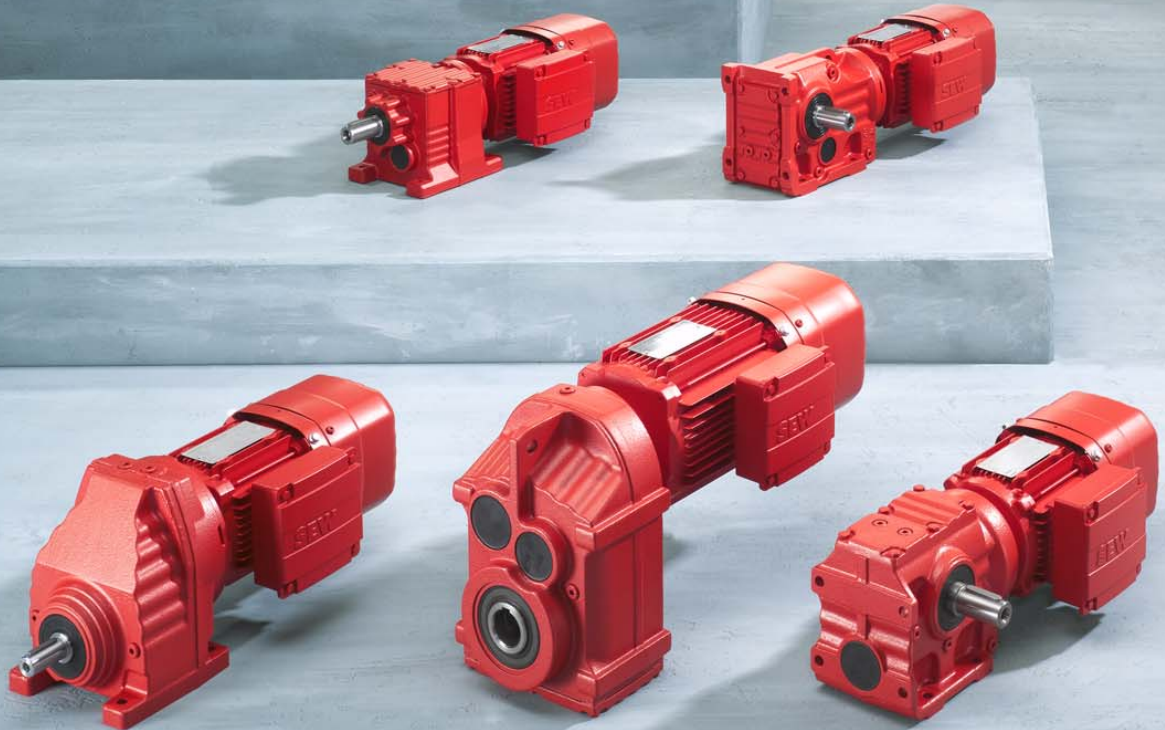




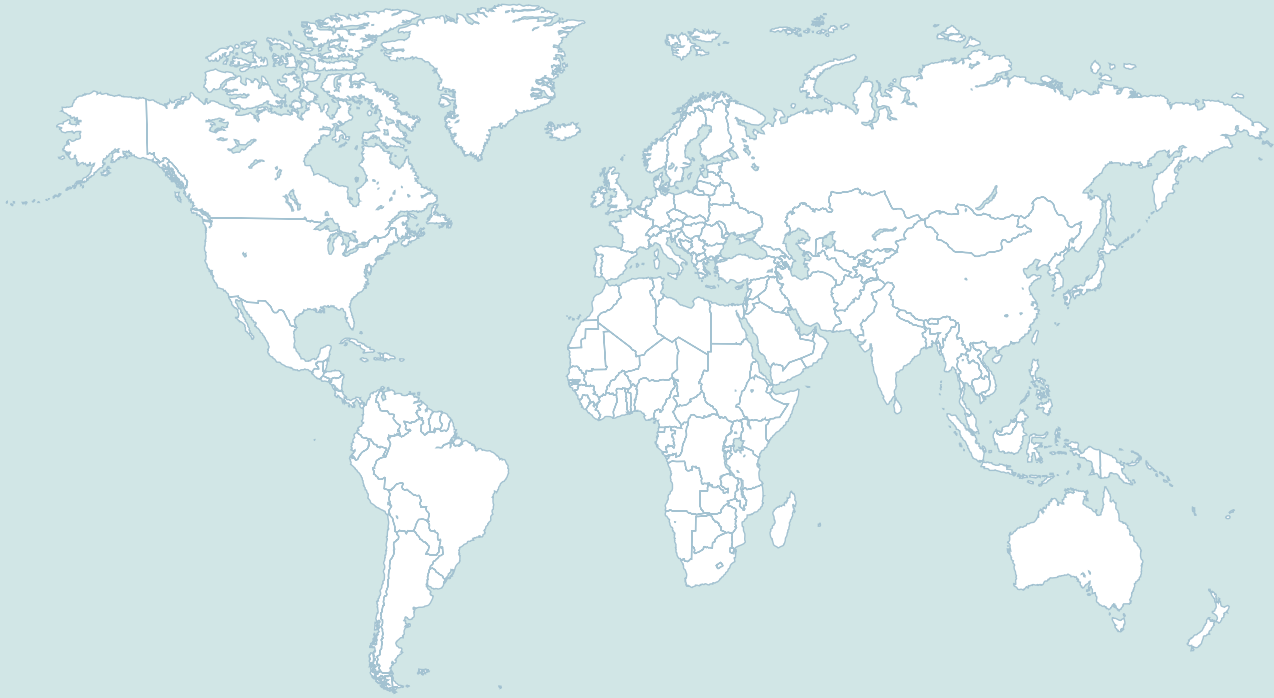
SEW
EURODRIVE

Catalog



DRE Gearmotors

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1 Introduction

1.1 The SEW-EURODRIVE Group of Companies

Global presence

Driving the world – with innovative drive solutions for all branches and for every application. Products and systems from SEW-EURODRIVE are used in a multitude of applications – worldwide. SEW-EURODRIVE products are found in a variety of industries, including automotive, building materials, food and beverage as well as metal-processing.

We are represented in the most important branches of industry all over the world: with 12 manufacturing plants, 64 assembly plants in 46 countries and our comprehensive range of services, which we consider an integrative service that continues our commitment to outstanding quality.

Always the right drive

The SEW-EURODRIVE modular concept offers millions of combinations. This wide selection enables you to choose the correct drive for all applications, each based on the required speed and torque range, space available and the ambient conditions. Gear units and gearmotors offering a unique and finely tuned performance range and the best economic prerequisites to face your drive challenges.

The gearmotors are powered by MOVITRAC® frequency inverters, MOVIDRIVE® inverters and MOVIAXIS® multi-axis servo inverters, a combination that blends perfectly with the existing SEW-EURODRIVE program. As in the case for mechanical systems, the development, production and assembly is also carried out completely by SEW-EURODRIVE. In combination with our drive electronics, these drives will provide the utmost in flexibility.

Products of the servo drive system, such as low backlash servo gear units, compact servomotors or MOVIAXIS® multi-axis servo inverters provide precision and dynamics. From single-axis or multi-axis applications all the way to synchronized process sequences, servo drive systems by SEW-EURODRIVE offer a flexible and customized implementation of your application.

For economical, decentralized installations, SEW-EURODRIVE offers components from its decentralized drive system, such as MOVIMOT®, the gearmotor with integrated frequency inverter or MOVI-SWITCH®, the gearmotor with integrated switching and protection function. SEW-EURODRIVE hybrid cables have been designed specifically to ensure cost-effective solutions, independent of the philosophy behind or the size of the system. The latest developments from SEW-EURODRIVE: MOVITRANS® system components for contactless energy transfer, MOVIPRO®, the decentralized drive control and MOVIFIT®, the new decentralized intelligence.

SEW-EURODRIVE also sets the global standard for power, quality and reliability with its industrial gear units for large loads. These large gear units are based on the same modular design concept to provide optimum adaptability for a wide range of applications.

Your ideal partner

Its global presence, extensive product range and broad spectrum of services make SEW-EURODRIVE the ideal partner for the machinery and plant process industry when it comes to providing drive systems for demanding applications in all branches of industries and applications.

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1.2 Products and systems from SEW-EURODRIVE

The products and systems from SEW-EURODRIVE are divided into 4 product groups. These 4 product groups are:

1. Gearmotors and frequency inverters
2. Servo drive systems
3. Decentralized drive systems
4. Industrial gear units

Products and systems used in several group applications are listed in a separate group "Products and systems covering several product groups". Consult the following tables to locate the products and systems included in the respective product group:

1. Gearmotors and frequency inverters		
Gear units/gearmotors	Motors	Frequency inverters
<ul style="list-style-type: none"> • Helical gear units/helical gearmotors • Parallel shaft helical gear units/parallel shaft helical gearmotors • Helical-bevel gear units/helical-bevel gearmotors • Helical-worm gear units/helical-worm gearmotors • SPIROPLAN right-angle gearmotors • Drives for electrified monorail systems • Multi-speed gearmotors • Variable speed gear units/variable speed gearmotors • Aseptic gearmotors 	<ul style="list-style-type: none"> • Asynchronous AC motors/AC brakemotors • Multi-speed AC motors/AC brakemotors • Energy-efficient motors 	<ul style="list-style-type: none"> • MOVITRAC® frequency inverters • MOVIDRIVE® inverters • Control, technology and communication options for inverters

2. Servo drive systems		
Servo gear units/servo gearmotors	Servomotors	Servo drive inverters/servo inverters
<ul style="list-style-type: none"> • Low backlash planetary gear units/planetary gearmotors • Low backlash helical-bevel servo gear units/helical-bevel gearmotors 	<ul style="list-style-type: none"> • Synchronous servomotors/servo brakemotors 	<ul style="list-style-type: none"> • MOVIDRIVE® servo inverters • MOVIAXIS® multi-axis servo inverters • Control, technology and communication options for servo drive inverters and servo inverters

3. Decentralized drive systems		
Decentralized drives	Communication and installation	Contactless energy transfer
<ul style="list-style-type: none"> • MOVIMOT® gearmotors with integrated frequency inverter • MOVIMOT® motors/brakemotors with integrated frequency inverter • MOVI-SWITCH® gearmotors with integrated switching and protection function • MOVI-SWITCH® motors/brakemotors with integrated switching and protection function 	<ul style="list-style-type: none"> • Fieldbus interfaces • Field distributors for decentralized installation • MOVIFIT® product range <ul style="list-style-type: none"> – MOVIFIT®-MC to control MOVIMOT® drives – MOVIFIT®-SC with integrated electronic motor switch – MOVIFIT®-FC with integrated frequency inverter 	<ul style="list-style-type: none"> • MOVITRANS® system <ul style="list-style-type: none"> – Stationary components for energy supply – Mobile components for energy consumption – Line cables and installation material



Introduction

Products and systems from SEW-EURODRIVE

4. Industrial gear units

- Helical gear units
- Bevel-helical gear units
- Planetary gear units

Products and systems covering several product groups

- Operator terminals
- MOVI-PLC[®] drive-based control system

In addition to products and systems, SEW-EURODRIVE offers a comprehensive range of services. These include:

- Technical application assistance
- Application software
- Seminars and training
- Extensive technical documentation
- International customer service

Visit our homepage at

→ www.seweurodrive.com

The website provides comprehensive information and services.

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1.3 Additional documentation

Contents of this publication

This DRE Gearmotors catalog includes the detailed technical data of the following SEW-EURODRIVE product groups:

- DRE helical gearmotors
- DRE parallel-shaft helical gearmotors
- DRE helical-bevel gearmotors
- DRE helical-worm gearmotors
- DRE Spiroplan® gearmotors

This catalog offers the following information:

- Product descriptions
- Unit designations
- Project planning instructions for drives and gear units
- Visual representation of mounting positions
- Explanation on the order information
- Design and operating notes
- Important information about tables and dimension sheets
- Description of the different types
- Overview of all permitted combinations
- Selection tables for DRE gearmotors
- Dimension sheet for DRE gearmotors
- Technical Data

Additional documentation

The "DR AC Motors" catalog is available from SEW-EURODRIVE in addition to this "DRE Gearmotors" catalog.

This catalog contains the following information:

- Unit designations
- Product descriptions
- Project planning information
- Technical data
- Technical data of options and additional features
- Information about the dimension sheets
- Dimension sheets for DR AC motors
- Information on brakes from SEW-EURODRIVE
- Information on prefabricated cables

Please note that the complete range of technical documentation is available on our home page:

→ www.seweurodrive.com

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Product Description

General notes on the product description

2 Product Description

2.1 General notes on the product description

Ambient temperature

Gear units and gearmotors from SEW-EURODRIVE can be operated in a wide ambient temperature range. The following standard temperature ranges are permitted for filling the gear units according to the lubricant table:

Gear unit	Filled with	Permitted standard temperature range
Helical, parallel-shaft helical and helical-bevel gear units	CLP(CC) VG220	-10 °C ... +40 °C
Helical-worm gear unit	CLP(CC) VG680	0 °C ... +40 °C
Spiroplan® gear units	CLP(SEW-PG) VG460	-10 °C ... +40 °C

The rated data of the gear units and gearmotors specified in the catalog/price catalog refer to an ambient temperature of +25 °C.

Gear units and gearmotors from SEW-EURODRIVE can be operated outside the standard temperature range if project planning is adapted to ambient temperatures from as low as up to -40 °C in the intensive cooling range until up to +60 °C. Project planning must take special operating conditions into account and adapt the drive to the ambient conditions by selecting suitable lubricants and seals. This kind of project planning is generally recommended for increased ambient temperatures as of size 97 and for helical-worm gear units with small gear ratios. SEW-EURODRIVE will gladly perform this project planning for you.

If the drive is to be operated on a frequency inverter, you must also consider the project planning notes of the inverter and take into account the thermal effects of inverter operation.

Installation altitude

Due to the low air density at high installation altitudes, heat dissipation on the surface of motors and gear units decreases. The rated data listed in the catalog/price catalog applies to an installation altitude of maximum 1000 m above sea level. Installation altitudes of more than 1000 m asl must be taken into account for project planning of gear units and gearmotors.

Power and torque

The power and torque ratings listed in the catalogs refer to mounting position M1 and similar mounting positions in which the input stage is not completely submerged in oil. In addition, the gearmotors are assumed to be standard versions with standard lubrication and under normal ambient conditions.

Please note that the motor power shown in the selection tables for gearmotors is subject to selection. However, the output torque and the desired output speed are essential for the application and need to be checked.

Speeds

The quoted output speeds of the gearmotors are recommended values. You can calculate the rated output speed based on the rated motor speed and the gear unit ratio. Please note that the actual output speed depends on the motor load and the supply system conditions.

Noise

The noise levels of all SEW-EURODRIVE gear units, motors and gearmotors are well within the maximum permitted noise levels set forth in the VDI guideline 2159 for gear units and IEC/EN 60034 for motors.



Coating	<p>Gear units, motors and gearmotors from SEW-EURODRIVE are painted with "SEW blue" as standard. Special paints are available on request.</p> <p>Exception: Spiroplan® W..10 DT56 gearmotors have an aluminum housing and are supplied unpainted as standard.</p>
Surface and corrosion protection	<p>If required, all gear units, motors and gearmotors from SEW-EURODRIVE can also be supplied with special surface protection for applications in extremely humid and chemically aggressive environments.</p>
Weights	<p>Please note that all weights shown in the catalogs exclude the oil fill for the gear units and gearmotors. The weights vary according to gear unit type and gear unit size. The lubricant fill depends on the mounting position which means no universally applicable information can be given. Please refer to "Lubricants" in the "Design and Operating Notes" section for recommended lubricant fill quantities depending on the mounting position. For the exact weight, refer to the order confirmation.</p>
Air admission and accessibility	<p>The gearmotors/brakemotors must be mounted on the driven machine in such a way that both axially and radially there is enough space left for unimpeded air flow, for maintenance work on the brake and, if required, for the MOVIMOT® inverter. Please also refer to the notes on the motor dimension sheets in the AC Motor Catalog.</p>
Multi-stage gear units	<p>You can achieve particularly low output speeds by using multi-stage gear units or multi-stage gearmotors. Such a setup requires a helical gear unit or gearmotor on the input end as a second gear unit.</p> <p>It may be necessary to limit the motor power to match the maximum permitted output torque of the gear unit.</p>
Reduced backlash gear units	<p>Helical, parallel-shaft helical and helical-bevel gear units with reduced backlash are available from gear unit size 37 and up. The circumferential backlash of these gear units is considerably less than that of the standard versions so that positioning tasks can be solved with great precision. The circumferential backlash is specified in angular minutes ['] in the technical data. The circumferential backlash for the output shaft is specified without load (max. 1% of the rated output torque); the gear unit input end is blocked. For further information, refer to section "Reduced backlash gear units" on page 94.</p>
NOCO® Fluid paste for protection against contact corrosion	<p>As standard, all shaft-mounted gear units and gearmotors are supplied with NOCO® Fluid, a paste that prevents contact corrosion. Use this paste in accordance with the instructions in the gear unit operating instructions. It facilitates service and stripping down jobs.</p> <p>NOCO® fluid is a food grade substance according to NSF-H1. You can tell that NOCO® Fluid is a food grade oil by the NSF-H1 identification label on its packaging.</p>
RM gear units, RM gearmotors	<p>RM gear units and RM gearmotors are a special type of helical gear units with an extended output bearing hub. They were designed especially for agitating applications can be used in applications subject to high overhung and axial loads. The remaining data correspond to the standard helical gear units and helical gearmotors. You can find special project planning notes for RM gearmotors in the "Project Planning for Gear Units/RM gear units" section.</p>

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Product Description

General notes on the product description

Spiroplan® right-angle gearmotors

Spiroplan® right-angle gearmotors are robust, single- and two-stage right-angle gearmotors with Spiroplan® gearing. The difference to the helical-worm gear units is the material combination of the steel-on-steel gearing, the special tooth meshing relationships and the aluminum housing. As a result, Spiroplan® right-angle gearmotors are wear-free, very quiet and light.

The particularly short design and the aluminum housing make for very compact and lightweight drive solutions.

After the running-in period, some sizes of the Spiroplan® right-angle gearmotor series are below the following sound pressure level in 4-pole motor operation on a 50 Hz supply system:

- Spiroplan® W..10 to W..30: 55 dB(A)

The sound-pressure level may be 3 to 5 dB(A) higher at time of delivery than after hours of regular operation.

The wear-free gearing and the life-long lubrication facilitate long periods of maintenance-free operation. The oil filling being independent of the mounting position, except for Spiroplan® W..37 and W..47 in mounting position M4 makes any position possible for Spiroplan® right-angle gearmotors without altering the quantity of oil. Identical hole spacing in the foot and face, as well as the equal shaft height to both, provides you with diverse mounting options.

Two different flange diameters are available. On request, Spiroplan® right-angle gearmotors can be equipped with a torque arm.

Brakemotors

On request, motors and gearmotors can be supplied with an integrated mechanical brake. The SEW-EURODRIVE brake is an electromagnetic disk brake with a DC coil that releases electrically and brakes using spring force. Due to its operating principle, the brake is applied if the power fails. It meets the basic safety requirements. The brake can also be released mechanically if equipped with manual brake release. For this purpose, the brake is supplied with either a hand lever with automatic reset or an adjustable setscrew. The brake is controlled by a brake controller that is either installed in the motor wiring space or the control cabinet.

A characteristic feature of the brakes is their very short design. The brake bearing end shield is an integral part of both the motor and the brake. The integrated construction of the SEW-EURODRIVE brakemotor permits particularly compact and sturdy solutions.

International markets

SEW-EURODRIVE supplies motors with CSA certification meeting the connection requirements to CSA and NEMA guidelines. UL listed motors are available when requested.

We deliver UL listed MOVIMOT® drives with connection requirements according to NEMA guidelines.

For the Japanese market, SEW-EURODRIVE offers motors conforming to JIS standard. Contact your sales representative to assist you in such cases.

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**Components on
the input side**

The following components on the input side are available for the gear units from SEW-EURODRIVE:

- **Input covers with input shaft extension, optionally with**
 - Centering shoulder
 - Backstop
 - Motor mounting platform
- **Adapter**
 - for mounting IEC or NEMA motors with the option of a backstop
 - for mounting servomotors with a square flange
 - with torque limiting safety couplings and speed or slip monitor
 - with hydraulic centrifugal coupling, also with disk brake or backstop

2

Swing base

A swing base is a drive unit consisting of helical-bevel gear unit, hydraulic centrifugal coupling and electric motor. The complete arrangement is mounted to a rigid mounting rail.

Motor swings are available with the following optional accessories:

- Torque arm
- Mechanical thermal monitoring unit
- Contactless thermal monitoring unit

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2.2 Corrosion and surface protection

General information

SEW-EURODRIVE offers various optional protective measures for operation of motors and gear units in excessive conditions.

- Corrosion protection KS for motors
- Industry option package

Corrosion protection KS

Corrosion protection KS for motors comprises the following measures:

- Stainless steel retaining screws.
- The nameplates are made from stainless steel or equivalent corrosion resistant material.
- Interior motor components are protected with a corrosion resistant coating.
- Additional sealing for brake motors.



Motors with a forced cooling fan and motors with a spreadshaft encoder (ES..) cannot be supplied with corrosion protection KS.

Industry Option Package

SEW-EURODRIVE provides options that provide protection to the motor and reducer when operating in severe environments.

Contact SEW-EURODRIVE for additional information on available IOP's (Industry Option Packages).

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Surface protection OS

Instead of the standard surface protection, the motors and gear units are available with surface protection OS1 to OS4 as an option. The special procedure Z can also be performed in addition. The special procedure Z means that large surface recesses are sprayed with a rubber filling prior to painting.

Surface protection	Suitable for
OSG	Primer only
Standard	Normal ambient conditions
OS1	Low environmental impact
OS2	Medium environmental impact
OS3	High environmental impact
OS4	Very high environmental impact

Special protective measures

Measure	Protection principle	Suitable for
FKM oil seal	High quality material	Drives subject to chemicals
PTFE oil seal	High quality material	Drives subject to chemicals
Stainless steel output shaft	Surface protection through high-quality material	Particularly exacting applications in terms of exterior surface protection

NOCO® fluid

As standard, SEW-EURODRIVE supplies NOCO® fluid corrosion protection and lubricant with every hollow shaft gear unit. Use NOCO® fluid when installing hollow shaft gear units. Using this fluid helps prevent contact corrosion and makes it easier to assemble the drive at a later date.

NOCO® fluid is also suitable for protecting machined metal surfaces that do not have corrosion protection, including parts of shaft ends or flanges. You can also order larger quantities of NOCO® fluid from SEW-EURODRIVE.

NOCO® fluid is food grade according to NSF certified H1.

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2.3 Extended storage

Type

You can also order the gear units prepared for "extended storage". SEW-EURODRIVE recommends the "extended storage" type for storage periods longer than 9 months.

In this case, a VCI (volatile corrosion inhibitor) is added to the lubricant in these gear units. Please note that this VCI corrosion inhibitor is only effective in a temperature range of -25 °C...+50 °C. The flange contact surfaces and shaft ends are also treated with an anti-corrosion agent. If not specified otherwise in your order, the gear unit will be supplied with OS1 surface protection. You can order OS2, OS3 or OS4 instead of OS1.



The gear units must remain tightly sealed until taken into operation to prevent the VCI corrosion protection agent from evaporating.

Gear units will be supplied with an oil fill according to the mounting position (M1 ... M6) and are ready for operation. Check the oil level before you start operating the gear unit for the first time!

Storage conditions

For extended storage, observe the storage conditions specified in the following table:

Climate zone	Packaging ¹⁾	Storage location ²⁾	Storage duration
Temperature (Europe, USA, Canada, China and Russia, excluding tropical zones)	Packed in containers, with desiccant and moisture indicator sealed in the plastic wrap.	With roof, protected against rain and snow, no shock loads	Up to three years with regular checks to the packaging and moisture indicator (rel. humidity < 50%).
	open	Under roof, enclosed at constant temperature and atmospheric humidity (5 °C < ϑ < 60 °C, < 50% relative atmospheric humidity). No sudden temperature fluctuations and controlled ventilation with filter (free of dust and dirt). No aggressive vapors and no shocks.	Two years or more given regular inspections. During inspection, check for cleanliness and mechanical damages. Check corrosion protection.
Tropical (Asia, Africa, Central and South America, Australia, New Zealand excluding temperate zones)	Packed in containers, with desiccant and moisture indicator sealed in the plastic wrap. Protected against insect damage and mold through chemical treatment.	Under roof, protected against rain, no shock loads.	Up to three years with regular checks of the packaging and moisture indicator (rel. humidity < 50%).
	open	Under roof, enclosed at constant temperature and atmospheric humidity (5 °C < ϑ < 50 °C, < 50% relative atmospheric humidity). No sudden temperature fluctuations and controlled ventilation with filter (free of dust and dirt). No aggressive vapors and no shock loads. Protection against insect damage.	Two years or more given regular inspections. During inspection, check for cleanliness and mechanical damages. Check corrosion protection.

1) Packaging must be performed by an experienced company using the packaging materials that have been expressly specified for the particular application.

2) SEW-EURODRIVE recommends to store the gear units according to the mounting position.

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2.4 Condition monitoring: Oil aging and vibration sensor

DUO10A diagnostics unit (Oil aging sensor)

Gear unit diagnostics via thermal analysis

The DUO10A diagnostic unit allows for diagnostic analysis as a means of preventive maintenance. The DUO10A diagnostic unit determines the individual, remaining service life of the oil based on the known service life curves and the oil temperature. The diagnostic unit consists of a temperature sensor and the actual evaluation unit. The remaining service life and the temperature of the oil can be read off via the display at the evaluation unit. The diagnostic unit is characterized by simple operation and user-friendly handling.

2

DUV10A diagnostics unit (vibration sensor)

Roller bearing diagnostics by means of vibration analysis

The DUV10A diagnostic unit monitors roller bearings, gearings for imbalance, and possible damages. Vibration analysis is used to detect possible damages at an early stage. This device allows for permanent vibration monitoring. The condition and development of the damage can be directly read on the device, or can be visualized externally using switch outputs.

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3 Unit Designations and Variants

3.1 Gear unit and options – unit designations

Helical gear unit

Designation	
RX..	Single-stage foot-mounted design
RXF..	Single-stage B5 flange-mounted design
R..	Foot-mounted design
R..F	Foot and B5-flange mounted design
RF..	B5 flange-mounted design
RZ..	B14 flange-mounted design
RM..	B5 flange-mounted design with extended bearing hub

Parallel-shaft helical gear unit

Designation	
F..	Foot-mounted design
FA..B	Foot-mounted, hollow shaft
FH..B	Foot-mounted, hollow shaft with shrink disk
FV..B	Foot-mounted, hollow shaft with splined hollow shaft to DIN 5480
FF..	B5 flange-mounted design
FAF..	B5 flange-mounted design and hollow shaft
FHF..	B5 flange-mounted and hollow shaft with shrink disk
FVF..	B5 flange-mounted design and hollow shaft with splined hollow shaft to DIN 5480
FA..	Hollow shaft
FH..	Hollow shaft with shrink disk
FT..	Hollow shaft with TorqLOC [®] hollow shaft mounting system
FT..B	Foot-mounted hollow shaft with TorqLOC [®] hollow shaft mounting system
FV..	Hollow shaft with splining to DIN 5480
FAZ..	B14 flange-mounted design and hollow shaft
FHZ..	B14 flange-mounted and hollow shaft with shrink disk
FVZ..	B14 flange-mounted design and hollow shaft with splined hollow shaft to DIN 5480

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Helical-bevel gear unit

Designation	
K..	Foot-mounted design
KA..B	Foot-mounted, hollow shaft
KH..B	Foot-mounted, hollow shaft with shrink disk
KV..B	Foot-mounted, hollow shaft with splined hollow shaft to DIN 5480
KF..	B5 flange-mounted design
KAF..	B5 flange-mounted design and hollow shaft
KHF..	B5 flange-mounted and hollow shaft with shrink disk
KVF..	B5 flange-mounted design and hollow shaft with splined hollow shaft to DIN 5480
KA..	Hollow shaft
KH..	Hollow shaft with shrink disk
KT..	Hollow shaft with TorqLOC® hollow shaft mounting system
KT..B	Foot-mounted hollow shaft with TorqLOC® hollow shaft mounting system
KV..	Hollow shaft with splining to DIN 5480
KAZ..	B14 flange-mounted design and hollow shaft
KHZ..	B14 flange-mounted and hollow shaft with shrink disk
KVZ..	B14 flange-mounted design and hollow shaft with splined hollow shaft to DIN 5480

Helical-worm gear unit

Designation	
S..	Foot-mounted design
SF..	B5 flange-mounted design
SAF..	B5 flange-mounted design and hollow shaft
SHF..	B5 flange-mounted and hollow shaft with shrink disk
SA..	Hollow shaft
SH..	Hollow shaft with shrink disk
ST..	Hollow shaft with TorqLOC® hollow shaft mounting system
SAZ..	B14 flange-mounted design and hollow shaft
SHZ..	B14 flange-mounted and hollow shaft with shrink disk

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Unit Designations and Variants

Gear unit and options – unit designations

Spiroplan® gear unit

For all gear unit sizes (W..10 to W..47):

Designation	
W..	Foot-mounted design
WF..	Flange-mounted design
WAF..	Flange-mounted design and hollow shaft
WA..	Hollow shaft

Only for gear unit sizes 37 and 47 (W..37 and W 47):

Designation	
WA..B	Foot-mounted, hollow shaft
WH..B	Foot-mounted, hollow shaft with shrink disk
WHF..	Flange-mounted, hollow shaft with shrink disk
WH..	Hollow shaft with shrink disk
WT..	Hollow shaft with TorqLOC® hollow shaft mounting system

Options

R, F and K gear units:

Designation	
/R	Reduced backlash

K, S and W gear units:

Designation	
/T	With torque arm

F gear units:

Designation	
/G	With rubber buffer

Condition monitoring

Designation	Option
/DUO	Diagnostic Unit Oil = Oil aging sensor
/DUV	Diagnostic Unit Vibration = Vibration sensor

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3.2 Unit designations for AC motors and options

AC motor series

Designation	
DRS..	Standard efficiency motor
DRE..	High efficiency motor
DRP..	Premium efficiency motor
71 - 315	Sizes: 71 / 80 / 90 / 100 / 112 / 132 / 160 / 180 / 200 / 225 / 315
K - L	Lengths: K= very short / S = short / M = medium / L = long MC/LC = Rotors with copper cage
2, 4, 6, 8/2, 8/4	Number of poles

Unit designation DR: Output variants

Designation	Option
/FI	IEC foot-mounted motor with specification of shaft height
/FG	7 Series integral motor, as stand-alone motor
/FF	IEC flange-mounted motor with bore holes
/FT	IEC flange motor with threads
/FL	General flange-mounted motor (other than IEC)
/FM	7 series integral gearmotor with IEC feet, with specification of shaft height if required
/FE	IEC flange-mounted motor with bore holes and IEC feet, with specification of shaft height
/FY	IEC flange-mounted motor with thread and IEC feet, with specification of shaft height if required
/FK	General flange-mounted motor (other than IEC) with feet, with specification of shaft height if required
/FC	C-face flange-mounted motor, dimensions in inch

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Unit Designations and Variants

Unit designations for AC motors and options

Mechanical attachments

Designation	Option
BE..	Spring-loaded brake with size specification
HR	Manual brake release of the brake, automatic disengaging function
HF	Manual brake release, lockable
/RS	Backstop
/MSW	MOVI-SWITCH®
/MI	Motor identification for MOVIMOT®
/MM03 - MM40	MOVIMOT®
/MO	MOVIMOT® option(s)

Temperature sensor/detection

Designation	Option
/TF	Temperature sensor (positive coefficient thermistor or PTC resistor)
/TH	Thermostat (bimetallic switch)
/KY	One KTY84 - 130 sensor
/PT	One / three PT100 sensor(s)

Encoder

Designation	Option
/ES7S /EG7S /EH7S /EV7S	Mounted speed sensor with sin/cos interface
/ES7R /EG7R /EH7R	Mounted speed sensor with TTL (RS-422) interface, V = 9 - 26 V
/EI7C	Mounted speed sensor with HTL interface
/EI76 /EI72 /EI71	Mounted speed sensor with HTL interface and 6 / 2 / 1 period(s)
/AS7W /AG7W	Mounted absolute encoder, RS-485 interface (multi-turn)
/AS7Y /AG7Y /AH7Y	Mounted absolute encoder, SSI interface (multi-turn)
/ES7A/EG7A	Mounting adapter for encoders from the SEW portfolio
/XV.A	Mounting adapter for non-SEW encoders
/XV..	Mounted non-SEW encoders

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Connection options

Designation	Option
/IS	Integrated plug connector
/ASB.	HAN 10ES plug connector on terminal box with two-clamp closure (cage clamps on motor end)
/ACB.	HAN 10E plug connector on terminal box with two-clamp closure (crimp contacts on motor end)
/AMB. /ABB. /ADB. /AKB.	HAN Modular 10B plug connector on terminal box with two-clamp closure (crimp contacts on motor end)
/ASE.	HAN 10ES plug connector on terminal box with single-clamp closure (cage clamps on motor end)
/ACE.	HAN 10ES plug connector on terminal box with single-clamp closure (crimp contacts on motor end)
/AME. /ABE. /ADE. /AKE.	HAN Modular 10B plug connector on terminal box with single-clamp closure (crimp contacts on motor end)
/KCC	Terminal strip with cage clamps (for DR.71 - DR.132)
/KC1	C1 profile compliant connection of the DR80 overhead trolley drive (VDI guideline 3643) (for DR71, 80)

3

Ventilation

Designation	Option
/V	Forced cooling fan
/Z	Additional inertia (flywheel fan)
/AL	Metal fan
/U	Non-ventilated (without fan) TENV
/OL	Non-ventilated (closed B side) TENV
/C	Protection canopy for the fan guard
/LF	Air filter
/LN	Low-noise fan guard (for DR.71 – 132)

Bearing

Designation	Option
/NS	Relubrication device (for DR.315 only)
/ERF	Reinforced bearing A-side with roller bearing (for DR.315 only)
/NIB	Insulated bearing B-side (for DR.315 only)

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Unit Designations and Variants

Unit designations for AC motors and options

Condition monitoring

Designation	Option
/DUB	Diagnostic unit brake = brake monitoring
/DUV	Diagnostic Unit Vibration = Vibration sensor

Other additional features

Designation	Option
/DH	Condensation drain hole
/RI	Reinforced winding insulation
/2W	2nd shaft end on the motor/brakemotor

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3.3 Sample unit designation for a DR gearmotor

The unit designation of the gearmotor starts from the component on the output end. For instance, a multi-staged helical-bevel gearmotor with thermistor sensor in the motor winding has the following unit designation:

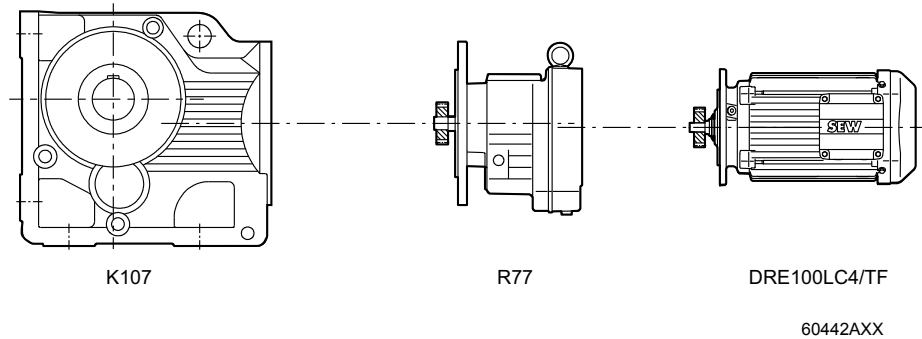
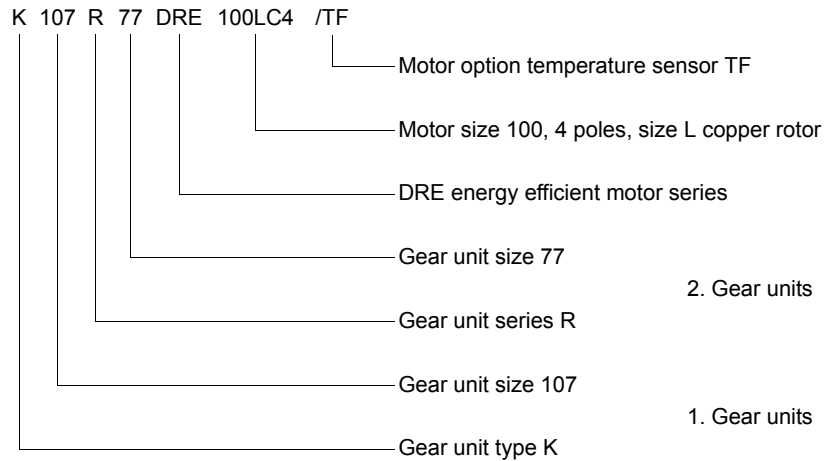


Figure 1: Sample unit designation for a DRE gearmotor

Other examples:

- RF 97 /R DRE100M4 BE5 HR
 - Gear unit type: Reduced backlash (/ R) helical gear unit in flange-mounted version
 - Gear unit size: 97
 - Motor series: DRE energy-efficient motor
 - Motor size 100M, 4-pole
 - Motor options: BE5 brake with automatic manual brake disengagement (HR)
- FAF 47 /R DRE90L4 BE2 /C
 - Gear unit type: Reduced backlash (/ R) parallel-shaft helical gear unit in B5 flange-mounted version with hollow shaft
 - Gear unit size: 47
 - Motor series: DRE energy-efficient motor
 - Motor size 90L, 4-pole
 - Motor options: BE2 brake and protection canopy for the fan guard (/ C)

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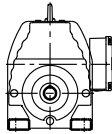
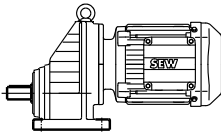
3.4 Gearmotor variants



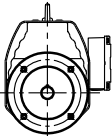
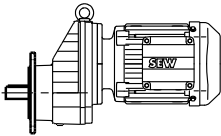
The types described in this section refer to DR gearmotors from SEW-EURODRIVE. They also apply to gear units without motors (without DR).

Helical gearmotors

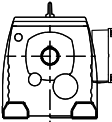
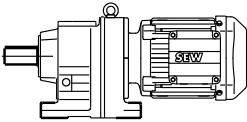
The following versions of helical gearmotors can be supplied:



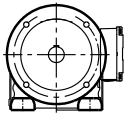
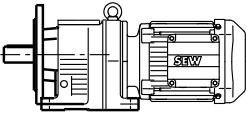
RX..DR..
Foot-mounted single stage helical gearmotor



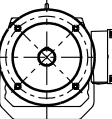
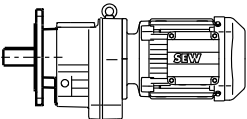
RXF..DR..
Single-stage B5 flange-mounted helical gearmotor



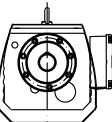
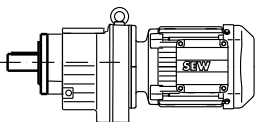
R..DR..
Foot-mounted helical gearmotor



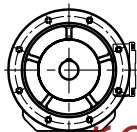
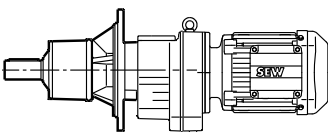
R..F DR..
Foot and B5-flange mounted helical gearmotor



RF..DR..
Helical gearmotor in B5 flange-mounted version



RZ..DR..
Helical gearmotor in B14 flange-mounted version



RM..DR..
B5 flange-mounted helical gearmotor with extended bearing hub

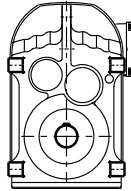
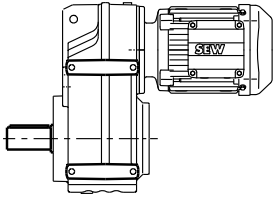
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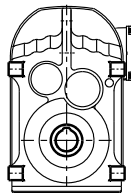
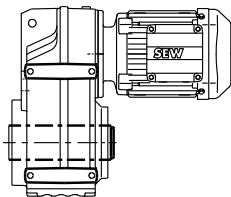
**Parallel-shaft
helical gearmo-
tors**

The following variants of parallel-shaft helical gearmotors can be supplied:



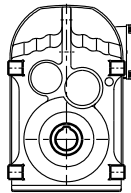
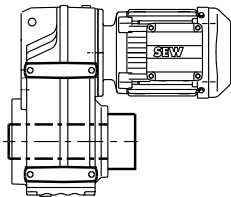
F..DR..
Foot-mounted parallel-shaft helical gearmotor

3

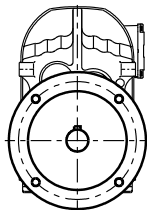
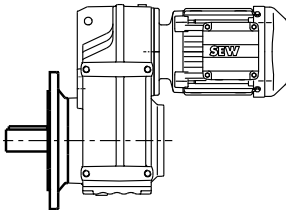


FA..B DR..
Foot-mounted parallel-shaft helical gearmotor with hollow shaft

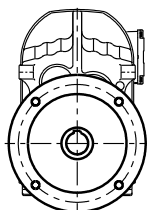
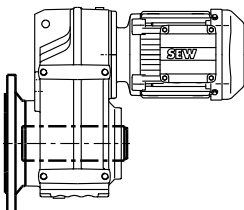
FV..B DR..
Foot-mounted parallel-shaft gearmotor with hollow shaft and splining according to DIN 5480



FH..B DR..
Foot-mounted parallel-shaft helical gearmotor with hollow shaft and shrink disk



FF..DR..
B5 flange-mounted parallel-shaft helical gearmotor



FAF..DR..
Parallel-shaft helical gearmotor in B5 flange-mounted design with hollow shaft

FVF..DR..
Parallel-shaft helical gearmotor in B5 flange-mounted design with hollow shaft and splining according to DIN 5480

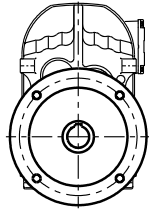
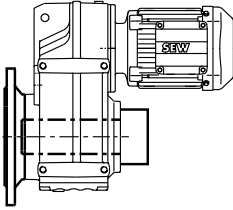
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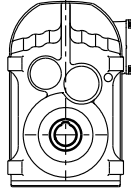
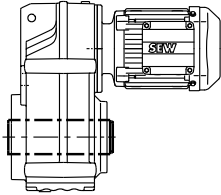
Unit Designations and Variants

Gearmotor variants



FHF..DR..

Parallel-shaft helical gearmotor in B5 flange-mounted version with hollow shaft and shrink disk

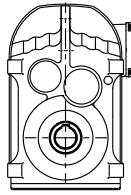
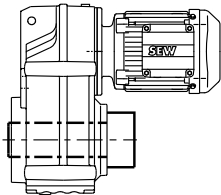


FA..DR..

Parallel-shaft helical gearmotor with hollow shaft

FV..DR..

Parallel-shaft helical gearmotor with hollow shaft and splining according to DIN 5480

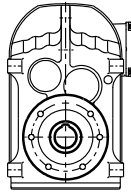
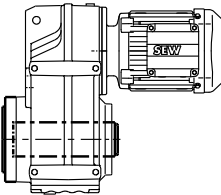


FH..DR..

Parallel-shaft helical gearmotor with hollow shaft and shrink disk

FT..DR..

Parallel-shaft helical gearmotor with hollow shaft and TorqLOC® hollow shaft mounting system

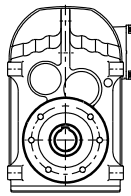
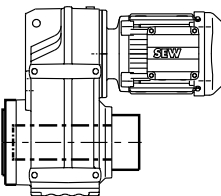


FAZ..DR..

Parallel-shaft helical gearmotor in B14 flange-mounted design with hollow shaft

FVZ..DR..

Parallel-shaft helical gearmotor in B14 flange-mounted design with hollow shaft and splining according to DIN 5480



FHZ..DR..

Parallel-shaft helical gearmotor in B14 flange-mounted version with hollow shaft and shrink disk

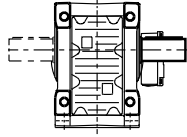
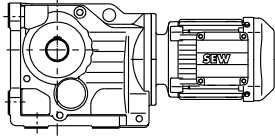
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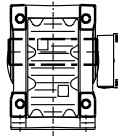
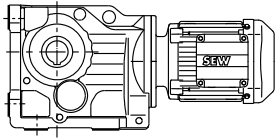


Helical-bevel gearmotors

The following types of helical-bevel gearmotors can be supplied:

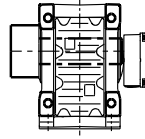
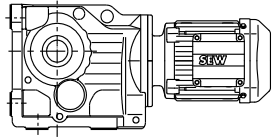


K..DR..
Foot-mounted helical-bevel gearmotor

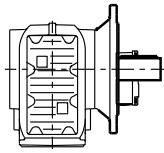
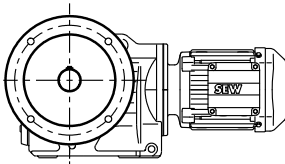


KA..B DR..
Foot-mounted helical-bevel gearmotor with hollow shaft

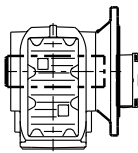
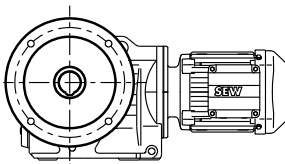
KV..B DR..
Foot-mounted helical-bevel gearmotor unit with hollow shaft and splining according to DIN 5480



KH..B DR..
Foot-mounted disk helical-bevel gearmotor with hollow shaft and shrink disk



KF..DR..
Helical-bevel gearmotor in B5 flange-mounted design



KAF..DR..
Helical-bevel gearmotor in B5 flange-mounted design with hollow shaft

KVF..DR..
Helical-bevel gearmotor in B5 flange-mounted design with hollow shaft and splining according to DIN 5480

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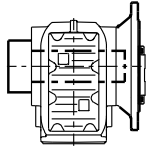
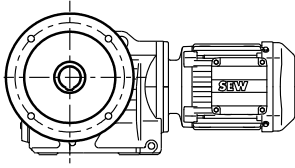
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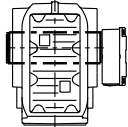
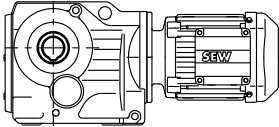
Unit Designations and Variants

Gearmotor variants



KHF..DR..

Helical-bevel gearmotor in B5 flange-mounted version with hollow shaft and shrink disk

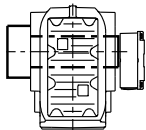
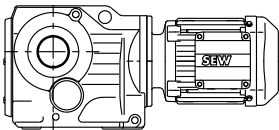


KA..DR..

Helical-bevel gearmotor with hollow shaft

KV..DR..

Helical-bevel gearmotor with hollow shaft and splining according to DIN 5480

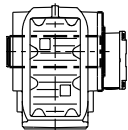
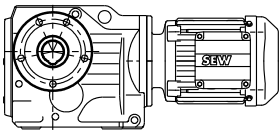


KH..DR..

Helical-bevel gearmotor with hollow shaft and shrink disk

KT..DR..

Helical-bevel gearmotor with hollow shaft and TorqLOC® hollow shaft mounting system

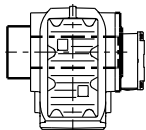
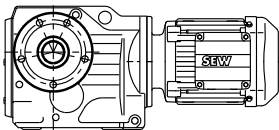


KAZ..DR..

Helical-bevel gearmotor in B14 flange-mounted design with hollow shaft

KVZ..DR..

Helical-bevel gearmotor in B14 flange-mounted design with hollow shaft and splining according to DIN 5480



KHZ..DR..

Helical-bevel gearmotor in B14 flange-mounted version with hollow shaft and shrink disk

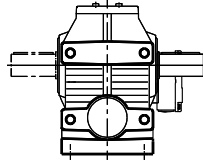
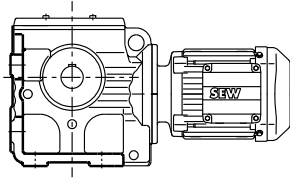
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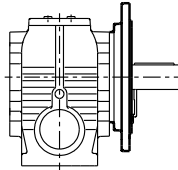
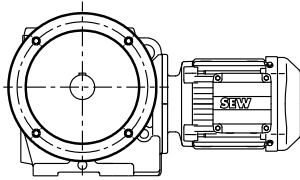


Helical-worm gearmotors

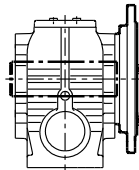
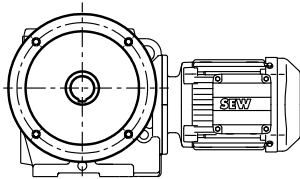
The following types of helical-worm gearmotors are available:



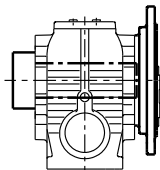
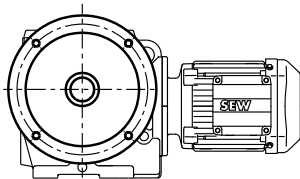
S..DR..
Foot-mounted helical-worm gearmotor



SF..DR..
Helical-worm gearmotor in B5 flange-mounted design



SAF..DR..
Helical-worm gearmotor in B5 flange-mounted design with hollow shaft



SHF..DR..
Helical-worm gearmotor in B5 flange-mounted design with hollow shaft and shrink disk

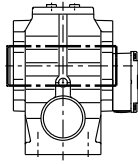
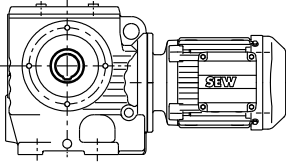
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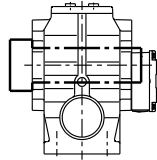
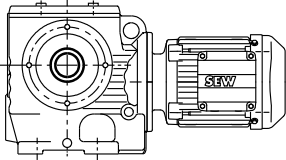
Unit Designations and Variants

Gearmotor variants



SA..DR..

Helical-worm gearmotor with hollow shaft

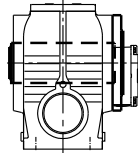
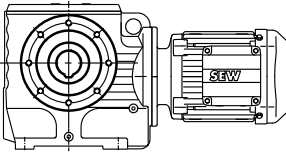


SH..DR..

Helical-worm gearmotor with hollow shaft and shrink disk

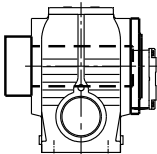
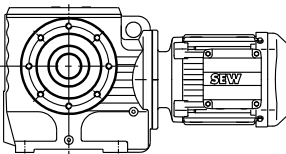
ST..DR..

Helical-worm gearmotor with hollow shaft and TorqLOC[®] hollow shaft mounting system



SAZ..DR..

Helical-worm gearmotor in B14 flange-mounted design with hollow shaft



SHZ..DR..

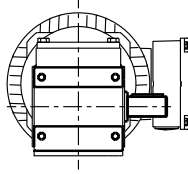
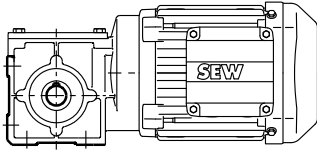
Helical-worm gearmotor in B14 flange-mounted design with hollow shaft and shrink disk

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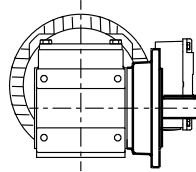
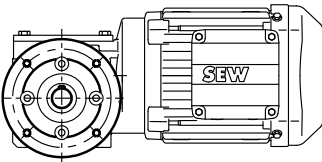
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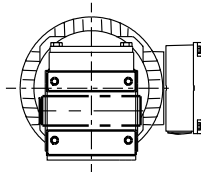
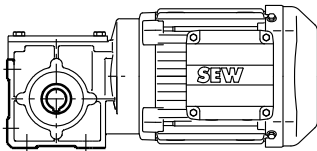
Spiroplan® gear- The following variants of Spiroplan® gearmotors size W..10 to W..47 are available:
motors



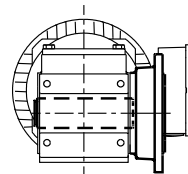
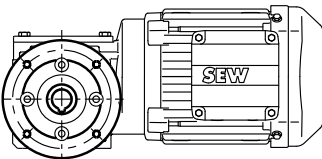
W..DR..
Foot-mounted Spiroplan® gearmotors



WF..DR..
Spiroplan® gearmotor in flange-mounted design



WA..DR..
Spiroplan® gearmotor with hollow shaft



WAF..DR..
Spiroplan® gearmotor in flange-mounted design with hollow shaft

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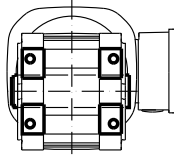
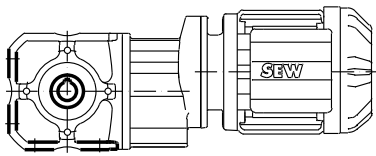
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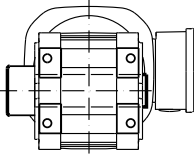
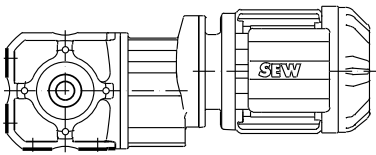
Unit Designations and Variants

Gearmotor variants

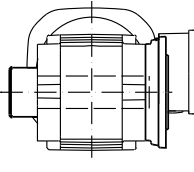
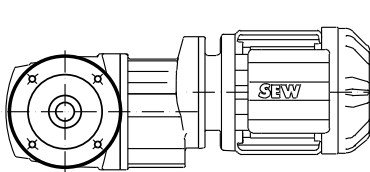
Additionally, the following variants of Spiroplan[®] gearmotors size W..37 and W..47 are available:



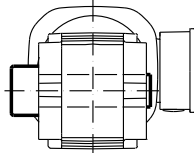
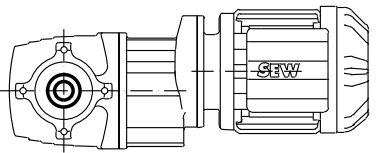
WA..B DR..
Foot-mounted Spiroplan[®] gearmotor with hollow shaft



WH..B DR..
Foot-mounted Spiroplan[®] gearmotor with hollow shaft and shrink disk



WHF.. DR..
Spiroplan[®] gearmotor in flange-mounted design with hollow shaft and shrink disk



WH.. DR..
Spiroplan[®] gearmotor with hollow shaft and shrink disk

WT.. DR..
Spiroplan[®] gearmotor with hollow shaft and TorqLOC[®]

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4 Project Planning for Drives

4.1 Additional documentation

In addition to the information in this manual, SEW-EURODRIVE offers extensive documentation covering the entire topic of electrical drive engineering. These are mainly the publications in the "Drive Engineering - Practical Implementation" series as well as the manuals and catalogs for electronically controlled drives. You will find additional links to a wide selection of our documentation in many languages for download on the SEW-EURODRIVE homepage (<http://www.seweurodrive.com>). The list below includes other documents that are of interest in terms of project planning. You can order these publications from SEW-EURODRIVE.

Drive Engineering Practical Implementation

- Project Planning for Drives
- Controlled AC Drives
- EMC in Drive Engineering
- SEW Disk Brakes

Electronics documentation

- "Decentralized Installation" system folder (MOVIMOT[®], MOVI-SWITCH[®], communication and supply interfaces)
- "MOVITRAC[®] B" system manual
- "MOVIDRIVE[®] MDX60/61B" system manual

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4.2 Drive selection data

In order to be able to precisely define the components for your drive, certain data is required. These are:

Drive selection data			Your entry
n_{amin}	Minimum output speed	[rpm]	
n_{amax}	Maximum output speed	[rpm]	
P_a at n_{amin}	Output power at minimum output speed	[HP]	
P_a at n_{amax}	Output power at maximum output speed	[HP]	
T_a at n_{amin}	Output torque at minimum output speed	[lb-in]	
T_a at n_{amax}	Output torque at maximum output speed	[lb-in]	
F_R	Overhung loads acting on the output shaft. Force application in center of shaft end is assumed. If, specify the exact application point giving the application angle and direction of rotation of the shaft for recalculation.	[lb]	
F_A	Axial load (tension and compression) on the output shaft	[lb]	
J_{Last}	Mass moment of inertia to be driven	[lb-ft ²]	
R, F, K, S, W M1 - M6	Required gear unit type and mounting position (→ Sec. Mounting positions, churning losses)	-	
IP..	Required degree of protection	-	
ϑ_{Umg}	Ambient temperature	[°C]	
H	Installation altitude	[m above sea level]	
S.., ..% cdf	Duty type and cyclic duration factor (cdf) or exact load cycle can be entered.	-	
Z	Starting frequency; alternatively, exact load cycle can be specified	[1/h]	
f_{mains}	Supply frequency	[Hz]	
U_{Mot} U_{Bremse}	Operating voltage of motor and brake	[V]	
T_B	Required braking torque	[lb-in]	
For inverter operation: Required control type and setting range			

Determining the motor data

It is first necessary to have data on the machine to be driven (mass, speed, setting range, etc.) to design the drive correctly.

These data help determine the required power, torque and speed. Refer to the "Drive Engineering - Practical Implementation, Drive Planning" publication or the PTPilot project planning software at www.ptpilot.com for assistance.

Selecting the correct drive

The appropriate drive can be selected once the power and speed of the drive have been calculated and with regard to other mechanical requirements.

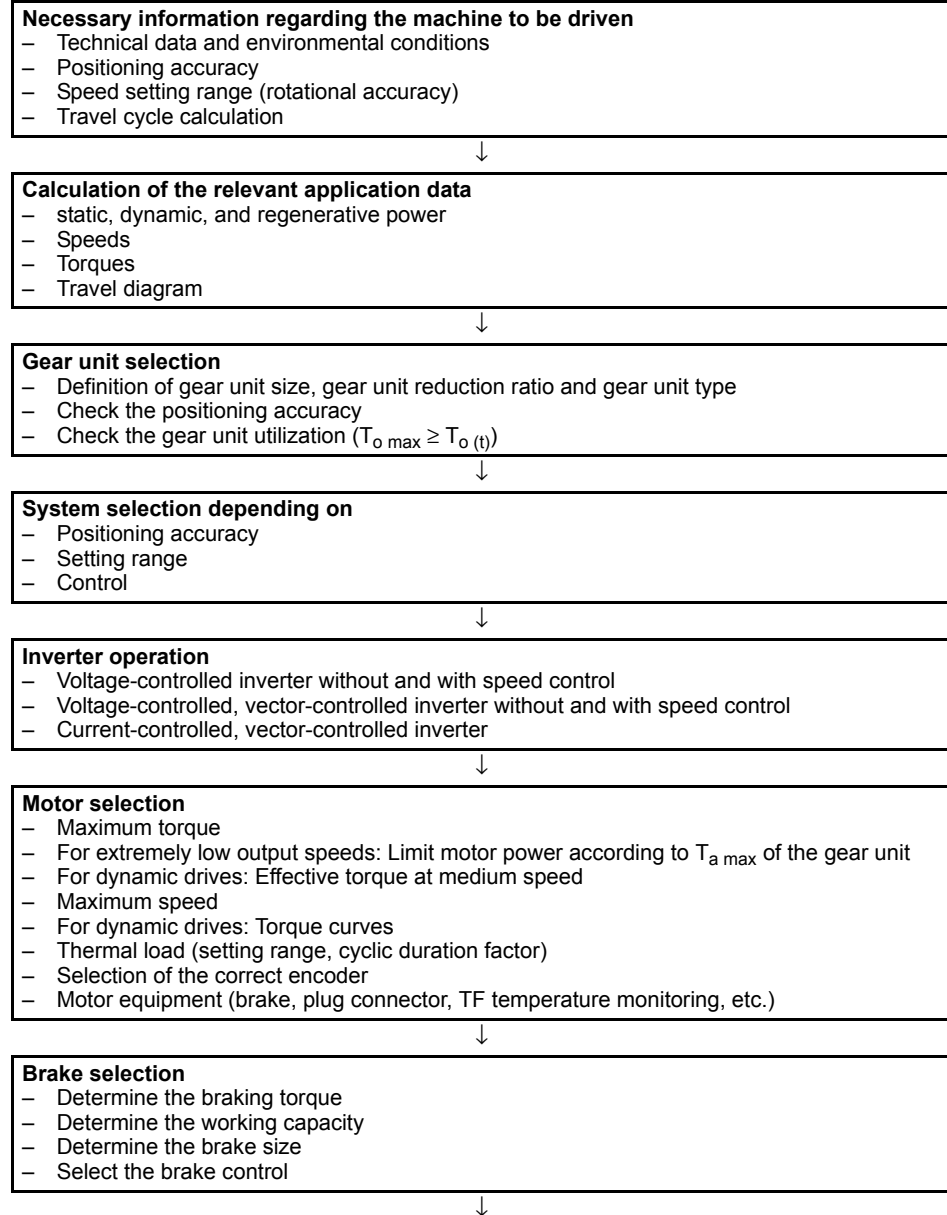
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4.3 Project planning procedure

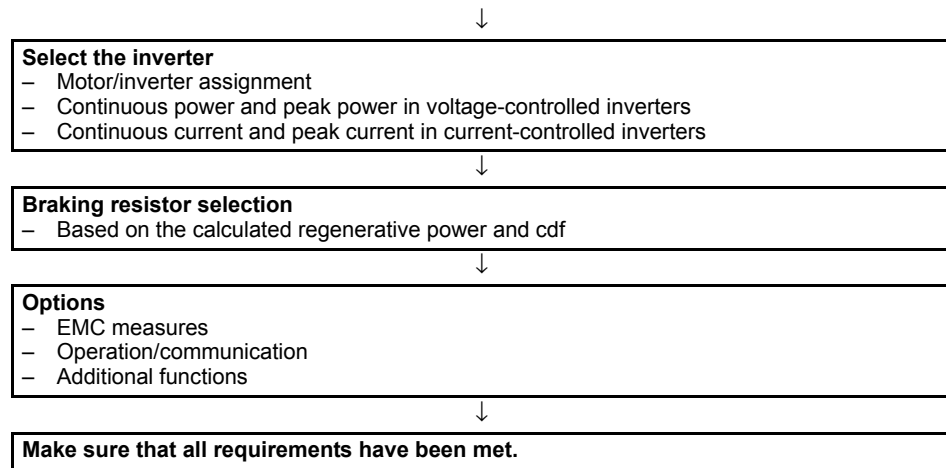
Example

The following flow diagram illustrates the project planning procedure for a positioning drive. The drive consists of a gearmotor that is powered by an inverter.



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5 Project Planning for Gear Units

5.1 Efficiency of SEW gear units

General information

The efficiency of gear units is mainly determined by the gearing and bearing friction. Keep in mind that the starting efficiency of a gear unit is always less than its efficiency at operating speed. This factor is especially pronounced in the case of helical-worm and Spiroplan® right-angle gearmotors.

R, F, K gear units

The efficiency of helical, parallel-shaft and helical-bevel gear units varies with the number of gear stages, between 94% (3-stage) and 98% (1-stage).

S and W gear units

The gearing in helical-worm and Spiroplan® gear units produces a high proportion of sliding friction. As a result, these gear units have higher gearing losses than R, F or K gear units and thus be less efficient.

The efficiency depends on the following factors:

- Gear ratio of the helical-worm or Spiroplan® stage
- Input speed
- Gear unit temperature

Helical-worm gear units from SEW-EURODRIVE are helical gear/worm combinations that are significantly more efficient than plain worm gear units. The efficiency may reach $\eta < 0.5$ if the helical-worm or Spiroplan® stage has a very high ratio step.

Self-locking

Back-driving torques on helical-worm or Spiroplan® gear units produce an efficiency of $\eta = 2 - 1/\eta_1$, which is significantly less favorable than the forward efficiency η . The helical-worm or Spiroplan® gear unit is self-locking if the forward efficiency $\eta \leq 0.5$. Some Spiroplan® gear units are also dynamically self-locking. Contact SEW-EURODRIVE if you wish to make technical use of the braking effect of self-locking characteristics.



Do not use the self-locking effect of helical-worm and Spiroplan® gear units as sole safety function for hoists.



Run-in phase

The tooth flanks of new helical-worm and Spiroplan® gear units are not yet completely smooth. That fact makes for a greater friction angle and less efficiency than during later operation. This effect intensifies with increasing gear unit ratio. Subtract the following values from the listed efficiency during the run-in phase:

	Worm	
	i range	η reduction
1-start	approx. 50 ... 280	approx. 12%
2-start	approx. 20 ... 75	approx. 6%
3-start	approx. 20 ... 90	approx. 3%
5-start	approx. 6 ... 25	approx. 3%
6-start	approx. 7 ... 25	approx. 2%

Spiroplan® W10 to W30		Spiroplan® W37 and W47	
i range	η reduction	i range	η reduction
approx. 35 ... 75	approx. 15%	-	-
approx. 20 ... 35	approx. 10%	-	-
approx. 10 ... 20	approx. 8%	approx. 30 ... 70	approx. 8%
About 8	approx. 5%	approx. 10 ... 30	approx. 5%
About 6	approx. 3%	approx. 3 ... 10	approx. 3%

The run-in phase usually lasts 48 hours. Helical-worm and Spiroplan® gear units achieve their listed rated efficiency values when:

- the gear unit has been completely run-in,
- the gear unit has reached nominal operating temperature,
- the recommended lubricant has been filled in and
- the gear unit is operating in the rated load range.

Churning losses

In certain gear unit mounting positions (→ Sec. "Mounting positions and important order information"), the first gearing stage is completely immersed in the lubricant. When the circumferential velocity of the input stage is high, considerable churning losses occur in larger gear units that must be taken into account. Contact SEW-EURODRIVE if you wish to use gear units of this type.

If possible, use mounting position M1 for R, K and S gear units to keep the churning losses low.

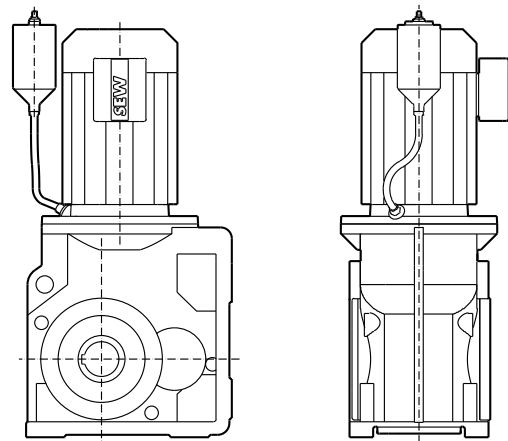
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5.2 Oil expansion tank

The oil expansion tank allows the lubricant/air space of the gear unit to expand. This means no lubricant can escape the breather valve at high operating temperatures.

SEW-EURODRIVE recommends to use oil expansion tanks for gear units and gearmotors in M4 mounting position and for input speeds > 2000 rpm.



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Figure 2: Oil expansion tank

The oil compensator is provided as assembly kit. It is intended for mounting onto the gearmotor. However, if installation space is limited or if the expansion tank is intended for gear units without motor, it can be mounted to nearby machine parts.

For further information, please contact your SEW-EURODRIVE sales representative.

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5.3 Multi-stage gearmotors

General information

You can achieve extremely low output speeds by using multi-stage gear units or multi-stage gearmotors. This means an additional second gear unit, usually a helical gear unit, is installed in front of the gear unit or between gear unit and motor.

The resulting total reduction ratio may make gear unit protection necessary.

Limiting the motor power

You have to reduce the maximum output motor power according to the maximum permitted output torque on the gear unit ($T_{a \max}$). For this purpose you first have to determine the maximum permitted motor torque ($T_{N \text{ allowable}}$).

You can calculate the maximum permitted motor torque as follows:

$$T_{N \text{ allowable}} = \frac{T_{a \max}}{i_{\text{total}} \cdot \eta_{\text{total}}}$$

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Use this maximum permitted motor torque $T_{N \text{ allowable}}$ and the load diagram of the motor to determine the associated value for the motor current.

Take suitable measures to prevent the continuous current consumption of the motor from exceeding the previously determined value for the motor torque $T_{N \text{ allowable}}$. A suitable measure is, for example, to set the trip current of the protective circuit breaker to this maximum current value. Besides, a protective circuit breaker can compensate for a brief overload, for example during the motor's starting phase. A suitable measure for inverter drives is to limit the output current of the inverter according to the determined motor current.

Checking brake torque

If you use a multi-stage brake motor, you will have to limit the braking torque (T_B) according to the maximum permitted motor torque $T_{N \text{ allowable}}$. The maximum permitted braking torque is 200 % $T_{N \text{ allowable}}$.

$$T_{B \max} \leq 200 \% T_{N \text{ allowable}}$$

If you have questions on the starting frequency of multi-stage brake motors, please consult SEW-EURODRIVE.

Avoiding blockage

Blockage on the output side of the multi-stage gear unit or multi-stage gearmotor is not permitted. The reason is that indeterminable torques and uncontrolled overhung and axial loads may occur. This may destroy the gear units.



Consult SEW-EURODRIVE if blockages of the multi-stage gear unit or multi-stage gearmotor cannot be avoided due to the application.

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5.4 Service factor

Determining the service factor

The effect of the driven machine on the gear unit is taken into account to a sufficient level of accuracy using the service factor f_B . The service factor is determined according to the daily operating time and the starting frequency Z . Three load classifications are taken into account depending on the mass acceleration factor. You can read off the service factor applicable to your application in Figure 3. The service factor determined from this diagram must be smaller than or equal to the service factor according to the selection tables.

$$T_a \cdot f_b \leq T_{a \max}$$

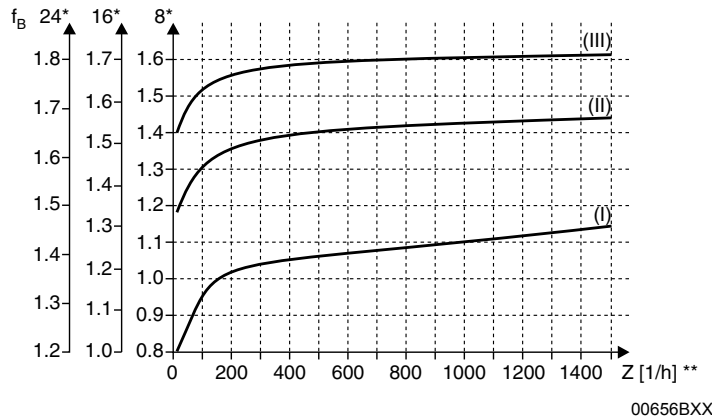


Figure 3: Service factor f_B

* Daily operating time in hours/day

** Starting frequency Z : The cycles include all starting and braking procedures as well as changeovers from low to high speed and vice versa.

Load classification

There are three load classifications:

- (I) Uniform, permitted mass acceleration factor ≤ 0.2
- (II) Non-uniform, permitted mass acceleration factor ≤ 3
- (III) Non-uniform, permitted mass acceleration factor ≤ 10

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**Mass acceleration factor**

The mass acceleration factor is calculated as follows:

$$\text{Mass acceleration factor} = \frac{\text{All external mass moments of inertia}}{\text{Mass moment of inertia on the motor end}}$$

"All external mass moments of inertia" are the mass moments of inertia of the driven machine and the gear unit, scaled down to the motor speed. The calculation for scaling down to motor speed is performed using the following formula:

$$J_X = J \cdot \left(\frac{n}{n_M}\right)^2$$

J_X = Mass moment of inertia scaled down to the motor shaft

J = Mass moment of inertia with reference to the output speed of the gear unit

n = Output speed of the gear unit

n_M = Motor speed

"Mass moment of inertia at the motor end" is the mass moment of inertia of the motor and, if installed, the brake and the flywheel fan (Z fan).

Service factors f_B 1.8 may occur with large mass acceleration factors (> 10), high levels of backlash in the transmission elements or large overhung loads. Contact SEW-EURODRIVE in such cases.

**Service factor:
SEW f_B**

The method for determining the maximum permitted continuous torque $T_{a \max}$ and using this value to derive the service factor $f_B = T_{a \max} / T_a$ is not defined in a standard and varies greatly from manufacturer to manufacturer. Even at a SEW service factor of $f_B = 1$, the gear units afford an extremely high level of safety and reliability in the fatigue strength range (exception: Wearing of the worm wheel of the helical-worm gear unit). The service factor may differ from specifications of other gear unit manufacturers. If you are in doubt, contact SEW-EURODRIVE for more detailed information on your specific drive.

Example

Mass acceleration factor 2.5 (load classification II), 14 hours/day operating time (read off at 16 h/d) and 300 cycles/hour, Figure 3, result in a service factor $f_B = 1.51$. According to the selection tables, the selected gearmotor must have an SEW f_B value of 1.51 or greater.

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helical-worm gear unit

For helical-worm gear units, two additional service factors will have to be taken into consideration besides service factor f_B derived from Figure 3 . These are:

- f_{B1} = Service factor from ambient temperature
- f_{B2} = Service factor from cyclic duration factor

The additional service factors f_{B1} and f_{B2} can be determined by referring to the diagrams in Figure 4 . For f_{B1} , the load classification is taken into account in the same way as for f_B .

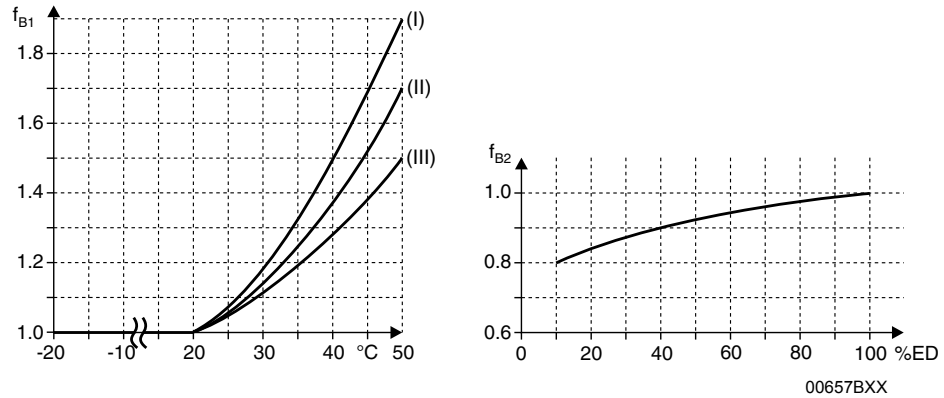


Figure 4: Additional service factors f_{B1} and f_{B2}

$$\text{cdf (\%)} = \frac{\text{Time under load in min/h}}{60} \cdot 1$$

Contact SEW-EURODRIVE in case of temperatures below -20 °C [-4 °F](→ f_{B1}).

The total service factor for helical-worm gear units is calculated as follows:

$$f_{B_{ges}} = f_B \cdot f_{B1} \cdot f_{B2}$$

Example

The gearmotor with the service factor $f_B = 1.51$ in the previous example is to be a helical-worm gearmotor.

Ambient temperature $\vartheta = 40$ °C → $f_{B1} = 1.38$ (read off at load classification II)

Time under load = 40 min/h → cdf = 66.67% → $f_{B2} = 0.95$

The total service factor is $f_{B_{ges}} = 1.51 \cdot 1.38 \cdot 0.95 = 1.98$

According to the selection tables, the selected helical-worm gearmotor must have an SEW f_B service factor of 1.98 or greater.

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5.5 Overhung and axial loads

Determining the overhung load

An important factor for determining the resulting overhung load is the type of transmission element mounted to the shaft end. The following transmission element factors f_z have to be considered for various transmission elements.

Transmission element	Transmission element factor f_z	Comments
Gears	1.15	< 17 teeth
Chain sprockets	1.40	< 13 teeth
Chain sprockets	1.25	< 20 teeth
Narrow V-belt pulleys	1.75	Influence of the tensile force
Flat-belt pulleys	2.50	Influence of the tensile force
Toothed belt pulleys	1.50	Influence of the tensile force

The overhung load exerted on the motor or gear shaft is calculated as follows:

$$F_R = \frac{T_d \cdot 2}{d_0} \cdot f_z$$

F_R = Overhung load in N

T_d = Torque in Nm

d_0 = Mean diameter of the installed transmission element in mm

f_z = Transmission element factor

Permitted overhung load

The basis for determining the permitted overhung loads is the computation of the rated bearing service life L_{10h} of the anti-friction bearings (according to ISO 281).

For special operating conditions, the permitted overhung loads can be determined with regard to the modified service life L_{na} on request.

The permitted overhung loads F_{Ra} for the output shafts of foot-mounted gear units with a solid shaft are listed in the selection tables for gearmotors. Contact SEW-EURODRIVE in case of other versions.



The values refer to force applied to the center of the shaft end . The values for the force application angle α and direction of rotation are based on the most unfavorable conditions.

- Only 50% of the F_{Ra} value specified in the selection tables is permitted in mounting position M1 with wall attachment on the front face for K and S gear units.
- Helical-bevel gearmotors K167 and K187 in mounting positions M1 to M4: A maximum of 50% of the overhung load F_{Ra} specified in the selection tables in the case of gear unit mounting other than as shown in the mounting position sheets.
- Foot and flange-mounted helical gearmotors (R..F): A maximum of 50% of the overhung load F_{Ra} specified in the selection tables for torque transmission via flange mounting are permitted.

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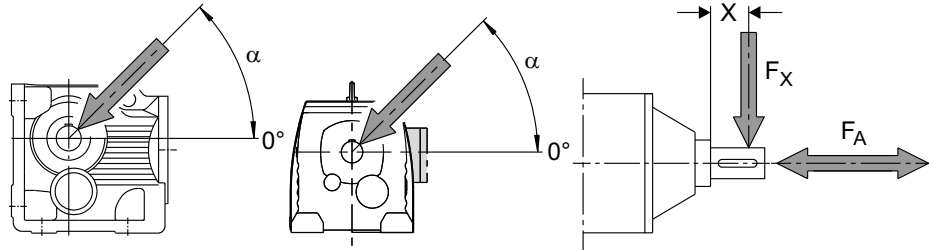


Higher permitted overhung loads

Exactly considering the force application angle α and the direction of rotation makes it possible to achieve a higher overhung load. Higher output shaft loads are permitted if heavy duty bearings are installed, especially with R, F and K gear units. Contact SEW-EURODRIVE in such cases.

Definition of the force application

The force application is defined according to the following figure:



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Figure 5: Definition of the force application

F_X = Permitted overhung load at point x [lb]

F_A = Permitted axial load [lb]

Permitted axial load

If there is no overhung load, then an axial force F_A (tension or compression) amounting to 50% of the overhung load given in the selection tables is permitted. This condition applies to the following gearmotors:

- Helical gearmotors except for R..137... to R..167...
- Parallel-shaft and helical-bevel gearmotors with solid shaft except for F97...
- Helical-worm gearmotors with solid shaft



Contact SEW-EURODRIVE for all other types of gear units and in the event of significantly greater axial forces or combinations of overhung load and axial force.

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On the input side:
Overhung load conversion for off-center force application

Important: only applies to gear units with input shaft assembly:

Please contact SEW-EURODRIVE for off-center force application on the drive end.

On the output side: Overhung load conversion for off-center force application

The permitted overhung loads must be calculated according the selection tables using the following formulae in the event that force is not applied at the center of the shaft end. The smaller of the two values F_{xL} (according to bearing life) and F_{xW} (according to shaft strength) is the permitted value for the overhung load at point x. Note that the calculations apply to $T_{a\ max}$.

F_{xL} according to bearing

$$F_{xL} = F_{Ra} \cdot \frac{a}{b + x} \quad [\text{lb}]$$

F_{xW} from the Shaft strength:

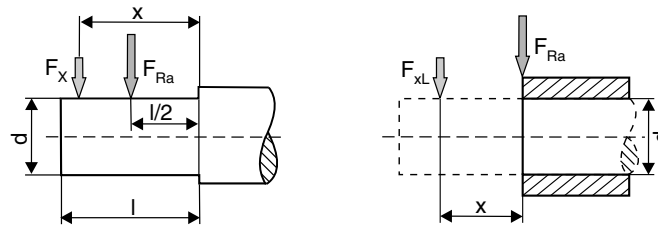
$$F_{xW} = \frac{c \cdot 10^3}{f + x} \quad [\text{lb}]$$

F_{Ra} = Permitted overhung load ($x = l/2$) for foot-mounted gear units according to the selection tables in [lb]

x = Distance from the shaft shoulder to the force application point in [in]

a, b, f = Gear unit constant for overhung load conversion [in]

c = Gear unit constant for overhung load conversion [in]



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Figure 6: Overhung load F_x for off-center force application

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Gear unit constants for overhung load conversion

Gear unit type	a [in]	b [in]	c [lb-in]	f [in]	d [in]	l [in]
RX57	1.71	0.93	1.34	1.35	0.750	1.57
RX67	2.07	1.08	2.14	1.56	1.000	1.97
RX77	2.38	1.20	1.73	0	1.250	2.36
RX87	2.89	1.32	6.81	1.93	1.625	3.15
RX97	3.41	1.44	12.66	2.12	2.125	3.94
RX107	4.04	1.67	21.86	2.45	2.375	4.72
R07	2.83	2.05	0.41	0.43	0.750	1.57
R17	3.48	2.70	0.58	0.67	0.750	1.57
R27	4.19	3.21	1.38	0.46	1.000	1.97
R37	4.65	3.66	1.10	0	1.000	1.97
R47	5.39	4.21	2.16	0.59	1.250	2.36
R57	5.81	4.43	3.34	0.71	1.375	2.76
R67	6.63	5.26	2.35	0	1.375	2.76
R77	6.84	5.26	3.51	0	1.625	3.15
R87	8.53	6.56	7.50	0	2.125	3.94
R97	10.06	7.70	10.53	0	2.375	4.72
R107	11.24	8.48	18.23	0	2.875	5.51
R137	13.52	10.18	54.34	1.18	3.625	6.69
R147	15.83	11.69	76.56	1.30	4.375	8.27
R167	17.72	13.58	111.52	0	4.750	8.27
F27	4.31	3.33	1.00	0	1.000	1.97
F37	4.86	3.88	0.95	0	1.000	1.97
F47	6.04	4.86	1.58	0	1.250	2.36
F57	6.72	5.34	4.86	1.26	1.375	2.76
F67	7.14	5.56	3.65	0	1.625	3.15
F77	8.50	6.53	6.97	0	2.000	3.94
F87	10.35	7.99	10.53	0	2.375	4.72
F97	13.78	11.02	18.50	0	2.875	5.51
F107	14.70	11.36	37.44	0	3.625	6.69
F127	17.42	13.29	83.64	0	4.375	8.27
F157	20.16	16.02	92.93	0	4.750	8.27
K37	4.86	3.88	1.25	0	1.000	1.97
K47	6.04	4.86	1.58	0	1.250	2.36
K57	6.68	5.30	6.02	1.22	1.375	2.76
K67	7.14	5.56	3.65	0	1.625	3.15
K77	8.50	6.53	6.81	0	2.000	3.94
K87	9.92	7.56	14.52	0	2.375	4.72
K97	12.56	9.80	24.78	0	2.875	5.51
K107	14.70	11.36	48.94	0	3.325	6.69
K127	17.46	13.33	73.55	0	4.375	8.27
K157	20.04	15.91	104.44	0	4.750	8.27
K167	24.47	19.55	166.39	0	6.250	9.84
K187	28.37	22.07	269.06	0	7.500	12.60
W10	3.34	2.55	0.32	0	0.625	1.57
W20	3.88	3.09	0.39	0	0.750	1.57
W30	4.31	3.52	0.53	0	0.750	1.57
W37	4.77	3.98	0.61	0	0.787	1.57
W47	5.73	4.55	3.74	1.40	1.181	2.36
S37	4.67	3.88	0.53	0	0.750	1.57
S47	5.12	4.13	1.18	0	1.000	1.97
S57	5.91	4.72	1.89	0	1.250	2.36
S67	7.24	5.87	2.69	0	1.375	2.76
S77	8.82	7.05	4.66	0	1.750	3.54
S87	11.08	8.72	14.87	0	2.375	4.72
S97	12.85	10.09	22.48	0	2.875	5.51

Values for types not listed are available on request.

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5.6 RM gear units

Project planning You must take account of the higher overhung loads and axial forces when planning projects with RM helical gearmotors with extended bearing housing. Observe the following project planning procedure:

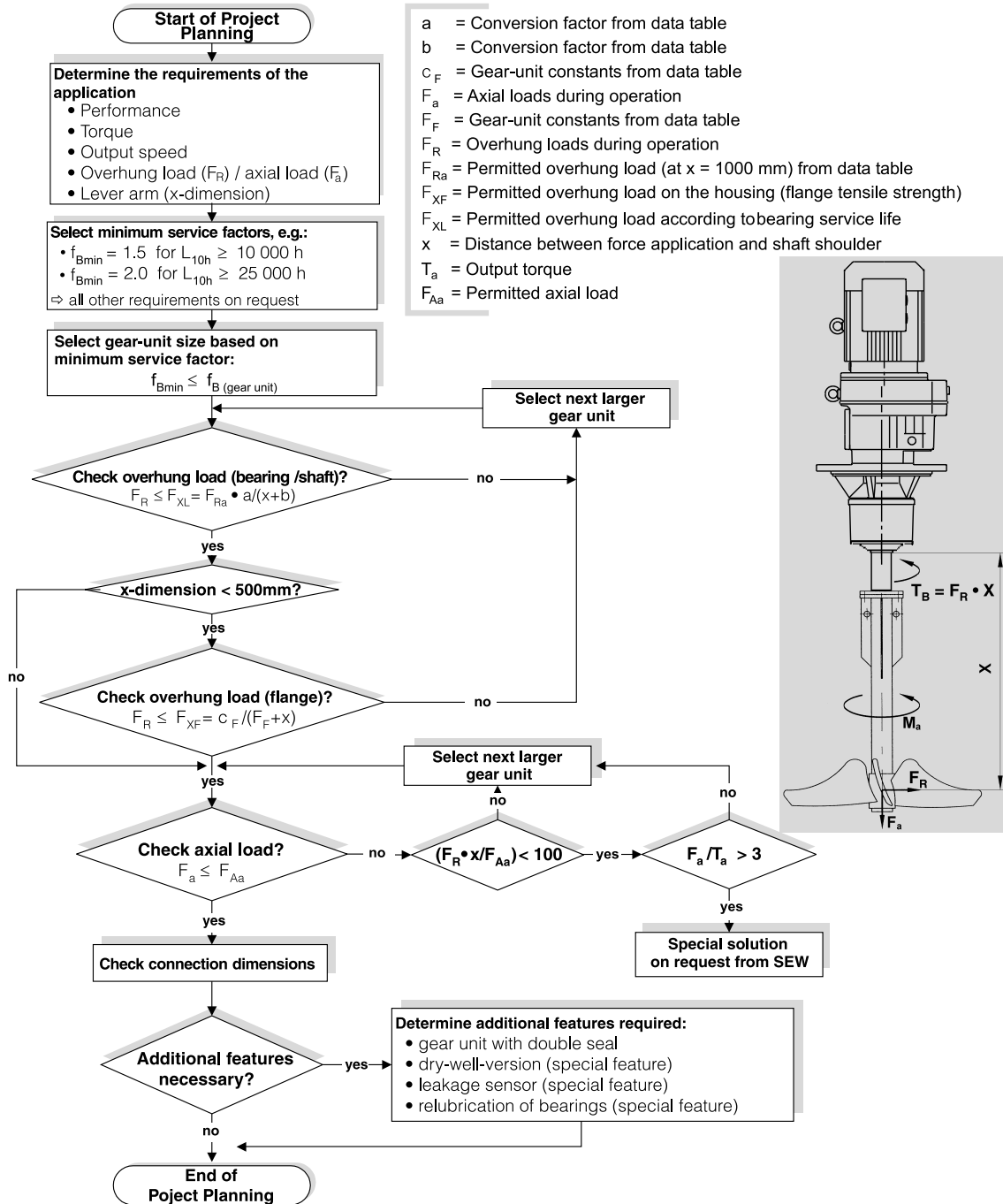


Figure 7: Project planning for RM gear units



Permitted overhung loads and axial forces

The permitted overhung loads F_{Ra} and axial forces F_{Aa} are specified for various service factors f_B and nominal bearing service life L_{10h} .

$f_{Bmin} = 1.5; L_{10h} = 10,000 h$

		n_a [rpm]							
		< 16	16-25	26-40	41-60	61-100	101-160	161-250	251-400
RM57	F_{Ra} [N]	400	400	400	400	400	405	410	415
	F_{Aa} [N]	18800	15000	11500	9700	7100	5650	4450	3800
RM67	F_{Ra} [N]	575	575	575	580	575	585	590	600
	F_{Aa} [N]	19000	18900	15300	11900	9210	7470	5870	5050
RM77	F_{Ra} [N]	1200	1200	1200	1200	1200	1210	1210	1220
	F_{Aa} [N]	22000	22000	19400	15100	11400	9220	7200	6710
RM87	F_{Ra} [N]	1970	1970	1970	1970	1980	1990	2000	2010
	F_{Aa} [N]	30000	30000	23600	18000	14300	11000	8940	8030
RM97	F_{Ra} [N]	2980	2980	2980	2990	3010	3050	3060	3080
	F_{Aa} [N]	40000	36100	27300	20300	15900	12600	9640	7810
RM107	F_{Ra} [N]	4230	4230	4230	4230	4230	4230	3580	3830
	F_{Aa} [N]	48000	41000	30300	23000	18000	13100	9550	9030
RM137	F_{Ra} [N]	8710	8710	8710	8710	7220	5060	3980	6750
	F_{Aa} [N]	70000	70000	70000	57600	46900	44000	35600	32400
RM147	F_{Ra} [N]	11100	11100	11100	11100	11100	10600	8640	10800
	F_{Aa} [N]	70000	70000	69700	58400	45600	38000	32800	30800
RM167	F_{Ra} [N]	14600	14600	14600	14600	14600	14700	-	-
	F_{Aa} [N]	70000	70000	70000	60300	45300	36900	-	-

$f_{Bmin} = 2.0; L_{10h} = 25 000 h$

		n_a [rpm]							
		< 16	16-25	26-40	41-60	61-100	101-160	161-250	251-400
RM57	F_{Ra} [N]	410	410	410	410	410	415	415	420
	F_{Aa} [N]	12100	9600	7350	6050	4300	3350	2600	2200
RM67	F_{Ra} [N]	590	590	590	595	590	595	600	605
	F_{Aa} [N]	15800	12000	9580	7330	5580	4460	3460	2930
RM77	F_{Ra} [N]	1210	1210	1210	1210	1210	1220	1220	1220
	F_{Aa} [N]	20000	15400	11900	9070	6670	5280	4010	3700
RM87	F_{Ra} [N]	2000	2000	2000	2000	2000	1720	1690	1710
	F_{Aa} [N]	24600	19200	14300	10600	8190	6100	5490	4860
RM97	F_{Ra} [N]	3040	3040	3040	3050	3070	3080	2540	2430
	F_{Aa} [N]	28400	22000	16200	11600	8850	6840	5830	4760
RM107	F_{Ra} [N]	4330	4330	4330	4330	4330	3350	2810	2990
	F_{Aa} [N]	32300	24800	17800	13000	9780	8170	5950	5620
RM137	F_{Ra} [N]	8850	8850	8850	8830	5660	4020	3200	5240
	F_{Aa} [N]	70000	59900	48000	37900	33800	31700	25600	23300
RM147	F_{Ra} [N]	11400	11400	11400	11400	11400	8320	6850	8440
	F_{Aa} [N]	70000	60600	45900	39900	33500	27900	24100	22600
RM167	F_{Ra} [N]	15100	15100	15100	15100	15100	13100	-	-
	F_{Aa} [N]	70000	68500	51600	37800	26800	23600	-	-



Project Planning for Gear Units

RM gear units

Conversion factors and gear unit constants

The following conversion factors and gear unit constants apply to calculating the permitted overhung load F_{XL} at point $x \neq 1000$ mm for RM gearmotors:

Gear unit type	a	b	$c_F (f_B = 1.5)$	$c_F (f_B = 2.0)$	F_F
RM57	1047	47	1220600	1260400	277
RM67	1047	47	2047600	2100000	297.5
RM77	1050	50	2512800	2574700	340.5
RM87	1056.5	56.5	4917800	5029000	414
RM97	1061	61	10911600	11124100	481
RM107	1069	69	15367000	15652000	554.5
RM137	1088	88	25291700	25993600	650
RM147	1091	91	30038700	31173900	756
RM167	1089.5	89.5	42096100	43654300	869

Additional weight RM gear units

Type	Additional weight compared to RF with reference to the smallest RF flange Δm [kg / lb]
RM57	12.0 / 26.4
RM67	15.8 / 34.8
RM77	25.0 / 55.1
RM87	29.7 / 65.5
RM97	51.3 / 113.1
RM107	88.0 / 194.0
RM137	111.1 / 244.9
RM147	167.4 / 369.1
RM167	195.4 / 430.8

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5.7 Condition monitoring: Oil aging and vibration sensor

DUO10A diagnostics unit (Oil aging sensor)

The diagnostic unit consists of a temperature sensor and the actual evaluation unit. The temperature sensor is screwed into a screw plug bore of the gear unit via an adapter system and connected to the evaluation unit.

The service life curves of the oil grades common in SEW gear units are stored in the electronics of the evaluation unit. SEW-EURODRIVE can also customize any oil grade in the diagnostic unit. Standard parameterization is performed directly on the evaluation unit. During operation, the evaluation unit continuously calculates the remaining service life in days based on the oil temperature, i.e. the time until the next oil change. The remaining service life is displayed directly on the evaluation unit. The expiration of the service life can also be transferred to a higher-level system via a binary signal and be evaluated or visualized there. Other switch outputs signal when a prewarning stage has been reached, a preset temperature limit is exceeded or readiness for operation. The voltage supply is DC 24 V.

The system operator no longer has to replace the oil within predefined intervals, but can adapt the replacement interval individually to the actual load. The benefits are reduced maintenance and service costs and increased system availability.

5

DUV10A diagnostics unit (vibration sensor)

The DUV10A diagnostics unit measures the structure-borne noise and uses this value to calculate the frequency spectrum. The structure-borne noise sensor and evaluation electronics are fully integrated in the diagnostic unit. Data, such as vibration acceleration, damage frequencies, etc., can be recorded, processed and evaluated decentralized without any expert knowledge. The damage progress of the diagnosis objects is indicated by the LEDs directly on the diagnostics unit. External visualization of the binary signals to the controller is also possible. A depth diagnosis can be displayed via the software.

The diagnostics unit is attached to the gearmotor or motor using a fastening element. The position where the diagnostic unit is installed depends on the objects to be diagnosed (gear unit/motor type, mounting position). The tightening torque for the screw connection is 7 Nm.

The diagnostic unit can be used to monitor up to 5 different objects or 20 individual frequencies. The diagnostic unit can be used with both constant and variable speeds. To ensure correct diagnosis when using variable speeds, a 0...20 mA current loop or a pulse signal must be supplied. The voltage supply is DC 24 V.

The parameters of the unit are set using the supplied software. When all data have been parameterized, a pulse test is carried out to check the signal level from the diagnostics object to the diagnostics unit. Next, all data is transferred to the sensor and a teach-in run can be performed. The teach-in is a self-learning process performed by the sensor under operating conditions. After successful teach-in, the unit is ready and enters monitoring mode. As the unit requires a certain measuring time at constant speed depending on the setting and number of objects to be monitored, you should consult SEW-EURODRIVE for applications where this time is < 16 seconds.

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6 Mounting Positions and Important Order Information

6.1 General information regarding the mounting positions

Designation of the mounting positions

SEW-EURODRIVE differentiates between six mounting positions M1 ... M6 for gear units, gearmotors and MOVIMOT® gearmotors. The following figure shows the position of the gear unit in mounting positions M1...M6.

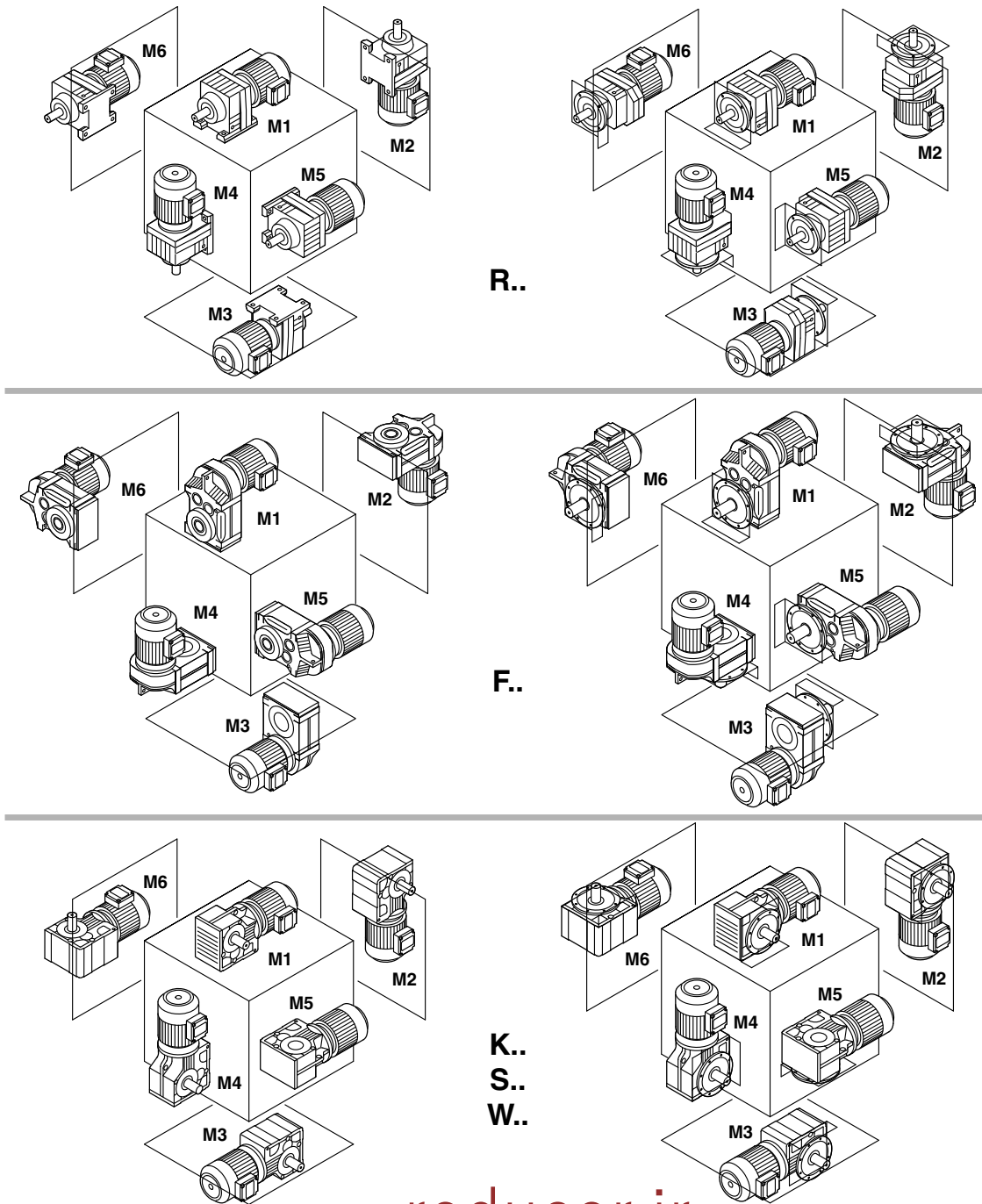


Figure 8: Depiction of mounting positions M1 ... M6

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6.2 Important order information



The following order information is required for R, F, K and S gear units and gearmotors in addition to the mounting position to exactly determine the design of the drive.

This information is also required for Spiroplan® gearmotors (W gearmotors) that do not depend on a particular mounting position.

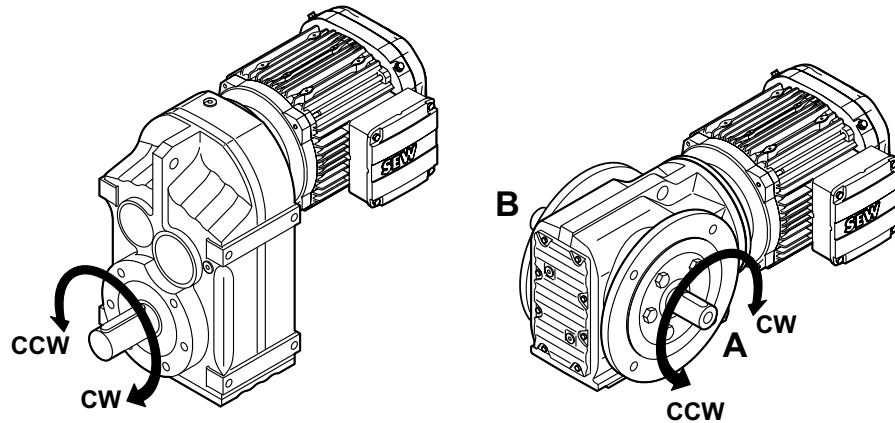
The following applies to all gear units and gearmotors

Observe the following notes for all gear units and gearmotors from SEW-EURODRIVE.

Output direction of rotation with backstop

If the drive has an RS backstop, you have to indicate the direction of rotation of the output for the drive. The following definition applies:

As viewed at the output shaft: CW = Rotating clockwise
CCW = Rotating counterclockwise



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Figure 9: Output direction of rotation

In right-angle gear units, you also have to indicate whether the direction of rotation is given looking onto the A or B end.

Position of the output shaft and output flange

In right-angle gear units, you also have to indicate the position of the output shaft and the output flange:

- A or B or AB

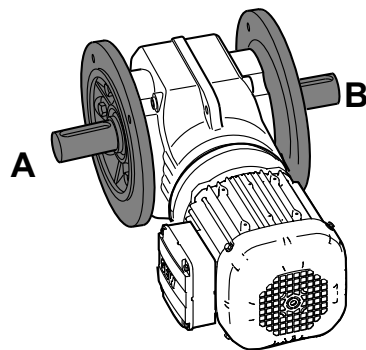
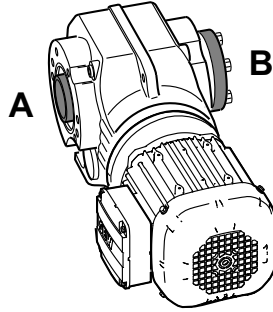


Figure 10: Position of the output shaft and the output flange

Position of output end in right-angle gear units

In shaft mounted right-angle gear units with a shrink disk, you also have to indicate whether the A or B end is the output end. In Figure 11, the A end is the output end. The shrink disk is located opposite the output end.

In shaft mounted right-angle gear units, the "output end" is equivalent to the "shaft position" of right-angle gear units with solid shaft.



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Figure 11: Position of the output end



You will find the permitted mounting surfaces (= hatched area) in the mounting position sheets (page 60 and the following pages).

Example: Only the mounting surface at the bottom is possible with helical-bevel gear units K167/K187 in mounting positions M5 and M6.

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For all gearmotors

Observe the following notes for all gearmotors from SEW-EURODRIVE.

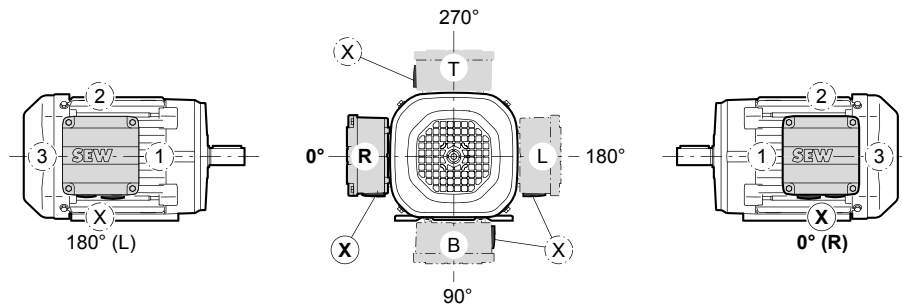
Position of the motor terminal box and the cable entry

The position of the motor terminal box has so far been specified indicated with 0°, 90°, 180° or 270° as viewed onto the fan guard = B-end (→ Figure 12). A change in the product standard EN 60034 specifies that the following designations will have to be used for terminal box positions for foot-mounted motors in the future:

- As viewed onto the output shaft = A-end
- Designation as R (right), B (bottom), L (left) and T (top)

This new designation applies to foot-mounted motors without a gear unit in mounting position B3 (= M1). The previous designation is maintained for gearmotors. Figure 12 shows both designations. Where the mounting position of the motor changes, R, B, L and T are rotated accordingly. In motor mounting position B8 (= M3), T is at the bottom.

The position of the cable entry can be selected as well. The positions are "X" (= standard position), "1", "2" or "3" (→ Figure 12).



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Figure 12: Position of terminal box and cable entry

Unless indicated otherwise, you will receive the terminal box type 0° (R) with "X" cable entry. We recommend selecting cable entry "2" with mounting position M3.



- **When the terminal box is in the 90° (B) position**, check to see if the gearmotor has to be supported.

Software support

Not any cable entry position [X, 1, 2, 3] and terminal box position [0°(R), 90°(B), 180°(L), 270°(T)] can be chosen. Some additional features for the motor require a connection inside the terminal box, which means this terminal box is larger than the standard terminal box due to the normative air gaps and creepage distances. The dimension sheets only depict the standard terminal box.

For a thorough check of the possible positions of your drive, you can use the DRIVECAD software available through PT Pilot® on the SEW-Eurodrive website.

- To register or to login, go to www.ptpilot.com. After login, click 2D/3D CAD.

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Sample orders

Type (Examples)	Mounting position	Shaft position	Flange position	Terminal box position	Cable entry position	Output direction of rotation
K47DRS71S4/RS	M2	A	-	0°	"X"	CW
SF77DRE100M4	M6	AB	AB	90°	"3"	-
KA97DRE132S4	M4	B	-	270°	"2"	-
KH107DRE132M4	M1	A	-	180°	"3"	-
WF20DRS71M4	-	A	A	0°	"X"	-
KAF67A	M3	A	B	-	-	-

Change in mounting position

Make sure to read the following information when you operate the gearmotor in a mounting position other than the one indicated in the order:

- Adjust lubricant fill quantity to match the new mounting position
- Adjust position of breather valve
- For helical-bevel gearmotors: Contact the SEW-EURODRIVE customer service prior to changing to mounting position M5 or M6 and when changing from M5 to M6 or vice versa.
- For helical-worm gearmotors: Contact the SEW-EURODRIVE customer service when changing to mounting position M2 or M3.

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6.3 Key to the mounting position sheets



The Spiroplan® gearmotors are not dependant on the mounting position, except for W..37 and W..47 in mounting position M4. However, mounting positions M1 to M6 are also shown for Spiroplan® gearmotors to assist you in working with this documentation.

Important! Please note:

Spiroplan® gearmotors W..10 to W..30 cannot be equipped with breather valves, oil level plugs or drain plugs.

Spiroplan® gearmotors W..37 and W..47 can be equipped with breather valves, oil level plugs or drain plugs.

Symbols used

The following table shows the symbols used in the mounting position sheets and their meaning:

Symbol	Meaning
	Breather valve
	Oil level plug ¹⁾
	Oil drain plug

1) Does not apply to the first gear unit (larger gear unit) of multi-stage gear units.

Churning losses

* → page 40

Churning losses may occur in some mounting positions. Contact SEW-EURODRIVE in case of the following combinations:

Mounting position	Gear unit type	Gear unit size	Input speed [rpm]
M2, M4	R	97 ... 107	> 2500
		> 107	>1500
M2, M3, M4, M5, M6	F	97 ... 107	> 2500
		> 107	> 1500
	K	77 ... 107	> 2500
		> 107	> 1500
	S	77 ... 97	> 2500

Displayed shaft

Note the following information regarding display of shafts in the mounting position sheets:



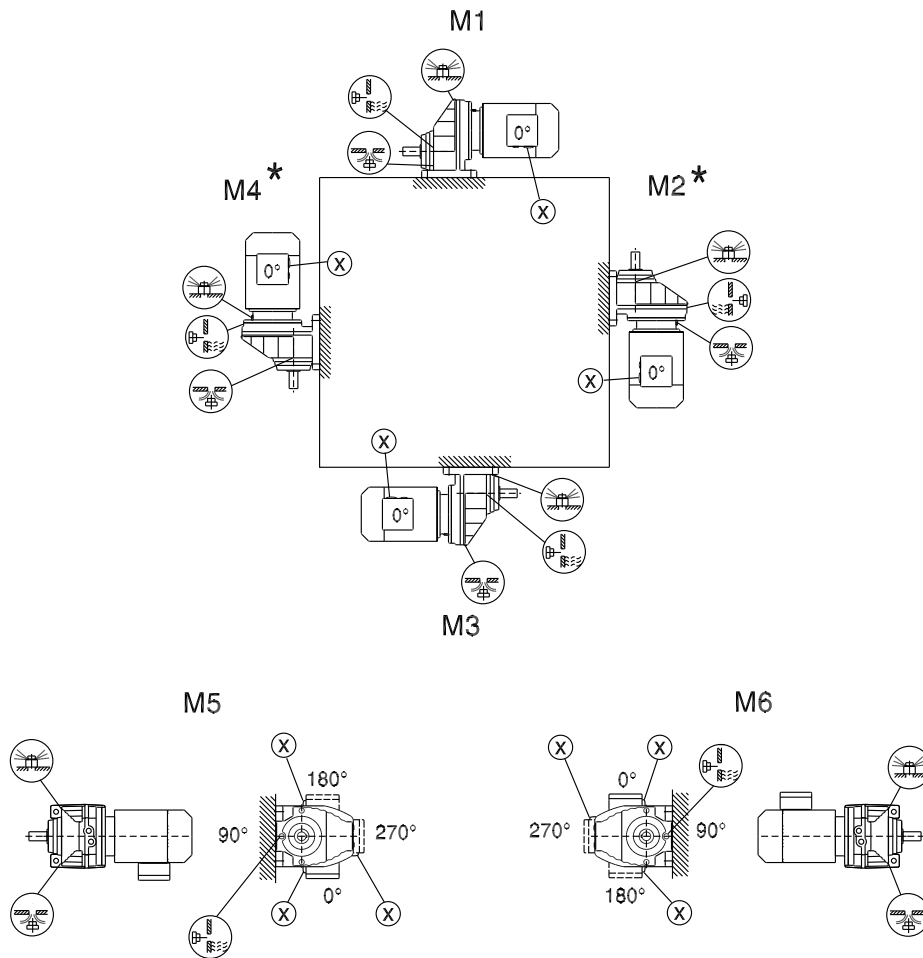
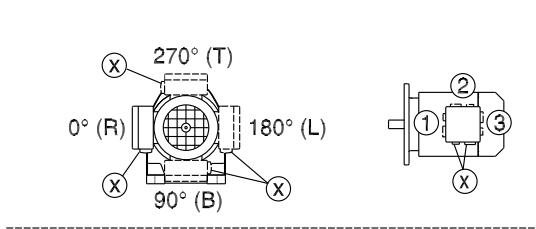
- **For gear units with solid shaft:** The displayed shaft is always on the A end.
- **For shaft mounted gear units:** The shaft with dashed lines represents the customer shaft. The output end (= shaft position) is always shown on the A end.

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6.4 Helical gearmotors – mounting positions

RX57-RX107

04 043 02 00

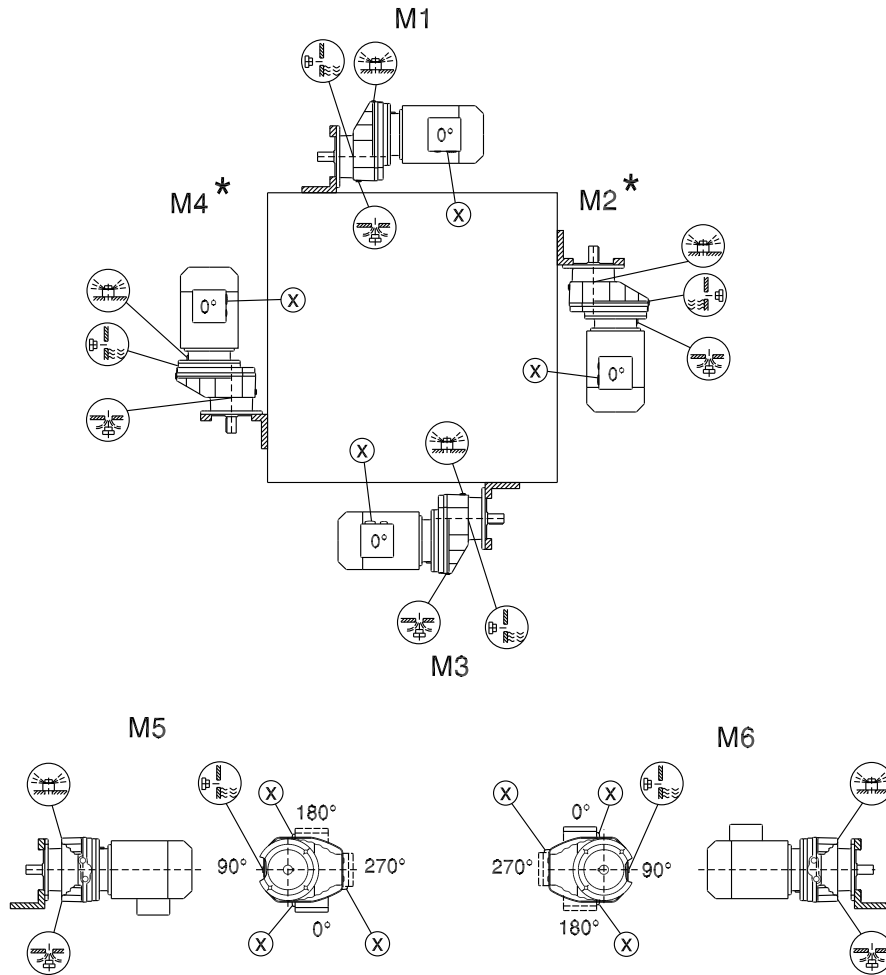
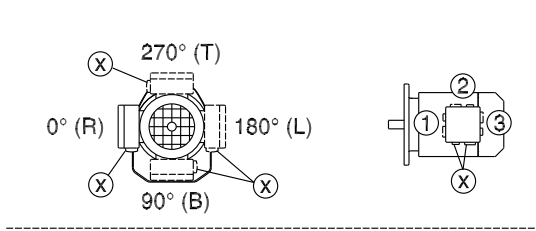


* → page 59

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RXF57-RXF107

04 044 02 00

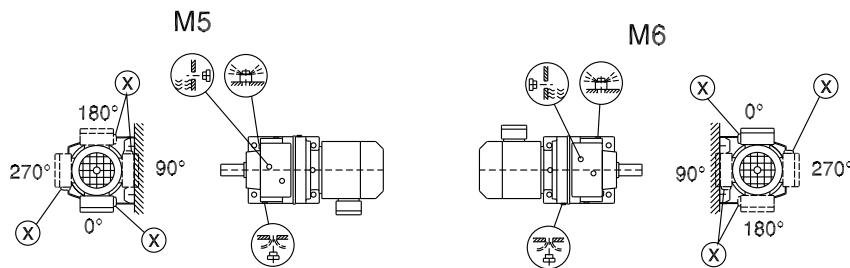
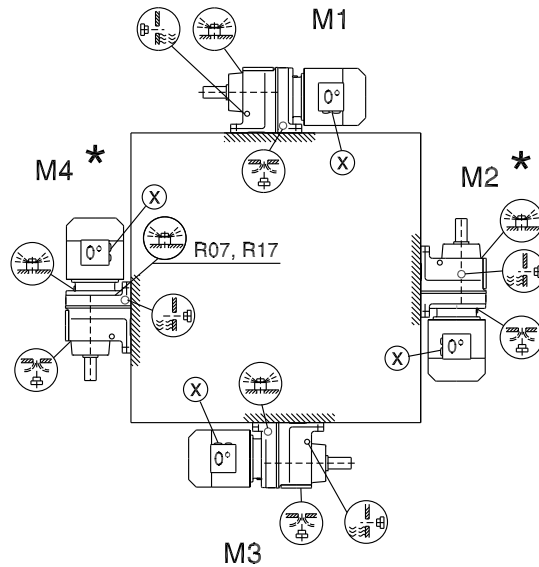
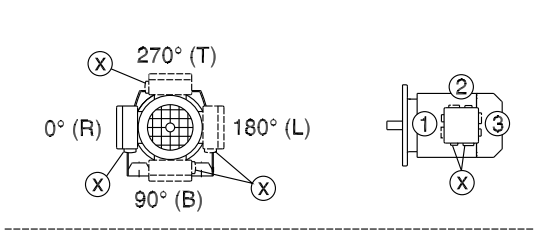


* → page 59

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R07-R167

04 040 03 00



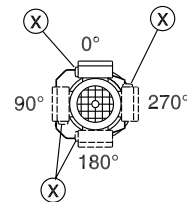
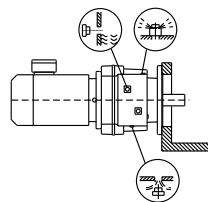
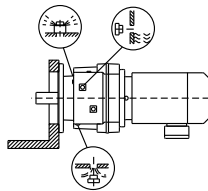
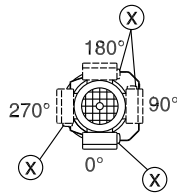
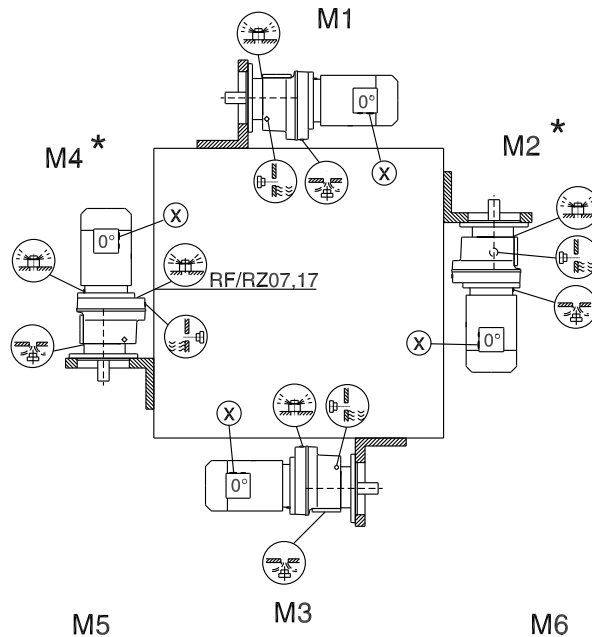
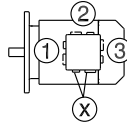
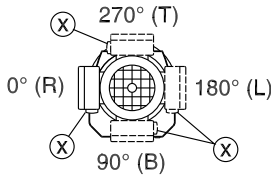
- R07 M1, M2, M3, M5, M6
- R17, R27 M1, M3, M5, M6
- R07, R17, R27
- R47, R57 M5

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RF07-RF167, RZ07-RZ87

04 041 03 00



RF/RZ07  M1, M2, M3, M5, M6

RF/RZ17,27  M1, M3, M5, M6

RF/RZ07, 17, 27  

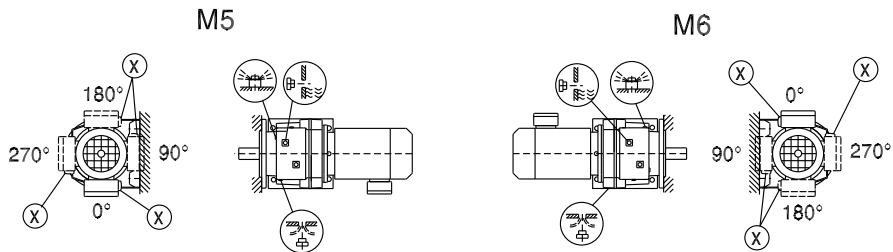
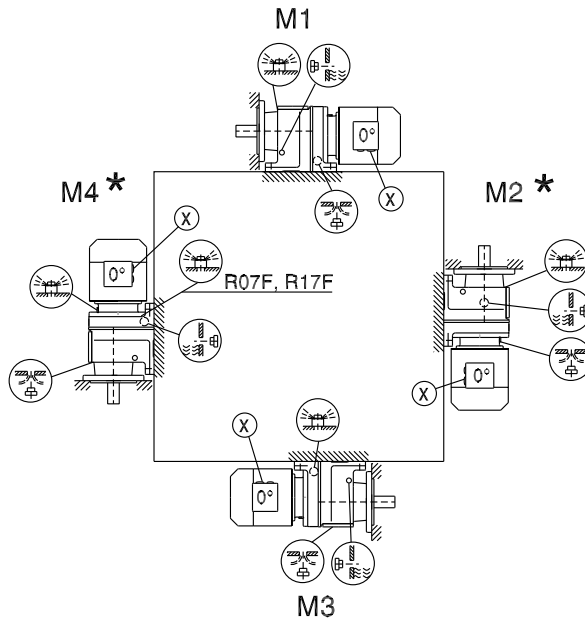
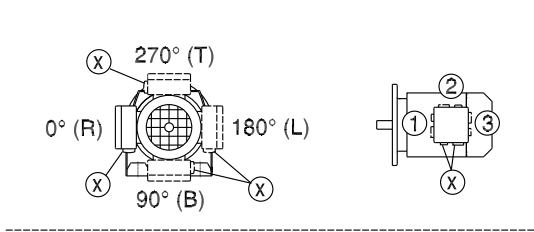
RF/RZ47, 57  M5

* → page 59

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R07F-R87F

04 042 03 00



R07F		M1, M2, M3, M5, M6
R17F, R27F		M1, M3, M5, M6
R07F, R17F, R27F		
R47F, R57F		M5

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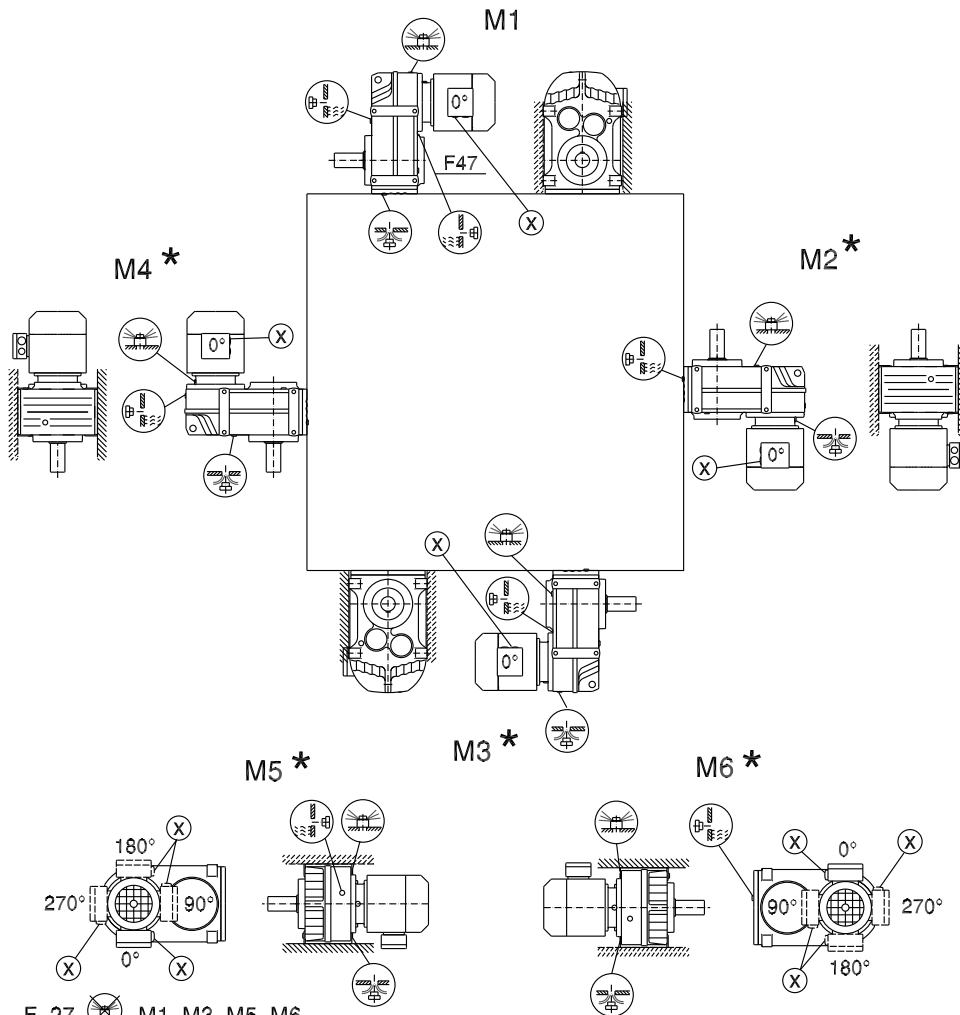
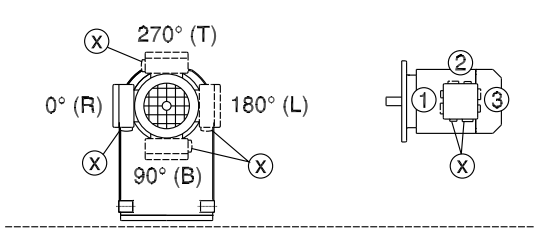
Caution: See the information marked with in the "Gearmotors" catalog, section "Project Planning for Gear Units/Overhung and axial loads" (page 36).



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6.5 Parallel-shaft helical gearmotors – mounting positions

F/FA..B/FH27B-157B, FV27B-107B

42 042 03 00



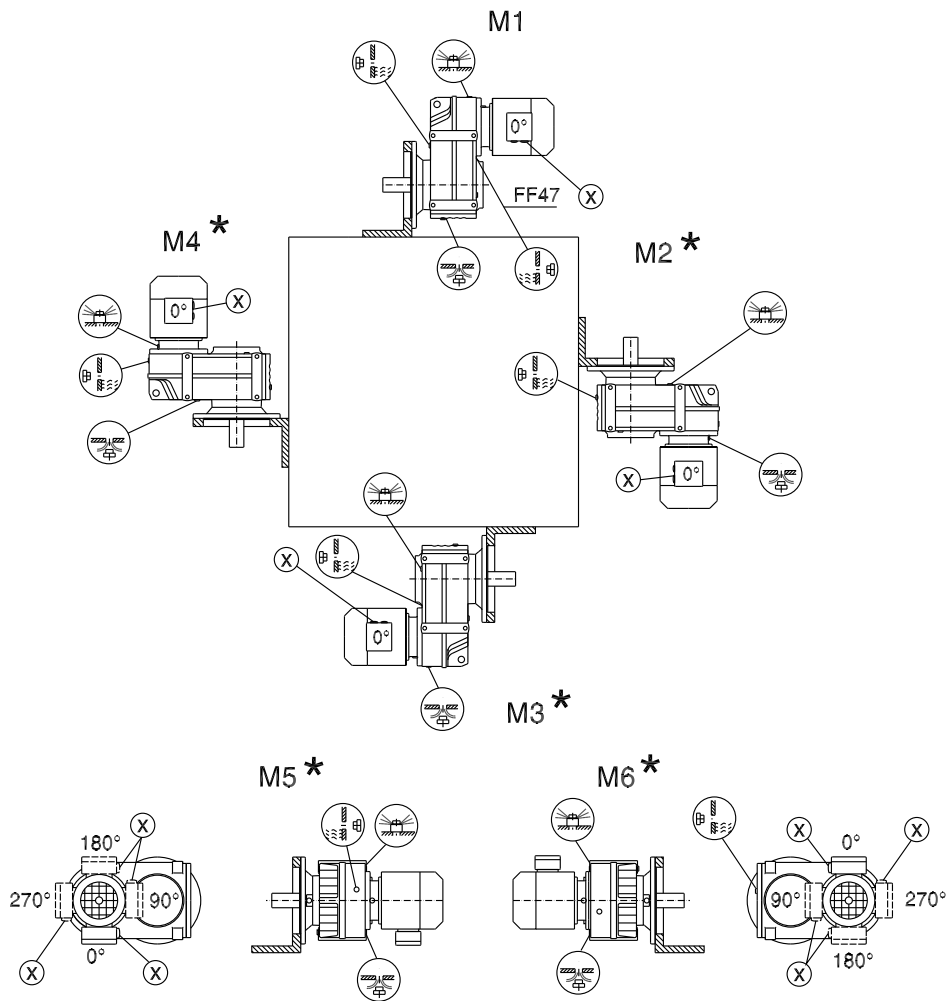
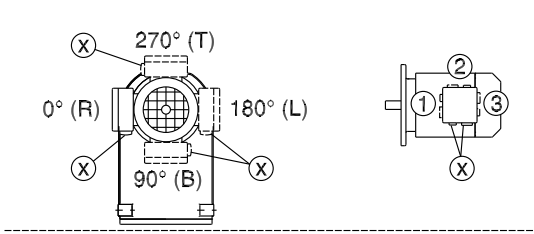
- F..27  M1, M3, M5, M6
- F..27  M1 - M6
- F..27  M1, M3, M5, M6

* → page 59

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FF/FAF/FHF/FAZ/FHZ27-157, FVF/FVZ27-107

42 043 03 00



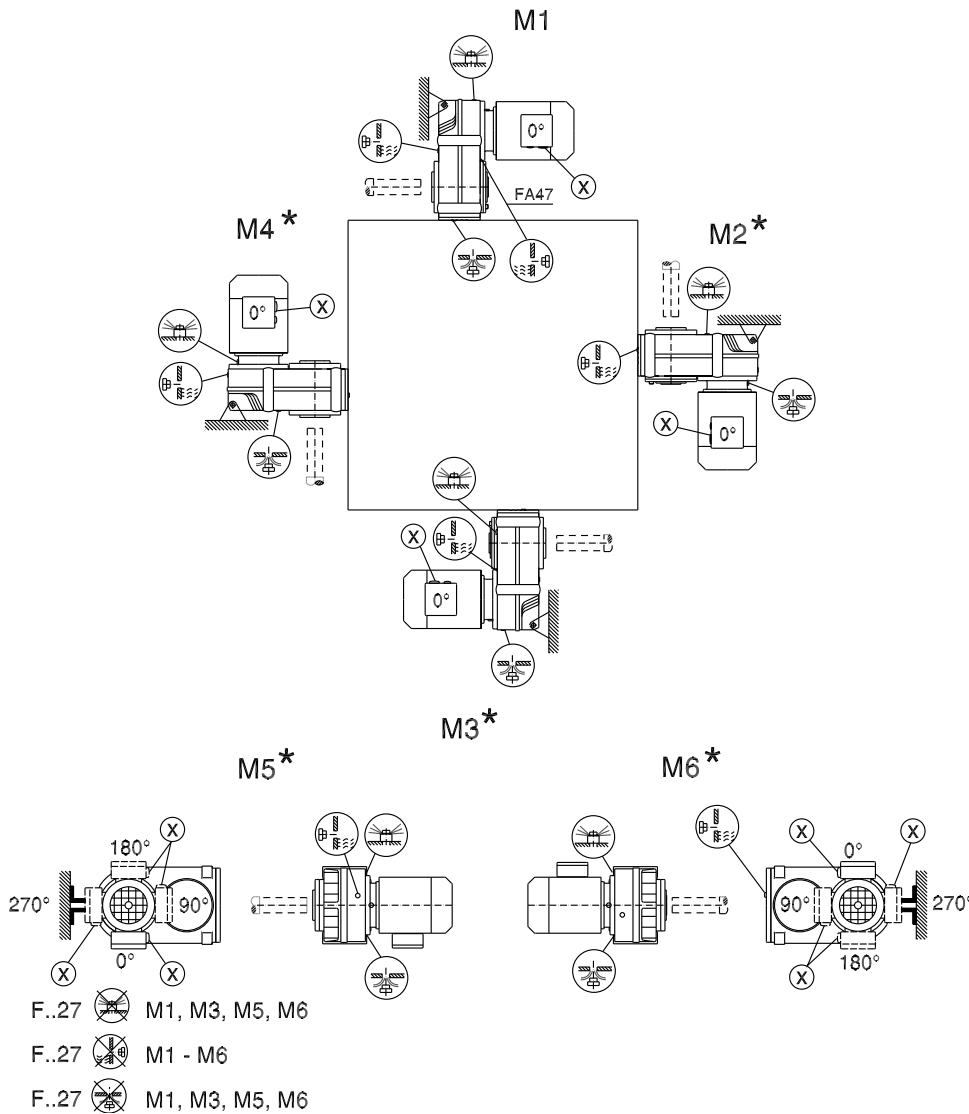
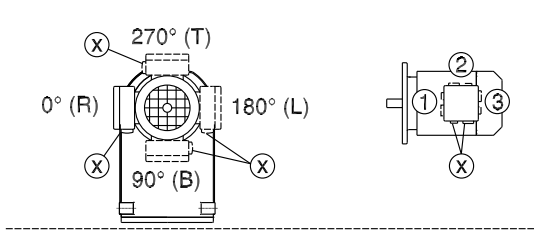
- F..27 M1, M3, M5, M6
- F..27 M1 - M6
- F..27 M1, M3, M5, M6

* → page 59

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FA/FH27-157, FV27-107, FT37-97

42 044 03 00



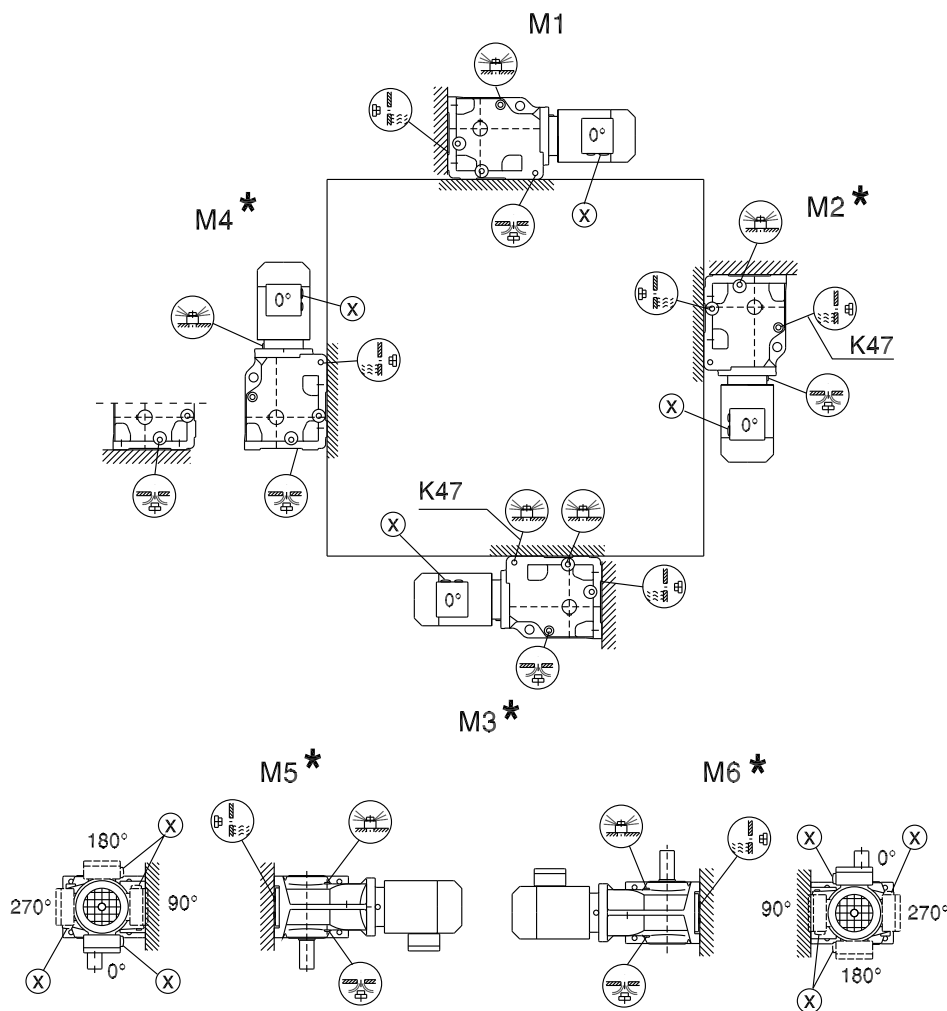
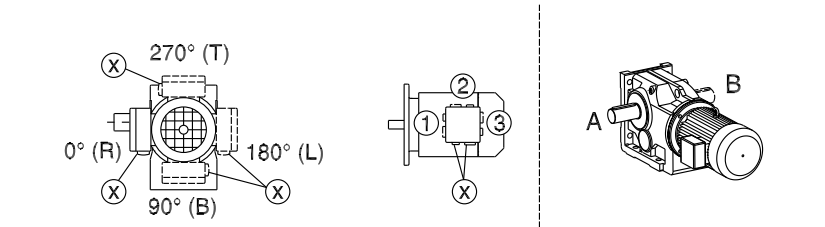
* → page 59

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6.6 Helical-bevel gearmotors – mounting positions

K/KA..B/KH47B-157B, KV37B-107B

34 025 03 00



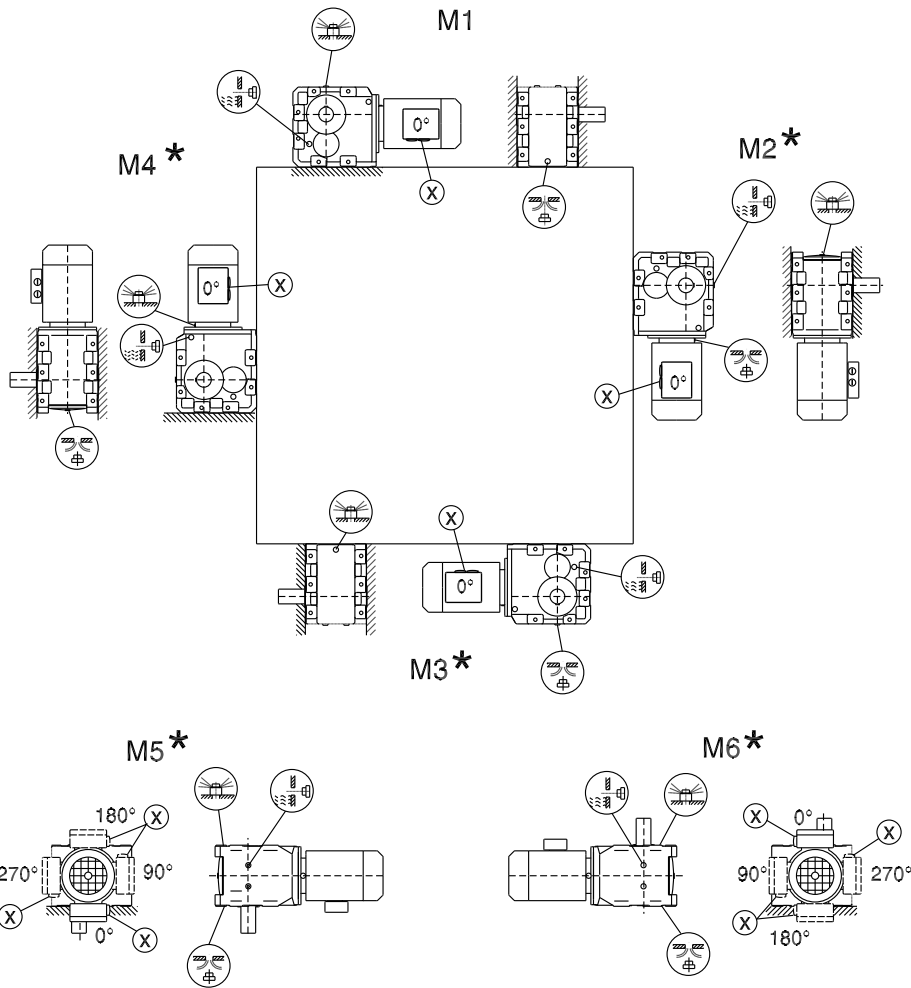
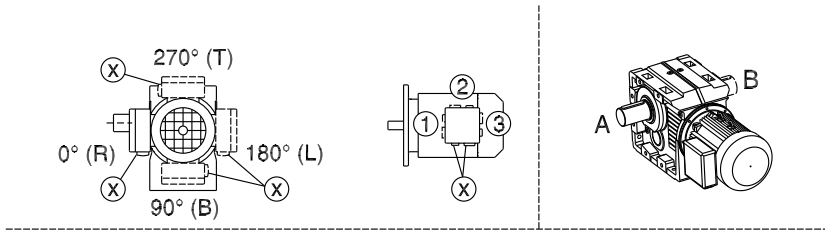
* → page 59

Caution: See the information marked with **i** in the "Gearmotors" catalog, section "Project Planning for Gear Units/Overhung and axial loads" (page 36).


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K167-187, KH167B-187B

34 026 03 00



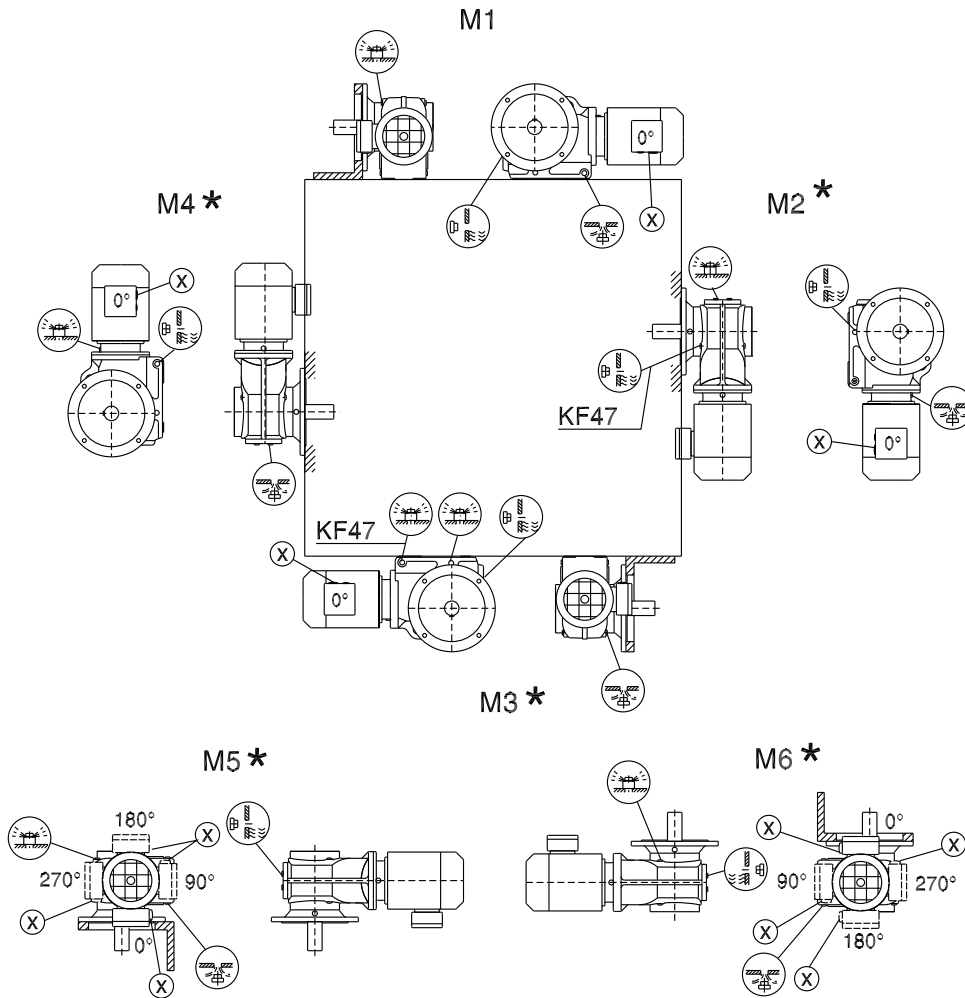
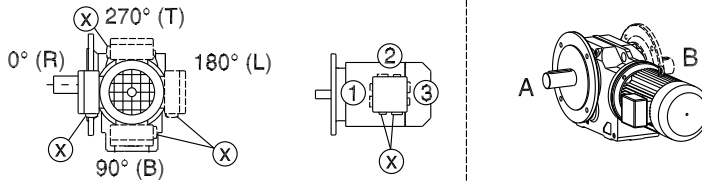
* → page 59

Caution: See the information marked with  in the "Gearmotors" catalog, section "Project Planning for Gear Units/Overhung and axial loads" (page 36).

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KF/KAF/KHF/KAZ/KHZ37-157, KVF/KVZ37-107

34 027 03 00

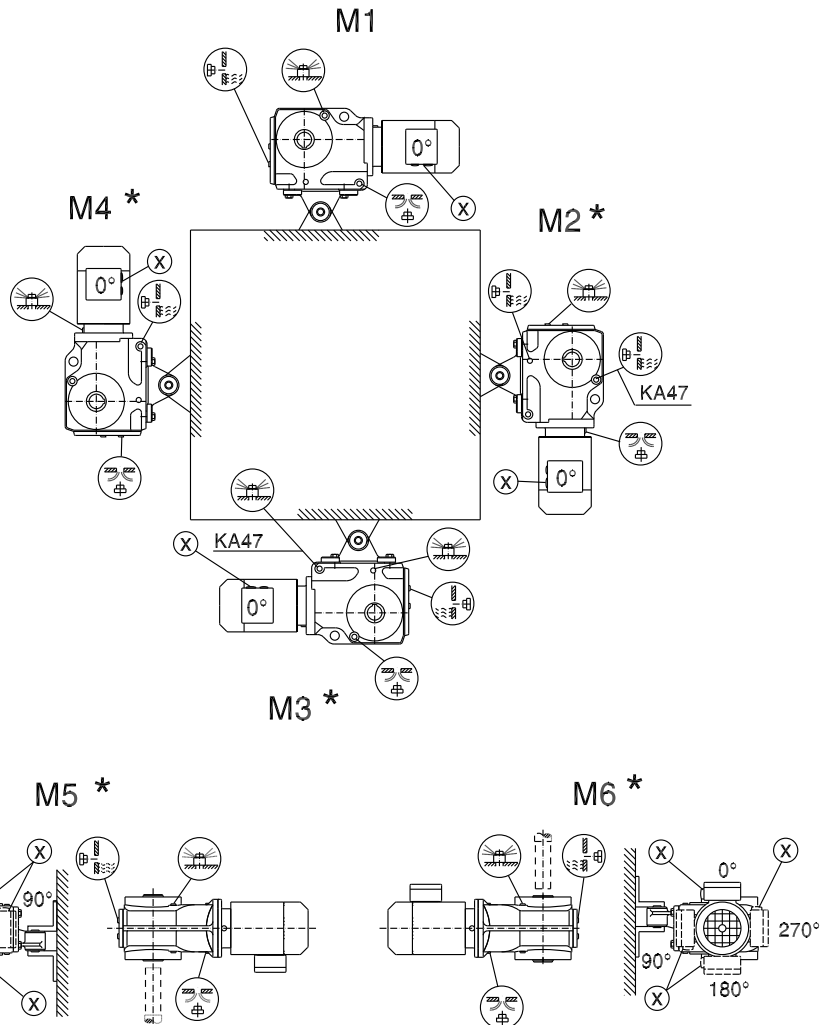
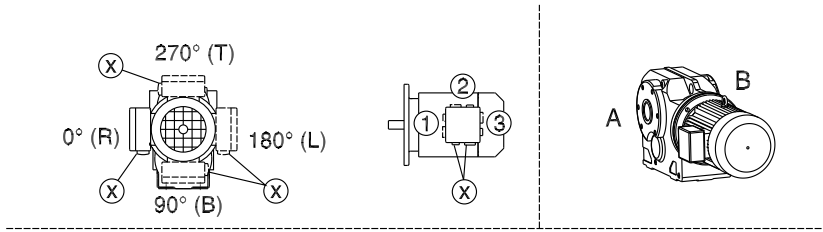


* → page 59

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KA/KH37-157, KV37-107, KT37-97

39 025 04 00

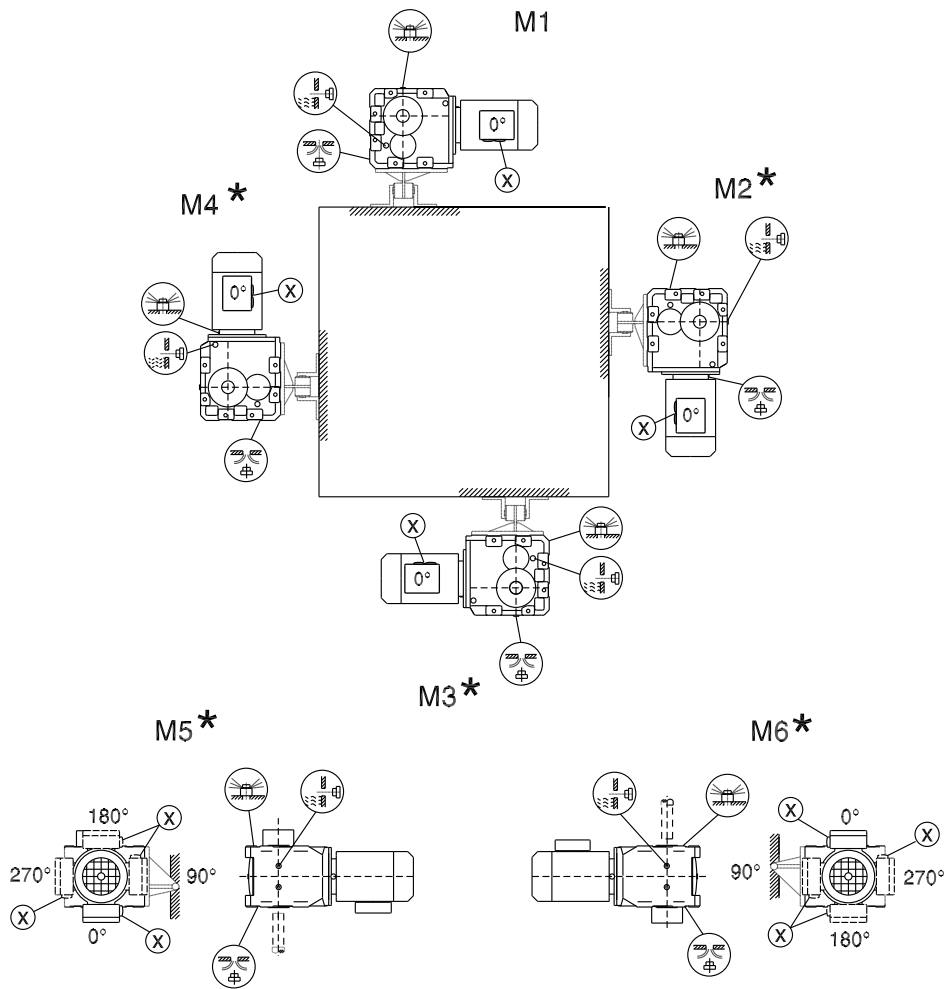
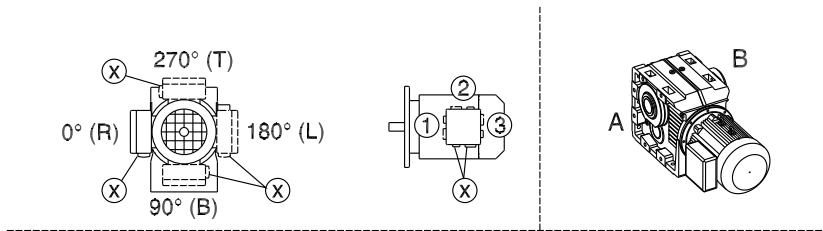


* → page 59

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KH167-187

39 026 04 00

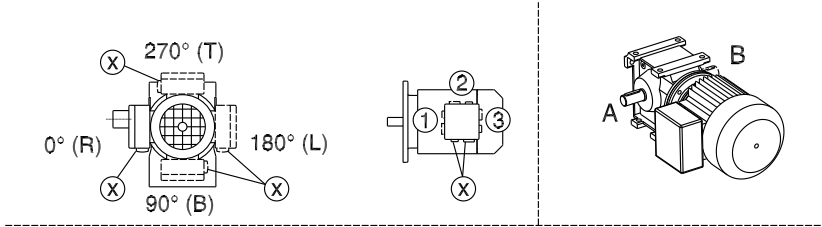


* → page 59

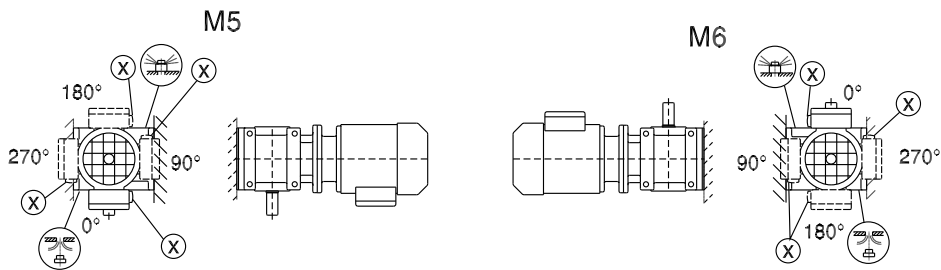
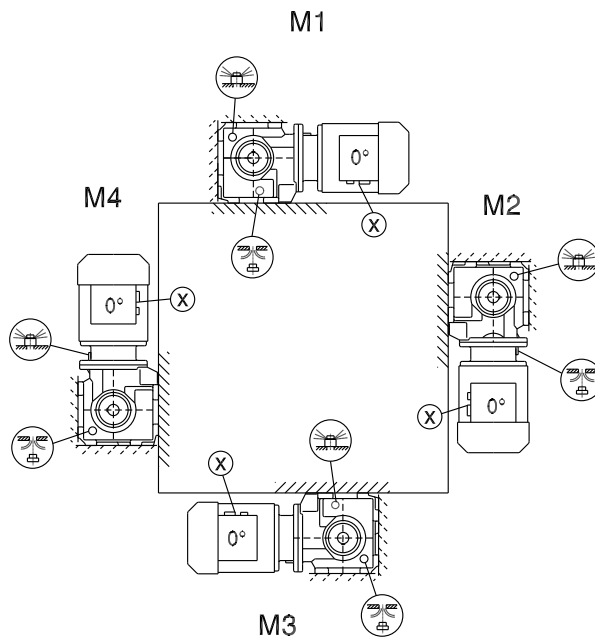
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6.7 Helical-worm gearmotors – mounting positions


S37



05 025 03 00



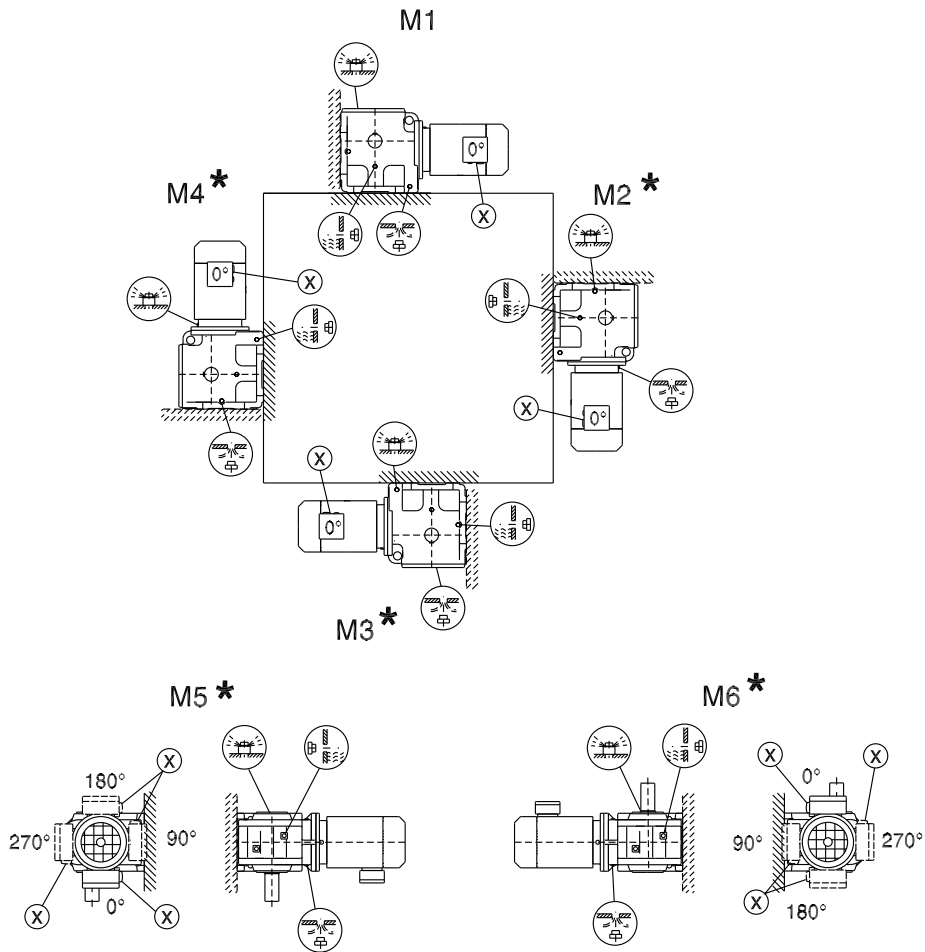
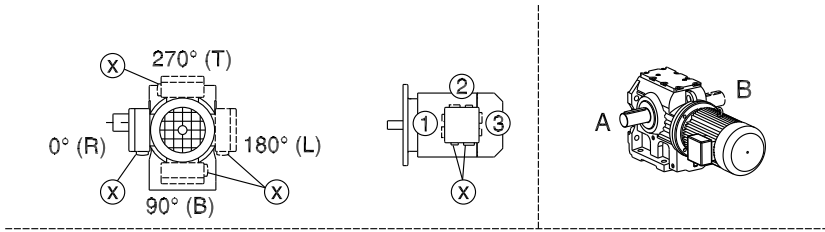
* → page 59

Caution: See the information marked with  in the "Gearmotors" catalog, section "Project Planning for Gear Units/Overhung and axial loads" (page 36).


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S47 - S97

05 026 03 00



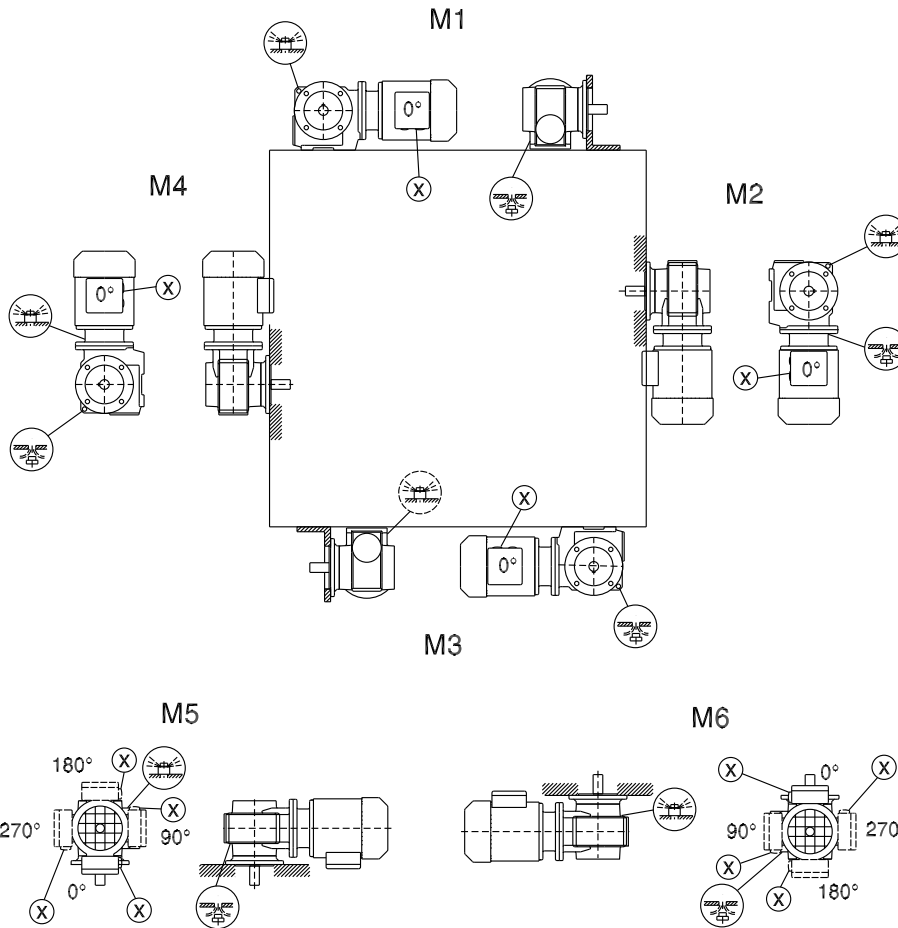
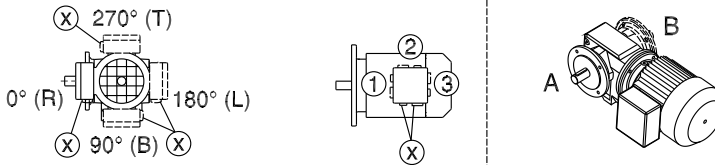
* → page 59

Caution: See the information marked with  in the "Gearmotors" catalog, section "Project Planning for Gear Units/Overhung and axial loads" (page 36).

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SF/SAF/SHF37

05 027 03 00

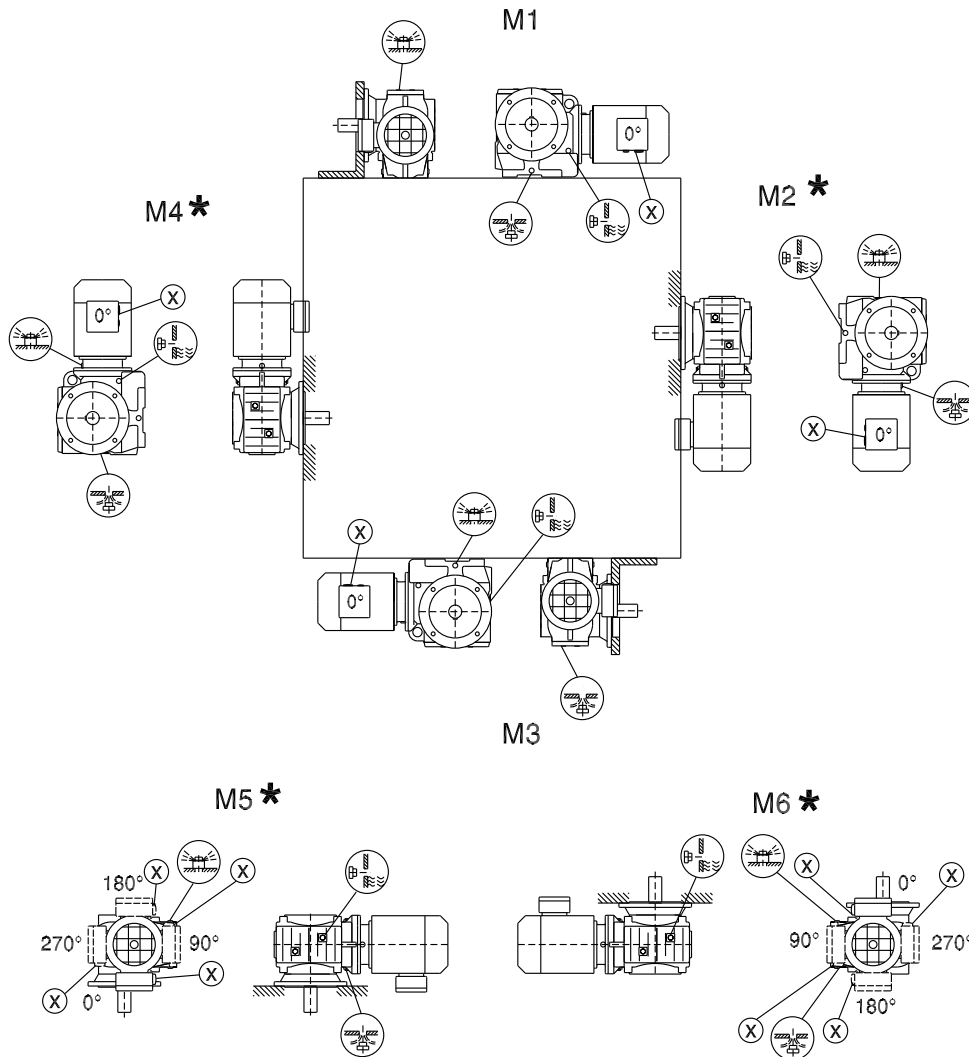
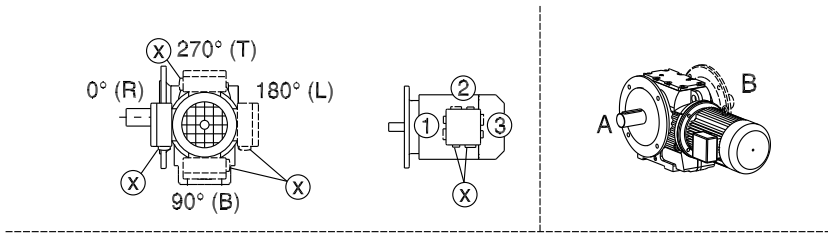


* → page 59

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SF/SAF/SHF/SAZ/SHZ47-97

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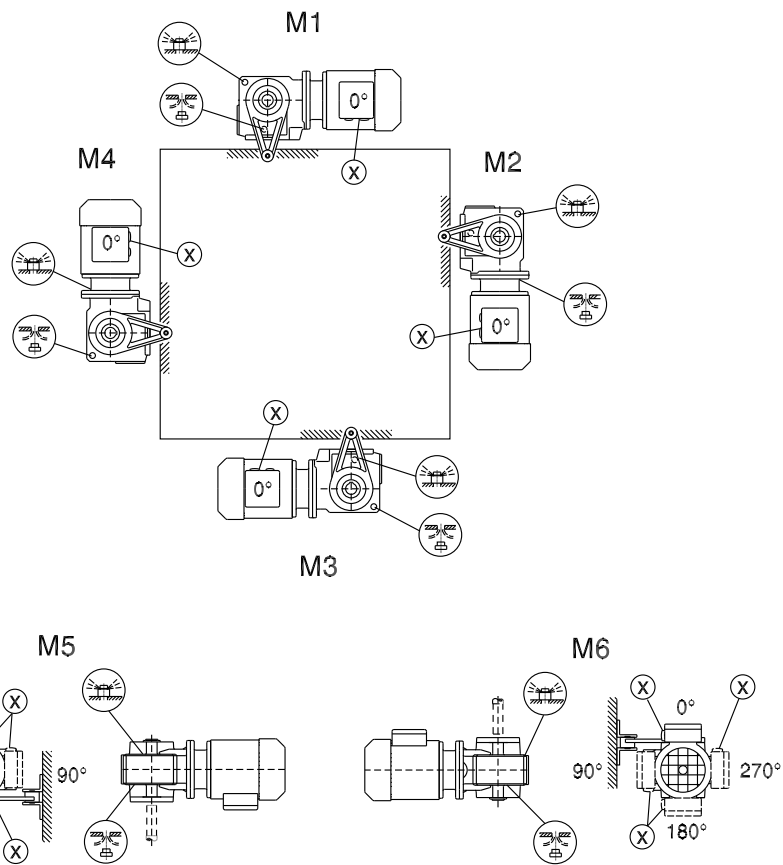
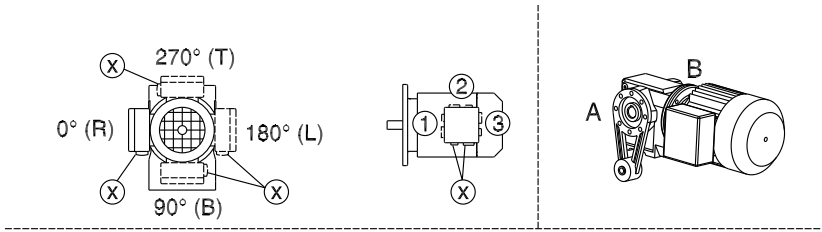


* → page 59

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SA/SH/ST37

28 020 04 00

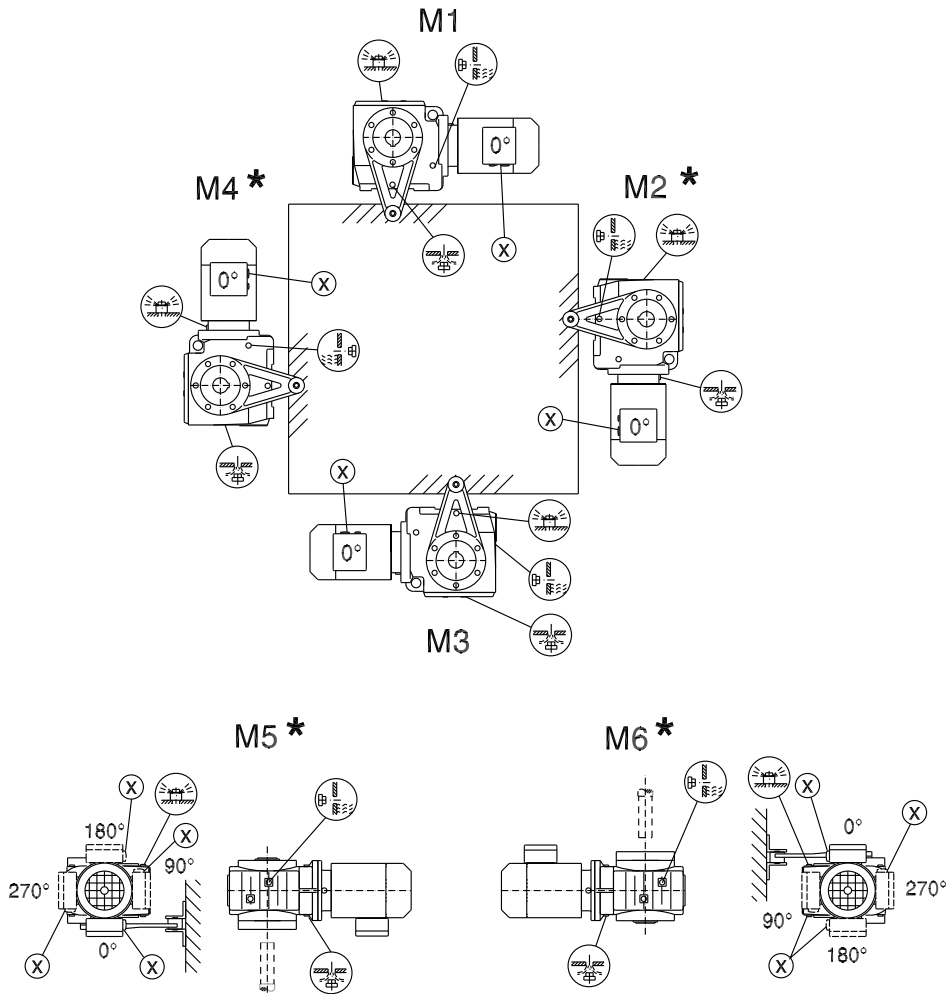
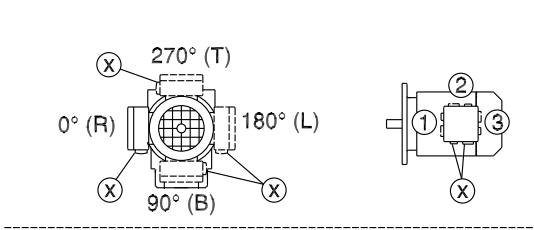


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SA/SH/ST47-97

28 021 03 00



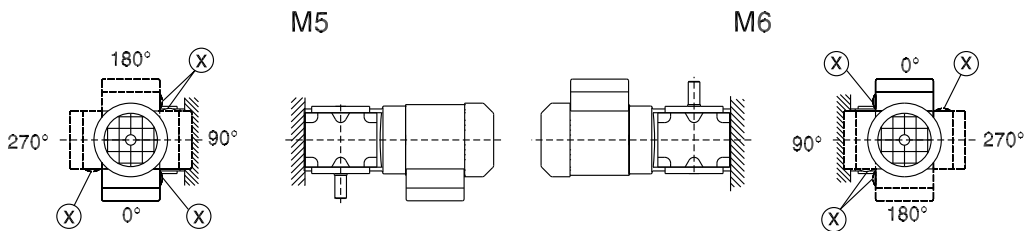
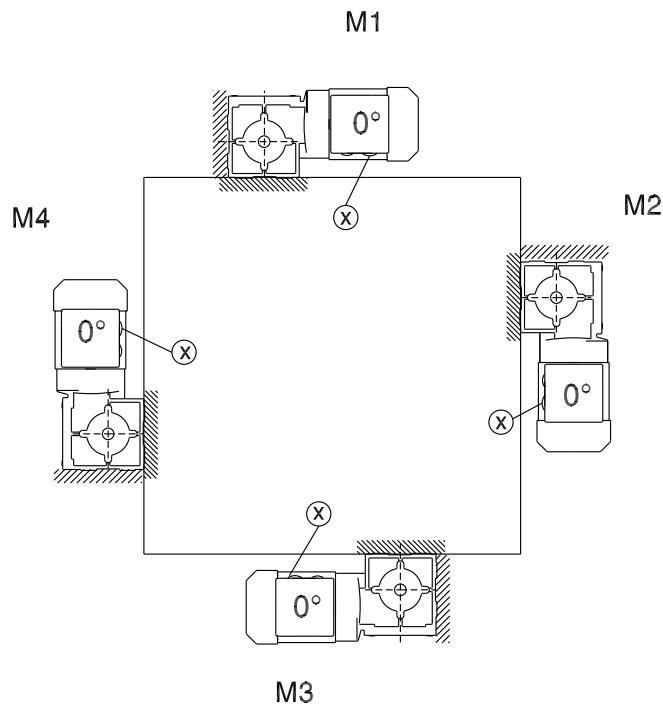
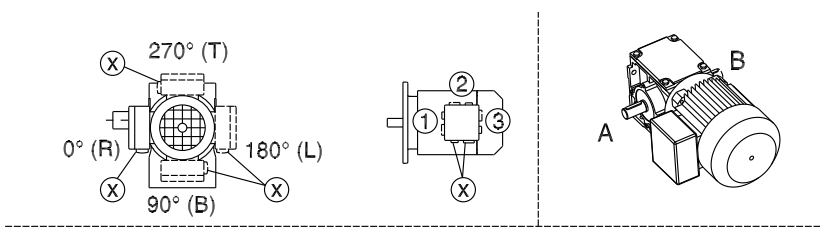
* → page 59

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6.8 Spiroplan® gearmotors – mounting positions

W10-30

20 001 01 02

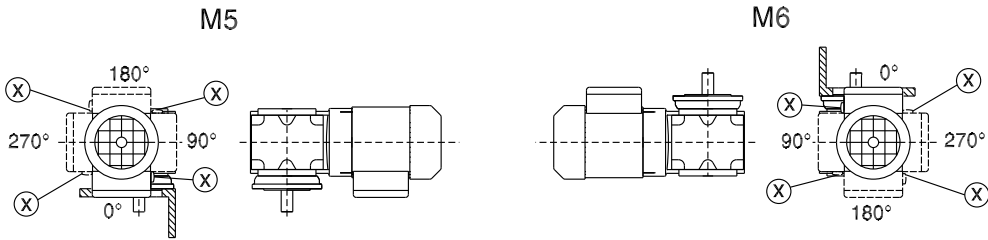
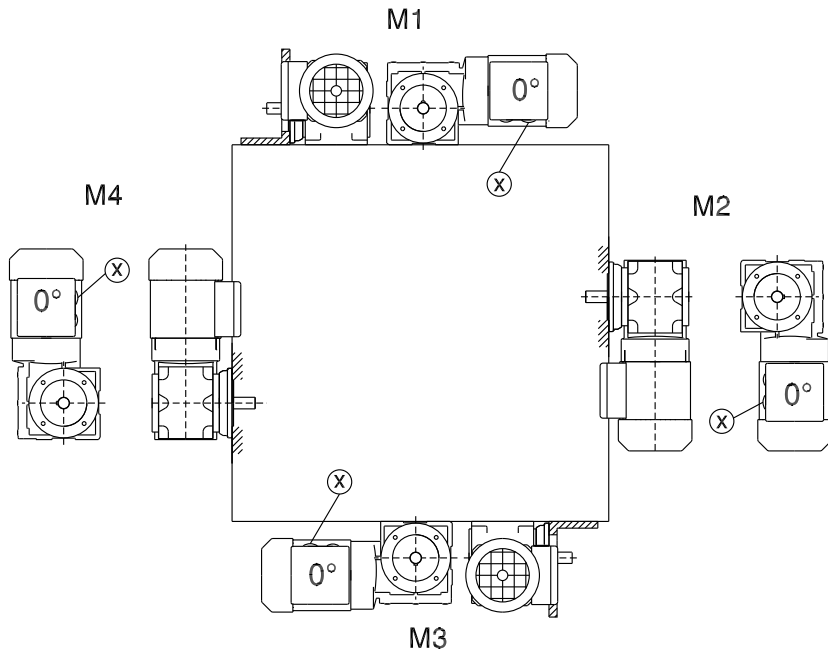
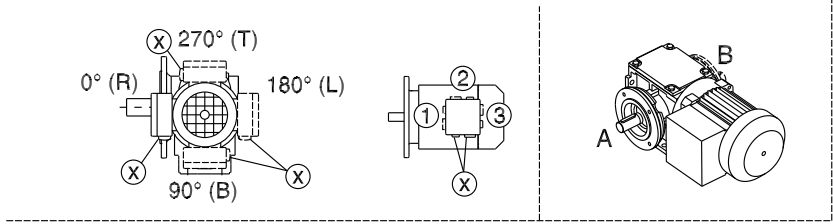


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WF10-30

20 002 01 02

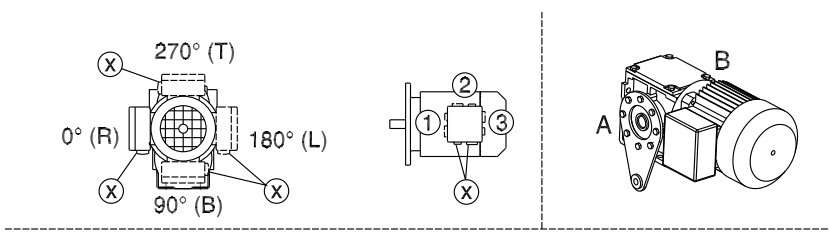


i → page 59

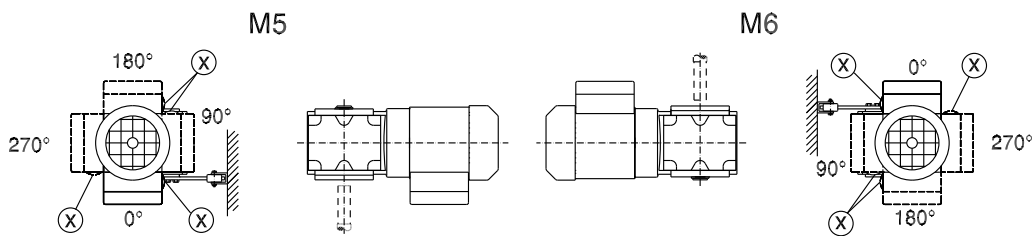
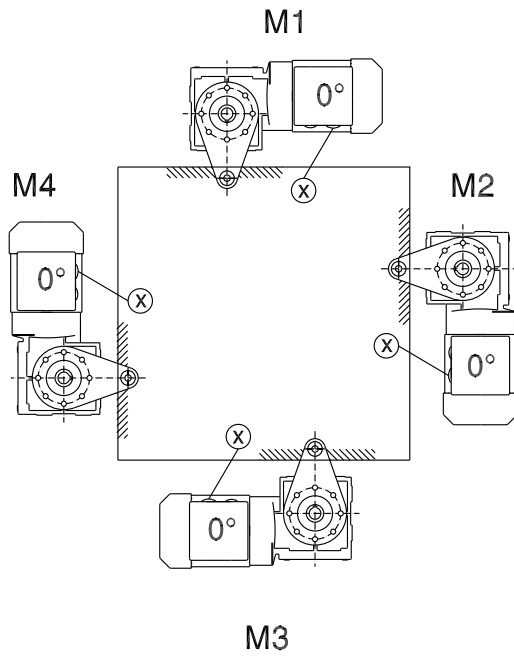
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WA10-30

20 003 02 02



6

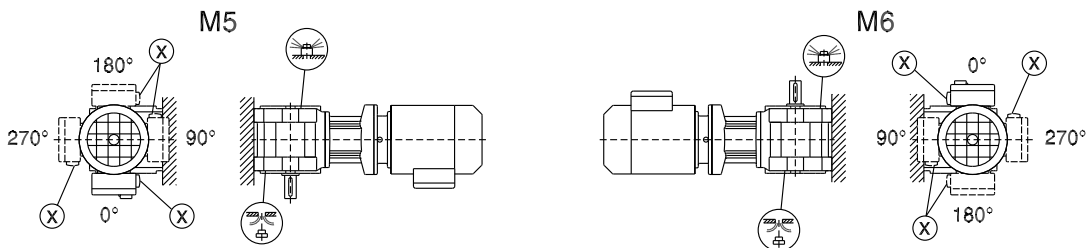
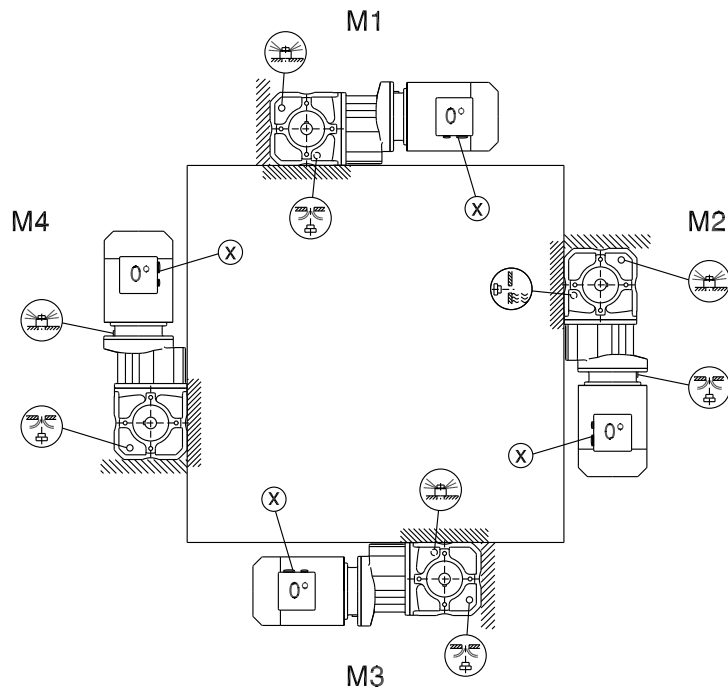
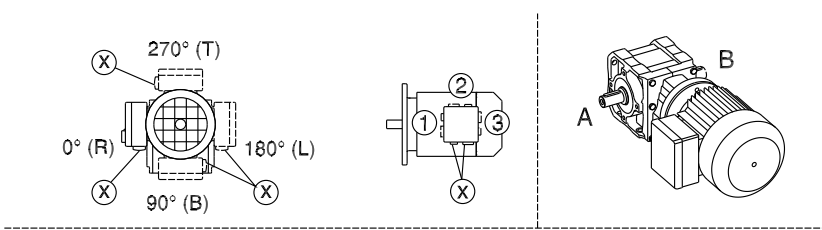


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W/WA37-47B

20 012 00 07

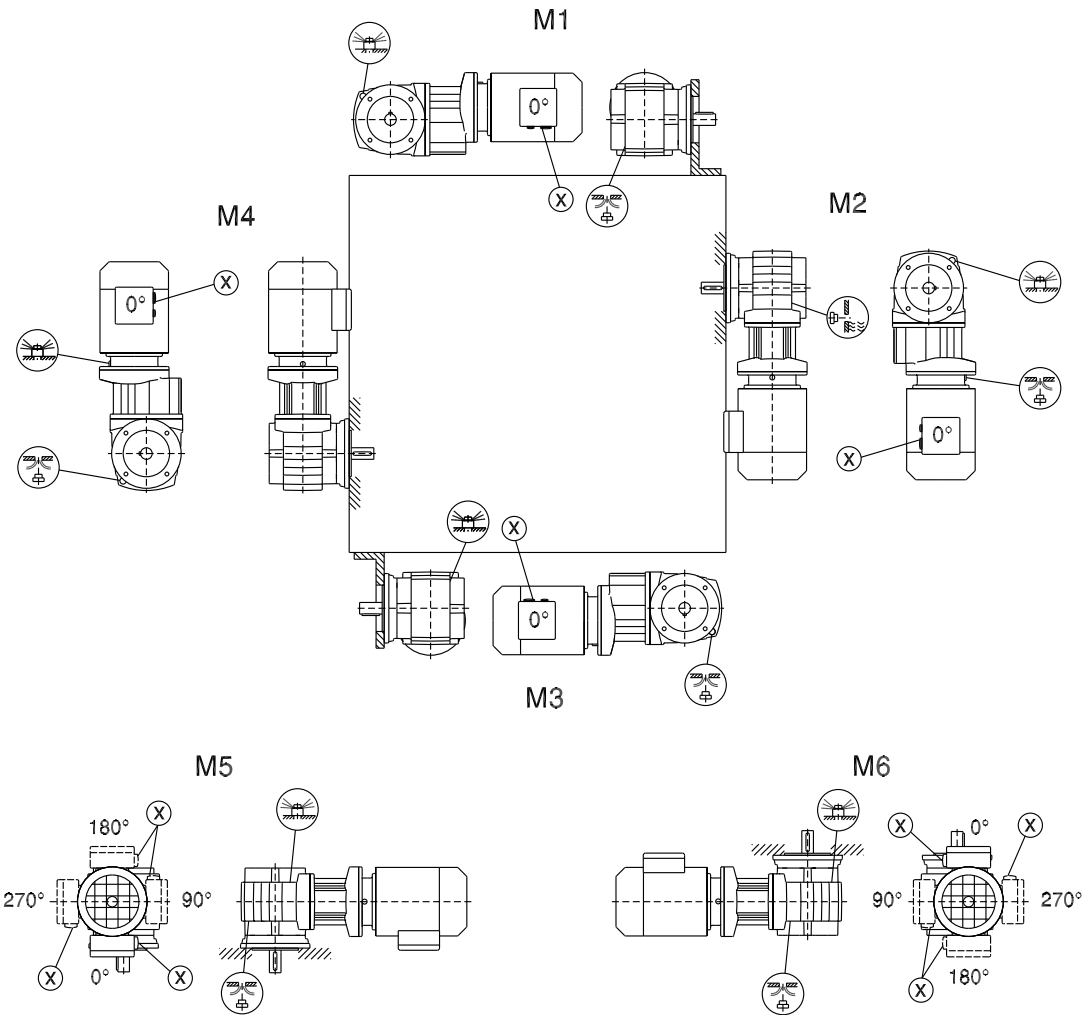
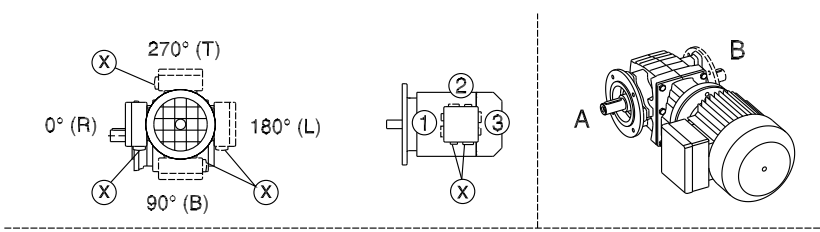


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WF/WAF/WHF37-47

20 013 00 07



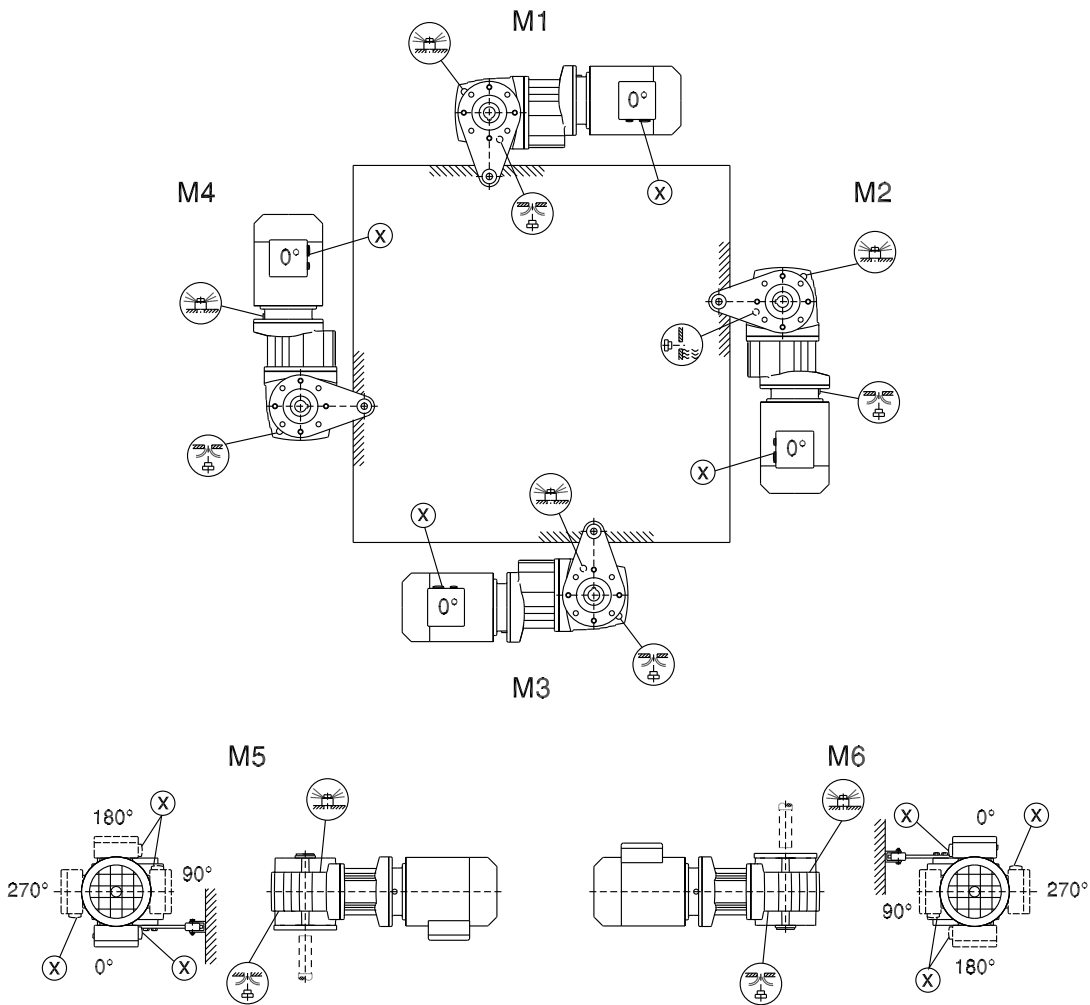
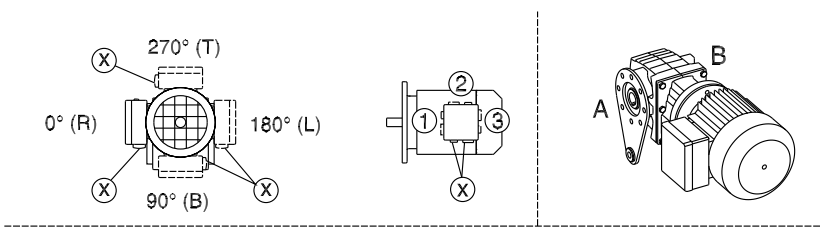
6

i → page 59

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WA/WH/WT37-47

20 014 00 07



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6.9 AC motor – mounting position designations

Position of motor terminal box and cable entry

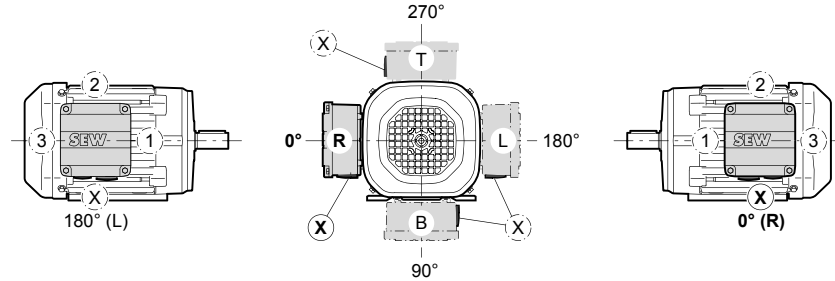


Figure 13: Position of terminal box and cable entry

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Mounting positions

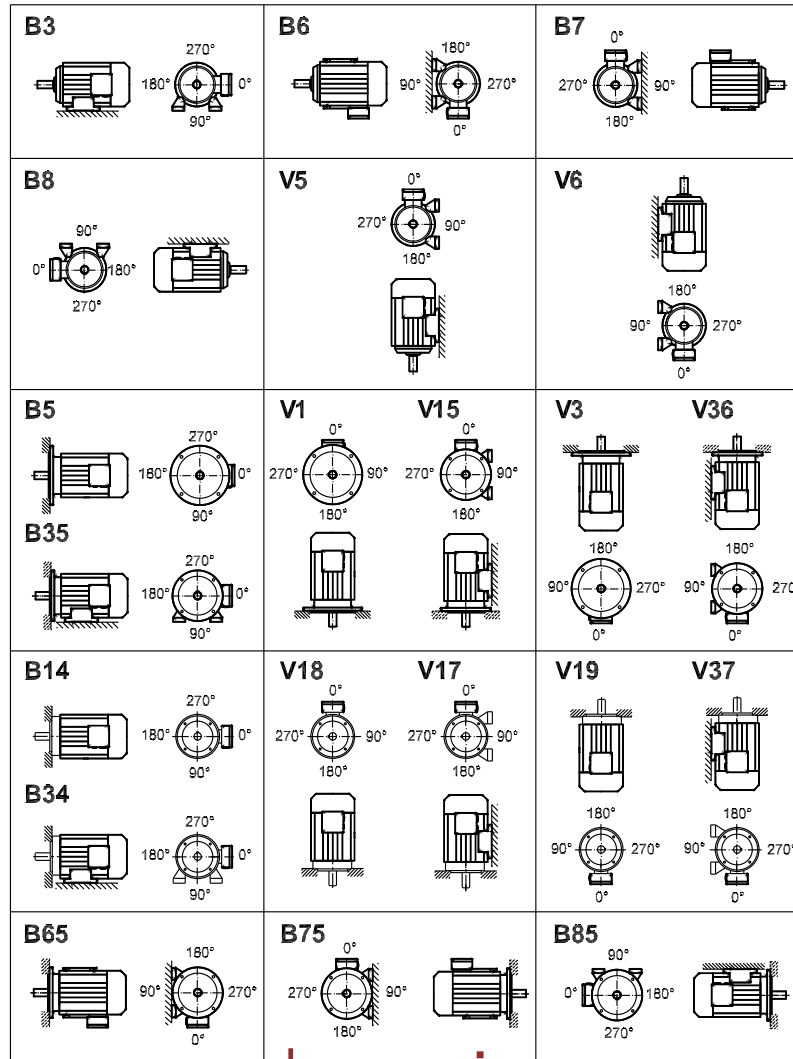


Figure 14: AC motors mounting positions

62592AXX



7 Design and Operating Notes

7.1 Lubricants

General information

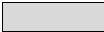
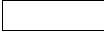


Unless a special arrangement is made, SEW-EURODRIVE supplies the drives with a lubricant fill adapted for the specific gear unit and mounting position. The decisive factor is the mounting position (M1 – M6, → Sec. "Mounting positions and important order information") specified when ordering the drive. You must adapt the lubricant fill in case of any subsequent changes made to the mounting position (→ Lubricant fill quantities).

Lubricant table

The lubricant table on the following page shows the permitted lubricants for SEW gear units. Please refer to the following legend for the lubricant table.



Legend for the lubricant table

Abbreviations, meaning of shading and notes:

CLP	= Mineral oil
CLP PG	= Polyglycol (W gear units, conforms to USDA-H1)
CLP HC	= Synthetic hydrocarbons
E	= Ester oil (water hazard class 1 (German regulation))
HCE	= Synthetic hydrocarbons + ester oil (USDA - H1 certification)
HLP	= Hydraulic oil
	= Synthetic lubricant (= synthetic-based anti-friction bearing grease)
	= Mineral lubricant (= mineral-based anti-friction bearing grease)
1)	Helical-worm gear units with PG oil: please contact SEW-EURODRIVE.
2)	Special lubricant for Spiroplan® gear units only
3)	SEW-f _B ≥ 1.2 required
4)	Pay attention to critical starting behavior at low temperatures!
5)	Low-viscosity grease
6)	Ambient temperature
	Lubricant for the food industry (food grade oil)
	Biodegradable oil (lubricant for agriculture, forestry, and fisheries)

Anti-friction bearing greases

The anti-friction bearings in gear units and motors are given a factory-fill with the greases listed below. SEW-EURODRIVE recommends regreasing anti-friction bearings with a grease fill at the same time as changing the oil or replacing the anti-friction bearings.

	Ambient temperature	Manufacturer	Type
Anti-friction bearing in gear unit	-10 °C ... +60 °C	ExxonMobil	Mobilux EP2
	-40 °C ... +80 °C	ExxonMobil	Mobilith SHC 100
Anti-friction bearing in motor ¹⁾²⁾	-20 °C ... +80 °C	ExxonMobil	Polyrex EM
	+20 °C ... +100 °C	Klüber	Barrierta L55/2
	-40 °C ... +40 °C	ExxonMobil	Mobilith SHC 100 ³⁾
Special greases for anti-friction bearings in gear units:			
	-25 °C ... +80 °C	Shell	Shell Cassida Grease EPS 2
	-35 °C ... +60 °C	Klüber	Klübersynth UH1 14-151
	-15 °C ... +80 °C	Klüber	Klübersynth UH1 14-222
	-20 °C ... +40 °C	Klüber	Klüberbio M 32-82

- 1) The motor anti-friction bearings are covered on both sides and cannot be regreased.
- 2) Greases providing equivalent performance are acceptable
- 3) Recommended for continuous operation at ambient temperature below 0°C, example in a cold storage.

The following grease quantities are required:






- For high-rpm bearings (gear unit input end): Fill the cavities between the rolling elements one-third full with grease.
- For low-rpm bearings (in gear units and at gear unit output end): Fill the cavities between the rolling elements two-thirds full with grease.





Lubricant table

01 805 12 92US

	6)	DIN (ISO)	ISO, NLGI	Mobil®	Shell	ARAL	bp	TEACRO	Castrol	FUCHS	TOTAL		
R...  K...(HK...)  F... 	Standard 0 -50 +100 -10 +40	CLP(CC)	VG 220	Mobilgear 600 XP 220	Shell Omala 220	Küboroll GEM 1-220 N	Aral Degol BG 220	BP Energol GR-XP 220	Meropla 220	Renolin CLP 220	Renolin CLP 220	Carter EP 220	
	+80	CLP PG	VG 220	Mobil Glycolyle 220	Shell Tivela S 220	Kübersynth GH 6-220	Aral Degol GS 220	BP Energol SG-XP 220	Synlub CLP 220	Renolin PG 220	Renolin PG 220	Carter SY 220	
	+80	CLP HC	VG 220	Mobil SHC 630	Shell Omala HD 220	Kübersynth GEM 4-220 N	Aral Degol PAS 220		Pinnacle EP 220	Renolin Unisyn CLP 220			
	+40	CLP HC	VG 150	Mobil SHC 629	Shell Omala HD 150	Kübersynth GEM 4-150 N			Pinnacle EP 150	Renolin Unisyn CLP 150			Carter SH 150
	+25	CLP (CC)	VG 150 VG 100	Mobilgear 600 XP 100	Shell Omala 100	Küboroll GEM 1-150 N	Aral Degol BG 100	BP Energol GR-XP 100	Meropa 150	Renolin CLP 150	Renolin CLP 150	Renolin CLP 150	Carter EP 100
	+10	HLP (HM)	VG 32	Mobil D.T.E. 13M	Shell Tellus T 32	Küboroll GEM 1-68 N	Aral Degol BG 46		Rando EP Ashless 46	Renolin B 46 HVI	Renolin B 46 HVI		Equivis ZS 46
	+20	CLP HC	VG 68	Mobil SHC 626		Küboroll GEM 1-68 N			Cetus PAO 46	Renolin Unisyn CLP 68	Renolin Unisyn CLP 68		Dacnis SH 32
	+10	CLP HC	VG 32	Mobil SHC 624	Shell Tellus T 15	Küboroll GEM 1-32			Alphasyn T32 Optigear HY 32	Renolin Unisyn OL 32	Renolin Unisyn OL 32		Dacnis SH 32
	+10	HLP (HM)	VG 15 VG 15	Mobil D.T.E. 11M	Shell Omala 15	Isotlex MT 30 ROT		BP Energol HLP-HM 15	Rando HDZ 15	Hyspin AWS 22	Renolin MR 310		Equivis ZS 15
	S...(HS...) 	Standard 0 +40	CLP (CC)	VG 680	Mobilgear 600 XP 680	Shell Omala 680	Küboroll GEM 1-680 N	Aral Degol BG 680	BP Energol GR-XP 680	Meropa 680	Renolin SEW 680	Renolin SEW 680	Carter EP 680
+60		CLP PG	VG 680 1)	Mobil	Shell Tivela S 680	Kübersynth GH 6-680		BP Energol SG-XP 680	Synlub CLP 680	Renolin PG 680	Renolin PG 680		
+80		CLP HC	VG 460	Mobil SHC 634	Shell Omala HD 460	Kübersynth GEM 4-460 N			Pinnacle EP 460	Renolin Unisyn CLP 460	Renolin Unisyn CLP 460		
+25		CLP HC	VG 150	Mobil SHC 629	Shell Omala HD 150	Kübersynth GEM 4-150 N			Pinnacle EP 150	Renolin Unisyn CLP 150	Renolin Unisyn CLP 150	Carter SH 150	
+10		CLP (CC)	VG 150 VG 100	Mobilgear 600 XP 100	Shell Omala 100	Küboroll GEM 1-150 N	Aral Degol BG 100	BP Energol GR-XP 100	Meropa 150	Renolin CLP 150	Renolin CLP 150	Renolin CLP 150	Carter EP 100
+20		CLP PG	VG 220 1)	Mobil Glycolyle 220	Shell Tivela S 220	Kübersynth GH 6-220	Aral Degol GS 220	BP Energol SG-XP 220	Synlub CLP 220	Renolin PG 220	Renolin PG 220	Renolin Unisyn CLP 68	Carter SY 220
+20		CLP HC	VG 68	Mobil SHC 626		Küboroll GEM 1-68 N			Cetus PAO 46	Renolin Unisyn CLP 68	Renolin Unisyn CLP 68		Dacnis SH 32
0		CLP HC	VG 32	Mobil SHC 624	Shell Cassida 4UH1-460 N	Küboroll 4UH1-460 N			Alphasyn T32 Optigear HY 32	Renolin Unisyn OL 32	Renolin Unisyn OL 32		Dacnis SH 32
+40		CLP HC	VG 460		Shell Cassida 4UH1-460 N	Küboroll 4UH1-460 N			Optileb GT 460	Renolin Unisyn OL 32	Renolin Unisyn OL 32		Dacnis SH 32
+25		CLP HC	VG 220		Shell Cassida Fluid GL 220	Küboroll 4UH1-220 N			Optileb GT 220	Renolin Unisyn OL 32	Renolin Unisyn OL 32		Dacnis SH 32
R...K...(HK...) F...S...(HS...)	+25	CLP HC	VG 68		Shell Cassida Fluid HF 68	Küboroll 4UH1-68 N			Optileb HY 68	Renolin Unisyn CLP 150	Renolin Unisyn CLP 150	Carter SH 150	
	+40	H1 PG	VG 460 1)			Kübersynth UH1 6-460				Renolin Unisyn CLP 68	Renolin Unisyn CLP 68		
	+40	E	VG 460		Küboroll UH1 6-460	Küboroll UH1 6-460				Renolin Unisyn CLP 68	Renolin Unisyn CLP 68		
	+40	SEW PG	VG 460 2)		Küboroll CA2-460	Küboroll CA2-460				Renolin Unisyn CLP 68	Renolin Unisyn CLP 68		
	+10	API GL5	SAE 75W90 (~VG 100)	Mobil Synthetic Gear Oil 75W90						Renolin Unisyn CLP 68	Renolin Unisyn CLP 68		
	+40	H1 PG	VG 460 3)			Kübersynth UH1 6-460				Renolin Unisyn CLP 68	Renolin Unisyn CLP 68		
	+60	DIN 51 818	00	Glycolyle Grease 00	Shell Tivela GL 00	Kübersynth UH1 6-460				Renolin Unisyn CLP 68	Renolin Unisyn CLP 68		
	+40	DIN 51 818	000 -0	Mobilux EP 004	Shell Alvania GL 00	Kübersynth UH1 6-460				Renolin Unisyn CLP 68	Renolin Unisyn CLP 68		
	+60									Renolin Unisyn CLP 68	Renolin Unisyn CLP 68		
	+40									Renolin Unisyn CLP 68	Renolin Unisyn CLP 68		
W...(HW...) 	Standard -20 -40	SEW PG	VG 460 2)										
	+10	API GL5	SAE 75W90 (~VG 100)										
R32 R302	Standard -25 -40	DIN 51 818	00										
	-15 -40												

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Lubricant fill quantities

The specified fill quantities are **recommended values**. The precise values vary depending on the number of stages and gear ratio. When filling, it is essential to check the **oil level plug since it indicates the precise oil capacity**.

The following tables show guide values for lubricant fill quantities in relation to the mounting position M1 ... M6.

Helical (R) gear units

RX..

Gear unit	Fill quantity in liters					
	M1	M2	M3	M4	M5	M6
RX57	0.60	0.80	1.30	1.30	0.90	0.90
RX67	0.80	0.80	1.70	1.90	1.10	1.10
RX77	1.10	1.50	2.60	2.70	1.60	1.60
RX87	1.70	2.50	4.80	4.80	2.90	2.90
RX97	2.10	3.40	7.4	7.0	4.80	4.80
RX107	3.90	5.6	11.6	11.9	7.7	7.7

RXF..

Gear unit	Fill quantity in liters					
	M1	M2	M3	M4	M5	M6
RXF57	0.50	0.80	1.10	1.10	0.70	0.70
RXF67	0.70	0.80	1.50	1.40	1.00	1.00
RXF77	0.90	1.30	2.40	2.00	1.60	1.60
RXF87	1.60	1.95	4.90	3.95	2.90	2.90
RXF97	2.10	3.70	7.1	6.3	4.80	4.80
RXF107	3.10	5.7	11.2	9.3	7.2	7.2

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R., R..F

Gear unit	Fill quantity in liters					
	M1 ¹⁾	M2 ¹⁾	M3	M4	M5	M6
R07	0.12	0.20	0.20	0.20	0.20	0.20
R17	0.25	0.55	0.35	0.55	0.35	0.40
R27	0.25/0.40	0.70	0.50	0.70	0.50	0.50
R37	0.30/0.95	0.85	0.95	1.05	0.75	0.95
R47	0.70/1.50	1.60	1.50	1.65	1.50	1.50
R57	0.80/1.70	1.90	1.70	2.10	1.70	1.70
R67	1.10/2.30	2.40/3.20	2.80	2.90	1.80	2.00
R77	1.20/3.00	3.30/4.20	3.60	3.80	2.50	3.40
R87	2.30/6.0	6.4/8.1	7.2	7.2	6.3	6.5
R97	4.60/9.8	11.7/14.0	11.7	13.4	11.3	11.7
R107	6.0/13.7	16.3	16.9	19.2	13.2	15.9
R137	10.0/25.0	28.0	29.5	31.5	25.0	25.0
R147	15.4/40.0	46.5	48.0	52.0	39.5	41.0
R167	27.0/70.0	82.0	78.0	88.0	66.0	69.0

1) The larger gear unit of multi-stage gear units must be filled with the larger oil volume.

RF..

Gear unit	Fill quantity in liters					
	M1 ¹⁾	M2 ¹⁾	M3	M4	M5	M6
RF07	0.12	0.20	0.20	0.20	0.20	0.20
RF17	0.25	0.55	0.35	0.55	0.35	0.40
RF27	0.25/0.40	0.70	0.50	0.70	0.50	0.50
RF37	0.35/0.95	0.90	0.95	1.05	0.75	0.95
RF47	0.65/1.50	1.60	1.50	1.65	1.50	1.50
RF57	0.80/1.70	1.80	1.70	2.00	1.70	1.70
RF67	1.20/2.50	2.50/3.20	2.70	2.80	1.90	2.10
RF77	1.20/2.60	3.10/4.10	3.30	3.60	2.40	3.00
RF87	2.40/6.0	6.4/8.2	7.1	7.2	6.3	6.4
RF97	5.1/10.2	11.9/14.0	11.2	14.0	11.2	11.8
RF107	6.3/14.9	15.9	17.0	19.2	13.1	15.9
RF137	9.5/25.0	27.0	29.0	32.5	25.0	25.0
RF147	16.4/42.0	47.0	48.0	52.0	42.0	42.0
RF167	26.0/70.0	82.0	78.0	88.0	65.0	71.0

1) The larger gear unit of multi-stage gear units must be filled with the larger oil volume.

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Parallel-shaft heli-
cal (F) gear units

F.., FA..B, FH..B, FV..B

Gear unit	Fill quantity in liters					
	M1	M2	M3	M4	M5	M6
F..27	0.60	0.80	0.65	0.70	0.60	0.60
F..37	0.95	1.25	0.70	1.25	1.00	1.10
F..47	1.50	1.80	1.10	1.90	1.50	1.70
F..57	2.60	3.50	2.10	3.50	2.80	2.90
F..67	2.70	3.80	1.90	3.80	2.90	3.20
F..77	5.9	7.3	4.30	8.0	6.0	6.3
F..87	10.8	13.0	7.7	13.8	10.8	11.0
F..97	18.5	22.5	12.6	25.2	18.5	20.0
F..107	24.5	32.0	19.5	37.5	27.0	27.0
F..127	40.5	54.5	34.0	61.0	46.3	47.0
F..157	69.0	104.0	63.0	105.0	86.0	78.0

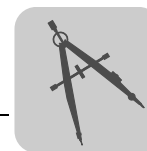
FF..

Gear unit	Fill quantity in liters					
	M1	M2	M3	M4	M5	M6
FF27	0.60	0.80	0.65	0.70	0.60	0.60
FF37	1.00	1.25	0.70	1.30	1.00	1.10
FF47	1.60	1.85	1.10	1.90	1.50	1.70
FF57	2.80	3.50	2.10	3.70	2.90	3.00
FF67	2.70	3.80	1.90	3.80	2.90	3.20
FF77	5.9	7.3	4.30	8.1	6.0	6.3
FF87	10.8	13.2	7.8	14.1	11.0	11.2
FF97	19.0	22.5	12.6	25.6	18.9	20.5
FF107	25.5	32.0	19.5	38.5	27.5	28.0
FF127	41.5	55.5	34.0	63.0	46.3	49.0
FF157	72.0	105.0	64.0	106.0	87.0	79.0

FA.., FH.., FV.., FAF.., FAZ.., FHF.., FHZ.., FVF.., FVZ.., FT..

Gear unit	Fill quantity in liters					
	M1	M2	M3	M4	M5	M6
F..27	0.60	0.80	0.65	0.70	0.60	0.60
F..37	0.95	1.25	0.70	1.25	1.00	1.10
F..47	1.50	1.80	1.10	1.90	1.50	1.70
F..57	2.70	3.50	2.10	3.40	2.90	3.00
F..67	2.70	3.80	1.90	3.80	2.90	3.20
F..77	5.9	7.3	4.30	8.0	6.0	6.3
F..87	10.8	13.0	7.7	13.8	10.8	11.0
F..97	18.5	22.5	12.6	25.2	18.5	20.0
F..107	24.5	32.0	19.5	37.5	27.0	27.0
F..127	39.0	54.5	34.0	61.0	45.0	46.5
F..157	68.0	103.0	62.0	104.0	85.0	77.0

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Helical-bevel (K)
gear units

K.., KA..B, KH..B, KV..B

Gear unit	Fill quantity in liters					
	M1	M2	M3	M4	M5	M6
K..37	0.50	1.00	1.00	1.25	0.95	0.95
K..47	0.80	1.30	1.50	2.00	1.60	1.60
K..57	1.10	2.20	2.20	2.80	2.30	2.10
K..67	1.10	2.40	2.60	3.45	2.60	2.60
K..77	2.20	4.10	4.40	5.8	4.20	4.40
K..87	3.70	8.0	8.7	10.9	8.0	8.0
K..97	7.0	14.0	15.7	20.0	15.7	15.5
K..107	10.0	21.0	25.5	33.5	24.0	24.0
K..127	21.0	41.5	44.0	54.0	40.0	41.0
K..157	31.0	62.0	65.0	90.0	58.0	62.0
K..167	33.0	95.0	105.0	123.0	85.0	84.0
K..187	53.0	152.0	167.0	200	143.0	143.0

KF..

Gear unit	Fill quantity in liters					
	M1	M2	M3	M4	M5	M6
KF37	0.50	1.10	1.10	1.50	1.00	1.00
KF47	0.80	1.30	1.70	2.20	1.60	1.60
KF57	1.20	2.20	2.40	3.15	2.50	2.30
KF67	1.10	2.40	2.80	3.70	2.70	2.70
KF77	2.10	4.10	4.40	5.9	4.50	4.50
KF87	3.70	8.2	9.0	11.9	8.4	8.4
KF97	7.0	14.7	17.3	21.5	15.7	16.5
KF107	10.0	21.8	25.8	35.1	25.2	25.2
KF127	21.0	41.5	46.0	55.0	41.0	41.0
KF157	31.0	66.0	69.0	92.0	62.0	62.0

KA.., KH.., KV.., KAF.., KHF.., KVF.., KAZ.., KHZ.., KVZ.., KT..

Gear unit	Fill quantity in liters					
	M1	M2	M3	M4	M5	M6
K..37	0.50	1.00	1.00	1.40	1.00	1.00
K..47	0.80	1.30	1.60	2.15	1.60	1.60
K..57	1.20	2.20	2.40	3.15	2.70	2.40
K..67	1.10	2.40	2.70	3.70	2.60	2.60
K..77	2.10	4.10	4.60	5.9	4.40	4.40
K..87	3.70	8.2	8.8	11.1	8.0	8.0
K..97	7.0	14.7	15.7	20.0	15.7	15.7
K..107	10.0	20.5	24.0	32.4	24.0	24.0
K..127	21.0	41.5	43.0	52.0	40.0	40.0
K..157	31.0	66.0	67.0	87.0	62.0	62.0

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*Helical-worm (S)
gear units*

S

Gear unit	Fill quantity in liters					
	M1	M2	M3 ¹⁾	M4	M5	M6
S..37	0.25	0.40	0.50	0.55	0.40	0.40
S..47	0.35	0.80	0.70/0.90	1.00	0.80	0.80
S..57	0.50	1.20	1.00/1.20	1.45	1.30	1.30
S..67	1.00	2.00	2.20/3.10	3.10	2.60	2.60
S..77	1.90	4.20	3.70/5.4	5.9	4.40	4.40
S..87	3.30	8.1	6.9/10.4	11.3	8.4	8.4
S..97	6.8	15.0	13.4/18.0	21.8	17.0	17.0

1) The larger gear unit of multi-stage gear units must be filled with the larger oil volume.

SF..

Gear unit	Fill quantity in liters					
	M1	M2	M3 ¹⁾	M4	M5	M6
SF37	0.25	0.40	0.50	0.55	0.40	0.40
SF47	0.40	0.90	0.90/1.05	1.05	1.00	1.00
SF57	0.50	1.20	1.00/1.50	1.55	1.40	1.40
SF67	1.00	2.20	2.30/3.00	3.20	2.70	2.70
SF77	1.90	4.10	3.90/5.8	6.5	4.90	4.90
SF87	3.80	8.0	7.1/10.1	12.0	9.1	9.1
SF97	7.4	15.0	13.8/18.8	22.6	18.0	18.0

1) The larger gear unit of multi-stage gear units must be filled with the larger oil volume.

SA.., SH.., SAF.., SHZ.., SAZ.., SHF.., ST..

Gear unit	Fill quantity in liters					
	M1	M2	M3 ¹⁾	M4	M5	M6
S..37	0.25	0.40	0.50	0.50	0.40	0.40
S..47	0.40	0.80	0.70/0.90	1.00	0.80	0.80
S..57	0.50	1.10	1.00/1.50	1.50	1.20	1.20
S..67	1.00	2.00	1.80/2.60	2.90	2.50	2.50
S..77	1.80	3.90	3.60/5.0	5.8	4.50	4.50
S..87	3.80	7.4	6.0/8.7	10.8	8.0	8.0
S..97	7.0	14.0	11.4/16.0	20.5	15.7	15.7

1) The larger gear unit of multi-stage gear units must be filled with the larger oil volume.

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Spiroplan® (W)
gear units

W.., WF.., WA..B, WH..B

Gear unit	Fill quantity in liters					
	M1	M2	M3	M4	M5	M6
W..10	0.16					
W..20	0.24					
W..30	0.40					
W..37	0.50		0.70		0.50	
W..47	0.90		1.40		0.90	

WA.., WAF.., WT.., WH.., WHF..

Gear unit	Fill quantity in liters					
	M1	M2	M3	M4	M5	M6
W..10	0.16					
W..20	0.24					
W..30	0.40					
W..37	0.50		0.70		0.50	
W..47	0.80		1.25		0.80	

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7.2 Reduced backlash gear units

Helical, parallel-shaft helical and helical-bevel gear units with reduced backlash are available as of gear unit size 37. The circumferential backlash of these gear units is considerably less than that of the standard versions so that positioning tasks can be solved with great precision. The circumferential backlash is specified in angular minutes ['] in the technical data. The circumferential backlash for the output shaft is specified without load (max. 1% of the rated output torque); the gear unit input end is blocked.

The reduced backlash variant is available for the following gear units:

- Helical gear units (R) sizes 37 to 167
- Parallel-shaft gear units (F) sizes 37 to 157
- Helical-bevel gear units (K) sizes 37 to 187

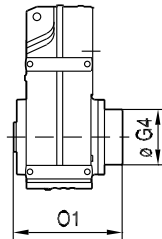
Multi-stage gear units are not available in reduced backlash variants.

Apart from the parallel-shaft gear units FH.87 and FH.97 with reduced backlash, the dimensions of the reduced backlash variants correspond to the dimensions of the standard designs.

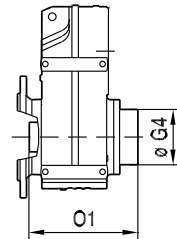
The following figure shows the dimensions of the FH.87 and FH.97 gear units with reduced backlash:

42 020 00 09

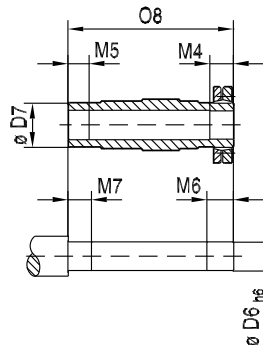
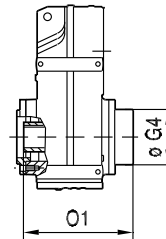
FH../R
FH../B/R



FHF../R



FHZ../R



Type	D6	D7	G4	M4	M5	M6	M7	O1	O8
FH.87/R	Ø 65 _{h6}	Ø 85	Ø 163	41	40	46	45	312.5	299.5
FH.97/R	Ø 75 _{h6}	Ø 95	Ø 184	55	50	60	55	382.5	367



7.3 Installation/removal of gear units with hollow shafts and keys



- Always use the supplied NOCO[®] Fluid for assembly. The fluid prevents contact corrosion and facilitates subsequent disassembly.
- The keyway dimension X is specified by the customers, but X must be $> DK$.

Assembly

SEW-EURODRIVE recommends two variants for mounting gear units with hollow shaft and key onto the input shaft of the driven machine (= customer shaft):

1. Use the provided fastening parts for installation.
2. Use the optional installation/removal kit for installation.

1. Provided fastening parts

The following fastening parts are supplied as standard:

- Retaining screw with washer (2)
- Retaining ring (3)

Note the following points concerning the customer shaft:

- The installation length of the customer shaft with contact shoulder (A) must be $L8 - 1 \text{ mm}$ (0.04 in).
- The installation length of the customer shaft without contact shoulder (B) must equal L8.

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Design and Operating Notes

Installation/removal of gear units with hollow shafts and keys

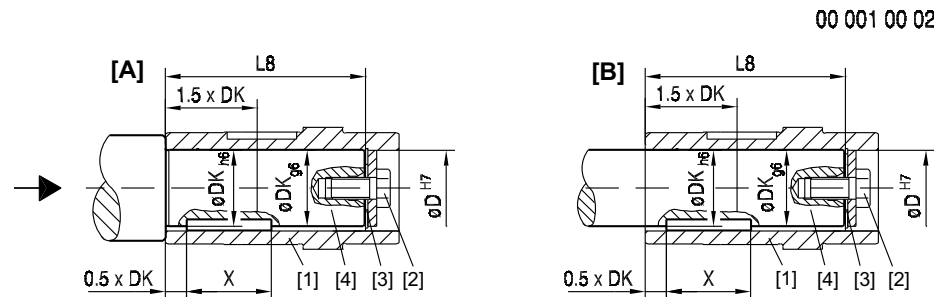


Figure 15: Customer shaft with contact shoulder (A) and without contact shoulder (B)

- (1) Hollow shaft
- (2) Retaining screw with washer
- (3) Retaining ring
- (4) Customer shaft

Dimensions and tightening torque:

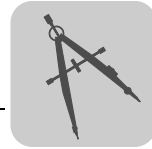
The retaining screw (2) must be tightened to the tightening torque MS given in the following table.

Gear unit type	D_{H7} [mm / in]	DK [mm]	L8 [mm]	MS [Nm]
WA..10	16 / 0.63	16	69	8
WA..20	18 / 0.71	18	84	
WA..20	20 / 0.79	20	88	
FA..27	25 / 0.98	25	88	20
WA..30, WA..37	20 / 0.79	20	105	8
SA..37			104	
FA..37, KA..37, SA..47	30 / 1.18	30	105	20
SA..47, WA..37	25 / 0.98	25	105	
FA..47, KA..47, SA..57	35 / 1.38	35	132	
WA..47	30 / 1.18	30	122	
SA..57			132	
FA..57, KA..57	40 / 1.57	40	142	40
FA..67, KA..67			156	
SA..67			144	
SA..67	45 / 1.77	45	144	40
FA..77, KA..77, SA..77	50 / 1.97	50	183	
SA..77	60 / 2.36	60	180	80
FA..87, KA..87			210	
SA..87			220	
SA..87			220	
FA..97, KA..97	70 / 2.76	70	270	200
SA..97	70 / 2.76	70	260	
SA..97			255	
FA..107	90 / 3.54	90	313	200
KA..107			313	
FA..127, KA..127	100 / 3.94	100	373	200
FA..157, KA..157	120 / 4.72	120	460	

2. Installation/removal kit

For information on the optional installation/removal tool, refer to Tech Note GM-024.

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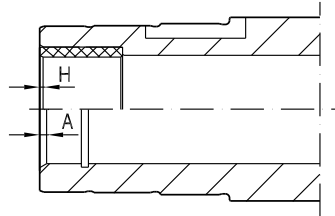


7.4 Gear units with hollow shaft

Chamfers on hollow shafts

The following illustration shows the chamfers on parallel-shaft helical, helical-bevel, helical-worm and Spiroplan® gear units with hollow shaft:

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Figure 16: Chamfers on hollow shafts

Gear units	Design [mm]	
	with hollow shaft (A)	with hollow shaft and shrink disk (H)
W..10 - W..30	2 × 30°	-
F..27	2 × 30°	0.5 × 45°
F../K../S../W..37	2 × 30°	0.5 × 45°
F../K../S../W..47	2 × 30°	0.5 × 45°
S..57	2 × 30°	0.5 × 45°
F../K../57	2 × 30°	0.5 × 45°
F../K../S../67	2 × 30°	0.5 × 45°
F../K../S../77	2 × 30°	0.5 × 45°
F../K../S../87	3 × 30°	0.5 × 45°
F../K../S../97	3 × 30°	0.5 × 45°
F../K../107	3 × 30°	3 × 2°
F../K../127	5 × 30°	1.5 × 30°
F../K../157	5 × 30°	1.5 × 30°
KH167	-	1.5 × 30°
KH187	-	1.5 × 30°

Special motor/gear unit combinations

Please note for parallel-shaft helical gearmotors with hollow shaft (FA..B, FV..B, FH..B, FAF, FVF, FHF, FA, FV, FH, FT, FAZ, FVZ, FHZ):

- If you are using a customer shaft pushed through on the motor end, there may be a collision when a "small gear unit" is used in combination with a "large motor".
- Check the motor dimension AC to decide whether there will be a collision with a pushed-through customer shaft.

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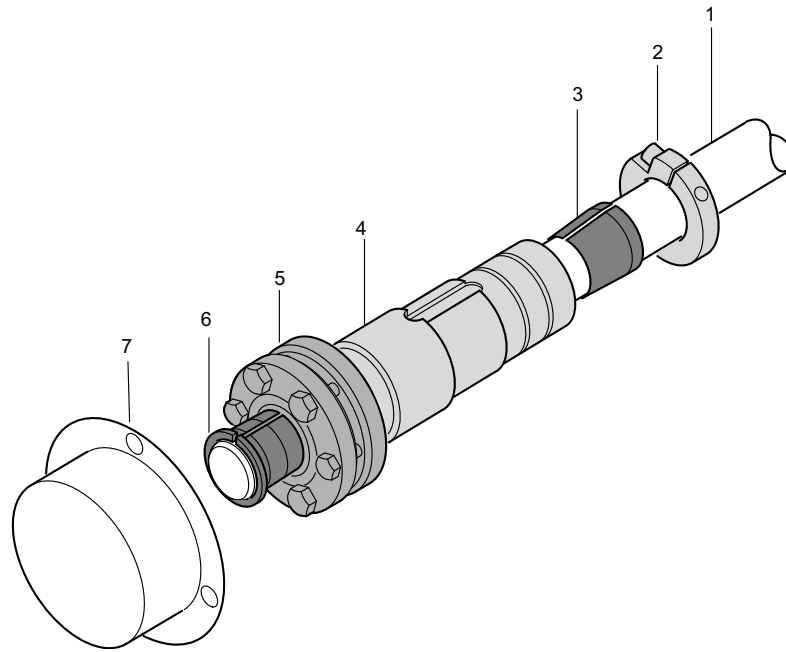


7.5 TorqLOC® mounting system for gear units with hollow shaft

Description of TorqLOC®

The TorqLOC® hollow shaft mounting system is used for achieving a connection between customer shaft and the hollow shaft in the gear unit. As a result, the TorqLOC® hollow shaft mounting system is an alternative to the hollow shaft with shrink disc, the hollow shaft with key and the splined hollow shaft that have been used so far.

The TorqLOC® hollow shaft mounting system consists of the following components:



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Figure 17: Components of the TorqLOC® hollow shaft mounting system

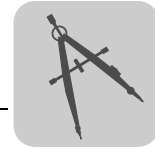
1. Customer shaft
2. Clamping ring
3. Tapered support bushing
4. Hollow shaft in gear unit
5. Shrink disc
6. Tapered torque bushing
7. Fixed cover

Advantages of TorqLOC®

The TorqLOC® hollow shaft mounting system is characterized by the following advantages:

- Cost saving because the customer shaft can be made from turned shaft stock or cold rolled stock without additional machining.
- Cost saving because different customer shaft diameters can be covered by one hollow shaft diameter and different bushings.
- Simple installation since there is no need to accommodate any shaft connections.
- Simple removal even after many hours of operation because the possibility of contact corrosion has been eliminated and the tapered connections can easily be released.

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Technical data The TorqLOC® hollow shaft mounting system is approved for output torques of 814 lb-in to 159300 lb-in.

The following gear units are available with TorqLOC® hollow shaft mounting system:

- Parallel shaft helical gear units in gear unit sizes 37 to 157 (FT37 ... FT157)
- Helical-bevel gear units in gear unit sizes 37 to 157 (KT37 ... KT157)
- Helical-worm gear units in gear unit sizes 37 to 97 (ST37 ... ST97)

Available options The following options are available for gear units with TorqLOC® hollow shaft mounting system:

- Helical-bevel and helical-worm gear units with TorqLOC® (KT..., ST...): The "torque arm" (../T) option is available.
- Parallel shaft helical gear units with TorqLOC® (FT...): The "rubber buffer" (../G) option is available.

Bore sizes Metric and inch bores are available as shown below.

Model	inch				
ST37	0.625	0.6875	0.75	-	-
FT37, KT37, ST47	1.00	1.1875	1.25	-	-
FT47, KT47, ST57	1.1875	1.25	1.375	1.4375	-
FT57, KT57	1.375	1.4375	1.50	1.625	-
FT67, KT67, ST67	1.375	1.4375	1.50	1.625	1.688
FT77, KT77, ST77	1.625	1.75	1.9375	2.00	-
FT87, KT87, ST87	1.9375	2.00	2.375	2.4375	-
FT97, KT97, ST97	2.4375	2.75	2.9375	-	-
FT107, KT107	3.250	3.4375	3.625	3.750	-
FT127, KT127	3.4375	3.750	4.00	4.1875	-
FT157, KT157	4.4375	4.50	4.9375	5.00	-

Model	mm		
ST37	16	19	20
FT37, KT37, ST47	25	30	-
FT47, KT47, ST57	30	35	-
FT57, KT57	35	38	40
FT67, KT67, ST67	35	38	40
FT77, KT77, ST77	50	-	-
FT87, KT87, ST87	51	62	65
FT97, KT97, ST97	62	70	75
FT107, KT107	80	90	95
FT127, KT127	105	-	-
FT157, KT157	110	125	-

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7.6 Shouldered hollow shaft with shrink disk option

As an option, gear units with hollow shaft and shrink disk (parallel-shaft helical gear units FH/FHF/FHZ37-157, helical-bevel gear units KH/KHF/KHZ37-157 and helical-worm gear units SH/SHF47-97) can be supplied with a larger bore diameter D' .

$D' = D$ as standard.

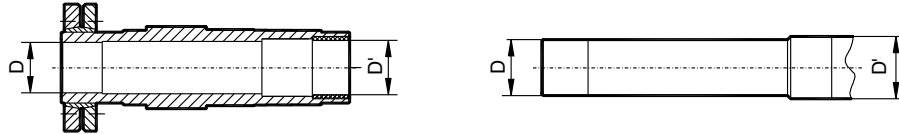


Figure 18: Optional hole diameter D'

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Gear unit	Bore diameter D / optionally D' [mm]
FH/FHF/FHZ37, KH/KHF/KHZ37, SH/SHF/SHZ47	30 / 32
FH/FHF/FHZ47, KH/KHF/KHZ47, SH/SHF/SHZ57	35 / 36
FH/FHF/FHZ57, KH/KHF/KHZ57	40 / 42
FH/FHF/FHZ67, KH/KHF/KHZ67, SH/SHF/SHZ67	40 / 42
FH/FHF/FHZ77, KH/KHF/KHZ77, SH/SHF/SHZ77	50 / 52
FH/FHF/FHZ87, KH/KHF/KHZ87, SH/SHF/SHZ87	65 / 66
FH/FHF/FHZ97, KH/KHF/KHZ97, SH/SHF/SHZ97	75 / 76
FH/FHF/FHZ107, KH/KHF/KHZ107	95 / 96
FH/FHF/FHZ127, KH/KHF/KHZ127	105 / 106
FH/FHF/FHZ157, KH/KHF/KHZ157	125 / 126

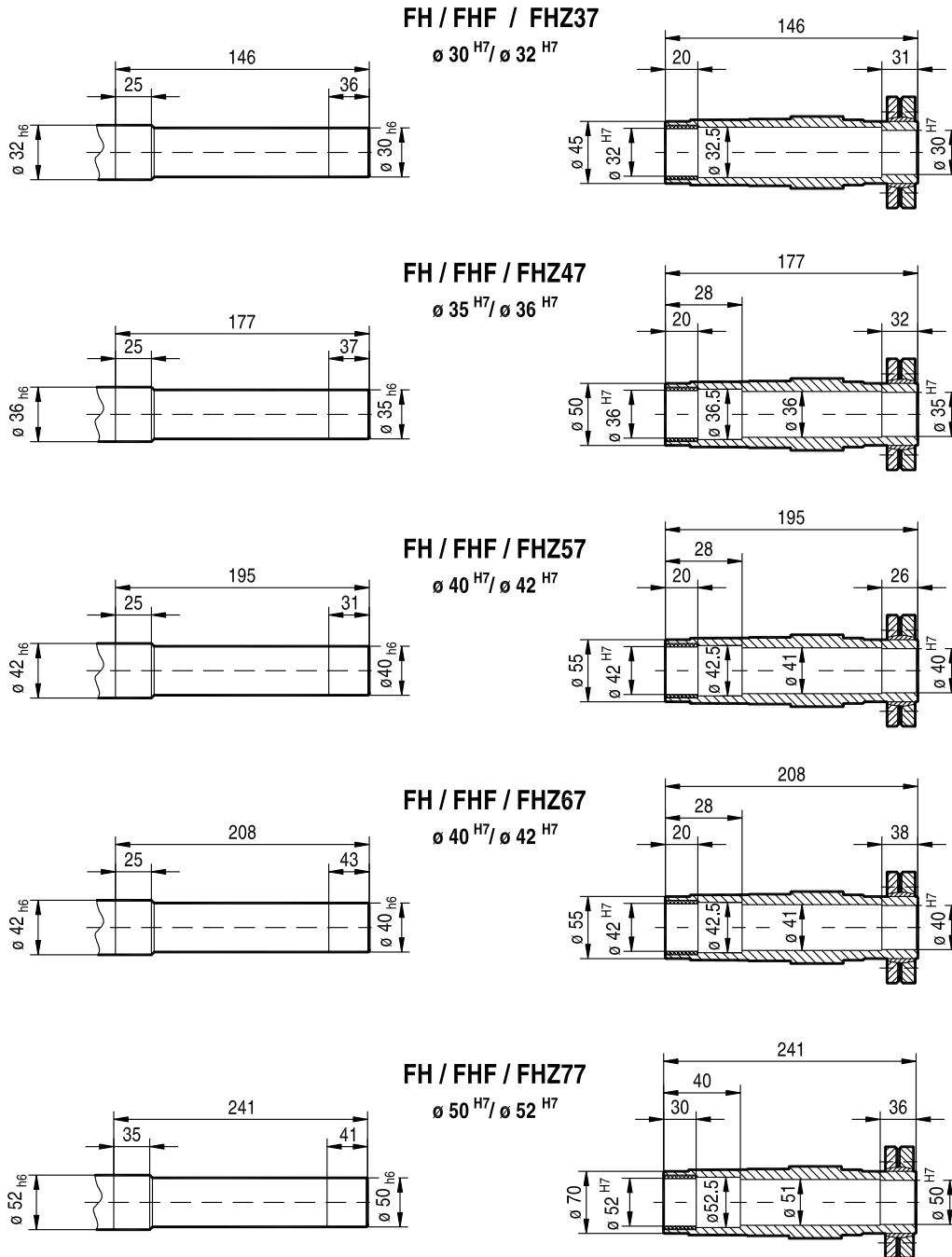
Diameter D/D' must be specified when ordering gear units with a shouldered hollow shaft (optional bore diameter D').

Sample order FH37 DRS80M4 with hollow shaft 30/32 mm

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Parallel-shaft helical gear units with shouldered hollow shaft (dimensions in mm):



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Figure 19: Shouldered hollow shaft FH/FHF/FHZ37...77

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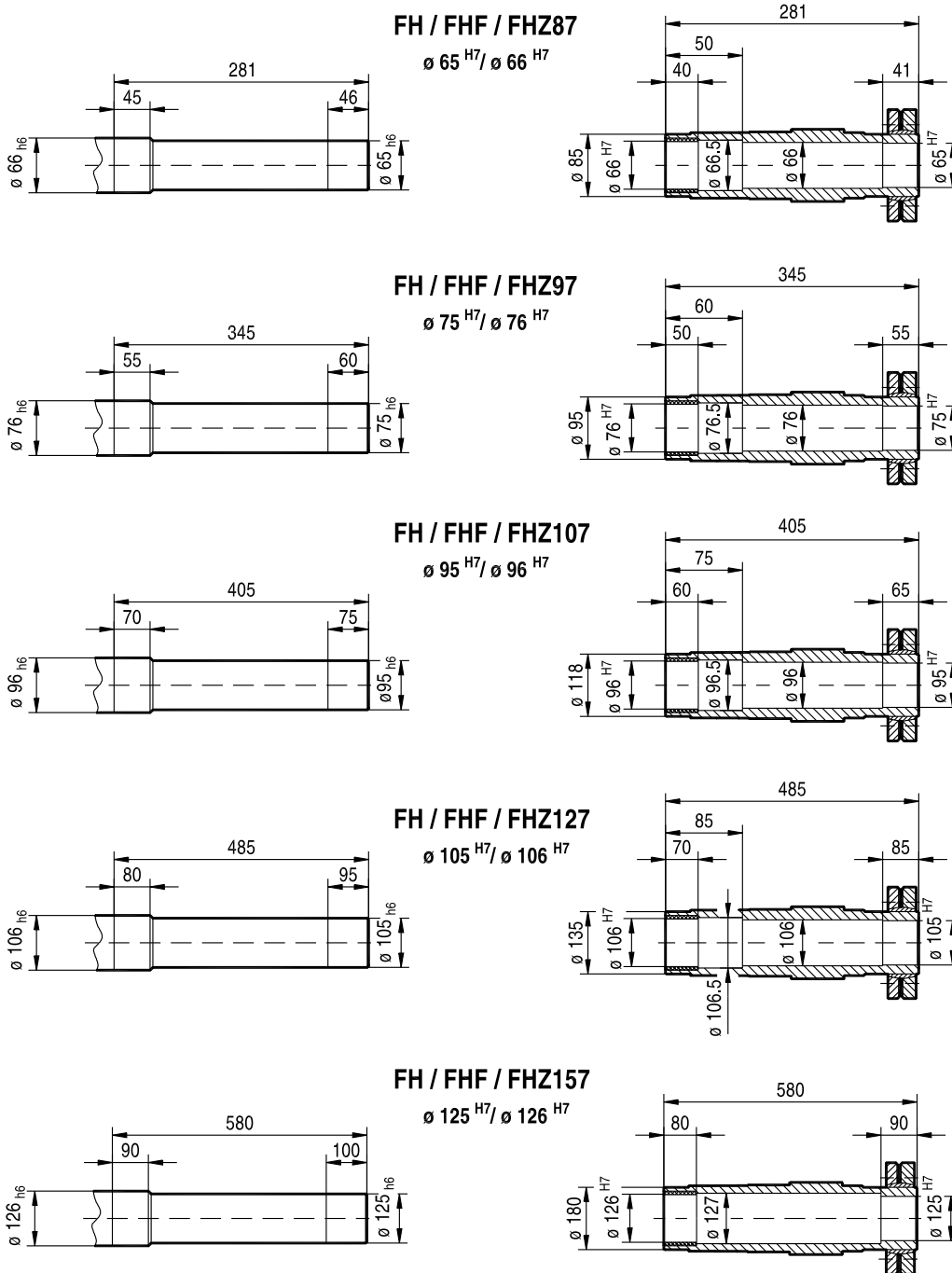
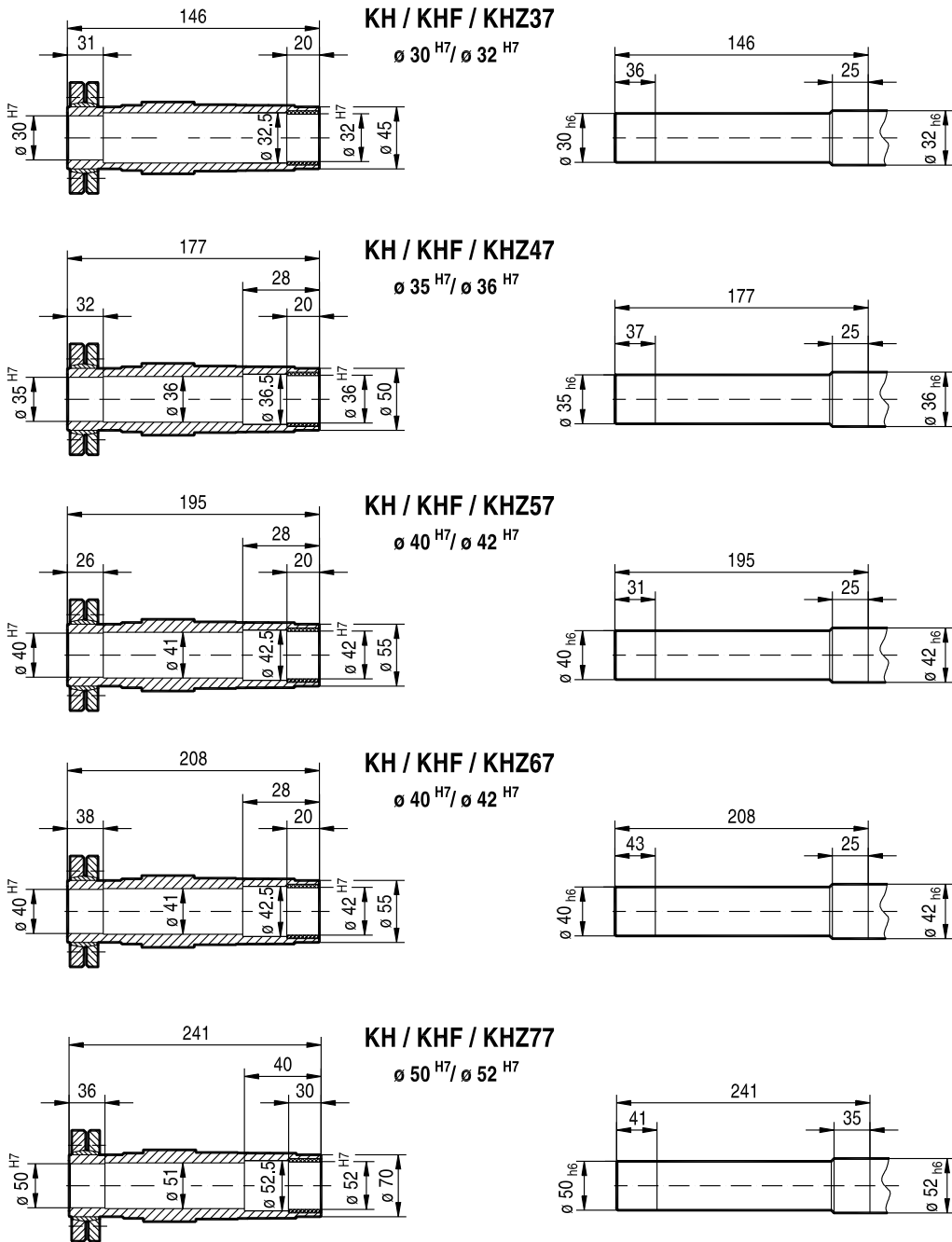


Figure 20: Shouldered hollow shaft FH/FHF/FHZ87...157

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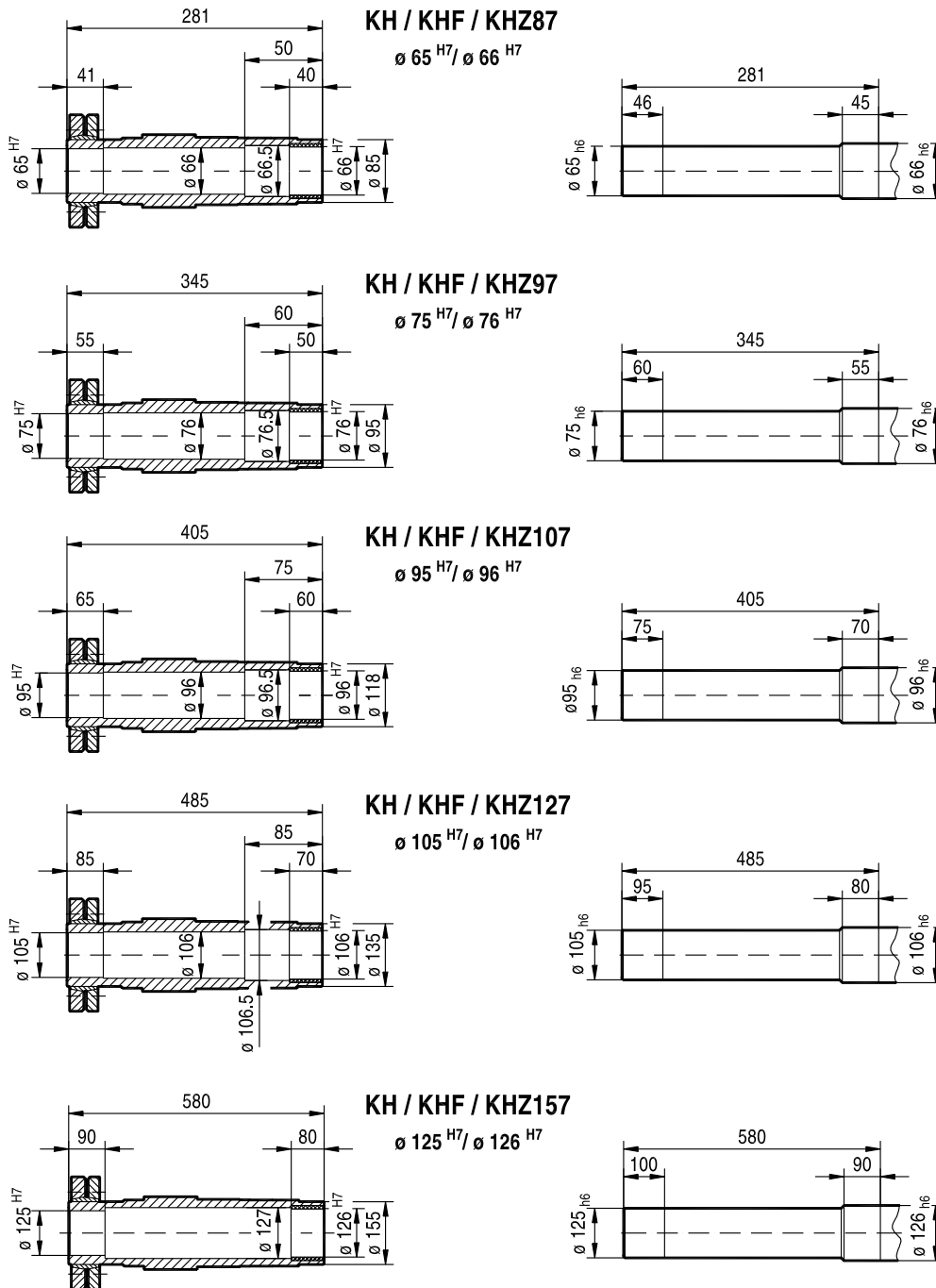
Helical-bevel gear units with shouldered hollow shaft (dimensions in mm):



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Figure 21: Shouldered hollow shaft KH/KHF/KHZ37...77

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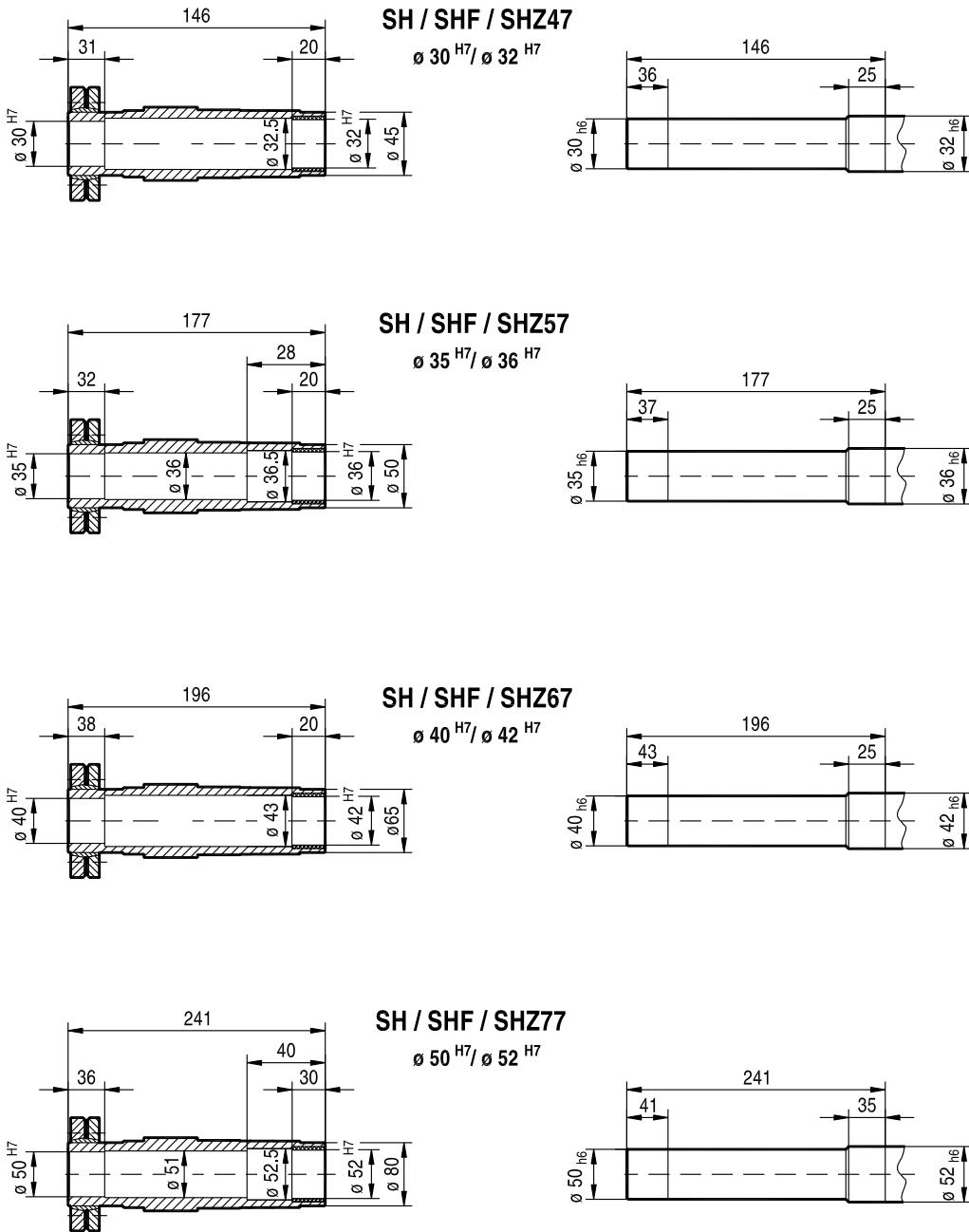
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Figure 22: Shouldered hollow shaft KH/KHF/KHZ87...157

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Helical-worm gear units with shouldered hollow shaft (dimensions in mm):



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Figure 23: Shouldered hollow shaft SH/SHF/SHZ47...77

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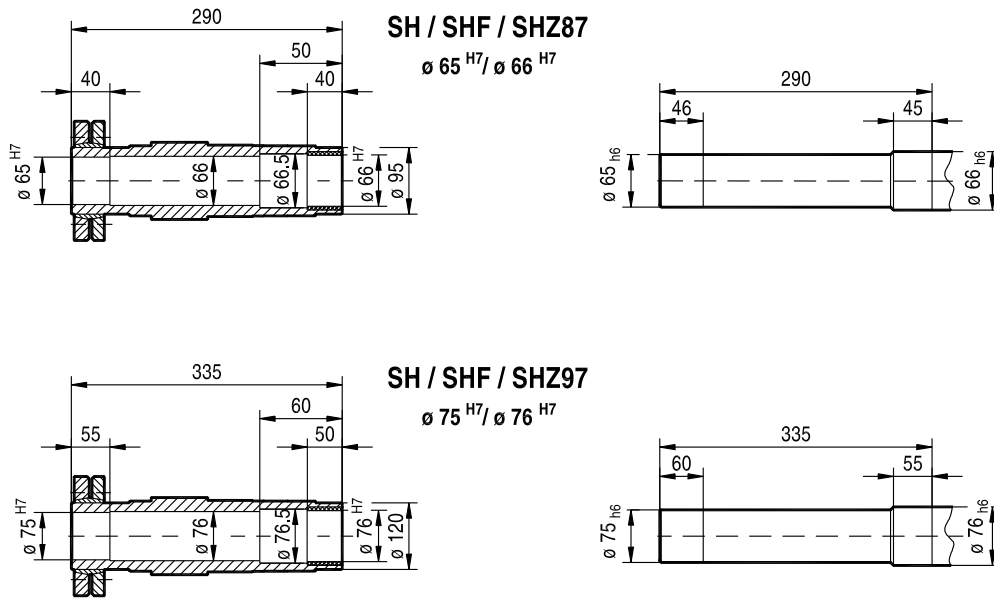
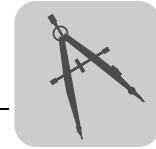


Figure 24: Shouldered hollow shaft SH/SHF/SHZ87...97

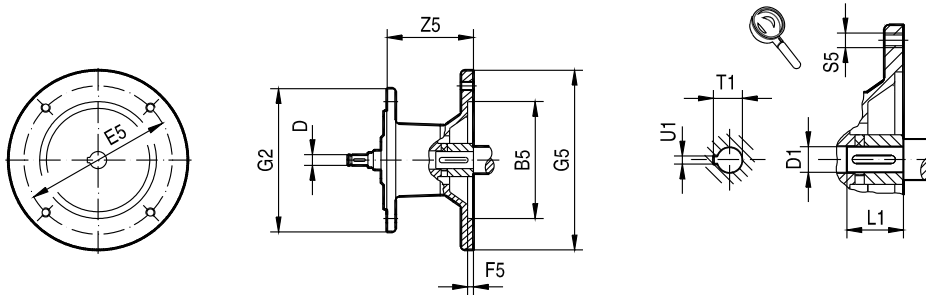
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7.7 Adapters for mounting IEC motors

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Gear unit type	Adapter type	Dimensions in mm											
		B5	D	E5	F5	G2	G5	S5	Z5	D1	L1	T1	U1
R..27, R..37 F..27, F..37, F..47 K..37 S..37, S..47, S..57 W..37	AM63	95	10	115	3.5	120	140	M8	72	11	23	12.8	4
	AM71 ¹⁾	110		130	4		14			30	16.3	5	
	AM80 ¹⁾	130	12	165	4.5		200	M10	106	19	40	21.8	6
	AM90 ¹⁾		14				24		50	27.3	8		
R..47 ²⁾ , R..57, R..67 F..57, F..67 K..47 ²⁾ , K..57, K..67 S..67 W..47	AM63	95	10	115	3.5	160	140	M8	66	11	23	12.8	4
	AM71	110		130	4		14			30	16.3	5	
	AM80	130	12	165	4.5		200	M10	99	19	40	21.8	6
	AM90		14				24		50	27.3	8		
	AM100 ¹⁾	180	16	215	5		250	M12	134	28	60	31.3	8
	AM112 ¹⁾		18				300		191	38	80	41.3	10
AM132S/M ¹⁾	230	22	265										
R..77 F..77 K..77 S..77	AM63	95	10	115	3.5	200	140	M8	60	11	23	12.8	4
	AM71	110		130	4		14			30	16.3	5	
	AM80	130	12	165	4.5		200	M10	92	19	40	21.8	6
	AM90		14				24		50	27.3	8		
	AM100 ¹⁾	180	16	215	5		250	M12	126	28	60	31.3	8
	AM112 ¹⁾		18				300		179	38	80	41.3	10
	AM132S/M ¹⁾	230	22	265									
AM132ML ¹⁾	28												
R..87 F..87 K..87 S..87 ³⁾	AM80	130	12	165	4.5	250	200	M10	87	19	40	21.8	6
	AM90		14							24	50	27.3	8
	AM100	180	16	215	5		250	M12	121	28	60	31.3	8
	AM112		18				300		174	38	80	41.3	10
	AM132S/M	230	22	265									
	AM132ML		28										
	AM160 ¹⁾	250	28	300	6		350	M16	232	42	110	45.3	12
AM180 ¹⁾	32		48			51.8				14			

1) Check dimension 1/2 G5 because component may protrude past foot-mounting surface if installed on R, K, S or W foot-mounted gear unit.

2) not with AM112

3) not with AM180

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Fig.1

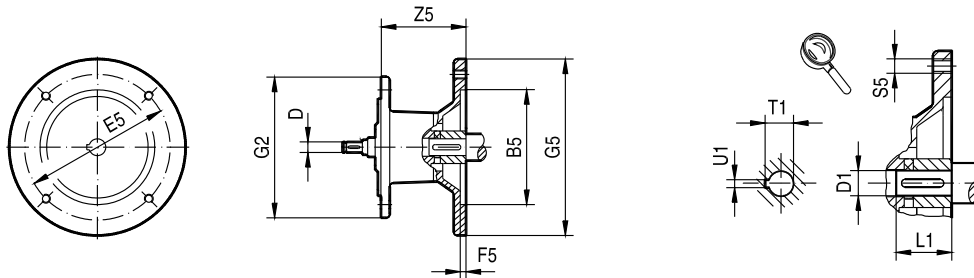
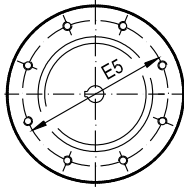


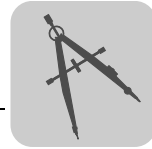
Fig.2



Gear unit type	Adapter type	Fig.	Dimensions in mm												
			B5	D	E5	F5	G2	G5	S5	Z5	D1	L1	T1	U1	
R..97 F..97 K..97 S..97 ¹⁾	AM100	1	180	16	215	5	300	250	M12	116	28	60	31.3	8	
	AM112			18											
	AM132S/M		230	22	265										
	AM132ML			28											
	AM160		250	28	300			6	350	M16	227	42	110	45.3	12
	AM180			32											
	AM200		300	38	350			7	400	268	55	59.3	16		
R..107 F..107 K..107	AM100	1	180	16	215	5	350	250	M12	110	28	60	31.3	8	
	AM112			18											
	AM132S/M		230	22	265										
	AM132ML			28											
	AM160		250	28	300			6	350	M16	221	42	110	45.3	12
	AM180			32											
	AM200		300	38	350			7	400	262	55	59.3	16		
	AM225	350		38		400	450							277	60
R..137	AM132S/M	1	230	22	265	5	400	300	M12	156	38	80	41.3	10	
	AM132ML			28											
	AM160		250	28	300			6	350	M16	214	42	110	45.3	12
	AM180			32											
	AM200	300	38	350	7	400	255	55	59.3	16					
	AM225		350								38	400	450	270	60

1) Not with AM200

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Fig.1

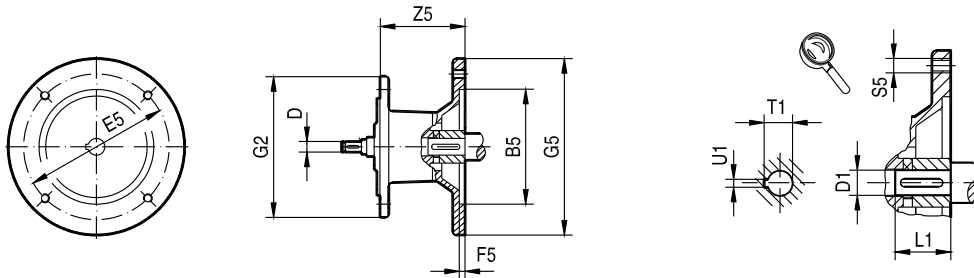
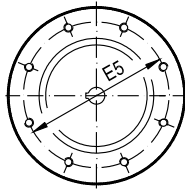


Fig.2



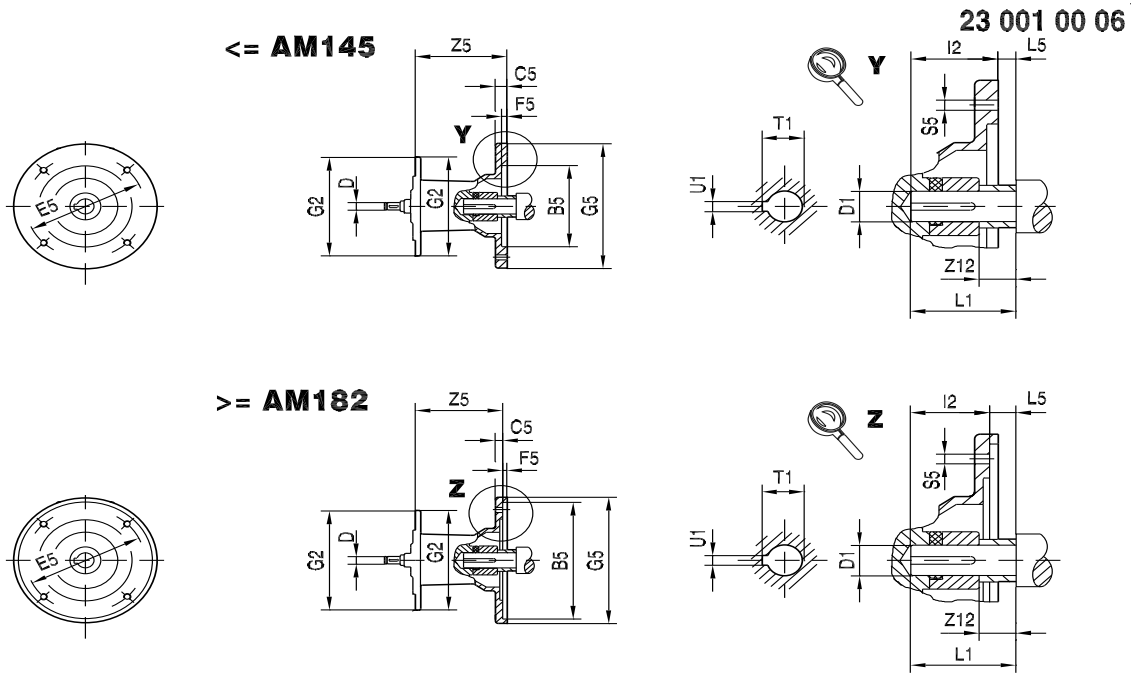
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Gear unit type	Adapter type	Fig.	Dimensions in mm											
			B5	D	E5	F5	G2	G5	S5	Z5	D1	L1	T1	U1
R..147 F..127 K..127	AM132S/M	1	230	22	265	5	450	300	M12	148	38	80	41.3	10
	AM132ML			28							38			
	AM160	250	28	300	6	350		206	42	110	45.3	12		
	AM180		32						48		51.8			
	AM200	300	38	350	7	400		247	55	140	59.3	16		
	AM225										350		38	400
	AM250	450	48	500	550	336		65	140	69.4		18		
AM280	75						79.9	20						
R..167 F..157 K..157 K..167 K..187	AM160	1	250	28	300	6	550	350	M16	198	42	110	45.3	12
	AM180			32							48			
	AM200	300	38	350	7	400		239		55	140	59.3	16	
	AM225											350		38
	AM250	450	48	500	550	328		65		140	69.4		18	
	AM280							75			79.9	20		

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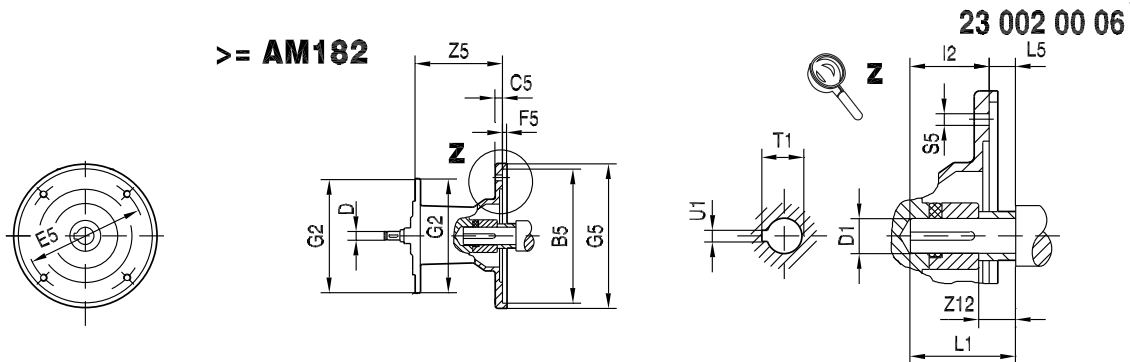
7.8 Adapters for mounting NEMA motors



Gear unit type	Adapter type	Dimensions in inch																
		B5	C5	D ¹⁾	E5	F5	G2	G5	I2	L5	S5	Z5	Z12	D1	L1	T1	U1	
R..27, R..37 F..27, F..37, F..47 K..37 S..37, S..47, S..57	AM56		0.43	10					2.07	-		3.68	0.65	0.625	1.85	0.71	0.1875	
	AM143	4.50		12	5.87	0.18	4.72	6.69			0.41							
	AM145		0.47	14					2.13	0.12		4.61	0.57	0.875	2.24	0.97		
R..47, R..57, R..67, F..57, F..67, K..47 ²⁾	AM56		0.43	10					2.07	-		3.43	0.65	0.625	1.85	0.71	0.1875	
	AM143	4.50		12	5.87	0.18		6.69			0.41							
	AM145		0.47	14					2.13	0.12		4.35	0.57	0.875	2.24	0.97		
	AM182			16			6.30		2.63	0.12		5.81	0.65	1.125	2.72	1.25		0.250
	AM184		0.39	18					3.13	0.25	0.59	7.89	0.62	1.375	3.35	1.52		0.3125
K..57, K..67 S..67	AM213/215	8.50	0.43	22	7.24	0.20		8.98										
R..77 F..77 K..77 S..77	AM56		0.43	10					2.07	-		3.19	0.65	0.625	1.85	0.71	0.1875	
	AM143	4.50		12	5.87	0.18		6.69			0.41							
	AM145		0.47	14					2.13	0.12		4.07	0.57	0.875	2.24	0.97		
	AM182			16			7.87		2.63	0.12		5.49	0.65	1.125	2.72	1.25		0.250
	AM184		0.39	18					3.13	0.25	0.59	7.42	0.62	1.375	3.35	1.52		0.3125
	AM213/215	8.50	0.43	22	7.24	0.20		8.98										
R..87 F..87 K..87 S..87	AM143	4.50	0.47	12	5.87	0.18		6.69	2.13	0.12	0.41	3.88	0.57	0.875	2.24	0.97	0.1875	
	AM145			14														
	AM182		0.39	16					2.63	0.12		5.30	0.65	1.125	2.72	1.25	0.250	
	AM184		0.39	18					3.13		0.59	7.22	0.62	1.375	3.35	1.52	0.3125	
	AM213/215	8.50	0.43	22	7.24	0.20		8.98				9.21	0.35	1.625	3.98	1.80	0.375	
	AM254/256		0.47	28					3.75	0.25		9.49	0.62	1.875	4.61	2.10	0.500	
	AM284/286	10.50	0.59	32	9.00			11.26	4.37									

1) Dimension in mm
2) Not with AM213/215

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Gear unit type	Adapter type	Dimensions in inch																				
		B5	C5	D ¹⁾	E5	F5	G2	G5	I2	L5	S5	Z5	Z12	D1	L1	T1	U1					
R..97 F..97 K..97 S..97	AM182	8.50	0.39	16	7.24	0.20	11.81	8.98	2.63	0.12	0.59	5.10	0.65	1.125	2.72	1.25	0.250					
	AM184		18	3.13					7.03									0.62	1.375	3.35	1.52	0.3125
	AM213/215		22	3.75					9.02									0.35	1.625	3.98	1.80	0.375
	AM254/256	0.47	28	9.02	0.35			1.625	3.98	1.80		0.375										
	AM284/286	10.50	0.79	32	9.00			11.26	4.37	0.25		9.29	0.62	1.875	4.61	2.10		0.500				
	AM324/326	12.50	0.67	38	11.00			14.02	5.00	0.69		11.65	1.37	2.125	5.24	2.36		0.500				
	AM364/365																		5.63	2.375	5.87	2.66
R..107 F..107 K..107	AM182	8.50	0.39	16	7.24	0.20	13.78	8.98	2.63	0.12	0.59	4.86	0.65	1.125	2.75	1.25	0.250					
	AM184		18	3.13					6.79									0.62	1.375	3.38	1.52	0.3125
	AM213/215		22	3.75					8.78									0.35	1.625	4.00	1.80	0.375
	AM254/256	0.47	28	8.78	0.35			1.625	4.00	1.80		0.375										
	AM284/286	10.50	0.59	32	9.00			11.26	4.37	0.25		9.06	0.62	1.875	4.62	2.10		0.500				
	AM324/326	12.50	0.67	38	11.00			14.02	5.00	0.69		11.42	1.37	2.125	5.25	2.36		0.500				
	AM364/365																		5.63	2.375	5.88	2.66
R..137	AM213/215	8.50	0.43	22	7.24	0.20	15.75	8.98	3.13	0.25	0.59	6.52	0.62	1.375	3.38	1.52	0.3125					
	AM254/256		28	3.75					8.50									0.35	1.625	4.00	1.80	0.375
	AM284/286	10.50	0.59	32	9.00			11.26	4.37			0.25	8.78	0.62	1.875	4.62		2.10	0.500			
	AM324/326	12.50	0.67	38	11.00			14.02	5.00			0.69	11.14	1.37	2.125	5.25		2.36	0.500			
	AM364/365																			5.63	2.375	5.88
R..147 F..127 K..127	AM213/215	8.50	0.43	22	7.24	0.20	17.72	8.98	3.13	0.25	0.59	6.20	0.62	1.375	3.38	1.52	0.3125					
	AM254/256		28	3.75					8.19									0.35	1.625	4.00	1.80	0.375
	AM284/286	10.50	0.59	32	9.00			11.26	4.37			0.25	8.46	0.62	1.875	4.62		2.10	0.500			
	AM324/326	12.50	0.67	38	11.00			14.02	5.00			0.69	10.83	1.37	2.125	5.25		2.36	0.500			
	AM364/365																			5.63	2.375	5.88
R..167 F..157 K..157, K..167, K..187	AM254/256	8.50	0.47	28	7.24	0.20	21.65	8.98	3.75	0.25	0.59	7.87	0.35	1.625	4.00	1.80	0.375					
	AM284/286	10.50	0.59	32	9.00			11.26	4.37			8.15	0.62	1.875	4.62	2.10	0.500					
	AM324/326	12.50	0.67	38	11.00			14.02	5.00			0.69	10.51	1.37	2.125	5.25	2.36	0.500				
	AM364/365																		5.63	2.375	5.88	2.66

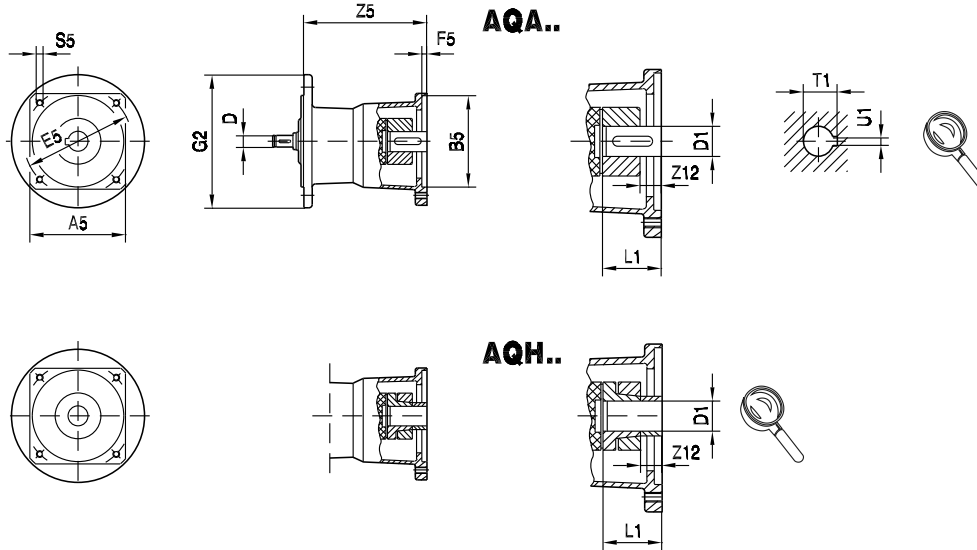
1) Dimension in mm

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7.9 Adapters for mounting servomotors

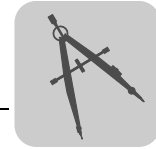
23 005 01 00



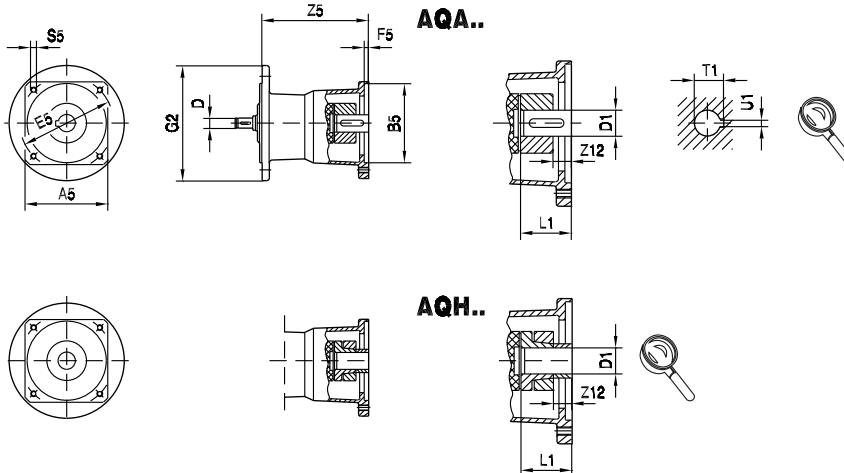
Gear unit type	Adapter type	Dimensions in mm													
		A5	B5	D	E5	F5	G2	S5	Z5	Z12 ¹⁾	Z12 ²⁾	D1	L1	T1 ¹⁾	U1 ¹⁾
R..27, R..37 F..27, F..37, F..47 K..37 S..37, S..47, S..57 W..37	AQ..80/1	82	60	10 12	75	3	120	M5	104.5	5.5	5.5	11	23	12.8	4
	AQ..80/2		50		95			14				30	16.3	5	
	AQ..80/3		80	100	14			30				16.3	5		
	AQ..100/1	100	80	10 12 14	100	4		M6	129.5	-	-	14	30	16.3	5
	AQ..100/2		95		115			14				30	16.3	5	
	AQ..100/3		80		100			19				40	21.8	6	
	AQ..100/4		95		115			19				40	21.8	6	
	AQ..115/1	115	95	16	130	4		M8	152.5	11	23	19	40	21.8	6
	AQ..115/2		110					24				50	27.3	8	
	AQ..115/3		110					16				16	24	50	27.3
R..47, R..57, R..67 F..57, F..67 K..47 ³⁾ , K..57, K..67 S..67 W..47	AQ..80/1	82	60	10 12	75	3	160	M5	98	5.5	5.5	11	23	12.8	4
	AQ..80/2		50		95			14				30	16.3	5	
	AQ..80/3		80	100	14			30				16.3	5		
	AQ..100/1	100	80	10 12 14	100	4		M6	122.5	-	-	14	30	16.3	5
	AQ..100/2		95		115			14				30	16.3	5	
	AQ..100/3		80		100			19				40	21.8	6	
	AQ..100/4		95		115			19				40	21.8	6	
	AQ..115/1	115	95	16	130	4		M8	145.5	11	23	19	40	21.8	6
	AQ..115/2		110					24				50	27.3	8	
	AQ..115/3		110					16				16	24	50	27.3
	AQ..140/1	140	110	16 18 22	165	5		M10	175	16	16	24	50	27.3	8
	AQ..140/2		130									32	60	35.5	10
	AQ..140/3		130									28	60	31.3	8
	AQ..140/4		130									32	60	35.3	10
	AQ..160/1	162	155	22 28	215	5		M12	237.5	24	24	32	60	35.3	10
AQ..190/1	190	130	32				60					35.3	10		
AQ..190/2	190	180	34				80					41.3	10		
AQ..190/3	190	180	28	215	5	M12	261.5	34	34	38	80	41.3	10		

- 1) For versions with keyway (AQA..).
- 2) For version with clamping ring hub (AQH..).
- 3) Not with AQ190

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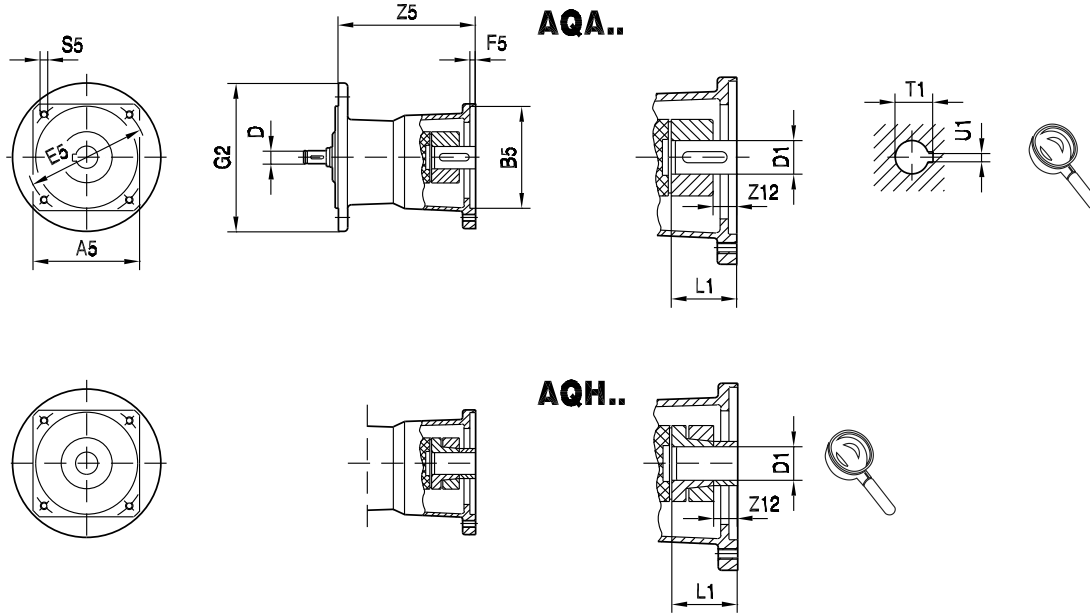
Gear unit type	Adapter type	Dimensions in mm															
		A5	B5	D	E5	F5	G2	S5	Z5	Z12 ¹⁾	Z12 ²⁾	D1	L1	T1 ¹⁾	U1 ¹⁾		
R..77 F..77 K..77 S..77	AQ..80/1	82	60	10	75	3	200	M5	92	5.5	5.5	11	23	12.8	4		
	AQ..80/2		12	75	14			30				16.3	5				
	AQ..80/3		50	95	14			30				16.3	5				
	AQ..100/1	100	80	10	100	4		M6	115.5	-	-	14	30	16.3	5		
	AQ..100/2		95		115			14				30	16.3	5			
	AQ..100/3		80		10			100				19	40	21.8	6		
	AQ..100/4		95		14			115				19	40	21.8	6		
	AQ..115/1	115	95	16	130	5		M8	138.5	11	23	19	40	21.8	6		
	AQ..115/2		110					16				16	24	50	27.3	8	
	AQ..115/3		110					16				16	24	50	27.3	8	
	AQ..140/1	140	110	16	165	5		M10	167	16	16	24	50	27.3	8		
	AQ..140/2		130									32	60	35.3	10		
	AQ..140/3		130									28	60	31.3	8		
	AQ..140/4		130									32	60	35.3	10		
	AQ..160/1	162	155	22	190	5		M12	225.5	24	24	32	60	35.3	10		
	AQ..190/1	190	130		215							38	80	41.3	10		
	AQ..190/2		180		28							215	38	80	41.3	10	
	AQ..190/3	190	180	28	215	5		M12	249.5	34	34	38	80	41.3	10		
R..87 F..87 K..87 S..87	AQ..100/1	100	80	12	100	4	250	M6	110.5	-	-	14	30	16.3	5		
	AQ..100/2		95		115			14				30	16.3	5			
	AQ..100/3		80		100			14				30	16.3	5			
	AQ..100/4		95		14			115				19	40	21.8	6		
	AQ..115/1	115	95	16	130	5		M8	133.5	11	23	19	40	21.8	6		
	AQ..115/2		110									16	16	24	50	27.3	8
	AQ..115/3		110									16	16	24	50	27.3	8
	AQ..140/1	140	110	16	165	5		M10	162	16	16	24	50	27.3	8		
	AQ..140/2		130									32	60	35.3	10		
	AQ..140/3		130									28	60	31.3	8		
	AQ..140/4		130									32	60	35.3	10		
	AQ..160/1	162	155	22	190	5		M12	220.5	24	24	32	60	35.3	10		
	AQ..190/1	190	130		215							38	80	41.3	10		
	AQ..190/2		180		28							215	38	80	41.3	10	
	AQ..190/3	190	180	28	215	5		M12	244.5	34	34	38	80	41.3	10		

- 1) For versions with keyway (AQA..).
- 2) For version with clamping ring hub (AQH..).

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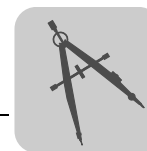


Gear unit type	Adapter type	Dimensions in mm																
		A5	B5	D	E5	F5	G2	S5	Z5	Z12 ¹⁾	Z12 ²⁾	D1	L1	T1 ¹⁾	U1 ¹⁾			
R..97 F..97 K..97 S..97	AQ..140/1	140	110	16 18 22	165	5	300	M10	157	16	16	24	50	27.3	8			
	AQ..140/2		130						22	22	32	60		35.3	10			
	AQ..140/3															162	155	190
	AQ..140/4		190						130	22	24	32		60	35.3			
	AQ..160/1	190		180	22			28					215			38	80	41.3
	AQ..190/1		190						180	22	28	215		32	60			
	AQ..190/2	239.5		34	34			38					80			41.3		
	AQ..190/3																	
R..107 F..107 K..107	AQ..140/1	140	110	16 18 22	165	5	350	M10	151	16	16	24	50	27.3	8			
	AQ..140/2		130						22	22	32	60		35.3	10			
	AQ..140/3															162	155	190
	AQ..140/4		190						130	22	24	32		60	35.3			
	AQ..160/1	190		180	22			28					215			32	60	35.3
	AQ..190/1		190						180	22	28	215		32	60			
	AQ..190/2	209.5		24	24			32					60			35.3		
	AQ..190/3																233.5	34
R..137	AQ..190/1	190	130	22 28	215	5	400	M12	202.5	24	24	32	60	35.3	10			
	AQ..190/2		180						22	24	32	60	35.3					
	AQ..190/3													226.5		34	34	38
R..147 F..127 K..127	AQ..190/1	190	130	22 28	215		5	450	M12	194.5	24	24	32	60		35.3	10	
	AQ..190/2		180							22	24	32	60	35.3				
	AQ..190/3															218.5		34
	AQ..190/3																	

1) For versions with keyway (AQA..).

2) For version with clamping ring hub (AQH..).

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7.10 Fastening the gear unit

Use bolts of metric grade 8.8 to fasten gear units and gearmotors.

Exception

Use bolts of **metric grade 10.9** to fasten the customer flange to transmit the rated torques for the following flange-mounted (RF .. /RZ..) and foot/flange-mounted helical gearmotors (R..F):

- RF37, R37F with flange \varnothing 120 mm
- RF47, R47F with flange \varnothing 140 mm
- RF57, R57F with flange \varnothing 160 mm
- RZ37 ... RZ87

7.11 Torque arms

Available torque arms

Gear unit	Size					
	27	37	47	57	67	77
KA, KH, KV, KT	-	643 425 8	643 428 2	643 431 2	643 431 2	643 434 7
SA, SH, ST	-	126 994 1	644 237 4	644 240 4	644 243 9	644 246 3
FA, FH, FV, FT Rubber buffer (2 pieces)	013 348 5	013 348 5	013 348 5	013 348 5	013 348 5	013 349 3

Gear unit	Size				
	87	97	107	127	157
KA, KH, KV, KT	643 437 1	643 440 1	643 443 6	643 294 8	-
SA, SH, ST	644 249 8	644 252 8	-	-	-
FA, FH, FV, FT Rubber buffer (2 pieces)	013 349 3	013 350 7	013 350 7	013 351 5	013 347 7

Gear unit	Size				
	10	20	30	37	47
WA	1 061 021 9	1 68 073 0	1 68 011 0	1 061 129 0	1 061 187 8

Torque arms for KH167.., KH187..

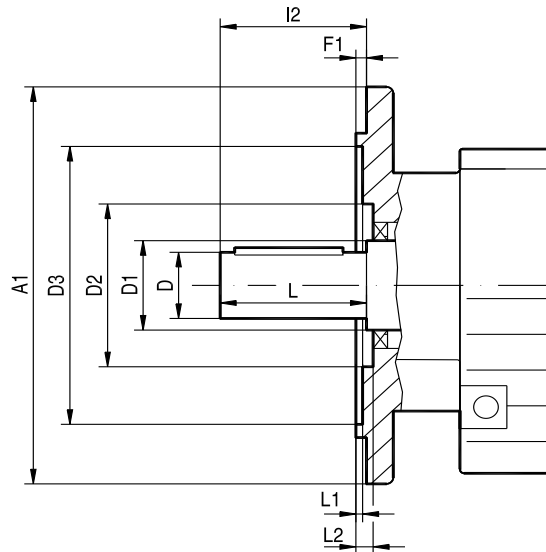
As standard, torque arms are not available for gear unit sizes KH167.. and KH187... Consult SEW-EURODRIVE for design proposals if you require torque arms for these gear units.

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7.12 Flange contours of RF.. and R..F gear units

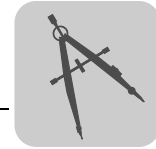
04355AXX



Check dimensions L1 and L2 for selection and installation of output elements.

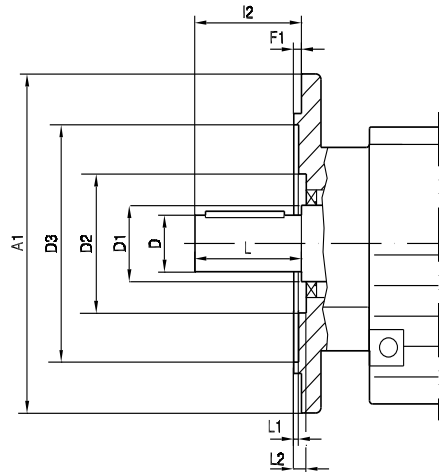
Type	Dimensions in mm											
	A1	D	D1	D2		D3	F1	I2	L	L1		L2
				RF	R..F					RF	R..F	
RF07, R07F	120	20	22	38	38	72	3	40	40	2	2	6
	140 ¹⁾				-	85	3			2	-	6
	160 ¹⁾				-	100	3.5			2.5	-	6.5
RF17, R17F	120	20	25	46	46	65	3	40	40	1	1	5
	140				-	78	3			1	-	5
	160 ¹⁾				-	95	3.5			1	-	6
RF27, R27F	120	25	30	54	54	66	3	50	50	1	1	6
	140				-	79	3			3	-	7
	160				-	92	3.5			3	-	7
RF37, R37F	120	25	35	60	63	70	3	50	50	5	4	7
	160				-	96	3.5			1	-	7.5
	200 ¹⁾				-	119	3.5			1	-	7.5
RF47, R47F	140	30	35	72	64	82	3	60	60	4	1	6
	160				-	96	3.5			0.5	-	6.5
	200				-	116	3.5			0.5	-	6.5
RF57, R57F	160	35	40	76	75	96	3.5	70	70	4	2.5	5
	200				-	116	3.5			0	-	5
	250 ¹⁾				-	160	4			0.5	-	5.5
RF67, R67F	200	35	50	90	90	118	3.5	70	70	2	4	7
	250				-	160	4			1	-	7.5
RF77, R77F	250	40	52	112	100	160	4	80	80	0.5	2.5	7
	300 ¹⁾				-	210	4			0.5	-	7
RF87, R87F	300	50	62	123	122	210	4	100	100	0	1.5	8
	350				-	226	5			1	-	9
RF97	350	60	72	136	-	236	5	120	120	0		9
	450				-	320						
RF107	350	70	82	157	-	232	5	140	140	0		11
	450			-	186	316						
RF137	450	90	108	180	-	316	5	170	170	0		10
	550				-	416						
RF147	450	110	125	210	-	316	5	210	210	0		10
	550				-	416						
RF167	550	120	145	290	-	416	5	210	210	1		10
	660				-	517				6	2	

1) The flange contour protrudes from under the base surface.



7.13 Flange contours of FF., KF., SF. and WF. gear units

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Check dimensions L1 and L2 for selection and installation of output elements.

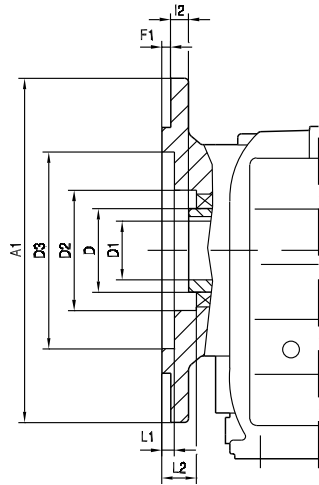
Type	Dimensions in mm									
	A1	D	D1	D2	D3	F1	I2	L	L1	L2
FF27	160	25	40	66	96	3.5	50	50	3	18.5
FF37	160	25	30	70	94	3.5	50	50	2	6
FF47	200	30	40	72	115	3.5	60	60	3.5	7.5
FF57	250	35	40	84	155	4	70	70	4	9
FF67	250	40	50	84	155	4	80	80	4	9
FF77	300	50	55	82	205	4	100	100	5	9
FF87	350	60	65	115	220	5	120	120	5	9
FF97	450	70	75	112	320	5	140	140	8	10
FF107	450	90	100	159	318	5	170	170	16	9
FF127	550	110	118	-	420	5	210	210	10	-
FF157	660	120	135	190	520	6	210	210	8	14
KF37	160	25	30	70	94	3.5	50	50	2	6
KF47	200	30	40	72	115	3.5	60	60	3.5	7.5
KF57	250	35	40	84	155	4	70	70	4	9
KF67	250	40	50	84	155	4	80	80	4	9
KF77	300	50	55	82	205	4	100	100	5	9
KF87	350	60	65	115	220	5	120	120	5	9
KF97	450	70	75	112	320	5	140	140	8	10
KF107	450	90	100	159	318	5	170	170	16	9
KF127	550	110	118	-	420	5	210	210	10	-
KF157	660	120	135	190	520	6	210	210	8	14
SF37	120	20	25	-	68	3	40	40	6	-
SF37	160	20	25	-	96	3.5	40	40	5.5	-
SF47	160	25	30	70	94	3.5	50	50	2	6
SF57	200	30	40	72	115	3.5	60	60	3.5	7.5
SF67	200	35	45	-	115	3.5	70	70	8.5	-
SF77	250	45	55	108	160	4	90	90	8	9
SF87	350	60	65	130	220	5	120	120	6	10
SF97	450	70	75	150	320	5	140	140	8.5	10
WF10	80	16	25	-	39	2.5	40	40	30	-
WF10	120	16	25	39	74	3	40	40	5	30
WF20	110	20	30	44	53	-4	40	40	27	35
WF20	120	20	30	-	45	2.5	40	40	37.5	-
WF30	120	20	30	48	63	2.5	40	40	18	27
WF30	160	20	30	48	63	2.5	40	40	33	42
WF37	120	20	30	-	70	2.5	40	40	-	10.5
WF37	160	20	30	-	70	2.5	40	40	-	25.5
WF47	160	30	35	-	92	3.5	10	60	6	-

7



7.14 Flange contours of FAF..., KAF..., SAF... and WAF... gear units

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Check dimensions L1 and L2 for selection and installation of output elements.

Type	Dimensions in mm								
	A1	D	D1	D2	D3	F1	I2	L1	L2
FAF27	160	40	25	66	96	3.5	20	3	18.5
FAF37	160	45	30	62	94	3.5	24	2	30
FAF47	200	50	35	70	115	3.5	25	3.5	31.5
FAF57	250	55	40	76	155	4	23.5	4	31
FAF67	250	55	40	76	155	4	23	4	31
FAF77	300	70	50	95	205	4	37	5	45
FAF87	350	85	60	120	220	5	30	5	39
FAF97	450	95	70	135	320	5	41.5	5.5	51
FAF107	450	118	90	224	320	5	41	16	52
FAF127	550	135	100	185	420	5	51	6	63
FAF157	660	155	120	200	520	6	60	10	74
KAF37	160	45	30	62	94	3.5	24	2	30
KAF47	200	50	35	70	115	3.5	25	3.5	8.5
KAF57	250	55	40	76	155	4	23.5	4	31
KAF67	250	55	40	76	155	4	23	4	31
KAF77	300	70	50	95	205	4	37	5	45
KAF87	350	85	60	120	220	5	30	5	39
KAF97	450	95	70	135	320	5	41.5	5.5	51
KAF107	450	118	90	224	320	5	41	16	52
KAF127	550	135	100	185	420	5	51	6	63
KAF157	660	155	120	200	520	6	60	10	74
SAF37	120	35	20	-	68	3	15	6	-
SAF37	160	35	20	-	96	3.5	15	5.5	-
SAF47	160	45	30 / 25	62	94	3.5	24	2	30
SAF57	200	50	35 / 30	70	115	3.5	25	3.5	31.5
SAF67	200	65	45 / 40	91	115	3.5	42.5	4	48.5
SAF77	250	80	60 / 50	112	164	4	45.5	5	53.5
SAF87	350	95	70 / 60	131	220	5	52.5	6	62.5
SAF97	450	120	90 / 70	160	320	5	60	6.5	69
WAF10	80	25	16	-	39	2.5	23	30	-
WAF10	120	25	16	39	74	3	23	5	30
WAF20	110	30	18 / 20	44	53	-4	30	27	35
WAF20	120	30	18 / 20	-	45	2.5	30	37.5	-
WAF30	120	30	20	48	63	2.5	19.5	18	27
WAF30	160	30	20	48	63	2.5	34.5	33	42
WAF37	120	35	20 / 25	54	70	2.5	19.5	10.5	27
WAF37	160	35	20 / 25	54	70	2.5	34.5	25.5	42
WAF47	160	45	25 / 30	72	94	3.5	10	6	45



7.15 Fixed covers

Parallel-shaft helical gear units, helical-bevel gear units, helical-worm and Spiroplan® gear units with hollow shafts and shrink disks of size 37 up to size 97 come equipped with a rotating cover as standard. If, for safety reasons, fixed covers are required for these gear units, you can order them for the respective gear unit types by quoting the part numbers in the following tables. As standard, size 107 parallel-shaft helical gear units and helical-bevel gear units with hollow shafts and shrink disks and size 27 parallel-shaft helical gear units come equipped with a fixed cover.

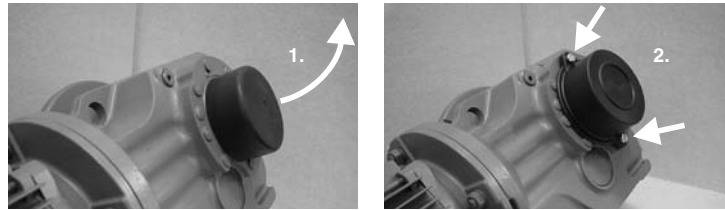
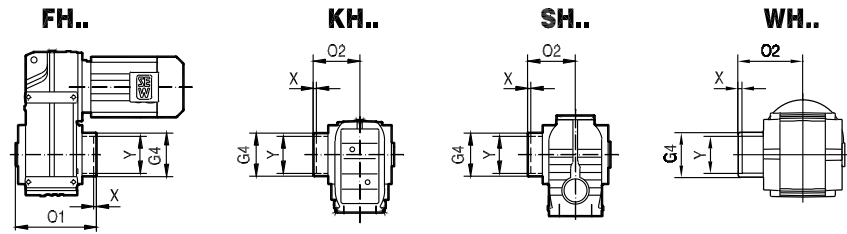


Figure 25: Replacing a rotating cover with a fixed cover

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1. Pull off the rotating cover.
2. Install and fasten fixed cover.


Part numbers and dimensions


62664AXX

Parallel-shaft helical gearmotors	FH..37	FH..47	FH..57	FH..67	FH..77	FH..87	FH..97
Part number	643 513 0	643 514 9	643 515 7	643 515 7	643 516 5	643 517 3	643 518 1
Max. size of motor that can be mounted	DR80	DR80	DR80	DR132	DR160	DR180..	DR180..
G4 [mm]	78	88	100	100	121	164	185
O1 [mm]	157	188.5	207.5	221.5	255	295	363.5
X [mm]	2	4.5	7.5	6	6	4	6.5
Y [mm]	75	83	83	93	114	159	174

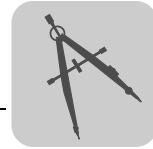
Helical-bevel gearmotors ¹⁾	KH..37	KH..47	KH..57	KH..67	KH..77	KH..87	KH..97
Part number	643 513 0	643 514 9	643 515 7	643 515 7	643 516 5	643 517 3	643 518 1
G4 [mm]	78	88	100	100	121	164	185
O2 [mm]	95	111.5	122.5	129	147	172	210.5
X [mm]	0	1.5	5.5	3	1	2	4.5
Y [mm]	75	83	83	93	114	159	174

1) Not possible in foot-mounted helical-bevel gear units with hollow shaft and shrink disk (KH..B).

Helical-worm gearmotors	SH..37	SH..47	SH..57	SH..67	SH..77	SH..87	SH..97
Part number	643 512 2	643 513 0	643 514 9	643 515 7	643 516 5	643 517 3	643 518 1
G4 [mm]	59	78	88	100	121	164	185
O2 [mm]	88	95	111.5	123	147	176	204.5
X [mm]	1	0	1.5	3	1	0	0.5
Y [mm]	53	75	83	93	114	159	174

Spiroplan® gearmotors	WH..37	WH..47					
Part number	1 061 136 3	1 061 194 0					
G4 [mm]	68	80.5					
O2 [mm]	95.5	109.5					
X [mm]	11	12.5					
Y [mm]	50	72					

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7.16 Condition monitoring: Oil aging and vibration sensor

Oil aging sensor technical data

DUO10A diagnostic unit

/DUO10A	Technical data	
Preset oil grades	OIL1	CLP mineral oil. $T_{max} = 100\text{ °C}$
		Bio oil $T_{max} = 100\text{ °C}$
	OIL2	CLP HC synthetic oil: $T_{max} = 130\text{ °C}$
		CLP PAO oil $T_{max} = 130\text{ °C}$
	OIL3	CLP PG polyglycol $T_{max} = 130\text{ °C}$
OIL4	Food grade oil $T_{max} = 100\text{ °C}$	
Switch outputs	1: Early warning (time to next oil change can be set to between 2 and 100 days) 2: Main alarm (time to oil change 0 days) 3: Exceeded temperature T_{max} 4: DUO10A is ready for operation	
Permitted oil temperature	-40 °C to +130 °C	
Permitted temperature sensors	PT1000	
EMC	IEC1000-4-2/3/4/6	
Ambient temperature	-25 °C to +70 °C	
Operating voltage	DC 18-28 V	
Current consumption at DC 24 V	< 90 mA	
Protection class	III	
Degree of protection	IP67 (optionally IP69K)	
Housing materials	Evaluation unit: V2A, EPDM/X, PBT, FPM Temperature sensor: V4A	
Electrical connection	Evaluation unit: M12 plug connector PT1000 temperature sensor: M12 plug connector	

Designations and part numbers



Designation	Description	Part number
DUO10A	Evaluation unit (basic unit)	1 343 875 1
		
DUO10A-PUR-M12-5m	5 m PUR cable with 1 connector	1 343 877 8
DUO10A-PVC-M12-5m	5 m PVC cable with 1 connector	1 343 878 6
DUO10A	Angle bracket	1 343 880 8
DUO10A D = 34	Mounting clamp	1 343 879 4

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Design and Operating Notes

Condition monitoring: Oil aging and vibration sensor

Designation	Description	Part number
W4843 PT1000 	PT1000 temperature sensor	1 343 881 6
W4843_4x0.34-2m-PUR	2 m PUR cable for PT1000 ¹⁾	1 343 882 4
W4843_4x0.34-2m-PVC	2 m PVC cable for PT1000 ²⁾	1 343 883 2
DUO10A 	Protection cap (for aseptic design, IP69K)	1 343 902 2

1) PUR cables are particularly suited for use in oil-contaminated environments.

2) PVC cables are particularly suited for use in wet environments.

Mounting on standard gear units (R, F, K, S)

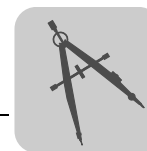
Adapter for mounting the PT1000 temperature sensor in screw plug holes:

Complete adapter for PT1000 sensor	Part number
M10 × 1	1 343 903 0
M12 × 1.5	1 343 904 9
M22 × 1.5	1 343 905 7
M33 × 2	1 343 906 5
M42 × 2	1 343 907 3

Mounting base for installing the diagnostic unit at the gear unit with an angle bracket:

Mounting base with sealing ring	Part number
M10 × 1	1 343 441 1
M12 × 1.5	1 343 827 1
M22 × 1.5	1 343 829 8
M33 × 2	1 343 830 1
M42 × 2	1 343 832 8

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Vibration sensor technical data

DUV10A diagnostics unit

/DUV10A	Technical data
Measuring range	± 20 g
Frequency range	0.125 ... 500 Hz
Spectral resolution	0.125 Hz
Diagnostic processes	FFT, envelope-FFT, trend analysis
Minimum measuring period	8.0 s
Speed range	12 ... 3,500 min ⁻¹
Switch outputs	1: Early warning 2: Main alarm
Operating voltage	DC 10-32 V
Current consumption at DC 24 V	100 mA
Protection class	III
EMC	IEC1000-4-2/3/4/6
Overload capacity	100 g
Ambient temperature	-30 °C to +60 °C
Degree of protection	IP67
Housing materials	Zinc die-casting, coating based on epoxy finish, polyester membrane keypad
Electrical connection for supply and switching output	M12 plug connector
Electrical connection RS-232 for communication	M8 plug connector
Certificates and standards	CE, UL



Designations and part numbers

Designation	Description	Part number
DUV10A	Diagnostic unit (basic unit)	1 406 629 7
DUV10A-S	Configuration software	1 406 630 0
DUV10A-K-RS232-M8	Communication cable	1 406 631 9
DUV10A-N24DC	DC 24 V power supply unit	1 406 632 7
DUV10A-I	Pulse tester	1 406 633 5
DUV10A-K-M12-2m PUR	2 m PUR cable with 1 connector ¹⁾	1 406 634 3
DUV10A-K-M12-5m PUR	5 m PUR cable with 1 connector ¹⁾	1 406 635 1
DUV10A-K-M12-2m PVC	2 m PVC cable with 1 connector ²⁾	1 326 620 9
DUV10A-K-M12-5m PVC	5 m PVC cable with 1 connector ²⁾	1 326 621 7

- 1) PUR cables are particularly suited for use in oil-contaminated environments.
2) PVC cables are particularly suited for use in wet environments.

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Design and Operating Notes

Condition monitoring: Oil aging and vibration sensor

Mounting on standard gear units (R, F, K, S)

Mounting base for installing the diagnostic unit at the gear unit:

Mounting base with sealing ring	Part number
M10 × 1	1 343 441 1
M12 × 1.5	1 343 827 1
M22 × 1.5	1 343 829 8
M33 × 2	1 343 830 1
M42 × 2	1 343 832 8

Mounted on motor

Mounting base for installing the diagnostic unit at the motor:

Fastening element	Part number
M12, for motor sizes 132M to 180	1 343 842 5
M16, for motor sizes 200 to 280	1 343 844 1

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8 Important Information about Tables and Dimension Sheets

8.1 Geometrically possible combinations

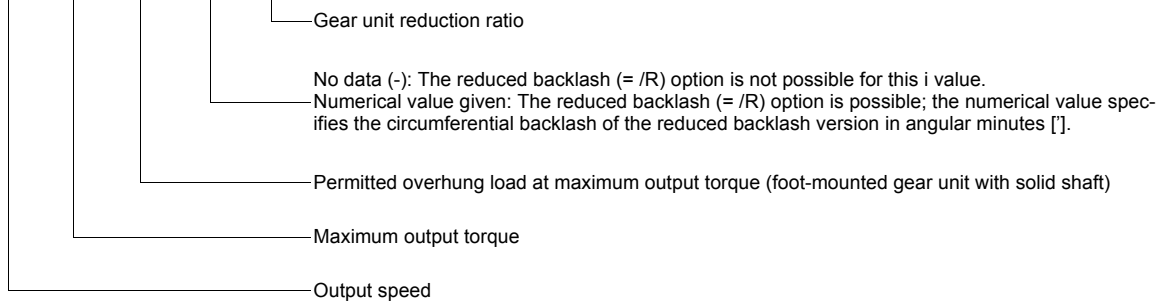
Structure of the tables

These tables show combinations of gear units and AC (brake) motors that are geometrically possible. The following data are given for each combination and an input speed $n_e = 1700$ rpm:

- Output speed (n_a)
- Maximum output torque (T_{amax})
- Permitted overhung load (F_{Ra}) at maximum output torque, applies to foot-mounted gear units with solid shaft
- Gear ratio (i)

Torsion angle $\varphi_{(R)}$: If no value is indicated, the gear unit is not available with "reduced backlash (/R)" with this option. If a value is stated, this gear unit is available with "reduced backlash (/R)". The numerical value specifies the circumferential backlash of the reduced backlash version in angular minutes ['].

R57, $n_e = 1700$ rpm					3980 lb-in						
n_a [rpm]	T_{amax} [lb-in]	F_{Ra} [lb]	φ (/R) [']	i	DR63 DRS71S DRS71M	DRS80 DRE80M DRE90M	DRS90M DRE90L	DRS90L DRS100M DRE100M DRE100LC DRE112M	DRS100LC DRS112M DRE132S	DRS132S DRS132M DRE132M DRE132MC DRE160S	DRS132MC
					2						
9.1	3980	1600	6.9	186.89							
9.9	3980	1600	6.9	172.17							
11	3980	1600	6.9	147.92							
13	3980	1600	6.9	128.77							



* Finite gear unit reduction ratio

	Combination with the motor in the header is possible .
	Combination with the motor in the header is not possible .

Helical gear units (R), with the exception of the single stage RX gear unit, and parallel-shaft helical gear units (F) have two or three stages, depending on the gear unit reduction ratio. The tables indicate whether the subsequent i ranges are two or three stage. Multi-stage gear units always have a helical gear unit as their primary gear unit; it explains why the number of stages is also given for multi-stage gear units.

2 For R and F gear units: Number of stages of the subsequent gear ratios (two or three stage).

3 3 For multi-stage gear units: Stages of the following ratios (2-2, 3-3, 2-3 or 3-2 stages). The number of stages of the primary gear unit (= small gear unit) is given on the right; the number of stages of the output gear unit (= large gear unit) is given on the left.

Helical-bevel, Spiroplan® and helical-worm gear units (K, W and S) have a defined number of stages. This means the number of stages does not have to be listed in the tables.

- Helical-bevel gear units (K): Always three-stage
- Spiroplan® gear units (W): W..10 to W..30: always single-stage W..37 and W..47: always two-stage
- Helical-worm gear units (S): always two-stage





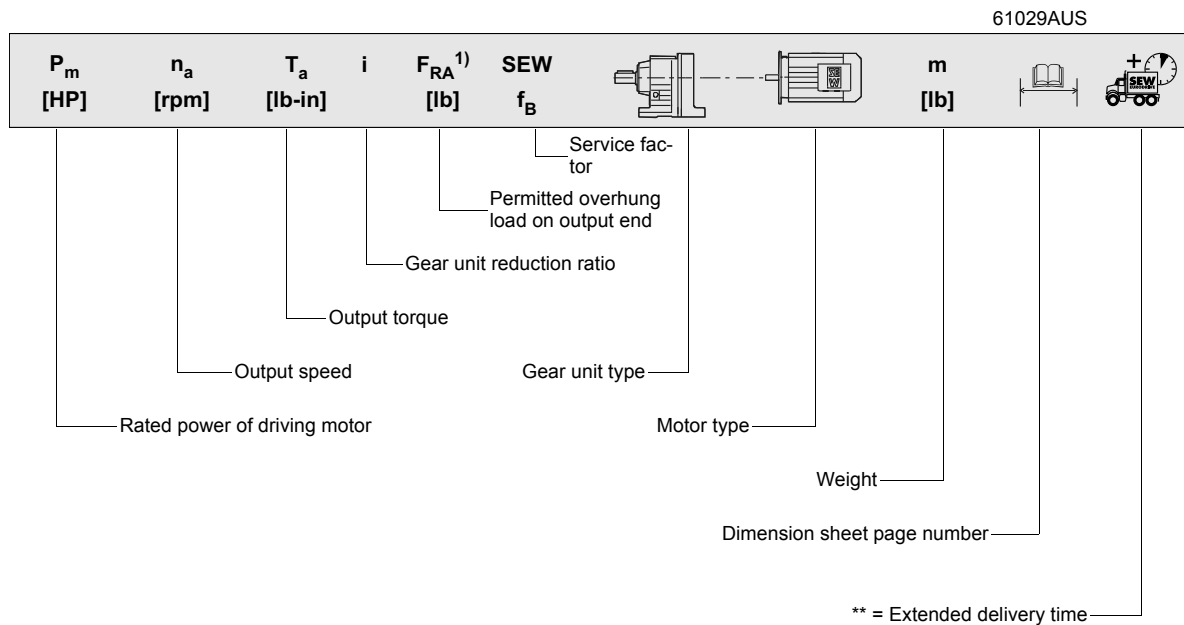
8.2 Selection tables for gearmotors

Structure of the selection tables

The two figures below illustrate the structure of the selection tables for gearmotors. There are two types of selection tables:

1. For standard output speeds, sorted according to the rated power P_m [HP] of the driving motor.
2. For particularly low output speeds, multi-stage gearmotors are always sorted according to the maximum permitted output torque $T_{a \max}$ [lb-in].

1. For standard output speeds:



Key

- * Finite gear unit reduction ratio
- 1) Overhung load for foot-mounted gear units with solid shaft; overhung loads for other gear unit types upon request



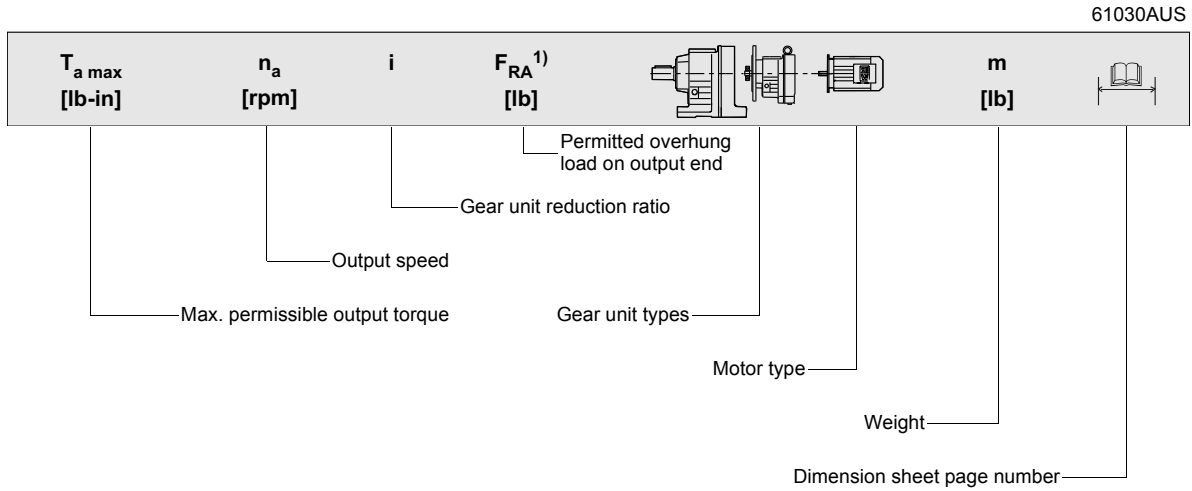
Only applies to Spiroplan® (W) gearmotors:

- If a lubricant is used for the food industry (food grade), SEW $f_B \geq 1.2$ required.

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1. For extremely low output speeds (multi-stage gearmotors):



Key

- * Finite gear unit reduction ratio
- 1) Overhung load for foot-mounted gear units with solid shaft; overhung loads for other gear unit types upon request



In drives for extremely low output speeds (multi-stage gearmotors), the motor power must be limited to the maximum permitted output torque of the gear unit.

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8.3 Information regarding the dimension sheets

Scope of delivery



= Standard parts supplied by SEW-EURODRIVE.



= Standard parts not supplied by SEW-EURODRIVE.

Tolerances

Shaft heights

The following tolerances apply to the indicated dimensions:

h	≤ 9.84 in	→ -0.02 in
h	> 9.84 in	→ -0.04 in

Foot-mounted gear units: Check the mounted motor because it may project below the mounting surface.

Shaft ends

Diameter tolerance:

inch		mm	
∅	> 0.500...1.500 → +0 / -0.0005	≤ 50 mm	→ ISO k6
∅	> 1.500...7.500 → +0 / -0.0010	> 50 mm	→ ISO m6

Center bores according to DIN 332, shape D [in], shape DR [mm]:

inch		mm	
∅	0.625...0.750 → 1/4 - 20 x 0.63	= 7...10 mm	→ M3
∅	1.000 → 3/8 - 16 x 0.87	> 10...13 mm	→ M4
∅	1.250...1.375 → 1/2 - 13 x 1.12	> 13...16 mm	→ M5
∅	1.625...1.750 → 5/8 - 11 x 1.38	> 16...21 mm	→ M6
∅	2.000...2.875 → 3/4 - 10 x 1.61	> 21...24 mm	→ M8
∅	3.625...4.750 → 1 - 8 x 2.13	> 24...30 mm	→ M10
∅	6.250...7.500 → 1-1/8 - 7 x 2.13	> 30...38 mm	→ M12
∅		> 38...50 mm	→ M16
∅		> 50...85 mm	→ M20
∅		> 85...130 mm	→ M24
∅		> 130 mm	→ M30

Keys: according to DIN 6885.

Hollow shafts

Diameter tolerance:

inch		mm	
→ ANSI H7		→ ISO H7	
∅	0.625 → +0.0007 / -0		
∅	0.750...1.000 → +0.0008 / -0		
∅	1.250...1.9375 → +0.0010 / -0		
∅	2.000...2.9375 → +0.0012 / -0		
∅	3.250...4.500 → +0.0014 / -0		

Multiple-spline shafts

Dm = Measuring roller diameter
Me = Check size



Flange

Centering shoulder tolerance:

≤ 230 mm (flange sizes A120...A300) → ISO j6

> 230 mm (flange sizes A350...A660) → ISO h6

Up to two different flange dimensions are available for each size of helical gear unit, Spiroplan® gear unit and AC (brake) motor. The respective dimension drawings will show the flanges approved for each size.

Eyebolts, lifting eyes

R07...R27 helical gear units, motors up to DR100 and the Spiroplan® gearmotors W..10 to W..30 are delivered without special transportation fixtures. All other gear units and motors are equipped with cast-on suspension eye lugs, screw-on suspension eye lugs or screw-on lifting eyebolts.

Gear unit/motor type	screw-on,		cast-on eyebolts
	lifting eyebolts	eyebolts	
R..37-R..57	-	•	-
R..67-R..107	•	-	-
RX57-RX67	-	•	-
RX77-RX107	•	-	-
F..27-F..157	-	-	•
K..37-K..157	-	-	•
K..167-K..187	•	-	-
S..37-S..47	-	•	-
S..57-S..97	-	-	•
W37-W47	-	•	-
≥ DR112	•	-	-

Breather valves

The gear unit dimension drawings are shown with screw plugs. As standard, the corresponding screw plug is replaced with an activated breather valve depending on the ordered mounting position M1...M6. Contour dimensions might be slightly different as a result.

Shrink disk connection

Hollow shaft gear unit with shrink disk connection: If required, please request a detailed data sheet on shrink disks, data sheet no. 33 753 ..95.

Splined hollow shaft

FV.. hollow shaft gear units in sizes 27 ... 107 and KV.. in sizes 37 ... 107 are delivered with a splined hollow shaft according to DIN 5480 (tooth space tolerance 9H).

Rubber buffer for FA/FH/FV/FT

Preload rubber buffer by the indicated value ΔL . The characteristic curve of spring for the rubber buffers is available at SEW-EURODRIVE on request.

Torque arm position

The following illustration shows the possible torque arm positions for helical-worm gear

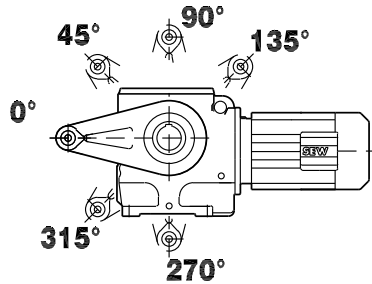
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Important Information about Tables and Dimension Sheets

Information regarding the dimension sheets

units and Spiroplan® gear units as well as the respective angles:



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Figure 26: Torque arm position

Dimensions for motors

Motor options

The motor dimensions may change due to motor options. Refer to the dimension drawings of the motor options.

Special designs

The dimensions of the terminal box on special designs such as KS, CSA, VIK, low voltage or voltage changeover may deviate from the standard dimensions.

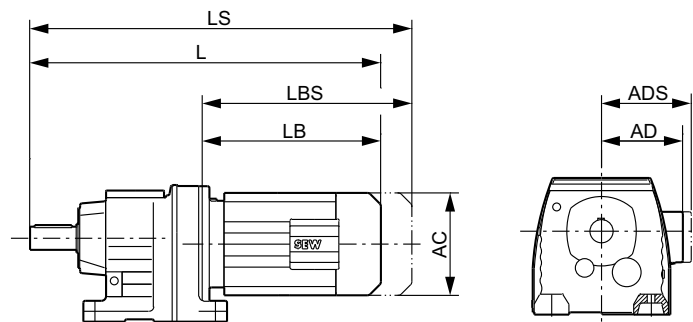
EN 50347

European standard EN 50347 became effective in August 2001. This standard adopts the dimension designations for three-phase AC motors of size 56 to 315M and flange size 65 to 740 from the IEC 72-1 standard.

The new dimension designations given in EN 50347 / IEC 72-1 are used for the relevant dimensions in the dimension sheet tables.

Dimension designations for the motors

The dimension designations for the motors are described below:



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Figure 27: Dimension designations for the motors

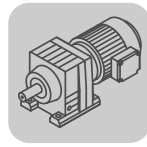
- L = Total length of the gearmotor
- LS = Total length of the gearmotor including the brake
- LB = Length of the motor
- LBS = Length of the brakemotor
- AC = Diameter of the motor
- AD = Distance between the center of the motor shaft and the top part of the terminal box
- ADS = Distance between the center of the brake motor shaft and the top part of the terminal box

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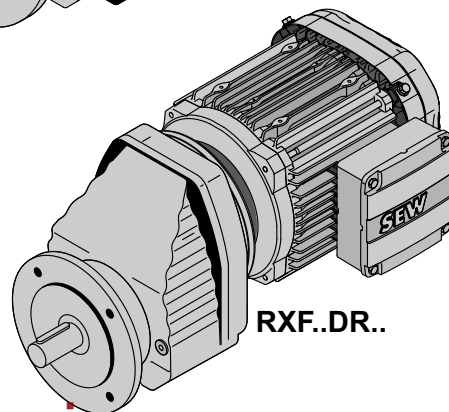
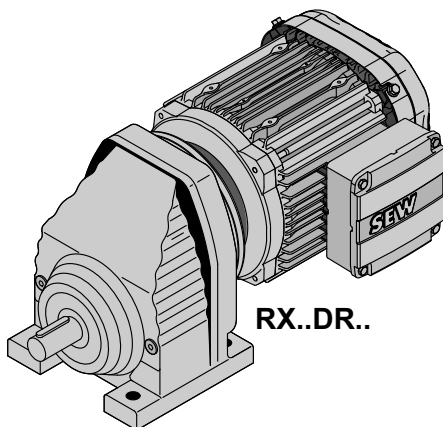
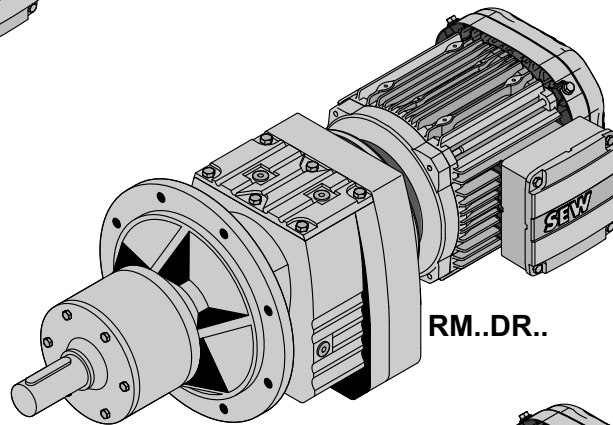
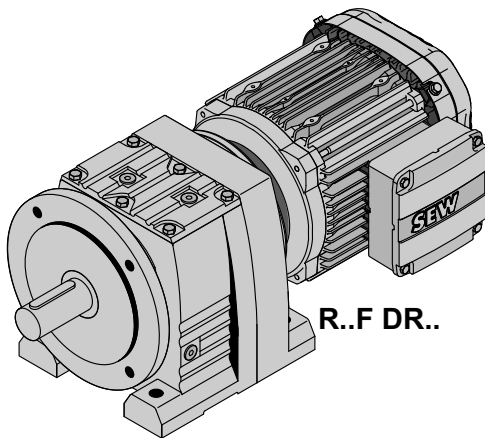
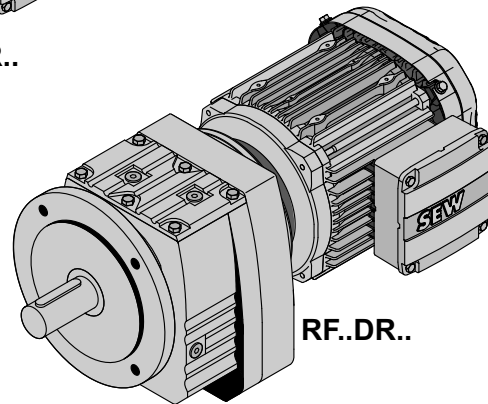
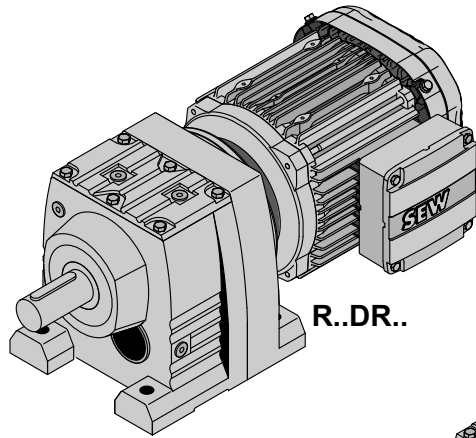
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9 R..DRE/DRS

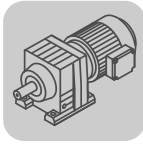
9.1 R, RF, R..F, RM, RX, RXF, RZ..DR..



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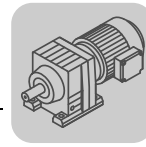

9.2 R.. → DRE/DRS

RX57, n_e = 1700 rpm					610 lb-in					
n _a [rpm]	T _{amax} [lb-in]	F _{Ra} [lb]	φ _(/R) [']	i	DR63 DRS71S DRS71M	DRS80 DRE80M DRE90M	DRS90M DRE90L	DRS90L DRS100M DRE100M DRE100LC DRE112M	DRS100LC DRS112M DRE132S	DRS132S DRS132M DRE132M DRE132MC DRE160S
309	345	650	-	5.50*						
335	315	635	-	5.07						
391	600	550	-	4.35						
449	610	515	-	3.79						
479	610	500	-	3.55*						
541	575	480	-	3.14						
584	590	405	-	2.91						
644	610	325	-	2.64*						
717	610	260	-	2.37						
833	610	166	-	2.04						
885	610	126	-	1.92*						
1030	610	27	-	1.65						
1150	600	-	-	1.48						
1310	555	-	-	1.30						

RX67, n_e = 1700 rpm					1180 lb-in					
n _a [rpm]	T _{amax} [lb-in]	F _{Ra} [lb]	φ _(/R) [']	i	DR63 DRS71S DRS71M	DRS80 DRE80M DRE90M	DRS90M DRE90L	DRS90L DRS100M DRE100M DRE100LC DRE112M	DRS100LC DRS112M DRE132S	DRS132S DRS132M DRE132M DRE132MC DRE160S
280	380	840	-	6.07						
328	660	745	-	5.18						
375	725	700	-	4.53						
395	705	685	-	4.30*						
451	765	640	-	3.77						
531	880	580	-	3.20*						
588	930	545	-	2.89						
669	1040	340	-	2.54						
708	1080	235	-	2.40*						
833	1180	-	-	2.04						
914	1110	-	-	1.86						
1055	1000	-	-	1.61						
1215	920	-	-	1.40*						

RX77, n_e = 1700 rpm					1900 lb-in						
n _a [rpm]	T _{amax} [lb-in]	F _{Ra} [lb]	φ _(/R) [']	i	DR63 DRS71S DRS71M	DRS80 DRE80M DRE90M	DRS90M DRE90L	DRS90L DRS100M DRE100M DRE100LC DRE112M	DRS100LC DRS112M DRE132S	DRS132S DRS132M DRE132M DRE132MC DRE160S	DRS132M DRS160 DRE160M DRE160MC
212	500	1330	-	8.00*							
228	465	1300	-	7.47							
265	910	1170	-	6.41							
302	970	1110	-	5.63							
318	910	1100	-	5.35*							
359	1080	1020	-	4.73							
421	1260	940	-	4.04*							
459	1350	890	-	3.70							
523	1610	580	-	3.25*							
552	1700	440	-	3.08*							
630	1900	121	-	2.70							
700	1900	-	-	2.43							
798	1760	-	-	2.13							
904	1650	-	-	1.88*							
1020	1530	-	-	1.67							
1195	1370	-	-	1.42							

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RX87, n_e = 1700 rpm **3580 lb-in**

n _a [rpm]	T _{amax} [lb-in]	F _{Ra} [lb]	φ _(/R) [']	i	DRS71M	DRS80 DRE80M DRE90M	DRS90M DRE90L	DRS90L DRS100M DRE100M DRE100LC DRE112M	DRS100LC DRS112M DRE132S	DRS132S DRS132M DRE132M DRE132MC DRE160S	DRS132MC DRS160 DRE160M DRE160MC DRE180S DRE180M	DRS180M DRS180L DRE180L DRE180LC	DRS180LC
197	1220	1650	-	8.65									
223	1310	1570	-	7.63									
236	1230	1540	-	7.20*									
264	1690	1430	-	6.45									
306	1990	1320	-	5.56*									
335	2210	1240	-	5.07									
378	2560	1140	-	4.50*									
450	2690	1040	-	3.78									
489	3580	420	-	3.48									
550	3580	255	-	3.09									
616	3580	91	-	2.76*									
685	3580	-	-	2.48									
791	3400	-	-	2.15									
881	3140	-	-	1.93									
1060	2780	-	-	1.60*									
1225	2560	-	-	1.39									

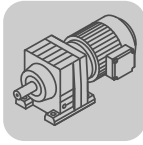
RX97, n_e = 1700 rpm **5260 lb-in**

n _a [rpm]	T _{amax} [lb-in]	F _{Ra} [lb]	φ _(/R) [']	i	DRS71M	DRS80 DRE80M DRE90M	DRS90M DRE90L	DRS90L DRS100M DRE100M DRE100LC DRE112M	DRS100LC DRS112M DRE132S	DRS132S DRS132M DRE132M DRE132MC DRE160S	DRS132MC DRS160 DRE160M DRE160MC DRE180S DRE180M	DRS180M DRS180L DRE180L DRE180LC	DRS180LC DRS200L DRE200L DRS225S DRE225S DRS225M DRE225M DRE225MC
207	1990	2000	-	8.23									
237	2300	1870	-	7.16*									
259	2650	1770	-	6.56									
294	3710	1580	-	5.79									
346	3490	1500	-	4.91									
376	5260	1150	-	4.52									
421	5260	960	-	4.04									
467	5260	775	-	3.64*									
515	5260	605	-	3.30									
582	5260	405	-	2.92									
644	5260	225	-	2.64									
759	5260	-	-	2.24*									
867	5040	-	-	1.96									
1035	4460	-	-	1.64									
1195	4020	-	-	1.42									





RX107, n_e = 1700 rpm **7340 lb-in**

n _a [rpm]	T _{amax} [lb-in]	F _{Ra} [lb]	φ _(/R) [']	i	DRS90L DRS100M DRE100M DRE100LC DRE112M	DRS100LC DRS112M DRE132S	DRS132S DRS132M DRE132M DRE132MC DRE160S	DRS132MC DRS160 DRE160M DRE160MC DRE180S DRE180M	DRS180M DRS180L DRE180L DRE180LC	DRS180LC DRS200L DRE200L DRS225S DRE225S DRS225M DRE225M DRE225MC	DRS225MC	
256	4070	2020	-	6.63*								
303	4020	1890	-	5.61								
328	6140	1610	-	5.19								
366	6140	1530	-	4.65								
405	7340	1150	-	4.20*								
446	7340	970	-	3.81								
503	7340	740	-	3.38								
554	7340	545	-	3.07								
644	7340	240	-	2.64*								
739	7340	-	-	2.30								
872	6760	-	-	1.95								
994	6230	-	-	1.71								
1180	5700	-	-	1.44								

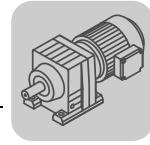
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R..DRE/DRS
R.. → DRE/DRS

R07, $n_e = 1700$ rpm					440 lb-in
n_a [rpm]	T_{amax} [lb-in]	F_{Ra} [lb]	$\varphi_{(R)}$ [']	i	DT56 DR63 DRS71S
 3					
22	440	340	-	78.24	
24	440	340	-	71.47	
28	440	335	-	60.32	
33	440	315	-	51.52	
36	440	305	-	47.78	
38	440	295	-	44.16	
41	440	285	-	41.31	
42	440	285	-	40.34	
44	440	275	-	38.51	
50	440	265	-	34.05	
58	440	245	-	29.08	
63	440	235	-	26.97	
73	440	220	-	23.32	
78	440	215	-	21.73	
 2					
93	440	198	-	18.31	
102	440	190	-	16.73	
120	440	175	-	14.12	
141	440	161	-	12.06	
152	440	155	-	11.18	
176	440	144	-	9.67	
189	440	138	-	9.01	
217	430	130	-	7.85	
227	380	106	-	7.48	
249	380	93	-	6.83	
295	350	93	-	5.76	
346	325	95	-	4.92	
372	315	93	-	4.57	
430	300	91	-	3.95	
462	290	91	-	3.68	
530	270	90	-	3.21	
R17, $n_e = 1700$ rpm					750 lb-in
n_a [rpm]	T_{amax} [lb-in]	F_{Ra} [lb]	$\varphi_{(R)}$ [']	i	DR63 DRS71S DRS71M
 3					
21	750	395	-	81.64	
24	750	395	-	70.39	
26	750	395	-	65.61	
30	750	395	-	57.35	
32	750	395	-	53.76	
36	750	395	-	47.44	
38	750	395	-	44.18	
44	750	395	-	38.61	
47	750	395	-	36.20	
53	750	385	-	31.94	
60	750	365	-	28.32	
71	750	340	-	24.07	
 2					
67	750	345	-	25.23	
73	750	330	-	23.15	
86	750	310	-	19.71	
100	750	285	-	16.99	
107	750	275	-	15.84	

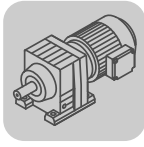
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R17, n _e = 1700 rpm					750 lb-in	
n _a [rpm]	T _{amax} [lb-in]	F _{Ra} [lb]	φ _(/R) [']	i	DR63 DRS71S DRS71M	DRS80
123	750	260	-	13.84		
131	750	250	-	12.98		
148	715	240	-	11.45		
167	680	230	-	10.15		
197	635	220	-	8.63		
225	495	210	-	7.55		
241	485	205	-	7.04		
276	475	194	-	6.15		
295	465	190	-	5.76		
334	450	182	-	5.09		
377	420	176	-	4.51		
444	395	168	-	3.83		

R27, n _e = 1700 rpm					1150 lb-in				
n _a [rpm]	T _{amax} [lb-in]	F _{Ra} [lb]	φ _(/R) [']	i	DR63 DRS71S DRS71M	DRS80 DRE80M DRE90M	DRS90M DRE90L	DRS90L DRS100M DRE100M DRE100LC	DRS100LC
3									
13	1150	950	-	135.09					
14	1150	950	-	123.91					
16	1150	950	-	105.49					
19	1150	950	-	90.96					
20	1150	940	-	84.78					
23	1150	890	-	74.11					
24	1150	870	-	69.47					
28	1150	830	-	61.30					
30	1150	800	-	55.87					
35	1150	755	-	48.17					
38	1150	735	-	44.90					
43	1150	695	-	39.25					
46	1150	680	-	36.79					
52	1150	645	-	32.47					
59	1150	615	-	28.78					
69	1150	575	-	24.47					
2									
60	1150	610	-	28.37					
65	1150	590	-	26.09					
76	1150	550	-	22.32					
88	1150	520	-	19.35					
94	1150	505	-	18.08					
109	1150	475	-	15.63					
128	1150	410	-	13.28*					
143	1140	370	-	11.86					
168	1070	355	-	10.13					
181	1070	133	-	9.41					
208	1020	129	-	8.16					
223	990	137	-	7.63*					
258	930	136	-	6.59					
304	870	139	-	5.60*					
340	840	136	-	5.00*					
398	765	153	-	4.27					
425	750	151	-	4.00*					
504	695	152	-	3.37					

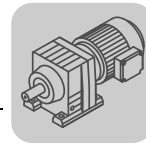
reducer.ir



R..DRE/DRS
R.. → DRE/DRS

R27R17, $n_e = 1700$ rpm					1150 lb-in	
n_a [rpm]	T_{amax} [lb-in]	F_{Ra} [lb]	$\varphi_{(R)}$ [°]	i	DR63 DRS71S DRS71M	DRS80
3 3						
0.20	1150	950	-	8612		
0.23	1150	745	-	7425		
0.25	1150	950	-	6921		
0.28	1150	950	-	6050		
0.33	1150	745	-	5217		
0.36	1150	950	-	4661		
0.42	1150	745	-	4073		
0.48	1150	950	-	3516		
0.54	1150	950	-	3160		
0.62	1150	950	-	2763		
0.70	1150	950	-	2414		
0.81	1150	950	-	2110		
0.91	1150	950	-	1862		
1.0	1150	745	-	1625		
1.2	1150	950	-	1434		
1.4	1150	950	-	1254		
2 3						
0.93	1150	950	-	1822		
1.1	1150	950	-	1580		
1.2	1150	950	-	1464		
1.3	1150	950	-	1270		
1.5	1150	950	-	1100		
1.7	1150	950	-	972		
2.0	1150	950	-	840		
2.3	1150	950	-	741		
2.6	1150	950	-	654		
3.0	1150	950	-	566		
3.4	1150	950	-	499		
3 2						
1.5	1150	950	-	1101		
1.8	1150	950	-	962		
2.0	1150	745	-	848		
2.3	1150	745	-	743		
2.6	1150	950	-	649		
3.0	1150	950	-	567		
3.3	1150	950	-	509		
3.9	1150	950	-	432		
4.4	1150	950	-	387		
5.0	1150	745	-	339		
5.7	1150	745	-	296		
6.6	1150	950	-	259		
7.4	1150	950	-	229		
8.5	1150	950	-	200		
9.6	1150	745	-	177		
10	1150	950	-	166		
11	1150	950	-	150		
12	1150	950	-	141		
14	1150	745	-	124		
15	1150	950	-	110		
18	1150	950	-	94		
2 2						
3.9	1150	950	-	440		
4.5	1150	950	-	381		
5.2	1150	950	-	329		
5.9	1150	950	-	290		
6.6	1150	950	-	256		
7.5	1150	950	-	227		

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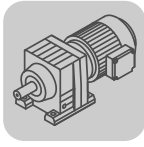
R27R17, $n_e = 1700$ rpm					1150 lb-in	
n_a [rpm]	T_{amax} [lb-in]	F_{Ra} [lb]	$\Phi_{(R)}$ [']	i	DR63 DRS71S DRS71M	DRS80
8.4	1150	950	-	203		
9.5	1150	950	-	179		
11	1150	950	-	156		
13	1150	950	-	135		
14	1150	950	-	118		
16	1150	950	-	104		
19	1150	950	-	90		

R37, $n_e = 1700$ rpm					1760 lb-in				
n_a [rpm]	T_{amax} [lb-in]	F_{Ra} [lb]	$\Phi_{(R)}$ [']	i	DR63 DRS71S DRS71M	DRS80 DRE80M DRE90M	DRS90M DRE90L	DRS90L DRS100M DRE100M DRE100LC	DRS100LC
3									
13	1760	1110	7.9	134.82					
14	1760	1110	8	123.66					
16	1760	1110	8	105.28					
19	1760	1110	8	90.77					
20	1760	1110	8	84.61					
23	1760	1110	8	73.96					
25	1760	1110	8	69.33					
28	1760	1110	8.1	61.18					
30	1760	1110	8.7	55.76					
35	1760	1080	8.7	48.08					
38	1760	1020	8.8	44.81					
43	1760	920	8.8	39.17					
46	1760	880	8.9	36.72					
52	1760	790	8.9	32.40					
59	1760	705	9	28.73					
70	1760	605	9	24.42					

2									
60	1760	700	7.3	28.32					
65	1630	740	7.4	26.03					
76	1760	545	7.4	22.27					
88	1760	460	7.5	19.31					
94	1760	425	7.5	18.05					
109	1760	345	7.7	15.60					
128	1680	320	7.9	13.25					
144	1610	310	8	11.83					
168	1500	315	8.1	10.11					
180	1470	305	8.2	9.47					
213	1380	300	8.4	7.97					
255	1270	144	12.1	6.67					
300	1250	94	12.4	5.67					
336	1190	104	12.7	5.06					
394	1110	114	13	4.32					
420	1070	121	13.2	4.05					
499	990	138	13.7	3.41					

R37R17, $n_e = 1700$ rpm					1760 lb-in	
n_a [rpm]	T_{amax} [lb-in]	F_{Ra} [lb]	$\Phi_{(R)}$ [']	i	DR63 DRS71S DRS71M	DRS80
3 3						
0.20	1760	1110	-	8595		
0.23	1760	1110	-	7411		
0.25	1760	1110	-	6907		
0.28	1760	1110	-	6038		
0.33	1760	1110	-	5206		

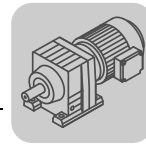
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R..DRE/DRS
R.. → DRE/DRS

R37R17, n_e = 1700 rpm					1760 lb-in	
n _a [rpm]	T _{amax} [lb-in]	F _{Ra} [lb]	φ _(/R) [°]	i	DR63 DRS71S DRS71M	DRS80
0.37	1760	1110	-	4651		
0.42	1760	1110	-	4065		
0.46	1760	1110	-	3658		
0.54	1760	1110	-	3154		
0.62	1760	1110	-	2757		
0.71	1760	1110	-	2409		
0.81	1760	1110	-	2106		
0.92	1760	1110	-	1856		
1.0	1760	1110	-	1622		
1.2	1760	1110	-	1431		
1.4	1760	1110	-	1251		
2 3						
0.94	1760	1110	-	1818		
1.1	1760	1110	-	1576		
1.3	1760	1110	-	1359		
1.3	1760	1110	-	1267		
1.5	1760	1110	-	1098		
1.8	1760	1110	-	970		
2.0	1760	1110	-	839		
2.3	1760	1110	-	740		
2.6	1760	1110	-	653		
2.9	1760	1110	-	577		
3.4	1760	1110	-	498		
3 2						
1.5	1760	1110	-	1099		
1.8	1760	1110	-	960		
2.0	1760	1110	-	847		
2.3	1760	1110	-	741		
2.6	1760	1110	-	647		
3.0	1760	1110	-	566		
3.3	1760	1110	-	508		
3.9	1760	1110	-	431		
4.4	1760	1110	-	387		
5.0	1760	1110	-	338		
5.7	1760	1110	-	296		
6.6	1760	1110	-	259		
7.5	1760	1110	-	228		
8.5	1760	1110	-	199		
9.9	1760	1110	-	172		
11	1760	1110	-	150		
13	1760	1110	-	130		
14	1760	1110	-	124		
15	1760	1110	-	110		
18	1760	1110	-	94		
2 2						
3.9	1760	1110	-	439		
4.5	1760	1110	-	378		
5.2	1760	1110	-	328		
5.9	1760	1110	-	289		
6.4	1760	1110	-	265		
7.5	1760	1110	-	226		
8.4	1760	1110	-	202		
9.5	1760	1110	-	179		
11	1760	1110	-	156		
13	1760	1110	-	135		
13	1760	1110	-	127		
16	1760	1110	-	104		
19	1760	1110	-	90		

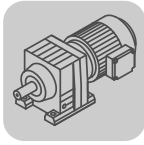
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R47, $n_e = 1700$ rpm					2650 lb-in					
n_a [rpm]	T_{amax} [lb-in]	F_{Ra} [lb]	$\Phi_{(R)}$ [°]	i	DR63 DRS71S DRS71M	DRS80 DRE80M DRE90M	DRS90M DRE90L	DRS90L DRS100M DRE100M DRE100LC DRE112M	DRS100LC DRS112M DRE132S	DRS132S DRS132M DRE132M DRE132MC DRE160S
3										
9.6	2650	1220	6.9	176.88						
10	2650	1220	6.9	162.94						
12	2650	1220	6.9	139.99						
14	2650	1220	6.9	121.87						
15	2650	1220	6.9	114.17						
17	2650	1220	7	100.86						
18	2650	1220	7	93.68						
20	2650	1220	7	84.90						
22	2650	1220	7	76.23						
25	2650	1220	7.6	68.54						
26	2650	1200	7.6	64.21						
30	2650	1150	7.6	56.73						
32	2650	1110	7.6	52.69						
36	2650	1070	7.7	47.75						
40	2650	1020	7.7	42.87						
46	2650	960	7.7	36.93						
49	2650	940	7.7	34.73						
57	2650	880	7.8	29.88						
64	2650	840	7.9	26.70						
72	2650	775	8	23.59						
2										
50	2120	970	6.5	33.79						
55	1940	960	6.5	31.12						
64	2650	840	6.6	26.74						
73	2650	760	6.6	23.28						
78	2650	710	6.7	21.81						
88	2610	640	6.8	19.27						
95	2560	615	6.8	17.89						
105	2430	625	6.9	16.22						
117	2340	605	7	14.56						
136	2210	590	7.1	12.54						
144	2160	575	7.1	11.79						
167	2030	565	7.3	10.15						
187	1940	550	7.7	9.07						
212	1810	555	7.8	8.01						
219	1440	565	9.5	7.76*						
244	1400	540	9.7	6.96						
283	1380	510	9.9	6.00						
301	1370	500	10	5.64*						
351	1320	470	10.3	4.85						
392	1290	455	11.1	4.34						
444	1270	430	11.4	3.83						

R47R37, $n_e = 1700$ rpm					2650 lb-in				
n_a [rpm]	T_{amax} [lb-in]	F_{Ra} [lb]	$\Phi_{(R)}$ [°]	i	DR63 DRS71S DRS71M	DRS80 DRE80M DRE90M	DRS90M DRE90L	DRS90L DRS100M DRE100M DRE100LC	DRS100LC
3 3									
0.13	2650	1220	-	13598					
0.14	2650	1220	-	12472					
0.16	2650	1220	-	10619					
0.19	2650	1220	-	9155					
0.20	2650	1220	-	8534					
0.23	2650	1220	-	7460					
0.24	2650	1220	-	6993					

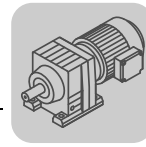
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R..DRE/DRS
R.. → DRE/DRS

R47R37, $n_e = 1700$ rpm					2650 lb-in				
n_a [rpm]	T_{amax} [lb-in]	F_{Ra} [lb]	$\varphi_{(R)}$ [°]	i	DR63 DRS71S DRS71M	DRS80 DRE80M DRE90M	DRS90M DRE90L	DRS90L DRS100M DRE100M DRE100LC	DRS100LC
0.28	2650	1220	-	6171					
0.30	2650	1220	-	5624					
0.35	2650	1220	-	4849					
0.38	2650	1220	-	4520					
0.43	2650	1220	-	3951					
0.46	2650	1220	-	3704					
0.52	2650	1220	-	3268					
0.59	2650	1220	-	2898					
0.69	2650	1220	-	2463					
2 3									
0.65	2650	1220	-	2598					
0.71	2650	1220	-	2383					
0.84	2650	1220	-	2029					
0.97	2650	1220	-	1749					
1.0	2650	1220	-	1630					
1.2	2650	1220	-	1425					
1.3	2650	1220	-	1336*					
1.4	2650	1220	-	1179					
1.6	2650	1220	-	1074					
1.8	2650	1220	-	927					
2.0	2650	1220	-	863					
2.3	2650	1220	-	755					
2.4	2650	1220	-	708					
2.7	2650	1220	-	624					
3.1	2650	1220	-	554					
3.6	2650	1220	-	471					
3 2									
0.60	2650	1220	-	2856					
0.65	2650	1220	-	2625					
0.76	2650	1220	-	2246					
0.87	2650	1220	-	1948					
0.93	2650	1220	-	1821					
1.1	2650	1220	-	1573					
1.4	2650	1220	-	1193					
1.7	2650	1220	-	1020					
1.8	2650	1220	-	955					
2.1	2650	1220	-	804					
2.5	2650	1220	-	673					
3.0	2650	1220	-	572					
3.3	2650	1220	-	510					
3.9	2650	1220	-	436					
4.2	2650	1220	-	408					
4.9	2650	1220	-	344					
2 2									
3.1	2650	1220	-	546					
3.4	2650	1220	-	502					
4.0	2650	1220	-	429					
4.6	2650	1220	-	372					
4.9	2650	1220	-	348					
5.6	2650	1220	-	301					
6.7	2650	1220	-	255					
7.5	2650	1220	-	228					
8.7	2650	1220	-	195					
9.3	2650	1220	-	182					
11	2650	1220	-	154					
13	2650	1220	-	129					
16	2650	1220	-	109					
17	2650	1220	-	98					

reducer.ir



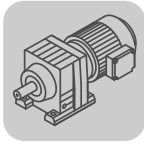
R57, n_e = 1700 rpm **3980 lb-in**

n _a [rpm]	T _{amax} [lb-in]	F _{Ra} [lb]	φ _(/R) [°]	i	DR63 DRS71S DRS71M	DRS80 DRE80M DRE90M	DRS90M DRE90L	DRS90L DRS100M DRE100M DRE100LC DRE112M	DRS100LC DRS112M DRE132S	DRS132S DRS132M DRE132M DRE132MC DRE160S	DRS132MC
3											
9.1	3980	1600	6.9	186.89							
9.9	3980	1600	6.9	172.17							
11	3980	1600	6.9	147.92							
13	3980	1600	6.9	128.77							
14	3980	1600	6.9	120.63							
16	3980	1600	7	106.58							
17	3980	1600	7	98.99							
19	3980	1600	7	89.71							
21	3980	1580	7	80.55							
25	3980	1490	7.5	69.23							
26	3980	1450	7.5	64.85							
30	3980	1370	7.6	57.29							
32	3980	1330	7.6	53.22							
35	3980	1280	7.6	48.23							
39	3980	1220	7.6	43.30							
46	3980	1140	7.6	37.30*							
48	3980	1110	7.7	35.07							
56	3980	1040	7.7	30.18							
63	3980	990	7.8	26.97							
2											
65	3980	980	6.4	26.31							
68	3980	950	6.5	24.99*							
78	3980	900	6.6	21.93							
91	3980	830	6.7	18.60*							
101	3980	745	6.7	16.79							
115	3840	695	6.8	14.77*							
122	3800	670	6.8	13.95*							
143	3580	645	6.9	11.88							
158	3450	635	7.2	10.79							
182	3270	615	7.4	9.35							
188	3310	305	8.7	9.06							
213	3140	315	8.8	7.97							
226	3090	300	8.8	7.53							
265	2960	270	9	6.41							
292	2830	285	9.6	5.82							
337	2690	270	9.9	5.05							
387	2470	315	10.1	4.39							

R57R37, n_e = 1700 rpm **3980 lb-in**

n _a [rpm]	T _{amax} [lb-in]	F _{Ra} [lb]	φ _(/R) [°]	i	DR63 DRS71S DRS71M	DRS80 DRE80M DRE90M	DRS90M DRE90L	DRS90L DRS100M DRE100M DRE100LC	DRS100LC
3 3									
0.12	3980	1600	-	14369					
0.14	3980	1600	-	12095					
0.16	3980	1600	-	10860					
0.18	3980	1600	-	9445					
0.20	3980	1600	-	8480					
0.23	3980	1600	-	7312					
0.26	3980	1600	-	6521					
0.30	3980	1600	-	5585					
0.34	3980	1600	-	4928					
0.39	3980	1600	-	4378					

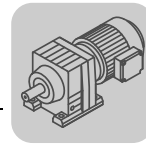
reducer.ir



R..DRE/DRS
R.. → DRE/DRS

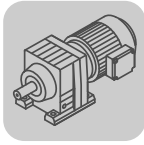
R57R37, $n_e = 1700$ rpm					3980 lb-in				
n_a [rpm]	T_{amax} [lb-in]	F_{Ra} [lb]	$\varphi/(R)$ [']	i	DR63 DRS71S DRS71M	DRS80 DRE80M DRE90M	DRS90M DRE90L	DRS90L DRS100M DRE100M DRE100LC	DRS100LC
0.44	3980	1600	-	3873					
0.51	3980	1600	-	3344					
0.58	3980	1600	-	2907					
0.66	3980	1600	-	2567					
0.76	3980	1600	-	2244					
0.86	3980	1600	-	1967					
2 3									
0.57	3980	1600	-	2957					
0.68	3980	1600	-	2508					
0.74	3980	1600	-	2309					
0.85	3980	1600	-	1991					
0.96	3980	1600	-	1768					
1.1	3980	1600	-	1520					
1.3	3980	1600	-	1342*					
1.5	3980	1600	-	1164					
1.7	3980	1600	-	1027					
1.9	3980	1600	-	894					
2.1	3980	1600	-	805					
2.5	3980	1600	-	683					
2.8	3980	1600	-	603					
3.2	3980	1600	-	534					
3.7	3980	1600	-	454					
4.1	3980	1600	-	410					
3 2									
0.98	3980	1600	-	1732					
1.1	3980	1600	-	1555					
1.2	3980	1600	-	1399					
1.4	3980	1600	-	1189					
1.6	3980	1600	-	1034					
2.2	3980	1600	-	782					
2.5	3980	1600	-	678					
2.8	3980	1600	-	604					
3.2	3980	1600	-	537					
3.6	3980	1600	-	471					
4.8	3980	1600	-	357					
5.3	3980	1600	-	319					
6.2	3980	1600	-	273					
7.1	3980	1600	-	241					
7.9	3980	1600	-	215					
9.1	3980	1600	-	187					
10	3980	1600	-	164					
12	3980	1600	-	142					
2 2									
4.7	3980	1600	-	359					
5.2	3980	1600	-	324					
5.9	3980	1600	-	290					
6.5	3980	1600	-	262					
6.9	3980	1600	-	246*					
7.7	3980	1600	-	220*					
9.0	3980	1600	-	188					
11	3980	1600	-	159					
12	3980	1600	-	146					
13	3980	1600	-	134					

reducer.ir



R67, n _e = 1700 rpm					5300 lb-in						
n _a [rpm]	T _{amax} [lb-in]	F _{Ra} [lb]	φ _(/R) [°]	i	DR63 DRS71S DRS71M	DRS80 DRE80M DRE90M	DRS90M DRE90L	DRS90L DRS100M DRE100M DRE100LC DRE112M	DRS100LC DRS112M DRE132S	DRS132S DRS132M DRE132M DRE132MC DRE160S	DRS132MC
3											
8.5	5300	1700	6.4	199.81							
9.2	5300	1700	6.4	184.07							
11	5300	1700	6.4	158.14							
12	5300	1700	6.4	137.67							
13	5300	1700	6.4	128.97							
15	5300	1700	6.5	113.94							
16	5300	1700	6.5	105.83							
18	5300	1700	6.5	95.91							
20	5300	1700	6.5	86.11							
23	5300	1700	6.5	74.17							
24	5300	1700	6.5	69.75							
28	5300	1700	7	61.26							
30	5300	1700	7	56.89							
33	5300	1700	7.1	51.56							
37	5300	1700	7.1	46.29							
43	5130	1750	7.1	39.88*							
45	5040	1780	7.1	37.50							
53	4770	1850	7.2	32.27							
59	4600	1890	7.3	28.83							
2											
60	4770	1850	6	28.13							
64	4770	1850	6	26.72							
73	4950	1760	6.1	23.44							
85	5300	1470	6.2	19.89							
95	5220	1380	6.2	17.95							
108	4950	1350	6.3	15.79							
114	4860	1320	6.3	14.91							
134	4600	1260	6.4	12.70							
147	4420	1230	6.7	11.54							
170	4150	1200	6.8	10.00							
195	3890	1190	7	8.70*							
218	3360	1110	8.3	7.79							
231	3270	1100	8.3	7.36*							
271	2910	1150	8.5	6.27							
298	2740	1130	9.1	5.70							
345	2560	1080	9.4	4.93							
396	2380	1040	9.7	4.29							
R67R37, n _e = 1700 rpm					5300 lb-in						
n _a [rpm]	T _{amax} [lb-in]	F _{Ra} [lb]	φ _(/R) [°]	i	DR63 DRS71S DRS71M	DRS80 DRE80M DRE90M	DRS90M DRE90L	DRS90L DRS100M DRE100M DRE100LC	DRS100LC		
3 3											
0.11	5300	1700	-	15361							
0.13	5300	1700	-	12931							
0.14	5300	1700	-	11996							
0.17	5300	1700	-	10097							
0.19	5300	1700	-	9066							
0.22	5300	1700	-	7816							
0.25	5300	1700	-	6732							
0.28	5300	1700	-	5970							
0.32	5300	1700	-	5268							
0.36	5300	1700	-	4680							

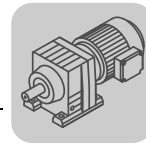
reducer.ir



R..DRE/DRS
R.. → DRE/DRS

R67R37, n_e = 1700 rpm					5300 lb-in				
n _a [rpm]	T _{amax} [lb-in]	F _{Ra} [lb]	φ _(/R) [']	i	DR63 DRS71S DRS71M	DRS80 DRE80M DRE90M	DRS90M DRE90L	DRS90L DRS100M DRE100M DRE100LC	DRS100LC
0.41	5300	1700	-	4136					
0.48	5300	1700	-	3566					
0.54	5300	1700	-	3125					
0.62	5300	1700	-	2745					
0.71	5300	1700	-	2403					
2 3									
0.63	5300	1700	-	2682					
0.69	5300	1700	-	2460					
0.81	5300	1700	-	2094					
0.94	5300	1700	-	1805					
1.0	5300	1700	-	1629					
1.2	5300	1700	-	1471					
1.2	5300	1700	-	1379					
1.5	5300	1700	-	1109					
1.8	5300	1700	-	956					
1.9	5300	1700	-	891					
2.3	5300	1700	-	730					
2.6	5300	1700	-	644					
3.0	5300	1700	-	571					
3.5	5300	1700	-	486					
3 2									
0.80	5300	1700	-	2136					
0.92	5300	1700	-	1852					
1.0	5300	1700	-	1652					
1.2	5300	1700	-	1432					
1.4	5300	1700	-	1259					
1.5	5300	1700	-	1106					
2.0	5300	1700	-	836					
2.3	5300	1700	-	750					
2.6	5300	1700	-	646					
3.0	5300	1700	-	574					
3.4	5300	1700	-	495					
3.9	5300	1700	-	438					
4.4	5300	1700	-	388					
4.9	5300	1700	-	344					
5.8	5300	1700	-	294					
6.5	5300	1700	-	261					
7.3	5300	1700	-	234					
8.5	5300	1700	-	200					
9.7	5300	1700	-	176					
11	5300	1700	-	158					
2 2									
3.8	5300	1700	-	443					
4.4	5300	1700	-	384					
4.7	5300	1700	-	359					
5.5	5300	1700	-	310					
6.4	5300	1700	-	264*					
7.2	5300	1700	-	235					
8.5	5300	1700	-	201					
9.4	5300	1700	-	181					
11	5300	1700	-	159					

reducer.ir



R77, n_e = 1700 rpm **7250 lb-in**

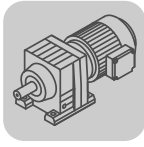
n _a [rpm]	T _{amax} [lb-in]	F _{Ra} [lb]	φ _(/R) [']	i	DR63 DRS71S DRS71M	DRS80 DRE80M DRE90M	DRS90M DRE90L	DRS90L DRS100M DRE100M DRE100LC DRE112M	DRS100LC DRS112M DRE132S	DRS132S DRS132M DRE132M DRE132MC DRE160S	DRS132MC DRS160 DRE160M DRE160MC
3											
8.7	7250	2230	6.4	195.24*							
10	7250	2230	6.5	166.59							
12	7250	2230	6.4	145.67							
12	7250	2230	6.4	138.39							
14	7250	2230	6.5	121.42							
17	7250	2230	6.5	102.99							
18	7250	2230	6.5	92.97							
21	7250	2230	6.5	81.80							
22	7250	2230	6.5	77.24							
26	7250	2230	6.5	65.77							
29	7250	2230	7.1	57.68							
33	7250	2230	7.1	52.07							
37	7250	2230	7.1	45.81							
39	7250	2230	7.1	43.26							
46	7250	2230	7.1	36.83							
51	7250	2230	7.2	33.47							
59	7250	2030	7.3	29.00							
67	6900	1950	7.3	25.23							

2											
73	7250	1690	6.1	23.37							
79	7250	1560	6.1	21.43							
90	6900	1510	6.1	18.80							
95	6900	1430	6.2	17.82*							
109	6540	1390	6.2	15.60							
121	6370	1330	6.5	14.05							
138	6100	1270	6.4	12.33							
156	5830	1220	6.5	10.88							
176	5570	1190	6.7	9.64							
198	5570	705	7.5	8.59							
220	5390	675	7.9	7.74							
250	5130	660	7.8	6.79							
284	4770	700	8	5.99*							
320	4510	710	8.4	5.31*							

R77R37, n_e = 1700 rpm **7250 lb-in**

n _a [rpm]	T _{amax} [lb-in]	F _{Ra} [lb]	φ _(/R) [']	i	DR63 DRS71S DRS71M	DRS80 DRE80M DRE90M	DRS90M DRE90L	DRS90L DRS100M DRE100M DRE100LC	DRS100LC
3 3									
0.10	7250	2230	-	16370					
0.11	7250	2230	-	15015					
0.12	7250	2230	-	13885					
0.13	7250	2230	-	12783					
0.15	7250	2230	-	11021					
0.17	7250	2230	-	9788					
0.20	7250	2230	-	8714					
0.22	7250	2230	-	7617					
0.25	7250	2230	-	6770					
0.29	7250	2230	-	5838					
0.33	7250	2230	-	5184					
0.38	7250	2230	-	4470					
0.43	7250	2230	-	3999					
0.49	7250	2230	-	3488					

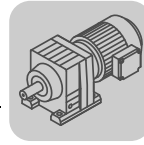
reducer.ir



R..DRE/DRS
R.. → DRE/DRS

R77R37, $n_e = 1700$ rpm					7250 lb-in				
n_a [rpm]	T_{amax} [lb-in]	F_{Ra} [lb]	$\varphi_{(R)}$ [']	i	DR63 DRS71S DRS71M	DRS80 DRE80M DRE90M	DRS90M DRE90L	DRS90L DRS100M DRE100M DRE100LC	DRS100LC
0.56	7250	2230	-	3053					
0.64	7250	2230	-	2671					
2 3									
0.54	7250	2230	-	3151					
0.59	7250	2230	-	2890					
0.69	7250	2230	-	2460					
0.80	7250	2230	-	2121					
0.86	7250	2230	-	1977					
0.98	7250	2230	-	1728					
1.0	7250	2230	-	1620					
1.2	7250	2230	-	1430					
1.3	7250	2230	-	1303					
1.5	7250	2230	-	1124					
1.6	7250	2230	-	1047					
1.9	7250	2230	-	915					
2.0	7250	2230	-	858					
2.2	7250	2230	-	757					
2.5	7250	2230	-	671					
3.0	7250	2230	-	571					
3 2									
0.72	7250	2230	-	2345					
0.82	7250	2230	-	2070					
0.93	7250	2230	-	1822					
1.1	7250	2230	-	1580					
1.2	7250	2230	-	1394					
1.4	7250	2230	-	1218					
1.6	7250	2230	-	1084*					
1.8	7250	2230	-	940					
2.1	7250	2230	-	821					
2.3	7250	2230	-	731					
2.6	7250	2230	-	646					
3.0	7250	2230	-	560					
3.5	7250	2230	-	488					
3.9	7250	2230	-	436					
4.6	7250	2230	-	373					
5.2	7250	2230	-	327					
5.9	7250	2230	-	289					
6.5	7250	2230	-	260					
7.6	7250	2230	-	224					
8.6	7250	2230	-	197					
10	7250	2230	-	169					
11	7250	2230	-	149					
2 2									
3.3	7250	2230	-	520					
3.8	7250	2230	-	451					
4.0	7250	2230	-	422					
4.7	7250	2230	-	365					
5.5	7250	2230	-	310*					
6.2	7250	2230	-	276					
7.2	7250	2230	-	236					
7.7	7250	2230	-	221					
9.1	7250	2230	-	186					

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R87, n_e = 1700 rpm **13700 lb-in**

n _a [rpm]	T _{amax} [lb-in]	F _{Ra} [lb]	Φ _(/R) [°]	i	DRS71M	DRS80 DRE80M DRE90M	DRS90M DRE90L	DRS90L DRS100M DRE100M DRE100LC DRE112M	DRS100LC DRS112M DRE132S	DRS132S DRS132M DRE132M DRE132MC DRE160S	DRS132MC DRS160 DRE160M DRE160MC DRE180S DRE180M	DRS180M DRS180L DRE180L DRE180LC	DRS180LC
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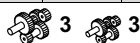
6.9	13700	3800	6	246.54									
7.9	13700	3800	6	216.54									
8.3	13700	3800	6	205.71									
9.4	13700	3800	6	181.77									
11	13700	3800	6	155.34									
12	13700	3800	6	142.41									
14	13700	3800	6	124.97									
14	13700	3800	6	118.43*									
16	13700	3800	6	103.65									
18	13700	3800	6	93.38									
21	13700	3730	6	81.92									
23	13700	3380	6.4	72.57									
27	13700	3020	6.4	63.68*									
28	13700	2880	6.4	60.35*									
32	13700	2540	6.5	52.82									
36	13700	3800	6.5	47.58									
41	13700	3670	6.5	41.74									
46	13700	3490	6.5	36.84*									
52	13700	3320	6.6	32.66*									
61	13200	3130	6.6	27.88									



49	13200	1690	5.5	34.40*									
54	13700	1330	5.5	31.40									
61	13700	3100	5.5	27.84*									
73	13700	2880	5.5	23.40									
79	13200	2810	5.7	21.51									
89	12700	2700	5.7	19.10									
100	12200	2600	5.8	17.08*									
111	11800	2510	5.9	15.35									
128	11300	2390	6	13.33									
142	10800	2310	6	11.93									
172	10400	2150	6.1	9.90*									
186	10700	2190	6.3	9.14*									
207	10200	2110	6.6	8.22									
238	9460	2030	6.7	7.13									
266	9020	1960	6.8	6.39									
321	8050	1870	7	5.30*									

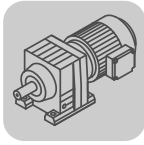
R87R57, n_e = 1700 rpm **13700 lb-in**

n _a [rpm]	T _{amax} [lb-in]	F _{Ra} [lb]	Φ _(/R) [°]	i	DR63 DRS71S DRS71M	DRS80 DRE80M DRE90M	DRS90M DRE90L	DRS90L DRS100M DRE100M DRE100LC DRE112M	DRS100LC DRS112M DRE132S	DRS132S DRS132M DRE132M DRE132MC DRE160S	DRS132MC
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0.10	13700	3800	-	17452								
0.11	13700	3800	-	15310								
0.12	13700	3800	-	13813								
0.14	13700	3800	-	12025								
0.16	13700	3800	-	10549								
0.18	13700	3800	-	9244								
0.21	13700	3800	-	8109								
0.24	13700	3800	-	7038								
0.28	13700	3800	-	6174								
0.31	13700	3800	-	5449								

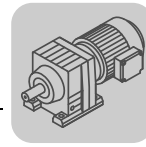
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R..DRE/DRS
R.. → DRE/DRS

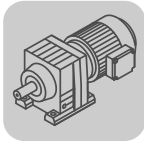
R87R57, n _e = 1700 rpm					13700 lb-in						
n _a [rpm]	T _{amax} [lb-in]	F _{Ra} [lb]	φ _(/R) [°]	i	DR63 DRS71S DRS71M	DRS80 DRE80M DRE90M	DRS90M DRE90L	DRS90L DRS100M DRE100M DRE100LC DRE112M	DRS100LC DRS112M DRE132S	DRS132S DRS132M DRE132M DRE132MC DRE160S	DRS132MC
0.35	13700	3800	-	4831							
0.40	13700	3800	-	4206							
0.45	13700	3800	-	3744							
0.53	13700	3800	-	3233							
0.59	13700	3800	-	2873							
0.68	13700	3800	-	2518							
0.77	13700	3800	-	2209							
0.87	13700	3800	-	1961							
1.7	13700	3800	-	994							
1.9	13700	3800	-	881							
2											
0.42	13700	3800	-	4020							
0.46	13700	3800	-	3703							
0.53	13700	3800	-	3182							
0.61	13700	3800	-	2770							
0.66	13700	3800	-	2595							
0.80	13700	3800	-	2129							
0.88	13700	3800	-	1930							
0.98	13700	3800	-	1733							
1.1	13700	3800	-	1489							
1.2	13700	3800	-	1395							
1.4	13700	3800	-	1232							
1.5	13700	3800	-	1145							
1.6	13700	3800	-	1037							
1.8	13700	3800	-	931							
2.1	13700	3800	-	802*							
2.3	13700	3800	-	754							
2.6	13700	3800	-	649							
2.9	13700	3800	-	580							
3											
0.98	13700	3800	-	1737							
1.1	13700	3800	-	1524							
1.3	13700	3800	-	1303							
1.5	13700	3800	-	1143							
1.7	13700	3800	-	1008							
1.9	13700	3800	-	885							
2.2	13700	3800	-	776							
2.5	13700	3800	-	685*							
2.8	13700	3800	-	599							
3.2	13700	3800	-	525							
3.7	13700	3800	-	456*							
4.3	13700	3800	-	398							
4.8	13700	3800	-	352							
5.6	13700	3800	-	305							
6.3	13700	3800	-	268							
7.2	13700	3800	-	236*							
8.1	13700	3800	-	209*							
2											
3.2	13700	3800	-	538							
3.6	13700	3800	-	472							
4.2	13700	3800	-	400							
4.7	13700	3800	-	361							
5.7	13700	3800	-	300							
6.6	13700	3800	-	256							
7.3	13700	3800	-	232							
8.7	13700	3800	-	195							

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R97, n _e = 1700 rpm					26500 lb-in								
n _a [rpm]	T _{amax} [lb-in]	F _{Ra} [lb]	φ _(/R) [°]	i	DRS71M	DRS80 DRE80M DRE90M	DRS90M DRE90L	DRS90L DRS100M DRE100M DRE100LC DRE112M	DRS100LC DRS112M DRE132S	DRS132S DRS132M DRE132M DRE132MC DRE160S	DRS132MC DRS160 DRE160M DRE160MC DRE180S DRE180M	DRS180M DRS180L DRE180L DRE180LC	DRS180LC DRS200L DRE200L DRS225S DRE225S DRS225M DRE225M DRE225MC
3													
5.9	26500	4450	5.7	289.74									
6.6	26500	4450	5.7	255.71									
7.0	26500	4450	5.7	241.25									
7.9	26500	4450	5.7	216.28									
9.1	26500	4450	5.7	186.30									
10.0	26500	4450	5.7	170.02									
11	26500	4450	5.7	150.78									
13	26500	4450	5.7	126.75									
15	26500	4450	5.7	116.48									
16	26500	4450	5.7	103.44									
18	26500	4270	5.7	92.48									
20	26500	3840	5.8	83.15									
24	26500	3300	5.8	72.17									
26	26500	4450	6.1	65.21									
28	26500	4450	6.2	59.92									
32	26500	4450	6.2	53.21									
36	26500	4280	6.2	47.58									
40	26500	4080	6.2	42.78									
46	26500	3830	6.3	37.13									
51	25500	3690	6.3	33.25									
62	23600	3490	6.3	27.58									
2													
53	22600	1800	5.3	32.05									
63	22600	1340	5.3	27.19									
68	25000	3270	5.4	25.03									
76	24000	3150	5.5	22.37									
84	23000	3050	5.5	20.14									
93	22100	2960	5.6	18.24									
105	21200	2850	5.6	16.17									
116	20300	2760	5.6	14.62									
137	19300	2610	5.7	12.39									
157	18400	2490	5.8	10.83									
183	17900	2520	5.6	9.29									
203	17900	2410	5.7	8.39									
239	17600	2250	5.8	7.12									
274	16700	2160	5.9	6.21									
327	15700	2030	6.1	5.20									
378	14400	1960	6.2	4.50*									
R97R57, n _e = 1700 rpm					26500 lb-in								
n _a [rpm]	T _{amax} [lb-in]	F _{Ra} [lb]	φ _(/R) [°]	i	DR63 DRS71S DRS71M	DRS80 DRE80M DRE90M	DRS90M DRE90L	DRS90L DRS100M DRE100M DRE100LC DRE112M	DRS100LC DRS112M DRE132S	DRS132S DRS132M DRE132M DRE132MC DRE160S	DRS132MC		
3 3													
0.08	26500	4450	-	21769									
0.09	26500	4450	-	19332									
0.10	26500	4450	-	17230									
0.11	26500	4450	-	14999									
0.13	26500	4450	-	13320									
0.15	26500	4450	-	11156									
0.17	26500	4450	-	10030									
0.20	26500	4450	-	8706									
0.22	26500	4450	-	7692									

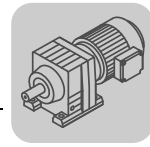
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R..DRE/DRS
R.. → DRE/DRS

R97R57, n _e = 1700 rpm					26500 lb-in						
n _a [rpm]	T _{amax} [lb-in]	F _{Ra} [lb]	φ _(/R) [°]	i	DR63 DRS71S DRS71M	DRS80 DRE80M DRE90M	DRS90M DRE90L	DRS90L DRS100M DRE100M DRE100LC DRE112M	DRS100LC DRS112M DRE132S	DRS132S DRS132M DRE132M DRE132MC DRE160S	DRS132MC
0.25	26500	4450	-	6708							
0.29	26500	4450	-	5931							
0.33	26500	4450	-	5161							
0.37	26500	4450	-	4559							
0.42	26500	4450	-	4004							
0.49	26500	4450	-	3481							
2 3											
0.36	26500	4450	-	4678							
0.39	26500	4450	-	4309							
0.46	26500	4450	-	3702							
0.56	26500	4450	-	3019							
0.64	26500	4450	-	2668							
0.76	26500	4450	-	2245							
0.84	26500	4450	-	2016							
0.98	26500	4450	-	1733							
1.0	26500	4450	-	1623							
1.2	26500	4450	-	1434							
1.4	26500	4450	-	1207							
1.6	26500	4450	-	1084							
1.8	26500	4450	-	934							
1.9	26500	4450	-	878							
2.3	26500	4450	-	755							
3 2											
0.55	26500	4450	-	3065							
0.62	26500	4450	-	2722							
0.74	26500	4450	-	2311							
0.82	26500	4450	-	2078							
0.93	26500	4450	-	1823							
1.1	26500	4450	-	1583							
1.2	26500	4450	-	1396							
1.4	26500	4450	-	1228							
1.6	26500	4450	-	1069							
1.8	26500	4450	-	938							
2.1	26500	4450	-	824							
2.3	26500	4450	-	737							
2.7	26500	4450	-	632							
3.0	26500	4450	-	560							
3.5	26500	4450	-	484							
3.9	26500	4450	-	431							
4.5	26500	4450	-	379							
5.1	26500	4450	-	336							
5.7	26500	4450	-	296							
6.8	26500	4450	-	249							
7.3	26500	4450	-	234							
8.1	26500	4450	-	209							
2 2											
2.7	26500	4450	-	625							
3.1	26500	4450	-	549							
3.6	26500	4450	-	466							
4.0	26500	4450	-	420							
4.6	26500	4450	-	370							
4.9	26500	4450	-	349							
5.7	26500	4450	-	297							
6.3	26500	4450	-	270							
7.5	26500	4450	-	227							

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R107, n_e = 1700 rpm **38000 lb-in**

n _a [rpm]	T _{amax} [lb-in]	F _{Ra} [lb]	φ _(/R) [']	i	DRS90L DRS100M DRE100M DRE100LC DRE112M	DRS100LC DRS112M DRE132S	DRS132S DRS132M DRE132M DRE132MC DRE160S	DRS132MC DRS160 DRE160M DRE160MC DRE180S DRE180M	DRS180M DRS180L DRE180L DRE180LC	DRS180LC DRS200L DRE200L DRS225S DRE225S DRS225M DRE225M DRE225MC	DRS225MC
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6.8	38000	6620	7	251.15							
7.4	38000	6620	7	229.95							
8.4	38000	6620	7	203.16							
9.9	38000	6620	7	172.34							
11	38000	6620	7	158.68							
12	38000	6620	7	141.83							
13	38000	6620	7	127.68							
15	38000	6620	7	115.63							
17	38000	6620	7	102.53							
18	38000	6620	7	92.70							
22	38000	6520	7.1	78.57							
23	38000	6320	7.3	72.88							
26	38000	6050	7.3	65.60*							
29	38000	5800	7.4	59.41							
32	38000	5510	7.4	52.68							
36	38000	5280	7.4	47.63							
42	38000	4910	7.4	40.37*							
48	38000	4620	7.4	35.26							
58	38000	4260	7.5	29.49							



55	38000	4340	6.7	30.77							
62	38000	4130	6.8	27.58							
68	38000	3940	6.8	24.90*							
75	38000	3760	6.9	22.62							
85	38000	3550	6.9	20.07							
93	38000	3390	6.8	18.21							
109	38000	3140	6.9	15.65							
124	38000	2930	6.9	13.66							
147	38000	2690	7	11.59							
168	38000	2500	7.1	10.13							
199	38000	2280	7.2	8.56							
216	26200	2840	8.8	7.86							
255	26200	2640	8.9	6.66							
292	26200	2480	9	5.82							
346	25600	2320	9.3	4.92							

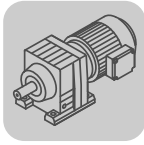
R107R77, n_e = 1700 rpm **38000 lb-in**

n _a [rpm]	T _{amax} [lb-in]	F _{Ra} [lb]	φ _(/R) [']	i	DR63 DRS71S DRS71M	DRS80 DRE80M DRE90M	DRS90M DRE90L	DRS90L DRS100M DRE100M DRE100LC DRE112M	DRS100LC DRS112M DRE132S	DRS132S DRS132M DRE132M DRE132MC DRE160S	DRS132MC DRS160 DRE160M DRE160MC
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0.08	38000	6620	-	20018							
0.10	38000	6620	-	17080							
0.11	38000	6620	-	14936							
0.13	38000	6620	-	12829							
0.15	38000	6620	-	11256							
0.18	38000	6620	-	9547							
0.20	38000	6620	-	8618							
0.22	38000	6620	-	7583							
0.25	38000	6620	-	6743							

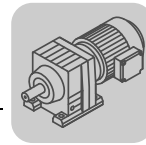
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R..DRE/DRS
R.. → DRE/DRS

R107R77, n _e = 1700 rpm					38000 lb-in						
n _a [rpm]	T _{amax} [lb-in]	F _{Ra} [lb]	φ _(/R) [']	i	DR63 DRS71S DRS71M	DRS80 DRE80M DRE90M	DRS90M DRE90L	DRS90L DRS100M DRE100M DRE100LC DRE112M	DRS100LC DRS112M DRE132S	DRS132S DRS132M DRE132M DRE132MC DRE160S	DRS132MC DRS160 DRE160M DRE160MC
0.29	38000	6620	-	5914							
0.33	38000	6620	-	5168							
0.38	38000	6620	-	4435							
0.44	38000	6620	-	3896							
0.50	38000	6620	-	3432							
0.56	38000	6620	-	3039							
0.63	38000	6620	-	2688							
0.73	38000	6620	-	2339							
2 3											
0.43	38000	6620	-	3918							
0.51	38000	6620	-	3343							
0.56	38000	6620	-	3034							
0.64	38000	6620	-	2653							
0.75	38000	6620	-	2280							
0.82	38000	6620	-	2067							
1.0	38000	6620	-	1693							
1.1	38000	6620	-	1550							
1.2	38000	6620	-	1407							
1.4	38000	6620	-	1209							
1.6	38000	6620	-	1055							
1.8	38000	6620	-	919							
2.1	38000	6620	-	815							
2.4	38000	6620	-	717							
2.7	38000	6620	-	626							
3.2	38000	6620	-	528							
3 2											
0.86	38000	6620	-	1987							
0.93	38000	6620	-	1827							
1.1	38000	6620	-	1599							
1.2	38000	6620	-	1400*							
1.4	38000	6620	-	1226							
1.5	38000	6620	-	1104							
1.8	38000	6620	-	939							
2.1	38000	6620	-	822							
2.8	38000	6620	-	614							
3.1	38000	6620	-	544							
3.5	38000	6620	-	492							
4.1	38000	6620	-	417							
4.6	38000	6620	-	369							
5.3	38000	6620	-	323							
6.0	38000	6620	-	285							
6.7	38000	6620	-	253							
7.9	38000	6620	-	214*							
9.1	38000	6620	-	187							
2 2											
3.6	38000	6620	-	469							
4.0	38000	6620	-	426							
4.5	38000	6620	-	377							
5.2	38000	6620	-	325							
6.0	38000	6620	-	284							
6.6	38000	6620	-	256							
7.7	38000	6620	-	220							
8.8	38000	6620	-	193							
9.9	38000	6620	-	172							

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R137, $n_e = 1700$ rpm					70700 lb-in				
n_a [rpm]	T_{amax} [lb-in]	F_{Ra} [lb]	$\varphi_{(R)}$ [']	i	DRS132S DRS132M DRE132M DRE132MC DRE160S	DRS132MC DRS160 DRE160M DRE160MC DRE180S DRE180M	DRS180M DRS180L DRE180L DRE180LC	DRS180LC DRS200L DRE200L DRS225S DRE225S DRS225M DRE225M DRE225MC	DRS225MC DVE250M DVE250M DVE280 DVE280S DVE280M



7.6	70700	12000	6	222.60*					
9.0	70700	12000	6	188.45					
9.7	70700	12000	6.1	174.40*					
11	70700	12000	6.1	156.31					
12	70700	12000	6.1	141.12*					
13	70700	12000	6.1	128.18					
15	70700	12000	6.1	113.72					
16	70700	12000	6.1	103.20*					
19	70700	12000	6.1	88.70*					
21	70700	12000	6.4	80.91*					
23	70700	12000	6.4	73.49					
26	70700	12000	6.4	65.20					
29	70700	12000	6.4	59.17*					
33	70700	12000	6.4	50.86*					
38	70700	12000	6.4	44.39					
45	70700	12000	6.4	37.65					
52	70700	11800	6.5	32.91					
61	67900	11100	6.5	27.83					



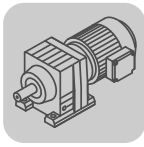
57	68800	11400	5.7	29.57*					
70	70700	10000	5.8	24.12					
77	70700	9520	5.8	22.00*					
89	70700	8770	5.9	19.04*					
101	70700	8150	5.9	16.80*					
117	70700	7450	5.9	14.51					
133	70700	6890	6	12.83					
158	70700	6130	6.1	10.79					
195	69300	5410	6.1	8.71					
224	45200	8000	8	7.59					
266	45200	7340	8.2	6.38					
330	40700	7070	8.2	5.15					

R137R77, $n_e = 1700$ rpm					70700 lb-in						
n_a [rpm]	T_{amax} [lb-in]	F_{Ra} [lb]	$\varphi_{(R)}$ [']	i	DR63 DRS71S DRS71M	DRS80 DRE80M DRE90M	DRS90M DRE90L	DRS90L DRS100M DRE100M DRE100LC DRE112M	DRS100LC DRS112M DRE132S	DRS132S DRS132M DRE132M DRE132MC DRE160S	DRS132MC DRS160 DRE160M DRE160MC



0.08	70700	12000	-	22203*							
0.09	70700	12000	-	18945							
0.10	70700	12000	-	16566							
0.12	70700	12000	-	14777							
0.13	70700	12000	-	12921							
0.15	70700	12000	-	11712							
0.16	70700	12000	-	10573*							
0.19	70700	12000	-	8784							
0.23	70700	12000	-	7479							
0.26	70700	12000	-	6559							
0.29	70700	12000	-	5834							
0.33	70700	12000	-	5116							
0.38	70700	12000	-	4464							

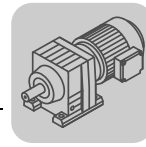
reducer.ir



R..DRE/DRS
R.. → DRE/DRS

R137R77, n _e = 1700 rpm					70700 lb-in							
n _a [rpm]	T _{amax} [lb-in]	F _{Ra} [lb]	φ _(/R) [']	i	DR63 DRS71S DRS71M	DRS80 DRE80M DRE90M	DRS90M DRE90L	DRS90L DRS100M DRE100M DRE100LC DRE112M	DRS100LC DRS112M DRE132S	DRS132S DRS132M DRE132M DRE132MC DRE160S	DRS132MC DRS160 DRE160M DRE160MC	
0.43	70700	12000	-	3928*								
0.49	70700	12000	-	3454								
0.57	70700	12000	-	2993								
2 3												
0.36	70700	12000	-	4709*								
0.42	70700	12000	-	4018								
0.48	70700	12000	-	3514								
0.51	70700	12000	-	3338								
0.58	70700	12000	-	2929								
0.68	70700	12000	-	2484								
0.76	70700	12000	-	2242*								
0.91	70700	12000	-	1863								
1.1	70700	12000	-	1586								
1.2	70700	12000	-	1391								
1.4	70700	12000	-	1256								
1.5	70700	12000	-	1105								
1.6	70700	12000	-	1043								
1.9	70700	12000	-	888								
2.4	70700	12000	-	699								
2.8	70700	12000	-	609								
3 2												
0.64	70700	12000	-	2658								
0.70	70700	12000	-	2412								
0.82	70700	12000	-	2073*								
0.92	70700	12000	-	1839*								
1.1	70700	12000	-	1598								
1.2	70700	12000	-	1397								
1.4	70700	12000	-	1226*								
1.6	70700	12000	-	1090*								
1.8	70700	12000	-	951								
2.0	70700	12000	-	831								
2.3	70700	12000	-	730								
2.7	70700	12000	-	629								
3.0	70700	12000	-	560								
3.5	70700	12000	-	490*								
4.0	70700	12000	-	428								
4.5	70700	12000	-	381								
5.3	70700	12000	-	323								
5.8	70700	12000	-	291								
6.7	70700	12000	-	255*								
7.6	70700	12000	-	223								
8.6	70700	12000	-	197*								
9.7	70700	12000	-	175								
2 2												
3.0	70700	12000	-	564								
3.3	70700	12000	-	517								
3.8	70700	12000	-	453*								
4.5	70700	12000	-	376								
5.0	70700	12000	-	339								
5.7	70700	12000	-	297								

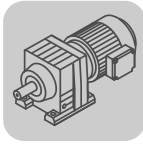
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R147, $n_e = 1700$ rpm					115000 lb-in			
n_a [rpm]	T_{amax} [lb-in]	F_{Ra} [lb]	$\varphi/(R)$ [']	i	DRS132MC DRS160 DRE160M DRE160MC DRE180S DRE180M	DRS180M DRS180L DRE180L DRE180LC	DRS180LC DRS200L DRE200L DRS225S DRE225S DRS225M DRE225M DRE225MC	DRS225MC DVE250M DVE250M DVE280 DVE280S DVE280M
3								
10	115000	14100	5.5	163.31				
12	115000	14100	5.5	146.91				
14	115000	14100	5.5	119.86				
16	115000	14100	5.5	109.31				
18	115000	14100	5.5	94.60*				
20	115000	14100	5.5	83.47				
24	115000	14100	5.5	72.09				
25	115000	14100	5.8	66.99				
28	115000	14100	5.8	61.09				
32	115000	14100	5.8	52.87				
36	115000	14100	5.8	46.65				
42	115000	14100	5.8	40.29				
48	115000	14100	5.9	35.64				
57	115000	14100	5.9	29.95				
70	105200	14500	5.9	24.19				
2								
83	106100	14500	5.2	20.44				
94	92900	15100	5.3	18.04				
109	115000	14100	5.3	15.64				
122	111400	13500	5.3	13.91				
142	115000	12300	5.4	11.99				
175	115000	11000	5.5	9.74				
206	115000	10100	5.6	8.26				
234	76700	12000	7.5	7.25				
289	76700	10900	7.6	5.89				
340	76700	10100	7.8	5.00				

R147R77, $n_e = 1700$ rpm					115000 lb-in						
n_a [rpm]	T_{amax} [lb-in]	F_{Ra} [lb]	$\varphi/(R)$ [']	i	DR63 DRS71S DRS71M	DRS80 DRE80M DRE90M	DRS90M DRE90L	DRS90L DRS100M DRE100M DRE100LC DRE112M	DRS100LC DRS112M DRE132S	DRS132S DRS132M DRE132M DRE132MC DRE160S	DRS132MC DRS160 DRE160M DRE160MC
3 3											
0.07	115000	14100	-	23401							
0.08	115000	14100	-	21342							
0.09	115000	14100	-	18210							
0.11	115000	14100	-	15923							
0.12	115000	14100	-	14075							
0.14	115000	14100	-	12344							
0.15	115000	14100	-	11143							
0.17	115000	14100	-	9743							
0.20	115000	14100	-	8443							
0.23	115000	14100	-	7307							
0.26	115000	14100	-	6447							
0.31	115000	14100	-	5568							
0.35	115000	14100	-	4926							
0.39	115000	14100	-	4325							
0.45	115000	14100	-	3754							
0.51	115000	14100	-	3302							
0.59	115000	14100	-	2898							

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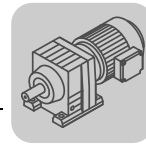
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R.. → DRE/DRS

R147R77, n_e = 1700 rpm					115000 lb-in						
n _a [rpm]	T _{amax} [lb-in]	F _{Ra} [lb]	φ(/R) [']	i	DR63 DRS71S DRS71M	DRS80 DRE80M DRE90M	DRS90M DRE90L	DRS90L DRS100M DRE100M DRE100LC DRE112M	DRS100LC DRS112M DRE132S	DRS132S DRS132M DRE132M DRE132MC DRE160S	DRS132MC DRS160 DRE160M DRE160MC
3 2											
0.67	115000	14100	-	2555							
0.77	115000	14100	-	2211							
0.87	115000	14100	-	1951							
1.00	115000	14100	-	1705							
1.1	115000	14100	-	1536							
1.3	115000	14100	-	1329							
1.5	115000	14100	-	1166							
1.7	115000	14100	-	1029							
1.9	115000	14100	-	889							
2.2	115000	14100	-	784							
2.4	115000	14100	-	695							
2.7	115000	14100	-	619							
3.0	115000	14100	-	558							
3.5	115000	14100	-	489							
4.1	115000	14100	-	415							

R147R87, n_e = 1700 rpm					115000 lb-in								
n _a [rpm]	T _{amax} [lb-in]	F _{Ra} [lb]	φ(/R) [']	i	DRS71M	DRS80 DRE80M DRE90M	DRS90M DRE90L	DRS90L DRS100M DRE100M DRE100LC DRE112M	DRS100LC DRS112M DRE132S	DRS132S DRS132M DRE132M DRE132MC DRE160S	DRS132MC DRS160 DRE160M DRE160MC DRE180S DRE180M	DRS180M DRS180L DRE180L DRE180LC	DRS180LC
3.2	115000	14100	-	533									
3.7	115000	14100	-	462									
4.0	115000	14100	-	426									
4.6	115000	14100	-	368									
5.2	115000	14100	-	326									
6.1	115000	14100	-	280									
6.9	115000	14100	-	247									
7.9	115000	14100	-	214									
9.0	115000	14100	-	189									
11	115000	14100	-	159									

R167, n_e = 1700 rpm					159200 lb-in					
n _a [rpm]	T _{amax} [lb-in]	F _{Ra} [lb]	φ(/R) [']	i	DRS160 DRE160M DRE160MC DRE180S DRE180M	DRS180M DRS180L DRE180L DRE180LC	DRS180LC DRS200L DRE200L DRS225S DRE225S DRS225M DRE225M DRE225MC	DRS225MC DVE250M DRE250M DVE280 DVE280S DVE280M	DRS315K DRE315K DRS315S DRE315S	DRS315M DRE315M DRE315L DRS315L DRS315L
3										
7.4	159200	27000	5.2	229.71						
9.1	159200	27000	5.2	186.93*						
11	159200	27000	5.2	153.07						
12	159200	27000	5.2	139.98						
14	159200	27000	5.2	121.81*						
16	159200	27000	5.2	107.49						
18	159200	27000	5.2	93.19						
21	159200	27000	5.2	82.91*						
23	159200	27000	5.6	73.70*						
25	159200	27000	5.6	67.40						
29	159200	27000	5.6	58.65						
33	159200	27000	5.6	51.76						
38	159200	27000	5.6	44.87						

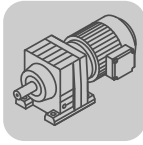
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R167, $n_e = 1700$ rpm					159200 lb-in					
n_a [rpm]	T_{amax} [lb-in]	F_{Ra} [lb]	$\varphi/(R)$ [']	i	DRS160 DRE160M DRE160MC DRE180S DRE180M	DRS180M DRS180L DRE180L DRE180LC	DRS180LC DRS200L DRE200L DRS225S DRE225S DRS225M DRE225M DRE225MC	DRS225MC DVE250M DRE250M DVE280 DRE280S DVE280M	DRS315K DRE315K DRS315S DRE315S	DRS315M DRE315M DRS315L DRE315L DRS315L
43	159200	27000	5.6	39.92						
49	159200	27000	5.6	34.41						
61	159200	25900	5.7	27.96						
72	159200	24100	5.7	23.71						
2										
37	61900	27000	5	46.00						
45	79600	27000	5	37.74						
55	88400	27000	5	30.71						
69	123800	26900	5.1	24.57						
78	115000	26300	5.1	21.85						
89	141500	23100	5.1	19.03						
100	132700	22600	5.1	16.98						
117	159200	19300	5.2	14.48						
142	150400	18200	5.3	11.99						
166	150400	16900	5.3	10.24						

R167R97, $n_e = 1700$ rpm					159200 lb-in								
n_a [rpm]	T_{amax} [lb-in]	F_{Ra} [lb]	$\varphi/(R)$ [']	i	DRS71M	DRS80 DRE80M DRE90M	DRS90M DRE90L	DRS90L DRS100M DRE100M DRE100LC DRE112M	DRS100LC DRS112M DRE132S	DRS132S DRS132M DRE132M DRE132MC DRE160S	DRS132MC DRS160 DRE160M DRE160MC DRE180S DRE180M	DRS180M DRE180L DRE180LC	DRS180LC DRS200L DRE200L DRS225S DRE225S DRS225M DRE225M DRE225MC
3 3													
0.06	159200	27000	-	27001									
0.08	159200	27000	-	22482									
0.08	159200	27000	-	20002*									
0.10	159200	27000	-	17361									
0.11	159200	27000	-	15446									
0.12	159200	27000	-	14051									
0.14	159200	27000	-	11812									
0.16	159200	27000	-	10509									
0.18	159200	27000	-	9631									
0.22	159200	27000	-	7749									
0.25	159200	27000	-	6894									
0.28	159200	27000	-	6077									
0.31	159200	27000	-	5407									
0.37	159200	27000	-	4650									
0.41	159200	27000	-	4129									
0.46	159200	27000	-	3692									
0.55	159200	27000	-	3099									
3 2													
0.64	159200	27000	-	2657*									
0.73	159200	27000	-	2333									
0.82	159200	27000	-	2085									
0.91	159200	27000	-	1877									
1.0	159200	27000	-	1670*									
1.2	159200	27000	-	1438									
1.3	159200	27000	-	1279									
1.5	159200	27000	-	1123									
1.7	159200	27000	-	999									
2.0	159200	27000	-	861									

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R..DRE/DRS
R.. → DRE/DRS

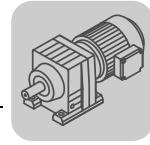
R167R97, n_e = 1700 rpm						159200 lb-in							
n _a [rpm]	T _{amax} [lb-in]	F _{Ra} [lb]	φ(/R) [']	i	DRS71M	DRS80 DRE80M DRE90M	DRS90M DRE90L	DRS90L DRS100M DRE100M DRE100LC DRE112M	DRS100LC DRS112M DRE132S	DRS132S DRS132M DRE132M DRE132MC DRE160S	DRS132MC DRS160 DRE160M DRE160MC DRE180S DRE180M	DRS180M DRS180L DRE180L DRE180LC	DRS180LC DRS200L DRE200L DRE225S DRS225M DRE225M DRE225MC
2.2	159200	27000	-	760									
2.6	159200	27000	-	656									
2.9	159200	27000	-	579									
3.4	159200	27000	-	503									
3.9	159200	27000	-	432									
4.5	159200	27000	-	376									
5.1	159200	27000	-	335									
5.6	159200	27000	-	303									
6.1	159200	27000	-	279									

R167R107, n_e = 1700 rpm						159200 lb-in							
n _a [rpm]	T _{amax} [lb-in]	F _{Ra} [lb]	φ(/R) [']	i	DRS90L DRS100M DRE100M DRE100LC DRE112M	DRS100LC DRS112M DRE132S	DRS132S DRS132M DRE132M DRE132MC DRE160S	DRS132MC DRS160 DRE160M DRE160MC DRE180S DRE180M	DRS180M DRS180L DRE180L DRE180LC	DRS180LC DRS200L DRE200L DRE225S DRS225M DRE225M DRE225MC	DRS225MC		
2 3													
0.47	159200	27000	-	3637									
0.51	159200	27000	-	3330									
0.62	159200	27000	-	2757									
0.70	159200	27000	-	2436									
0.74	159200	27000	-	2298									
0.82	159200	27000	-	2066									
0.92	159200	27000	-	1849									
1.0	159200	27000	-	1674									
1.1	159200	27000	-	1485									
1.3	159200	27000	-	1342									
1.4	159200	27000	-	1229									
1.5	159200	27000	-	1111									
1.8	159200	27000	-	950									
2.0	159200	27000	-	860									
2.2	159200	27000	-	763									
2.5	159200	27000	-	690									
2.9	159200	27000	-	585									
3.3	159200	27000	-	511									

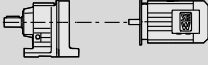


3 2													
4.9	159200	27000	-	349									
5.8	159200	27000	-	295									
6.3	159200	27000	-	270									
7.4	159200	27000	-	229									
8.5	159200	27000	-	200									
10	159200	27000	-	169									

2 2													
3.8	159200	27000	-	446									
4.3	159200	27000	-	399									
4.7	159200	27000	-	361									
5.2	159200	27000	-	328									
5.8	159200	27000	-	291									
6.4	159200	27000	-	264									
7.5	159200	27000	-	227									
8.6	159200	27000	-	198									
10	159200	27000	-	168									

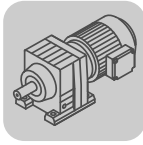
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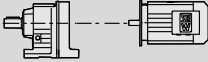











9.3 R..DRE/DRS [HP]

P_m [HP]	n_a [rpm]	T_a [lb-in]	i	$F_{Ra}^{1)}$ [lb]	SEW f_B		m [lbs]			
0.12	18	415	60.32	340	1.05					
	21	355	51.52	350	1.25					
	23	330	47.78	355	1.35					
	25	305	44.16	355	1.45					
	27	285	41.31	360	1.55					
	27	275	40.34	360	1.60	R	07	DR	63S6	14 238 **
	29	265	38.51	360	1.65	RF	07	DR	63S6	14 239
	32	235	34.05	355	1.90					
	38	200	29.08	345	2.2					
	41	187	26.97	335	2.4					
	47	161	23.32	325	2.8					
51	150	21.73	315	2.9						
0.13	21	400	78.24	345	1.10					
	23	365	71.47	350	1.20					
	27	310	60.32	355	1.40					
	32	265	51.52	355	1.65					
	34	245	47.78	345	1.80					
	37	225	44.16	340	1.95	R	07	DT	56M4	13 238 **
	40	210	41.31	335	2.1	RF	07	DT	56M4	13 239
	41	205	40.34	330	2.1					
	43	198	38.51	330	2.2					
	48	175	34.05	320	2.5					
	56	150	29.08	305	3.0					
0.16	23	440	47.78	340	1.00					
	25	405	44.16	345	1.10					
	27	380	41.31	350	1.15					
	27	370	40.34	350	1.20					
	29	350	38.51	350	1.25	R	07	DR	63M6	14 238 **
	32	310	34.05	340	1.40	RF	07	DR	63M6	14 239
	38	265	29.08	330	1.65					
	41	245	26.97	325	1.80					
	47	215	23.32	315	2.1					
	51	200	21.73	310	2.2					
	24	430	71.47	340	1.05					
	28	360	60.32	350	1.20					
	33	310	51.52	340	1.40					
	35	285	47.78	335	1.55					
38	265	44.16	330	1.65	R	07	DR	63S4	14 238 **	
41	245	41.31	325	1.75	RF	07	DR	63S4	14 239	
42	240	40.34	320	1.80						
44	230	38.51	320	1.90						
49	205	34.05	310	2.2						
58	175	29.08	295	2.5						
62	163	26.97	290	2.7						
60	169	18.31	295	2.6	R	07	DR	63M6	14 238 **	
66	154	16.73	285	2.9	RF	07	DR	63M6	14 239	
0.20	31	405	51.52	330	1.10					
	33	375	47.78	325	1.15					
	36	345	44.16	320	1.25					
	39	325	41.31	315	1.35					
	40	315	40.34	315	1.40	R	07	DT	56L4	13 238 **
	42	305	38.51	310	1.45	RF	07	DT	56L4	13 239
	47	265	34.05	305	1.65					
	55	230	29.08	290	1.90					
	59	210	26.97	285	2.1					
	69	185	23.32	275	2.4					
	74	173	21.73	270	2.6					
0.25	0.26	41700	6447	16400	2.8	R	147R77	DRS	71S4	930 275
						RF	147R77	DRS	71S4	950 275
						RM	147R77	DRS	71S4	1320 275
	0.26	45300	6559	13100	1.55					
	0.29	36400	5834	13300	1.95	R	137R77	DRS	71S4	640 275
	0.33	35300	5116	13400	2.0	RF	137R77	DRS	71S4	690 275
	0.38	28900	4464	13500	2.4	RM	137R77	DRS	71S4	940 275
0.43	25400	3928	13600	2.8						

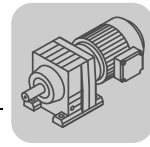
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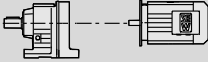



R..DRE/DRS
R..DRE/DRS [HP]

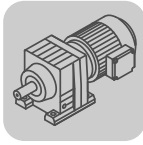
P_m [HP]	n_a [rpm]	T_a [lb-in]	i	$F_{Ra}^{1)}$ [lb]	SEW f_B		m [lbs]			
0.25	0.36	33300	4709	13400	2.1	R 137R77 DRS 71S4 RF 137R77 DRS 71S4 RM 137R77 DRS 71S4	620 275 670 275 920 275			
	0.42	28400	4018	13500	2.5					
	0.48	24900	3514	13600	2.8					
	0.51	23600	3338	13600	3.0					
	0.33	32200	5168	7320	1.20	R 107R77 DRS 71S4 RF 107R77 DRS 71S4 RM 107R77 DRS 71S4	450 275 465 275 660 275			
	0.38	28700	4435	7670	1.30					
	0.44	25500	3896	7930	1.50					
	0.50	20800	3432	8170	1.80					
	0.56	21000	3039	8170	1.80					
	0.63	15600	2688	8320	2.4					
	0.43	27700	3918	7750	1.35	R 107R77 DRS 71S4 RF 107R77 DRS 71S4 RM 107R77 DRS 71S4	435 275 450 275 640 275			
	0.51	23600	3343	8070	1.60					
0.56	21500	3034	8150	1.75						
0.64	18800	2653	8230	2.0						
0.75	16100	2280	8300	2.4						
0.82	14400	2067	8340	2.6						
0.86	13600	1987	8360	2.8						
0.49	25100	3481	4960	1.05	R 97R57 DRS 71S4 RF 97R57 DRS 71S4 RM 97R57 DRS 71S4	290 275 325 275 440 275				
0.56	22800	3019	5310	1.15						
0.64	19900	2668	5690	1.35						
0.76	16300	2245	6050	1.60	R 97R57 DRS 71S4 RF 97R57 DRS 71S4 RM 97R57 DRS 71S4	280 275 320 275 430 275				
0.84	14500	2016	6170	1.85						
0.98	13100	1733	6220	2.0						
1.0	12200	1623	6250	2.2						
1.2	10700	1434	6300	2.5						
0.55	23300	3065	5240	1.15				R 97R57 DRS 71S4 RF 97R57 DRS 71S4 RM 97R57 DRS 71S4	285 275 325 275 435 275	
0.62	20700	2722	5590	1.30						
0.74	17400	2311	5950	1.50						
0.82	15700	2078	6110	1.70						
0.93	13600	1823	6200	1.95						
1.1	11800	1583	6260	2.2						
1.2	10000	1396	6310	2.6						
1.7	6520	994	4490	2.1	R 87R57 DRS 71S4 RF 87R57 DRS 71S4 RM 87R57 DRS 71S4	195 275 210 275 275 275				
1.9	5780	881	4490	2.4						
0.98	12400	1733	4010	1.10				R 87R57 DRS 71S4 RF 87R57 DRS 71S4 RM 87R57 DRS 71S4	190 275 210 275 275 275	
1.1	11300	1489	4170	1.20						
1.2	10500	1395	4270	1.30						
1.4	9190	1232	4420	1.50						
1.5	8470	1145	4490	1.60						
1.6	7570	1037	4490	1.80						
1.8	6690	931	4490	2.0						
2.1	5630	802	4490	2.4						
2.2	5240	754	4490	2.6						
0.98	12600	1737	3980	1.10	R 87R57 DRS 71S4 RF 87R57 DRS 71S4 RM 87R57 DRS 71S4	195 275 210 275 275 275				
1.1	11100	1524	4200	1.25						
1.3	9060	1303	4440	1.50						
1.5	7950	1143	4490	1.70						
1.7	6690	1008	4490	2.0						
1.9	6460	885	4490	2.1						
2.2	5660	776	4490	2.4						
2.5	5000	685	4490	2.7						
1.9	6990	915	2290	1.05	R 77R37 DRS 71S4 RF 77R37 DRS 71S4 RM 77R37 DRS 71S4	105 275 120 275 175 275				
2.0	6520	858	2390	1.10						
2.2	5690	757	2540	1.25						
2.5	4980	671	2640	1.45						
3.0	4160	571	2740	1.75						

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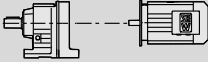




P_m [HP]	n_a [rpm]	T_a [lb-in]	i	$F_{Ra}^{1)}$ [lb]	SEW f_B		m [lbs]				
0.25	1.8	7260	940	2230	1.00						
	2.1	5820	821	2520	1.25						
	2.3	5290	731	2600	1.35						
	2.6	5020	646	2640	1.45	R	77R37	DRS	71S4	110	275
	3.0	4350	560	2720	1.65	RF	77R37	DRS	71S4	120	275
	3.5	3660	488	2790	2.00	RM	77R37	DRS	71S4	175	275
	3.9	3230	436	2830	2.2						
	4.6	2800	373	2870	2.6						
	5.2	2450	327	2890	3.0						
	3.3	4130	520	2750	1.75	R	77R37	DRS	71S4	105	275
	3.8	3540	451	2810	2.0	RF	77R37	DRS	71S4	120	275
	4.0	3290	422	2830	2.2	RM	77R37	DRS	71S4	175	275
	4.7	2820	365	2870	2.6						
	2.6	4840	644	1830	1.10	R	67R37	DRS	71S4	94	275
	3.0	4240	571	1970	1.25	RF	67R37	DRS	71S4	100	275
	3.5	3540	486	2100	1.50	RM	67R37	DRS	71S4	135	275
	2.6	4850	646	1830	1.10						
	3.0	4390	574	1940	1.20						
	3.4	3780	495	2060	1.40	R	67R37	DRS	71S4	96	275
	3.9	3170	438	2150	1.65	RF	67R37	DRS	71S4	105	275
	4.4	2800	388	2200	1.90	RM	67R37	DRS	71S4	140	275
	4.9	2620	344	2220	2.0						
	5.8	2080	294	2280	2.6						
	6.5	1930	261	2290	2.7						
	3.8	3520	443	2100	1.50						
4.4	3010	384	2180	1.75	R	67R37	DRS	71S4	94	275	
4.7	2800	359	2200	1.90	RF	67R37	DRS	71S4	100	275	
5.5	2400	310	2250	2.2	RM	67R37	DRS	71S4	135	275	
6.4	2000	264	2290	2.6							
7.2	1760	235	2300	3.0							
3.2	3960	534	1600	1.00	R	57R37	DRS	71S4	80	275	
3.7	3310	454	1660	1.20	RF	57R37	DRS	71S4	87	275	
4.2	2990	410	1690	1.35	RM	57R37	DRS	71S4	115	275	
3.6	3590	471	1640	1.10							
4.8	2680	357	1710	1.50	R	57R37	DRS	71S4	81	275	
5.3	2370	319	1730	1.70	RF	57R37	DRS	71S4	89	275	
6.2	1980	273	1750	2.0	RM	57R37	DRS	71S4	115	275	
7.1	1700	241	1770	2.3							
7.9	1520	215	1770	2.6							
9.1	1360	187	1780	2.9							
4.7	2820	359	1700	1.40							
5.2	2540	324	1720	1.55							
5.9	2240	290	1740	1.75	R	57R37	DRS	71S4	79	275	
6.5	2020	262	1750	1.95	RF	57R37	DRS	71S4	87	275	
6.9	1870	246	1760	2.1	RM	57R37	DRS	71S4	115	275	
7.7	1650	220	1770	2.4							
9.0	1380	188	1780	2.9							
4.9	2430	344	1250	1.10	R	47R37	DRS	71S4	68	275	
					RF	47R37	DRS	71S4	69	275	
5.7	2320	301	1260	1.15							
6.7	1940	255	1300	1.35							
7.5	1710	228	1320	1.55							
8.7	1430	195	1340	1.85	R	47R37	DRS	71S4	68	275	
9.3	1330	182	1350	2.00	RF	47R37	DRS	71S4	69	275	
11	1100	154	1360	2.4							
13	990	129	1370	2.7							
7.5	1770	228	1110	1.00							
8.5	1530	199	1180	1.15							
9.9	1330	172	1230	1.30							
11	1150	150	1260	1.55	R	37R17	DRS	71S4	43	275	
13	970	130	1290	1.80	RF	37R17	DRS	71S4	46	275	
14	910	124	1300	1.95							
15	810	110	1320	2.2							
18	690	94	1330	2.6							

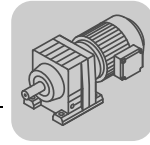
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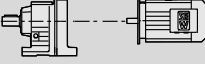




R..DRE/DRS
R..DRE/DRS [HP]

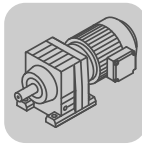
P_m [HP]	n_a [rpm]	T_a [lb-in]	i	$F_{Ra}^{1)}$ [lb]	SEW f_B		m [lbs]				
0.25	7.5	1720	226	1130	1.05						
	8.4	1570	202	1170	1.15						
	9.5	1370	179	1220	1.30						
	11	1160	156	1260	1.50	R	37R17	DRS	71S4	43	275
	13	1000	135	1290	1.75	RF	37R17	DRS	71S4	46	275
	13	1000	127	1290	1.75						
	16	800	104	1320	2.2						
	19	695	90	1330	2.5						
	12	1040	141	960	1.10						
	14	920	124	980	1.25	R	27R17	DRS	71S4	30	275
	15	820	110	980	1.40	RF	27R17	DRS	71S4	30	275
	18	690	94	990	1.65						
	13	1000	135	970	1.15						
	14	930	118	970	1.25	R	27R17	DRS	71S4	30	275
	16	800	104	980	1.40	RF	27R17	DRS	71S4	30	275
	19	695	90	990	1.65						
	8.5	1780	199.81	2300	3.0	R	67	DRS	71S4	71	256
						RF	67	DRS	71S4	78	257
						RM	67	DRS	71S4	115	257
	9.1	1670	186.89	1770	2.4	R	57	DRS	71S4	56	253
9.9	1540	172.17	1770	2.6	RF	57	DRS	71S4	64	254	
					RM	57	DRS	71S4	90	254	
9.6	1580	176.88	1330	1.70							
10	1450	162.94	1340	1.80							
12	1250	139.99	1350	2.1	R	47	DRS	71S4	45	250	
14	1090	121.87	1360	2.4	RF	47	DRS	71S4	45	251	
15	1020	114.17	1360	2.6							
17	900	100.86	1370	2.9							
13	1200	134.82	1250	1.45							
14	1100	123.66	1270	1.60							
16	940	105.28	1300	1.90	R	37	DRS	71S4	37	247	
19	810	90.77	1320	2.2	RF	37	DRS	71S4	40	248	
20	755	84.61	1320	2.3							
23	660	73.96	1330	2.7							
25	620	69.33	1340	2.8							
14	1100	123.91	960	1.05							
16	940	105.49	970	1.20							
19	810	90.96	980	1.40							
20	755	84.78	990	1.50							
23	660	74.11	950	1.75	R	27	DRS	71S4	24	244	
24	620	69.47	940	1.85	RF	27	DRS	71S4	24	245	
28	545	61.30	910	2.1							
30	495	55.87	880	2.3							
35	430	48.17	840	2.7							
38	400	44.90	830	2.9							
21	725	81.64	430	1.05							
24	625	70.39	560	1.20							
26	585	65.61	560	1.30							
30	510	57.35	540	1.45							
32	480	53.76	535	1.55	R	17	DRS	71S4	22	241	
36	420	47.44	520	1.75	RF	17	DRS	71S4	22	242	
38	395	44.18	510	1.90							
44	345	38.61	495	2.2							
47	320	36.20	485	2.3							
53	285	31.94	470	2.6							
60	250	28.32	455	3.0							
36	425	47.78	305	1.05							
38	395	44.16	305	1.10							
41	365	41.31	300	1.20							
42	360	40.34	300	1.25							
44	340	38.51	295	1.30	R	07	DRS	71S4	20	238	
50	300	34.05	290	1.45	RF	07	DRS	71S4	20	239	
58	260	29.08	280	1.70							
63	240	26.97	275	1.85							
73	205	23.32	265	2.1							
78	195	21.73	260	2.3							

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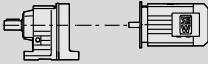




P_m [HP]	n_a [rpm]	T_a [lb-in]	i	$F_{Ra}^{1)}$ [lb]	SEW f_B		m [lbs]					
0.25	37	410	29.08	305	1.05							
	40	380	26.97	300	1.15	R	07	DR	63L6	16	238	**
	46	330	23.32	295	1.35	RF	07	DR	63L6	16	239	**
	49	305	21.73	290	1.45							
	42	355	78.24	300	1.25							
	46	325	71.47	295	1.35							
	55	275	60.32	285	1.60							
	64	235	51.52	275	1.85							
	69	215	47.78	270	2.0	R	07	DR	63S2	14	238	**
	75	200	44.16	265	2.2	RF	07	DR	63S2	14	239	**
	80	189	41.31	260	2.3							
	82	185	40.34	260	2.4							
	86	176	38.51	255	2.5							
	98	156	34.05	250	2.8							
	93	164	18.31	250	2.7	R	07	DRS	71S4	19	238	**
	102	150	16.73	245	3.0	RF	07	DRS	71S4	19	239	**
	58	260	18.31	280	1.70							
	64	235	16.73	275	1.85	R	07	DR	63L6	15	238	**
76	200	14.12	265	2.2	RF	07	DR	63L6	15	239	**	
89	172	12.06	255	2.6								
96	159	11.18	250	2.8								
0.33	0.26	62600	6447	16000	1.85	R	147R77	DRS	71S4	930	275	
	0.31	54000	5568	16200	2.1	RF	147R77	DRS	71S4	950	275	
	0.35	49300	4926	16300	2.3	RM	147R77	DRS	71S4	1320	275	
	0.39	42300	4325	16400	2.7							
	0.26	66500	6559	12200	1.05							
	0.29	55300	5834	12700	1.30							
	0.33	51900	5116	12900	1.35	R	137R77	DRS	71S4	640	275	
	0.38	43300	4464	13200	1.65	RF	137R77	DRS	71S4	690	275	
	0.43	38100	3928	13300	1.85	RM	137R77	DRS	71S4	940	275	
	0.49	32100	3454	13400	2.2							
	0.57	27100	2993	13600	2.6							
	0.36	48800	4709	13000	1.45							
	0.42	41600	4018	13200	1.70	R	137R77	DRS	71S4	620	275	
	0.48	36400	3514	13300	1.95	RF	137R77	DRS	71S4	670	275	
	0.51	34600	3338	13400	2.0	RM	137R77	DRS	71S4	920	275	
	0.58	30300	2929	13500	2.3							
	0.68	25500	2484	13600	2.8							
	0.64	27300	2658	13500	2.6	R	137R77	DRS	71S4	640	275	
	0.70	24700	2412	13600	2.9	RF	137R77	DRS	71S4	690	275	
						RM	137R77	DRS	71S4	940	275	
	0.44	38100	3896	6600	1.00	R	107R77	DRS	71S4	450	275	
	0.50	31900	3432	7350	1.20	RF	107R77	DRS	71S4	465	275	
	0.56	30800	3039	7470	1.25	RM	107R77	DRS	71S4	660	275	
	0.63	24300	2688	8020	1.55							
	0.51	34600	3343	7050	1.10							
	0.56	31400	3034	7410	1.20	R	107R77	DRS	71S4	435	275	
	0.64	27400	2653	7770	1.40	RF	107R77	DRS	71S4	450	275	
	0.75	23600	2280	8070	1.60	RM	107R77	DRS	71S4	640	275	
	0.82	21200	2067	8160	1.80							
	1.0	17100	1693	8280	2.2							
	1.1	15200	1550	8330	2.5							
	1.2	13800	1407	8360	2.8							
	0.86	20100	1987	8190	1.90	R	107R77	DRS	71S4	450	275	
	0.93	17900	1827	8260	2.1	RF	107R77	DRS	71S4	460	275	
	1.1	15300	1599	8320	2.5	RM	107R77	DRS	71S4	660	275	
	1.2	13700	1400	8360	2.8							
0.76	23700	2245	5180	1.10								
0.84	21100	2016	5540	1.25								
0.98	18800	1733	5810	1.40								
1.0	17500	1623	5940	1.50	R	97R57	DRS	71S4	280	275		
1.2	15300	1434	6130	1.70	RF	97R57	DRS	71S4	320	275		
1.4	12700	1207	6230	2.1	RM	97R57	DRS	71S4	430	275		
1.6	11300	1084	6280	2.3								
1.8	9610	934	6320	2.8								
1.9	8980	878	6340	3.0								

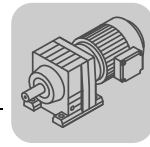
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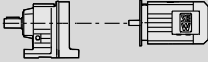



R..DRE/DRS
R..DRE/DRS [HP]

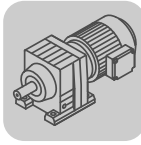
P_m [HP]	n_a [rpm]	T_a [lb-in]	i	$F_{Ra}^{1)}$ [lb]	SEW f_B		m [lbs]				
0.33	0.74	25000	2311	4970	1.05						
	0.82	22500	2078	5360	1.20						
	0.93	19500	1823	5730	1.35						
	1.1	16900	1583	6000	1.55	R	97R57	DRS	71S4	285	275
	1.2	14600	1396	6160	1.80	RF	97R57	DRS	71S4	325	275
	1.4	12600	1228	6230	2.1	RM	97R57	DRS	71S4	435	275
	1.6	11500	1069	6270	2.3						
	1.8	10000	938	6310	2.6						
	1.7	9730	994	4360	1.40	R	87R57	DRS	71S4	195	275
	1.9	8630	881	4480	1.60	RF	87R57	DRS	71S4	210	275
						RM	87R57	DRS	71S4	275	275
	1.4	13200	1232	3890	1.05						
	1.5	12200	1145	4050	1.10						
	1.6	10900	1037	4220	1.25						
	1.8	9750	931	4360	1.40	R	87R57	DRS	71S4	190	275
	2.1	8260	802	4490	1.65	RF	87R57	DRS	71S4	210	275
	2.2	7720	754	4490	1.80	RM	87R57	DRS	71S4	275	275
	2.6	6520	649	4490	2.1						
	2.9	5750	580	4490	2.4						
	1.3	13300	1303	3870	1.05						
	1.5	11600	1143	4120	1.15						
	1.7	9990	1008	4340	1.35						
	1.9	9360	885	4400	1.45	R	87R57	DRS	71S4	195	275
	2.2	8210	776	4490	1.65	RF	87R57	DRS	71S4	210	275
	2.5	7240	685	4490	1.90	RM	87R57	DRS	71S4	275	275
	2.8	6010	599	4490	2.3						
	3.2	5270	525	4490	2.6						
	3.7	4660	456	4490	2.9						
	3.2	5890	538	4490	2.3	R	87R57	DRS	71S4	190	275
	3.6	5120	472	4490	2.7	RF	87R57	DRS	71S4	205	275
						RM	87R57	DRS	71S4	270	275
	2.5	7180	671	2250	1.00	R	77R37	DRS	71S4	105	275
	3.0	6030	571	2480	1.20	RF	77R37	DRS	71S4	120	275
						RM	77R37	DRS	71S4	175	275
	2.6	7130	646	2260	1.00						
	3.0	6180	560	2450	1.15						
	3.5	5260	488	2600	1.40						
	3.9	4660	436	2680	1.55	R	77R37	DRS	71S4	110	275
	4.6	4020	373	2760	1.80	RF	77R37	DRS	71S4	120	275
	5.2	3520	327	2810	2.1	RM	77R37	DRS	71S4	175	275
	5.9	3140	289	2840	2.3						
	6.6	2800	260	2870	2.6						
	3.3	5860	520	2510	1.25						
	3.8	5040	451	2630	1.45						
	4.0	4690	422	2680	1.55	R	77R37	DRS	71S4	105	275
	4.7	4030	365	2760	1.80	RF	77R37	DRS	71S4	120	275
	5.5	3380	310	2820	2.1	RM	77R37	DRS	71S4	175	275
	6.2	2990	276	2850	2.4						
	7.2	2520	236	2880	2.9						
	3.5	5130	486	1750	1.05	R	67R37	DRS	71S4	94	275
						RF	67R37	DRS	71S4	100	275
						RM	67R37	DRS	71S4	135	275
	3.9	4600	438	1890	1.15						
	4.4	4080	388	2000	1.30						
	4.9	3750	344	2060	1.40						
	5.8	3040	294	2170	1.75	R	67R37	DRS	71S4	96	275
	6.5	2790	261	2200	1.90	RF	67R37	DRS	71S4	105	275
	7.3	2500	234	2240	2.1	RM	67R37	DRS	71S4	140	275
	8.5	2110	200	2280	2.5						
	9.7	1820	176	2300	2.9						
	3.8	4980	443	1790	1.05						
	4.4	4290	384	1960	1.25						
	4.7	3990	359	2020	1.35						
	5.5	3420	310	2120	1.55	R	67R37	DRS	71S4	94	275
	6.4	2870	264	2190	1.85	RF	67R37	DRS	71S4	100	275
	7.2	2540	235	2230	2.1	RM	67R37	DRS	71S4	135	275
	8.5	2150	201	2270	2.5						
	9.4	1940	181	2290	2.7						

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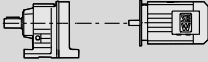




P_m [HP]	n_a [rpm]	T_a [lb-in]	i	$F_{Ra}^{1)}$ [lb]	SEW f_B		m [lbs]		
0.33	4.8	3850	357	1610	1.05				
	5.3	3410	319	1650	1.15				
	6.2	2880	273	1700	1.40				
	7.1	2490	241	1730	1.60	R	57R37	DRS 71S4	81 275
	7.9	2220	215	1740	1.80	RF	57R37	DRS 71S4	89 275
	9.1	1970	187	1750	2.0	RM	57R37	DRS 71S4	115 275
	10	1700	164	1770	2.3				
	12	1490	142	1780	2.7				
	5.2	3620	324	1630	1.10				
	5.9	3200	290	1670	1.25				
	6.5	2890	262	1700	1.40				
	6.9	2690	246	1710	1.50	R	57R37	DRS 71S4	79 275
	7.7	2380	220	1730	1.65	RF	57R37	DRS 71S4	87 275
	9.0	2010	188	1750	2.00	RM	57R37	DRS 71S4	115 275
	11	1690	159	1770	2.4				
	12	1610	146	1770	2.5				
	13	1400	134	1780	2.8				
	7.5	2470	228	1240	1.05				
	8.7	2080	195	1290	1.25				
	9.3	1940	182	1300	1.35				
	11	1610	154	1330	1.65	R	47R37	DRS 71S4	68 275
13	1420	129	1340	1.85	RF	47R37	DRS 71S4	69 275	
16	1190	109	1360	2.2					
17	1050	98	1360	2.5					
11	1650	150	1150	1.05					
13	1390	130	1210	1.25	R	37R17	DRS 71S4	43 275	
14	1320	124	1230	1.35	RF	37R17	DRS 71S4	46 275	
15	1170	110	1260	1.50					
18	990	94	1290	1.75					
11	1680	156	1140	1.05					
13	1450	135	1200	1.20	R	37R17	DRS 71S4	43 275	
13	1420	127	1210	1.25	RF	37R17	DRS 71S4	46 275	
16	1150	104	1260	1.55					
19	990	90	1290	1.80					
18	1000	94	970	1.15	R	27R17	DRS 71S4	30 275	
					RF	27R17	DRS 71S4	30 275	
16	1150	104	950	1.00	R	27R17	DRS 71S4	30 275	
19	990	90	970	1.15	RF	27R17	DRS 71S4	30 275	
5.6	3740	195.24*	2790	1.95	R	77	DRS 71S6	87 259	
6.6	3190	166.59	2840	2.3	RF	77	DRS 71S6	99 260	
7.6	2790	145.67	2870	2.6	RM	77	DRS 71S6	155 260	
8.0	2650	138.39	2880	2.7					
8.7	2420	195.24*	2890	3.0	R	77	DRS 71S4	87 259	
					RF	77	DRS 71S4	99 260	
					RM	77	DRS 71S4	155 260	
5.5	3830	199.81	2050	1.40					
6.0	3530	184.07	2100	1.50					
7.0	3030	158.14	2170	1.75					
8.0	2640	137.67	2220	2.0	R	67	DRS 71S6	71 256	
8.5	2470	128.97	2240	2.1	RF	67	DRS 71S6	78 257	
9.6	2180	113.94	2270	2.4	RM	67	DRS 71S6	115 257	
10	2030	105.83	2280	2.6					
11	1840	95.91	2300	2.9					
8.5	2480	199.81	2240	2.1	R	67	DRS 71S4	71 256	
9.2	2280	184.07	2260	2.3	RF	67	DRS 71S4	78 257	
11	1960	158.14	2290	2.7	RM	67	DRS 71S4	115 257	
5.9	3580	186.89	1640	1.10					
6.4	3300	172.17	1660	1.20					
7.4	2840	147.92	1700	1.40					
8.5	2470	128.77	1730	1.60					
9.1	2310	120.63	1740	1.70	R	57	DRS 71S6	56 253	
10	2040	106.58	1750	1.95	RF	57	DRS 71S6	64 254	
11	1900	98.99	1760	2.1	RM	57	DRS 71S6	90 254	
12	1720	89.71	1770	2.3					
14	1540	80.55	1770	2.6					
16	1320	69.23	1780	3.0					

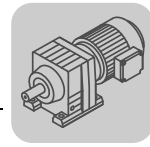
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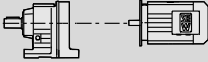



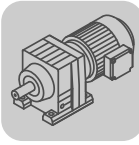
R..DRE/DRS
R..DRE/DRS [HP]

P_m [HP]	n_a [rpm]	T_a [lb-in]	i	$F_{Ra}^{1)}$ [lb]	SEW f_B		m [lbs]				
0.33	9.1	2320	186.89	1740	1.70						
	9.9	2130	172.17	1750	1.85	R	57	DRS	71S4	56	253
	11	1830	147.92	1760	2.2	RF	57	DRS	71S4	64	254
	13	1590	128.77	1770	2.5	RM	57	DRS	71S4	90	254
	14	1490	120.63	1780	2.7						
	9.0	2340	121.87	1260	1.15						
	9.6	2190	114.17	1270	1.20						
	11	1930	100.86	1300	1.35						
	12	1790	93.68	1310	1.50						
	13	1630	84.90	1330	1.65	R	47	DRS	71S6	45	250
	14	1460	76.23	1340	1.80	RF	47	DRS	71S6	45	251
	16	1310	68.54	1350	2.0						
	17	1230	64.21	1350	2.2						
	19	1080	56.73	1360	2.4						
21	1010	52.69	1360	2.6							
23	910	47.75	1370	2.9							
9.6	2190	176.88	1270	1.20							
10	2020	162.94	1290	1.30							
12	1730	139.99	1320	1.55							
14	1510	121.87	1340	1.75	R	47	DRS	71S4	45	250	
15	1410	114.17	1340	1.85	RF	47	DRS	71S4	45	251	
17	1250	100.86	1350	2.1							
18	1160	93.68	1360	2.3							
20	1050	84.90	1360	2.5							
22	940	76.23	1370	2.8							
12	1740	90.77	1120	1.00							
13	1620	84.61	1160	1.10							
15	1420	73.96	1210	1.25							
16	1330	69.33	1230	1.35							
18	1170	61.18	1260	1.50	R	37	DRS	71S6	37	247	
20	1070	55.76	1280	1.65	RF	37	DRS	71S6	40	248	
23	920	48.08	1300	1.90							
25	860	44.81	1310	2.1							
28	750	39.17	1310	2.4							
30	705	36.72	1280	2.5							
34	620	32.40	1240	2.8							
13	1670	134.82	1140	1.05							
14	1530	123.66	1180	1.15							
16	1300	105.28	1230	1.35							
19	1120	90.77	1270	1.55							
20	1050	84.61	1280	1.70	R	37	DRS	71S4	37	247	
23	910	73.96	1300	1.90	RF	37	DRS	71S4	40	248	
25	860	69.33	1310	2.0							
28	760	61.18	1310	2.3							
30	690	55.76	1270	2.6							
35	595	48.08	1220	3.0							
20	1070	55.87	960	1.05							
23	920	48.17	920	1.25							
24	860	44.90	910	1.35							
28	750	39.25	880	1.55	R	27	DRS	71S6	24	244	
30	705	36.79	860	1.65	RF	27	DRS	71S6	24	245	
34	620	32.47	830	1.85							
38	550	28.78	810	2.1							
45	465	24.47	770	2.4							
19	1120	90.96	950	1.00							
20	1050	84.78	950	1.10							
23	920	74.11	920	1.25							
24	860	69.47	910	1.35							
28	760	61.30	880	1.50	R	27	DRS	71S4	24	244	
30	690	55.87	860	1.65	RF	27	DRS	71S4	24	245	
35	595	48.17	820	1.90							
38	555	44.90	810	2.1							
43	485	39.25	780	2.4							
46	455	36.79	765	2.5							
52	400	32.47	740	2.8							
39	545	28.37	800	2.1	R	27	DRS	71S6	24	244	
42	500	26.09	785	2.3	RF	27	DRS	71S6	23	245	
49	425	22.32	750	2.7							

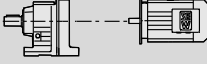


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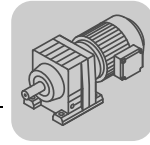
P_m [HP]	n_a [rpm]	T_a [lb-in]	i	$F_{Ra}^{1)}$ [lb]	SEW f_B		m [lbs]		
0.33	28	740	38.61	415	1.00				
	30	695	36.20	480	1.10	R	17	DRS 71S6	22 241
	34	610	31.94	495	1.25	RF	17	DRS 71S6	22 242
	39	540	28.32	480	1.40				
	46	460	24.07	465	1.65				
	30	710	57.35	455	1.05				
	32	665	53.76	500	1.15				
	36	585	47.44	490	1.30				
	38	545	44.18	485	1.35				
	44	475	38.61	470	1.55	R	17	DRS 71S4	22 241
	47	445	36.20	465	1.65	RF	17	DRS 71S4	22 242
	53	395	31.94	450	1.90				
	60	350	28.32	440	2.1				
	71	295	24.07	420	2.5				
	44	480	25.23	470	1.55				
	48	440	23.15	460	1.70				
	56	375	19.71	445	2.00	R	17	DRS 71S6	22 241
	65	325	16.99	430	2.3	RF	17	DRS 71S6	21 242
	69	300	15.84	425	2.5				
	79	265	13.84	410	2.8				
	67	310	25.23	425	2.4	R	17	DRS 71S4	22 241
	73	285	23.15	420	2.6	RF	17	DRS 71S4	21 242
	51	415	21.73	265	1.05	R	07	DRS 71S6	20 238 **
						RF	07	DRS 71S6	20 239
	50	420	34.05	265	1.05				
	58	360	29.08	260	1.25	R	07	DRS 71S4	20 238 **
	63	335	26.97	255	1.30	RF	07	DRS 71S4	20 239
	73	285	23.32	250	1.55				
	78	265	21.73	250	1.65				
	54	390	60.32	265	1.15				
63	330	51.52	255	1.35					
68	305	47.78	255	1.45					
74	285	44.16	250	1.55					
79	265	41.31	245	1.65					
81	260	40.34	245	1.70	R	07	DR 63M2	14 238 **	
85	245	38.51	245	1.75	RF	07	DR 63M2	14 239	
96	220	34.05	240	2.0					
112	188	29.08	230	2.4					
121	174	26.97	225	2.5					
140	151	23.32	220	2.9					
60	350	18.31	260	1.25					
66	320	16.73	255	1.40					
78	270	14.12	250	1.65					
91	230	12.06	240	1.90					
98	215	11.18	235	2.1	R	07	DRS 71S6	19 238 **	
114	186	9.67	230	2.4	RF	07	DRS 71S6	19 239	
122	173	9.01	225	2.6					
140	150	7.85	220	2.9					
147	143	7.48	215	2.6					
161	131	6.83	210	2.9					
93	225	18.31	240	1.95					
102	205	16.73	235	2.1	R	07	DRS 71S4	19 238 **	
120	175	14.12	225	2.5	RF	07	DRS 71S4	19 239	
141	150	12.06	215	3.0					
0.50	0.26	98300	6447	14800	1.15				
	0.31	84900	5568	15400	1.35				
	0.35	76600	4926	15600	1.50	R	147R77	DRS 71S4	930 275
	0.39	66300	4325	15900	1.75	RF	147R77	DRS 71S4	950 275
	0.45	58400	3754	16100	1.95	RM	147R77	DRS 71S4	1320 275
	0.51	50600	3302	16300	2.3				
	0.59	44200	2898	16400	2.6				
	0.67	40500	2555	16500	2.8	R	147R77	DRS 71S4	930 275
						RF	147R77	DRS 71S4	950 275
						RM	147R77	DRS 71S4	1320 275
	0.38	68100	4464	12100	1.05	R	137R77	DRS 71S4	640 275
	0.43	59900	3928	12500	1.20	RF	137R77	DRS 71S4	690 275
0.49	51300	3454	12900	1.40	RM	137R77	DRS 71S4	940 275	
0.57	43700	2993	13100	1.60					

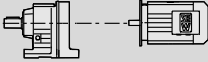



R..DRE/DRS
R..DRE/DRS [HP]

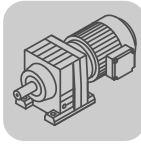
P_m [HP]	n_a [rpm]	T_a [lb-in]	i	$F_{Ra}^{1)}$ [lb]	SEW f_B		m [lbs]				
0.50	0.42	64200	4018	12300	1.10						
	0.48	56100	3514	12700	1.25						
	0.51	53300	3338	12800	1.35						
	0.58	46800	2929	13000	1.50	R	137R77	DRS	71S4	620	275
	0.68	39400	2484	13300	1.80	RF	137R77	DRS	71S4	670	275
	0.76	35300	2242	13400	2.0	RM	137R77	DRS	71S4	920	275
	0.91	28700	1863	13500	2.5						
	1.1	24100	1586	13600	2.9						
	0.64	42200	2658	13200	1.70						
	0.70	38300	2412	13300	1.85	R	137R77	DRS	71S4	640	275
0.82	32900	2073	13400	2.2	RF	137R77	DRS	71S4	690	275	
0.92	28400	1839	13500	2.5	RM	137R77	DRS	71S4	940	275	
1.1	24000	1598	13600	2.9							
0.75	36400	2280	6840	1.05							
0.82	32800	2067	7260	1.15							
1.0	26600	1693	7840	1.45							
1.1	23900	1550	8050	1.60	R	107R77	DRS	71S4	435	275	
1.2	21700	1407	8140	1.75	RF	107R77	DRS	71S4	450	275	
1.4	18600	1209	8240	2.0	RM	107R77	DRS	71S4	640	275	
1.6	16300	1055	8300	2.3							
1.8	14200	919	8350	2.7							
2.1	12800	815	8380	3.0							
0.86	31200	1987	7420	1.20							
0.93	28200	1827	7710	1.35							
1.1	24300	1599	8020	1.55	R	107R77	DRS	71S4	450	275	
1.2	21600	1400	8140	1.75	RF	107R77	DRS	71S4	460	275	
1.4	18600	1226	8240	2.0	RM	107R77	DRS	71S4	660	275	
1.5	16600	1104	8290	2.3							
1.8	14500	939	8340	2.6							
1.2	23400	1434	5220	1.15							
1.4	19500	1207	5730	1.35	R	97R57	DRS	71S4	280	275	
1.6	17400	1084	5960	1.50	RF	97R57	DRS	71S4	320	275	
1.8	14800	934	6150	1.80	RM	97R57	DRS	71S4	430	275	
1.9	13900	878	6190	1.90							
2.2	11800	755	6260	2.2							
1.1	25800	1583	4820	1.05							
1.2	22400	1396	5370	1.20							
1.4	19500	1228	5730	1.35	R	97R57	DRS	71S4	285	275	
1.6	17500	1069	5940	1.50	RF	97R57	DRS	71S4	325	275	
1.8	15300	938	6130	1.75	RM	97R57	DRS	71S4	435	275	
2.1	13100	824	6220	2.0							
2.3	11700	737	6260	2.3							
2.7	10000	632	6310	2.6							
2.7	10400	625	6300	2.6	R	97R57	DRS	71S4	280	275	
3.1	9080	549	6340	2.9	RF	97R57	DRS	71S4	315	275	
					RM	97R57	DRS	71S4	430	275	
1.9	13500	881	3840	1.00	R	87R57	DRS	71S4	195	275	
					RF	87R57	DRS	71S4	210	275	
					RM	87R57	DRS	71S4	275	275	
2.1	12700	802	3960	1.05	R	87R57	DRS	71S4	190	275	
2.2	11900	754	4090	1.15	RF	87R57	DRS	71S4	210	275	
2.6	10100	649	4320	1.35	RM	87R57	DRS	71S4	275	275	
2.9	9000	580	4440	1.50							
2.2	12500	776	3990	1.10							
2.5	11000	685	4200	1.25							
2.8	9370	599	4400	1.45	R	87R57	DRS	71S4	195	275	
3.2	8220	525	4490	1.65	RF	87R57	DRS	71S4	210	275	
3.7	7210	456	4490	1.90	RM	87R57	DRS	71S4	275	275	
4.3	6170	398	4490	2.2							
4.8	5470	352	4490	2.5							
5.6	4680	305	4490	2.9							
3.2	8950	538	4450	1.55							
3.6	7800	472	4490	1.75	R	87R57	DRS	71S4	190	275	
4.2	6550	400	4490	2.1	RF	87R57	DRS	71S4	205	275	
4.7	5870	361	4490	2.3	RM	87R57	DRS	71S4	270	275	
5.7	4810	300	4490	2.8							

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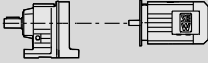
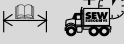


P_m [HP]	n_a [rpm]	T_a [lb-in]	i	$F_{Ra}^{1)}$ [lb]	SEW f_B		m [lbs]		
0.50	3.9	7110	436	2260	1.00				
	4.6	6110	373	2470	1.20				
	5.2	5360	327	2590	1.35				
	5.9	4760	289	2670	1.50	R	77R37	DRS 71S4	110 275
	6.6	4250	260	2730	1.70	RF	77R37	DRS 71S4	120 275
	7.6	3580	224	2800	2.0	RM	77R37	DRS 71S4	175 275
	8.6	3140	197	2840	2.3				
	10	2760	169	2870	2.6				
	4.0	7090	422	2270	1.00				
	4.7	6100	365	2470	1.20				
	5.5	5140	310	2620	1.40	R	77R37	DRS 71S4	105 275
	6.2	4560	276	2700	1.60	RF	77R37	DRS 71S4	120 275
	7.2	3870	236	2770	1.85	RM	77R37	DRS 71S4	175 275
	7.7	3610	221	2800	2.0				
	9.1	3010	186	2850	2.4				
	5.8	4690	294	1870	1.15				
	6.5	4250	261	1960	1.25				
	7.3	3820	234	2050	1.40	R	67R37	DRS 71S4	96 275
	8.5	3230	200	2140	1.65	RF	67R37	DRS 71S4	105 275
	9.7	2800	176	2200	1.90	RM	67R37	DRS 71S4	140 275
	11	2520	158	2240	2.1				
	5.5	5190	310	1730	1.00				
	6.4	4370	264	1940	1.20				
	7.2	3880	235	2040	1.35	R	67R37	DRS 71S4	94 275
	8.5	3290	201	2140	1.60	RF	67R37	DRS 71S4	100 275
	9.4	2970	181	2180	1.80	RM	67R37	DRS 71S4	135 275
	11	2560	159	2230	2.1				
	7.1	3840	241	1610	1.05				
7.9	3430	215	1650	1.15	R	57R37	DRS 71S4	81 275	
9.1	3020	187	1690	1.30	RF	57R37	DRS 71S4	89 275	
10	2620	164	1720	1.50	RM	57R37	DRS 71S4	115 275	
12	2280	142	1740	1.75					
7.7	3630	220	1630	1.10					
9.0	3070	188	1680	1.30	R	57R37	DRS 71S4	79 275	
11	2590	159	1720	1.55	RF	57R37	DRS 71S4	87 275	
12	2440	146	1730	1.65	RM	57R37	DRS 71S4	115 275	
13	2160	134	1740	1.85					
11	2480	154	1240	1.05					
13	2150	129	1280	1.25	R	47R37	DRS 71S4	68 275	
16	1810	109	1310	1.45	RF	47R37	DRS 71S4	69 275	
17	1600	98	1330	1.65					
18	1520	94	1180	1.15	R	37R17	DRS 71S4	43 275	
					RF	37R17	DRS 71S4	46 275	
16	1740	104	1120	1.00	R	37R17	DRS 71S4	43 275	
19	1500	90	1190	1.15	RF	37R17	DRS 71S4	46 275	
4.5	7000	246.54	4490	1.95					
5.1	6150	216.54	4490	2.2	R	87	DRS 71M6	150 262	
5.4	5840	205.71	4490	2.4	RF	87	DRS 71M6	165 263	
6.0	5160	181.77	4490	2.7	RM	87	DRS 71M6	230 263	
5.6	5540	195.24*	2560	1.30					
6.6	4730	166.59	2680	1.55					
7.6	4130	145.67	2750	1.75	R	77	DRS 71M6	90 259	
8.0	3930	138.39	2770	1.85	RF	77	DRS 71M6	100 260	
9.1	3450	121.42	2810	2.1	RM	77	DRS 71M6	155 260	
11	2920	102.99	2860	2.5					
12	2640	92.97	2880	2.8					
8.7	3590	195.24*	2800	2.0	R	77	DRS 71S4	87 259	
10	3060	166.59	2850	2.4	RF	77	DRS 71S4	99 260	
12	2670	145.67	2880	2.7	RM	77	DRS 71S4	155 260	
12	2540	138.39	2880	2.8					

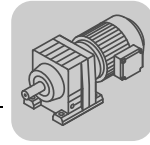
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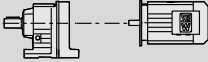



R..DRE/DRS
R..DRE/DRS [HP]

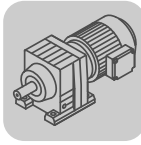
P_m [HP]	n_a [rpm]	T_a [lb-in]	i	$F_{Ra}^{1)}$ [lb]	SEW f_B		m [lbs]		
0.50	6.0	5230	184.07	1720	1.00				
	7.0	4490	158.14	1910	1.20				
	8.0	3910	137.67	2030	1.35				
	8.5	3660	128.97	2080	1.45				
	9.6	3230	113.94	2140	1.65				
	10	3000	105.83	2180	1.75				
	11	2720	95.91	2210	1.95				
	13	2440	86.11	2240	2.2				
	15	2100	74.17	2280	2.5				
	16	1980	69.75	2290	2.7				
	8.5	3670	199.81	2080	1.45				
	9.2	3380	184.07	2120	1.55				
	11	2900	158.14	2190	1.85	R 67	DRS 71M6	74	256
	12	2530	137.67	2230	2.1	RF 67	DRS 71M6	81	257
	13	2370	128.97	2250	2.2	RM 67	DRS 71M6	115	257
	15	2090	113.94	2280	2.5				
16	1940	105.83	2290	2.7					
8.5	3650	128.77	1630	1.10					
9.1	3420	120.63	1650	1.15					
10	3020	106.58	1690	1.30					
11	2810	98.99	1700	1.40					
12	2540	89.71	1720	1.55					
14	2280	80.55	1740	1.75	R 57	DRS 71M6	59	253	
16	1960	69.23	1760	2.0	RF 57	DRS 71M6	67	254	
17	1840	64.85	1760	2.2	RM 57	DRS 71M6	93	254	
19	1620	57.29	1770	2.4					
21	1510	53.22	1780	2.6					
23	1370	48.23	1770	2.9					
9.1	3430	186.89	1650	1.15					
9.9	3160	172.17	1680	1.25					
11	2710	147.92	1710	1.45					
13	2360	128.77	1730	1.70	R 57	DRS 71S4	56	253	
14	2210	120.63	1740	1.80	RF 57	DRS 71S4	64	254	
16	1950	106.58	1760	2.0	RM 57	DRS 71S4	90	254	
17	1820	98.99	1760	2.2					
19	1640	89.71	1770	2.4					
21	1480	80.55	1780	2.7					
12	2660	93.68	1220	1.00					
13	2410	84.90	1250	1.10					
14	2160	76.23	1280	1.20					
16	1940	68.54	1300	1.35					
17	1820	64.21	1310	1.45					
19	1610	56.73	1330	1.65	R 47	DRS 71M6	48	250	
21	1490	52.69	1340	1.75	RF 47	DRS 71M6	48	251	
23	1350	47.75	1350	1.95					
26	1210	42.87	1350	2.2					
30	1040	36.93	1300	2.5					
32	980	34.73	1280	2.7					
12	2570	139.99	1230	1.05					
14	2240	121.87	1270	1.20					
15	2090	114.17	1280	1.25					
17	1850	100.86	1310	1.45					
18	1720	93.68	1320	1.55					
20	1560	84.90	1330	1.70	R 47	DRS 71S4	45	250	
22	1400	76.23	1340	1.90	RF 47	DRS 71S4	45	251	
25	1260	68.54	1350	2.1					
26	1180	64.21	1340	2.2					
30	1040	56.73	1300	2.5					
32	960	52.69	1270	2.7					
33	960	33.79	1260	2.2	R 47	DRS 71M6	46	250	
35	880	31.12	1240	2.2	RF 47	DRS 71M6	47	251	
18	1730	61.18	1120	1.00					
20	1580	55.76	1170	1.10					
23	1360	48.08	1220	1.30					
25	1270	44.81	1240	1.40					
28	1110	39.17	1260	1.60	R 37	DRS 71M6	39	247	
30	1040	36.72	1240	1.70	RF 37	DRS 71M6	43	248	
34	920	32.40	1200	1.90					
38	810	28.73	1160	2.2					
45	690	24.42	1110	2.6					

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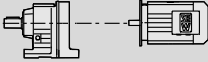




P_m [HP]	n_a [rpm]	T_a [lb-in]	i	$F_{Ra}^{1)}$ [lb]	SEW f_B		m [lbs]		
0.50	19	1660	90.77	1140	1.05				
	20	1550	84.61	1170	1.15				
	23	1350	73.96	1220	1.30				
	25	1270	69.33	1240	1.40				
	28	1120	61.18	1270	1.55				
	30	1020	55.76	1230	1.75	R	37	DRS 71S4	37 247
	35	880	48.08	1190	2.0	RF	37	DRS 71S4	40 248
	38	820	44.81	1160	2.2				
	43	720	39.17	1120	2.5				
	46	675	36.72	1100	2.6				
52	595	32.40	1060	3.0					
39	800	28.32	1160	2.2	R	37	DRS 71M6	39 247	
42	735	26.03	1130	2.2	RF	37	DRS 71M6	42 248	
49	630	22.27	1080	2.8					
28	1110	39.25	830	1.05					
30	1040	36.79	820	1.10					
34	920	32.47	795	1.25	R	27	DRS 71M6	27 244	
38	810	28.78	775	1.40	RF	27	DRS 71M6	26 245	
45	695	24.47	740	1.65					
28	1120	61.30	830	1.00					
30	1020	55.87	820	1.10					
35	880	48.17	790	1.30					
38	820	44.90	775	1.40					
43	720	39.25	750	1.60	R	27	DRS 71S4	24 244	
46	675	36.79	735	1.70	RF	27	DRS 71S4	24 245	
52	595	32.47	715	1.95					
59	525	28.78	690	2.2					
69	445	24.47	660	2.6					
39	800	28.37	770	1.45					
42	740	26.09	755	1.55					
49	630	22.32	725	1.80	R	27	DRS 71M6	26 244	
57	545	19.35	700	2.1	RF	27	DRS 71M6	26 245	
61	510	18.08	685	2.2					
70	440	15.63	660	2.6					
60	520	28.37	690	2.2					
65	475	26.09	675	2.4	R	27	DRS 71S4	24 244	
76	410	22.32	645	2.8	RF	27	DRS 71S4	23 245	
46	680	24.07	425	1.10	R	17	DRS 71M6	25 241	
					RF	17	DRS 71M6	25 242	
44	710	38.61	430	1.05					
47	665	36.20	425	1.15					
53	585	31.94	415	1.30	R	17	DRS 71S4	22 241	
60	520	28.32	410	1.45	RF	17	DRS 71S4	22 242	
71	440	24.07	395	1.70					
44	715	25.23	430	1.05					
48	655	23.15	425	1.15					
56	560	19.71	415	1.35					
65	480	16.99	400	1.55					
69	450	15.84	395	1.65					
79	390	13.84	385	1.90					
85	365	12.98	380	2.0	R	17	DRS 71M6	24 241	
96	325	11.45	370	2.2	RF	17	DRS 71M6	24 242	
108	285	10.15	360	2.4					
127	245	8.63	345	2.6					
146	210	7.55	325	2.3					
156	200	7.04	320	2.4					
179	175	6.15	310	2.7					
191	164	5.76	305	2.9					
67	460	25.23	400	1.60					
73	425	23.15	390	1.75					
86	360	19.71	380	2.1	R	17	DRS 71S4	22 241	
100	310	16.99	365	2.4	RF	17	DRS 71S4	21 242	
107	290	15.84	360	2.6					
123	250	13.84	350	3.0					
73	425	23.32	225	1.05	R	07	DRS 71S4	20 238	
78	395	21.73	225	1.10	RF	07	DRS 71S4	20 239	

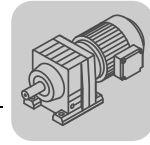
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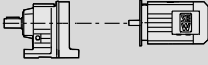
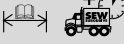


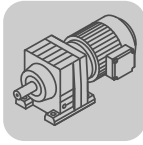
R..DRE/DRS
R..DRE/DRS [HP]

P_m [HP]	n_a [rpm]	T_a [lb-in]	i	$F_{Ra}^{1)}$ [lb]	SEW f_B					m [lbs]		
0.50	74	420	44.16	225	1.05	R RF	07 07	DR DR	63L2 63L2	16 16	238 239	**
	79	395	41.31	225	1.10							
	81	385	40.34	220	1.15							
	84	370	38.51	220	1.20							
	95	325	34.05	215	1.35							
	112	275	29.08	210	1.60							
	121	255	26.97	210	1.70							
	139	220	23.32	205	1.95							
	150	205	21.73	200	2.1							
	78	400	14.12	225	1.10							
	91	340	12.06	220	1.30							
	98	315	11.18	215	1.40							
	114	275	9.67	210	1.60							
	122	255	9.01	210	1.75							
	140	220	7.85	205	1.95							
147	210	7.48	205	1.80								
161	194	6.83	199	1.95								
191	164	5.76	192	2.2								
223	140	4.92	185	2.3								
241	130	4.57	182	2.4								
279	112	3.95	175	2.7								
299	104	3.68	172	2.8								
93	335	18.31	220	1.30								
102	305	16.73	215	1.45								
120	255	14.12	210	1.70								
141	220	12.06	205	2.00								
152	205	11.18	200	2.2								
176	178	9.67	194	2.5								
189	165	9.01	191	2.7								
227	137	7.48	184	2.8								
177	176	18.31	194	2.5								
194	161	16.73	190	2.8								
138	225	8.00*	1590	2.2								
147	210	7.47	1550	2.2								
181	173	6.07	1010	2.2								
200	157	5.50*	795	2.2								
217	144	5.07	775	2.2								
0.75	0.28	135400	6077	27000	1.20	R	167R97	DRS	71M4	1660	275	
	0.31	120500	5407	27000	1.30	RF	167R97	DRS	71M4	1680	275	
	0.36	102000	4650	27000	1.55	RM	167R97	DRS	71M4	2110	275	
	0.41	88300	4129	27000	1.80							
	0.64	61000	2657	27000	2.6	R	167R97	DRS	71M4	1660	275	
						RF	167R97	DRS	71M4	1670	275	
						RM	167R97	DRS	71M4	2100	275	
	0.39	103000	4325	14600	1.10	R	147R77	DRS	71M4	930	275	
	0.45	90200	3754	15200	1.30	RF	147R77	DRS	71M4	950	275	
	0.51	78600	3302	15600	1.45	RM	147R77	DRS	71M4	1320	275	
	0.58	68700	2898	15900	1.65							
	0.66	62400	2555	16000	1.85	R	147R77	DRS	71M4	930	275	
	0.76	54000	2211	16200	2.1	RF	147R77	DRS	71M4	950	275	
	0.87	47700	1951	16300	2.4	RM	147R77	DRS	71M4	1320	275	
	0.99	40500	1705	16500	2.8							
	0.56	69000	2993	12100	1.00	R	137R77	DRS	71M4	640	275	
						RF	137R77	DRS	71M4	700	275	
						RM	137R77	DRS	71M4	940	275	
	0.68	60700	2484	12500	1.15							
	0.75	54500	2242	12800	1.30	R	137R77	DRS	71M4	620	275	
	0.91	44700	1863	13100	1.60	RF	137R77	DRS	71M4	670	275	
1.1	37700	1586	13300	1.90	RM	137R77	DRS	71M4	920	275		
1.2	34000	1391	13400	2.1								
1.4	30500	1256	13500	2.3								
1.5	26600	1105	13600	2.7								
1.6	25000	1043	13600	2.8								

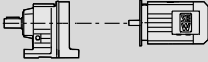

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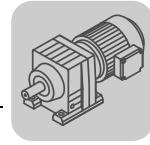
P_m [HP]	n_a [rpm]	T_a [lb-in]	i	$F_{Ra}^{1)}$ [lb]	SEW f_B		m [lbs]		
0.75	0.64	65000	2658	12300	1.10				
	0.70	59000	2412	12600	1.20				
	0.82	50700	2073	12900	1.40				
	0.92	44100	1839	13100	1.60	R	137R77	DRS 71M4	640 275
	1.1	37700	1598	13300	1.90	RF	137R77	DRS 71M4	690 275
	1.2	33900	1397	13400	2.1	RM	137R77	DRS 71M4	940 275
	1.4	29500	1226	13500	2.4				
	1.6	26500	1090	13600	2.7				
	1.1	37200	1550	6730	1.00				
	1.2	33700	1407	7150	1.15				
	1.4	29000	1209	7640	1.30	R	107R77	DRS 71M4	440 275
	1.6	25300	1055	7950	1.50	RF	107R77	DRS 71M4	455 275
	1.8	22100	919	8130	1.70	RM	107R77	DRS 71M4	650 275
	2.1	19800	815	8200	1.90				
	2.4	17200	717	8270	2.2				
	2.7	15000	626	8330	2.5				
1.1	38000	1599	6620	1.00					
1.2	33600	1400	7170	1.15					
1.4	29100	1226	7630	1.30	R	107R77	DRS 71M4	450 275	
1.5	26000	1104	7890	1.45	RF	107R77	DRS 71M4	465 275	
1.8	22500	939	8110	1.70	RM	107R77	DRS 71M4	660 275	
2.1	19500	822	8210	1.95					
1.8	22800	934	5310	1.15	R	97R57	DRS 71M4	285 275	
1.9	21400	878	5500	1.25	RF	97R57	DRS 71M4	320 275	
2.2	18300	755	5870	1.45	RM	97R57	DRS 71M4	435 275	
1.8	23300	938	5230	1.15					
2.0	20100	824	5660	1.30					
2.3	18000	737	5890	1.45	R	97R57	DRS 71M4	290 275	
2.7	15400	632	6130	1.70	RF	97R57	DRS 71M4	325 275	
3.0	13300	560	6210	2.00	RM	97R57	DRS 71M4	440 275	
3.5	11600	484	6270	2.3					
3.9	10600	431	6300	2.5					
4.5	9290	379	6330	2.9					
2.7	15800	625	6100	1.65					
3.1	13800	549	6190	1.90	R	97R57	DRS 71M4	280 275	
3.6	11600	466	6270	2.3	RF	97R57	DRS 71M4	320 275	
4.0	10400	420	6300	2.5	RM	97R57	DRS 71M4	435 275	
4.6	9160	370	6340	2.9					
3.2	12700	525	3970	1.10					
3.7	11100	456	4200	1.25					
4.2	9580	398	4380	1.45	R	87R57	DRS 71M4	195 275	
4.8	8490	352	4490	1.60	RF	87R57	DRS 71M4	210 275	
5.5	7290	305	4490	1.90	RM	87R57	DRS 71M4	275 275	
6.3	6480	268	4490	2.1					
7.2	5720	236	4490	2.4					
3.1	13600	538	3820	1.00					
3.6	11900	472	4090	1.15					
4.2	10000	400	4330	1.35	R	87R57	DRS 71M4	195 275	
4.7	9010	361	4440	1.50	RF	87R57	DRS 71M4	210 275	
5.6	7410	300	4490	1.85	RM	87R57	DRS 71M4	275 275	
6.6	6260	256	4490	2.2					
7.3	5660	232	4490	2.4					
8.7	4860	195	4490	2.8					
5.9	7240	289	2230	1.00					
6.5	6480	260	2400	1.10					
7.5	5500	224	2570	1.30	R	77R37	DRS 71M4	110 275	
8.6	4820	197	2660	1.50	RF	77R37	DRS 71M4	125 275	
10.0	4210	169	2740	1.70	RM	77R37	DRS 71M4	180 275	
11	3680	149	2790	1.95					
6.1	6960	276	2290	1.05					
7.2	5920	236	2500	1.25	R	77R37	DRS 71M4	110 275	
7.6	5530	221	2560	1.30	RF	77R37	DRS 71M4	120 275	
9.1	4630	186	2690	1.55	RM	77R37	DRS 71M4	175 275	
8.4	4950	200	1800	1.05					
9.6	4310	176	1950	1.25	R	67R37	DRS 71M4	98 275	
11	3870	158	2040	1.35	RF	67R37	DRS 71M4	105 275	
8.4	5030	201	1780	1.05	RM	67R37	DRS 71M4	140 275	
9.3	4540	181	1900	1.15					
11	3940	159	2030	1.35					

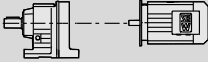



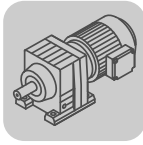
R..DRE/DRS
R..DRE/DRS [HP]

P_m [HP]	n_a [rpm]	T_a [lb-in]	i	$F_{Ra}^{1)}$ [lb]	SEW f_B		m [lbs]	
0.75	12	3500	142	1650	1.15	R 57R37 DRS 71M4	84	275
						RF 57R37 DRS 71M4	91	275
						RM 57R37 DRS 71M4	120	275
	11	3970	159	1600	1.00	R 57R37 DRS 71M4	82	275
	12	3710	146	1620	1.05	RF 57R37 DRS 71M4	89	275
	13	3320	134	1660	1.20	RM 57R37 DRS 71M4	115	275
	17	2450	98	1240	1.10	R 47R37 DRS 71M4	71	275
	RF 47R37 DRS 71M4	71	275					
	3.9	12000	289.74	6260	2.2	R 97 DRS 80S6	245	265
	4.4	10600	255.71	6300	2.5	RF 97 DRS 80S6	280	266
	4.6	10000	241.25	6310	2.6	RM 97 DRS 80S6	395	266
	5.2	8970	216.28	6340	3.0			
	4.5	10200	246.54	4310	1.35			
	5.2	8980	216.54	4440	1.55			
	5.4	8530	205.71	4490	1.60			
6.2	7540	181.77	4490	1.80	R 87 DRS 80S6	155	262	
7.2	6440	155.34	4490	2.1	RF 87 DRS 80S6	170	263	
7.9	5900	142.41	4490	2.3	RM 87 DRS 80S6	235	263	
9.0	5180	124.97	4490	2.6				
9.5	4910	118.43*	4490	2.8				
6.8	6770	246.54	4490	2.0				
7.8	5950	216.54	4490	2.3	R 87 DRS 71M4	150	262	
8.2	5650	205.71	4490	2.4	RF 87 DRS 71M4	165	263	
9.3	4990	181.77	4490	2.7	RM 87 DRS 71M4	230	263	
6.7	6910	166.59	2310	1.05				
7.7	6040	145.67	2480	1.20				
8.1	5740	138.39	2530	1.25				
9.2	5030	121.42	2640	1.45	R 77 DRS 80S6	95	259	
11	4270	102.99	2730	1.70	RF 77 DRS 80S6	110	260	
12	3850	92.97	2780	1.90	RM 77 DRS 80S6	165	260	
14	3390	81.80	2820	2.1				
14	3200	77.24	2840	2.3				
17	2720	65.77	2870	2.7				
8.7	5360	195.24*	2590	1.35				
10	4580	166.59	2700	1.60				
12	4000	145.67	2760	1.80	R 77 DRS 71M4	90	259	
12	3800	138.39	2780	1.90	RF 77 DRS 71M4	100	260	
14	3330	121.42	2820	2.2	RM 77 DRS 71M4	155	260	
16	2830	102.99	2860	2.6				
18	2550	92.97	2880	2.8				
18	2650	195.24*	2880	2.7	R 77 DRS 71M2	90	259	
RF 77 DRS 71M2	100	260						
RM 77 DRS 71M2	155	260						
9.8	4720	113.94	1860	1.10				
11	4390	105.83	1940	1.20				
12	3970	95.91	2020	1.35				
13	3570	86.11	2090	1.50				
15	3070	74.17	2170	1.75	R 67 DRS 80S6	79	256	
16	2890	69.75	2190	1.85	RF 67 DRS 80S6	86	257	
18	2540	61.26	2230	2.1	RM 67 DRS 80S6	120	257	
20	2360	56.89	2250	2.2				
22	2130	51.56	2270	2.5				
24	1920	46.29	2290	2.8				
9.2	5060	184.07	1770	1.05				
11	4340	158.14	1950	1.20				
12	3780	137.67	2060	1.40				
13	3540	128.97	2100	1.50				
15	3130	113.94	2160	1.70	R 67 DRS 71M4	74	256	
16	2910	105.83	2190	1.80	RF 67 DRS 71M4	81	257	
18	2630	95.91	2220	2.0	RM 67 DRS 71M4	115	257	
20	2360	86.11	2250	2.2				
23	2030	74.17	2280	2.6				
24	1910	69.75	2290	2.8				
17	2710	199.81	2210	1.95				
19	2500	184.07	2240	2.1	R 67 DRS 71M2	74	256	
22	2140	158.14	2270	2.5	RF 67 DRS 71M2	81	257	
25	1870	137.67	2300	2.8	RM 67 DRS 71M2	115	257	

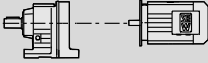

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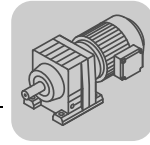
P_m [HP]	n_a [rpm]	T_a [lb-in]	i	$F_{Ra}^{1)}$ [lb]	SEW f_B		m [lbs]		
0.75	12	3720	89.71	1620	1.05				
	14	3340	80.55	1660	1.20				
	16	2870	69.23	1700	1.40				
	17	2690	64.85	1710	1.50				
	20	2370	57.29	1730	1.65	R	57	DRS 80S6	64 253
	21	2200	53.22	1740	1.80	RF	57	DRS 80S6	72 254
	23	2000	48.23	1700	2.00	RM	57	DRS 80S6	98 254
	26	1790	43.30	1650	2.2				
	30	1540	37.30*	1590	2.6				
	32	1450	35.07	1560	2.7				
	13	3540	128.77	1640	1.10				
	14	3310	120.63	1660	1.20				
	16	2930	106.58	1690	1.35				
	17	2720	98.99	1710	1.45				
	19	2460	89.71	1730	1.60	R	57	DRS 71M4	59 253
	21	2210	80.55	1740	1.80	RF	57	DRS 71M4	67 254
	24	1900	69.23	1680	2.1	RM	57	DRS 71M4	93 254
	26	1780	64.85	1650	2.2				
	30	1570	57.29	1600	2.5				
	32	1460	53.22	1560	2.7				
	35	1320	48.23	1520	3.0				
	18	2530	186.89	1720	1.55				
	20	2330	172.17	1730	1.70				
	23	2010	147.92	1700	2.00	R	57	DRS 71M2	59 253
	27	1750	128.77	1640	2.3	RF	57	DRS 71M2	67 254
	28	1630	120.63	1610	2.4	RM	57	DRS 71M2	93 254
	32	1440	106.58	1560	2.8				
	35	1340	98.99	1530	3.0				
	17	2660	64.21	1220	1.00				
	20	2350	56.73	1260	1.15				
	21	2180	52.69	1280	1.20				
	23	1980	47.75	1300	1.35				
26	1770	42.87	1290	1.50	R	47	DRS 80S6	53 250	
30	1530	36.93	1240	1.75	RF	47	DRS 80S6	53 251	
32	1440	34.73	1220	1.85					
37	1230	29.88	1180	2.1					
42	1100	26.70	1140	2.4					
47	970	23.59	1100	2.7					
18	2570	93.68	1230	1.05					
20	2330	84.90	1260	1.15					
22	2090	76.23	1280	1.25					
25	1880	68.54	1300	1.40					
26	1760	64.21	1290	1.50	R	47	DRS 71M4	48 250	
30	1550	56.73	1250	1.70	RF	47	DRS 71M4	48 251	
32	1440	52.69	1230	1.85					
35	1310	47.75	1200	2.0					
39	1170	42.87	1160	2.2					
46	1010	36.93	1110	2.6					
49	950	34.73	1100	2.8					
19	2400	176.88	1250	1.10					
21	2210	162.94	1270	1.20					
24	1900	139.99	1300	1.40					
28	1650	121.87	1270	1.60					
30	1550	114.17	1250	1.70	R	47	DRS 71M2	48 250	
34	1370	100.86	1210	1.95	RF	47	DRS 71M2	48 251	
37	1270	93.68	1190	2.1					
40	1150	84.90	1150	2.3					
45	1030	76.23	1120	2.6					
50	930	68.54	1090	2.8					
42	1100	26.74	1140	2.4	R	47	DRS 80S6	52 250	
48	960	23.28	1100	2.8	RF	47	DRS 80S6	52 251	
51	900	21.81	1080	2.9					
50	920	33.79	1090	2.3	R	47	DRS 71M4	46 250	
54	850	31.12	1060	2.3	RF	47	DRS 71M4	47 251	
29	1620	39.17	1150	1.10					
30	1520	36.72	1180	1.15					
35	1340	32.40	1140	1.30					
39	1190	28.73	1110	1.50	R	37	DRS 80S6	44 247	
46	1010	24.42	1060	1.75	RF	37	DRS 80S6	48 248	

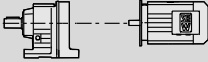



R..DRE/DRS
R..DRE/DRS [HP]

P_m [HP]	n_a [rpm]	T_a [lb-in]	i	$F_{Ra}^{1)}$ [lb]	SEW f_B		m [lbs]	
0.75	28	1680	61.18	1140	1.05	R 37 RF 37	DRS 71M4 DRS 71M4	39 247 43 248
	30	1530	55.76	1180	1.15			
	35	1320	48.08	1140	1.35			
	38	1230	44.81	1120	1.45			
	43	1070	39.17	1080	1.65			
	46	1000	36.72	1060	1.75			
	52	890	32.40	1030	2.00			
	59	790	28.73	1000	2.2			
	69	670	24.42	950	2.6			
	28	1680	123.66	1140	1.05			
	32	1430	105.28	1160	1.25			
	38	1230	90.77	1120	1.45			
	40	1140	84.61	1100	1.55			
	46	1000	73.96	1060	1.75			
49	940	69.33	1040	1.90				
56	830	61.18	1010	2.1				
61	755	55.76	980	2.3				
71	650	48.08	950	2.7				
76	605	44.81	930	2.9				
50	920	22.27	1040	1.90				
58	800	19.31	1000	2.2				
62	745	18.05	980	2.4				
72	645	15.60	940	2.7				
60	775	28.32	990	2.3				
65	715	26.03	970	2.3				
76	610	22.27	930	2.9				
46	1010	24.47	695	1.15				
43	1070	39.25	705	1.05				
46	1010	36.79	695	1.15				
52	890	32.47	680	1.30				
59	790	28.78	660	1.45				
69	670	24.47	635	1.70				
40	1150	84.78	715	1.00				
46	1000	74.11	695	1.15				
49	940	69.47	685	1.20				
56	830	61.30	665	1.40				
61	755	55.87	655	1.50				
71	650	48.17	630	1.75				
76	610	44.90	620	1.90				
87	530	39.25	600	2.2				
93	495	36.79	590	2.3				
105	440	32.47	570	2.6				
119	390	28.78	550	2.9				
50	920	22.32	685	1.25				
58	800	19.35	660	1.45				
62	750	18.08	650	1.55				
72	645	15.63	630	1.75				
84	550	13.28*	605	2.1				
94	490	11.86	585	2.3				
111	420	10.13	560	2.6				
119	390	9.41	545	2.8				
60	780	28.37	655	1.45				
65	715	26.09	645	1.60				
76	610	22.32	620	1.85				
87	530	19.35	600	2.2				
93	495	18.08	585	2.3				
108	430	15.63	565	2.7				
121	385	28.37	550	3.0				
70	660	24.07	355	1.15				

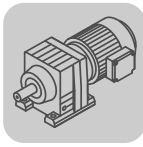
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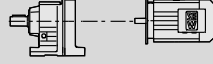
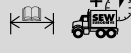
P_m [HP]	n_a [rpm]	T_a [lb-in]	i	$F_{Ra}^{1)}$ [lb]	SEW f_B		m [lbs]	
0.75	64	730	53.76	360	1.05			
	72	645	47.44	355	1.15			
	77	595	44.18	350	1.25			
	89	520	38.61	345	1.45	R 17	DRS 71M2	25 241
	94	490	36.20	340	1.55	RF 17	DRS 71M2	25 242
	107	430	31.94	335	1.75			
	121	380	28.32	330	1.95			
	142	325	24.07	320	2.3			
	66	705	16.99	360	1.05			
	71	655	15.84	355	1.15			
	81	570	13.84	350	1.30			
	86	535	12.98	345	1.40			
	98	475	11.45	340	1.50			
	110	420	10.15	335	1.60			
	130	355	8.63	325	1.80	R 17	DRS 80S6	29 241
	148	310	7.55	300	1.60	RF 17	DRS 80S6	29 242
	159	290	7.04	295	1.65			
	182	250	6.15	290	1.90			
194	235	5.76	285	1.95				
220	210	5.09	280	2.1				
248	187	4.51	270	2.3				
292	159	3.83	260	2.5				
67	690	25.23	360	1.10				
73	635	23.15	355	1.20				
86	540	19.71	345	1.40				
99	465	16.99	340	1.60				
107	435	15.84	335	1.75				
122	380	13.84	325	2.00				
130	355	12.98	325	2.1	R 17	DRS 71M4	24 241	
148	310	11.45	315	2.3	RF 17	DRS 71M4	24 242	
166	275	10.15	305	2.4				
196	235	8.63	295	2.7				
224	205	7.55	275	2.4				
240	194	7.04	275	2.5				
275	169	6.15	265	2.8				
293	158	5.76	260	3.0				
136	340	25.23	320	2.2	R 17	DRS 71M2	24 241	
148	310	23.15	315	2.4	RF 17	DRS 71M2	24 242	
174	265	19.71	305	2.8				
118	395	29.08	186	1.10	R 07	DRS 71M2	23 238	
127	365	26.97	184	1.20	RF 07	DRS 71M2	23 239	
147	315	23.32	182	1.40			**	
157	295	21.73	180	1.50				
120	385	14.12	185	1.15				
140	330	12.06	183	1.35				
151	305	11.18	181	1.45				
175	265	9.67	178	1.65				
188	245	9.01	176	1.80				
215	215	7.85	172	2.0	R 07	DRS 71M4	22 238	
226	205	7.48	172	1.85	RF 07	DRS 71M4	22 239	
247	188	6.83	169	2.0			**	
293	158	5.76	163	2.2				
343	135	4.92	158	2.4				
370	126	4.57	155	2.5				
428	109	3.95	150	2.8				
459	101	3.68	147	2.9				
187	245	18.31	176	1.80				
204	225	16.73	174	1.95				
242	192	14.12	169	2.3	R 07	DRS 71M2	22 238	
284	164	12.06	163	2.7	RF 07	DRS 71M2	22 239	
306	152	11.18	161	2.9			**	
211	220	8.00*	1370	2.3	RX 77	DRS 71M4	68 230	
226	205	7.47	1340	2.3	RXF 77	DRS 71M4	73 231	
279	167	6.07	880	2.3	RX 67	DRS 71M4	44 228	
					RXF 67	DRS 71M4	53 229	
					RXF 67	DRS 71M4	53 229	
307	151	5.50*	685	2.3	RX 57	DRS 71M4	38 226	
334	139	5.07	670	2.3	RXF 57	DRS 71M4	43 227	

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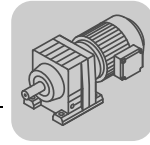
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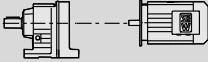



R..DRE/DRS
R..DRE/DRS [HP]

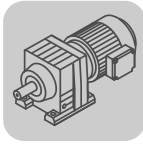
P_m [HP]	n_a [rpm]	T_a [lb-in]	i	$F_{Ra}^{1)}$ [lb]	SEW f_B		m [lbs]	
1.0	0.37	140300	4650	27000	1.15	R 167R97 DRE 80M4	1670	275
	0.42	122300	4129	27000	1.30	RF 167R97 DRE 80M4	1690	275
	0.47	107100	3692	27000	1.50	RM 167R97 DRE 80M4	2120	275
	0.65	83300	2657	27000	1.90	R 167R97 DRE 80M4	1670	275
	0.75	71200	2333	27000	2.2	RF 167R97 DRE 80M4	1680	275
	0.83	62500	2085	27000	2.6	RM 167R97 DRE 80M4	2110	275
	0.93	55100	1877	27000	2.9			
	0.53	106000	3302	14500	1.10	R 147R77 DRE 80M4	950	275
	0.60	92800	2898	15100	1.25	RF 147R77 DRE 80M4	960	275
						RM 147R77 DRE 80M4	1330	275
	0.68	83900	2555	15400	1.35			
	0.79	72600	2211	15700	1.60	R 147R77 DRE 80M4	940	275
	0.89	64000	1951	16000	1.80	RF 147R77 DRE 80M4	960	275
	1.0	54800	1705	16200	2.1	RM 147R77 DRE 80M4	1330	275
	1.1	49100	1536	16300	2.3			
	1.3	42500	1329	16400	2.7			
	0.93	60300	1863	12500	1.15			
	1.1	51000	1586	12900	1.40	R 137R77 DRE 80M4	630	275
	1.2	45700	1391	13100	1.55	RF 137R77 DRE 80M4	680	275
	1.4	41000	1256	13200	1.70	RM 137R77 DRE 80M4	930	275
	1.6	35900	1105	13400	1.95			
	1.7	33800	1043	13400	2.1			
	2.0	28500	888	13500	2.5			
	0.84	68100	2073	12100	1.05			
	0.95	59600	1839	12500	1.20	R 137R77 DRE 80M4	650	275
	1.1	51100	1598	12900	1.40	RF 137R77 DRE 80M4	700	275
	1.2	45700	1397	13100	1.55	RM 137R77 DRE 80M4	950	275
	1.4	39800	1226	13300	1.80			
	1.6	35600	1090	13400	2.00			
	1.8	31100	951	13500	2.3			
	2.1	26600	831	13600	2.7			
	1.6	34200	1055	7110	1.10	R 107R77 DRE 80M4	450	275
	1.9	29800	919	7560	1.25	RF 107R77 DRE 80M4	465	275
	2.1	26600	815	7840	1.45	RM 107R77 DRE 80M4	660	275
	2.4	23300	717	8090	1.65			
	2.8	20300	626	8190	1.85			
	3.3	16700	528	8290	2.3			
	1.6	35300	1104	6970	1.10	R 107R77 DRE 80M4	465	275
	1.8	30400	939	7510	1.25	RF 107R77 DRE 80M4	475	275
	2.1	26400	822	7860	1.45	RM 107R77 DRE 80M4	670	275
	2.8	19300	614	8220	1.95			
	3.2	16900	544	8280	2.2			
	3.5	15300	492	8320	2.5			
	4.2	13000	417	8370	2.9			
	3.7	15500	469	8320	2.4	R 107R77 DRE 80M4	450	275
	4.1	14100	426	8350	2.7	RF 107R77 DRE 80M4	460	275
						RM 107R77 DRE 80M4	660	275
	2.3	24600	755	5030	1.10	R 97R57 DRE 80M4	295	275
						RF 97R57 DRE 80M4	335	275
						RM 97R57 DRE 80M4	445	275
	2.4	24200	737	5100	1.10			
	2.8	20700	632	5590	1.30	R 97R57 DRE 80M4	300	275
	3.1	18000	560	5890	1.45	RF 97R57 DRE 80M4	340	275
	3.6	15700	484	6110	1.70	RM 97R57 DRE 80M4	450	275
	4.0	14200	431	6180	1.85			
	4.6	12400	379	6240	2.1			
	5.2	11100	336	6280	2.4			
	5.9	9730	296	6320	2.7			
	2.8	21100	625	5540	1.25	R 97R57 DRE 80M4	295	275
	3.2	18500	549	5850	1.45	RF 97R57 DRE 80M4	330	275
	3.7	15600	466	6120	1.70	RM 97R57 DRE 80M4	445	275
	4.1	14000	420	6180	1.90			
	4.7	12300	370	6250	2.2			
	5.0	11500	349	6270	2.3			
	5.8	9810	297	6320	2.7			
	6.4	8880	270	6340	3.0			

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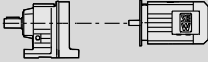



P_m [HP]	n_a [rpm]	T_a [lb-in]	i	$F_{Ra}^{1)}$ [lb]	SEW f_B		m [lbs]		
1.0	4.4	12900	398	3940	1.05				
	4.9	11400	352	4150	1.20				
	5.7	9860	305	4350	1.40	R	87R57	DRE 80M4	205 275
	6.5	8720	268	4470	1.55	RF	87R57	DRE 80M4	225 275
	7.4	7700	236	4490	1.80	RM	87R57	DRE 80M4	290 275
	8.3	6700	209	4490	2.0				
	4.4	13400	400	3850	1.00				
	4.8	12000	361	4070	1.15				
	5.8	9960	300	4340	1.40	R	87R57	DRE 80M4	205 275
	6.8	8430	256	4490	1.65	RF	87R57	DRE 80M4	220 275
	7.5	7630	232	4490	1.80	RM	87R57	DRE 80M4	285 275
	8.9	6510	195	4490	2.1				
	8.8	6470	197	2400	1.10	R	77R37	DRE 80M4	120 275
	10	5630	169	2550	1.30	RF	77R37	DRE 80M4	135 275
	12	4930	149	2650	1.45	RM	77R37	DRE 80M4	190 275
	9.3	6210	186	2450	1.15	R	77R37	DRE 80M4	120 275
						RF	77R37	DRE 80M4	130 275
						RM	77R37	DRE 80M4	185 275
	11	5190	158	1730	1.00	R	67R37	DRE 80M4	110 275
						RF	67R37	DRE 80M4	115 275
					RM	67R37	DRE 80M4	150 275	
11	5280	159	1700	1.00	R	67R37	DRE 80M4	105 275	
					RF	67R37	DRE 80M4	115 275	
					RM	67R37	DRE 80M4	150 275	
4.5	14100	255.71	6180	1.90					
4.8	13300	241.25	6210	2.00	R	97	DRE 90L6	265 265	
5.3	11900	216.28	6260	2.2	RF	97	DRE 90L6	300 266	
6.2	10300	186.30	6310	2.6	RM	97	DRE 90L6	415 266	
6.7	9400	170.02	6330	2.8					
6.0	10500	289.74	6300	2.5	R	97	DRE 80M4	250 265	
6.8	9310	255.71	6330	2.8	RF	97	DRE 80M4	285 266	
					RM	97	DRE 80M4	400 266	
5.3	11900	216.54	4080	1.15					
5.6	11300	205.71	4160	1.20					
6.3	10000	181.77	4330	1.35					
7.4	8590	155.34	4480	1.60	R	87	DRE 90L6	175 262	
8.0	7880	142.41	4490	1.75	RF	87	DRE 90L6	190 263	
9.2	6910	124.97	4490	2.00	RM	87	DRE 90L6	255 263	
9.7	6550	118.43*	4490	2.1					
11	5730	103.65	4490	2.4					
12	5160	93.38	4490	2.6					
7.1	8970	246.54	4440	1.55					
8.0	7880	216.54	4490	1.75	R	87	DRE 80M4	160 262	
8.5	7490	205.71	4490	1.85	RF	87	DRE 80M4	175 263	
9.6	6620	181.77	4490	2.1	RM	87	DRE 80M4	240 263	
11	5650	155.34	4490	2.4					
12	5180	142.41	4490	2.6					
9.4	6720	121.42	2350	1.10					
11	5690	102.99	2540	1.25					
12	5140	92.97	2620	1.40					
14	4520	81.80	2700	1.60	R	77	DRE 90L6	115 259	
15	4270	77.24	2730	1.70	RF	77	DRE 90L6	125 260	
17	3640	65.77	2800	2.00	RM	77	DRE 90L6	180 260	
20	3190	57.68	2840	2.3					
22	2880	52.07	2860	2.5					
25	2530	45.81	2880	2.9					
10	6060	166.59	2470	1.20					
12	5300	145.67	2600	1.35					
13	5030	138.39	2640	1.45					
14	4420	121.42	2710	1.65	R	77	DRE 80M4	100 259	
17	3750	102.99	2790	1.95	RF	77	DRE 80M4	115 260	
19	3380	92.97	2820	2.1	RM	77	DRE 80M4	170 260	
21	2970	81.80	2850	2.4					
23	2810	77.24	2870	2.6					
21	3020	166.59	2850	2.4	R	77	DRE 80M2	100 259	
24	2640	145.67	2880	2.7	RF	77	DRE 80M2	115 260	
25	2510	138.39	2890	2.9	RM	77	DRE 80M2	170 260	

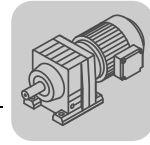
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R..DRE/DRS
R..DRE/DRS [HP]

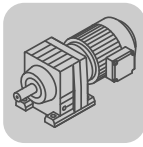
P_m [HP]	n_a [rpm]	T_a [lb-in]	i	$F_{Ra}^{1)}$ [lb]	SEW f_B		m [lbs]		
1.0	12	5300	95.91	1700	1.00				
	13	4760	86.11	1850	1.10				
	15	4100	74.17	2000	1.30				
	16	3860	69.75	2040	1.40				
	19	3390	61.26	2120	1.55				
	20	3140	56.89	2160	1.70	R 67	DRE 90L6	100	256
	22	2850	51.56	2200	1.85	RF 67	DRE 90L6	110	257
	25	2560	46.29	2230	2.1	RM 67	DRE 90L6	145	257
	29	2200	39.88*	2270	2.3				
	31	2070	37.50	2280	2.4				
	35	1780	32.27	2300	2.7				
	40	1590	28.83	2320	2.9				
	13	5010	137.67	1780	1.05				
	13	4690	128.97	1870	1.15				
	15	4140	113.94	1990	1.30				
	16	3850	105.83	2040	1.40				
	18	3490	95.91	2110	1.50	R 67	DRE 80M4	85	256
	20	3130	86.11	2160	1.70	RF 67	DRE 80M4	92	257
	23	2700	74.17	2220	1.95	RM 67	DRE 80M4	125	257
	25	2540	69.75	2230	2.1				
	28	2230	61.26	2270	2.4				
	31	2070	56.89	2280	2.6				
	34	1870	51.56	2300	2.8				
	22	2870	158.14	2190	1.85				
	25	2490	137.67	2240	2.1	R 67	DRE 80M2	85	256
	27	2340	128.97	2250	2.3	RF 67	DRE 80M2	92	257
	31	2060	113.94	2280	2.6	RM 67	DRE 80M2	125	257
	33	1920	105.83	2290	2.8				
	17	3830	69.23	1610	1.05				
	18	3580	64.85	1640	1.10				
	20	3170	57.29	1680	1.25				
	22	2940	53.22	1660	1.35				
	24	2660	48.23	1630	1.50	R 57	DRE 90L6	87	253
	26	2390	43.30	1590	1.65	RF 57	DRE 90L6	94	254
	31	2060	37.30*	1530	1.95	RM 57	DRE 90L6	120	254
	33	1940	35.07	1510	2.0				
	38	1670	30.18	1450	2.4				
	42	1490	26.97	1410	2.7				
	16	3880	106.58	1610	1.05				
	18	3600	98.99	1640	1.10				
19	3260	89.71	1670	1.20					
22	2930	80.55	1660	1.35					
25	2520	69.23	1610	1.60	R 57	DRE 80M4	70	253	
27	2360	64.85	1580	1.70	RF 57	DRE 80M4	78	254	
30	2080	57.29	1530	1.90	RM 57	DRE 80M4	105	254	
33	1930	53.22	1500	2.0					
36	1750	48.23	1470	2.3					
40	1570	43.30	1430	2.5					
47	1350	37.30*	1370	2.9					
24	2680	147.92	1630	1.50					
27	2330	128.77	1580	1.70					
29	2190	120.63	1550	1.80	R 57	DRE 80M2	70	253	
33	1930	106.58	1500	2.1	RF 57	DRE 80M2	78	254	
35	1790	98.99	1480	2.2	RM 57	DRE 80M2	105	254	
39	1620	89.71	1440	2.4					
43	1460	80.55	1400	2.7					
44	1450	26.31	1400	2.7	R 57	DRE 90L6	85	253	
46	1380	24.99*	1380	2.9	RF 57	DRE 90L6	92	254	
					RM 57	DRE 90L6	120	254	
24	2640	47.75	1220	1.00					
27	2370	42.87	1230	1.10					
31	2040	36.93	1190	1.30					
33	1920	34.73	1170	1.40	R 47	DRE 90L6	75	250	
38	1650	29.88	1130	1.60	RF 47	DRE 90L6	75	251	
43	1470	26.70	1100	1.80					
49	1300	23.59	1060	2.0					

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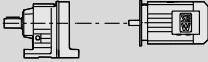




P _m [HP]	n _a [rpm]	T _a [lb-in]	i	F _{Ra} ¹⁾ [lb]	SEW f _B			m [lbs]			
						R	RF		DRE	DRE	+
1.0	25	2490	68.54	1240	1.05						
	27	2330	64.21	1220	1.15						
	31	2060	56.73	1190	1.30						
	33	1910	52.69	1170	1.40						
	36	1730	47.75	1140	1.55	R	47	DRE	80M4	59	250
	41	1560	42.87	1110	1.70	RF	47	DRE	80M4	59	251
	47	1340	36.93	1070	1.95						
	50	1260	34.73	1060	2.1						
	58	1080	29.88	1010	2.4						
	65	970	26.70	980	2.7						
	25	2540	139.99	1230	1.05						
	29	2210	121.87	1210	1.20						
	31	2070	114.17	1190	1.30						
	35	1830	100.86	1160	1.45						
	37	1700	93.68	1140	1.55	R	47	DRE	80M2	59	250
	41	1540	84.90	1110	1.70	RF	47	DRE	80M2	59	251
	46	1380	76.23	1080	1.90						
	51	1240	68.54	1050	2.1						
	54	1160	64.21	1030	2.3						
	62	1020	56.73	1000	2.6						
	66	950	52.69	980	2.8						
	49	1280	23.28	1060	2.1						
	53	1200	21.81	1040	2.2						
	59	1060	19.27	1010	2.4	R	47	DRE	90L6	74	250
	64	990	17.89	990	2.6	RF	47	DRE	90L6	74	251
	71	890	16.22	960	2.7						
	79	800	14.56	930	2.9						
	65	970	26.74	980	2.7	R	47	DRE	80M4	57	250
						RF	47	DRE	80M4	58	251
	40	1580	28.73	1050	1.10	R	37	DRE	90L6	65	247
	47	1350	24.42	1010	1.30	RF	37	DRE	90L6	68	248
	36	1750	48.08	1070	1.00						
	39	1630	44.81	1060	1.10						
	44	1420	39.17	1030	1.25						
	47	1330	36.72	1010	1.30	R	37	DRE	80M4	50	247
	54	1180	32.40	980	1.50	RF	37	DRE	80M4	53	248
	61	1040	28.73	950	1.70						
	71	880	24.42	920	2.00						
	38	1640	90.77	1060	1.05						
	41	1530	84.61	1040	1.15						
	47	1340	73.96	1010	1.30						
	50	1250	69.33	1000	1.40						
	57	1110	61.18	970	1.60	R	37	DRE	80M2	50	247
	63	1010	55.76	950	1.75	RF	37	DRE	80M2	53	248
	73	870	48.08	910	2.0						
	78	810	44.81	900	2.2						
	89	710	39.17	860	2.5						
	95	665	36.72	850	2.6						
	59	1060	19.31	960	1.65						
	63	990	18.05	940	1.75						
	73	860	15.60	910	2.0	R	37	DRE	90L6	65	247
	86	730	13.25	870	2.3	RF	37	DRE	90L6	68	248
	97	650	11.83	850	2.5						
	113	555	10.11	810	2.7						
	121	520	9.47	795	2.8						
	78	810	22.27	900	2.2	R	37	DRE	80M4	50	247
	90	700	19.31	860	2.5	RF	37	DRE	80M4	53	248
	96	655	18.05	850	2.7						
	60	1040	28.78	620	1.10	R	27	DRE	80M4	37	244
	71	890	24.47	600	1.30	RF	27	DRE	80M4	37	245
	57	1110	61.30	625	1.05						
	62	1010	55.87	615	1.15						
	72	870	48.17	600	1.30						
	78	810	44.90	590	1.40						
	89	710	39.25	570	1.60	R	27	DRE	80M2	37	244
	95	665	36.79	565	1.70	RF	27	DRE	80M2	37	245
	107	585	32.47	545	1.95						
	121	520	28.78	530	2.2						
	143	440	24.47	510	2.6						

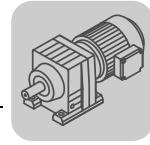
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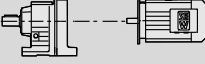
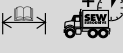


R..DRE/DRS
R..DRE/DRS [HP]

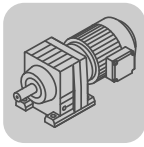
P_m [HP]	n_a [rpm]	T_a [lb-in]	i	$F_{Ra}^{1)}$ [lb]	SEW f_B		m [lbs]				
1.0	59	1070	19.35	625	1.05						
	63	1000	18.08	615	1.15						
	73	860	15.63	595	1.35						
	86	735	13.28*	575	1.55						
	97	655	11.86	560	1.75	R	27	DRE	90L6	52	244
	113	560	10.13	540	1.90	RF	27	DRE	90L6	52	245
	140	450	8.16	500	2.3						
	150	420	7.63*	495	2.4						
	174	360	6.59	475	2.6						
	204	305	5.60*	455	2.8						
	78	810	22.32	590	1.40						
	90	700	19.35	570	1.65						
	96	655	18.08	560	1.75						
	111	565	15.63	540	2.0	R	27	DRE	80M4	37	244
	131	480	13.28*	520	2.4	RF	27	DRE	80M4	37	245
	147	430	11.86	505	2.6						
	172	365	10.13	485	2.9						
	156	405	22.32	495	2.8	R	27	DRE	80M2	37	244
						RF	27	DRE	80M2	37	245
	90	700	38.61	310	1.05						
	96	655	36.20	310	1.15						
	109	575	31.94	305	1.30	R	17	DRE	80M2	35	241
	123	510	28.32	300	1.45	RF	17	DRE	80M2	35	242
	145	435	24.07	295	1.70						
	88	715	19.71	310	1.05						
	102	615	16.99	310	1.20						
	110	575	15.84	305	1.30						
	126	500	13.84	300	1.50						
134	470	12.98	300	1.60							
152	415	11.45	295	1.70							
171	365	10.15	285	1.85							
202	310	8.63	280	2.0	R	17	DRE	80M4	35	241	
231	275	7.55	260	1.80	RF	17	DRE	80M4	35	242	
247	255	7.04	255	1.90							
283	220	6.15	250	2.1							
302	205	5.76	245	2.2							
342	185	5.09	240	2.4							
386	165	4.51	235	2.6							
454	140	3.83	225	2.8							
177	355	19.71	285	2.1							
205	305	16.99	275	2.4	R	17	DRE	80M2	35	241	
220	285	15.84	275	2.6	RF	17	DRE	80M2	35	242	
252	250	13.84	265	3.0							
253	250	4.53	890	2.9	RX	67	DRE	90L6	71	228	
266	235	4.30*	880	3.0	RXF	67	DRE	90L6	80	229	
302	205	3.79	680	2.9	RX	57	DRE	90L6	66	226	
					RXF	57	DRE	90L6	70	227	
1.5	0.65	125800	2657	27000	1.25						
	0.75	108500	2333	27000	1.45						
	0.83	95800	2085	27000	1.65	R	167R97	DRE	90M4	1680	275
	0.93	85100	1877	27000	1.85	RF	167R97	DRE	90M4	1690	275
	1.0	75700	1670	27000	2.1	RM	167R97	DRE	90M4	2120	275
	1.2	68100	1438	27000	2.3						
	1.4	60600	1279	27000	2.6						
	0.79	108000	2211	14400	1.05						
	0.89	95300	1951	15000	1.20						
	1.0	82100	1705	15500	1.40						
	1.1	73700	1536	15700	1.55	R	147R77	DRE	90M4	950	275
	1.3	63800	1329	16000	1.80	RF	147R77	DRE	90M4	970	275
	1.5	55600	1166	16200	2.1	RM	147R77	DRE	90M4	1340	275
	1.7	48800	1029	16300	2.4						
	2.0	42400	889	16400	2.7						
	1.2	67900	1391	12100	1.05						
	1.4	61100	1256	12500	1.15						
	1.6	53600	1105	12800	1.30	R	137R77	DRE	90M4	640	275
	1.7	50500	1043	12900	1.40	RF	137R77	DRE	90M4	690	275
	2.0	42800	888	13200	1.65	RM	137R77	DRE	90M4	940	275
	2.5	33300	699	13400	2.1						
	2.9	28900	609	13500	2.4						

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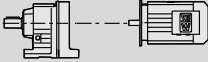



P_m [HP]	n_a [rpm]	T_a [lb-in]	i	$F_{Ra}^{1)}$ [lb]	SEW f_B		m [lbs]		
1.5	1.2	68000	1397	12100	1.05				
	1.4	59400	1226	12600	1.20				
	1.6	53000	1090	12800	1.35				
	1.8	46300	951	13100	1.55	R	137R77	DRE 90M4	660 275
	2.1	39900	831	13300	1.75	RF	137R77	DRE 90M4	710 275
	2.4	34800	730	13400	2.0	RM	137R77	DRE 90M4	960 275
	2.8	29600	629	13500	2.4				
	3.1	26900	560	13600	2.6				
	3.1	27800	564	13500	2.5	R	137R77	DRE 90M4	640 275
	3.4	25400	517	13600	2.8	RF	137R77	DRE 90M4	690 275
						RM	137R77	DRE 90M4	940 275
	2.4	34700	717	7040	1.10	R	107R77	DRE 90M4	460 275
	2.8	30300	626	7510	1.25	RF	107R77	DRE 90M4	470 275
	3.3	25200	528	7960	1.50	RM	107R77	DRE 90M4	670 275
	2.8	29100	614	7630	1.30				
	3.2	25700	544	7920	1.50				
	3.5	23200	492	8090	1.65	R	107R77	DRE 90M4	470 275
	4.2	19700	417	8210	1.95	RF	107R77	DRE 90M4	485 275
	4.7	17700	369	8260	2.2	RM	107R77	DRE 90M4	680 275
5.4	15400	323	8320	2.5					
6.1	13500	285	8360	2.8					
3.7	23100	469	8090	1.65					
4.1	21000	426	8160	1.80	R	107R77	DRE 90M4	455 275	
4.6	18500	377	8240	2.0	RF	107R77	DRE 90M4	470 275	
5.4	15800	325	8310	2.4	RM	107R77	DRE 90M4	660 275	
6.1	13800	284	8360	2.8					
3.6	23400	484	5220	1.15					
4.0	21100	431	5540	1.25					
4.6	18500	379	5840	1.45	R	97R57	DRE 90M4	310 275	
5.2	16500	336	6040	1.60	RF	97R57	DRE 90M4	350 275	
5.9	14400	296	6170	1.85	RM	97R57	DRE 90M4	460 275	
7.0	12000	249	6250	2.2					
7.4	11200	234	6280	2.4					
8.3	10000	209	6310	2.6					
3.7	23100	466	5260	1.15					
4.1	20800	420	5580	1.25					
4.7	18200	370	5870	1.45	R	97R57	DRE 90M4	305 275	
5.0	17200	349	5970	1.55	RF	97R57	DRE 90M4	340 275	
5.8	14600	297	6160	1.80	RM	97R57	DRE 90M4	455 275	
6.4	13200	270	6210	2.0					
7.7	11200	227	6280	2.4					
6.5	13000	268	3920	1.05	R	87R57	DRE 90M4	220 275	
7.4	11400	236	4150	1.20	RF	87R57	DRE 90M4	235 275	
8.3	10000	209	4330	1.35	RM	87R57	DRE 90M4	300 275	
6.8	12500	256	3990	1.10	R	87R57	DRE 90M4	215 275	
7.5	11300	232	4160	1.20	RF	87R57	DRE 90M4	230 275	
8.9	9670	195	4370	1.40	RM	87R57	DRE 90M4	295 275	
6.0	15400	289.74	6130	1.70					
6.8	13600	255.71	6200	1.95					
7.2	12800	241.25	6230	2.1	R	97	DRE 90M4	260 265	
8.0	11500	216.28	6270	2.3	RF	97	DRE 90M4	295 266	
9.3	9950	186.30	6320	2.7	RM	97	DRE 90M4	410 266	
10	9080	170.02	6340	2.9					
7.1	13100	246.54	3900	1.05					
8.0	11500	216.54	4140	1.20					
8.5	10900	205.71	4220	1.25					
9.6	9700	181.77	4370	1.40	R	87	DRE 90M4	170 262	
11	8290	155.34	4490	1.65	RF	87	DRE 90M4	185 263	
12	7600	142.41	4490	1.80	RM	87	DRE 90M4	250 263	
14	6670	124.97	4490	2.0					
15	6320	118.43*	4490	2.2					
17	5530	103.65	4490	2.5					
19	4980	93.38	4490	2.8					
14	6600	246.54	4490	2.1	R	87	DRE 90M2	170 262	
16	5790	216.54	4490	2.4	RF	87	DRE 90M2	185 263	
17	5500	205.71	4490	2.5	RM	87	DRE 90M2	250 263	
19	4860	181.77	4490	2.8					

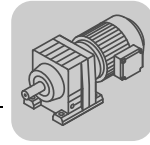
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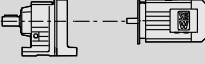
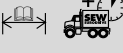


R..DRE/DRS
R..DRE/DRS [HP]

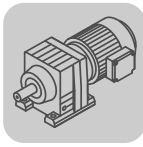
P_m [HP]	n_a [rpm]	T_a [lb-in]	i	$F_{Ra}^{1)}$ [lb]	SEW f_B		m [lbs]	
1.5	14	6480	121.42	2400	1.10			
	17	5500	102.99	2570	1.30			
	19	4960	92.97	2650	1.45			
	21	4360	81.80	2720	1.65	R 77	DRE 90M4	110 259
	23	4120	77.24	2750	1.75	RF 77	DRE 90M4	120 260
	26	3510	65.77	2810	2.1	RM 77	DRE 90M4	175 260
	30	3080	57.68	2850	2.4			
	33	2780	52.07	2870	2.6			
	38	2440	45.81	2890	3.0			
	21	4460	166.59	2710	1.65			
24	3900	145.67	2770	1.85	R 77	DRE 90M2	110 259	
25	3700	138.39	2790	1.95	RF 77	DRE 90M2	120 260	
29	3250	121.42	2830	2.2	RM 77	DRE 90M2	175 260	
34	2750	102.99	2870	2.6				
37	2480	92.97	2890	2.9				
18	5120	95.91	1750	1.05				
20	4600	86.11	1890	1.15				
23	3960	74.17	2020	1.35				
25	3720	69.75	2070	1.40				
28	3270	61.26	2140	1.60				
31	3030	56.89	2170	1.75	R 67	DRE 90M4	96 256	
34	2750	51.56	2210	1.95	RF 67	DRE 90M4	105 257	
38	2470	46.29	2240	2.2	RM 67	DRE 90M4	135 257	
44	2120	39.88*	2280	2.4				
46	2000	37.50	2290	2.5				
54	1720	32.27	2250	2.8				
60	1530	28.83	2180	3.0				
22	4230	158.14	1970	1.25				
25	3680	137.67	2070	1.45				
27	3450	128.97	2110	1.55				
30	3050	113.94	2170	1.75	R 67	DRE 90M2	96 256	
33	2830	105.83	2200	1.85	RF 67	DRE 90M2	105 257	
36	2560	95.91	2230	2.1	RM 67	DRE 90M2	135 257	
40	2300	86.11	2260	2.3				
47	1980	74.17	2290	2.7				
50	1860	69.75	2300	2.8				
25	3690	69.23	1500	1.10				
27	3460	64.85	1480	1.15				
30	3060	57.29	1440	1.30				
33	2840	53.22	1420	1.40				
36	2570	48.23	1390	1.55	R 57	DRE 90M4	81 253	
40	2310	43.30	1360	1.70	RF 57	DRE 90M4	89 254	
47	1990	37.30*	1310	2.0	RM 57	DRE 90M4	115 254	
50	1870	35.07	1290	2.1				
58	1610	30.18	1240	2.5				
65	1440	26.97	1210	2.8				
23	3960	147.92	1520	1.00				
27	3440	128.77	1480	1.15				
29	3230	120.63	1460	1.25				
33	2850	106.58	1420	1.40				
35	2650	98.99	1400	1.50	R 57	DRE 90M2	81 253	
39	2400	89.71	1370	1.65	RF 57	DRE 90M2	89 254	
43	2150	80.55	1340	1.85	RM 57	DRE 90M2	115 254	
50	1850	69.23	1290	2.2				
54	1730	64.85	1270	2.3				
61	1530	57.29	1230	2.6				
65	1420	53.22	1210	2.8				
66	1400	26.31	1200	2.8	R 57	DRE 90M4	79 253	
70	1330	24.99*	1190	3.0	RF 57	DRE 90M4	87 254	
					RM 57	DRE 90M4	115 254	
36	2550	47.75	1070	1.05				
41	2280	42.87	1050	1.15				
47	1970	36.93	1010	1.35				
50	1850	34.73	1000	1.45	R 47	DRE 90M4	70 250	
58	1590	29.88	970	1.65	RF 47	DRE 90M4	70 251	
65	1420	26.70	940	1.85				
74	1250	23.59	910	2.1				

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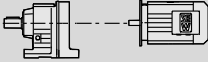



P_m [HP]	n_a [rpm]	T_a [lb-in]	i	$F_{Ra}^{1)}$ [lb]	SEW f_B		m [lbs]		
1.5	37	2500	93.68	1060	1.05				
	41	2270	84.90	1040	1.15				
	46	2040	76.23	1020	1.30				
	51	1830	68.54	1000	1.45				
	54	1720	64.21	980	1.55				
	61	1510	56.73	960	1.75	R 47	DRE 90M2	70	250
	66	1410	52.69	940	1.90	RF 47	DRE 90M2	70	251
	73	1270	47.75	920	2.1				
	81	1140	42.87	890	2.3				
	94	980	36.93	860	2.7				
	100	920	34.73	850	2.8				
	65	1420	26.74	940	1.85				
	75	1240	23.28	910	2.1				
	80	1160	21.81	900	2.3	R 47	DRE 90M4	68	250
	90	1020	19.27	870	2.5	RF 47	DRE 90M4	69	251
	97	950	17.89	850	2.7				
	107	860	16.22	830	2.8				
	54	1730	32.40	800	1.00	R 37	DRE 90M4	60	247
	61	1530	28.73	860	1.15	RF 37	DRE 90M4	63	248
	71	1300	24.42	870	1.35				
	57	1630	61.18	830	1.10				
	62	1490	55.76	870	1.20				
	72	1280	48.08	860	1.35				
	77	1200	44.81	850	1.45				
	89	1040	39.17	830	1.70	R 37	DRE 90M2	60	247
	94	980	36.72	810	1.80	RF 37	DRE 90M2	63	248
	107	860	32.40	790	2.0				
	121	765	28.73	765	2.3				
	142	650	24.42	735	2.7				
	78	1190	22.27	850	1.50				
	90	1030	19.31	820	1.70				
	96	960	18.05	810	1.85				
	112	830	15.60	780	2.1	R 37	DRE 90M4	59	247
	131	705	13.25	750	2.4	RF 37	DRE 90M4	62	248
	147	630	11.83	730	2.6				
	172	535	10.11	700	2.8				
	184	505	9.47	685	2.9				
	156	595	22.27	715	3.0	R 37	DRE 90M2	59	247
						RF 37	DRE 90M2	62	248
	88	1050	39.25	530	1.10				
94	980	36.79	525	1.15					
107	860	32.47	515	1.30	R 27	DRE 90M2	47	244	
121	770	28.78	500	1.50	RF 27	DRE 90M2	47	245	
142	655	24.47	485	1.75					
90	1030	19.35	530	1.10					
96	960	18.08	525	1.20					
111	830	15.63	510	1.40					
131	705	13.28*	490	1.60					
147	630	11.86	480	1.80					
172	540	10.13	465	2.0	R 27	DRE 90M4	46	244	
185	500	9.41	445	2.2	RF 27	DRE 90M4	46	245	
213	435	8.16	430	2.4					
228	405	7.63*	425	2.4					
264	350	6.59	410	2.7					
311	295	5.60*	390	2.9					
155	595	22.32	475	1.90					
179	515	19.35	460	2.2	R 27	DRE 90M2	46	244	
192	480	18.08	450	2.4	RF 27	DRE 90M2	46	245	
222	415	15.63	435	2.8					
201	460	8.65	1730	2.7	RX 87	DRE 90M4	125	232	
					RXF 87	DRE 90M4	135	233	
271	340	6.41	1240	2.7	RX 77	DRE 90M4	88	230	
					RXF 77	DRE 90M4	93	231	
336	275	5.18	800	2.4	RX 67	DRE 90M4	66	228	
384	240	4.53	770	3.0	RXF 67	DRE 90M4	75	229	
400	230	4.35	610	2.6	RX 57	DRE 90M4	60	226	
					RXF 57	DRE 90M4	64	227	

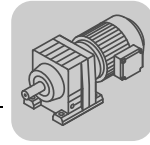
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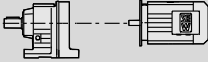



R..DRE/DRS
R..DRE/DRS [HP]

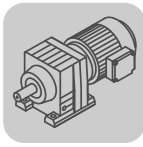
P_m [HP]	n_a [rpm]	T_a [lb-in]	i	$F_{Ra}^{1)}$ [lb]	SEW f_B		m [lbs]		
2.0	0.75	151200	2333	27000	1.05				
	0.83	133900	2085	27000	1.20				
	0.93	119400	1877	27000	1.35				
	1.0	106300	1670	27000	1.50	R	167R97	DRE 90L4	1680 275
	1.2	94400	1438	27000	1.70	RF	167R97	DRE 90L4	1700 275
	1.4	83900	1279	27000	1.90	RM	167R97	DRE 90L4	2130 275
	1.6	72800	1123	27000	2.2				
	1.7	64700	999	27000	2.5				
	2.0	55800	861	27000	2.8				
		1.0	113300	1705	14200	1.00			
	1.1	101800	1536	14700	1.15				
	1.3	88100	1329	15200	1.30				
	1.5	76900	1166	15600	1.50	R	147R77	DRE 90L4	960 275
	1.7	67600	1029	15900	1.70	RF	147R77	DRE 90L4	980 275
	2.0	58600	889	16100	1.95	RM	147R77	DRE 90L4	1340 275
	2.2	51500	784	16300	2.2				
	2.5	45500	695	16400	2.5				
	2.8	41100	619	16400	2.8				
	1.7	69600	1043	12100	1.00	R	137R77	DRE 90L4	650 275
	2.0	59000	888	12600	1.20	RF	137R77	DRE 90L4	700 275
	2.5	46100	699	13100	1.55	RM	137R77	DRE 90L4	940 275
	2.9	40000	609	13200	1.75				
	1.8	63700	951	12400	1.10				
	2.1	55100	831	12700	1.30				
	2.4	48100	730	13000	1.45	R	137R77	DRE 90L4	670 275
	2.8	41100	629	13200	1.70	RF	137R77	DRE 90L4	720 275
	3.1	37200	560	13300	1.90	RM	137R77	DRE 90L4	960 275
	3.6	32100	490	13400	2.2				
	4.1	28000	428	13500	2.5				
	4.6	25300	381	13600	2.8				
	3.1	38300	564	13300	1.85	R	137R77	DRE 90L4	640 275
	3.4	35000	517	13400	2.0	RF	137R77	DRE 90L4	700 275
	3.8	30600	453	13500	2.3	RM	137R77	DRE 90L4	940 275
	4.6	25300	376	13600	2.8				
	3.3	34800	528	7030	1.10	R	107R77	DRE 90L4	465 275
						RF	107R77	DRE 90L4	480 275
						RM	107R77	DRE 90L4	670 275
	3.2	35600	544	6930	1.05				
	3.5	32200	492	7320	1.20				
	4.2	27300	417	7790	1.40	R	107R77	DRE 90L4	475 275
	4.7	24400	369	8010	1.55	RF	107R77	DRE 90L4	490 275
	5.4	21300	323	8150	1.80	RM	107R77	DRE 90L4	680 275
	6.1	18700	285	8230	2.0				
	6.9	16500	253	8290	2.3				
	8.1	14000	214	8350	2.7				
	3.7	31800	469	7360	1.20				
	4.1	28900	426	7650	1.30				
	4.6	25500	377	7930	1.50	R	107R77	DRE 90L4	460 275
	5.4	21900	325	8140	1.75	RF	107R77	DRE 90L4	475 275
	6.1	19100	284	8220	2.00	RM	107R77	DRE 90L4	670 275
	6.8	17100	256	8280	2.2				
	7.9	14700	220	8340	2.6				
	9.0	12800	193	8380	3.0				
	4.6	25400	379	4900	1.05				
	5.2	22600	336	5340	1.15	R	97R57	DRE 90L4	315 275
	5.9	19800	296	5690	1.35	RF	97R57	DRE 90L4	355 275
	7.0	16600	249	6030	1.60	RM	97R57	DRE 90L4	465 275
	7.4	15500	234	6130	1.70				
	8.3	13800	209	6190	1.90				
	4.7	25100	370	4950	1.05				
	5.0	23700	349	5180	1.10	R	97R57	DRE 90L4	310 275
	5.8	20100	297	5660	1.30	RF	97R57	DRE 90L4	345 275
	6.4	18200	270	5870	1.45	RM	97R57	DRE 90L4	460 275
	7.7	15400	227	6130	1.70				
	8.9	13200	195	3880	1.05	R	87R57	DRE 90L4	220 275
						RF	87R57	DRE 90L4	235 275
						RM	87R57	DRE 90L4	300 275

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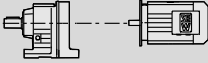




P_m [HP]	n_a [rpm]	T_a [lb-in]	i	$F_{Ra}^{1)}$ [lb]	SEW f_B		m [lbs]	
2.0	6.8	18600	255.71	5830	1.45			
	7.2	17500	241.25	5940	1.50			
	8.0	15700	216.28	6110	1.70	R 97	DRE 90L4	265 265
	9.3	13500	186.30	6200	1.95	RF 97	DRE 90L4	300 266
	10	12300	170.02	6240	2.1	RM 97	DRE 90L4	415 266
	12	10900	150.78	6290	2.4			
	14	9230	126.75	6330	2.9			
	9.6	13200	181.77	3890	1.05			
	11	11300	155.34	4170	1.20			
	12	10300	142.41	4290	1.30			
	14	9100	124.97	4430	1.50	R 87	DRE 90L4	175 262
	15	8620	118.43*	4480	1.60	RF 87	DRE 90L4	190 263
	17	7540	103.65	4490	1.80	RM 87	DRE 90L4	255 263
	19	6800	93.38	4490	2.0			
21	5960	81.92	4490	2.3				
24	5280	72.57	4490	2.6				
27	4630	63.68*	4490	3.0				
19	6770	92.97	2340	1.05				
21	5950	81.80	2490	1.20				
23	5620	77.24	2550	1.30				
26	4790	65.77	2670	1.50	R 77	DRE 90L4	115 259	
30	4200	57.68	2740	1.75	RF 77	DRE 90L4	125 260	
33	3790	52.07	2780	1.90	RM 77	DRE 90L4	180 260	
38	3330	45.81	2820	2.2				
40	3150	43.26	2840	2.3				
47	2680	36.83	2840	2.7				
52	2430	33.47	2760	3.0				
25	5080	69.75	1760	1.05				
28	4460	61.26	1920	1.20				
31	4140	56.89	1990	1.30				
34	3750	51.56	2060	1.40	R 67	DRE 90L4	100 256	
38	3370	46.29	2120	1.55	RF 67	DRE 90L4	110 257	
44	2900	39.88*	2190	1.75	RM 67	DRE 90L4	145 257	
46	2730	37.50	2210	1.85				
54	2350	32.27	2200	2.0				
60	2090	28.83	2130	2.2				
62	2040	28.13	2120	2.3	R 67	DRE 90L4	99 256	
65	1940	26.72	2090	2.4	RF 67	DRE 90L4	105 257	
74	1700	23.44	2010	2.9	RM 67	DRE 90L4	140 257	
33	3870	53.22	1330	1.05				
36	3510	48.23	1310	1.15				
40	3150	43.30	1280	1.25	R 57	DRE 90L4	87 253	
47	2710	37.30*	1250	1.45	RF 57	DRE 90L4	94 254	
50	2550	35.07	1230	1.55	RM 57	DRE 90L4	120 254	
58	2190	30.18	1190	1.80				
65	1960	26.97	1160	2.0				
66	1910	26.31	1150	2.1	R 57	DRE 90L4	85 253	
70	1820	24.99*	1140	2.2	RF 57	DRE 90L4	92 254	
79	1590	21.93	1110	2.5	RM 57	DRE 90L4	120 254	
94	1350	18.60*	1060	2.9				
50	2520	34.73	940	1.05				
58	2170	29.88	910	1.20	R 47	DRE 90L4	75 250	
65	1940	26.70	890	1.35	RF 47	DRE 90L4	75 251	
74	1710	23.59	870	1.55				
75	1690	23.28	870	1.55				
80	1580	21.81	860	1.65				
90	1400	19.27	830	1.85				
97	1300	17.89	820	1.95				
107	1180	16.22	800	2.1				
120	1060	14.56	780	2.2	R 47	DRE 90L4	74 250	
139	910	12.54	750	2.4	RF 47	DRE 90L4	74 251	
148	850	11.79	740	2.5				
171	735	10.15	710	2.8				
192	660	9.07	690	3.0				
224	560	7.76*	650	2.6				
250	505	6.96	630	2.8				
71	1770	24.42	580	1.00	R 37	DRE 90L4	65 247	
					RF 37	DRE 90L4	68 248	

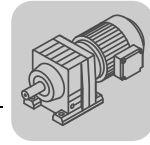
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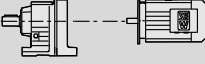
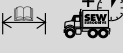


R..DRE/DRS
R..DRE/DRS [HP]

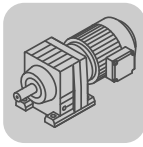
P_m [HP]	n_a [rpm]	T_a [lb-in]	i	$F_{Ra}^{1)}$ [lb]	SEW f_B		m [lbs]			
2.0	90	1400	19.31	710	1.25					
	96	1310	18.05	735	1.35					
	112	1130	15.60	745	1.55					
	131	960	13.25	720	1.75					
	147	860	11.83	700	1.90	R	37	DRE 90L4	65	247
	172	735	10.11	675	2.0	RF	37	DRE 90L4	68	248
	184	685	9.47	665	2.1					
	218	580	7.97	635	2.4					
	261	485	6.67	600	2.6					
	111	1130	15.63	470	1.00					
	131	960	13.28*	460	1.20					
	147	860	11.86	450	1.30					
	172	735	10.13	440	1.45					
	213	590	8.16	405	1.75					
	228	555	7.63*	400	1.80	R	27	DRE 90L4	52	244
	264	480	6.59	390	1.95	RF	27	DRE 90L4	52	245
	311	405	5.60*	375	2.2					
	348	360	5.00*	365	2.3					
	407	310	4.27	355	2.5					
	435	290	4.00*	345	2.6					
	516	245	3.37	330	2.8					
	228	555	7.63	1640	2.4	RX	87	DRE 90L4	130	232
	242	520	7.20*	1610	2.4	RXF	87	DRE 90L4	140	233
	309	410	5.63	1180	2.4	RX	77	DRE 90L4	93	230
	325	385	5.35*	1160	2.3	RXF	77	DRE 90L4	98	231
	384	330	4.53	755	2.2					
405	310	4.30*	745	2.3	RX	67	DRE 90L4	71	228	
461	275	3.77	720	2.8	RXF	67	DRE 90L4	80	229	
459	275	3.79	575	2.2						
490	255	3.55*	560	2.4	RX	57	DRE 90L4	66	226	
555	225	3.14	545	2.5	RXF	57	DRE 90L4	70	227	
597	210	2.91	530	2.8						
3.0	1.0	157600	1674	27000	1.00					
	1.2	138000	1485	27000	1.15					
	1.3	123300	1342	27000	1.30					
	1.4	114300	1229	27000	1.40					
	1.6	102200	1111	27000	1.55	R	167R107	DRE 100L4	1810	275
	1.8	90200	950	27000	1.75	RF	167R107	DRE 100L4	1820	275
	2.0	80900	860	27000	1.95	RM	167R107	DRE 100L4	2250	275
	2.3	70900	763	27000	2.2					
	2.5	63300	690	27000	2.5					
	1.2	140800	1438	27000	1.15					
	1.4	125300	1279	27000	1.25					
	1.5	109000	1123	27000	1.45	R	167R97	DRE 100L4	1700	275
	1.7	97000	999	27000	1.65	RF	167R97	DRE 100L4	1710	275
	2.0	83600	861	27000	1.90	RM	167R97	DRE 100L4	2140	275
	2.3	74000	760	27000	2.2					
	2.6	61400	656	27000	2.6					
	3.2	51000	533	16300	2.2	R	147R87	DRE 100L4	1020	275
	3.8	43800	462	16400	2.6	RF	147R87	DRE 100L4	1040	275
	4.1	41400	426	16400	2.8	RM	147R87	DRE 100L4	1410	275
	1.5	114600	1166	14100	1.00					
	1.7	100800	1029	14700	1.15					
	2.0	87300	889	15300	1.30					
	2.2	76800	784	15600	1.50					
	2.5	67900	695	15900	1.70	R	147R77	DRE 100L4	970	275
	2.8	61100	619	16000	1.90	RF	147R77	DRE 100L4	990	275
	3.1	55000	558	16200	2.1	RM	147R77	DRE 100L4	1360	275
	3.5	48100	489	16300	2.4					
	4.2	40700	415	16400	2.8					
	2.5	68700	699	12100	1.05	R	137R77	DRE 100L4	660	275
	2.8	59600	609	12500	1.20	RF	137R77	DRE 100L4	720	275
						RM	137R77	DRE 100L4	960	275

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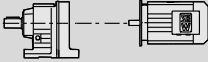



P_m [HP]	n_a [rpm]	T_a [lb-in]	i	$F_{Ra}^{1)}$ [lb]	SEW f_B				m [lbs]		
3.0	2.8	61400	629	12500	1.15						
	3.1	55300	560	12700	1.30						
	3.5	47900	490	13000	1.50						
	4.0	41800	428	13200	1.70	R	137R77	DRE	100L4	680	275
	4.6	37600	381	13300	1.90	RF	137R77	DRE	100L4	740	275
	5.4	31900	323	13500	2.2	RM	137R77	DRE	100L4	980	275
	6.0	28700	291	13500	2.5						
	6.8	25100	255	13600	2.8						
	3.1	56700	564	12700	1.25						
	3.4	51900	517	12900	1.35						
	3.8	45400	453	13100	1.55	R	137R77	DRE	100L4	660	275
	4.6	37600	376	13300	1.90	RF	137R77	DRE	100L4	710	275
	5.1	33800	339	13400	2.1	RM	137R77	DRE	100L4	960	275
	5.8	29500	297	13500	2.4						
	4.7	36300	369	6850	1.05						
	5.4	31800	323	7370	1.20						
	6.1	27900	285	7730	1.35	R	107R77	DRE	100L4	495	275
	6.9	24700	253	7990	1.55	RF	107R77	DRE	100L4	510	275
	8.1	20900	214	8170	1.80	RM	107R77	DRE	100L4	700	275
	9.3	18300	187	8250	2.1						
	4.6	37800	377	6650	1.00						
	5.4	32500	325	7290	1.15						
	6.1	28300	284	7700	1.35	R	107R77	DRE	100L4	480	275
	6.8	25500	256	7930	1.50	RF	107R77	DRE	100L4	495	275
7.9	21900	220	8130	1.75	RM	107R77	DRE	100L4	690	275	
9.0	19100	193	8220	2.00							
10	17200	172	8280	2.2							
7.0	24600	249	5030	1.10	R	97R57	DRE	100L4	335	275	
7.4	23000	234	5280	1.15	RF	97R57	DRE	100L4	370	275	
8.3	20600	209	5610	1.30	RM	97R57	DRE	100L4	485	275	
7.6	22800	227	5310	1.15	R	97R57	DRE	100L4	325	275	
					RF	97R57	DRE	100L4	365	275	
					RM	97R57	DRE	100L4	480	275	
6.9	26900	251.15	7820	1.40							
7.6	24600	229.95	8000	1.55							
8.5	21700	203.16	8140	1.75	R	107	DRE	100L4	410	267	
10	18400	172.34	8240	2.1	RF	107	DRE	100L4	425	268	
11	17000	158.68	8280	2.2	RM	107	DRE	100L4	620	268	
12	15100	141.83	8330	2.5							
14	13600	127.68	8360	2.8							
8.0	23100	216.28	5260	1.15							
9.3	19900	186.30	5680	1.35							
10	18200	170.02	5880	1.45							
12	16100	150.78	6070	1.65	R	97	DRE	100L4	280	265	
14	13500	126.75	6200	1.95	RF	97	DRE	100L4	320	266	
15	12400	116.48	6240	2.1	RM	97	DRE	100L4	430	266	
17	11000	103.44	6280	2.4							
19	9900	92.48	6320	2.7							
21	8900	83.15	6280	3.0							
14	13300	124.97	3860	1.00							
15	12600	118.43*	3980	1.10							
17	11100	103.65	4200	1.25							
19	10000	93.38	4340	1.35	R	87	DRE	100L4	190	262	
21	8770	81.92	4460	1.55	RF	87	DRE	100L4	205	263	
24	7770	72.57	4490	1.75	RM	87	DRE	100L4	270	263	
27	6820	63.68*	4490	2.0							
29	6460	60.35*	4490	2.1							
33	5650	52.82	4490	2.4							
36	5090	47.58	4370	2.7							
26	7040	65.77	2280	1.05							
30	6170	57.68	2450	1.15							
33	5570	52.07	2560	1.30							
38	4900	45.81	2650	1.50	R	77	DRE	100L4	130	259	
40	4630	43.26	2690	1.55	RF	77	DRE	100L4	145	260	
47	3940	36.83	2750	1.85	RM	77	DRE	100L4	200	260	
52	3580	33.47	2680	2.0							
60	3100	29.00	2580	2.3							
69	2700	25.23	2480	2.6							

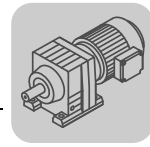
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R..DRE/DRS
R..DRE/DRS [HP]

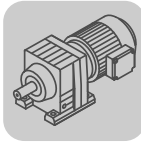
P_m [HP]	n_a [rpm]	T_a [lb-in]	i	$F_{Ra}^{1)}$ [lb]	SEW f_B		m [lbs]	
3.0	74	2500	23.37	2430	2.9	R 77 DRE 100L4 RF 77 DRE 100L4 RM 77 DRE 100L4	130 259 140 260 195 260	
	37	4960	46.29	1800	1.05			
	44	4270	39.88*	1960	1.20	R 67 DRE 100L4	120 256	
	46	4010	37.50	2010	1.25	RF 67 DRE 100L4	125 257	
	54	3450	32.27	2110	1.40	RM 67 DRE 100L4	160 257	
	60	3080	28.83	2050	1.50			
	74	2510	23.44	1950	1.95			
	87	2130	19.89	1860	2.5	R 67 DRE 100L4	115 256	
	97	1920	17.95	1810	2.7	RF 67 DRE 100L4	125 257	
	110	1690	15.79	1750	2.9	RM 67 DRE 100L4	160 257	
	47	3990	37.30*	1130	1.00			
	49	3750	35.07	1120	1.05	R 57 DRE 100L4	105 253	
	57	3230	30.18	1100	1.25	RF 57 DRE 100L4	110 254	
	64	2880	26.97	1080	1.40	RM 57 DRE 100L4	140 254	
	79	2340	21.93	1040	1.70			
	93	1990	18.60*	1000	2.0			
	103	1790	16.79	980	2.2	R 57 DRE 100L4	100 253	
	117	1580	14.77*	950	2.4	RF 57 DRE 100L4	110 254	
	124	1490	13.95*	940	2.6	RM 57 DRE 100L4	135 254	
	146	1270	11.88	900	2.8			
	161	1150	10.79	880	3.0			
	74	2520	23.59	800	1.05	R 47 DRE 100L4 RF 47 DRE 100L4	93 250 93 251	
	90	2060	19.27	775	1.25			
	107	1730	16.22	750	1.40			
	119	1550	14.56	735	1.50			
	138	1340	12.54	710	1.65			
	147	1260	11.79	700	1.70			
	171	1080	10.15	680	1.85			
	191	970	9.07	660	2.0	R 47 DRE 100L4	91 250	
	217	850	8.01	640	2.1	RF 47 DRE 100L4	91 251	
	224	830	7.76*	625	1.75			
	249	745	6.96	605	1.90			
	289	640	6.00	585	2.2			
	308	600	5.64*	575	2.3			
	357	520	4.85	555	2.6			
	400	460	4.34	535	2.8			
	111	1670	15.60	400	1.05			
	131	1420	13.25	500	1.20			
	147	1260	11.83	550	1.30			
	172	1080	10.11	610	1.40			
	183	1010	9.47	625	1.45			
	218	850	7.97	605	1.60	R 37 DRE 100L4	83 247	
	260	710	6.67	570	1.80	RF 37 DRE 100L4	86 248	
	306	605	5.67	550	2.1			
	343	540	5.06	535	2.2			
	402	460	4.32	515	2.4			
	429	430	4.05	505	2.5			
	509	365	3.41	485	2.7			
	171	1080	10.13	340	1.00			
	263	705	6.59	325	1.35			
310	595	5.60*	350	1.45	R 27 DRE 100L4	70 244		
347	535	5.00*	340	1.55	RF 27 DRE 100L4	70 245		
406	455	4.27	330	1.70				
434	425	4.00*	325	1.75				
515	360	3.37	315	1.95				
211	880	8.23	2100	2.3	RX 97 DRE 100L4	200 234		
242	765	7.16*	2010	3.0	RXF 97 DRE 100L4	220 235		
269	690	6.45	1540	2.5	RX 87 DRE 100L4	145 232		
					RXF 87 DRE 100L4	160 233		
367	505	4.73	1100	2.2	RX 77 DRE 100L4	110 230		
429	430	4.04*	1050	2.9	RXF 77 DRE 100L4	115 231		
460	400	3.77	695	1.90	RX 67 DRE 100L4	89 228		
542	340	3.20*	665	2.6	RXF 67 DRE 100L4	98 229		

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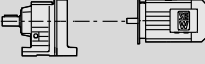




P _m [HP]	n _a [rpm]	T _a [lb-in]	i	F _{Ra} ¹⁾ [lb]	SEW f _B					m [lbs]	
3.0	553	335	3.14	525	1.70						
	657	280	2.64*	500	2.2	RX	57	DRE	100L4	83	226
	732	250	2.37	485	2.4	RXF	57	DRE	100L4	87	227
	850	215	2.04	465	2.8						
	904	205	1.92*	455	3.0						
5.0	1.8	154000	950	27000	1.05	R	167R107	DRE	100LC4	1810	275
	2.0	138800	860	27000	1.15	RF	167R107	DRE	100LC4	1820	275
	2.3	122200	763	27000	1.30	RM	167R107	DRE	100LC4	2260	275
	2.5	109700	690	27000	1.45						
	3.0	91900	585	27000	1.75						
	3.9	73800	446	27000	2.2	R	167R107	DRE	100LC4	1800	275
	4.4	65800	399	27000	2.4	RF	167R107	DRE	100LC4	1810	275
	4.9	59100	361	27000	2.7	RM	167R107	DRE	100LC4	2240	275
	5.4	53400	328	27000	3.0						
	2.0	141600	861	27000	1.10	R	167R97	DRE	100LC4	1700	275
	2.3	125200	760	27000	1.25	RF	167R97	DRE	100LC4	1720	275
	2.7	105500	656	27000	1.50	RM	167R97	DRE	100LC4	2150	275
	3.5	80900	503	27000	1.95						
	4.6	60600	376	27000	2.6						
	5.2	53900	335	27000	3.0						
	3.3	86900	533	15300	1.30	R	147R87	DRE	100LC4	1020	275
	3.8	74900	462	15700	1.55	RF	147R87	DRE	100LC4	1040	275
	4.1	70100	426	15800	1.65	RM	147R87	DRE	100LC4	1410	275
	4.8	60600	368	16100	1.90						
	5.4	53600	326	16200	2.2						
	6.2	45400	280	16400	2.5						
	7.1	40100	247	16500	2.9						
	2.5	114700	695	14100	1.00	R	147R77	DRE	100LC4	980	275
	2.8	102800	619	14700	1.10	RF	147R77	DRE	100LC4	1000	275
	3.1	92500	558	15100	1.25	RM	147R77	DRE	100LC4	1370	275
	3.6	81000	489	15500	1.40						
	4.2	68700	415	15900	1.65						
	4.1	70600	428	12000	1.00	R	137R77	DRE	100LC4	690	275
	4.6	63300	381	12400	1.10	RF	137R77	DRE	100LC4	740	275
	5.4	53700	323	12800	1.30	RM	137R77	DRE	100LC4	980	275
	6.0	48300	291	13000	1.45						
	6.9	42200	255	13200	1.65						
	7.8	37000	223	13300	1.90						
	8.9	32600	197	13400	2.2						
	10	28800	175	13500	2.4						
	4.6	63200	376	12400	1.10	R	137R77	DRE	100LC4	670	275
	5.2	56900	339	12700	1.25	RF	137R77	DRE	100LC4	720	275
	5.9	49800	297	12900	1.40	RM	137R77	DRE	100LC4	960	275
	8.2	35400	214	6960	1.05	R	107R77	DRE	100LC4	500	275
	9.3	30900	187	7460	1.25	RF	107R77	DRE	100LC4	510	275
						RM	107R77	DRE	100LC4	710	275
	8.0	36900	220	6770	1.05	R	107R77	DRE	100LC4	485	275
	9.0	32300	193	7310	1.20	RF	107R77	DRE	100LC4	495	275
	10	28900	172	7640	1.30	RM	107R77	DRE	100LC4	690	275
	8.6	36200	203.16	6850	1.05	R	107	DRE	100LC4	415	267
	10	30700	172.34	7470	1.25	RF	107	DRE	100LC4	430	268
	11	28300	158.68	7700	1.35	RM	107	DRE	100LC4	620	268
	12	25300	141.83	7950	1.50						
	14	22800	127.68	8100	1.65						
	15	20600	115.63	8180	1.85						
	17	18300	102.53	8030	2.1						
	19	16500	92.70	7810	2.3						
	22	14000	78.57	7460	2.7						
	24	13000	72.88	7300	2.9						
	14	22600	126.75	5340	1.15	R	97	DRE	100LC4	285	265
	15	20800	116.48	5580	1.30	RF	97	DRE	100LC4	325	266
	17	18400	103.44	5850	1.45	RM	97	DRE	100LC4	435	266
	19	16500	92.48	6040	1.60						
	21	14800	83.15	5960	1.80						
	24	12800	72.17	5750	2.1						
	27	11600	65.21	5600	2.3						
	29	10700	59.92	5480	2.5						
	33	9500	53.21	5300	2.8						

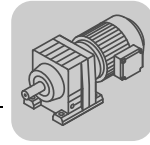
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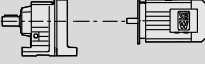



R..DRE/DRS
R..DRE/DRS [HP]

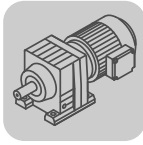
P_m [HP]	n_a [rpm]	T_a [lb-in]	i	$F_{Ra}^{1)}$ [lb]	SEW f_B		m [lbs]		
5.0	24	12900	72.57	3580	1.05				
	27	11300	63.68*	3800	1.20				
	29	10700	60.35*	3880	1.25				
	33	9430	52.82	4030	1.45	R 87	DRE 100LC4	195	262
	37	8500	47.58	4120	1.60	RF 87	DRE 100LC4	210	263
	42	7450	41.74	4010	1.85	RM 87	DRE 100LC4	275	263
	48	6580	36.84*	3890	2.1				
	54	5830	32.66*	3760	2.4				
	63	4980	27.88	3600	2.7				
	51	6140	34.40*	3820	2.2	R 87	DRE 100LC4	190	262
	56	5600	31.40	3720	2.4	RF 87	DRE 100LC4	210	263
	63	4970	27.84*	3600	2.8	RM 87	DRE 100LC4	275	263
	48	6580	36.83	2380	1.10	R 77	DRE 100LC4	135	259
	52	5970	33.47	2490	1.20	RF 77	DRE 100LC4	150	260
	60	5170	29.00	2410	1.40	RM 77	DRE 100LC4	205	260
	69	4500	25.23	2340	1.55				
	75	4170	23.37	2290	1.75				
	82	3820	21.43	2250	1.90				
	93	3350	18.80	2170	2.0	R 77	DRE 100LC4	135	259
	98	3180	17.82*	2140	2.2	RF 77	DRE 100LC4	145	260
	112	2780	15.60	2070	2.4	RM 77	DRE 100LC4	200	260
	125	2510	14.05	2010	2.5				
	142	2200	12.33	1940	2.8				
	75	4180	23.44	1800	1.20				
	88	3550	19.89	1740	1.50				
	97	3200	17.95	1700	1.65				
	111	2820	15.79	1650	1.75				
	117	2660	14.91	1630	1.85				
	138	2260	12.70	1560	2.0	R 67	DRE 100LC4	120	256
	152	2060	11.54	1530	2.2	RF 67	DRE 100LC4	130	257
	175	1780	10.00	1470	2.3	RM 67	DRE 100LC4	165	257
	201	1550	8.70*	1420	2.5				
	225	1390	7.79	1380	2.4				
	238	1310	7.36*	1360	2.5				
	279	1110	6.27	1290	2.6				
	307	1010	5.70	1260	2.7				
	355	880	4.93	1210	2.9				
	80	3910	21.93	890	1.00				
	94	3320	18.60*	880	1.20				
	104	2990	16.79	870	1.35				
	118	2630	14.77*	850	1.45				
	125	2490	13.95*	850	1.55				
	147	2120	11.88	820	1.70				
	162	1920	10.79	810	1.80	R 57	DRE 100LC4	105	253
	187	1670	9.35	790	1.95	RF 57	DRE 100LC4	115	254
	193	1610	9.06	785	2.0	RM 57	DRE 100LC4	140	254
	220	1420	7.97	765	2.2				
	232	1340	7.53	755	2.3				
	273	1140	6.41	725	2.6				
	300	1040	5.82	710	2.7				
347	900	5.05	685	3.0					
148	2100	11.79	595	1.05					
172	1810	10.15	610	1.10					
193	1620	9.07	600	1.20					
218	1430	8.01	585	1.25					
226	1380	7.76*	560	1.05	R 47	DRE 100LC4	96	250	
251	1240	6.96	550	1.15	RF 47	DRE 100LC4	96	251	
292	1070	6.00	535	1.30					
310	1000	5.64*	530	1.35					
361	860	4.85	515	1.55					
404	770	4.34	500	1.65					
457	680	3.83	490	1.85					
262	1190	6.67	200	1.05					
309	1010	5.67	290	1.25					
346	900	5.06	340	1.30					
405	770	4.32	390	1.45	R 37	DRE 100LC4	87	247	
432	720	4.05	410	1.50	RF 37	DRE 100LC4	90	248	
513	605	3.41	450	1.65					

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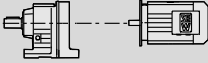



P _m [HP]	n _a [rpm]	T _a [lb-in]	i	F _{Ra} ¹⁾ [lb]	SEW f _B					m [lbs]							
5.0	410	760	4.27	151	1.00	R	27	DRE	100LC4	74	244						
	438	710	4.00*	175	1.05												
	519	600	3.37	225	1.15	RF	27	DRE	100LC4	74	245						
	213	1460	8.23	2030	1.35												
	244	1270	7.16*	1950	1.80	RX	97	DRE	100LC4	205	234						
	267	1170	6.56	1900	2.3												
	271	1150	6.45	1480	1.45	RXF	97	DRE	100LC4	225	235						
	315	990	5.56*	1420	2.0												
	345	900	5.07	1380	2.4	RX	87	DRE	100LC4	150	232						
	370	840	4.73	1050	1.30												
	433	720	4.04*	1000	1.75	RXF	87	DRE	100LC4	160	233						
	472	660	3.70	980	2.0												
	538	580	3.25*	940	2.8	RX	77	DRE	100LC4	115	230						
	464	670	3.77	650	1.15												
	547	570	3.20*	625	1.55	RXF	77	DRE	100LC4	120	231						
	606	515	2.89	610	1.80												
	689	450	2.54	590	2.3	RX	67	DRE	100LC4	93	228						
	729	425	2.40*	580	2.5												
	558	560	3.14	480	1.05	RXF	67	DRE	100LC4	100	229						
	663	470	2.64*	460	1.30												
738	420	2.37	450	1.45	RX	57	DRE	100LC4	88	226							
857	360	2.04	435	1.65													
911	340	1.92*	430	1.80	RXF	57	DRE	100LC4	92	227							
1060	295	1.65	410	2.1													
1185	260	1.48	400	2.3	RX	57	DRE	100LC4	88	226							
1340	230	1.30	385	2.4													
5.4	2.0	149200	860	27000	1.05	R	167R107	DRE	132S4	1840	275						
	2.3	131400	763	27000	1.20												
	2.6	118000	690	27000	1.35												
	3.0	98900	585	27000	1.60												
	4.0	79200	446	27000	2.0	RF	167R107	DRE	132S4	1820	275						
	4.4	70700	399	27000	2.2												
	4.9	63500	361	27000	2.5												
	5.4	57400	328	27000	2.8												
	2.0	152000	861	27000	1.05	RM	167R107	DRE	132S4	2280	275						
	2.3	134400	760	27000	1.20												
	2.7	113500	656	27000	1.40												
	3.5	87000	503	27000	1.85												
	4.7	65100	376	27000	2.4	R	167R97	DRE	132S4	1730	275						
	5.3	57900	335	27000	2.8												
	3.3	93300	533	15000	1.25							RF	167R97	DRE	132S4	1750	275
	3.8	80500	462	15500	1.45												
	4.1	75300	426	15700	1.55												
	4.8	65000	368	16000	1.75												
	5.4	57500	326	16100	2.0	RM	167R97	DRE	132S4	2180	275						
	6.3	48800	280	16300	2.4												
	7.1	43100	247	16400	2.7												
	2.8	110300	619	14300	1.05							R	147R87	DRE	132S4	1060	275
	3.2	99300	558	14800	1.15												
	3.6	87000	489	15300	1.30												
	4.2	73700	415	15700	1.55												
	4.6	67900	381	12100	1.05	RF	147R87	DRE	132S4	1070	275						
	5.5	57600	323	12600	1.25												
	6.1	51800	291	12900	1.35												
	6.9	45300	255	13100	1.55												
	7.9	39700	223	13300	1.80	RM	147R87	DRE	132S4	1440	275						
	9.0	34900	197	13400	2.0												
	10	30900	175	13500	2.3												
	4.7	67800	376	12200	1.05							R	137R77	DRE	132S4	720	275
	5.2	61000	339	12500	1.15												
	5.9	53400	297	12800	1.30												
	8.2	38000	214	6630	1.00												
	9.4	33100	187	7220	1.15	RF	137R77	DRE	132S4	770	275						
	9.1	34700	193	7050	1.10												
	10	31000	172	7440	1.20												
												RM	137R77	DRE	132S4	1020	275

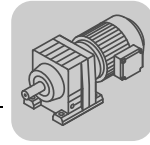
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R..DRE/DRS
R..DRE/DRS [HP]

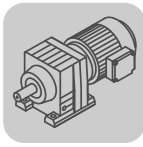
P _m [HP]	n _a [rpm]	T _a [lb-in]	i	F _{Ra} ¹⁾ [lb]	SEW f _B						
										R	RF
5.4	10	32900	172.34	7240	1.15						
	11	30300	158.68	7510	1.25						
	12	27100	141.83	7800	1.40						
	14	24400	127.68	8010	1.55	R	107	DRE	132S4	445	267
	15	22100	115.63	8130	1.70	RF	107	DRE	132S4	455	268
	17	19600	102.53	7950	1.95	RM	107	DRE	132S4	650	268
	19	17700	92.70	7730	2.1						
	22	15000	78.57	7390	2.5						
	24	13900	72.88	7240	2.7						
	14	24200	126.75	5100	1.10						
	15	22300	116.48	5390	1.20						
	17	19800	103.44	5700	1.35						
	19	17700	92.48	5930	1.50	R	97	DRE	132S4	315	265
	21	15900	83.15	5890	1.65	RF	97	DRE	132S4	355	266
	24	13800	72.17	5680	1.90	RM	97	DRE	132S4	465	266
	27	12400	65.21	5540	2.1						
	29	11400	59.92	5420	2.3						
	33	10100	53.21	5250	2.6						
	37	9110	47.58	5100	2.9						
	28	12100	63.68*	3480	1.10						
	29	11500	60.35*	3570	1.20						
	33	10100	52.82	3760	1.35	R	87	DRE	132S4	225	262
	37	9110	47.58	3880	1.50	RF	87	DRE	132S4	240	263
	42	7990	41.74	3970	1.70	RM	87	DRE	132S4	310	263
48	7050	36.84*	3840	1.95							
54	6250	32.66*	3730	2.2							
63	5330	27.88	3570	2.5							
51	6580	34.40*	3780	2.0	R	87	DRE	132S4	225	262	
56	6010	31.40	3690	2.3	RF	87	DRE	132S4	240	263	
63	5330	27.84*	3570	2.6	RM	87	DRE	132S4	305	263	
48	7050	36.83	2280	1.05							
53	6400	33.47	2410	1.15	R	77	DRE	132S4	170	259	
61	5550	29.00	2380	1.30	RF	77	DRE	132S4	180	260	
70	4830	25.23	2300	1.45	RM	77	DRE	132S4	235	260	
76	4470	23.37	2260	1.60							
82	4100	21.43	2220	1.75							
94	3600	18.80	2150	1.90							
99	3410	17.82*	2120	2.0	R	77	DRE	132S4	165	259	
113	2980	15.60	2050	2.2	RF	77	DRE	132S4	180	260	
126	2690	14.05	1990	2.4	RM	77	DRE	132S4	235	260	
143	2360	12.33	1920	2.6							
162	2080	10.88	1860	2.8							
89	3800	19.89	1710	1.40							
98	3430	17.95	1680	1.50							
112	3020	15.79	1630	1.65							
118	2850	14.91	1610	1.70							
139	2430	12.70	1550	1.90							
153	2210	11.54	1510	2.0	R	67	DRE	132S4	155	256	
177	1910	10.00	1450	2.2	RF	67	DRE	132S4	160	257	
203	1660	8.70*	1400	2.3	RM	67	DRE	132S4	195	257	
226	1490	7.79	1370	2.2							
240	1400	7.36*	1340	2.3							
282	1190	6.27	1280	2.4							
310	1090	5.70	1250	2.5							
358	940	4.93	1200	2.7							
411	820	4.29	1150	2.9							
95	3560	18.60*	850	1.10							
105	3210	16.79	850	1.25							
119	2820	14.77*	830	1.35							
127	2670	13.95*	830	1.40							
149	2270	11.88	810	1.60							
164	2060	10.79	795	1.65							
189	1790	9.35	775	1.85	R	57	DRE	132S4	140	253	
195	1730	9.06	775	1.90	RF	57	DRE	132S4	145	254	
221	1520	7.97	755	2.1	RM	57	DRE	132S4	170	254	
234	1440	7.53	745	2.2							
275	1220	6.41	720	2.4							
303	1110	5.82	700	2.5							
350	960	5.05	680	2.8							
402	840	4.39	655	3.0							

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P_m [HP]	n_a [rpm]	T_a [lb-in]	i	$F_{Ra}^{1)}$ [lb]	SEW f_B		m [lbs]				
5.4	174	1940	10.15	595	1.05						
	195	1730	9.07	585	1.10						
	220	1530	8.01	575	1.20						
	253	1330	6.96	540	1.05						
	294	1140	6.00	525	1.20	R	47	DRE	132S4	125	250
	313	1080	5.64*	520	1.25	RF	47	DRE	132S4	125	251
	364	920	4.85	505	1.45						
	407	820	4.34	495	1.55						
	461	730	3.83	480	1.75						
	247	1370	7.16*	1940	1.70	RX	97	DRE	132S4	235	234
	269	1250	6.56	1890	2.1	RXF	97	DRE	132S4	255	235
	317	1060	5.56*	1410	1.85	RX	87	DRE	132S4	185	232
	348	970	5.07	1370	2.3	RXF	87	DRE	132S4	195	233
	392	860	4.50*	1320	3.0						
	437	770	4.04*	990	1.65						
	477	705	3.70	970	1.90	RX	77	DRE	132S4	145	230
	543	620	3.25*	940	2.6	RXF	77	DRE	132S4	150	231
	573	590	3.08*	920	2.9						
	552	610	3.20*	615	1.45						
	611	550	2.89	600	1.70	RX	67	DRE	132S4	125	228
694	485	2.54	585	2.2	RXF	67	DRE	132S4	135	229	
735	455	2.40*	575	2.4							
669	505	2.64*	455	1.20							
745	450	2.37	445	1.35							
864	390	2.04	430	1.55							
919	365	1.92*	420	1.65	RX	57	DRE	132S4	120	226	
1070	315	1.65	405	1.95	RXF	57	DRE	132S4	125	227	
1195	280	1.48	395	2.1							
1355	245	1.30	380	2.2							
7.5	3.0	139300	585	27000	1.15	R	167R107	DRE	132M4	1860	275
	3.4	120700	511	27000	1.30	RF	167R107	DRE	132M4	1880	275
						RM	167R107	DRE	132M4	2310	275
	5.0	80600	349	27000	1.95	R	167R107	DRE	132M4	1860	275
	6.5	63900	270	27000	2.5	RF	167R107	DRE	132M4	1880	275
	7.6	53600	229	27000	3.0	RM	167R107	DRE	132M4	2310	275
	3.9	110300	446	27000	1.45						
	4.4	98600	399	27000	1.60						
	4.9	88700	361	27000	1.80	R	167R107	DRE	132M4	1850	275
	5.4	80300	328	27000	2.00	RF	167R107	DRE	132M4	1860	275
	6.0	70900	291	27000	2.2	RM	167R107	DRE	132M4	2300	275
	6.7	64100	264	27000	2.5						
	7.8	54600	227	27000	2.9						
	2.7	158700	656	27000	1.00						
	3.0	138500	579	27000	1.15						
	3.5	121700	503	27000	1.30	R	167R97	DRE	132M4	1760	275
	4.1	103300	432	27000	1.55	RF	167R97	DRE	132M4	1770	275
	4.7	91100	376	27000	1.75	RM	167R97	DRE	132M4	2210	275
	5.2	81100	335	27000	1.95						
	5.8	72300	303	27000	2.2						
	6.3	66700	279	27000	2.4						
	3.8	112300	462	14200	1.00						
	4.1	104700	426	14600	1.10						
	4.8	90400	368	15200	1.25						
	5.4	80000	326	15500	1.45	R	147R87	DRE	132M4	1080	275
	6.3	68100	280	15900	1.70	RF	147R87	DRE	132M4	1100	275
	7.1	60100	247	16100	1.90	RM	147R87	DRE	132M4	1470	275
	8.2	51900	214	16200	2.2						
	9.3	45900	189	16400	2.5						
	11	38600	159	16500	3.0						
4.2	102300	415	14700	1.10	R	147R77	DRE	132M4	1040	275	
					RF	147R77	DRE	132M4	1060	275	
					RM	147R77	DRE	132M4	1420	275	
6.9	62900	255	12400	1.10	R	137R77	DRE	132M4	750	275	
7.8	55100	223	12700	1.30	RF	137R77	DRE	132M4	800	275	
8.9	48600	197	13000	1.45							
10	43000	175	13200	1.65	RM	137R77	DRE	132M4	1040	275	

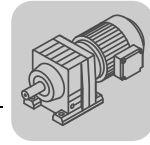
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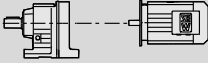




R..DRE/DRS
R..DRE/DRS [HP]

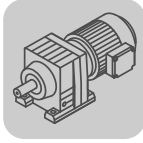
P _m [HP]	n _a [rpm]	T _a [lb-in]	i	F _{Ra} ¹⁾ [lb]	SEW f _B					m [lbs]		
7.5	7.9	58900	222.60*	12600	1.20							
	9.3	49900	188.45	12900	1.40							
	10	46100	174.40*	13100	1.55	R	137	DRE	132M4	660	269	
	11	41300	156.31	13200	1.70	RF	137	DRE	132M4	710	270	
	12	37300	141.12*	13300	1.90	RM	137	DRE	132M4	960	270	
	14	33900	128.18	13400	2.1							
	15	30100	113.72	13500	2.4							
	17	27300	103.20*	13500	2.6							
	12	37500	141.83	6690	1.00							
	14	33800	127.68	7150	1.15							
15	30600	115.63	7490	1.25								
17	27100	102.53	7640	1.40	R	107	DRE	132M4	470	267		
19	24500	92.70	7460	1.55	RF	107	DRE	132M4	480	268		
22	20800	78.57	7170	1.85	RM	107	DRE	132M4	680	268		
24	19200	72.88	7030	1.95								
27	17300	65.60*	6840	2.2								
30	15700	59.41	6660	2.4								
33	13900	52.68	6450	2.7								
19	24400	92.48	4760	1.10								
21	22000	83.15	5080	1.20								
24	19100	72.17	5410	1.40								
27	17200	65.21	5310	1.55	R	97	DRE	132M4	345	265		
29	15800	59.92	5210	1.65	RF	97	DRE	132M4	380	266		
33	14000	53.21	5060	1.90	RM	97	DRE	132M4	495	266		
37	12500	47.58	4930	2.1								
41	11300	42.78	4800	2.3								
47	9830	37.13	4630	2.7								
53	8800	33.25	4500	2.9								
55	8480	32.05	4450	2.7	R	97	DRE	132M4	335	265		
					RF	97	DRE	132M4	375	266		
					RM	97	DRE	132M4	485	266		
37	12600	47.58	3890	1.10								
42	11000	41.74	3790	1.25	R	87	DRE	132M4	255	262		
48	9750	36.84*	3690	1.40	RF	87	DRE	132M4	270	263		
54	8640	32.66*	3590	1.60	RM	87	DRE	132M4	335	263		
63	7380	27.88	3450	1.80								
63	7370	27.84*	3450	1.85								
75	6190	23.40	3300	2.2	R	87	DRE	132M4	250	262		
82	5690	21.51	3230	2.3	RF	87	DRE	132M4	265	263		
92	5050	19.10	3130	2.5	RM	87	DRE	132M4	330	263		
103	4520	17.08*	3040	2.7								
114	4060	15.35	2950	2.9								
70	6680	25.23	1980	1.05	R	77	DRE	132M4	195	259		
					RF	77	DRE	132M4	205	260		
					RM	77	DRE	132M4	260	260		
93	4970	18.80	2050	1.40								
98	4710	17.82*	2030	1.45								
113	4120	15.60	1970	1.60								
125	3720	14.05	1920	1.70	R	77	DRE	132M4	190	259		
142	3260	12.33	1860	1.85	RF	77	DRE	132M4	205	260		
161	2880	10.88	1800	2.0	RM	77	DRE	132M4	260	260		
182	2550	9.64	1750	2.2								
204	2270	8.59	1720	2.4								
227	2050	7.74	1670	2.6								
258	1790	6.79	1610	2.8								
111	4180	15.79	1530	1.20								
118	3940	14.91	1520	1.25								
138	3360	12.70	1470	1.35								
152	3050	11.54	1440	1.45								
176	2640	10.00	1400	1.55	R	67	DRE	132M4	180	256		
202	2300	8.70*	1350	1.70	RF	67	DRE	132M4	185	257		
225	2060	7.79	1320	1.65	RM	67	DRE	132M4	220	257		
238	1940	7.36*	1300	1.70								
280	1650	6.27	1250	1.75								
308	1500	5.70	1220	1.80								
356	1300	4.93	1170	1.95								
409	1130	4.29	1130	2.1								

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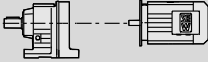




P_m [HP]	n_a [rpm]	T_a [lb-in]	i	$F_{Ra}^{1)}$ [lb]	SEW f_B		m [lbs]		
7.5	126	3690	13.95*	695	1.05				
	148	3140	11.88	730	1.15				
	163	2850	10.79	725	1.20				
	188	2470	9.35	715	1.30				
	220	2110	7.97	705	1.50	R 57	DRE 132M4	165	253
	233	1990	7.53	695	1.55	RF 57	DRE 132M4	170	254
	274	1690	6.41	680	1.75	RM 57	DRE 132M4	200	254
	301	1540	5.82	665	1.85				
	348	1330	5.05	645	2.0				
	400	1160	4.39	625	2.1				
	362	1280	4.85	470	1.05	R 47	DRE 132M4	155	250
	405	1140	4.34	460	1.10	RF 47	DRE 132M4	155	251
	458	1010	3.83	450	1.25				
	265	1750	6.63*	2220	2.3	RX 107	DRE 132M4	335	236
	313	1480	5.61	2120	2.7	RXF 107	DRE 132M4	370	237
	303	1530	5.79	1780	2.4	RX 97	DRE 132M4	260	234
	357	1300	4.91	1700	2.7	RXF 97	DRE 132M4	280	235
	390	1190	4.50*	1290	2.2	RX 87	DRE 132M4	210	232
	464	1000	3.78	1230	2.7	RXF 87	DRE 132M4	220	233
	540	860	3.25*	900	1.85				
	570	810	3.08*	890	2.1	RX 77	DRE 132M4	175	230
	651	710	2.70	860	2.7	RXF 77	DRE 132M4	180	231
	723	640	2.43	840	3.0				
	690	670	2.54	550	1.55				
	731	635	2.40*	545	1.70				
	859	540	2.04	525	2.2	RX 67	DRE 132M4	150	228
	945	490	1.86	515	2.3	RXF 67	DRE 132M4	160	229
	1090	425	1.61	495	2.4				
1255	370	1.40*	475	2.5					
860	540	2.04	265	1.15					
914	505	1.92*	275	1.20	RX 57	DRE 132M4	145	226	
1060	435	1.65	305	1.40	RXF 57	DRE 132M4	150	227	
1190	390	1.48	315	1.55					
1345	345	1.30	335	1.60					
10	5.1	110800	349	27000	1.45	R 167R107	DRE 132MC4	1870	275
	6.6	87300	270	27000	1.80	RF 167R107	DRE 132MC4	1880	275
	7.7	73500	229	27000	2.2	RM 167R107	DRE 132MC4	2320	275
	8.9	63700	200	27000	2.5				
	4.0	149500	446	27000	1.05				
	4.4	133700	399	27000	1.20				
	4.9	120400	361	27000	1.30				
	5.4	109100	328	27000	1.45	R 167R107	DRE 132MC4	1860	275
	6.1	96400	291	27000	1.65	RF 167R107	DRE 132MC4	1870	275
	6.7	87200	264	27000	1.85	RM 167R107	DRE 132MC4	2300	275
	7.8	74500	227	27000	2.1				
	9.0	64600	198	27000	2.5				
	11	54400	168	27000	2.9				
	4.1	140800	432	27000	1.15				
	4.7	123800	376	27000	1.30	R 167R97	DRE 132MC4	1770	275
	5.3	110100	335	27000	1.45	RF 167R97	DRE 132MC4	1780	275
	5.9	98600	303	27000	1.60	RM 167R97	DRE 132MC4	2210	275
	6.4	90800	279	27000	1.75				
	5.4	108300	326	14400	1.05				
	6.3	92500	280	15100	1.25				
	7.2	81600	247	15500	1.40	R 147R87	DRE 132MC4	1090	275
	8.3	70400	214	15800	1.65	RF 147R87	DRE 132MC4	1110	275
	9.4	62300	189	16000	1.85	RM 147R87	DRE 132MC4	1480	275
	11	52400	159	16200	2.2				
	9.0	65700	197	12300	1.10	R 137R77	DRE 132MC4	750	275
	10	58200	175	12600	1.20	RF 137R77	DRE 132MC4	800	275
						RM 137R77	DRE 132MC4	1050	275

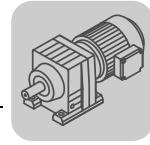
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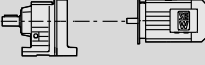
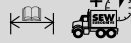


R..DRE/DRS R..DRE/DRS [HP]

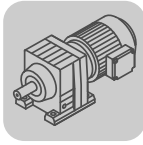
P_m [HP]	n_a [rpm]	T_a [lb-in]	i	$F_{Ra}^{1)}$ [lb]	SEW f_B		m [lbs]				
10	9.4	67200	188.45	12200	1.05						
	10	62200	174.40*	12400	1.15						
	11	55800	156.31	12700	1.25						
	13	50300	141.12*	12900	1.40						
	14	45700	128.18	13100	1.55	R	137	DRE	132MC4	670	269
	16	40500	113.72	13200	1.75	RF	137	DRE	132MC4	720	270
	17	36800	103.20*	13300	1.90	RM	137	DRE	132MC4	960	270
	20	31600	88.70*	13500	2.2						
	22	28800	80.91*	13500	2.4						
	24	26200	73.49	13600	2.7						
	17	36600	102.53	6810	1.05						
	19	33000	92.70	7070	1.15						
	23	28000	78.57	6830	1.35						
	24	26000	72.88	6720	1.45	R	107	DRE	132MC4	475	267
	27	23400	65.60*	6560	1.60	RF	107	DRE	132MC4	490	268
	30	21200	59.41	6410	1.80	RM	107	DRE	132MC4	680	268
	34	18800	52.68	6220	2.0						
	37	17000	47.63	6070	2.2						
	44	14400	40.37*	5810	2.6						
	25	25700	72.17	3370	1.05						
	27	23200	65.21	4980	1.15						
	30	21300	59.92	4900	1.25						
	33	18900	53.21	4790	1.40						
	37	16900	47.58	4680	1.55	R	97	DRE	132MC4	350	265
41	15200	42.78	4580	1.75	RF	97	DRE	132MC4	385	266	
48	13200	37.13	4430	2.0	RM	97	DRE	132MC4	500	266	
53	11800	33.25	4320	2.2							
64	9840	27.58	4130	2.4							
55	11400	32.05	4280	2.00	R	97	DRE	132MC4	345	265	
65	9700	27.19	4110	2.3	RF	97	DRE	132MC4	380	266	
71	8930	25.03	4030	2.8	RM	97	DRE	132MC4	495	266	
48	13100	36.84*	3460	1.05	R	87	DRE	132MC4	260	262	
54	11600	32.66*	3390	1.20	RF	87	DRE	132MC4	275	263	
64	9950	27.88	3280	1.35	RM	87	DRE	132MC4	340	263	
64	9940	27.84*	3280	1.40							
76	8350	23.40	3160	1.65							
83	7670	21.51	3100	1.75							
93	6810	19.10	3010	1.85	R	87	DRE	132MC4	255	262	
104	6090	17.08*	2930	2.0	RF	87	DRE	132MC4	275	263	
116	5480	15.35	2850	2.2	RM	87	DRE	132MC4	340	263	
133	4750	13.33	2750	2.4							
149	4260	11.93	2670	2.6							
179	3530	9.90*	2540	3.0							
94	6710	18.80	1520	1.05							
100	6360	17.82*	1590	1.10							
114	5560	15.60	1720	1.20							
126	5010	14.05	1810	1.25							
144	4400	12.33	1770	1.40							
163	3880	10.88	1720	1.50	R	77	DRE	132MC4	200	259	
184	3440	9.64	1670	1.60	RF	77	DRE	132MC4	210	260	
207	3060	8.59	1660	1.80	RM	77	DRE	132MC4	265	260	
229	2760	7.74	1610	1.95							
261	2420	6.79	1560	2.1							
296	2130	5.99*	1510	2.2							
334	1890	5.31*	1460	2.4							
140	4530	12.70	1240	1.00							
154	4120	11.54	1340	1.05							
178	3560	10.00	1310	1.15							
204	3100	8.70*	1280	1.25							
228	2780	7.79	1260	1.20	R	67	DRE	132MC4	185	256	
241	2620	7.36*	1240	1.25	RF	67	DRE	132MC4	195	257	
283	2230	6.27	1200	1.30	RM	67	DRE	132MC4	230	257	
312	2030	5.70	1170	1.35							
360	1760	4.93	1130	1.45							
413	1530	4.29	1090	1.55							

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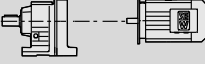
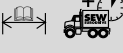


P_m [HP]	n_a [rpm]	T_a [lb-in]	i	$F_{Ra}^{1)}$ [lb]	SEW f_B		m [lbs]			
10	223	2840	7.97	450	1.10					
	236	2680	7.53	500	1.15					
	277	2280	6.41	620	1.30	R	57	DRE 132MC4	170	253
	305	2070	5.82	615	1.35	RF	57	DRE 132MC4	180	254
	352	1800	5.05	600	1.50	RM	57	DRE 132MC4	205	254
	404	1560	4.39	590	1.60					
	268	2360	6.63*	2150	1.70	RX	107	DRE 132MC4	340	236
	316	2000	5.61	2060	2.0	RXF	107	DRE 132MC4	375	237
	306	2060	5.79	1720	1.80	RX	97	DRE 132MC4	270	234
	361	1750	4.91	1650	2.00	RXF	97	DRE 132MC4	285	235
	394	1600	4.50*	1230	1.60					
	469	1350	3.78	1180	2.0	RX	87	DRE 132MC4	215	232
	511	1240	3.48	1160	2.9	RXF	87	DRE 132MC4	225	233
	546	1150	3.25*	860	1.40					
	576	1090	3.08*	850	1.55					
	658	960	2.70	820	2.00					
	731	860	2.43	800	2.2	RX	77	DRE 132MC4	180	230
	833	760	2.13	775	2.3	RXF	77	DRE 132MC4	185	231
	944	670	1.88*	750	2.5					
	1065	590	1.67	725	2.6					
1245	505	1.42	695	2.7						
698	900	2.54	485	1.15						
740	850	2.40*	500	1.25						
869	725	2.04	490	1.60	RX	67	DRE 132MC4	160	228	
956	660	1.86	480	1.70	RXF	67	DRE 132MC4	165	229	
1105	570	1.61	465	1.75						
1270	495	1.40*	450	1.85						
1075	590	1.65	47	1.05	RX	57	DRE 132MC4	150	226	
1200	525	1.48	73	1.15	RXF	57	DRE 132MC4	155	227	
1360	465	1.30	116	1.20						
12.5	5.1	137800	349	27000	1.15					
	6.0	115300	295	27000	1.40					
	6.6	108200	270	27000	1.45	R	167R107	DRE 160M4	1920	275
	7.7	91200	229	27000	1.75	RF	167R107	DRE 160M4	1930	275
	8.8	79200	200	27000	2.0	RM	167R107	DRE 160M4	2360	275
	10	66300	169	27000	2.4					
	4.9	148600	361	27000	1.05					
	5.4	134700	328	27000	1.20					
	6.1	119200	291	27000	1.35	R	167R107	DRE 160M4	1900	275
	6.7	107800	264	27000	1.50	RF	167R107	DRE 160M4	1920	275
	7.8	92300	227	27000	1.75	RM	167R107	DRE 160M4	2350	275
	9.0	80100	198	27000	2.00					
	11	67500	168	27000	2.4					
	4.7	152900	376	27000	1.05	R	167R97	DRE 160M4	1810	275
	5.3	136100	335	27000	1.15	RF	167R97	DRE 160M4	1830	275
	5.8	122000	303	27000	1.30	RM	167R97	DRE 160M4	2260	275
	6.4	112400	279	27000	1.40					
	6.3	114100	280	14100	1.00					
	7.2	100700	247	14700	1.15	R	147R87	DRE 160M4	1140	275
	8.3	87000	214	15300	1.30	RF	147R87	DRE 160M4	1150	275
	9.4	76900	189	15600	1.50	RM	147R87	DRE 160M4	1520	275
	11	64600	159	16000	1.80					
	7.7	100800	229.71	27000	1.60					
	9.5	82000	186.93*	27000	1.95	R	167	DRE 160M4	1540	273
	12	67200	153.07	27000	2.4	RF	167	DRE 160M4	1550	274
	13	61400	139.98	27000	2.6	RM	167	DRE 160M4	1980	274
	15	53400	121.81*	27000	3.0					
	11	71700	163.31	15800	1.60					
	12	64500	146.91	16000	1.80	R	147	DRE 160M4	990	271
	15	52600	119.86	16200	2.2	RF	147	DRE 160M4	1010	272
16	48000	109.31	16300	2.4	RM	147	DRE 160M4	1380	272	
19	41500	94.60*	16400	2.8						

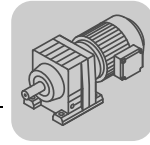
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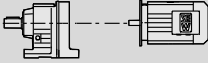



R..DRE/DRS
R..DRE/DRS [HP]

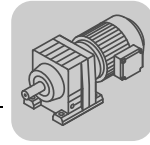
P_m [HP]	n_a [rpm]	T_a [lb-in]	i	$F_{Ra}^{1)}$ [lb]	SEW f_B		m [lbs]		
12.5	11	68600	156.31	12100	1.05				
	13	61900	141.12*	12400	1.15				
	14	56200	128.18	12700	1.25				
	16	49900	113.72	12900	1.40				
	17	45300	103.20*	13100	1.55	R	137	DRE 160M4	710 269
	20	38900	88.70*	13300	1.80	RF	137	DRE 160M4	760 270
	22	35500	80.91*	13400	2.00	RM	137	DRE 160M4	1000 270
	24	32200	73.49	13400	2.2				
	27	28600	65.20	13500	2.5				
	30	25900	59.17*	13600	2.7				
	23	34500	78.57	6570	1.10				
	24	32000	72.88	6470	1.20				
	27	28800	65.60*	6340	1.30				
	30	26000	59.41	6210	1.45	R	107	DRE 160M4	520 267
	34	23100	52.68	6040	1.65	RF	107	DRE 160M4	540 268
	37	20900	47.63	5910	1.80	RM	107	DRE 160M4	730 268
	44	17700	40.37*	5680	2.2				
	50	15400	35.26	5490	2.5				
	60	12900	29.49	5240	2.9				
	58	13500	30.77	5300	2.8	R	107	DRE 160M4	510 267
						RF	107	DRE 160M4	520 268
						RM	107	DRE 160M4	720 268
	30	26300	59.92	4660	1.00				
	33	23300	53.21	4570	1.15				
	37	20800	47.58	4490	1.25	R	97	DRE 160M4	395 265
	41	18700	42.78	4400	1.40	RF	97	DRE 160M4	435 266
	48	16300	37.13	4280	1.65	RM	97	DRE 160M4	550 266
	53	14600	33.25	4180	1.75				
	64	12100	27.58	4010	1.95				
	71	10900	25.03	3920	2.3				
79	9820	22.37	3820	2.4	R	97	DRE 160M4	390 265	
88	8840	20.14	3720	2.6	RF	97	DRE 160M4	425 266	
97	8010	18.24	3630	2.8	RM	97	DRE 160M4	540 266	
109	7100	16.17	3520	3.0					
63	12200	27.88	3140	1.10	R	87	DRE 160M4	305 262	
					RF	87	DRE 160M4	320 263	
					RM	87	DRE 160M4	385 263	
82	9440	21.51	2990	1.40					
93	8380	19.10	2920	1.50					
104	7490	17.08*	2850	1.65					
115	6740	15.35	2780	1.75	R	87	DRE 160M4	305 262	
133	5850	13.33	2690	1.95	RF	87	DRE 160M4	320 263	
148	5240	11.93	2610	2.1	RM	87	DRE 160M4	385 263	
179	4340	9.90*	2490	2.4					
194	4010	9.14*	2480	2.7					
215	3600	8.22	2410	2.8					
126	6170	14.05	1350	1.05					
144	5410	12.33	1490	1.15					
163	4770	10.88	1600	1.20					
184	4230	9.64	1620	1.30	R	77	DRE 160M4	245 259	
229	3390	7.74	1550	1.60	RF	77	DRE 160M4	260 260	
261	2980	6.79	1530	1.70	RM	77	DRE 160M4	315 260	
295	2630	5.99*	1480	1.80					
333	2330	5.31*	1430	1.95					
341	2270	5.19	1970	2.7	RX	107	DRE 160M4	390 236	
					RXF	107	DRE 160M4	425 237	
391	1980	4.52	1580	2.6	RX	97	DRE 160M4	315 234	
438	1770	4.04	1530	3.0	RXF	97	DRE 160M4	335 235	
509	1520	3.48	1120	2.4	RX	87	DRE 160M4	260 232	
573	1350	3.09	1090	2.6	RXF	87	DRE 160M4	275 233	
641	1210	2.76*	1060	3.0					
729	1060	2.43	770	1.80					
831	930	2.13	750	1.90					
941	820	1.88*	725	2.0	RX	77	DRE 160M4	225 230	
1060	730	1.67	705	2.1	RXF	77	DRE 160M4	230 231	
1245	620	1.42	675	2.2					

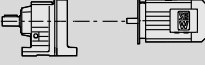

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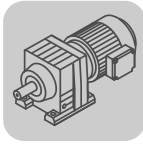


P_m [HP]	n_a [rpm]	T_a [lb-in]	i	$F_{Ra}^{(1)}$ [lb]	SEW f_B		m [lbs]		
15	6.0	138300	295	27000	1.15				
	6.6	129300	270	27000	1.25	R	167R107	DRE 160MC4	1930 275
	7.8	109100	229	27000	1.45	RF	167R107	DRE 160MC4	1940 275
	8.9	94800	200	27000	1.70	RM	167R107	DRE 160MC4	2370 275
	11	79500	169	27000	2.0				
	6.1	142100	291	27000	1.10				
	6.8	128700	264	27000	1.25	R	167R107	DRE 160MC4	1920 275
	7.9	110200	227	27000	1.45	RF	167R107	DRE 160MC4	1930 275
	9.0	95800	198	27000	1.65	RM	167R107	DRE 160MC4	2360 275
	11	80800	168	27000	1.95				
	5.9	145700	303	27000	1.10	R	167R97	DRE 160MC4	1820 275
	6.4	134200	279	27000	1.20	RF	167R97	DRE 160MC4	1840 275
						RM	167R97	DRE 160MC4	2270 275
	8.3	103600	214	14600	1.10	R	147R87	DRE 160MC4	1150 275
	9.4	91700	189	15100	1.25	RF	147R87	DRE 160MC4	1160 275
11	77000	159	15600	1.50	RM	147R87	DRE 160MC4	1530 275	
7.8	119900	229.71	27000	1.35					
9.5	97600	186.93*	27000	1.65					
12	79900	153.07	27000	2.00	R	167	DRE 160MC4	1550 273	
13	73000	139.98	27000	2.2	RF	167	DRE 160MC4	1560 274	
15	63600	121.81*	27000	2.5	RM	167	DRE 160MC4	1990 274	
17	56100	107.49	27000	2.8					
39	24000	46.00	27000	2.6	R	167	DRE 160MC4	1530 273	
					RF	167	DRE 160MC4	1550 274	
					RM	167	DRE 160MC4	1980 274	
11	85200	163.31	15300	1.35					
12	76700	146.91	15600	1.50					
15	62500	119.86	16000	1.85	R	147	DRE 160MC4	1000 271	
16	57000	109.31	16100	2.0	RF	147	DRE 160MC4	1020 272	
19	49300	94.60*	16300	2.3	RM	147	DRE 160MC4	1390 272	
21	43500	83.47	16400	2.6					
14	66900	128.18	12200	1.05					
16	59300	113.72	12600	1.20					
17	53800	103.20*	12800	1.30					
20	46300	88.70*	13100	1.55	R	137	DRE 160MC4	720 269	
22	42200	80.91*	13200	1.70	RF	137	DRE 160MC4	770 270	
24	38300	73.49	13300	1.85	RM	137	DRE 160MC4	1020 270	
27	34000	65.20	13400	2.1					
30	30800	59.17*	13500	2.3					
35	26500	50.86*	13600	2.7					
24	38000	72.88	6200	1.00					
27	34200	65.60*	6090	1.10					
30	31000	59.41	5990	1.25	R	107	DRE 160MC4	530 267	
34	27500	52.68	5850	1.40	RF	107	DRE 160MC4	550 268	
37	24800	47.63	5730	1.55	RM	107	DRE 160MC4	740 268	
44	21000	40.37*	5520	1.80					
50	18400	35.26	5350	2.1					
60	15300	29.49	5130	2.5					
58	16000	30.77	5180	2.4	R	107	DRE 160MC4	520 267	
65	14400	27.58	5040	2.6	RF	107	DRE 160MC4	530 268	
71	13000	24.90*	4910	2.9	RM	107	DRE 160MC4	730 268	
37	24800	47.58	4280	1.05					
42	22300	42.78	4210	1.20	R	97	DRE 160MC4	405 265	
48	19300	37.13	4120	1.35	RF	97	DRE 160MC4	445 266	
54	17300	33.25	4030	1.45	RM	97	DRE 160MC4	560 266	
65	14400	27.58	3890	1.65					
71	13000	25.03	3810	1.90					
80	11600	22.37	3720	2.1					
88	10500	20.14	3630	2.2	R	97	DRE 160MC4	400 265	
98	9520	18.24	3540	2.3	RF	97	DRE 160MC4	440 266	
110	8440	16.17	3440	2.5	RM	97	DRE 160MC4	550 266	
122	7630	14.62	3350	2.7					
144	6470	12.39	3210	3.0					

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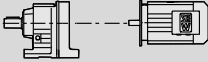



P_m [HP]	n_a [rpm]	T_a [lb-in]	i	$F_{Ra}^{1)}$ [lb]	SEW f_B		m [lbs]	
20	34	37600	52.68	5430	1.00			
	37	34000	47.63	5350	1.10	R 107	DRE 180M4	630 267
	44	28800	40.37*	5200	1.30	RF 107	DRE 180M4	650 268
	50	25100	35.26	5070	1.50	RM 107	DRE 180M4	840 268
	60	21000	29.49	4890	1.80			
	58	21900	30.77	4940	1.75			
	64	19600	27.58	4820	1.95			
	71	17700	24.90*	4710	2.1	R 107	DRE 180M4	620 267
	78	16100	22.62	4610	2.4	RF 107	DRE 180M4	630 268
	88	14300	20.07	4480	2.7	RM 107	DRE 180M4	830 268
	97	13000	18.21	4370	2.9			
	48	26500	37.13	3760	1.00	R 97	DRE 180M4	500 265
	53	23700	33.25	3710	1.10	RF 97	DRE 180M4	540 266
	64	19600	27.58	3620	1.20	RM 97	DRE 180M4	650 266
	71	17800	25.03	3570	1.40			
	79	15900	22.37	3500	1.50			
	88	14300	20.14	3430	1.60			
	97	13000	18.24	3370	1.70			
	110	11500	16.17	3280	1.85	R 97	DRE 180M4	495 265
	121	10400	14.62	3210	1.95	RF 97	DRE 180M4	540 266
	143	8840	12.39	3090	2.2	RM 97	DRE 180M4	650 266
	164	7720	10.83	2990	2.4			
	191	6620	9.29	2940	2.7			
	211	5990	8.39	2860	3.0			
	104	12100	17.08*	2560	1.00			
	116	10900	15.35	2520	1.10			
	133	9510	13.33	2460	1.20			
	149	8520	11.93	2410	1.30			
	179	7060	9.90*	2320	1.50	R 87	DRE 180M4	410 262
	194	6520	9.14*	2360	1.65	RF 87	DRE 180M4	430 263
	216	5860	8.22	2300	1.75	RM 87	DRE 180M4	495 263
	249	5090	7.13	2210	1.85			
	278	4560	6.39	2150	2.00			
	335	3780	5.30*	2050	2.1			
	342	3700	5.19	1830	1.65			
	382	3320	4.65	1780	1.85	RX 107	DRE 180M4	500 236
	423	2990	4.20*	1750	2.4	RXF 107	DRE 180M4	530 237
	465	2720	3.81	1710	2.7			
	392	3230	4.52	1450	1.65			
	439	2880	4.04	1420	1.80			
	488	2590	3.64*	1380	2.0	RX 97	DRE 180M4	420 234
	538	2350	3.30	1350	2.2	RXF 97	DRE 180M4	440 235
	607	2080	2.92	1320	2.5			
	672	1880	2.64	1280	2.8			
511	2480	3.48	1010	1.45				
575	2200	3.09	990	1.65				
643	1970	2.76*	970	1.80				
715	1770	2.48	950	2.0	RX 87	DRE 180M4	370 232	
824	1530	2.15	920	2.2	RXF 87	DRE 180M4	380 233	
920	1370	1.93	900	2.3				
1110	1140	1.60*	860	2.4				
1275	990	1.39	830	2.6				
25	10	136700	169	27000	1.15	R 167R107	DRE 180L4	2070 275
						RF 167R107	DRE 180L4	2080 275
						RM 167R107	DRE 180L4	2510 275
	11	138100	168	27000	1.15	R 167R107	DRE 180L4	2060 275
						RF 167R107	DRE 180L4	2070 275
						RM 167R107	DRE 180L4	2500 275
	12	134700	153.07	27000	1.20			
	13	123200	139.98	27000	1.30			
	15	107200	121.81*	27000	1.50			
	17	94600	107.49	27000	1.70	R 167	DRE 180L4	1680 273
	19	82000	93.19	27000	1.95	RF 167	DRE 180L4	1700 274
	21	73000	82.91*	27000	2.2	RM 167	DRE 180L4	2130 274
	24	64900	73.70*	27000	2.4			
	26	59300	67.40	27000	2.7			
	47	33200	37.74	27000	2.4	R 167	DRE 180L4	1670 273
					RF 167	DRE 180L4	1680 274	
					RM 167	DRE 180L4	2120 274	

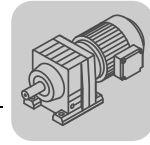


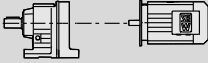


R..DRE/DRS

R..DRE/DRS [HP]

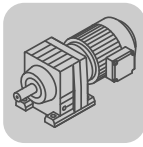
P_m [HP]	n_a [rpm]	T_a [lb-in]	i	$F_{Ra}^{1)}$ [lb]	SEW f_B		m [lbs]	
25	15	105500	119.86	14500	1.10			
	16	96200	109.31	14900	1.20			
	19	83300	94.60*	15400	1.40			
	21	73500	83.47	15700	1.55	R 147	DRE 180L4	1140 271
	25	63400	72.09	16000	1.80	RF 147	DRE 180L4	1160 272
	26	58900	66.99	16100	1.95	RM 147	DRE 180L4	1530 272
	29	53800	61.09	16200	2.1			
	34	46500	52.87	16400	2.5			
	38	41000	46.65	16400	2.8			
	24	64700	73.49	12300	1.10			
	27	57400	65.20	12600	1.25			
	30	52100	59.17*	12900	1.35			
	35	44700	50.86*	13100	1.60	R 137	DRE 180L4	860 269
	40	39000	44.39	13300	1.80	RF 137	DRE 180L4	910 270
	47	33100	37.65	13400	2.1	RM 137	DRE 180L4	1160 270
	54	28900	32.91	13500	2.4			
	64	24500	27.83	13600	2.8			
	60	26000	29.57*	13600	2.6	R 137	DRE 180L4	840 269
						RF 137	DRE 180L4	890 270
						RM 137	DRE 180L4	1130 270
	44	35500	40.37*	4920	1.05	R 107	DRE 180L4	680 267
	50	31000	35.26	4830	1.25	RF 107	DRE 180L4	690 268
	60	25900	29.49	4690	1.45	RM 107	DRE 180L4	880 268
	71	21900	24.90*	4540	1.75			
	78	19900	22.62	4450	1.90	R 107	DRE 180L4	660 267
88	17600	20.07	4340	2.2	RF 107	DRE 180L4	670 268	
97	16000	18.21	4250	2.4	RM 107	DRE 180L4	870 268	
113	13700	15.65	4100	2.8				
88	17700	20.14	3260	1.30				
97	16000	18.24	3210	1.40				
110	14200	16.17	3150	1.50				
121	12800	14.62	3090	1.60	R 97	DRE 180L4	540 265	
143	10900	12.39	2990	1.80	RF 97	DRE 180L4	580 266	
164	9530	10.83	2900	1.95	RM 97	DRE 180L4	690 266	
191	8170	9.29	2880	2.2				
211	7390	8.39	2800	2.4				
249	6260	7.12	2680	2.8				
149	10500	11.93	2290	1.05				
179	8710	9.90*	2220	1.20				
194	8050	9.14*	2280	1.35	R 87	DRE 180L4	455 262	
216	7230	8.22	2230	1.40	RF 87	DRE 180L4	470 263	
249	6280	7.13	2160	1.50	RM 87	DRE 180L4	530 263	
278	5620	6.39	2100	1.60				
335	4660	5.30*	2000	1.75				
423	3690	4.20*	1680	2.00				
465	3350	3.81	1640	2.2	RX 107	DRE 180L4	540 236	
524	2980	3.38	1600	2.5	RXF 107	DRE 180L4	580 237	
578	2700	3.07	1570	2.7				
488	3200	3.64*	1320	1.65				
538	2900	3.30	1300	1.80				
607	2570	2.92	1270	2.0	RX 97	DRE 180L4	465 234	
672	2320	2.64	1240	2.3	RXF 97	DRE 180L4	485 235	
792	1970	2.24*	1190	2.7				
907	1720	1.96	1150	2.9				
643	2430	2.76*	880	1.45				
715	2180	2.48	890	1.65				
824	1890	2.15	870	1.80	RX 87	DRE 180L4	415 232	
920	1690	1.93	850	1.85	RXF 87	DRE 180L4	425 233	
1110	1400	1.60*	820	2.00				
1275	1220	1.39	795	2.1				

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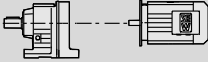




P_m [HP]	n_a [rpm]	T_a [lb-in]	i	$F_{Ra}^{1)}$ [lb]	SEW f_B		m [lbs]			
30	12	159800	153.07	27000	1.00					
	13	146100	139.98	27000	1.10					
	15	127200	121.81*	27000	1.25					
	17	112200	107.49	27000	1.40					
	19	97300	93.19	27000	1.65	R	167	DRE	180LC4	1710 273
	21	86500	82.91*	27000	1.85	RF	167	DRE	180LC4	1720 274
	24	76900	73.70*	27000	2.1	RM	167	DRE	180LC4	2150 274
	26	70300	67.40	27000	2.3					
	30	61200	58.65	27000	2.6					
	34	54000	51.76	27000	3.0					
	47	39400	37.74	27000	2.0	R	167	DRE	180LC4	1690 273
	58	32000	30.71	27000	2.8	RF	167	DRE	180LC4	1710 274
						RM	167	DRE	180LC4	2140 274
	16	114100	109.31	14100	1.00					
	19	98700	94.60*	14800	1.15					
	21	87100	83.47	15300	1.30					
	25	75200	72.09	15700	1.55	R	147	DRE	180LC4	1170 271
	27	69900	66.99	15800	1.65	RF	147	DRE	180LC4	1180 272
	29	63700	61.09	16000	1.80	RM	147	DRE	180LC4	1550 272
	34	55200	52.87	16200	2.1					
	38	48700	46.65	16300	2.4					
	44	42000	40.29	16400	2.7					
	27	68000	65.20	12100	1.05					
	30	61700	59.17*	12400	1.15					
	35	53100	50.86*	12800	1.35	R	137	DRE	180LC4	880 269
	40	46300	44.39	13100	1.55	RF	137	DRE	180LC4	930 270
	47	39300	37.65	13300	1.80	RM	137	DRE	180LC4	1180 270
	54	34300	32.91	13400	2.1					
	64	29000	27.83	13500	2.3					
	60	30800	29.57*	13500	2.2	R	137	DRE	180LC4	860 269
	74	25100	24.12	13600	2.8	RF	137	DRE	180LC4	910 270
						RM	137	DRE	180LC4	1160 270
	50	36800	35.26	4580	1.05	R	107	DRE	180LC4	700 267
	60	30700	29.49	4480	1.25	RF	107	DRE	180LC4	710 268
						RM	107	DRE	180LC4	910 268
	71	26000	24.90*	4360	1.45					
	79	23600	22.62	4290	1.60					
	89	20900	20.07	4200	1.80	R	107	DRE	180LC4	690 267
	98	19000	18.21	4120	2.0	RF	107	DRE	180LC4	700 268
	114	16300	15.65	3990	2.3	RM	107	DRE	180LC4	890 268
	130	14200	13.66	3870	2.7					
	88	21000	20.14	3090	1.10					
	98	19000	18.24	3060	1.15					
	110	16800	16.17	3010	1.25					
	122	15200	14.62	2960	1.35					
	144	12900	12.39	2880	1.50	R	97	DRE	180LC4	570 265
	164	11300	10.83	2810	1.65	RF	97	DRE	180LC4	600 266
	192	9690	9.29	2810	1.85	RM	97	DRE	180LC4	720 266
	212	8760	8.39	2740	2.0					
	250	7430	7.12	2630	2.4					
	286	6490	6.21	2540	2.6					
	342	5420	5.20	2420	2.9					
	180	10300	9.90*	2120	1.00					
	195	9540	9.14*	2200	1.10					
	217	8580	8.22	2160	1.20	R	87	DRE	180LC4	480 262
	249	7450	7.13	2090	1.25	RF	87	DRE	180LC4	495 263
	279	6670	6.39	2040	1.35	RM	87	DRE	180LC4	560 263
	336	5530	5.30*	1960	1.45					
	424	4380	4.20*	1610	1.65					
	467	3980	3.81	1580	1.85					
	526	3530	3.38	1540	2.1	RX	107	DRE	180LC4	560 236
	580	3200	3.07	1510	2.3	RXF	107	DRE	180LC4	600 237
	674	2750	2.64*	1460	2.7					

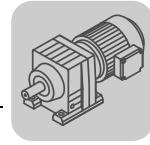
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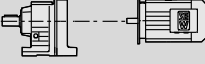
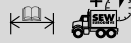


R..DRE/DRS
R..DRE/DRS [HP]

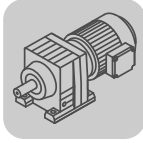
P_m [HP]	n_a [rpm]	T_a [lb-in]	i	$F_{Ra}^{1)}$ [lb]	SEW f_B		m [lbs]		
30	489	3800	3.64*	1260	1.40				
	540	3440	3.30	1240	1.55				
	609	3050	2.92	1210	1.70				
	674	2750	2.64	1190	1.90	RX 97	DRE 180LC4	490	234
	795	2330	2.24*	1150	2.2	RXF 97	DRE 180LC4	510	235
	910	2040	1.96	1120	2.5				
	1090	1700	1.64	1070	2.6				
	1255	1470	1.42	1030	2.7				
	645	2880	2.76*	555	1.25				
	717	2590	2.48	625	1.40				
	826	2240	2.15	690	1.50	RX 87	DRE 180LC4	435	232
	923	2010	1.93	735	1.55	RXF 87	DRE 180LC4	450	233
	1110	1670	1.60*	775	1.65				
	1280	1450	1.39	765	1.75				
40	17	153000	107.49	27000	1.05				
	19	132700	93.19	27000	1.20				
	21	118000	82.91*	27000	1.35				
	24	104900	73.70*	27000	1.50	R 167	DRE 200L4	1900	273
	26	95900	67.40	27000	1.65	RF 167	DRE 200L4	1920	274
	30	83500	58.65	27000	1.90	RM 167	DRE 200L4	2350	274
	34	73700	51.76	27000	2.2				
	40	63800	44.87	27000	2.5				
	45	56800	39.92	27000	2.8				
	58	43700	30.71	27000	2.0	R 167	DRE 200L4	1890	273
						RF 167	DRE 200L4	1910	274
						RM 167	DRE 200L4	2340	274
	25	102600	72.09	14700	1.10				
	27	95300	66.99	15000	1.20				
	29	86900	61.09	15300	1.30				
	34	75200	52.87	15700	1.55	R 147	DRE 200L4	1360	271
	38	66400	46.65	15900	1.75	RF 147	DRE 200L4	1380	272
	44	57300	40.29	16100	2.0	RM 147	DRE 200L4	1750	272
	50	50700	35.64	16300	2.3				
	59	42600	29.95	16400	2.7				
	40	63200	44.39	12400	1.10	R 137	DRE 200L4	1080	269
	47	53600	37.65	12800	1.30	RF 137	DRE 200L4	1130	270
	54	46800	32.91	13000	1.50	RM 137	DRE 200L4	1370	270
	64	39600	27.83	13300	1.70				
	74	34300	24.12	13400	2.1	R 137	DRE 200L4	1060	269
	81	31300	22.00*	13500	2.3	RF 137	DRE 200L4	1110	270
	93	27100	19.04*	13500	2.6	RM 137	DRE 200L4	1350	270
	106	23900	16.80*	13300	3.0				
	89	28500	20.07	3870	1.35				
	98	25900	18.21	3820	1.45				
	114	22200	15.65	3740	1.70	R 107	DRE 200L4	880	267
	130	19400	13.66	3650	1.95	RF 107	DRE 200L4	890	268
	154	16500	11.59	3530	2.3	RM 107	DRE 200L4	1090	268
	176	14400	10.13	3440	2.6				
	227	11100	7.86	3320	2.4				
	267	9480	6.66	3180	2.8				
	144	17600	12.39	2640	1.10				
	164	15400	10.83	2600	1.20				
	192	13200	9.29	2660	1.35				
	212	11900	8.39	2610	1.50	R 97	DRE 200L4	760	265
	250	10100	7.12	2520	1.75	RF 97	DRE 200L4	800	266
	286	8840	6.21	2440	1.90	RM 97	DRE 200L4	910	266
342	7400	5.20	2340	2.1					
396	6400	4.50*	2260	2.2					
526	4810	3.38	1410	1.50					
580	4370	3.07	1390	1.70					
674	3750	2.64*	1360	1.95					
772	3280	2.30	1320	2.2	RX 107	DRE 200L4	760	236	
911	2780	1.95	1280	2.4	RXF 107	DRE 200L4	800	237	
1040	2430	1.71	1240	2.6					
1230	2050	1.44	1200	2.8					

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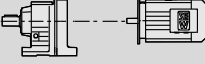




P_m [HP]	n_a [rpm]	T_a [lb-in]	i	$F_{Ra}^{1)}$ [lb]	SEW f_B		m [lbs]	
40	609	4160	2.92	980	1.25			
	674	3760	2.64	1050	1.40			
	795	3180	2.24*	1060	1.65	RX 97	DRE 200L4	680 234
	910	2780	1.96	1040	1.80	RXF 97	DRE 200L4	700 235
	1090	2330	1.64	1000	1.90			
	1255	2010	1.42	970	2.0			
50	21	146000	82.91*	27000	1.10			
	24	129800	73.70*	27000	1.25			
	26	118700	67.40	27000	1.35			
	30	103200	58.65	27000	1.55	R 167	DRE 225S4	1970 273
	34	91100	51.76	27000	1.75	RF 167	DRE 225S4	1990 274
	40	79000	44.87	27000	2.0	RM 167	DRE 225S4	2420 274
	44	70300	39.92	27000	2.3			
	52	60600	34.41	27000	2.6			
	58	54000	30.71	27000	1.65	R 167	DRE 225S4	1960 273
	72	43200	24.57	27000	2.9	RF 167	DRE 225S4	1970 274
	81	38400	21.85	27000	3.0	RM 167	DRE 225S4	2400 274
	29	107600	61.09	14400	1.05			
	34	93100	52.87	15100	1.25			
	38	82100	46.65	15500	1.40	R 147	DRE 225S4	1430 271
	44	70900	40.29	15800	1.60	RF 147	DRE 225S4	1440 272
	50	62700	35.64	16000	1.85	RM 147	DRE 225S4	1810 272
	59	52700	29.95	16200	2.2			
	73	42600	24.19	16400	2.5			
	87	35900	20.44	16500	3.0	R 147	DRE 225S4	1400 271
	98	31700	18.04	16600	2.9	RF 147	DRE 225S4	1420 272
						RM 147	DRE 225S4	1780 272
	47	66300	37.65	12200	1.05	R 137	DRE 225S4	1140 269
	54	57900	32.91	12600	1.20	RF 137	DRE 225S4	1200 270
	64	49000	27.83	13000	1.40	RM 137	DRE 225S4	1440 270
	74	42400	24.12	13000	1.65			
	81	38700	22.00*	13000	1.85	R 137	DRE 225S4	1120 269
	93	33500	19.04*	12800	2.1	RF 137	DRE 225S4	1170 270
	106	29500	16.80*	12700	2.4	RM 137	DRE 225S4	1420 270
	122	25500	14.51	12400	2.8			
	88	35300	20.07	3590	1.10			
	97	32000	18.21	3570	1.20			
	113	27500	15.65	3520	1.40			
	130	24000	13.66	3460	1.60			
	153	20400	11.59	3370	1.85	R 107	DRE 225S4	950 267
	175	17800	10.13	3300	2.1	RF 107	DRE 225S4	960 268
	207	15000	8.56	3190	2.5	RM 107	DRE 225S4	1150 268
	226	13800	7.86	3230	1.90			
	266	11700	6.66	3100	2.2			
	305	10200	5.82	3000	2.6			
	360	8670	4.92	2880	3.0			
	191	16300	9.29	2540	1.10			
	211	14700	8.39	2500	1.20	R 97	DRE 225S4	830 265
	249	12500	7.12	2420	1.40	RF 97	DRE 225S4	860 266
	286	10900	6.21	2360	1.55	RM 97	DRE 225S4	980 266
	341	9150	5.20	2270	1.70			
	394	7920	4.50*	2200	1.80			
	524	5960	3.38	1300	1.25			
	578	5400	3.07	1290	1.35			
672	4640	2.64*	1260	1.60	RX 107	DRE 225S4	820 236	
770	4050	2.30	1240	1.80	RXF 107	DRE 225S4	860 237	
908	3440	1.95	1210	1.95				
1040	3000	1.71	1180	2.1				
1230	2540	1.44	1140	2.2				
607	5140	2.92	420	1.00				
672	4650	2.64	535	1.15				
792	3940	2.24*	660	1.35	RX 97	DRE 225S4	750 234	
907	3440	1.96	765	1.45	RXF 97	DRE 225S4	770 235	
1085	2880	1.64	840	1.55				
1255	2490	1.42	880	1.60				

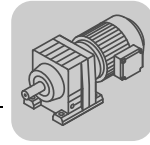
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R..DRE/DRS R..DRE/DRS [HP]

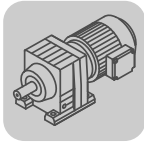
P_m [HP]	n_a [rpm]	T_a [lb-in]	i	$F_{Ra}^{1)}$ [lb]	SEW f_B		m [lbs]			
60	24	157400	73.70*	27000	1.00					
	26	143900	67.40	27000	1.10					
	30	125200	58.65	27000	1.25					
	34	110500	51.76	27000	1.45	R	167	DRE 225M4	2020	273
	40	95800	44.87	27000	1.65	RF	167	DRE 225M4	2030	274
	45	85200	39.92	27000	1.85	RM	167	DRE 225M4	2460	274
	52	73500	34.41	27000	2.2					
	64	59700	27.96	27000	2.7					
	58	65500	30.71	27000	1.35	R	167	DRE 225M4	2000	273
	72	52400	24.57	27000	2.4	RF	167	DRE 225M4	2020	274
	81	46600	21.85	27000	2.5	RM	167	DRE 225M4	2450	274
	34	112900	52.87	14200	1.00					
	38	99600	46.65	14800	1.15					
	44	86000	40.29	15300	1.35	R	147	DRE 225M4	1470	271
	50	76100	35.64	15600	1.50	RF	147	DRE 225M4	1490	272
	59	63900	29.95	16000	1.80	RM	147	DRE 225M4	1860	272
	74	51600	24.19	16300	2.0					
	87	43600	20.44	16400	2.4	R	147	DRE 225M4	1440	271
	99	38500	18.04	16500	2.4	RF	147	DRE 225M4	1460	272
						RM	147	DRE 225M4	1830	272
	54	70200	32.91	11600	1.00	R	137	DRE 225M4	1190	269
	64	59400	27.83	11800	1.15	RF	137	DRE 225M4	1240	270
						RM	137	DRE 225M4	1490	270
	74	51500	24.12	12000	1.35					
	81	46900	22.00*	12000	1.50					
	93	40600	19.04*	12000	1.75	R	137	DRE 225M4	1170	269
	106	35800	16.80*	11900	1.95	RF	137	DRE 225M4	1220	270
	123	30900	14.51	11800	2.3	RM	137	DRE 225M4	1460	270
	139	27400	12.83	11600	2.6					
	234	16200	7.59	10900	2.8					
	114	33400	15.65	3270	1.15					
	130	29100	13.66	3240	1.30					
	154	24700	11.59	3190	1.55					
	176	21600	10.13	3130	1.75	R	107	DRE 225M4	990	267
	208	18200	8.56	3050	2.1	RF	107	DRE 225M4	1000	268
	227	16700	7.86	3120	1.55	RM	107	DRE 225M4	1200	268
267	14200	6.66	3010	1.85						
306	12400	5.82	2920	2.1						
361	10500	4.92	2810	2.4						
212	17900	8.39	2360	1.00						
250	15100	7.12	2310	1.15	R	97	DRE 225M4	870	265	
286	13200	6.21	2260	1.25	RF	97	DRE 225M4	910	266	
342	11100	5.20	2190	1.40	RM	97	DRE 225M4	1020	266	
396	9610	4.50*	2120	1.50						
526	7220	3.38	730	1.00						
580	6560	3.07	850	1.10						
674	5630	2.64*	990	1.30						
772	4920	2.30	1090	1.50	RX	107	DRE 225M4	870	236	
911	4170	1.95	1130	1.60	RXF	107	DRE 225M4	910	237	
1040	3640	1.71	1110	1.70						
1230	3080	1.44	1080	1.85						
795	4780	2.24*	149	1.10						
910	4170	1.96	300	1.20	RX	97	DRE 225M4	800	234	
1090	3490	1.64	430	1.30	RXF	97	DRE 225M4	820	235	
1255	3020	1.42	510	1.35						
75	30	153500	58.65	27000	1.05					
	34	135400	51.76	27000	1.20					
	40	117400	44.87	27000	1.35	R	167	DVE 250M4	2330	273
	44	104500	39.92	27000	1.50	RF	167	DVE 250M4	2340	274
	52	90000	34.41	27000	1.75	RM	167	DVE 250M4	2770	274
	63	73100	27.96	27000	2.2					
	75	62000	23.71	27000	2.6					
	72	64300	24.57	27000	1.95					
	81	57100	21.85	27000	2.0	R	167	DVE 250M4	2310	273
	93	49800	19.03	27000	2.8	RF	167	DVE 250M4	2330	274
	105	44400	16.98	27000	3.0	RM	167	DVE 250M4	2760	274

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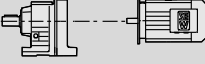


P _m [HP]	n _a [rpm]	T _a [lb-in]	i	F _{Ra} ¹⁾ [lb]	SEW f _B					m [lbs]		
75	44	105400	40.29	14500	1.10	R	147	DVE	250M4	1770	271	
	50	93300	35.64	15100	1.25	RF	147	DVE	250M4	1790	272	
	59	78400	29.95	15600	1.45	RM	147	DVE	250M4	2160	272	
	73	63300	24.19	16000	1.65							
	87	53500	20.44	16200	2.00	R	147	DVE	250M4	1740	271	
	98	47200	18.04	16300	1.95	RF	147	DVE	250M4	1760	272	
	114	40900	15.64	16400	2.8	RM	147	DVE	250M4	2130	272	
	93	49800	19.04*	10900	1.40							
	106	43900	16.80*	11000	1.60							
	122	37900	14.51	11000	1.85	R	137	DVE	250M4	1460	269	
	138	33500	12.83	10900	2.1	RF	137	DVE	250M4	1510	270	
	165	28200	10.79	10800	2.5	RM	137	DVE	250M4	1760	270	
	234	19800	7.59	10500	2.3							
	278	16700	6.38	10200	2.7							
100	44	142500	39.92	27000	1.10	R	167	DVE	280S4	2620	273	
	52	122800	34.41	27000	1.30	RF	167	DVE	280S4	2630	274	
	63	99800	27.96	27000	1.60	RM	167	DVE	280S4	3060	274	
	75	84600	23.71	27000	1.90							
	72	87700	24.57	27000	1.40	R	167	DVE	280S4	2610	273	
	81	77900	21.85	27000	1.45	RF	167	DVE	280S4	2620	274	
	93	67900	19.03	27000	2.1	RM	167	DVE	280S4	3050	274	
	105	60600	16.98	27000	2.2							
	59	106900	29.95	14500	1.10	R	147	DVE	280S4	2080	271	
	73	86300	24.19	15300	1.20	RF	147	DVE	280S4	2090	272	
						RM	147	DVE	280S4	2460	272	
	87	72900	20.44	15700	1.45							
	98	64300	18.04	16000	1.45	R	147	DVE	280S4	2050	271	
	114	55800	15.64	16200	2.1	RF	147	DVE	280S4	2070	272	
	128	49600	13.91	16300	2.2	RM	147	DVE	280S4	2430	272	
	148	42800	11.99	16400	2.7							
	245	25800	7.25	15800	3.0							
	93	67900	19.04*	8880	1.05							
	106	59900	16.80*	9180	1.20							
	122	51700	14.51	9420	1.35	R	137	DVE	280S4	1760	269	
	138	45800	12.83	9550	1.55	RF	137	DVE	280S4	1810	270	
	165	38500	10.79	9640	1.85	RM	137	DVE	280S4	2060	270	
	204	31000	8.71	9610	2.2							
	234	27100	7.59	9760	1.65							
278	22700	6.38	9570	2.00								
344	18300	5.15	9290	2.2								
125	52	147400	34.41	27000	1.10	R	167	DVE	280M4	2630	273	
	63	119700	27.96	27000	1.35	RF	167	DVE	280M4	2640	274	
	75	101500	23.71	27000	1.55	RM	167	DVE	280M4	3070	274	
	72	105200	24.57	27000	1.20							
	81	93500	21.85	27000	1.25	R	167	DVE	280M4	2610	273	
	93	81500	19.03	26700	1.75	RF	167	DVE	280M4	2630	274	
	105	72700	16.98	26300	1.80	RM	167	DVE	280M4	3060	274	
	123	62000	14.48	25500	2.6							
	148	51300	11.99	24600	2.9							
	73	103600	24.19	14600	1.00	R	147	DVE	280M4	2080	271	
						RF	147	DVE	280M4	2100	272	
						RM	147	DVE	280M4	2470	272	
	87	87500	20.44	15300	1.20							
	98	77200	18.04	15600	1.20	R	147	DVE	280M4	2050	271	
	114	66900	15.64	15900	1.70	RF	147	DVE	280M4	2070	272	
	128	59500	13.91	16100	1.85	RM	147	DVE	280M4	2440	272	
	148	51300	11.99	16300	2.2							
	182	41700	9.74	16400	2.8							
	245	31000	7.25	15400	2.5							
	122	62100	14.51	8240	1.15							
	138	54900	12.83	8500	1.30							
	165	46200	10.79	8750	1.55	R	137	DVE	280M4	1770	269	
	204	37300	8.71	8900	1.85	RF	137	DVE	280M4	1820	270	
	234	32500	7.59	9180	1.40	RM	137	DVE	280M4	2070	270	
278	27300	6.38	9090	1.65								
344	22000	5.15	8900	1.85								

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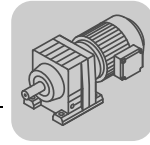


R..DRE/DRS

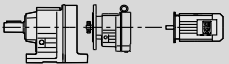


R..DRE/DRS [HP]

P_m [HP]	n_a [rpm]	T_a [lb-in]	i	$F_{Ra}^{1)}$ [lb]	SEW f_B		m [lbs]		
150	64	145400	27.96	26300	1.10	R 167	DRE 315K4	3170	273
	75	123300	23.71	26000	1.30	RF 167	DRE 315K4	3180	274
						RM 167	DRE 315K4	3620	274
	94	99000	19.03	25500	1.45				
	105	88300	16.98	25100	1.50	R 167	DRE 315K4/ERF/NS	3160	273
	123	75300	14.48	24600	2.1	RF 167	DRE 315K4/ERF/NS	3170	274
	149	62400	11.99	23800	2.4	RM 167	DRE 315K4/ERF/NS	3600	274
	174	53200	10.24	23100	2.8				
200	94	135000	19.03	23000	1.05				
	105	120500	16.98	22900	1.10	R 167	DRE 315S4/ERF/NS	3330	273
	123	102700	14.48	22700	1.55	RF 167	DRE 315S4/ERF/NS	3350	274
	149	85100	11.99	22300	1.75	RM 167	DRE 315S4/ERF/NS	3780	274
	174	72600	10.24	21800	2.1				
250	123	126900	14.48	21100	1.25	R 167	DRE 315M4	3680	273
	149	105100	11.99	20900	1.45	RF 167	DRE 315M4	3700	274
	174	89700	10.24	20700	1.70	RM 167	DRE 315M4	4130	274
300	123	154300	14.48	19200	1.05	R 167	DRE 315L4	3860	273
	149	127800	11.99	19400	1.20	RF 167	DRE 315L4	3870	274
	174	109100	10.24	19300	1.40	RM 167	DRE 315L4	4300	274

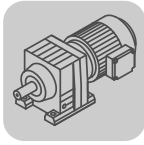
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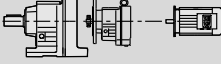


9.4 R..R..DRE/DRS [lb-in]

$T_a \text{ max}$ [lb-in]	n_a [rpm]	i	$F_{Ra}^{1)}$ [lb]		m [lbs]				
1150	0.20	8612	950						
	0.23	7425	950						
	0.25	6921	950						
	0.28	6050	950						
	0.33	5217	950						
	0.36	4661	950						
	0.42	4073	950						
	0.48	3516	950	R	27R17	DRS	71S4	31	275
	0.54	3160	950	RF	27R17	DRS	71S4	31	275
	0.62	2763	950						
	0.70	2414	950						
	0.81	2110	950						
	0.91	1862	950						
	1.0	1625	950						
	1.2	1434	950						
1.4	1254	950							
0.93	1822	950							
1.1	1580	950							
1.2	1464	950							
1.3	1270	950							
1.6	1100	950	R	27R17	DRS	71S4	30	275	
1.8	972	950	RF	27R17	DRS	71S4	30	275	
2.0	840	950							
2.3	741	950							
2.6	654	950							
3.0	566	950							
3.4	499	950							
1.5	1101	950							
1.8	962	950							
2.0	848	950							
2.3	743	950							
2.6	649	950							
3.0	567	950							
3.3	509	950							
3.9	432	950							
4.4	387	950							
5.0	339	950	R	27R17	DRS	71S4	30	275	
5.7	296	950	RF	27R17	DRS	71S4	30	275	
6.6	259	950							
7.4	229	950							
8.5	200	950							
9.6	177	950							
10	166	950							
11	150	950							
12	141	950							
14	124	950							
15	110	950							
18	94	950							
3.9	440	950							
4.5	381	950							
5.2	329	950							
5.9	290	950							
6.6	256	950							
7.5	227	950							
8.4	203	950	R	27R17	DRS	71S4	30	275	
9.5	179	950	RF	27R17	DRS	71S4	30	275	
11	156	950							
13	135	950							
14	118	950							
16	104	950							
19	90	950							

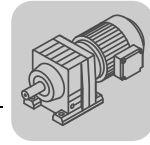
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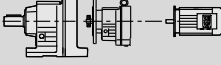




R..DRE/DRS
R..R..DRE/DRS [lb-in]

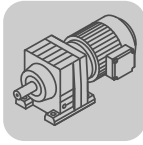
$T_a \text{ max}$ [lb-in]	n_a [rpm]	i	$F_{Ra}^{1)}$ [lb]		m [lbs]					
1760	0.20	8595	1110							
	0.23	7411	1110							
	0.25	6907	1110							
	0.28	6038	1110							
	0.33	5206	1110							
	0.37	4651	1110							
	0.42	4065	1110							
	0.46	3658	1110		R	37R17	DRS	71S4	44	275
	0.54	3154	1110		RF	37R17	DRS	71S4	47	275
	0.62	2757	1110							
	0.71	2409	1110							
	0.81	2106	1110							
	0.92	1856	1110							
	1.0	1622	1110							
	1.2	1431	1110							
	1.4	1251	1110							
		0.93	1818	1110						
	1.1	1576	1110							
	1.2	1359	1110							
	1.3	1267	1110							
	1.6	1098	1110							
	1.8	970	1110	R	37R17	DRS	71S4	43	275	
	2.0	839	1110	RF	37R17	DRS	71S4	46	275	
	2.3	740	1110							
	2.6	653	1110							
	3.0	577	1110							
	3.4	498	1110							
	1.6	1099	1110							
	1.8	960	1110							
	2.0	847	1110							
	2.3	741	1110							
	2.6	647	1110							
	3.0	566	1110							
	3.3	508	1110							
	4.0	431	1110							
	4.4	387	1110							
	5.0	338	1110	R	37R17	DRS	71S4	43	275	
	5.8	296	1110	RF	37R17	DRS	71S4	46	275	
	6.6	259	1110							
	7.5	228	1110							
	8.5	199	1110							
	9.9	172	1110							
	11	150	1110							
	13	130	1110							
	14	124	1110							
	15	110	1110							
	18	94	1110	R	37R17	DRS	71M4	46	275	
				RF	37R17	DRS	71M4	49	275	
	3.9	439	1110							
	4.5	378	1110							
	5.2	328	1110							
	5.9	289	1110							
	6.4	265	1110							
	7.5	226	1110	R	37R17	DRS	71S4	43	275	
	8.4	202	1110	RF	37R17	DRS	71S4	46	275	
	9.5	179	1110							
	11	156	1110							
	13	135	1110							
	13	127	1110							
	16	104	1110	R	37R17	DRS	71M4	45	275	
	19	90	1110	RF	37R17	DRS	71M4	49	275	

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$T_{a \max}$ [lb-in]	n_a [rpm]	i	$F_{Ra}^{1)}$ [lb]		m [lbs]				
2650	0.13	13598	1220						
	0.14	12472	1220						
	0.16	10619	1220						
	0.19	9155	1220						
	0.20	8534	1220						
	0.23	7460	1220						
	0.24	6993	1220						
	0.28	6171	1220	R	47R37	DRS	71S4	69	275
	0.30	5624	1220	RF	47R37	DRS	71S4	69	275
	0.35	4849	1220						
	0.38	4520	1220						
	0.43	3951	1220						
	0.46	3704	1220						
	0.52	3268	1220						
	0.59	2898	1220						
	0.69	2463	1220						
	0.65	2598	1220						
	0.71	2383	1220						
	0.84	2029	1220						
	0.97	1749	1220						
	1.0	1630	1220						
	1.2	1425	1220						
	1.3	1336	1220						
	1.4	1179	1220	R	47R37	DRS	71S4	69	275
	1.6	1074	1220	RF	47R37	DRS	71S4	69	275
	1.8	927	1220						
	2.0	863	1220						
	2.2	755	1220						
	2.4	708	1220						
	2.7	624	1220						
	3.1	554	1220						
	3.6	471	1220						
	0.60	2856	1220						
	0.65	2625	1220						
	0.76	2246	1220						
	0.87	1948	1220						
	0.93	1821	1220						
	1.1	1573	1220						
	1.4	1193	1220						
	1.7	1020	1220	R	47R37	DRS	71S4	68	275
	1.8	955	1220	RF	47R37	DRS	71S4	69	275
	2.1	804	1220						
	2.5	673	1220						
	3.0	572	1220						
	3.3	510	1220						
	3.9	436	1220						
	4.2	408	1220						
	4.9	344	1220						
	3.1	546	1220						
	3.4	502	1220						
	4.0	429	1220						
	4.6	372	1220						
	4.9	348	1220	R	47R37	DRS	71S4	68	275
	5.7	301	1220	RF	47R37	DRS	71S4	69	275
	6.7	255	1220						
	7.5	228	1220						
	8.7	195	1220						
	9.3	182	1220						
	11	154	1220	R	47R37	DRS	71M4	71	275
	13	129	1220	RF	47R37	DRS	71M4	71	275
	15	109	1220						
	18	98	1220	R	47R37	DRE	80M4	82	275
				RF	47R37	DRE	80M4	82	275

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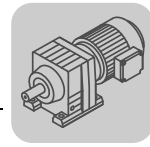


R..DRE/DRS

R..R..DRE/DRS [lb-in]

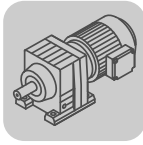
$T_a \text{ max}$ [lb-in]	n_a [rpm]	i	$F_{Ra}^{1)}$ [lb]		m [lbs]		
3980	0.12	14369	1600				
	0.14	12095	1600				
	0.16	10860	1600				
	0.18	9445	1600				
	0.20	8480	1600				
	0.23	7312	1600				
	0.26	6521	1600				
	0.30	5585	1600		R 57R37 DRS 71S4	82	275
	0.34	4928	1600		RF 57R37 DRS 71S4	89	275
	0.39	4378	1600		RM 57R37 DRS 71S4	115	275
	0.44	3873	1600				
	0.51	3344	1600				
	0.58	2907	1600				
	0.66	2567	1600				
	0.76	2244	1600				
	0.86	1967	1600				
	0.58	2957	1600				
	0.68	2508	1600				
	0.74	2309	1600				
	0.85	1991	1600				
	0.96	1768	1600				
	1.1	1520	1600				
	1.3	1342	1600				
	1.5	1164	1600		R 57R37 DRS 71S4	80	275
	1.6	1027	1600		RF 57R37 DRS 71S4	87	275
	1.9	894	1600		RM 57R37 DRS 71S4	115	275
	2.1	805	1600				
	2.5	683	1600				
	2.8	603	1600				
	3.2	534	1600				
	3.7	454	1600				
	4.2	410	1600				
	0.98	1732	1600				
	1.1	1555	1600				
	1.2	1399	1600				
	1.4	1189	1600				
	1.6	1034	1600				
	2.2	782	1600		R 57R37 DRS 71S4	81	275
	2.5	678	1600		RF 57R37 DRS 71S4	89	275
	2.8	604	1600		RM 57R37 DRS 71S4	115	275
	3.2	537	1600				
	3.6	471	1600				
4.8	357	1600					
5.3	319	1600					
6.2	273	1600					
7.0	241	1600					
7.9	215	1600		R 57R37 DRS 71M4	84	275	
9.0	187	1600		RF 57R37 DRS 71M4	91	275	
10	164	1600		RM 57R37 DRS 71M4	120	275	
12	142	1600					
				R 57R37 DRE 80M4	94	275	
				RF 57R37 DRE 80M4	100	275	
				RM 57R37 DRE 80M4	130	275	
4.7	359	1600					
5.2	324	1600		R 57R37 DRS 71S4	79	275	
5.9	290	1600		RF 57R37 DRS 71S4	87	275	
6.5	262	1600		RM 57R37 DRS 71S4	115	275	
6.9	246	1600					
7.7	220	1600		R 57R37 DRS 71M4	82	275	
9.0	188	1600		RF 57R37 DRS 71M4	89	275	
				RM 57R37 DRS 71M4	115	275	
11	159	1600		R 57R37 DRE 80M4	92	275	
12	146	1600		RF 57R37 DRE 80M4	100	275	
13	134	1600		RM 57R37 DRE 80M4	125	275	

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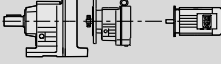


$T_{a \max}$ [lb-in]	n_a [rpm]	i	$F_{Ra}^{1)}$ [lb]		m [lbs]			
5300	0.11	15361	1700					
	0.13	12931	1700					
	0.14	11996	1700					
	0.17	10097	1700					
	0.19	9066	1700					
	0.22	7816	1700					
	0.25	6732	1700		R 67R37	DRS 71S4	96	275
	0.28	5970	1700		RF 67R37	DRS 71S4	105	275
	0.32	5268	1700		RM 67R37	DRS 71S4	140	275
	0.36	4680	1700					
	0.41	4136	1700					
	0.48	3566	1700					
	0.54	3125	1700					
	0.62	2745	1700					
	0.71	2403	1700					
	0.63	2682	1700					
	0.69	2460	1700					
	0.81	2094	1700					
	0.94	1805	1700					
	1.0	1629	1700					
	1.2	1471	1700					
	1.2	1379	1700		R 67R37	DRS 71S4	94	275
	1.5	1109	1700		RF 67R37	DRS 71S4	100	275
	1.8	956	1700		RM 67R37	DRS 71S4	135	275
	1.9	891	1700					
	2.3	730	1700					
	2.6	644	1700					
	3.0	571	1700					
	3.5	486	1700					
	0.80	2136	1700					
	0.92	1852	1700					
	1.0	1652	1700					
	1.2	1432	1700					
	1.4	1259	1700					
	1.5	1106	1700					
	2.0	836	1700		R 67R37	DRS 71S4	96	275
	2.3	750	1700		RF 67R37	DRS 71S4	105	275
	2.6	646	1700		RM 67R37	DRS 71S4	140	275
	3.0	574	1700					
	3.4	495	1700					
	3.9	438	1700					
	4.4	388	1700					
	4.9	344	1700					
	5.8	294	1700		R 67R37	DRS 71M4	98	275
	6.5	261	1700		RF 67R37	DRS 71M4	105	275
7.2	234	1700		RM 67R37	DRS 71M4	140	275	
8.7	200	1700		R 67R37	DRE 80M4	110	275	
9.9	176	1700		RF 67R37	DRE 80M4	115	275	
				RM 67R37	DRE 80M4	150	275	
11	158	1700		R 67R37	DRE 90M4	120	275	
				RF 67R37	DRE 90M4	125	275	
				RM 67R37	DRE 90M4	160	275	
3.8	443	1700		R 67R37	DRS 71S4	94	275	
4.4	384	1700		RF 67R37	DRS 71S4	100	275	
4.7	359	1700		RM 67R37	DRS 71S4	135	275	
5.4	310	1700		R 67R37	DRS 71M4	96	275	
6.4	264	1700		RF 67R37	DRS 71M4	105	275	
7.2	235	1700		RM 67R37	DRS 71M4	140	275	
8.7	201	1700		R 67R37	DRE 80M4	105	275	
9.6	181	1700		RF 67R37	DRE 80M4	115	275	
				RM 67R37	DRE 80M4	150	275	
11	159	1700		R 67R37	DRE 90M4	115	275	
				RF 67R37	DRE 90M4	125	275	
				RM 67R37	DRE 90M4	160	275	

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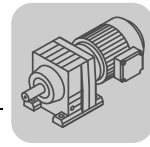


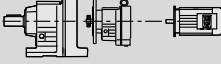


R..DRE/DRS

R..R..DRE/DRS [lb-in]

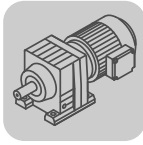
$T_a \text{ max}$ [lb-in]	n_a [rpm]	i	$F_{Ra}^{1)}$ [lb]		m [lbs]					
7250	0.10	16370	2230							
	0.11	15015	2230							
	0.12	13885	2230							
	0.13	12783	2230							
	0.15	11021	2230							
	0.17	9788	2230							
	0.20	8714	2230							
	0.22	7617	2230		R	77R37	DRS	71S4	110	275
	0.25	6770	2230		RF	77R37	DRS	71S4	120	275
	0.29	5838	2230		RM	77R37	DRS	71S4	175	275
	0.33	5184	2230							
	0.38	4470	2230							
	0.43	3999	2230							
	0.49	3488	2230							
	0.56	3053	2230							
	0.64	2671	2230							
	0.54	3151	2230							
	0.59	2890	2230							
	0.69	2460	2230							
	0.80	2121	2230							
	0.86	1977	2230							
	0.98	1728	2230							
	1.0	1620	2230							
	1.2	1430	2230		R	77R37	DRS	71S4	105	275
	1.3	1303	2230		RF	77R37	DRS	71S4	120	275
	1.5	1124	2230		RM	77R37	DRS	71S4	175	275
	1.6	1047	2230							
	1.9	915	2230							
	2.0	858	2230							
	2.2	757	2230							
	2.5	671	2230							
	3.0	571	2230							
	0.73	2345	2230							
	0.82	2070	2230							
	0.93	1822	2230							
	1.1	1580	2230							
	1.2	1394	2230							
	1.4	1218	2230		R	77R37	DRS	71S4	110	275
	1.6	1084	2230		RF	77R37	DRS	71S4	120	275
	1.8	940	2230		RM	77R37	DRS	71S4	175	275
	2.1	821	2230							
	2.3	731	2230							
	2.6	646	2230							
	3.0	560	2230							
	3.5	488	2230							
3.9	436	2230		R	77R37	DRS	71M4	110	275	
4.5	373	2230		RF	77R37	DRS	71M4	125	275	
5.2	327	2230		RM	77R37	DRS	71M4	180	275	
6.0	289	2230		R	77R37	DRE	80M4	120	275	
6.7	260	2230		RF	77R37	DRE	80M4	135	275	
7.8	224	2230		RM	77R37	DRE	80M4	190	275	
8.8	197	2230		R	77R37	DRE	90M4	130	275	
10	169	2230		RF	77R37	DRE	90M4	145	275	
12	149	2230		RM	77R37	DRE	90M4	200	275	
3.3	520	2230		R	77R37	DRS	71S4	105	275	
3.8	451	2230		RF	77R37	DRS	71S4	120	275	
				RM	77R37	DRS	71S4	175	275	
4.0	422	2230		R	77R37	DRS	71M4	110	275	
4.6	365	2230		RF	77R37	DRS	71M4	120	275	
5.5	310	2230		RM	77R37	DRS	71M4	175	275	
6.3	276	2230		R	77R37	DRE	80M4	120	275	
7.4	236	2230		RF	77R37	DRE	80M4	130	275	
7.9	221	2230		RM	77R37	DRE	80M4	185	275	
9.3	186	2230		R	77R37	DRE	90M4	130	275	
				RF	77R37	DRE	90M4	140	275	
				RM	77R37	DRE	90M4	195	275	

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$T_{a \max}$ [lb-in]	n_a [rpm]	i	$F_{Ra}^{1)}$ [lb]		m [lbs]			
13700	0.10	17452	3800					
	0.11	15310	3800					
	0.12	13813	3800					
	0.14	12025	3800					
	0.16	10549	3800					
	0.18	9244	3800					
	0.21	8109	3800					
	0.24	7038	3800					
	0.28	6174	3800					
	0.31	5449	3800		R 87R57	DRS 71S4	195	275
	0.35	4831	3800		RF 87R57	DRS 71S4	210	275
	0.40	4206	3800		RM 87R57	DRS 71S4	275	275
	0.45	3744	3800					
	0.53	3233	3800					
	0.59	2873	3800					
	0.68	2518	3800					
	0.77	2209	3800					
	0.87	1961	3800					
	1.7	994	3800					
	1.9	881	3800		R 87R57	DRS 71M4	200	275
				RF 87R57	DRS 71M4	215	275	
				RM 87R57	DRS 71M4	280	275	
0.42	4020	3800						
0.46	3703	3800						
0.53	3182	3800						
0.61	2770	3800						
0.66	2595	3800						
0.80	2129	3800						
0.88	1930	3800		R 87R57	DRS 71S4	190	275	
0.98	1733	3800		RF 87R57	DRS 71S4	210	275	
1.1	1489	3800		RM 87R57	DRS 71S4	275	275	
1.2	1395	3800						
1.4	1232	3800						
1.5	1145	3800						
1.6	1037	3800						
1.8	931	3800						
2.1	802	3800						
2.2	754	3800		R 87R57	DRS 71M4	195	275	
2.6	649	3800		RF 87R57	DRS 71M4	210	275	
2.9	580	3800		RM 87R57	DRS 71M4	275	275	
0.98	1737	3800						
1.1	1524	3800		R 87R57	DRS 71S4	195	275	
1.3	1303	3800		RF 87R57	DRS 71S4	210	275	
1.5	1143	3800		RM 87R57	DRS 71S4	275	275	
1.7	1008	3800						
1.9	885	3800						
2.2	776	3800		R 87R57	DRS 71M4	195	275	
2.5	685	3800		RF 87R57	DRS 71M4	210	275	
2.8	599	3800		RM 87R57	DRS 71M4	275	275	
3.3	525	3800		R 87R57	DRE 80M4	205	275	
3.8	456	3800		RF 87R57	DRE 80M4	225	275	
				RM 87R57	DRE 80M4	290	275	
4.4	398	3800		R 87R57	DRE 90M4	220	275	
4.9	352	3800		RF 87R57	DRE 90M4	235	275	
5.7	305	3800		RM 87R57	DRE 90M4	300	275	
6.5	268	3800		R 87R57	DRE 90L4	225	275	
7.4	236	3800		RF 87R57	DRE 90L4	240	275	
8.3	209	3800		RM 87R57	DRE 90L4	305	275	
3.2	538	3800		R 87R57	DRE 80M4	205	275	
3.7	472	3800		RF 87R57	DRE 80M4	220	275	
				RM 87R57	DRE 80M4	285	275	
4.4	400	3800		R 87R57	DRE 90M4	215	275	
4.8	361	3800		RF 87R57	DRE 90M4	230	275	
5.8	300	3800		RM 87R57	DRE 90M4	295	275	
6.8	256	3800		R 87R57	DRE 90L4	220	275	
7.5	232	3800		RF 87R57	DRE 90L4	235	275	
				RM 87R57	DRE 90L4	300	275	

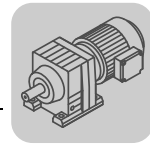
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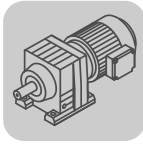
R..DRE/DRS
R..R..DRE/DRS [lb-in]

$T_{a \max}$ [lb-in]	n_a [rpm]	i	$F_{Ra}^{1)}$ [lb]				m [lbs]		
13700	8.9	195	3800	R	87R57	DRE 100L4	240	275	
				RF	87R57	DRE 100L4	255	275	
				RM	87R57	DRE 100L4	320	275	
26500	0.08	21769	4450						
	0.09	19332	4450						
	0.10	17230	4450						
	0.11	14999	4450						
	0.13	13320	4450						
	0.15	11156	4450						
	0.17	10030	4450						
	0.20	8706	4450		R	97R57	DRS 71S4	290	275
	0.22	7692	4450		RF	97R57	DRS 71S4	325	275
	0.25	6708	4450		RM	97R57	DRS 71S4	440	275
	0.29	5931	4450						
	0.33	5161	4450						
	0.37	4559	4450						
	0.42	4004	4450						
	0.49	3481	4450						
	0.36	4678	4450						
	0.39	4309	4450						
	0.46	3702	4450						
	0.56	3019	4450		R	97R57	DRS 71S4	280	275
	0.64	2668	4450		RF	97R57	DRS 71S4	320	275
	0.76	2245	4450		RM	97R57	DRS 71S4	430	275
	0.84	2016	4450						
	0.98	1733	4450						
	1.0	1623	4450						
	1.2	1434	4450		R	97R57	DRS 71M4	285	275
	1.4	1207	4450		RF	97R57	DRS 71M4	320	275
	1.6	1084	4450		RM	97R57	DRS 71M4	435	275
	1.9	934	4450		R	97R57	DRE 80M4	295	275
	2.0	878	4450		RF	97R57	DRE 80M4	335	275
					RM	97R57	DRE 80M4	445	275
	2.3	755	4450		R	97R57	DRE 90M4	305	275
					RF	97R57	DRE 90M4	345	275
					RM	97R57	DRE 90M4	455	275
	0.55	3065	4450						
	0.62	2722	4450		R	97R57	DRS 71S4	285	275
	0.74	2311	4450		RF	97R57	DRS 71S4	325	275
	0.82	2078	4450		RM	97R57	DRS 71S4	435	275
	0.93	1823	4450						
	1.1	1583	4450		R	97R57	DRS 71M4	290	275
	1.2	1396	4450		RF	97R57	DRS 71M4	325	275
	1.4	1228	4450		RM	97R57	DRS 71M4	440	275
	1.6	1069	4450						
	1.8	938	4450		R	97R57	DRE 80M4	300	275
	2.1	824	4450		RF	97R57	DRE 80M4	340	275
					RM	97R57	DRE 80M4	450	275
	2.4	737	4450		R	97R57	DRE 90M4	310	275
	2.8	632	4450		RF	97R57	DRE 90M4	350	275
3.1	560	4450		RM	97R57	DRE 90M4	460	275	
3.6	484	4450		R	97R57	DRE 90L4	315	275	
4.0	431	4450		RF	97R57	DRE 90L4	355	275	
				RM	97R57	DRE 90L4	465	275	
4.6	379	4450		R	97R57	DRE 100L4	335	275	
5.2	336	4450		RF	97R57	DRE 100L4	370	275	
5.9	296	4450		RM	97R57	DRE 100L4	485	275	
7.0	249	4450		R	97R57	DRE 100LC4	340	275	
7.5	234	4450		RF	97R57	DRE 100LC4	375	275	
8.4	209	4450		RM	97R57	DRE 100LC4	490	275	
2.8	625	4450		R	97R57	DRE 90M4	305	275	
3.2	549	4450		RF	97R57	DRE 90M4	340	275	
				RM	97R57	DRE 90M4	455	275	
3.7	466	4450		R	97R57	DRE 90L4	310	275	
4.1	420	4450		RF	97R57	DRE 90L4	345	275	
				RM	97R57	DRE 90L4	460	275	

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$T_a \text{ max}$ [lb-in]	n_a [rpm]	i	$F_{Ra} \text{ 1)}$ [lb]				m [lbs]		
26500	4.7	370	4450	R	97R57	DRE	100L4	325	275
	5.0	349	4450	RF	97R57	DRE	100L4	365	275
	5.8	297	4450	RM	97R57	DRE	100L4	480	275
	6.4	270	4450						
	7.7	227	4450	R	97R57	DRE	100LC4	330	275
				RF	97R57	DRE	100LC4	370	275
			RM	97R57	DRE	100LC4	480	275	
38000	0.08	20018	6620						
	0.10	17080	6620						
	0.11	14936	6620						
	0.13	12829	6620						
	0.15	11256	6620						
	0.18	9547	6620						
	0.20	8618	6620						
	0.22	7583	6620	R	107R77	DRS	71S4	450	275
	0.25	6743	6620	RF	107R77	DRS	71S4	465	275
	0.29	5914	6620	RM	107R77	DRS	71S4	660	275
	0.33	5168	6620						
	0.38	4435	6620						
	0.44	3896	6620						
	0.50	3432	6620						
	0.56	3039	6620						
	0.63	2688	6620						
	0.74	2339	6620	R	107R77	DRE	80M4	465	275
				RF	107R77	DRE	80M4	480	275
				RM	107R77	DRE	80M4	670	275
	0.43	3918	6620	R	107R77	DRS	71S4	435	275
	0.51	3343	6620	RF	107R77	DRS	71S4	450	275
	0.56	3034	6620	RM	107R77	DRS	71S4	640	275
	0.64	2653	6620						
	0.74	2280	6620	R	107R77	DRS	71M4	440	275
	0.82	2067	6620	RF	107R77	DRS	71M4	455	275
	1.0	1693	6620	RM	107R77	DRS	71M4	650	275
	1.1	1550	6620	R	107R77	DRE	80M4	450	275
	1.2	1407	6620	RF	107R77	DRE	80M4	465	275
	1.4	1209	6620	RM	107R77	DRE	80M4	660	275
	1.6	1055	6620	R	107R77	DRE	90M4	460	275
	1.9	919	6620	RF	107R77	DRE	90M4	470	275
	2.1	815	6620	RM	107R77	DRE	90M4	670	275
	2.4	717	6620	R	107R77	DRE	90L4	465	275
	2.8	626	6620	RF	107R77	DRE	90L4	480	275
				RM	107R77	DRE	90L4	670	275
	3.3	528	6620	R	107R77	DRE	100L4	480	275
				RF	107R77	DRE	100L4	495	275
				RM	107R77	DRE	100L4	690	275
	0.85	1987	6620	R	107R77	DRS	71M4	450	275
	0.92	1827	6620	RF	107R77	DRS	71M4	465	275
				RM	107R77	DRS	71M4	660	275
	1.1	1599	6620	R	107R77	DRE	80M4	465	275
	1.2	1400	6620	RF	107R77	DRE	80M4	475	275
	1.4	1226	6620	RM	107R77	DRE	80M4	670	275
	1.6	1104	6620	R	107R77	DRE	90M4	470	275
	1.8	939	6620	RF	107R77	DRE	90M4	485	275
	2.1	822	6620	RM	107R77	DRE	90M4	680	275
	2.8	614	6620	R	107R77	DRE	90L4	475	275
				RF	107R77	DRE	90L4	490	275
				RM	107R77	DRE	90L4	680	275
3.2	544	6620	R	107R77	DRE	100L4	495	275	
3.5	492	6620	RF	107R77	DRE	100L4	510	275	
4.2	417	6620	RM	107R77	DRE	100L4	700	275	
4.8	369	6620	R	107R77	DRE	100LC4	500	275	
5.4	323	6620	RF	107R77	DRE	100LC4	510	275	
6.1	285	6620	RM	107R77	DRE	100LC4	710	275	
6.9	253	6620							
8.2	214	6620	R	107R77	DRE	132M4	560	275	
9.4	187	6620	RF	107R77	DRE	132M4	570	275	
			RM	107R77	DRE	132M4	760	275	

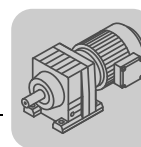


R..DRE/DRS

R..R..DRE/DRS [lb-in]

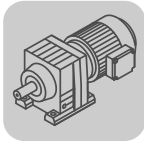
$T_a \text{ max}$ [lb-in]	n_a [rpm]	i	$F_{Ra}^{1)}$ [lb]				m [lbs]		
38000	3.7	469	6620	R	107R77	DRE	100L4	480	275
	4.1	426	6620	RF	107R77	DRE	100L4	495	275
				RM	107R77	DRE	100L4	690	275
	4.6	377	6620	R	107R77	DRE	100LC4	485	275
	5.4	325	6620	RF	107R77	DRE	100LC4	495	275
	6.2	284	6620	RM	107R77	DRE	100LC4	690	275
	6.8	256	6620						
	8.0	220	6620	R	107R77	DRE	132S4	520	275
				RF	107R77	DRE	132S4	530	275
				RM	107R77	DRE	132S4	720	275
	9.1	193	6620	R	107R77	DRE	132M4	540	275
	10	172	6620	RF	107R77	DRE	132M4	560	275
				RM	107R77	DRE	132M4	750	275
	70700	0.08	22203	12000					
0.09		18945	12000						
0.10		16566	12000						
0.12		14777	12000						
0.13		12921	12000						
0.15		11712	12000	R	137R77	DRS	71S4	640	275
0.16		10573	12000	RF	137R77	DRS	71S4	690	275
0.19		8784	12000	RM	137R77	DRS	71S4	940	275
0.23		7479	12000						
0.26		6559	12000						
0.29		5834	12000						
0.33		5116	12000						
0.38		4464	12000	R	137R77	DRS	71M4	640	275
0.43		3928	12000	RF	137R77	DRS	71M4	700	275
0.49		3454	12000	RM	137R77	DRS	71M4	940	275
0.58		2993	12000	R	137R77	DRE	80M4	660	275
				RF	137R77	DRE	80M4	710	275
				RM	137R77	DRE	80M4	950	275
0.36		4709	12000	R	137R77	DRS	71S4	620	275
				RF	137R77	DRS	71S4	670	275
				RM	137R77	DRS	71S4	920	275
0.42		4018	12000	R	137R77	DRS	71M4	620	275
0.48		3514	12000	RF	137R77	DRS	71M4	670	275
0.51		3338	12000	RM	137R77	DRS	71M4	920	275
0.58		2929	12000						
0.70		2484	12000	R	137R77	DRE	80M4	630	275
0.78		2242	12000	RF	137R77	DRE	80M4	680	275
				RM	137R77	DRE	80M4	930	275
0.93		1863	12000	R	137R77	DRE	90M4	640	275
1.1		1586	12000	RF	137R77	DRE	90M4	690	275
				RM	137R77	DRE	90M4	940	275
1.2		1391	12000	R	137R77	DRE	90L4	650	275
1.4		1256	12000	RF	137R77	DRE	90L4	700	275
1.6		1105	12000	RM	137R77	DRE	90L4	940	275
1.7		1043	12000	R	137R77	DRE	100L4	660	275
2.0		888	12000	RF	137R77	DRE	100L4	720	275
				RM	137R77	DRE	100L4	960	275
2.5		699	12000	R	137R77	DRE	100LC4	670	275
2.9		609	12000	RF	137R77	DRE	100LC4	720	275
				RM	137R77	DRE	100LC4	970	275
0.65		2658	12000	R	137R77	DRE	80M4	650	275
0.72		2412	12000	RF	137R77	DRE	80M4	700	275
			RM	137R77	DRE	80M4	950	275	
0.84	2073	12000	R	137R77	DRE	90M4	660	275	
0.95	1839	12000	RF	137R77	DRE	90M4	710	275	
1.1	1598	12000	RM	137R77	DRE	90M4	960	275	
1.2	1397	12000	R	137R77	DRE	90L4	670	275	
1.4	1226	12000	RF	137R77	DRE	90L4	720	275	
1.6	1090	12000	RM	137R77	DRE	90L4	960	275	
1.8	951	12000	R	137R77	DRE	100L4	680	275	
2.1	831	12000	RF	137R77	DRE	100L4	740	275	
2.4	730	12000	RM	137R77	DRE	100L4	980	275	

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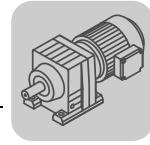
T _{a max} [lb-in]	n _a [rpm]	i	F _{Ra 1)} [lb]				m [lbs]		
70700	2.8	629	12000	R	137R77	DRE	100LC4	690	275
	3.1	560	12000	RF	137R77	DRE	100LC4	740	275
	3.6	490	12000	RM	137R77	DRE	100LC4	980	275
	4.1	428	12000	R	137R77	DRE	132S4	720	275
				RF	137R77	DRE	132S4	770	275
				RM	137R77	DRE	132S4	1020	275
	4.6	381	12000	R	137R77	DRE	132M4	750	275
	5.4	323	12000	RF	137R77	DRE	132M4	800	275
	6.0	291	12000	RM	137R77	DRE	132M4	1040	275
	7.0	255	12000	R	137R77	DRE	132MC4	750	275
	7.9	223	12000	RF	137R77	DRE	132MC4	800	275
				RM	137R77	DRE	132MC4	1050	275
	9.0	197	12000	R	137R77	DRE	160M4	800	275
	10	175	12000	RF	137R77	DRE	160M4	850	275
				RM	137R77	DRE	160M4	1100	275
	3.1	564	12000	R	137R77	DRE	100LC4	670	275
	3.4	517	12000	RF	137R77	DRE	100LC4	720	275
	3.9	453	12000	RM	137R77	DRE	100LC4	960	275
	4.7	376	12000	R	137R77	DRE	132M4	720	275
	5.2	339	12000	RF	137R77	DRE	132M4	780	275
5.9	297	12000	RM	137R77	DRE	132M4	1020	275	
115000	0.07	23401	14100						
	0.08	21342	14100						
	0.09	18210	14100						
	0.11	15923	14100	R	147R77	DRS	71S4	930	275
	0.12	14075	14100	RF	147R77	DRS	71S4	950	275
	0.14	12344	14100	RM	147R77	DRS	71S4	1320	275
	0.15	11143	14100						
	0.17	9743	14100						
	0.20	8443	14100						
	0.23	7307	14100	R	147R77	DRS	71M4	930	275
	0.26	6447	14100	RF	147R77	DRS	71M4	950	275
	0.30	5568	14100	RM	147R77	DRS	71M4	1320	275
	0.34	4926	14100						
	0.40	4325	14100	R	147R77	DRE	80M4	950	275
	0.46	3754	14100	RF	147R77	DRE	80M4	960	275
				RM	147R77	DRE	80M4	1330	275
	0.53	3302	14100	R	147R77	DRE	90M4	950	275
	0.60	2898	14100	RF	147R77	DRE	90M4	970	275
				RM	147R77	DRE	90M4	1340	275
	0.68	2555	14100	R	147R77	DRE	90M4	950	275
				RF	147R77	DRE	90M4	970	275
				RM	147R77	DRE	90M4	1340	275
	0.79	2211	14100	R	147R77	DRE	90L4	960	275
	0.89	1951	14100	RF	147R77	DRE	90L4	980	275
				RM	147R77	DRE	90L4	1340	275
	1.0	1705	14100	R	147R77	DRE	100L4	970	275
	1.1	1536	14100	RF	147R77	DRE	100L4	990	275
	1.3	1329	14100	RM	147R77	DRE	100L4	1360	275
	1.5	1166	14100	R	147R77	DRE	100LC4	980	275
	1.7	1029	14100	RF	147R77	DRE	100LC4	1000	275
	2.0	889	14100	RM	147R77	DRE	100LC4	1370	275
	2.2	784	14100						
	2.5	695	14100	R	147R77	DRE	132S4	1010	275
				RF	147R77	DRE	132S4	1030	275
				RM	147R77	DRE	132S4	1400	275
	2.8	619	14100	R	147R77	DRE	132M4	1040	275
	3.1	558	14100	RF	147R77	DRE	132M4	1060	275
	3.6	489	14100	RM	147R77	DRE	132M4	1420	275
	4.3	415	14100	R	147R77	DRE	132MC4	1040	275
				RF	147R77	DRE	132MC4	1060	275
			RM	147R77	DRE	132MC4	1430	275	
3.3	533	14100	R	147R87	DRE	132M4	1080	275	
			RF	147R87	DRE	132M4	1100	275	
			RM	147R87	DRE	132M4	1470	275	

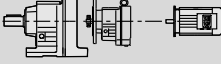
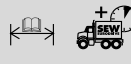
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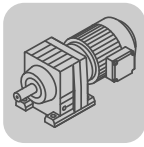
R..DRE/DRS
R..R..DRE/DRS [lb-in]

$T_{a \max}$ [lb-in]	n_a [rpm]	i	$F_{Ra}^{1)}$ [lb]				m [lbs]			
115000	3.8	462	14100	R	147R87	DRE	132MC4	1090	275	
	4.2	426	14100	RF	147R87	DRE	132MC4	1110	275	
	4.8	368	14100	RM	147R87	DRE	132MC4	1480	275	
	5.4	326	14100	R	147R87	DRE	160M4	1140	275	
				RF	147R87	DRE	160M4	1150	275	
				RM	147R87	DRE	160M4	1520	275	
	6.4	280	14100	R	147R87	DRE	160MC4	1150	275	
	7.2	247	14100	RF	147R87	DRE	160MC4	1160	275	
				RM	147R87	DRE	160MC4	1530	275	
	8.3	214	14100	R	147R87	DRE	180M4	1240	275	
	9.4	189	14100	RF	147R87	DRE	180M4	1260	275	
				RM	147R87	DRE	180M4	1630	275	
		11	159	14100	R	147R87	DRE	180L4	1290	275
				RF	147R87	DRE	180L4	1300	275	
			RM	147R87	DRE	180L4	1670	275		
159200	0.06	27001	27000							
	0.08	22482	27000							
	0.08	20002	27000							
	0.10	17361	27000	R	167R97	DRS	71M4	1660	275	
	0.11	15446	27000	RF	167R97	DRS	71M4	1680	275	
	0.12	14051	27000	RM	167R97	DRS	71M4	2110	275	
	0.14	11812	27000							
	0.16	10509	27000							
	0.18	9631	27000							
	0.22	7749	27000	R	167R97	DRE	80M4	1670	275	
	0.25	6894	27000	RF	167R97	DRE	80M4	1690	275	
	0.29	6077	27000	RM	167R97	DRE	80M4	2120	275	
	0.32	5407	27000							
	0.37	4650	27000	R	167R97	DRE	90M4	1680	275	
	0.42	4129	27000	RF	167R97	DRE	90M4	1700	275	
	0.47	3692	27000	RM	167R97	DRE	90M4	2130	275	
	0.56	3099	27000	R	167R97	DRE	100L4	1710	275	
				RF	167R97	DRE	100L4	1720	275	
				RM	167R97	DRE	100L4	2150	275	
	0.65	2657	27000	R	167R97	DRE	90L4	1680	275	
				RF	167R97	DRE	90L4	1700	275	
				RM	167R97	DRE	90L4	2130	275	
	0.74	2333	27000	R	167R97	DRE	100L4	1700	275	
	0.83	2085	27000	RF	167R97	DRE	100L4	1710	275	
	0.92	1877	27000	RM	167R97	DRE	100L4	2140	275	
	1.0	1670	27000							
	1.2	1438	27000	R	167R97	DRE	100LC4	1700	275	
	1.4	1279	27000	RF	167R97	DRE	100LC4	1720	275	
	1.6	1123	27000	RM	167R97	DRE	100LC4	2150	275	
	1.8	999	27000							
	2.0	861	27000	R	167R97	DRE	132M4	1760	275	
	2.3	760	27000	RF	167R97	DRE	132M4	1770	275	
				RM	167R97	DRE	132M4	2210	275	
	2.7	656	27000	R	167R97	DRE	132MC4	1770	275	
	3.1	579	27000	RF	167R97	DRE	132MC4	1780	275	
	3.5	503	27000	RM	167R97	DRE	132MC4	2210	275	
	4.1	432	27000	R	167R97	DRE	160M4	1810	275	
				RF	167R97	DRE	160M4	1830	275	
				RM	167R97	DRE	160M4	2260	275	
	4.7	376	27000	R	167R97	DRE	160MC4	1820	275	
	5.3	335	27000	RF	167R97	DRE	160MC4	1840	275	
				RM	167R97	DRE	160MC4	2270	275	
	5.9	303	27000	R	167R97	DRE	180M4	1920	275	
	6.4	279	27000	RF	167R97	DRE	180M4	1940	275	
				RM	167R97	DRE	180M4	2370	275	
	0.48	3637	27000							
0.52	3330	27000								
0.63	2757	27000	R	167R107	DRE	100L4	1810	275		
0.71	2436	27000	RF	167R107	DRE	100L4	1820	275		
0.76	2298	27000	RM	167R107	DRE	100L4	2250	275		
0.84	2066	27000								
0.94	1849	27000								



$T_a \text{ max}$ [lb-in]	n_a [rpm]	i	$F_{Ra} \text{ 1)}$ [lb]		m [lbs]		
159200	1.0	1674	27000				
	1.2	1485	27000	R	167R107	DRE 100LC4	1810 275
	1.3	1342	27000	RF	167R107	DRE 100LC4	1820 275
	1.4	1229	27000	RM	167R107	DRE 100LC4	2260 275
	1.6	1111	27000				
	1.9	950	27000	R	167R107	DRE 132S4	1840 275
				RF	167R107	DRE 132S4	1850 275
				RM	167R107	DRE 132S4	2280 275
	2.0	860	27000	R	167R107	DRE 132M4	1860 275
	2.3	763	27000	RF	167R107	DRE 132M4	1880 275
	2.6	690	27000	RM	167R107	DRE 132M4	2310 275
	3.0	585	27000	R	167R107	DRE 132MC4	1870 275
	3.5	511	27000	RF	167R107	DRE 132MC4	1890 275
				RM	167R107	DRE 132MC4	2320 275
	5.1	349	27000	R	167R107	DRE 160MC4	1930 275
				RF	167R107	DRE 160MC4	1940 275
				RM	167R107	DRE 160MC4	2370 275
	6.0	295	27000	R	167R107	DRE 180M4	2030 275
	6.6	270	27000	RF	167R107	DRE 180M4	2040 275
				RM	167R107	DRE 180M4	2470 275
	7.7	229	27000	R	167R107	DRE 180L4	2070 275
	8.9	200	27000	RF	167R107	DRE 180L4	2080 275
				RM	167R107	DRE 180L4	2510 275
	11	169	27000	R	167R107	DRE 180LC4	2090 275
				RF	167R107	DRE 180LC4	2110 275
				RM	167R107	DRE 180LC4	2540 275
	4.0	446	27000	R	167R107	DRE 160M4	1900 275
	4.4	399	27000	RF	167R107	DRE 160M4	1920 275
				RM	167R107	DRE 160M4	2350 275
	4.9	361	27000	R	167R107	DRE 160MC4	1920 275
5.4	328	27000	RF	167R107	DRE 160MC4	1930 275	
			RM	167R107	DRE 160MC4	2360 275	
6.1	291	27000	R	167R107	DRE 180M4	2010 275	
6.7	264	27000	RF	167R107	DRE 180M4	2030 275	
			RM	167R107	DRE 180M4	2460 275	
7.8	227	27000	R	167R107	DRE 180L4	2060 275	
9.0	198	27000	RF	167R107	DRE 180L4	2070 275	
			RM	167R107	DRE 180L4	2500 275	
11	168	27000	R	167R107	DRE 180LC4	2080 275	
			RF	167R107	DRE 180LC4	2090 275	
			RM	167R107	DRE 180LC4	2530 275	

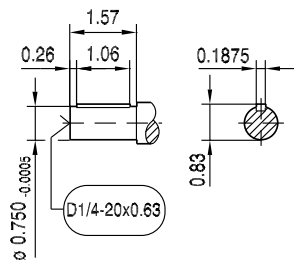
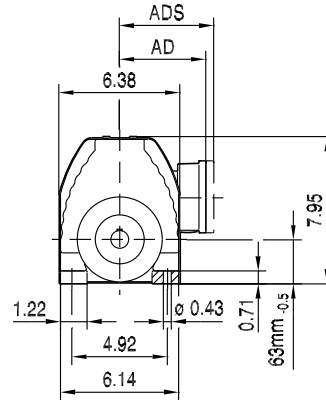
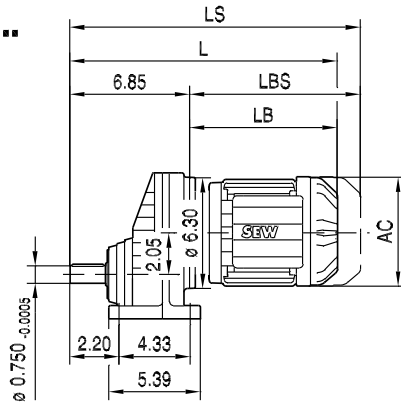
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9.5 R..[in]

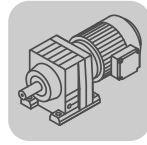
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RX57..



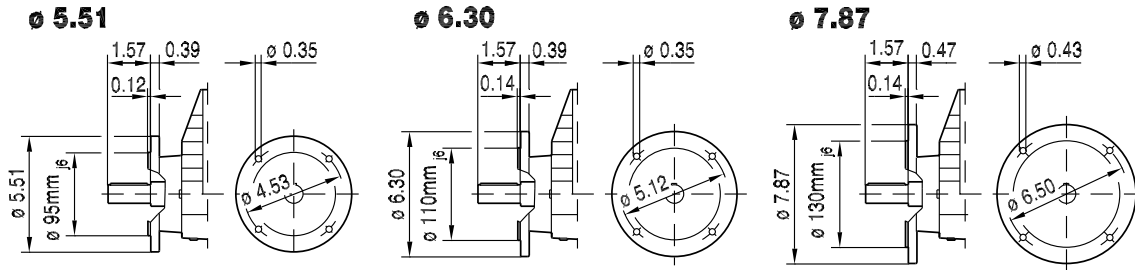
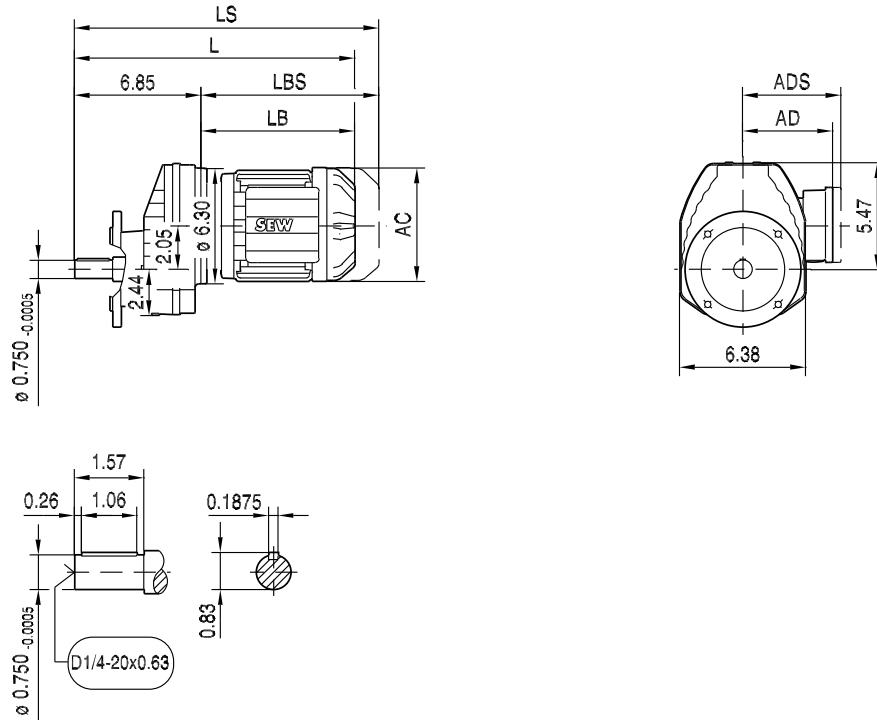
(→ 125)	DR71M	DR90M	DR90L	DR100L/LC	DR132S	DR132M/MC		
AC	5.47	7.05	7.05	7.76	8.70	8.70		
AD	4.69	5.51	5.51	6.18	6.69	6.69		
ADS	5.08	5.91	5.91	6.22	6.77	6.77		
L	15.55	17.20	17.99	20.35	22.20	24.17		
LS	18.23	20.87	21.65	24.02	26.61	28.58		
LB	8.70	10.35	11.14	13.50	15.35	17.32		
LBS	11.38	14.02	14.80	17.17	19.76	21.73		

reducer.ir



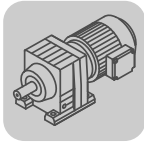
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RXF57..

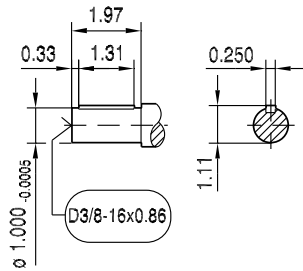
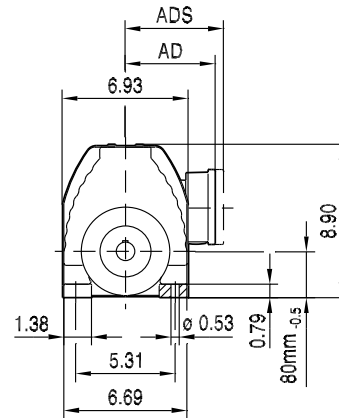
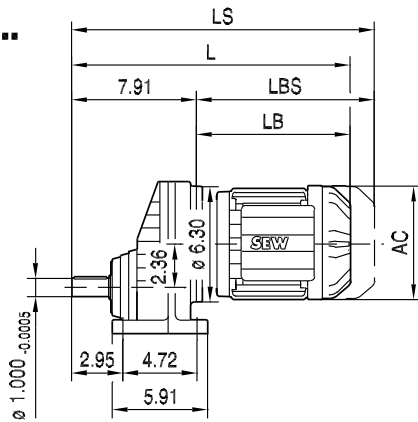


(→ 125)	DR71M	DR90M	DR90L	DR100L/LC	DR132S	DR132M/MC		
AC	5.47	7.05	7.05	7.76	8.70	8.70		
AD	4.69	5.51	5.51	6.18	6.69	6.69		
ADS	5.08	5.91	5.91	6.22	6.77	6.77		
L	15.55	17.20	17.99	20.35	22.20	24.17		
LS	18.23	20.87	21.65	24.02	26.61	28.58		
LB	8.70	10.35	11.14	13.50	15.35	17.32		
LBS	11.38	14.02	14.80	17.17	19.76	21.73		

reducer.ir

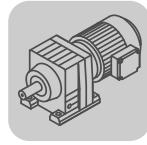


RX67..



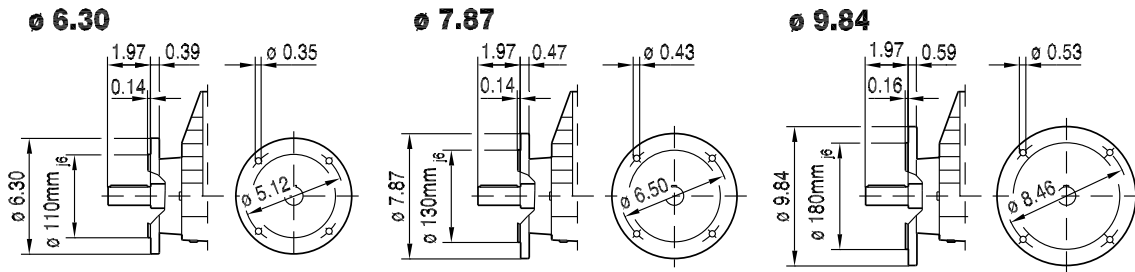
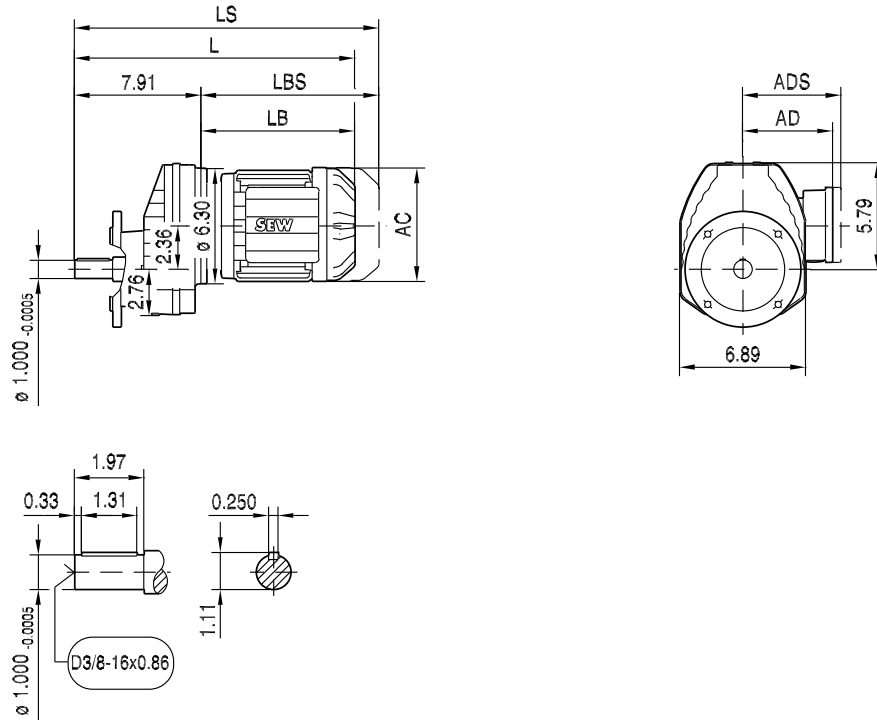
(→ 125)	DR71M	DR90M	DR90L	DR100L/LC	DR132S	DR132M/MC		
AC	5.47	7.05	7.05	7.76	8.70	8.70		
AD	4.69	5.51	5.51	6.18	6.69	6.69		
ADS	5.08	5.91	5.91	6.22	6.77	6.77		
L	16.61	18.27	19.06	21.42	23.27	25.24		
LS	19.29	21.93	22.72	25.08	27.68	29.65		
LB	8.70	10.35	11.14	13.50	15.35	17.32		
LBS	11.38	14.02	14.80	17.17	19.76	21.73		

reducer.ir



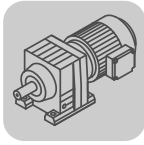
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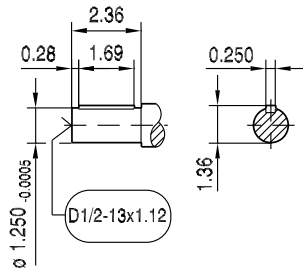
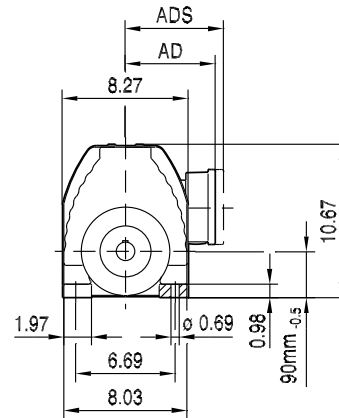
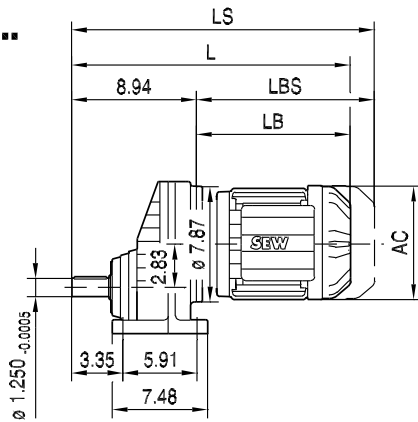


(→ 125)	DR71M	DR90M	DR90L	DR100L/LC	DR132S	DR132M/MC		
AC	5.47	7.05	7.05	7.76	8.70	8.70		
AD	4.69	5.51	5.51	6.18	6.69	6.69		
ADS	5.08	5.91	5.91	6.22	6.77	6.77		
L	16.61	18.27	19.06	21.42	23.27	25.24		
LS	19.29	21.93	22.72	25.08	27.68	29.65		
LB	8.70	10.35	11.14	13.50	15.35	17.32		
LBS	11.38	14.02	14.80	17.17	19.76	21.73		

reducer.ir

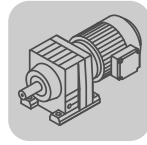


RX77..



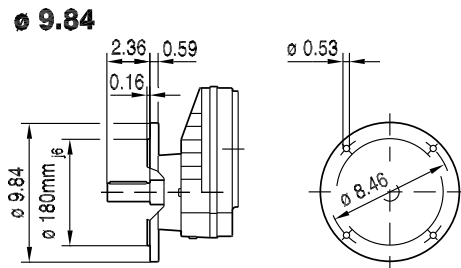
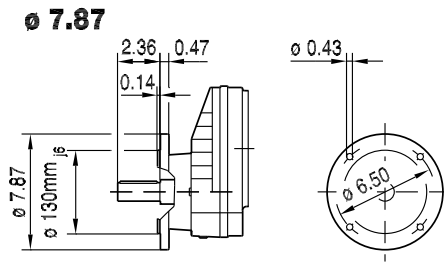
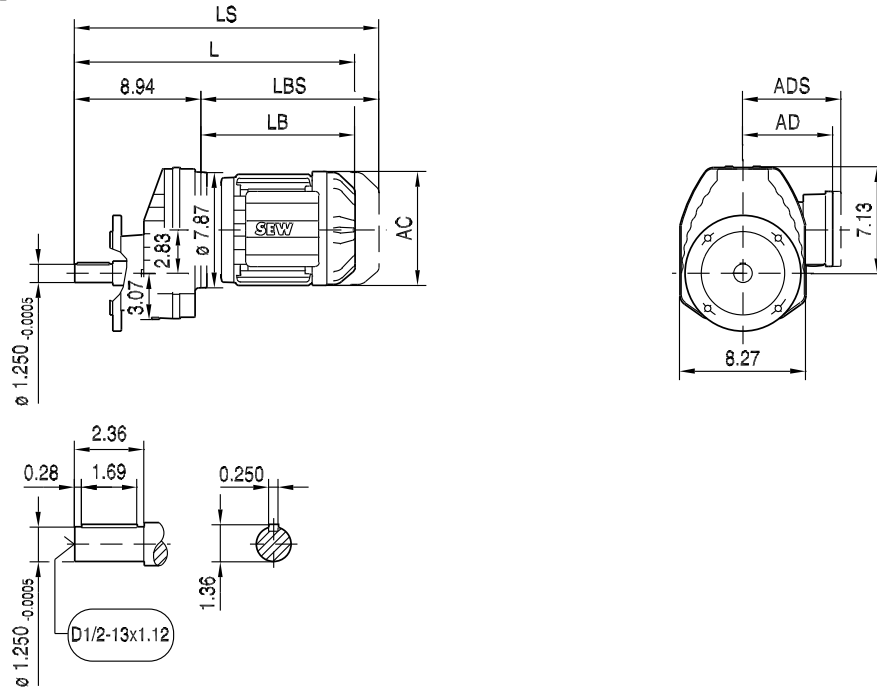
(→ 125)	DR71M	DR90M	DR90L	DR100L/LC	DR132S	DR132M/MC	DR160..	
AC	5.47	7.05	7.05	7.76	8.70	8.70	10.63	
AD	4.69	5.51	5.51	6.18	6.69	6.69	8.98	
ADS	5.08	5.91	5.91	6.22	6.77	6.77	8.98	
L	17.36	19.02	19.80	22.17	23.86	25.83	27.44	
LS	20.04	22.68	23.46	25.83	28.27	30.24	32.83	
LB	8.43	10.08	10.87	13.23	14.92	16.89	18.50	
LBS	11.10	13.74	14.53	15.89	19.83	21.30	23.90	

reducer.ir



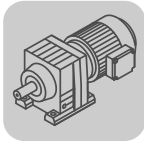
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RXF77..

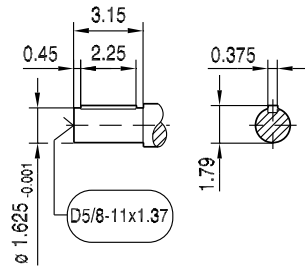
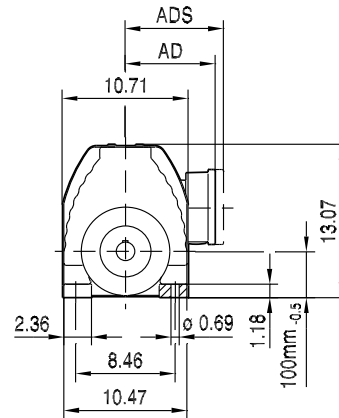
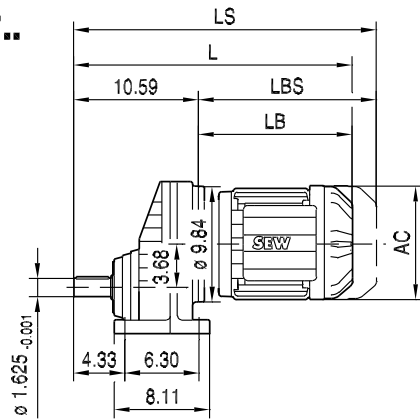


(→ 125)	DR71M	DR90M	DR90L	DR100L/LC	DR132S	DR132M/MC	DR160..	
AC	5.47	7.05	7.05	7.76	8.70	8.70	10.63	
AD	4.69	5.51	5.51	6.18	6.69	6.69	8.98	
ADS	5.08	5.91	5.91	6.22	6.77	6.77	8.98	
L	17.36	19.02	19.80	22.17	23.86	25.83	27.44	
LS	20.04	22.68	23.46	25.83	28.27	30.24	32.83	
LB	8.43	10.08	10.87	13.23	14.92	16.89	18.50	
LBS	11.10	13.74	14.53	15.89	19.83	21.30	23.90	

reducer.ir

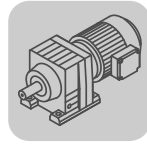


RX87..



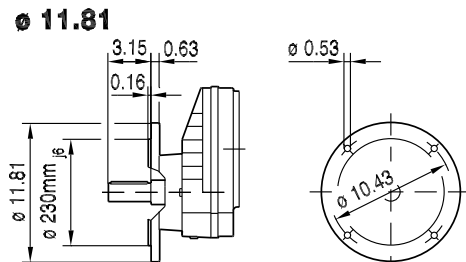
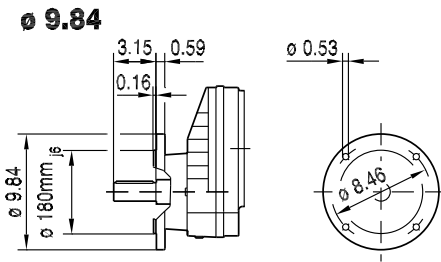
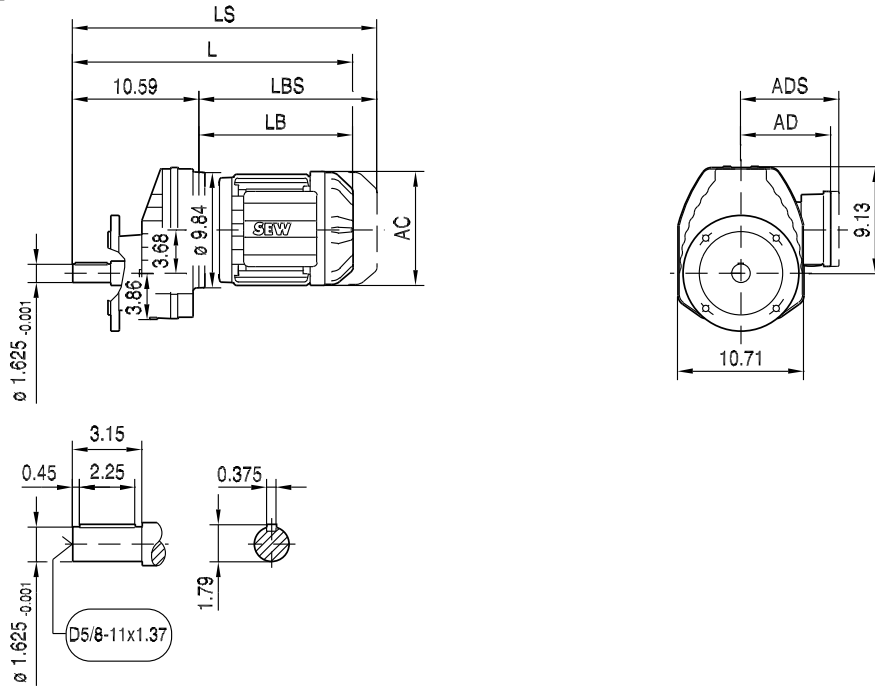
(→ 125)	DR90M	DR90L	DR100L/LC	DR132S	DR132M/MC	DR160..	DR180S/M	DR180L/LC
AC	7.05	7.05	7.76	8.70	8.70	10.63	12.44	12.44
AD	5.51	5.51	6.18	6.69	6.69	8.98	9.96	9.96
ADS	5.91	5.91	6.22	6.77	6.77	8.98	9.96	9.96
L	20.47	21.26	23.62	25.31	27.28	28.90	31.61	33.98
LS	24.13	24.92	27.28	29.72	31.69	34.29	39.06	41.42
LB	9.88	10.67	13.03	14.72	16.69	18.31	21.02	23.39
LBS	13.54	14.33	16.69	19.13	21.10	23.70	28.46	30.83

reducer.ir



01 022 00 09

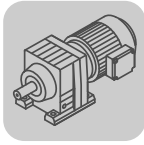
RXF87..



9

(→ 125)	DR90M	DR90L	DR100L/LC	DR132S	DR132M/MC	DR160..	DR180S/M	DR180L/LC
AC	7.05	7.05	7.76	8.70	8.70	10.63	12.44	12.44
AD	5.51	5.51	6.18	6.69	6.69	8.98	9.96	9.96
ADS	5.91	5.91	6.22	6.77	6.77	8.98	9.96	9.96
L	20.47	21.26	23.62	25.31	27.28	28.90	31.61	33.98
LS	24.13	24.92	27.28	29.72	31.69	34.29	39.06	41.42
LB	9.88	10.67	13.03	14.72	16.69	18.31	21.02	23.39
LBS	13.54	14.33	16.69	19.13	21.10	23.70	28.46	30.83

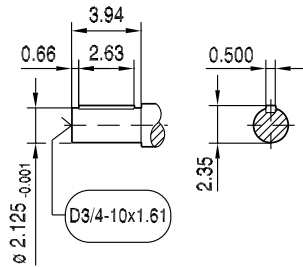
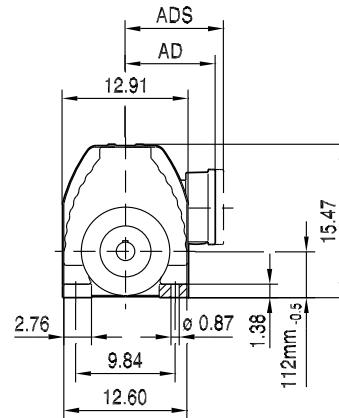
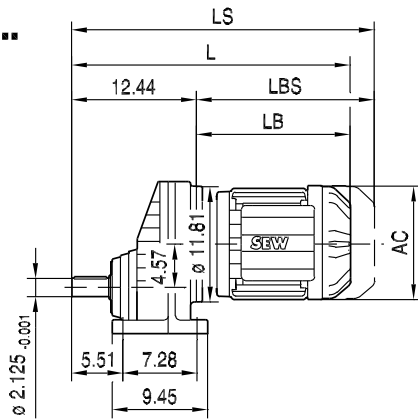
reducer.ir



R..DRE/DRS
R..[in]

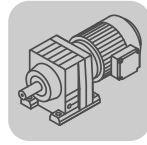
01 023 00 09

RX97..



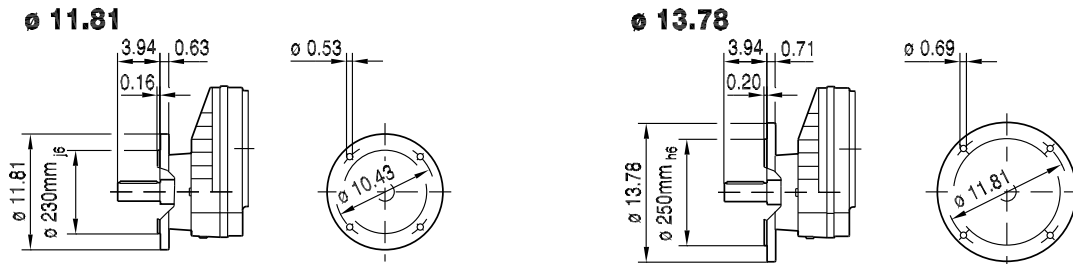
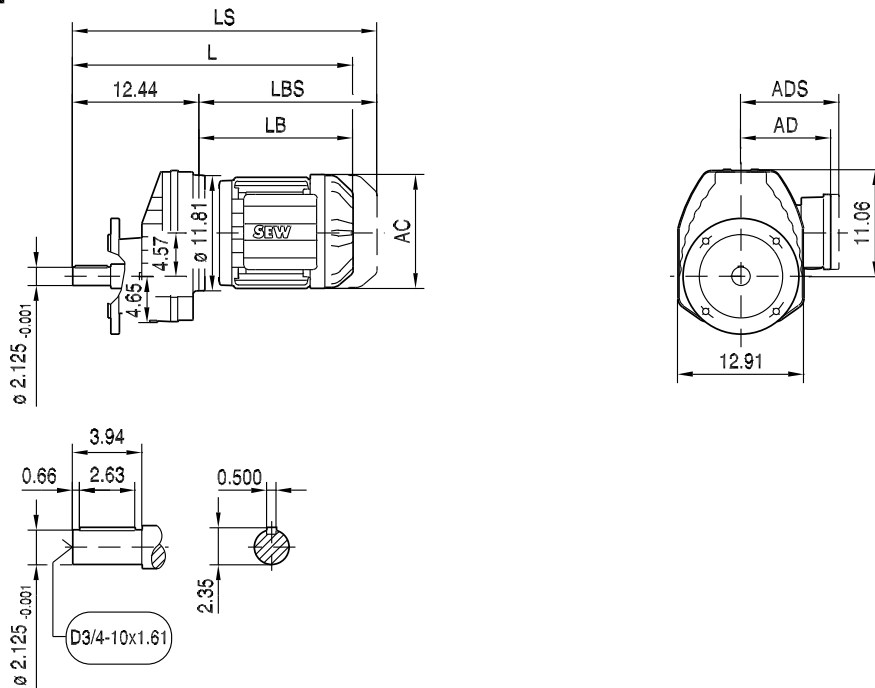
(→ 125)	DR100L/LC	DR132S	DR132M/MC	DR160..	DR180S/M	DR180L/LC	DR200	DR225S	DR225M/MC
AC	7.76	8.70	8.70	10.63	12.44	12.44	15.51	15.51	15.51
AD	6.18	6.69	6.69	8.98	9.96	9.96	11.14	11.14	11.14
ADS	6.22	6.77	6.77	8.98	9.96	9.96	11.14	11.14	11.14
L	25.28	26.97	28.94	30.55	33.27	35.63	38.50	38.50	40.47
LS	28.94	31.38	33.35	35.94	40.71	43.07	46.57	46.57	48.54
LB	12.83	14.53	16.50	18.11	20.83	23.19	26.06	26.06	28.03
LBS	16.50	18.94	20.91	23.50	26.27	30.60	34.13	34.13	36.10

reducer.ir



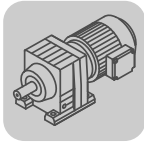
01 024 00 09

RXF97..

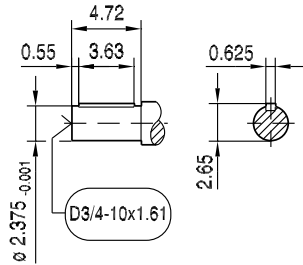
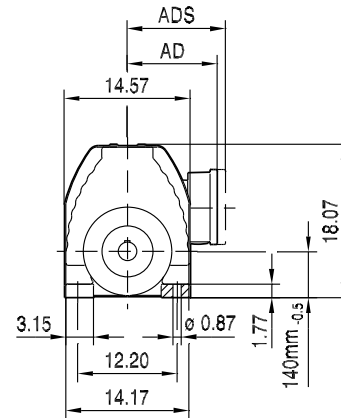
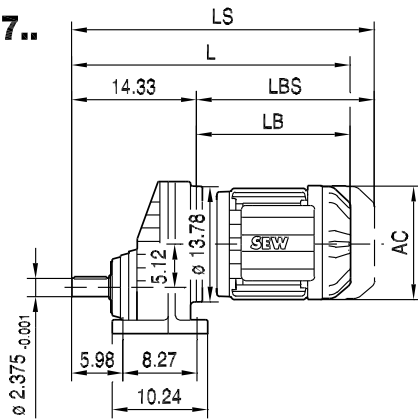


(→ 125)	DR100L/LC	DR132S	DR132M/MC	DR160..	DR180S/M	DR180L/LC	DR200	DR225S	DR225M/MC
AC	7.76	8.70	8.70	10.63	12.44	12.44	15.51	15.51	15.51
AD	6.18	6.69	6.69	8.98	9.96	9.96	11.14	11.14	11.14
ADS	6.22	6.77	6.77	8.98	9.96	9.96	11.14	11.14	11.14
L	25.28	26.97	28.94	30.55	33.27	35.63	38.50	38.50	40.47
LS	28.94	31.38	33.35	35.94	40.71	43.07	46.57	46.57	48.54
LB	12.83	14.53	16.50	18.11	20.83	23.19	26.06	26.06	28.03
LBS	16.50	18.94	20.91	23.50	26.27	30.60	34.13	34.13	36.10

reducer.ir

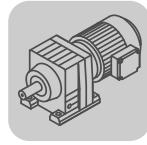


RX107..



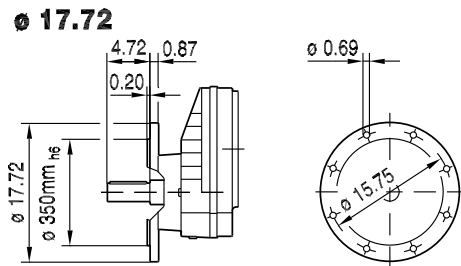
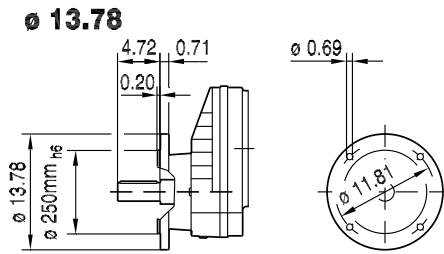
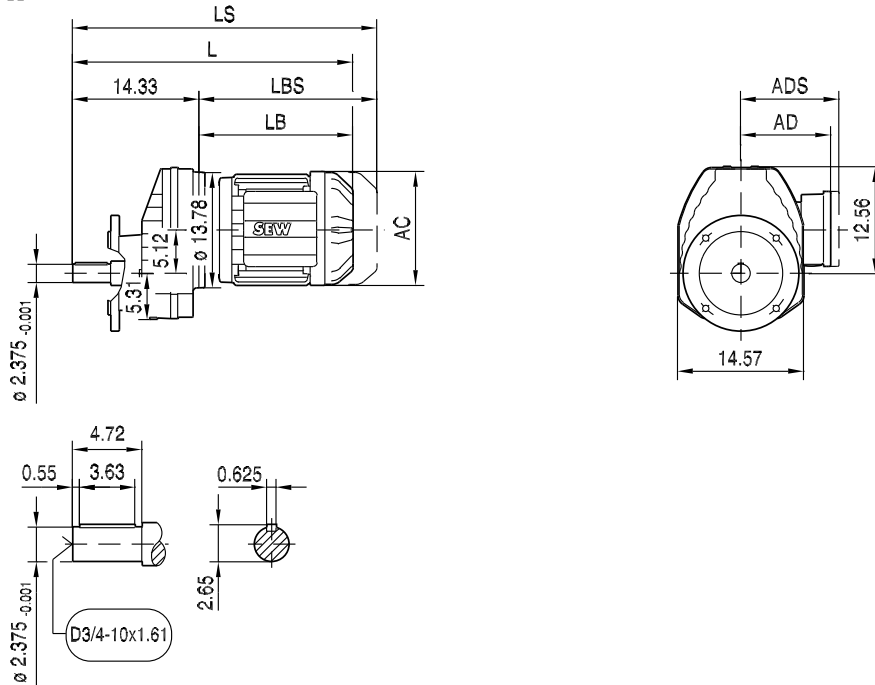
(→ 125)	DR132M/MC	DR160..	DR180S/M	DR180L/LC	DR200	DR225S	DR225M/MC	
AC	8.70	10.63	12.44	12.44	15.51	15.51	15.51	
AD	6.69	8.98	9.96	9.96	11.14	11.14	11.14	
ADS	6.77	8.98	9.96	9.96	11.14	11.14	11.14	
L	30.59	32.20	34.92	37.28	40.16	40.16	42.13	
LS	35.00	37.60	42.36	44.72	48.23	48.23	50.20	
LB	16.26	17.87	20.59	22.95	25.83	25.83	27.80	
LBS	20.67	23.27	28.03	30.89	33.90	33.90	35.87	

reducer.ir



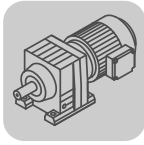
01 026 00 09

RXF107..



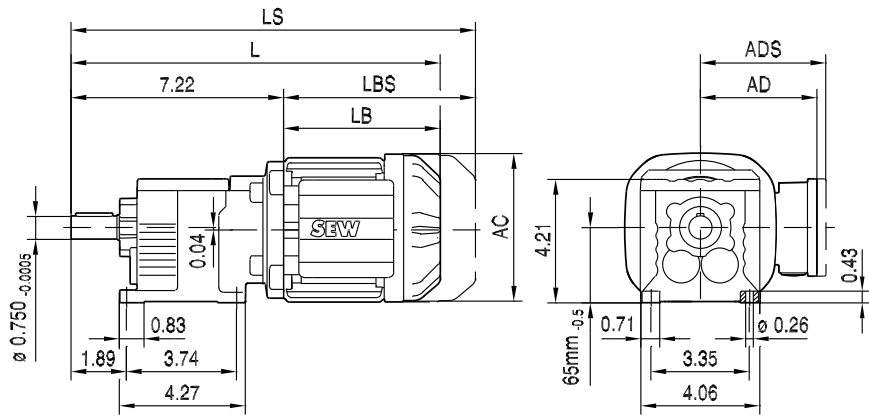
(→ 125)	DR132M/MC	DR160..	DR180S/M	DR180L/LC	DR200	DR225S	DR225M/MC	
AC	8.70	10.63	12.44	12.44	15.51	15.51	15.51	
AD	6.69	8.98	9.96	9.96	11.14	11.14	11.14	
ADS	6.77	8.98	9.96	9.96	11.14	11.14	11.14	
L	30.59	32.20	34.92	37.28	40.16	40.16	42.13	
LS	35.00	37.60	42.36	44.72	48.23	48.23	50.20	
LB	16.26	17.87	20.59	22.95	25.83	25.83	27.80	
LBS	20.67	23.27	28.03	30.89	33.90	33.90	35.87	

reducer.ir

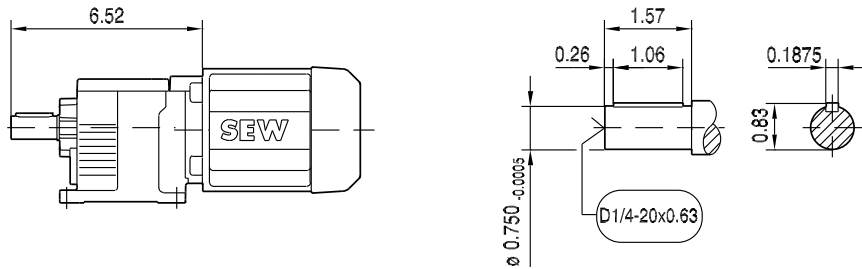


R07..

DR..

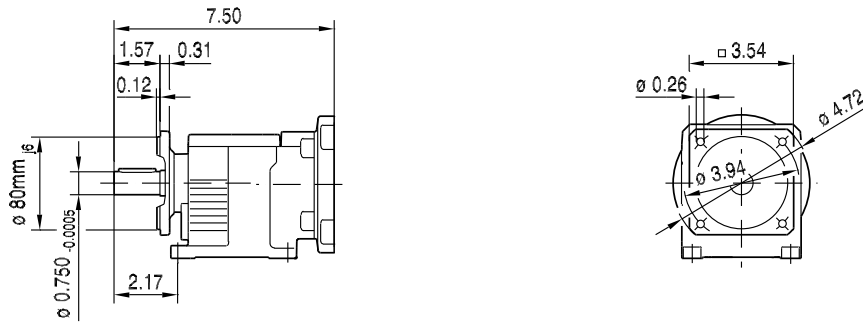


DT56..

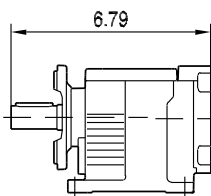


R07F..

DR..

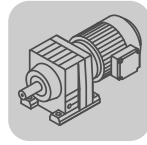


DT56..



(→ 125)	DT56..	DR63..	DR71S	DR71M			
AC	4.29	5.20	5.47	5.47			
AD	3.43	4.13	4.69	4.69			
ADS	3.43	4.13	5.08	5.08			
L	11.89	13.11	13.54	14.53			
LS	13.31	15.28	16.22	17.20			
LB	5.35	5.87	6.30	7.28			
LBS	6.77	8.03	8.98	9.96			

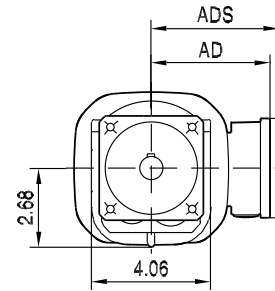
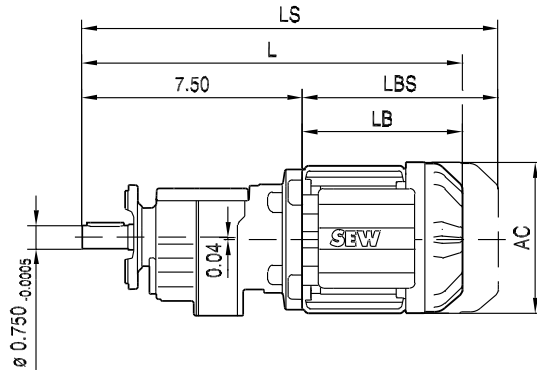
reducer.ir



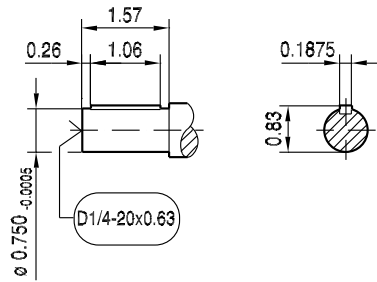
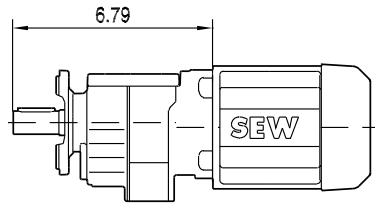
01 028 00 09

RF07..

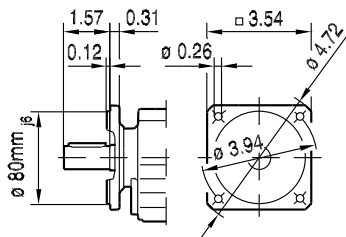
DR..



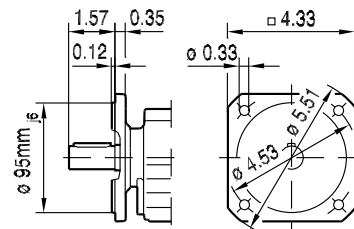
DT56..



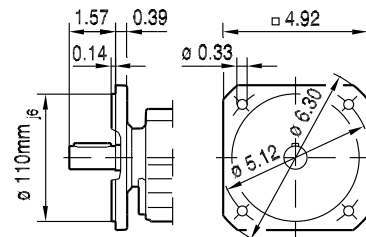
ø 4.72



ø 5.51

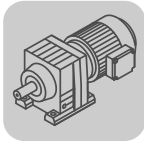


ø 6.30



(→ 125)	DT56..	DR63..	DR71S	DR71M			
AC	4.29	5.20	5.47	5.47			
AD	3.43	4.13	4.69	4.69			
ADS	3.43	4.13	5.08	5.08			
L	12.17	13.39	13.82	14.80			
LS	13.58	15.55	16.50	17.48			
LB	5.35	5.87	6.30	7.28			
LBS	6.77	8.03	8.98	9.96			

reducer.ir

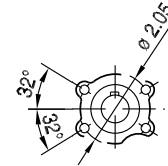
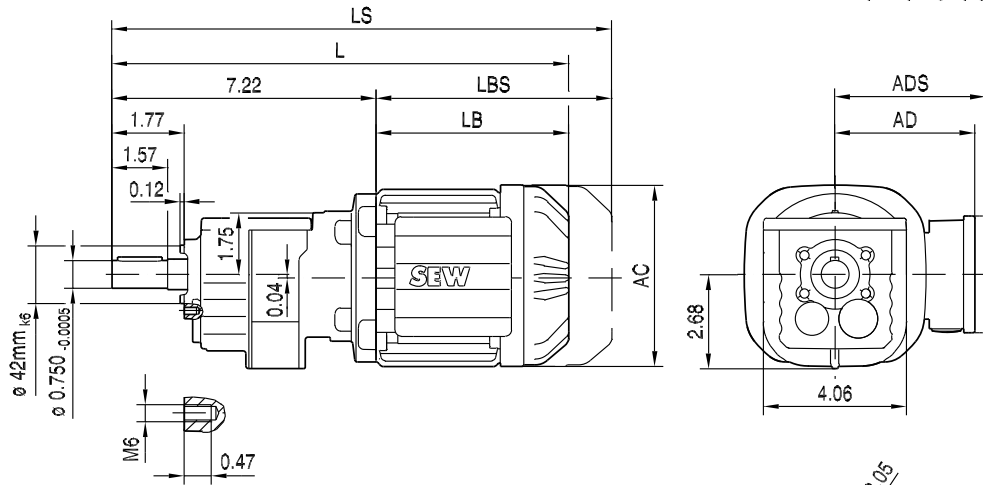


R..DRE/DRS
R..[in]

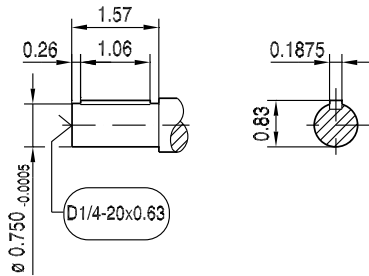
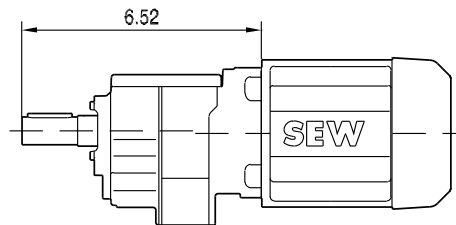
01 029 00 09

RZ07..

DR..

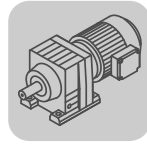


DT56..

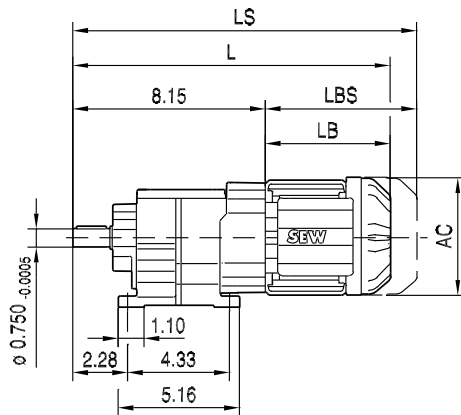


(→ 125)	DT56..	DR63..	DR71S	DR71M			
AC	4.29	5.20	5.47	5.47			
AD	3.43	4.13	4.69	4.69			
ADS	3.43	4.13	5.08	5.08			
L	11.89	13.11	13.54	14.53			
LS	13.31	15.28	16.22	17.20			
LB	5.35	5.87	6.30	7.28			
LBS	6.77	8.03	8.98	9.96			

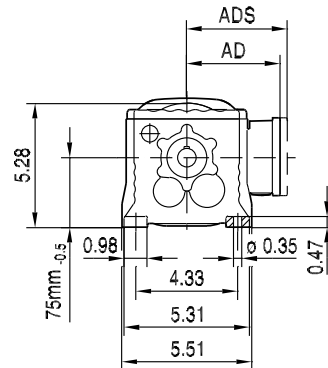
reducer.ir



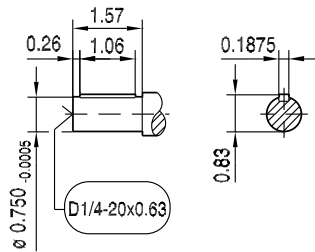
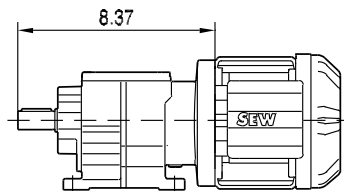
R17..



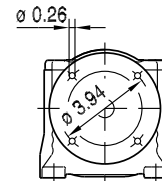
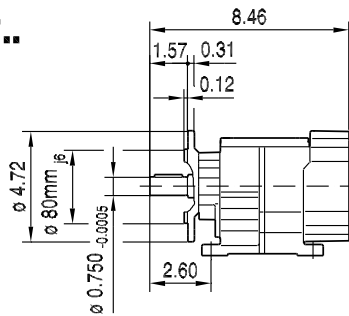
01 030 00 09



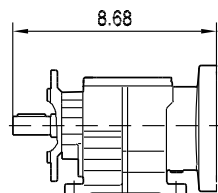
DR80..



R17F..

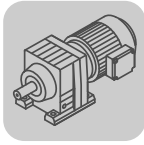


DR80..

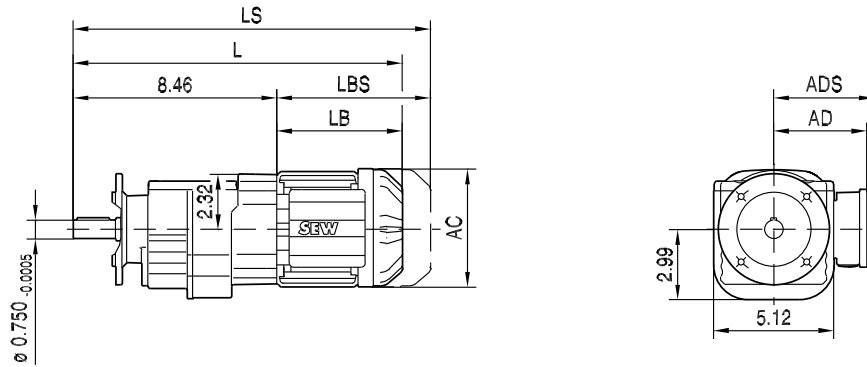


(→ 125)	DR63..	DR71S	DR71M	DR80S	DR80M		
AC	5.20	5.47	5.47	6.14	6.14		
AD	4.13	4.69	4.69	5.04	5.04		
ADS	4.13	5.08	5.08	5.47	5.47		
L	14.02	14.45	15.43	15.83	17.05		
LS	16.18	17.13	18.11	19.02	20.24		
LB	5.87	6.30	7.28	7.44	8.66		
LBS	8.03	8.98	9.96	10.63	11.85		

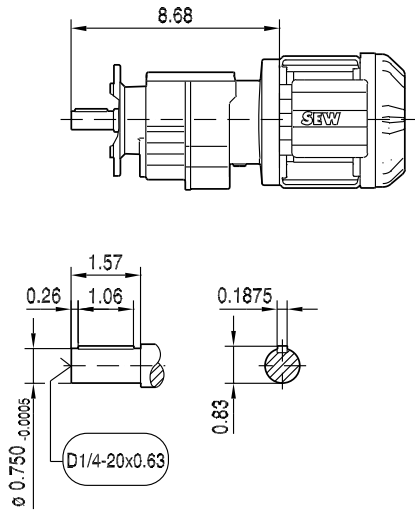
reducer.ir



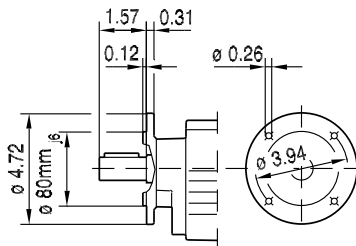
RF17..



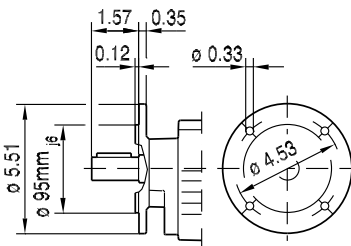
DR80..



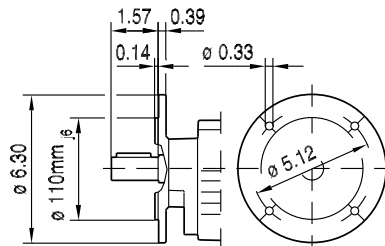
ø 4.72



ø 5.51

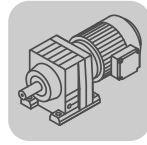


ø 6.30

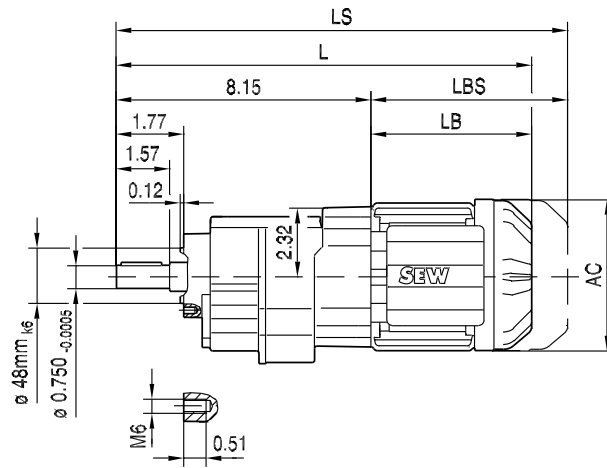


(→ 125)	DR63..	DR71S	DR71M	DR80S	DR80M		
AC	5.20	5.47	5.47	6.14	6.14		
AD	4.13	4.69	4.69	5.04	5.04		
ADS	4.13	5.08	5.08	5.47	5.47		
L	14.33	14.76	15.75	16.14	17.36		
LS	16.50	17.44	18.43	19.33	20.55		
LB	5.87	6.30	7.28	7.44	8.66		
LBS	8.03	8.98	9.96	10.63	11.85		

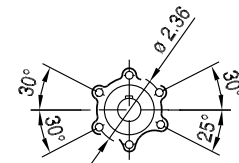
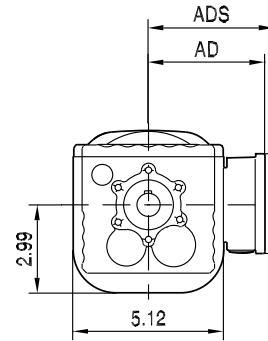
reducer.ir



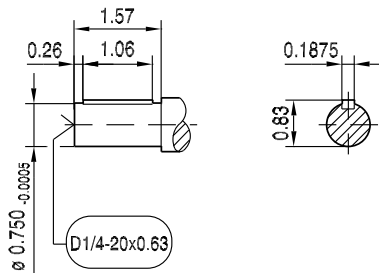
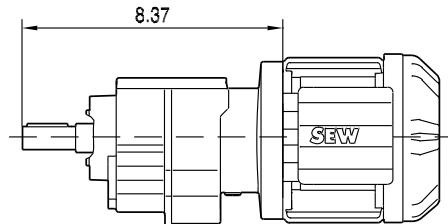
RZ17..



01 032 00 09

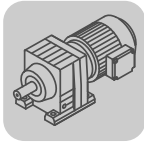


DR80..



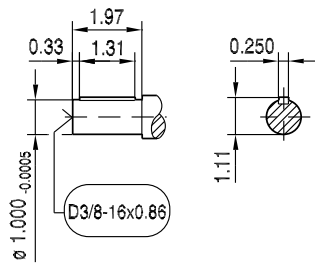
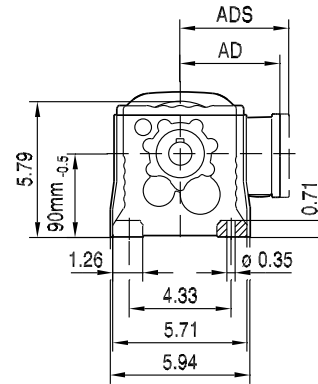
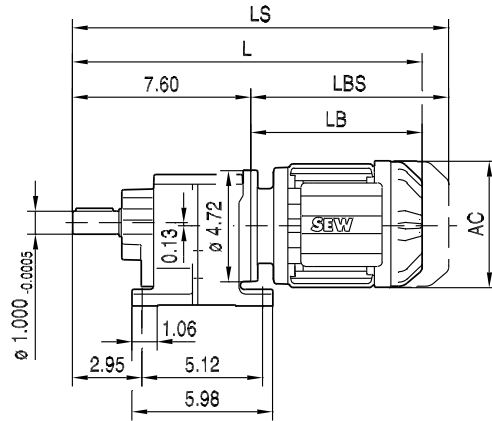
(→ 125)	DR63..	DR71S	DR71M	DR80S	DR80M			
AC	5.20	5.47	5.47	6.14	6.14			
AD	4.13	4.69	4.69	5.04	5.04			
ADS	4.13	5.08	5.08	5.47	5.47			
L	14.02	14.45	15.43	15.83	17.05			
LS	16.18	17.13	18.11	19.02	20.24			
LB	5.87	6.30	7.28	7.44	8.66			
LBS	8.03	8.98	9.96	10.63	11.85			

reducer.ir

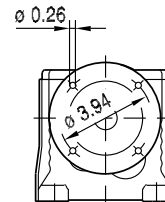
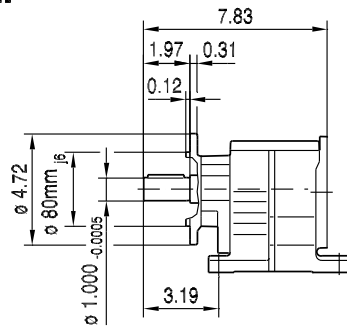


01 033 00 09

R27..

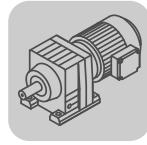


R27F..



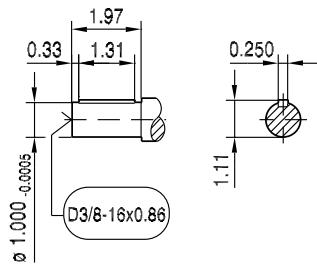
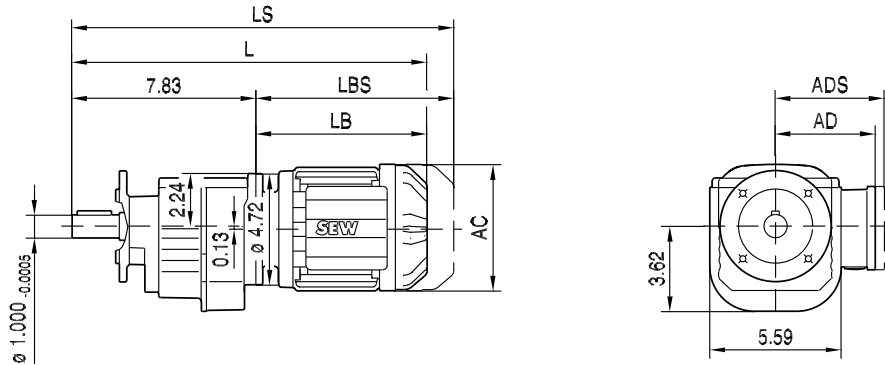
(→ 125)	DR63..	DR71S	DR71M	DR80S	DR80M	DR90M	DR90L	DR100M	DR100L/LC
AC	5.20	5.47	5.47	6.14	6.14	7.05	7.05	7.76	7.76
AD	4.13	4.69	4.69	5.04	5.04	5.51	5.51	6.18	6.18
ADS	4.13	5.08	5.08	5.47	5.47	5.91	5.91	6.22	6.22
L	15.12	15.59	16.57	16.93	18.15	18.31	19.09	20.28	21.46
LS	17.28	18.27	19.25	20.12	21.34	21.97	22.76	23.94	25.12
LB	7.52	7.99	8.98	9.33	10.55	10.71	11.50	12.68	13.86
LBS	9.69	10.67	11.65	12.52	13.74	14.37	15.16	16.34	17.52

reducer.ir

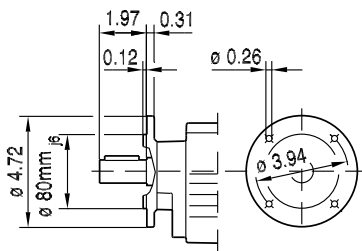


01 034 00 09

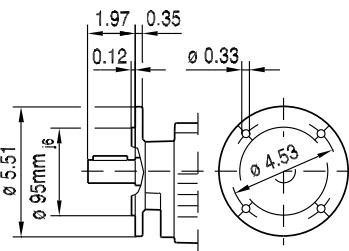
RF27..



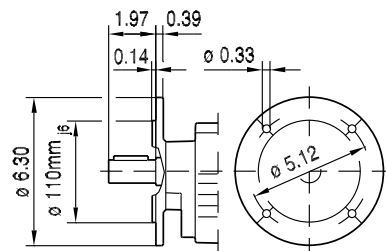
$\varnothing 4.72$



$\varnothing 5.51$

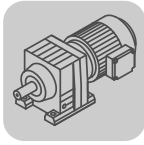


$\varnothing 6.30$



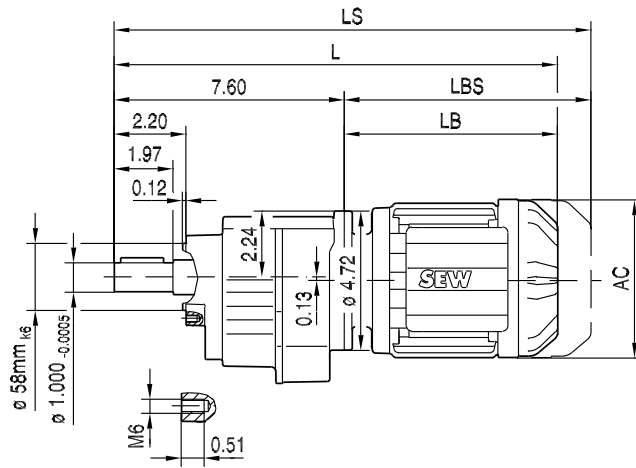
(→ 125)	DR63..	DR71S	DR71M	DR80S	DR80M	DR90M	DR90L	DR100M	DR100L/LC
AC	5.20	5.47	5.47	6.14	6.14	7.05	7.05	7.76	7.76
AD	4.13	4.69	4.69	5.04	5.04	5.51	5.51	6.18	6.18
ADS	4.13	5.08	5.08	5.47	5.47	5.91	5.91	6.22	6.22
L	15.35	15.83	16.81	17.17	18.39	18.54	19.33	20.51	21.69
LS	17.52	18.50	19.49	20.35	21.57	22.20	22.99	24.17	25.35
LB	7.52	7.99	8.98	9.33	10.55	10.71	11.50	12.68	13.86
LBS	9.69	10.67	11.65	12.52	13.74	14.37	15.16	16.34	17.52

reducer.ir

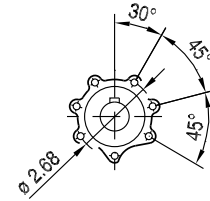
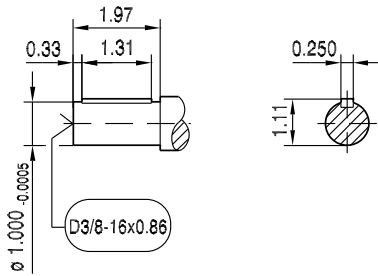
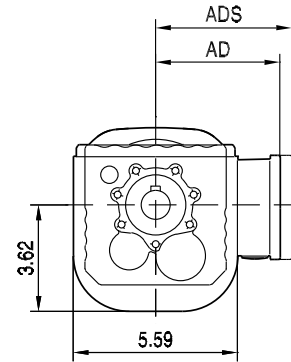


R..DRE/DRS
R..[in]

RZ27..

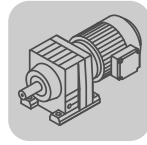


01 035 00 09

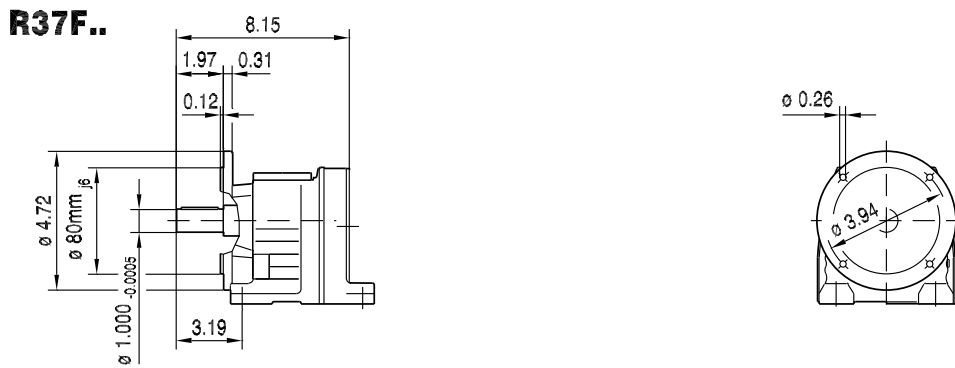
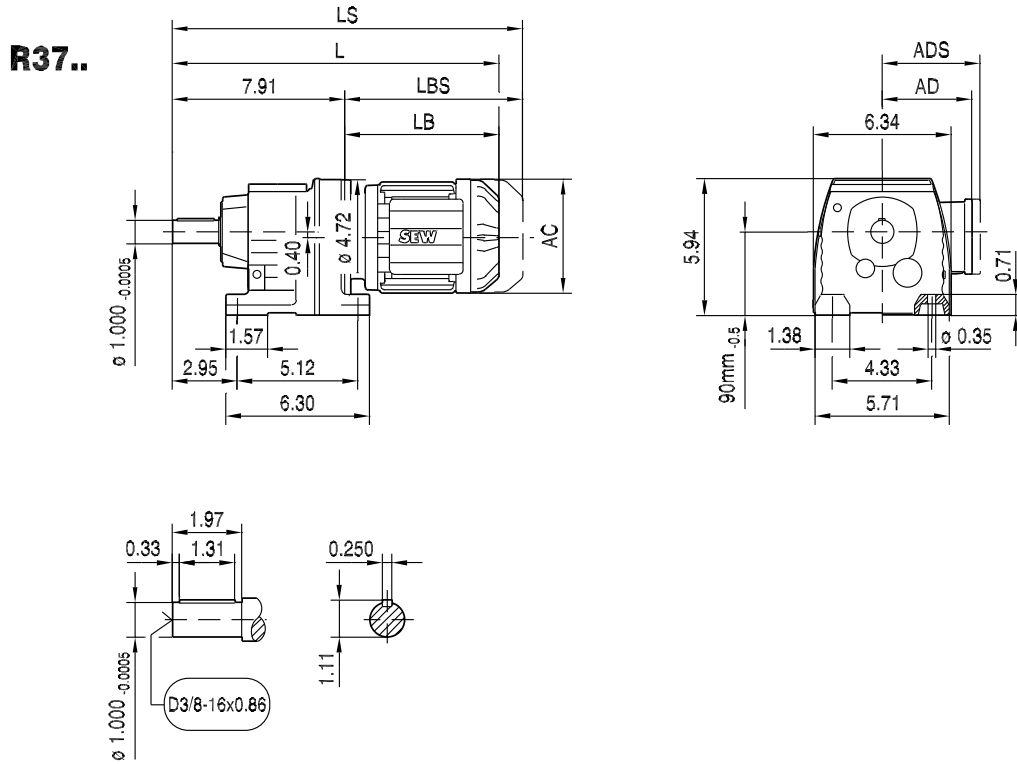


(→ 125)	DR63..	DR71S	DR71M	DR80S	DR80M	DR90M	DR90L	DR100M	DR100L/LC
AC	5.20	5.47	5.47	6.14	6.14	7.05	7.05	7.76	7.76
AD	4.13	4.69	4.69	5.04	5.04	5.51	5.51	6.18	6.18
ADS	4.13	5.08	5.08	5.47	5.47	5.91	5.91	6.22	6.22
L	15.12	15.59	16.57	16.93	18.15	18.31	19.09	20.28	21.46
LS	17.28	18.27	19.25	20.12	21.34	21.97	22.76	23.94	25.12
LB	7.52	7.99	8.98	9.33	10.55	10.71	11.50	12.68	13.86
LBS	9.69	10.67	11.65	12.52	13.74	14.37	15.16	16.34	17.52

reducer.ir

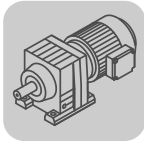


01 036 00 09



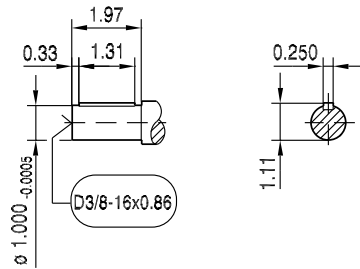
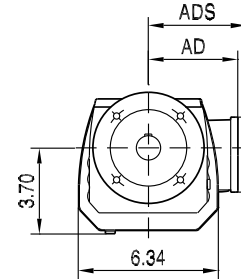
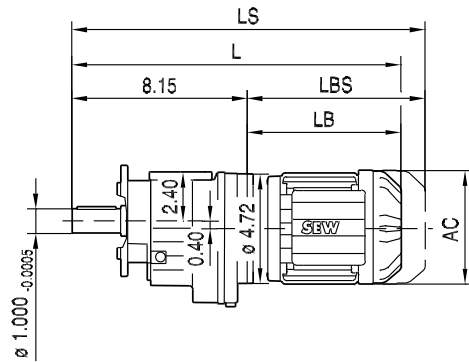
(→ 125)	DR63..	DR71S	DR71M	DR80S	DR80M	DR90M	DR90L	DR100M	DR100L/LC
AC	5.20	5.47	5.47	6.14	6.14	7.05	7.05	7.76	7.76
AD	4.13	4.69	4.69	5.04	5.04	5.51	5.51	6.18	6.18
ADS	4.13	5.08	5.08	5.47	5.47	5.91	5.91	6.22	6.22
L	15.43	15.91	16.89	17.24	18.46	18.62	19.41	20.59	21.77
LS	17.60	18.58	19.57	20.43	21.65	22.28	23.07	24.25	25.43
LB	7.52	7.99	8.98	9.33	10.55	10.71	11.50	12.68	13.86
LBS	9.69	10.67	11.65	12.52	13.74	14.37	15.16	16.34	17.52

reducer.ir

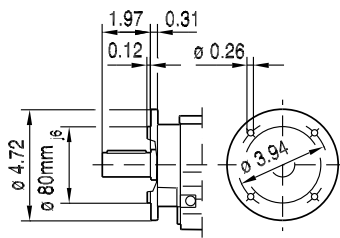


RF37..

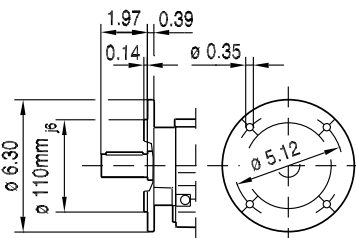
01 037 00 09



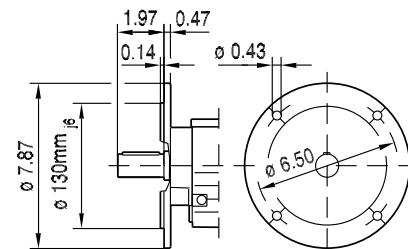
ø 4.72



ø 6.30

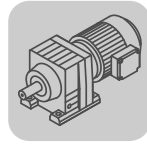


ø 7.87



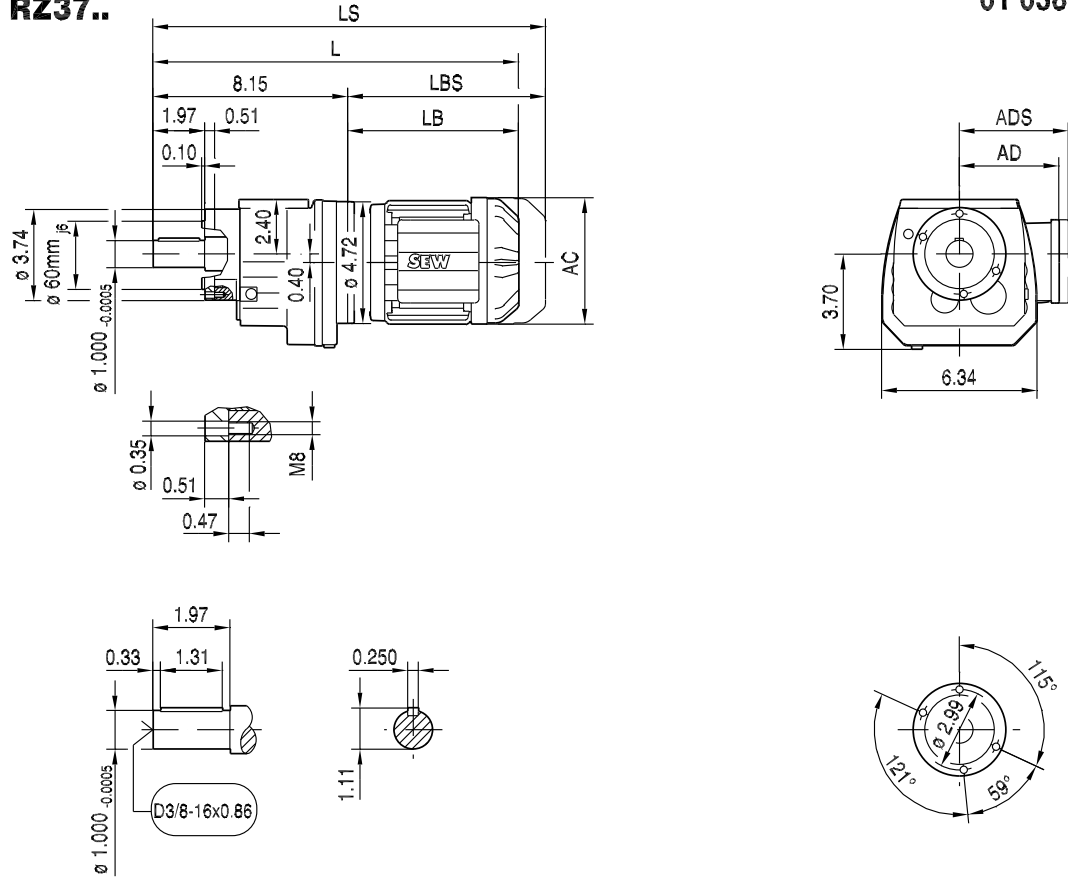
(→ 125)	DR63..	DR71S	DR71M	DR80S	DR80M	DR90M	DR90L	DR100M	DR100L/LC
AC	5.20	5.47	5.47	6.14	6.14	7.05	7.05	7.76	7.76
AD	4.13	4.69	4.69	5.04	5.04	5.51	5.51	6.18	6.18
ADS	4.13	5.08	5.08	5.47	5.47	5.91	5.91	6.22	6.22
L	15.67	16.14	17.13	17.48	18.70	18.86	19.65	20.83	22.01
LS	17.83	18.82	19.80	20.67	21.89	22.52	23.31	24.49	25.67
LB	7.52	7.99	8.98	9.33	10.55	10.71	11.50	12.68	13.86
LBS	9.69	10.67	11.65	12.52	13.74	14.37	15.16	16.34	17.52

reducer.ir



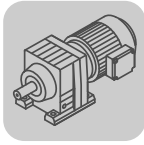
RZ37..

01 038 00 09



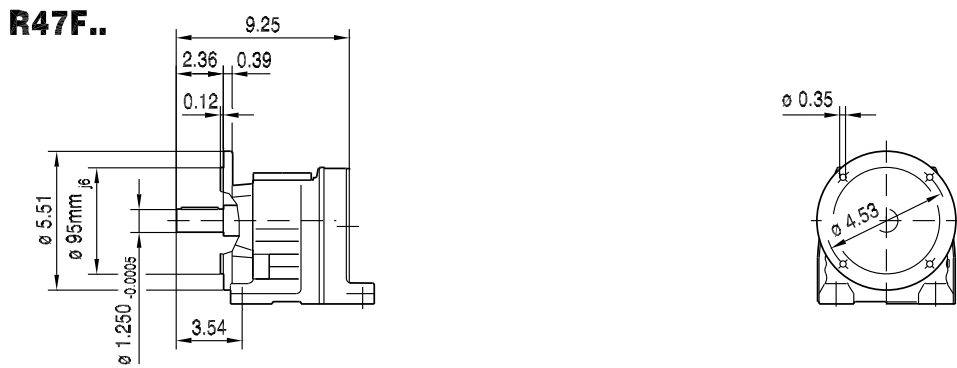
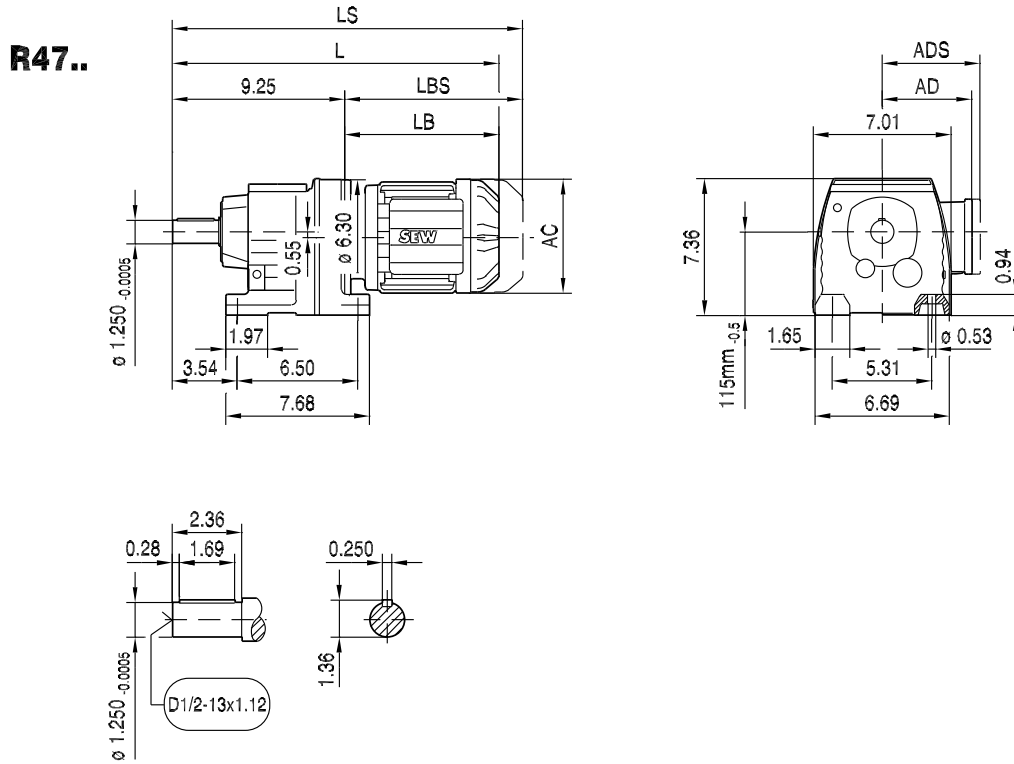
(→ 125)	DR63..	DR71S	DR71M	DR80S	DR80M	DR90M	DR90L	DR100M	DR100L/LC
AC	5.20	5.47	5.47	6.14	6.14	7.05	7.05	7.76	7.76
AD	4.13	4.69	4.69	5.04	5.04	5.51	5.51	6.18	6.18
ADS	4.13	5.08	5.08	5.47	5.47	5.91	5.91	6.22	6.22
L	15.67	16.14	17.13	17.48	18.70	18.86	19.65	20.83	22.01
LS	17.83	18.82	19.80	20.67	21.89	22.52	23.31	24.49	25.67
LB	7.52	7.99	8.98	9.33	10.55	10.71	11.50	12.68	13.86
LBS	9.69	10.67	11.65	12.52	13.74	14.37	15.16	16.34	17.52

reducer.ir



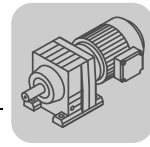
R..DRE/DRS
R..[in]

01 039 00 09



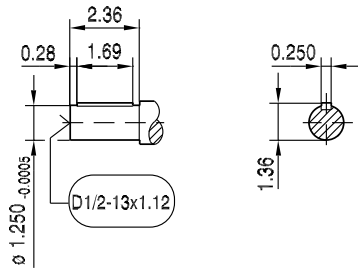
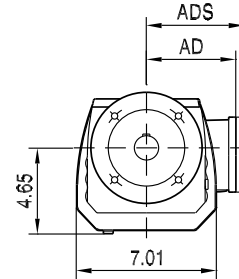
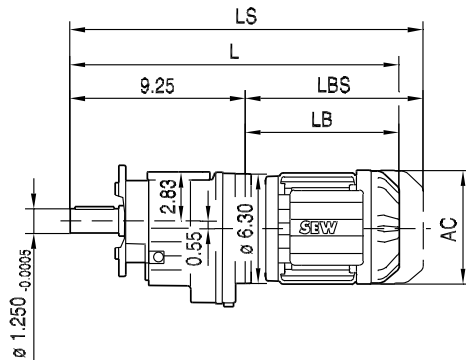
(→ 125)	DR63..	DR71S	DR71M	DR80S	DR80M	DR90M	DR90L	DR100M	DR100L/LC	DR132S	DR132M/MC
AC	5.20	5.47	5.47	6.14	6.14	7.05	7.05	7.76	7.76	8.70	8.70
AD	4.13	4.69	4.69	5.04	5.04	5.51	5.51	6.18	6.18	6.69	6.69
ADS	4.13	5.08	5.08	5.47	5.47	5.91	5.91	6.22	6.22	6.77	6.77
L	16.54	16.97	17.95	18.31	19.53	19.61	20.39	21.57	22.76	24.61	26.57
LS	18.70	19.65	20.63	21.50	22.72	23.27	24.06	25.24	26.42	29.02	30.98
LB	7.28	7.72	8.70	9.06	10.28	10.35	11.14	12.32	13.50	15.35	17.32
LBS	9.45	10.39	11.38	12.24	13.46	14.02	14.80	15.98	17.17	19.76	21.73

reducer.ir

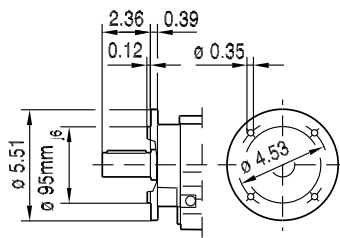


RF47..

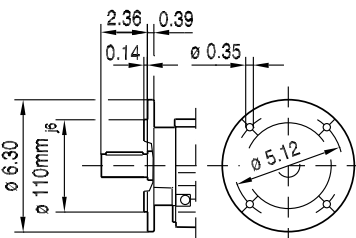
01 040 00 09



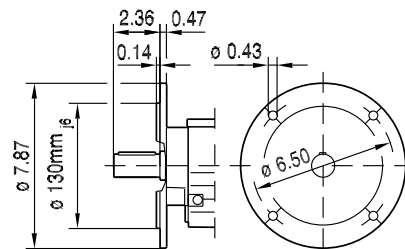
ø 5.51



ø 6.30

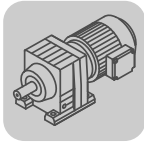


ø 7.87



(→ 125)	DR63..	DR71S	DR71M	DR80S	DR80M	DR90M	DR90L	DR100M	DR100L/LC	DR132S	DR132M/MC
AC	5.20	5.47	5.47	6.14	6.14	7.05	7.05	7.76	7.76	8.70	8.70
AD	4.13	4.69	4.69	5.04	5.04	5.51	5.51	6.18	6.18	6.69	6.69
ADS	4.13	5.08	5.08	5.47	5.47	5.91	5.91	6.22	6.22	6.77	6.77
L	16.54	16.97	17.95	18.31	19.53	19.61	20.39	21.57	22.76	24.61	26.57
LS	18.70	19.65	20.63	21.50	22.72	23.27	24.06	25.24	26.42	29.02	30.98
LB	7.28	7.72	8.70	9.06	10.28	10.35	11.14	12.32	13.50	15.35	17.32
LBS	9.45	10.39	11.38	12.24	13.46	14.02	14.80	15.98	17.17	19.76	21.73

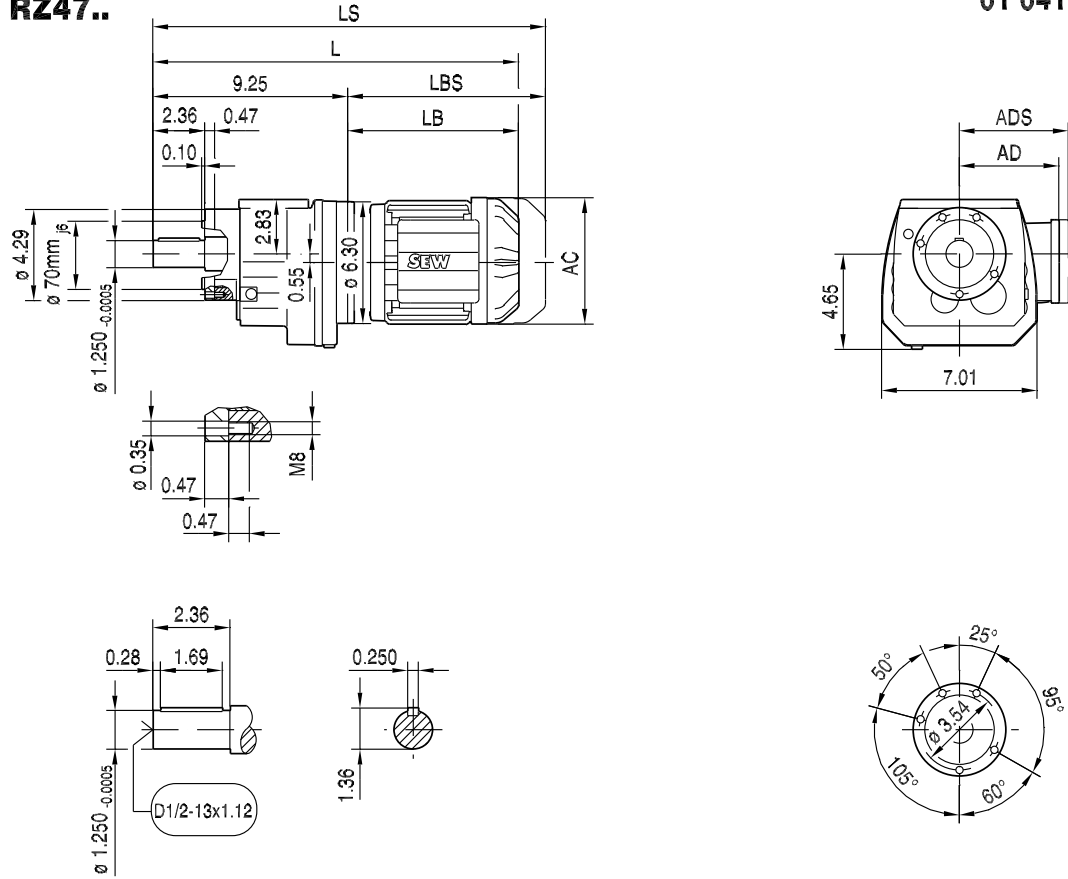
reducer.ir



R..DRE/DRS
R..[in]

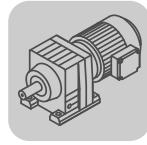
RZ47..

01 041 00 09

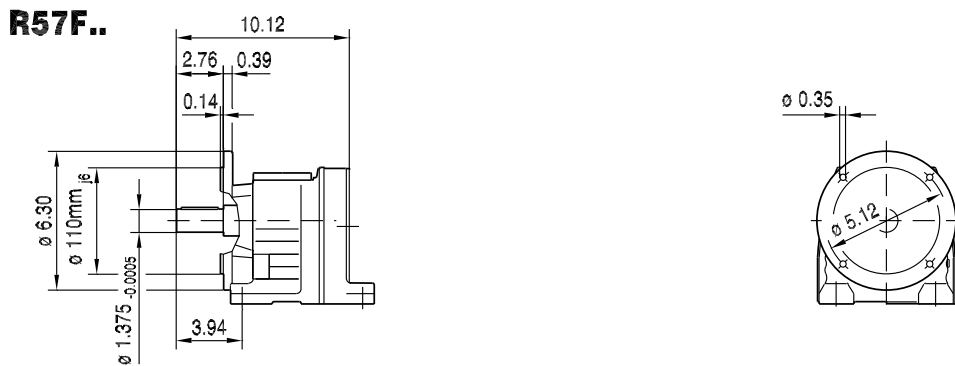
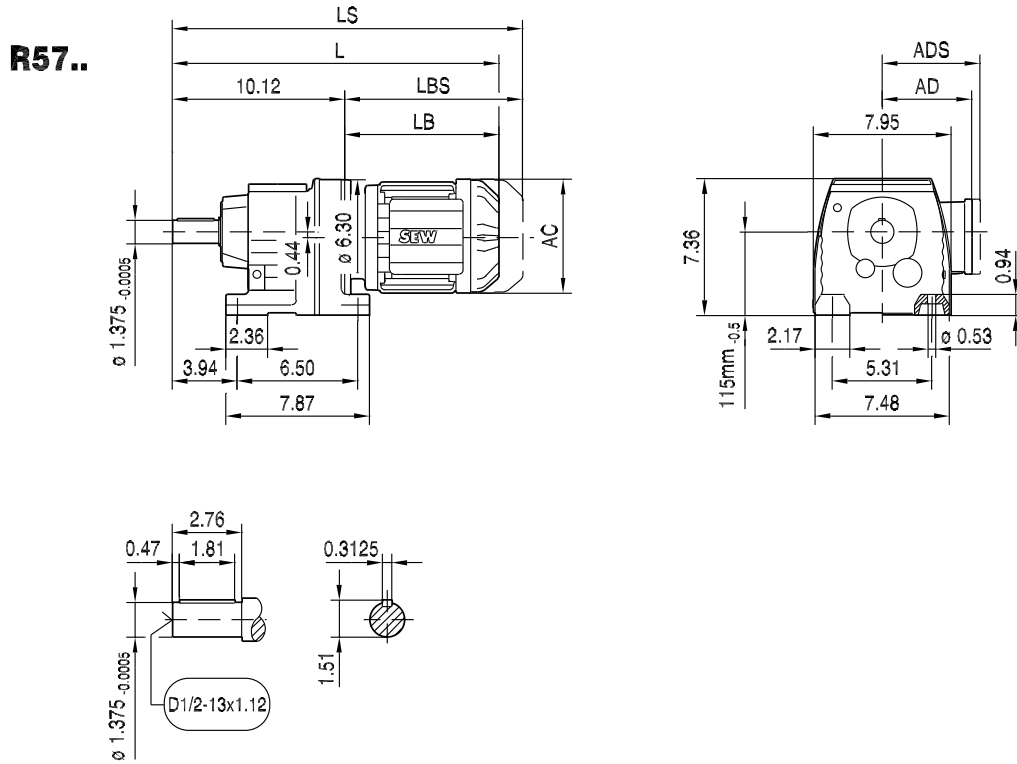


(→ 125)	DR63..	DR71S	DR71M	DR80S	DR80M	DR90M	DR90L	DR100M	DR100L/LC	DR132S	DR132M/MC
AC	5.20	5.47	5.47	6.14	6.14	7.05	7.05	7.76	7.76	8.70	8.70
AD	4.13	4.69	4.69	5.04	5.04	5.51	5.51	6.18	6.18	6.69	6.69
ADS	4.13	5.08	5.08	5.47	5.47	5.91	5.91	6.22	6.22	6.77	6.77
L	16.54	16.97	17.95	18.31	19.53	19.61	20.39	21.57	22.76	24.61	26.57
LS	18.70	19.65	20.63	21.50	22.72	23.27	24.06	25.24	26.42	29.02	30.98
LB	7.28	7.72	8.70	9.06	10.28	10.35	11.14	12.32	13.50	15.35	17.32
LBS	9.45	10.39	11.38	12.24	13.46	14.02	14.80	15.98	17.17	19.76	21.73

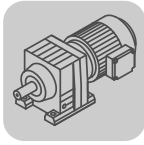
reducer.ir



01 042 00 09

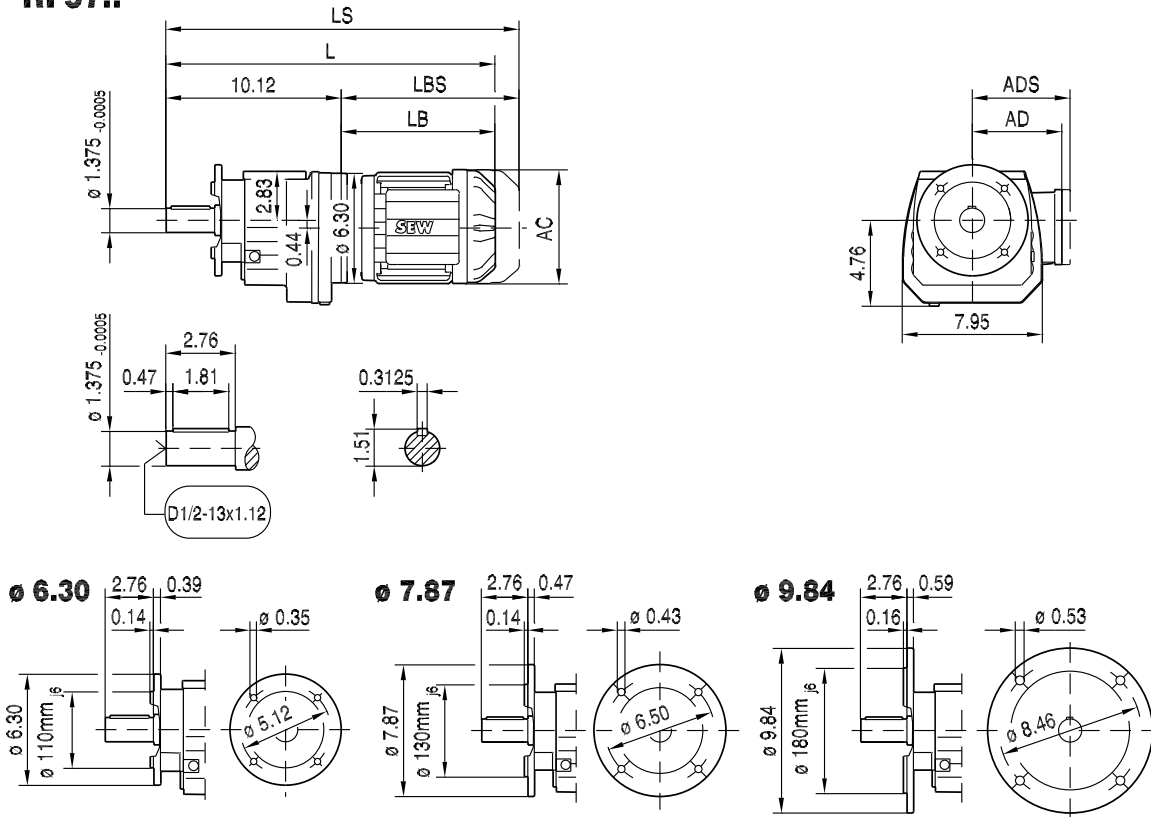


(→ 125)	DR63..	DR71S	DR71M	DR80S	DR80M	DR90M	DR90L	DR100M	DR100L/LC	DR132S	DR132M/MC
AC	5.20	5.47	5.47	6.14	6.14	7.05	7.05	7.76	7.76	8.70	8.70
AD	4.13	4.69	4.69	5.04	5.04	5.51	5.51	6.18	6.18	6.69	6.69
ADS	4.13	5.08	5.08	5.47	5.47	5.91	5.91	6.22	6.22	6.77	6.77
L	17.40	17.83	18.82	19.17	20.39	20.47	21.26	22.44	23.62	25.47	27.44
LS	19.57	20.51	21.50	22.36	23.58	24.13	24.92	26.10	27.28	29.88	31.85
LB	7.28	7.72	8.70	9.06	10.28	10.35	11.14	12.32	13.50	15.35	17.32
LBS	9.45	10.39	11.38	12.24	13.46	14.02	14.80	15.98	17.17	19.76	21.73

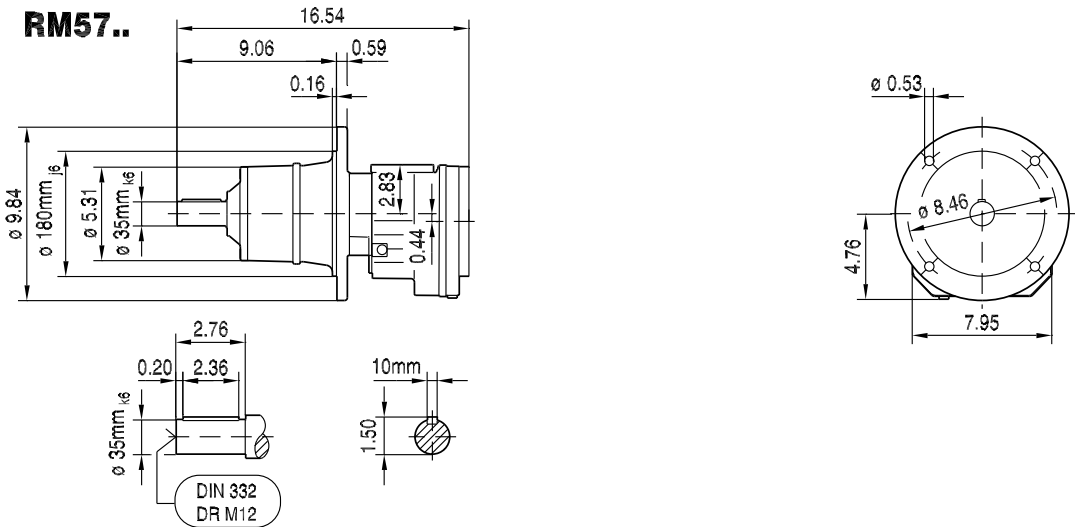


01 043 00 09

RF57..

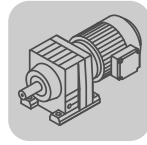


RM57..



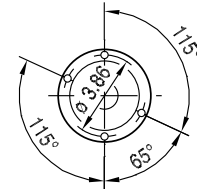
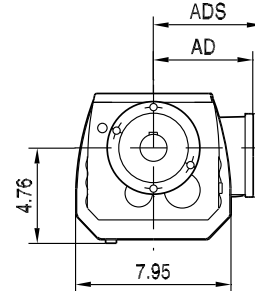
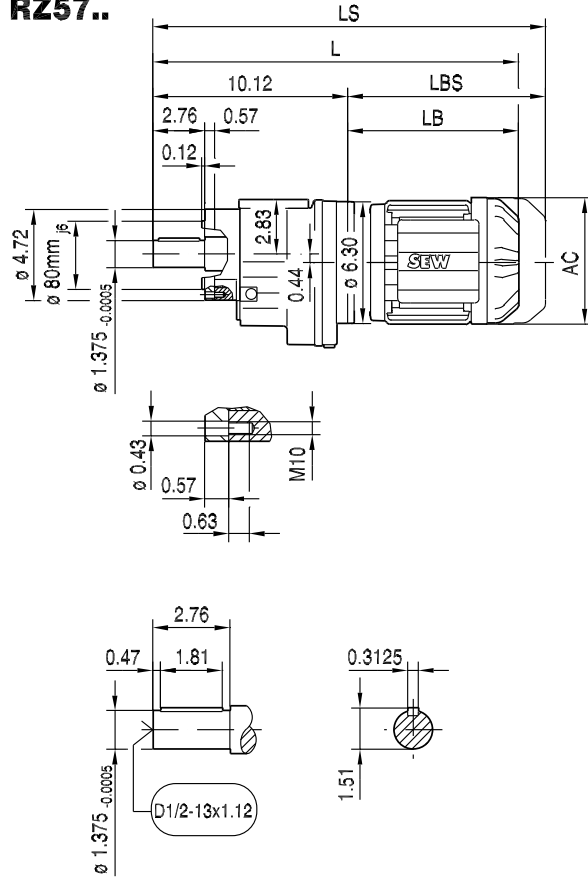
(→ 125)	DR63..	DR71S	DR71M	DR80S	DR80M	DR90M	DR90L	DR100M	DR100L/LC	DR132S	DR132M/MC
AC	5.20	5.47	5.47	6.14	6.14	7.05	7.05	7.76	7.76	8.70	8.70
AD	4.13	4.69	4.69	5.04	5.04	5.51	5.51	6.18	6.18	6.69	6.69
ADS	4.13	5.08	5.08	5.47	5.47	5.91	5.91	6.22	6.22	6.77	6.77
L	17.40	17.83	18.82	19.17	20.39	20.47	21.26	22.44	23.62	25.47	27.44
LS	19.57	20.51	21.50	22.36	23.58	24.13	24.92	26.10	27.28	29.88	31.85
LB	7.28	7.72	8.70	9.06	10.28	10.35	11.14	12.32	13.50	15.35	17.32
LBS	9.45	10.39	11.38	12.24	13.46	14.02	14.80	15.98	17.17	19.76	21.73

reducer.ir



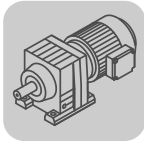
RZ57..

01 044 00 09



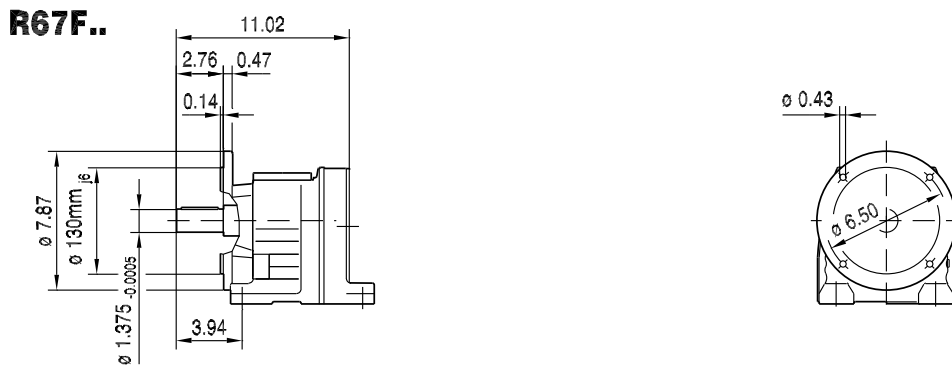
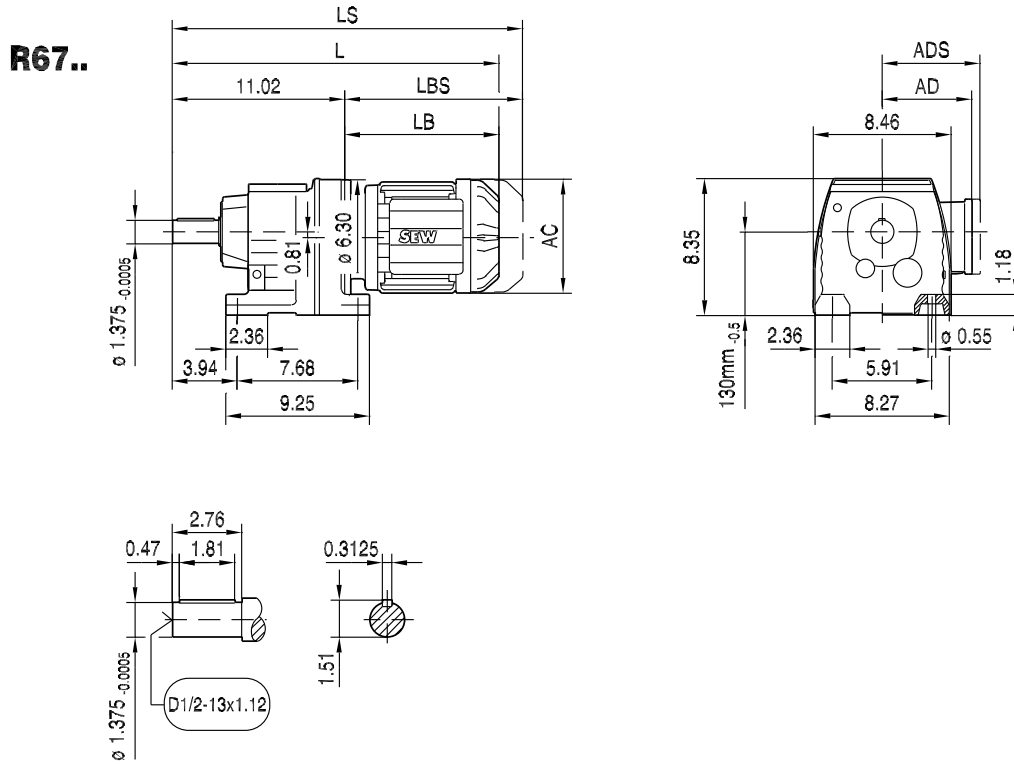
(→ 125)	DR63..	DR71S	DR71M	DR80S	DR80M	DR90M	DR90L	DR100M	DR100L/LC	DR132S	DR132M/MC
AC	5.20	5.47	5.47	6.14	6.14	7.05	7.05	7.76	7.76	8.70	8.70
AD	4.13	4.69	4.69	5.04	5.04	5.51	5.51	6.18	6.18	6.69	6.69
ADS	4.13	5.08	5.08	5.47	5.47	5.91	5.91	6.22	6.22	6.77	6.77
L	17.40	17.83	18.82	19.17	20.39	20.47	21.26	22.44	23.62	25.47	27.44
LS	19.57	20.51	21.50	22.36	23.58	24.13	24.92	26.10	27.28	29.88	31.85
LB	7.28	7.72	8.70	9.06	10.28	10.35	11.14	12.32	13.50	15.35	17.32
LBS	9.45	10.39	11.38	12.24	13.46	14.02	14.80	15.98	17.17	19.76	21.73

reducer.ir



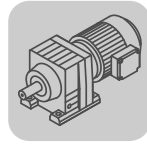
R..DRE/DRS
R..[in]

01 045 00 09



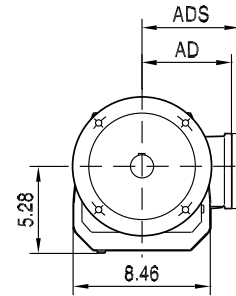
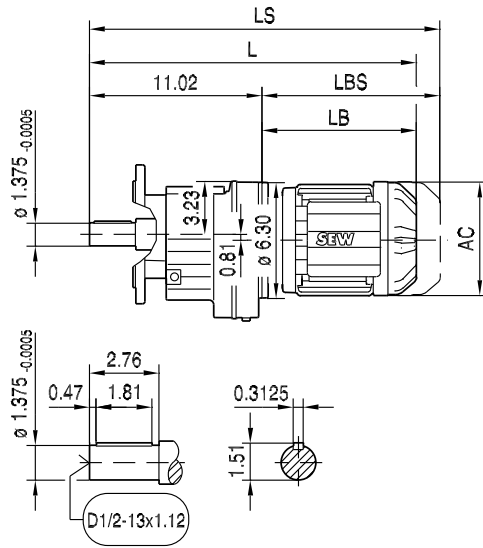
(→ 125)	DR63..	DR71S	DR71M	DR80S	DR80M	DR90M	DR90L	DR100M	DR100L/LC	DR132S	DR132M/MC
AC	5.20	5.47	5.47	6.14	6.14	7.05	7.05	7.76	7.76	8.70	8.70
AD	4.13	4.69	4.69	5.04	5.04	5.51	5.51	6.18	6.18	6.69	6.69
ADS	4.13	5.08	5.08	5.47	5.47	5.91	5.91	6.22	6.22	6.77	6.77
L	18.31	18.74	19.72	20.08	21.30	21.38	22.17	23.35	24.53	26.38	28.35
LS	20.47	21.42	22.40	23.27	24.49	25.04	25.83	27.01	28.19	30.79	32.76
LB	7.28	7.72	8.70	9.06	10.28	10.35	11.14	12.32	13.50	15.35	17.32
LBS	9.45	10.39	11.38	12.24	13.46	14.02	14.80	15.98	17.17	19.76	21.73

reducer.ir

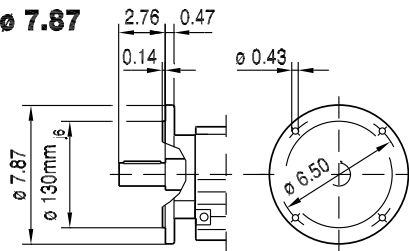


01 046 00 09

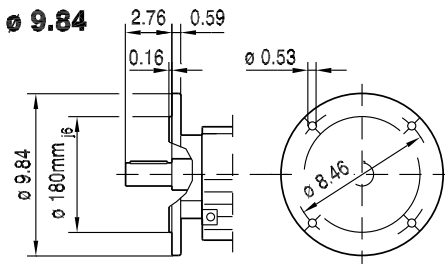
RF67..



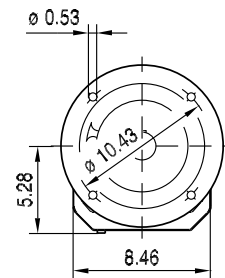
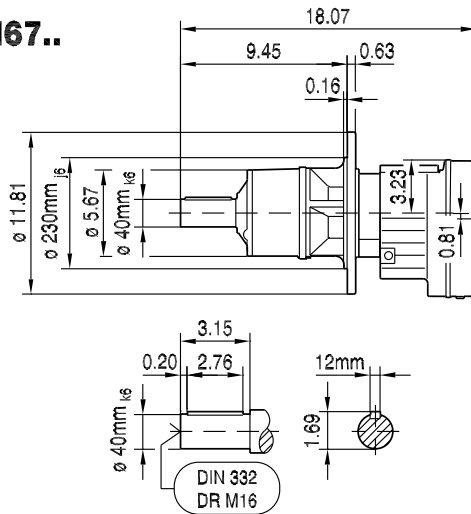
ø 7.87



ø 9.84

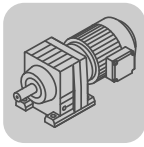


RM67..



(→ 125)	DR63..	DR71S	DR71M	DR80S	DR80M	DR90M	DR90L	DR100M	DR100L/C	DR132S	DR132M/MC
AC	5.20	5.47	5.47	6.14	6.14	7.05	7.05	7.76	7.76	8.70	8.70
AD	4.13	4.69	4.69	5.04	5.04	5.51	5.51	6.18	6.18	6.69	6.69
ADS	4.13	5.08	5.08	5.47	5.47	5.91	5.91	6.22	6.22	6.77	6.77
L	18.31	18.74	19.72	20.08	21.30	21.38	22.17	23.35	24.53	26.38	28.35
LS	20.47	21.42	22.40	23.27	24.49	25.04	25.83	27.01	28.19	30.79	32.76
LB	7.28	7.72	8.70	9.06	10.28	10.35	11.14	12.32	13.50	15.35	17.32
LBS	9.45	10.39	11.38	12.24	13.46	14.02	14.80	15.98	17.17	19.76	21.73

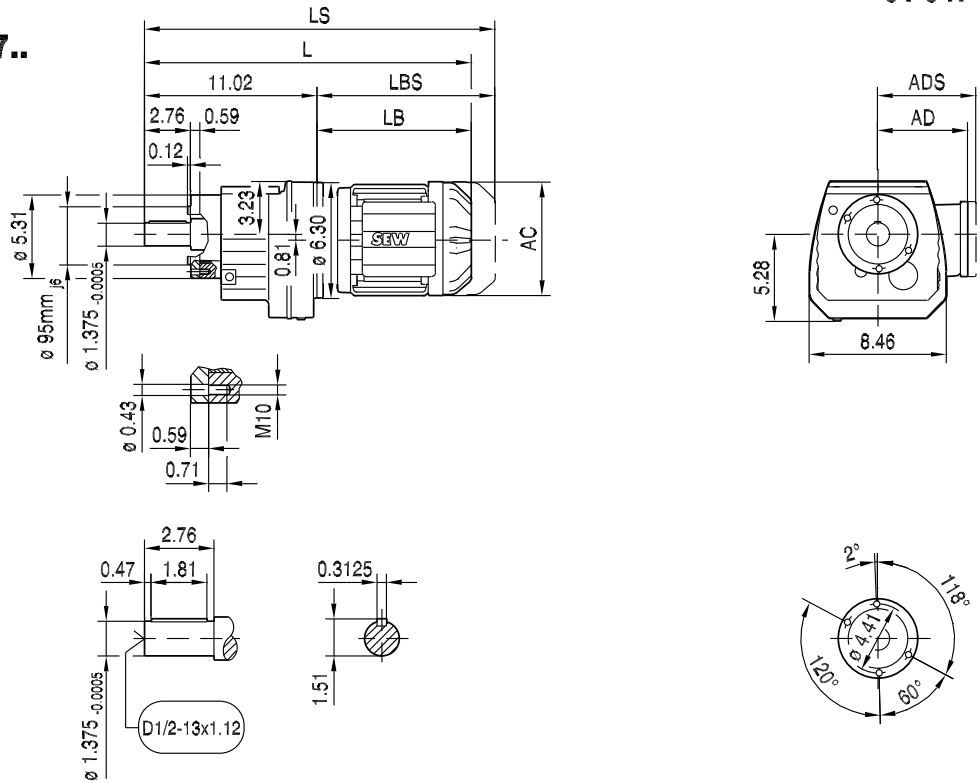
reducer.ir



R..DRE/DRS
R..[in]

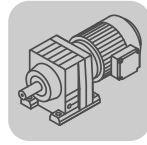
01 047 00 09

RZ67..

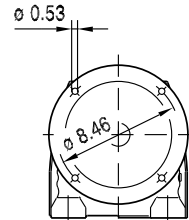
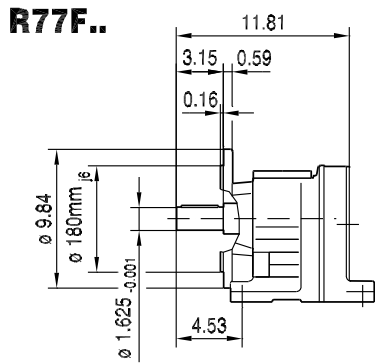
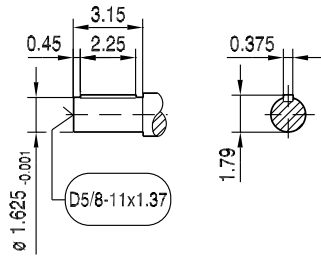
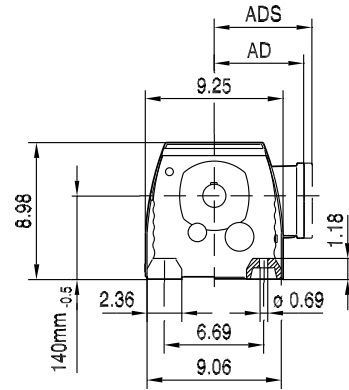
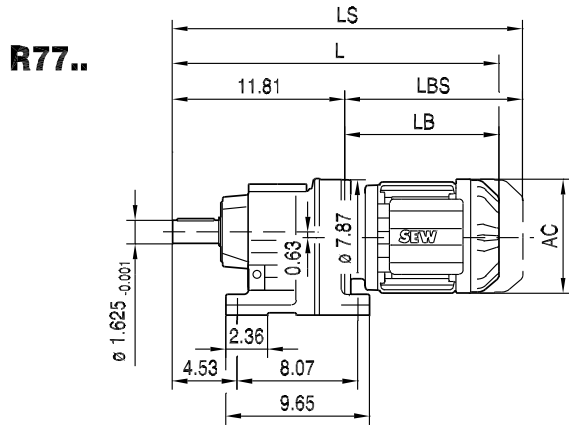


(→ 125)	DR63..	DR71S	DR71M	DR80S	DR80M	DR90M	DR90L	DR100M	DR100L/LC	DR132S	DR132M/MC
AC	5.20	5.47	5.47	6.14	6.14	7.05	7.05	7.76	7.76	8.70	8.70
AD	4.13	4.69	4.69	5.04	5.04	5.51	5.51	6.18	6.18	6.69	6.69
ADS	4.13	5.08	5.08	5.47	5.47	5.91	5.91	6.22	6.22	6.77	6.77
L	18.31	18.74	19.72	20.08	21.30	21.38	22.17	23.35	24.53	26.38	28.35
LS	20.47	21.42	22.40	23.27	24.49	25.04	25.83	27.01	28.19	30.79	32.76
LB	7.28	7.72	8.70	9.06	10.28	10.35	11.14	12.32	13.50	15.35	17.32
LBS	9.45	10.39	11.38	12.24	13.46	14.02	14.80	15.98	17.17	19.76	21.73

reducer.ir

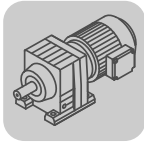


01 048 00 09



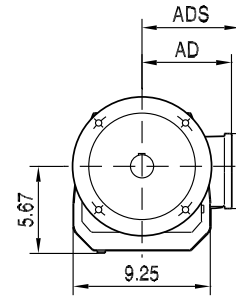
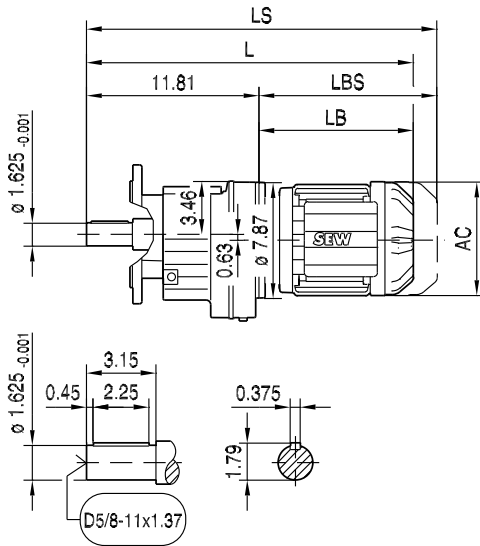
(→ 125)	DR63..	DR71S	DR71M	DR80S	DR80M	DR90M	DR90L	DR100M	DR100L/LC	DR132S	DR132M/MC	DR160..
AC	5.20	5.47	5.47	6.14	6.14	7.05	7.05	7.76	7.76	8.70	8.70	10.63
AD	4.13	4.69	4.69	5.04	5.04	5.51	5.51	6.18	6.18	6.69	6.69	8.98
ADS	4.13	5.08	5.08	5.47	5.47	5.91	5.91	6.22	6.22	6.77	6.77	8.98
L	18.82	19.25	20.24	20.59	21.81	21.89	22.68	23.86	25.04	26.73	28.70	30.31
LS	20.98	21.93	22.91	23.78	25.00	25.55	26.34	27.52	28.70	31.14	33.11	35.71
LB	7.01	7.44	8.43	8.78	10.00	10.08	10.87	12.05	13.23	14.92	16.89	18.50
LBS	9.17	10.12	11.10	11.97	13.19	13.74	14.53	15.71	16.89	19.33	21.30	23.90

reducer.ir

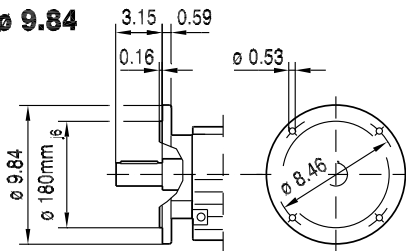


01 049 00 09

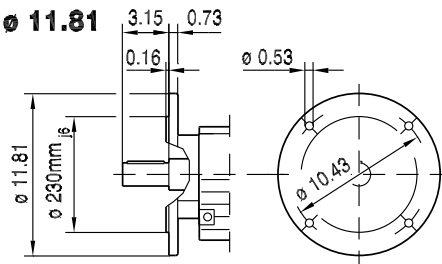
RF77..



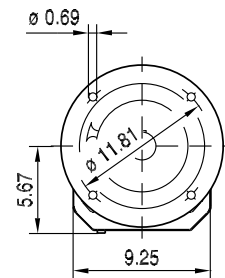
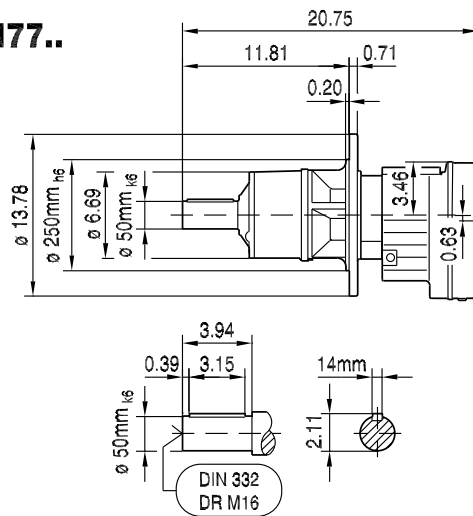
ø 9.84



ø 11.81

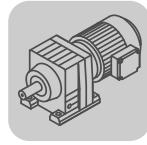


RM77..



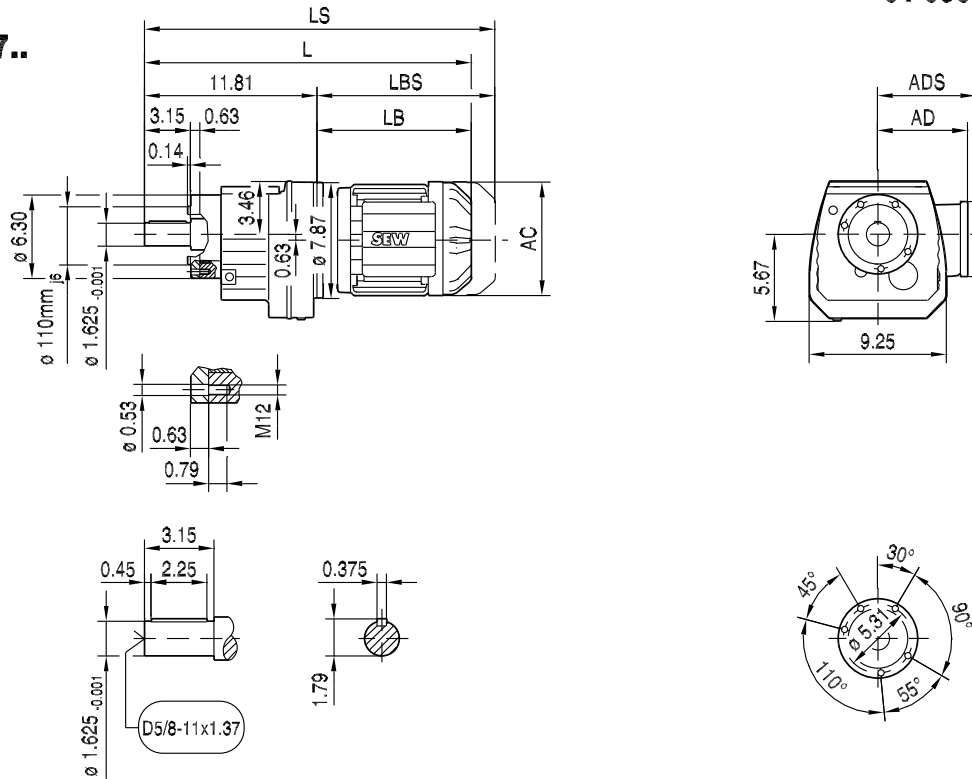
(→ 125)	DR63..	DR71S	DR71M	DR80S	DR80M	DR90M	DR90L	DR100M	DR100L/LC	DR132S	DR132M/MC	DR160..
AC	5.20	5.47	5.47	6.14	6.14	7.05	7.05	7.76	7.76	8.70	8.70	10.63
AD	4.13	4.69	4.69	5.04	5.04	5.51	5.51	6.18	6.18	6.69	6.69	8.98
ADS	4.13	5.08	5.08	5.47	5.47	5.91	5.91	6.22	6.22	6.77	6.77	8.98
L	18.82	19.25	20.24	20.59	21.81	21.89	22.68	23.86	25.04	26.73	28.70	30.31
LS	20.98	21.93	22.91	23.78	25.00	25.55	26.34	27.52	28.70	31.14	33.11	35.71
LB	7.01	7.44	8.43	8.78	10.00	10.08	10.87	12.05	13.23	14.92	16.89	18.50
LBS	9.17	10.12	11.10	11.97	13.19	13.74	14.53	15.71	16.89	19.33	21.30	23.90

reducer.ir



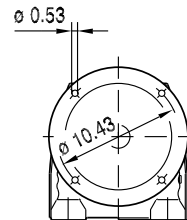
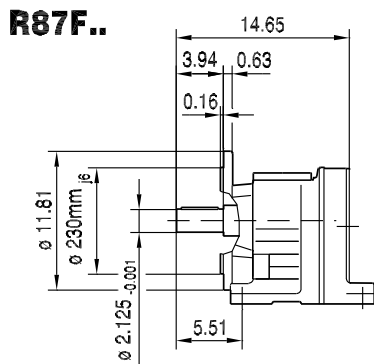
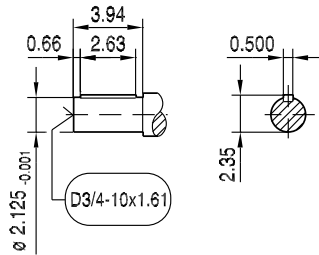
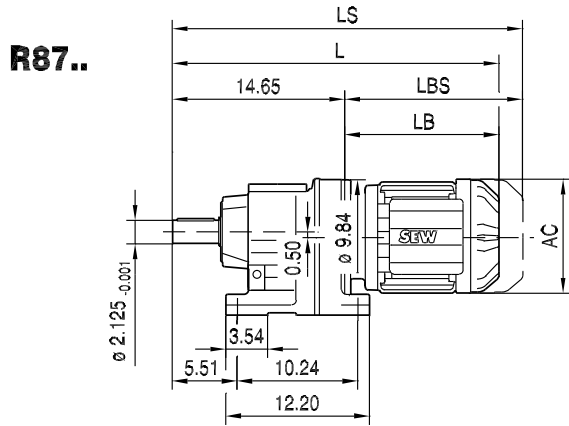
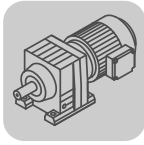
01 050 00 09

RZ77..



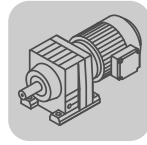
(→ 125)	DR63..	DR71S	DR71M	DR80S	DR80M	DR90M	DR90L	DR100M	DR100L/LC	DR132S	DR132M/MC	DR160..
AC	5.20	5.47	5.47	6.14	6.14	7.05	7.05	7.76	7.76	8.70	8.70	10.63
AD	4.13	4.69	4.69	5.04	5.04	5.51	5.51	6.18	6.18	6.69	6.69	8.98
ADS	4.13	5.08	5.08	5.47	5.47	5.91	5.91	6.22	6.22	6.77	6.77	8.98
L	18.82	19.25	20.24	20.59	21.81	21.89	22.68	23.86	25.04	26.73	28.70	30.31
LS	20.98	21.93	22.91	23.78	25.00	25.55	26.34	27.52	28.70	31.14	33.11	35.71
LB	7.01	7.44	8.43	8.78	10.00	10.08	10.87	12.05	13.23	14.92	16.89	18.50
LBS	9.17	10.12	11.10	11.97	13.19	13.74	14.53	15.71	16.89	19.33	21.30	23.90

reducer.ir



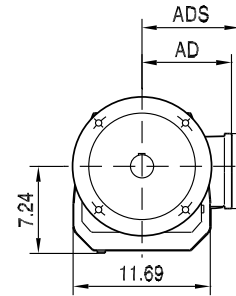
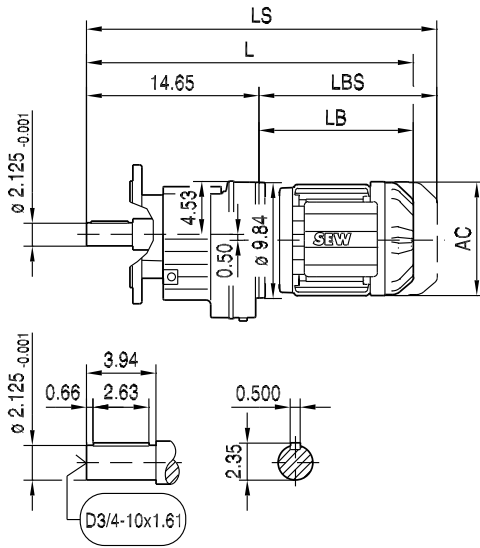
(→ 125)	DR71M	DR80S	DR80M	DR90M	DR90L	DR100M	DR100L/LC	DR132S	DR132M/MC	DR160..	DR180S/M	DR180L/LC
AC	5.47	6.14	6.14	7.05	7.05	7.76	7.76	8.70	8.70	10.63	12.44	12.44
AD	4.69	5.04	5.04	5.51	5.51	6.18	6.18	6.69	6.69	8.98	9.96	9.96
ADS	5.08	5.47	5.47	5.91	5.91	6.22	6.22	6.77	6.77	8.98	9.96	9.96
L	22.87	23.23	24.45	24.53	25.31	26.50	27.68	29.37	31.34	32.95	35.67	38.03
LS	25.55	26.42	27.64	28.19	28.98	30.16	31.34	33.78	35.75	38.35	43.11	45.47
LB	8.23	8.58	9.80	9.88	10.67	11.85	13.03	14.72	16.69	18.31	21.02	23.39
LBS	10.91	11.77	12.99	13.54	14.33	15.51	16.69	19.13	21.10	23.70	28.46	30.83

reducer.ir

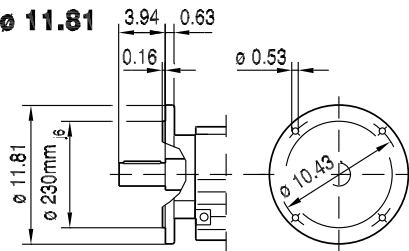


01 052 00 09

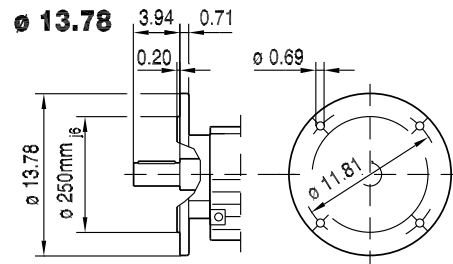
RF87..



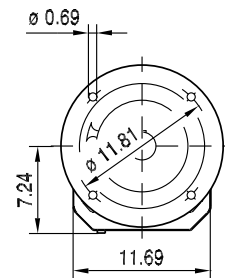
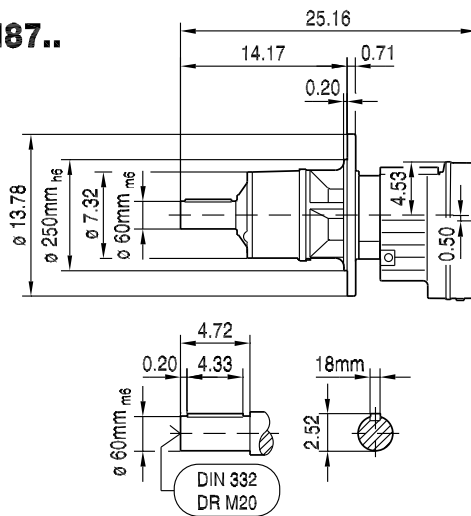
ø 11.81



ø 13.78

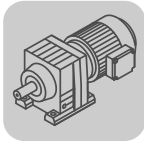


RM87..



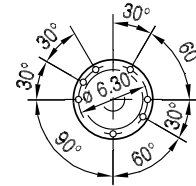
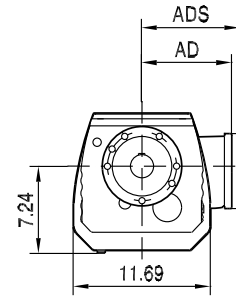
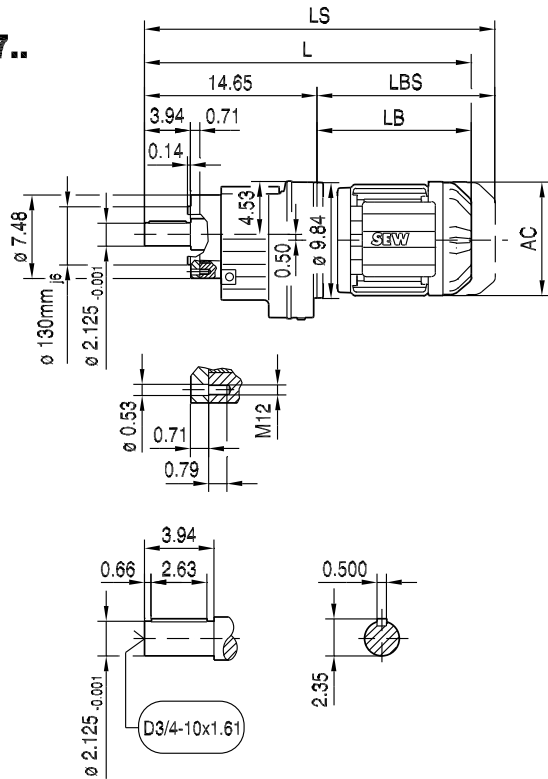
(→ 125)	DR71M	DR80S	DR80M	DR90M	DR90L	DR100M	DR100L/LC	DR132S	DR132M/MC	DR160..	DR180S/M	DR180L/LC
AC	5.47	6.14	6.14	7.05	7.05	7.76	7.76	8.70	8.70	10.63	12.44	12.44
AD	4.69	5.04	5.04	5.51	5.51	6.18	6.18	6.69	6.69	8.98	9.96	9.96
ADS	5.08	5.47	5.47	5.91	5.91	6.22	6.22	6.77	6.77	8.98	9.96	9.96
L	22.87	23.23	24.45	24.53	25.31	26.50	27.68	29.37	31.34	32.95	35.67	38.03
LS	25.55	26.42	27.64	28.19	28.98	30.16	31.34	33.78	35.75	38.35	43.11	45.47
LB	8.23	8.58	9.80	9.88	10.67	11.85	13.03	14.72	16.69	18.31	21.02	23.39
LBS	10.91	11.77	12.99	13.54	14.33	15.51	16.69	19.13	21.10	23.70	28.46	30.83

reducer.ir



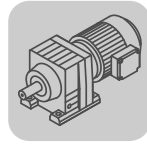
01 053 00 09

RZ87..

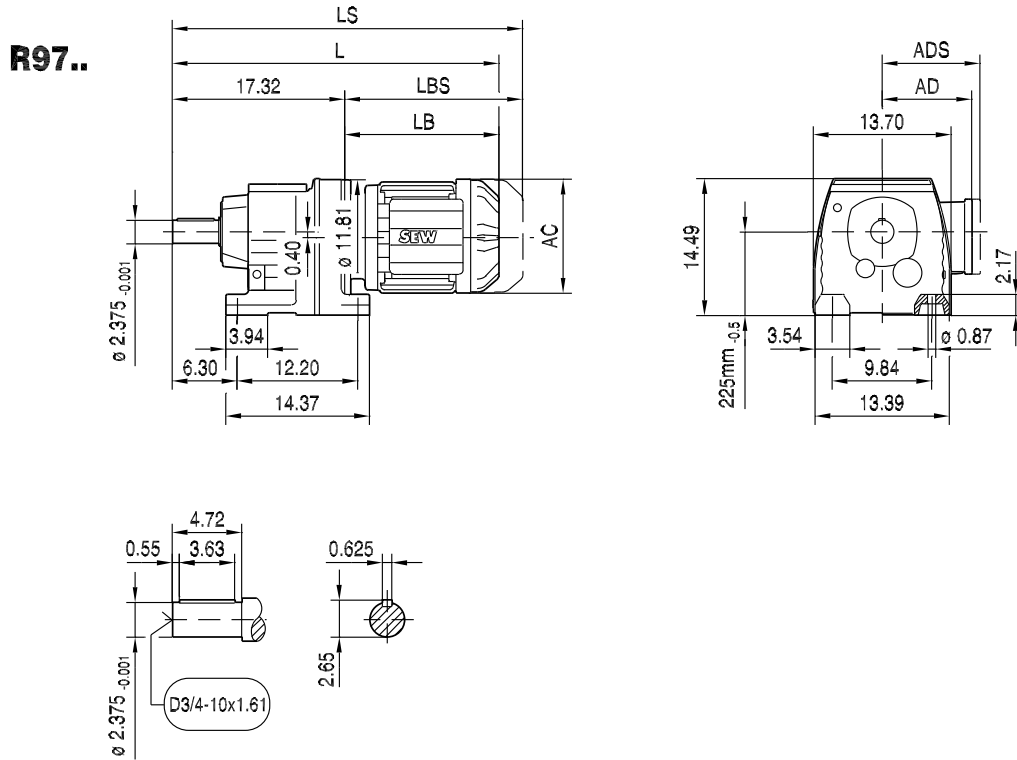


(→ 125)	DR71M	DR80S	DR80M	DR90M	DR90L	DR100M	DR100L/LC	DR132S	DR132M/MC	DR160..	DR180S/M	DR180L/LC
AC	5.47	6.14	6.14	7.05	7.05	7.76	7.76	8.70	8.70	10.63	12.44	12.44
AD	4.69	5.04	5.04	5.51	5.51	6.18	6.18	6.69	6.69	8.98	9.96	9.96
ADS	5.08	5.47	5.47	5.91	5.91	6.22	6.22	6.77	6.77	8.98	9.96	9.96
L	22.87	23.23	24.45	24.53	25.31	26.50	27.68	29.37	31.34	32.95	35.67	38.03
LS	25.55	26.42	27.64	28.19	28.98	30.16	31.34	33.78	35.75	38.35	43.11	45.47
LB	8.23	8.58	9.80	9.88	10.67	11.85	13.03	14.72	16.69	18.31	21.02	23.39
LBS	10.91	11.77	12.99	13.54	14.33	15.51	16.69	19.13	21.10	23.70	28.46	30.83

reducer.ir

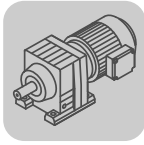


01 054 00 09



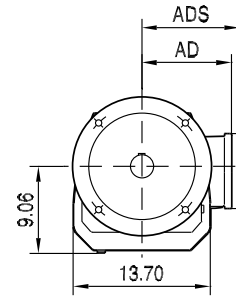
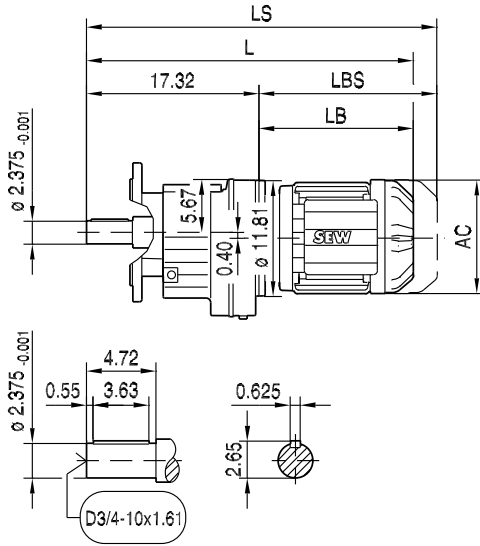
(→ 125)	DR90L	DR100M	DR100L/LC	DR132S	DR132M/MC	DR160..	DR180S/M	DR180L/LC	DR200	DR225S	DR225M/MC
AC	7.05	7.76	7.76	8.70	8.70	10.63	12.44	12.44	15.51	15.51	15.51
AD	5.51	6.18	6.18	6.69	6.69	8.98	9.96	9.96	11.14	11.14	11.14
ADS	5.91	6.22	6.22	6.77	6.77	8.98	9.96	9.96	11.14	11.14	11.14
L	27.80	28.98	30.16	31.85	33.82	35.43	38.15	40.51	43.39	43.39	45.35
LS	31.46	32.64	33.82	36.26	38.23	40.83	45.59	47.95	51.46	51.46	53.43
LB	10.47	11.65	12.83	14.53	16.50	18.11	20.83	23.19	26.06	26.06	28.03
LBS	14.13	15.31	16.50	18.94	20.91	23.50	26.27	30.63	34.13	34.13	36.10

reducer.ir

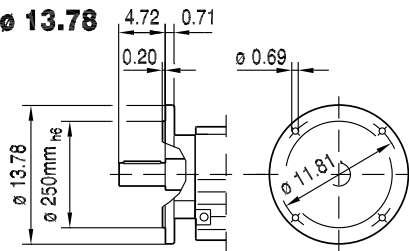


01 055 00 09

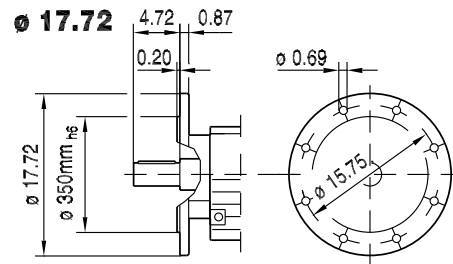
RF97..



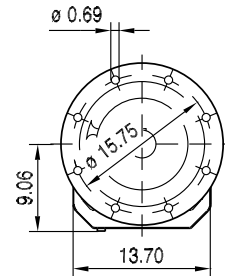
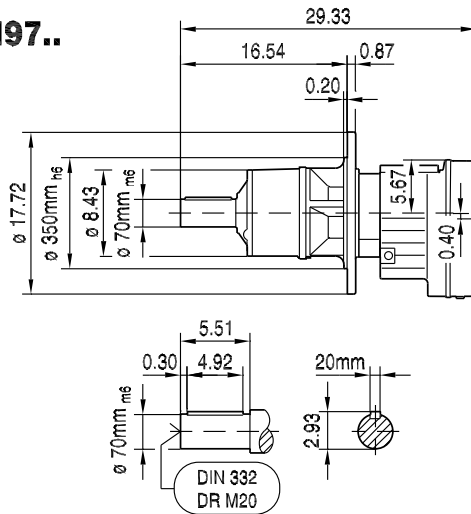
ø 13.78



ø 17.72

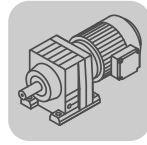


RM97..

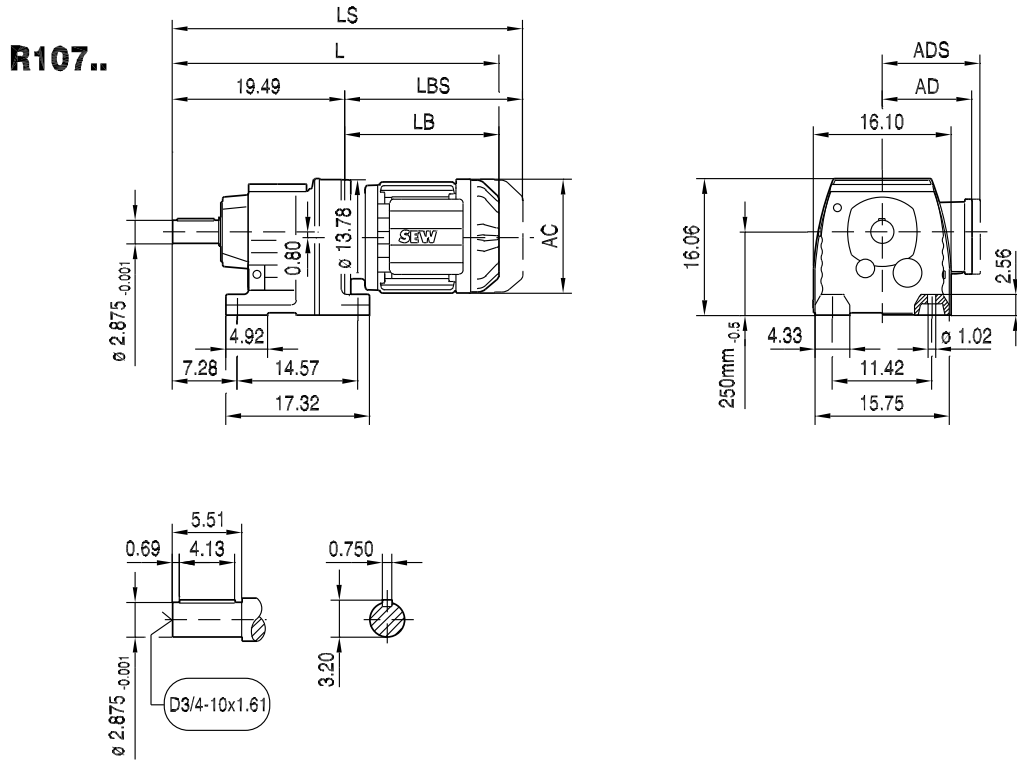


(→ 125)	DR90L	DR100M	DR100L/LC	DR132S	DR132M/MC	DR160..	DR180S/M	DR180L/LC	DR200	DR225S	DR225M/MC
AC	7.05	7.76	7.76	8.70	8.70	10.63	12.44	12.44	15.51	15.51	15.51
AD	5.51	6.18	6.18	6.69	6.69	8.98	9.96	9.96	11.14	11.14	11.14
ADS	5.91	6.22	6.22	6.77	6.77	8.98	9.96	9.96	11.14	11.14	11.14
L	27.80	28.98	30.16	31.85	33.82	35.43	38.15	40.51	43.39	43.39	45.35
LS	31.46	32.64	33.82	36.26	38.23	40.83	45.59	47.95	51.46	51.46	53.43
LB	10.47	11.65	12.83	14.53	16.50	18.11	20.83	23.19	26.06	26.06	28.03
LBS	14.13	15.31	16.50	18.94	20.91	23.50	26.27	30.63	34.13	34.13	36.10

reducer.ir

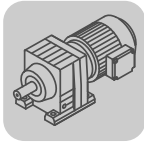


01 056 00 09



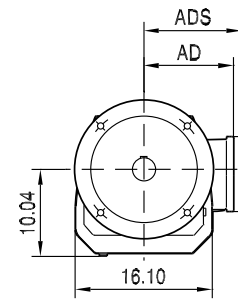
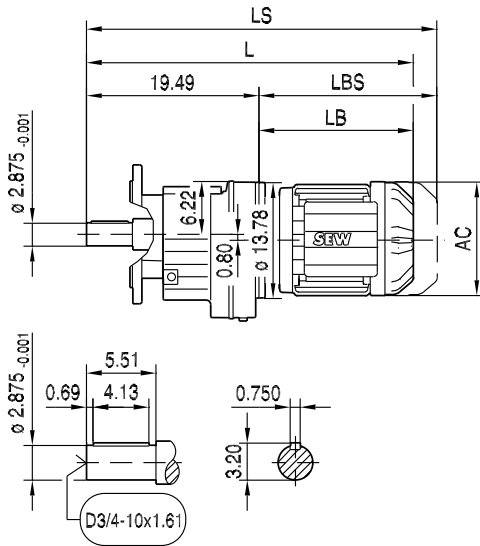
(→ 125)	DR100M	DR100L/LC	DR132S	DR132M/MC	DR160..	DR180S/M	DR180L/LC	DR200	DR225S	DR225M/MC
AC	7.76	7.76	8.70	8.70	10.63	12.44	12.44	15.51	15.51	15.51
AD	6.18	6.18	6.69	6.69	8.98	9.96	9.96	11.14	11.14	11.14
ADS	6.22	6.22	6.77	6.77	8.98	9.96	9.96	11.14	11.14	11.14
L	30.91	32.09	33.78	35.75	37.36	40.08	42.44	45.31	45.31	47.28
LS	34.57	35.75	38.19	40.16	42.76	47.52	49.88	53.39	53.39	55.35
LB	11.42	12.60	14.29	16.26	17.87	20.59	22.95	25.83	25.83	27.80
LBS	15.08	16.26	18.70	20.67	23.27	26.09	28.39	33.90	33.90	35.87

reducer.ir

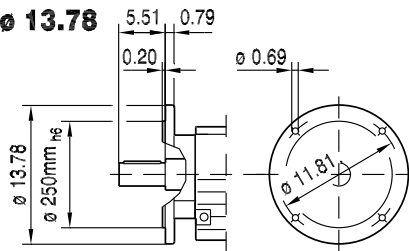


01 057 00 09

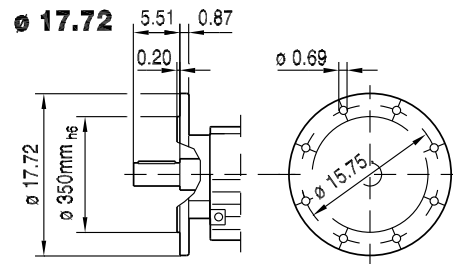
RF107..



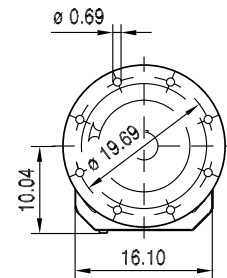
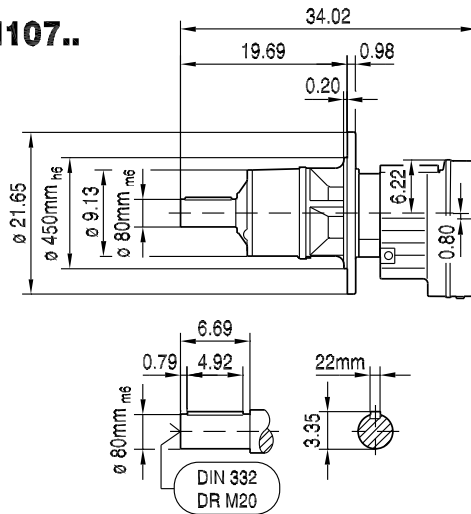
ø 13.78



ø 17.72

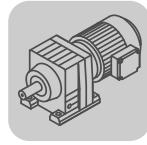


RM107..

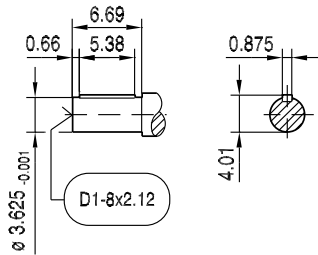
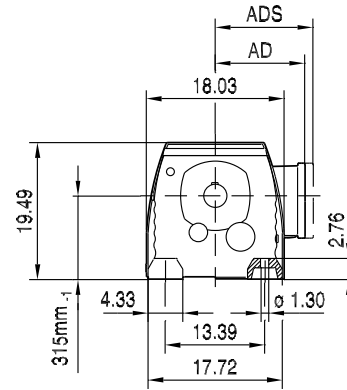
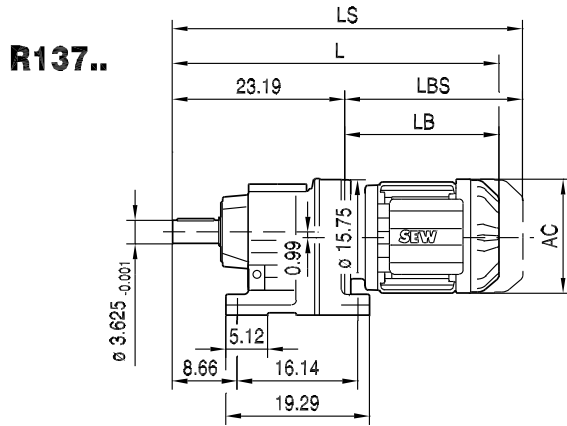


(→ 125)	DR100M	DR100L/LC	DR132S	DR132M/MC	DR160..	DR180S/M	DR180L/LC	DR200	DR225S	DR225M/MC
AC	7.76	7.76	8.70	8.70	10.63	12.44	12.44	15.51	15.51	15.51
AD	6.18	6.18	6.69	6.69	8.98	9.96	9.96	11.14	11.14	11.14
ADS	6.22	6.22	6.77	6.77	8.98	9.96	9.96	11.14	11.14	11.14
L	30.91	32.09	33.78	35.75	37.36	40.08	42.44	45.31	45.31	47.28
LS	34.57	35.75	38.19	40.16	42.76	47.52	49.88	53.39	53.39	55.35
LB	11.42	12.60	14.29	16.26	17.87	20.59	22.95	25.83	25.83	27.80
LBS	15.08	16.26	18.70	20.67	23.27	26.09	28.39	33.90	33.90	35.87

reducer.ir

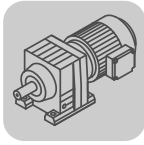


01 058 00 09



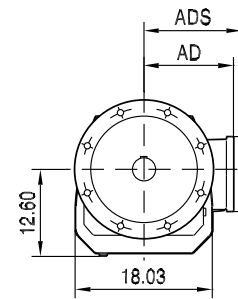
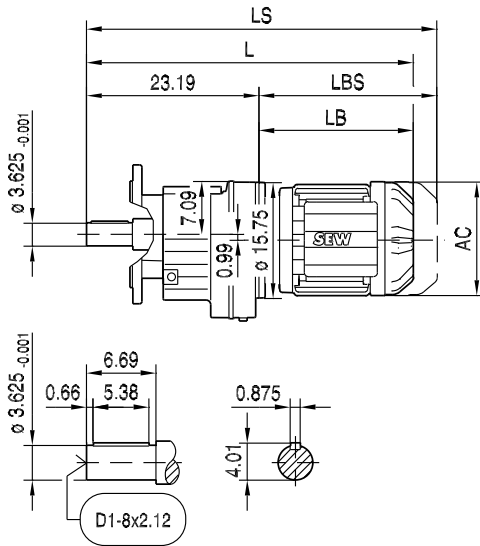
(→ 125)	DR132M/MC	DR160..	DR180S/M	DR180L/LC	DR200	DR225S	DR225M/MC	DVE250M	DVE280..
AC	8.70	10.63	12.44	12.44	15.51	15.51	15.51	20.08	20.08
AD	6.69	8.98	9.96	9.96	11.14	11.14	11.14	15.63	15.63
ADS	6.77	8.98	9.96	9.96	11.14	11.14	11.14	15.63	15.63
L	39.17	40.79	43.50	45.87	48.74	48.74	50.71	54.25	54.25
LS	43.58	46.18	50.94	53.31	56.81	56.81	58.78	61.54	61.54
LB	15.98	17.60	20.31	22.68	25.55	25.55	27.52	31.06	31.06
LBS	20.39	22.99	27.76	30.12	33.62	33.62	35.59	38.35	38.35

reducer.ir

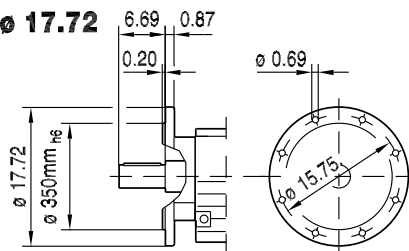


01 059 00 09

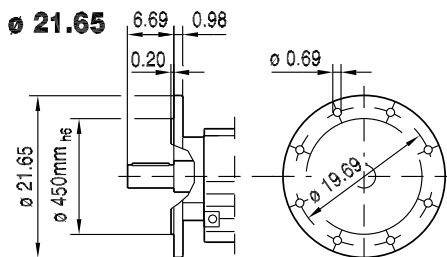
RF137..



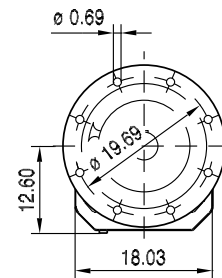
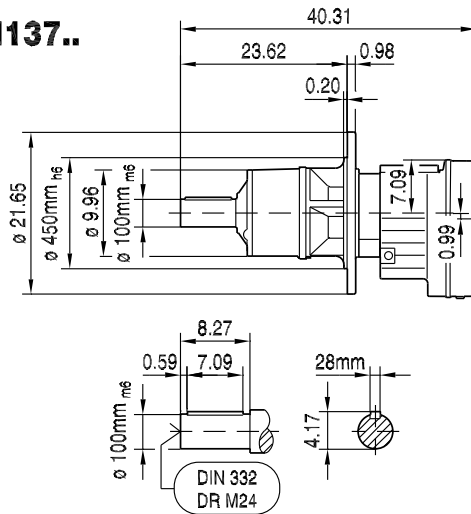
ø 17.72



ø 21.65

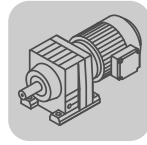


RM137..

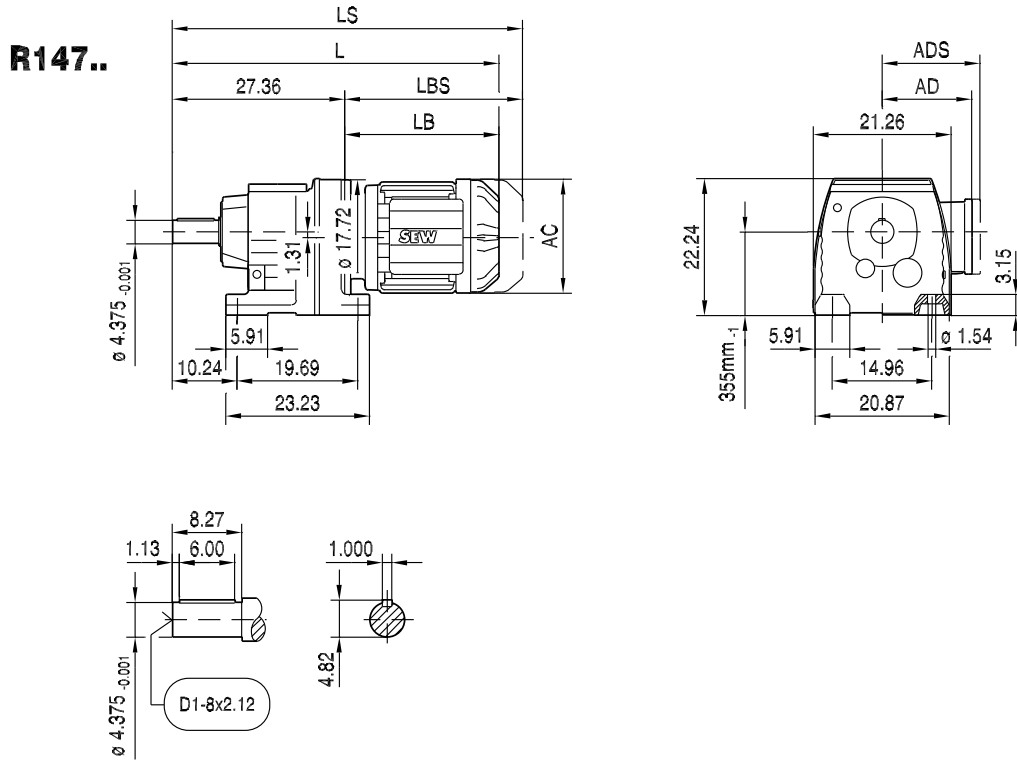


(→ 125)	DR132M/MC	DR160..	DR180S/M	DR180L/LC	DR200	DR225S	DR225M/MC	DVE250M	DVE280..
AC	8.70	10.63	12.44	12.44	15.51	15.51	15.51	20.08	20.08
AD	6.69	8.98	9.96	9.96	11.14	11.14	11.14	15.63	15.63
ADS	6.77	8.98	9.96	9.96	11.14	11.14	11.14	15.63	15.63
L	39.17	40.79	43.50	45.87	48.74	48.74	50.71	54.25	54.25
LS	43.58	46.18	50.94	53.31	56.81	56.81	58.78	61.54	61.54
LB	15.98	17.60	20.31	22.68	25.55	25.55	27.52	31.06	31.06
LBS	20.39	22.99	27.76	30.12	33.62	33.62	35.59	38.35	38.35

reducer.ir

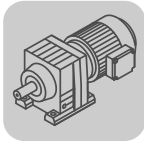


01 060 00 09



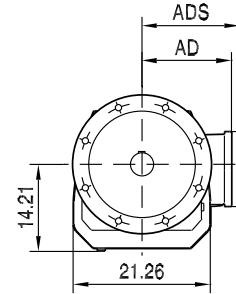
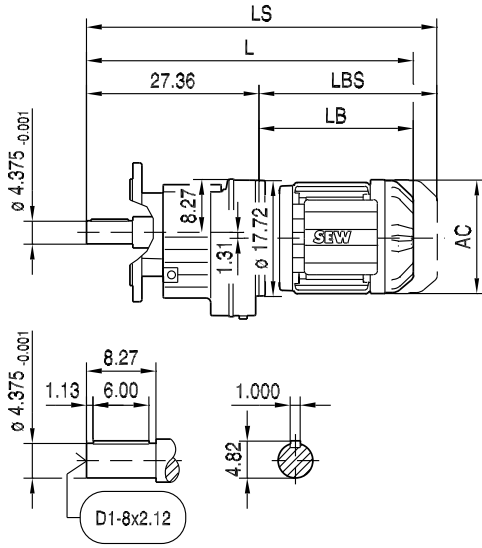
(→ 125)	DR160..	DR180S/M	DR180L/LC	DR200	DR225S	DR225M/MC	DVE250M	DVE280..
AC	10.63	12.44	12.44	15.51	15.51	15.51	20.08	20.08
AD	8.98	9.96	9.96	11.14	11.14	11.14	15.63	15.63
ADS	8.98	9.96	9.96	11.14	11.14	11.14	15.63	15.63
L	44.65	47.36	49.72	52.60	52.60	54.57	58.07	58.07
LS	50.04	54.80	57.17	60.67	60.67	62.64	65.35	65.35
LB	17.28	20.00	22.36	25.24	25.24	27.20	30.71	30.71
LBS	22.68	27.44	29.80	33.81	33.81	35.28	37.99	37.99

reducer.ir

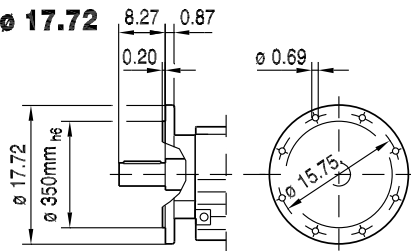


01 061 00 09

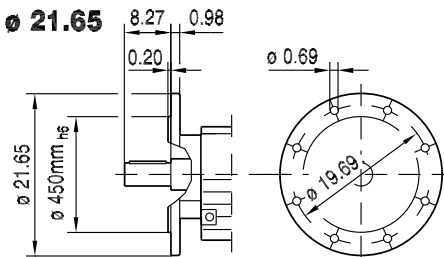
RF147..



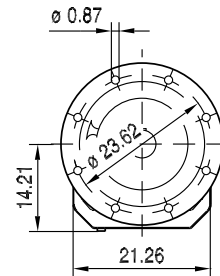
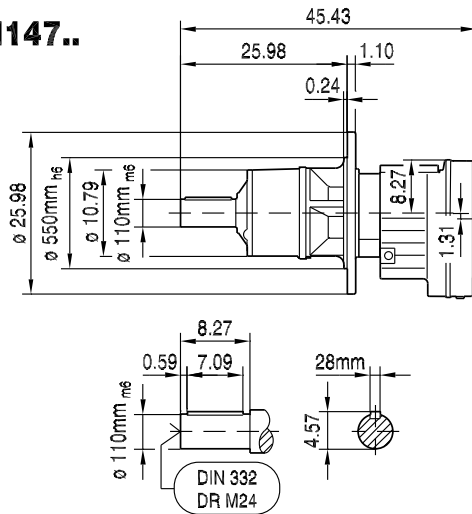
ø 17.72



ø 21.65

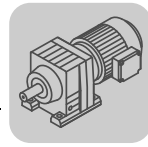


RM147..

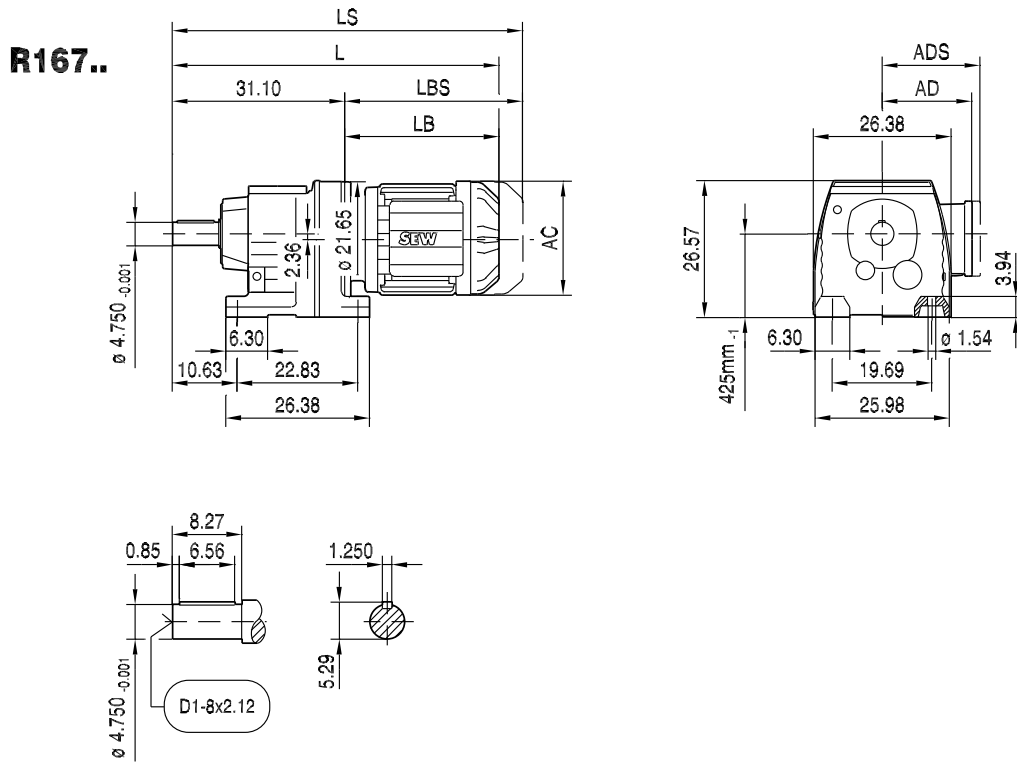


(→ 125)	DR160..	DR180S/M	DR180L/LC	DR200	DR225S	DR225M/MC	DVE250M	DVE280..
AC	10.63	12.44	12.44	15.51	15.51	15.51	20.08	20.08
AD	8.98	9.96	9.96	11.14	11.14	11.14	15.63	15.63
ADS	8.98	9.96	9.96	11.14	11.14	11.14	15.63	15.63
L	44.65	47.36	49.72	52.60	52.60	54.57	58.07	58.07
LS	50.04	54.80	57.17	60.67	60.67	62.64	65.35	65.35
LB	17.28	20.00	22.36	25.24	25.24	27.20	30.71	30.71
LBS	22.68	27.44	29.80	33.81	33.81	35.28	37.99	37.99

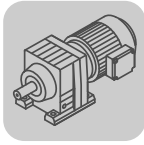
reducer.ir



01 062 00 09

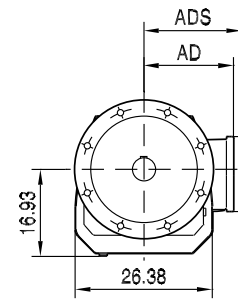
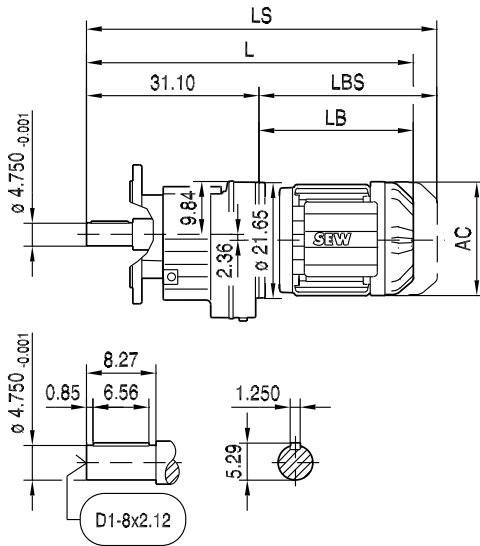


(→ 125)	DR160..	DR180S/M	DR180L/LC	DR200	DR225S	DR225M/MC	DVE250M	DVE280..	DR315K/S	DR315M/L
AC	10.63	12.44	12.44	15.51	15.51	15.51	20.08	20.08	24.57	24.57
AD	8.98	9.96	9.96	11.14	11.14	11.14	15.63	15.63	19.92	20.51
ADS	8.98	9.96	9.96	11.14	11.14	11.14	15.63	15.63	19.92	20.51
L	48.07	50.79	53.15	56.02	56.02	57.99	61.46	61.46	68.15	73.27
LS	53.46	58.23	60.59	64.09	64.09	66.06	68.74	68.74	78.03	83.15
LB	16.97	19.69	22.05	24.92	24.92	26.89	30.35	30.35	37.05	42.17
LBS	22.36	27.13	29.49	32.99	32.99	34.96	37.64	37.64	46.93	52.05

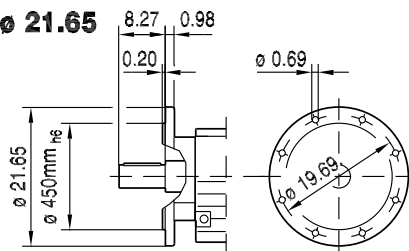


01 063 00 09

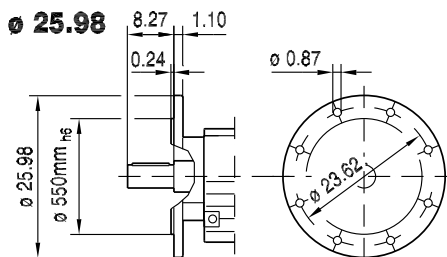
RF167..



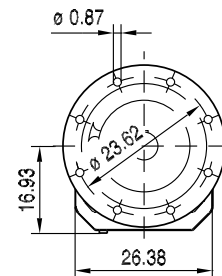
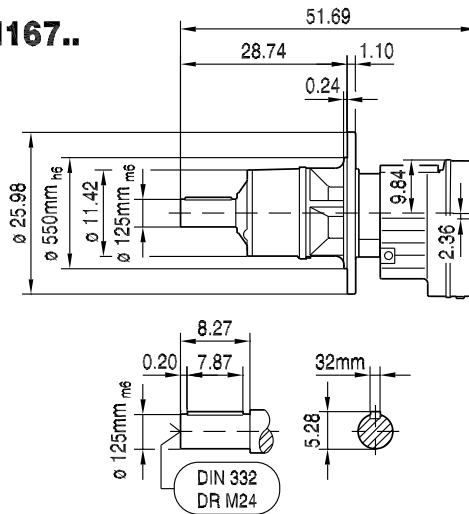
ø 21.65



ø 25.98

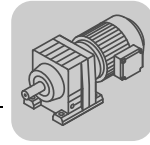


RM167..

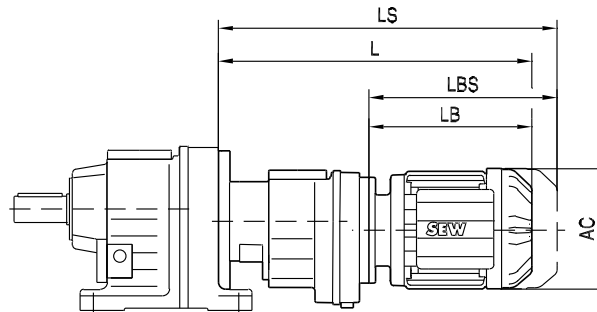


(→ 125)	DR160..	DR180S/M	DR180L/LC	DR200	DR225S	DR225M/MC	DVE250M	DVE280..	DR315K/S	DR315M/L
AC	10.63	12.44	12.44	15.51	15.51	15.51	20.08	20.08	24.57	24.57
AD	8.98	9.96	9.96	11.14	11.14	11.14	15.63	15.63	19.92	20.51
ADS	8.98	9.96	9.96	11.14	11.14	11.14	15.63	15.63	19.92	20.51
L	48.07	50.79	53.15	56.02	56.02	57.99	61.46	61.46	68.15	73.27
LS	53.46	58.23	60.59	64.09	64.09	66.06	68.74	68.74	78.03	83.15
LB	16.97	19.69	22.05	24.92	24.92	26.89	30.35	30.35	37.05	42.17
LBS	22.36	27.13	29.49	32.99	32.99	34.96	37.64	37.64	46.93	52.05

reducer.ir

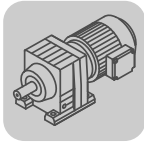
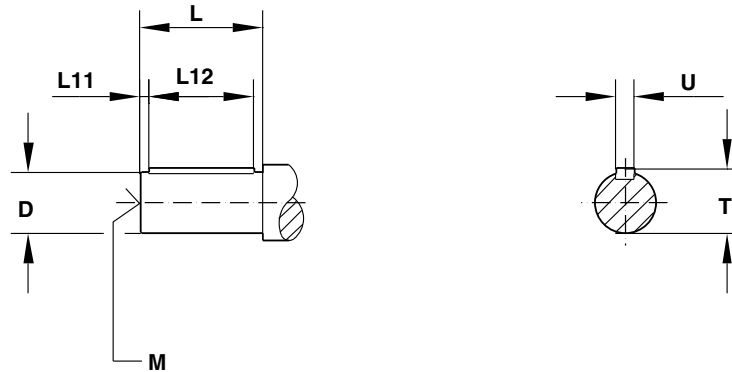


01 131 00 06



(→ 14)		AC	L	LS	LB	LBS	(→ 14)		AC	L	LS	LB	LBS
R..27R17	DR63..	5.20	12.76	14.92	5.87	8.03	R..137R77	DR100M..	7.76	21.42	25.12	11.97	15.67
R..37R17	DR63..	5.20	12.76	14.92	5.87	8.03		DR100LC..	7.76	22.60	26.30	13.15	16.85
	DR71S..	5.47	13.19	15.87	6.30	8.98		DR132S..	8.70	24.37	28.78	14.92	19.33
R..47R37	DR63..	5.20	14.02	16.18	7.52	9.69		DR132M..	8.70	26.34	31.06	16.89	21.30
R..57R37	DR71S..	5.47	14.45	17.13	7.95	10.63	R..147R77	DR63..	5.20	16.18	18.35	7.05	9.21
	DR71M	5.47	15.43	18.11	8.94	11.61		DR71S..	5.47	16.61	19.25	7.48	10.12
R..67R37	DR63..	5.20	14.02	16.18	7.52	9.69		DR71M..	5.47	17.60	20.24	8.46	11.10
	DR71S..	5.47	14.45	17.13	7.95	10.63		DR80S..	6.14	17.91	21.10	8.78	11.97
	DR71M	5.47	15.43	18.11	8.94	11.61		DR80M..	6.14	19.13	22.32	10.00	13.19
	DR80S..	6.14	15.79	18.98	9.29	12.48		DR90M..	7.05	19.13	22.83	10.00	13.70
R..77R37	DR63..	5.20	13.70	15.87	7.52	9.69		DR90L..	7.05	19.92	23.62	10.79	14.49
	DR71S..	5.47	14.13	16.81	7.95	10.63		DR100M..	7.76	21.10	24.80	11.97	15.67
	DR71M..	5.47	15.12	17.80	8.94	11.61		DR100LC..	7.76	22.28	25.98	13.15	16.85
	DR80S..	6.14	15.47	18.66	9.29	12.48		DR132S..	8.70	24.06	28.46	14.92	19.33
	DR80M..	6.14	16.69	19.88	10.51	13.70	R..147R87	DR90M..	7.05	20.87	24.57	9.84	13.54
R..87R57	DR63..	5.20	15.79	17.95	7.28	9.45		DR90L..	7.05	21.65	25.35	10.63	14.33
	DR71S..	5.47	16.22	18.86	7.72	10.35		DR100M..	7.76	22.83	26.54	11.81	15.51
	DR71M..	5.47	17.20	19.84	8.70	11.34		DR100LC..	7.76	24.02	27.72	12.99	16.69
	DR80S..	6.14	17.56	20.75	9.06	12.24		DR132S..	8.70	25.75	30.16	14.72	19.13
	DR80M..	6.14	18.78	21.97	10.28	13.46		DR132M/MC..	8.70	27.72	32.13	16.69	21.10
	DR90M..	7.05	18.82	22.52	10.31	14.02		DR160..	10.71	29.33	34.72	18.31	23.70
R..97R57	DR63..	5.20	15.59	17.76	7.28	9.45	R..167R97	DR71M..	5.47	20.83	23.46	8.03	10.67
	DR71S..	5.47	16.02	18.66	7.72	10.35		DR80S..	6.14	21.18	24.37	8.39	11.57
	DR71M..	5.47	17.01	19.65	8.70	11.34		DR80M..	6.14	22.40	25.59	9.61	12.80
	DR80S..	6.14	17.36	20.55	9.06	12.24		DR90M..	7.05	22.40	26.10	9.61	13.31
	DR80M..	6.14	18.58	21.77	10.28	13.46		DR90L..	7.05	23.19	26.89	10.39	14.09
	DR90M..	7.05	18.62	22.32	10.31	14.02		DR100M..	7.76	24.37	28.07	11.57	15.28
	DR90L..	7.05	19.41	23.11	11.10	14.80		DR100LC..	7.76	25.55	29.25	12.76	16.46
	DR100M..	7.76	20.59	24.29	12.28	15.98		DR132S..	8.70	27.32	31.73	14.53	18.94
R..107R77	DR63..	5.20	16.77	18.94	7.05	9.21		DR132M/MC..	8.70	29.29	33.70	16.50	20.91
	DR71S..	5.47	17.20	19.84	7.48	10.12		DR160..	10.71	30.91	36.30	18.11	23.50
	DR71M..	5.47	18.19	20.83	8.46	11.10	R..167R107	DR90L..	7.05	25.55	28.90	10.16	13.86
	DR80S..	6.14	18.50	21.69	8.78	11.97		DR100M..	7.76	26.38	30.08	11.34	15.04
	DR80M..	6.14	19.72	22.91	10.00	13.19		DR100LC..	7.76	27.56	31.26	12.52	16.22
	DR90M..	7.05	19.72	23.43	10.00	13.70		DR132S..	8.70	29.33	33.74	14.29	18.70
	DR90L..	7.05	20.51	24.21	10.79	14.49		DR132M/MC..	8.70	31.30	35.71	16.26	20.67
	DR100M..	7.76	21.69	25.39	11.97	15.67		DR160..	10.71	32.91	38.31	17.87	23.27
	DR100LC..	7.76	22.87	26.57	13.15	16.85		DR180M..	12.48	36.30	44.13	21.26	29.09
R..137R77	DR63..	5.20	16.50	18.66	7.05	9.21							
	DR71S..	5.47	16.93	19.57	7.48	10.12							
	DR71M..	5.47	17.91	20.55	8.46	11.10							
	DR80S..	6.14	18.23	21.42	8.78	11.97							
	DR80M..	6.14	19.45	22.64	10.00	13.19							
	DR90M..	7.05	19.45	23.15	10.00	13.70							
	DR90L..	7.05	20.24	23.94	10.79	14.49							

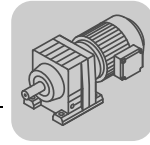
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9.6 Available output shafts R series
9.6.1 R Series inch solid shafts


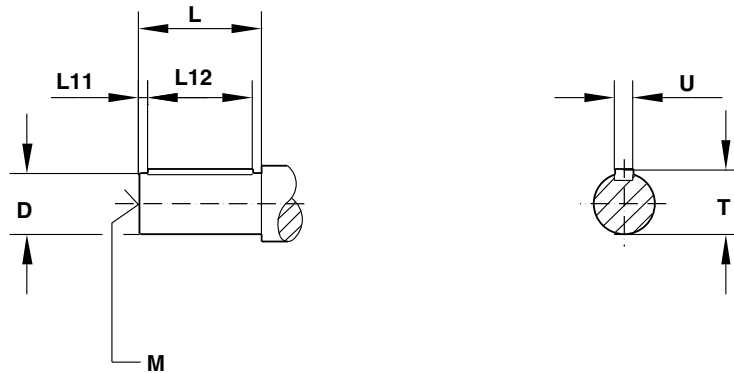
Model ¹	D	T	U	L	L11	L12	M	Change ²
R...17	0.75	0.83	3/16	1.57	0.25	1-1/16	1/4 - 20 x 0.63	0
R...27	1	1.11	1/4	1.97	0.26	1-5/16	3/8 - 16 x 0.87	0
R...37	1	1.11	1/4	1.97	0.26	1-5/16	3/8 - 16 x 0.87	0
R...47	1.25	1.36	1/4	2.36	0.26	1-11/16	1/2 - 13 x 1.12	0
R...57	1.25	1.36	1/4	2.36	0.28	1-11/16	1/2 - 13 x 1.12	-0.4
	1.375	1.51	5/16	2.76	0.43	1-13/16	1/2 - 13 x 1.12	0
R...67	1.375	1.51	5/16	2.76	0.43	1-13/16	1/2 - 13 x 1.12	0
R...77	1.625	1.79	3/8	3.15	0.38	2-1/4	5/8 - 11 x 1.38	0
R...87	2.125	2.35	1/2	3.94	0.64	2-5/8	3/4 - 10 x 1.61	0
R...97	2.375	2.65	5/8	4.72	0.51	3-5/8	3/4 - 10 x 1.61	0
R...107	2.875	3.2	3/4	5.51	0.67	4-1/8	3/4 - 10 x 1.61	0
R...137	3.625	4.01	7/8	6.69	0.63	5-3/8	1 - 8 x 2.13	0
R...147	4.375	4.82	1	8.27	1.09	6	1 - 8 x 2.13	0
R...167	4.75	5.29	1-1/4	8.27	0.82	6-9/16	1 - 8 x 2.13	0
RX...57	0.75	0.83	3/16	1.57	0.23	1-1/16	1/4 - 20 x 0.63	0
RX...67	1	1.11	1/4	1.97	0.26	1-5/16	3/8 - 16 x 0.87	0
RX...77	1.25	1.36	1/4	2.36	0.26	1-11/16	1/2 - 13 x 1.12	0
	1.625	1.79	3/8	3.15	0.38	2-1/4	5/8 - 11 x 1.38	0.79
RX...87	1.625	1.79	3/8	3.15	0.38	2-1/4	5/8 - 11 x 1.38	0
	1.75	1.92	3/8	3.54	0.38	2-3/4	5/8 - 11 x 1.38	0.39
RX...97	2.125	2.35	1/2	3.94	0.64	2-5/8	3/4 - 10 x 1.61	0
RX...107	2.375	2.65	5/8	4.72	0.51	3-5/8	3/4 - 10 x 1.61	0

¹ Longer shafts to match older designs are available for flanged units.

² Compared to standard shaft as shown in dimension pages.



9.6.2 R Series metric solid shafts

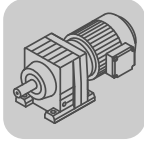


Model ¹	D	T	U	L	L11	L12	M	Change ²
R...17	20	22.5	6	40	4	32	M6 x 16	0
R...27	25	28	8	50	3.5	40	M10 x 22	0
R...37	25	28	8	50	3.5	50	M10 x 22	0
R...47	30	33	8	60	3.5	50	M10 x 22	0
R...57	30	33	8	60	7	50	M10 x 22	0
	35	38	10	70	7	56	M12 x 28	0
R...67	35	38	10	70	7	56	M12 x 28	0
R...77	40	43	12	80	5	70	M16 x 36	0
R...87	50	53.5	14	100	10	80	M16 x 36	0
R...97	60	64	18	120	5	110	M20 x 42	0
R...107	70	74.5	20	140	7.5	125	M20 x 42	0
R...137	90	95	25	170	5	160	M24 x 50	0
R...147	110	116	28	210	15	180	M24 x 50	0
R...167	120	127	32	210	5	200	M24 x 50	0
RX...57	20	22.5	6	40	3.5	32	M6 x 16	0
RX...67	25	28	8	50	3.5	40	M10 x 22	0
RX...77	30	33	8	60	3.5	50	M10 x 22	0
	40	43	12	80	5	70	M16 x 36	0
RX...87	40	43	12	80	5	70	M16 x 36	0
	45	48.5	14	90	5	80	M16 x 36	0
RX...97	50	53.5	14	100	10	80	M16 x 36	0
RX...107	60	64	18	120	5	110	M20 x 42	0

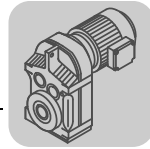
1 Longer shafts to match older designs are available for flanged units.

2 Compared to standard shaft as shown in dimension pages.

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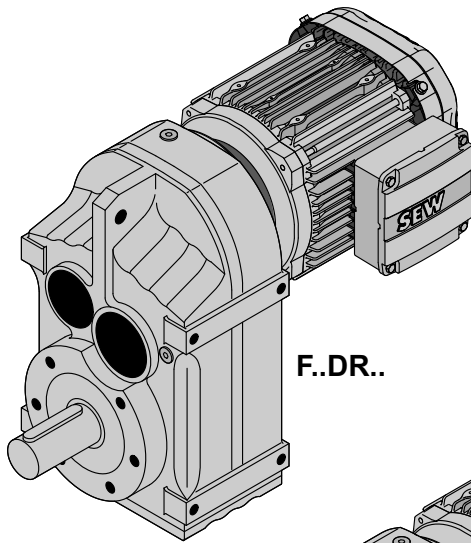
**R..DRE/DRS**Available output shafts R series

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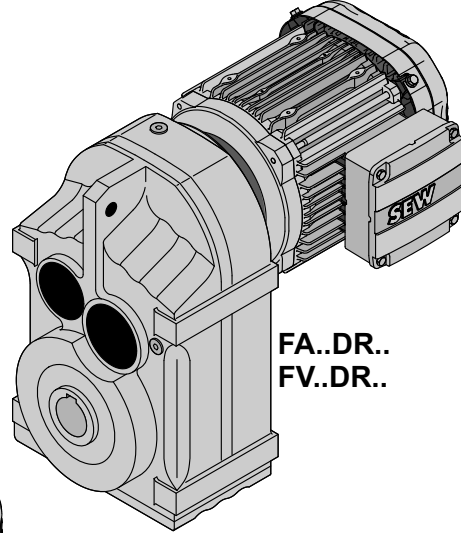


10 F..DRE/DRS

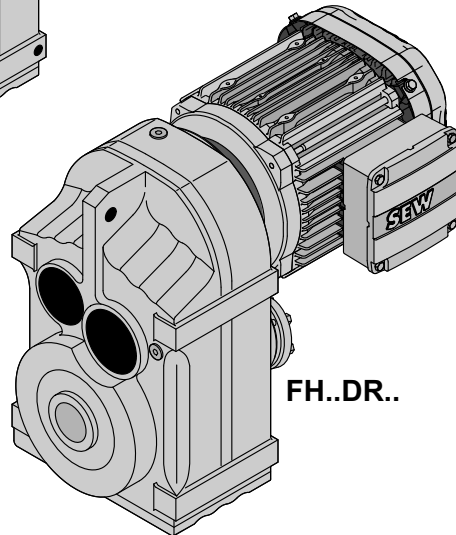
10.1 F, FA..(B), FV..(B), FH..(B), FT, FF, FAF, FVF, FHF, FAZ, FVZ..DR..



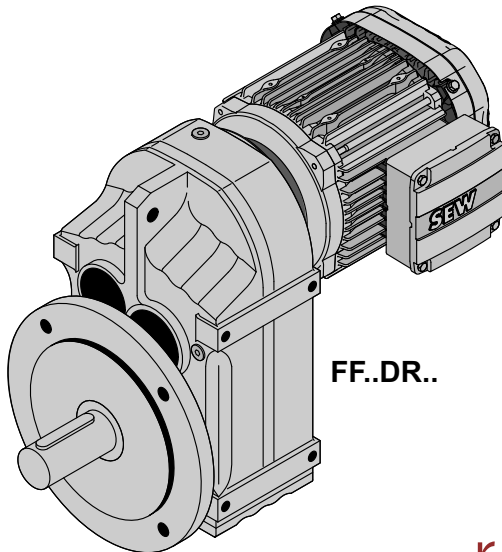
F..DR..



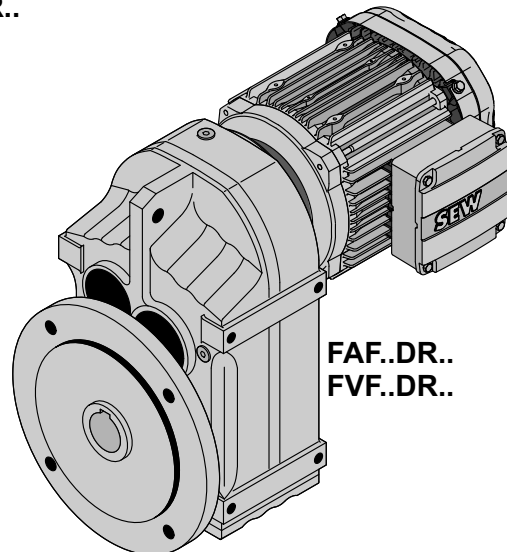
FA..DR..
FV..DR..



FH..DR..



FF..DR..



FAF..DR..
FVF..DR..

10

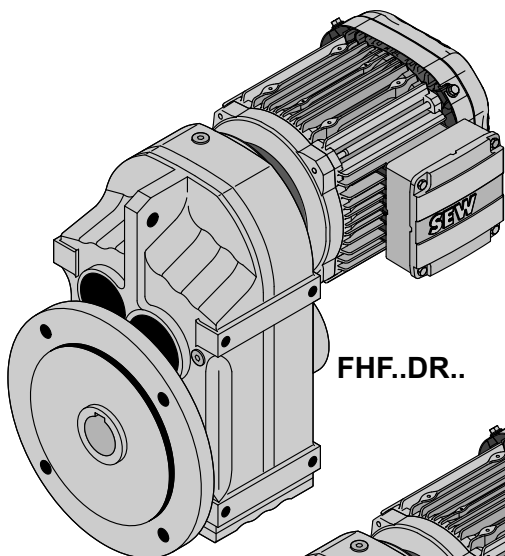
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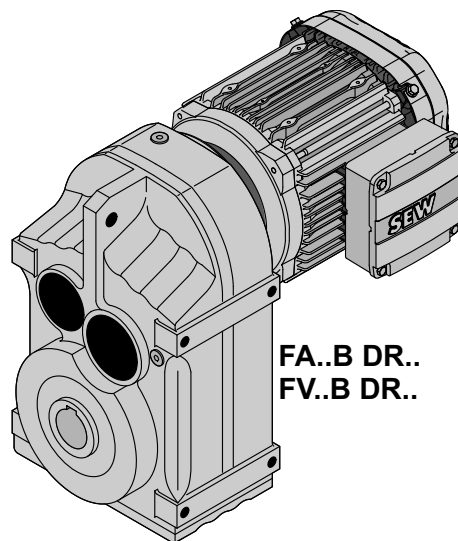


F..DRE/DRS

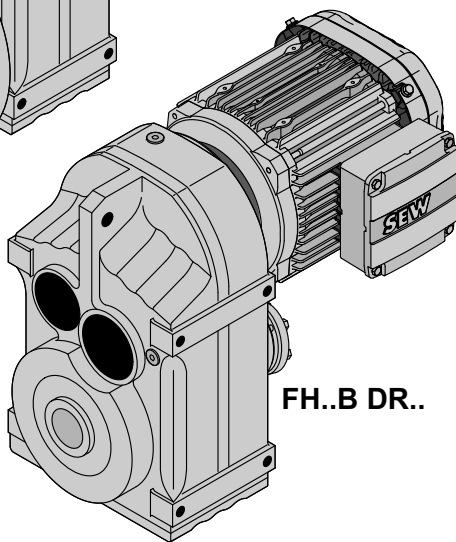
F, FA..(B), FV..(B), FH..(B), FT, FF, FAF, FVF, FHF, FAZ, FVZ..DR..



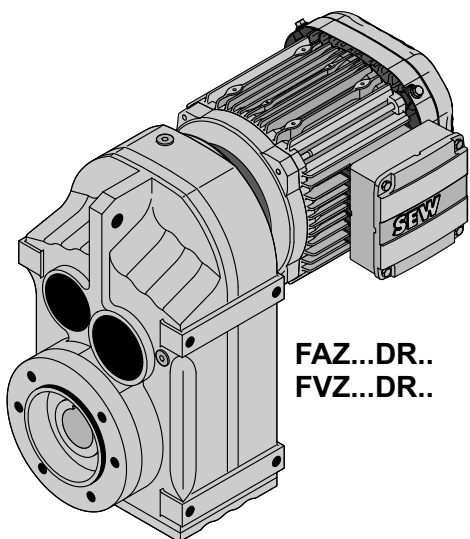
FHF..DR..



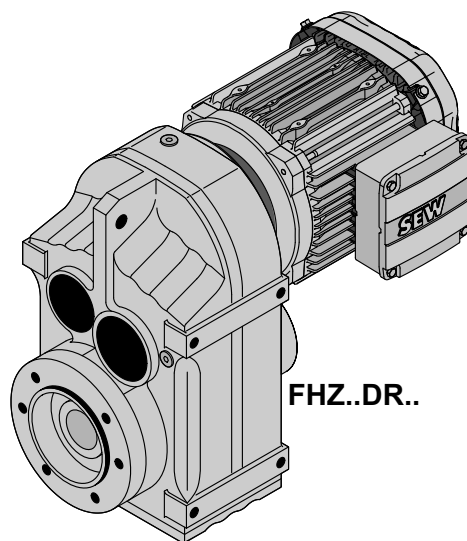
**FA..B DR..
FV..B DR..**



FH..B DR..



**FAZ...DR..
FVZ...DR..**



FHZ..DR..

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10.2 F.. → DRE/DRS

F27, n _e = 1700 rpm					1150 lb-in			
n _a [rpm]	T _{amax} [lb-in]	F _{Ra} [lb]	φ _(/R) [']	i	DR63 DRS71S DRS71M	DRS80 DRE80M DRE90M	DRS90M DRE90L	DRS90L DRS100M DRE100M DRE100LC
3								
12	1150	1010	-	140.74				
13	1150	1010	-	129.09				
15	1150	1010	-	109.90				
18	1150	1010	-	94.76				
19	1150	1010	-	88.32				
22	1150	990	-	77.21				
23	1150	960	-	72.37				
27	1150	910	-	63.86				
30	1150	870	-	56.62				
34	1150	820	-	50.19				
36	1150	795	-	46.78				
42	1150	750	-	40.89				
44	1150	730	-	38.33				
50	1150	690	-	33.83				
2								
58	1150	645	-	29.56				
63	1150	620	-	27.18				
73	1150	575	-	23.25				
84	1150	540	-	20.15				
90	1150	520	-	18.84				
104	1150	485	-	16.28				
123	1150	445	-	13.84				
138	1150	420	-	12.35				
161	1150	385	-	10.55				
172	1150	370	-	9.88				
181	1150	330	-	9.40				
209	1080	315	-	8.13				
246	1000	305	-	6.91				
276	960	295	-	6.17				
323	880	290	-	5.27				
345	840	285	-	4.93				
409	765	280	-	4.16				

10

F27R17, n _e = 1700 rpm					1150 lb-in			
n _a [rpm]	T _{amax} [lb-in]	F _{Ra} [lb]	φ _(/R) [']	i	DR63 DRS71S DRS71M	DRS80		
3 3								
0.19	1150	1010	-	8972				
0.22	1150	1010	-	7736				
0.24	1150	1010	-	7211				
0.27	1150	1010	-	6303				
0.31	1150	1010	-	5435				
0.35	1150	1010	-	4855				
0.40	1150	1010	-	4243				
0.46	1150	1010	-	3715				
0.52	1150	1010	-	3247				
0.59	1150	1010	-	2878				
0.68	1150	1010	-	2515				
0.77	1150	1010	-	2217				

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F..DRE/DRS
 F.. → DRE/DRS

F27R17, n_e = 1700 rpm					1150 lb-in			
n _a [rpm]	T _{amax} [lb-in]	F _{Ra} [lb]	φ _(/R) [']	i	DR63 DRS71S DRS71M	DRS80		
2 3								
0.90	1150	1010	-	1898				
1.0	1150	1010	-	1645				
1.1	1150	1010	-	1525				
1.3	1150	1010	-	1322				
1.5	1150	1010	-	1146				
1.7	1150	1010	-	1013				
1.9	1150	1010	-	890				
2.2	1150	1010	-	778				
2.5	1150	1010	-	682				
2.8	1150	1010	-	602				
3.3	1150	1010	-	520				
3 2								
0.87	1150	1010	-	1948				
0.93	1150	1010	-	1826				
1.1	1150	1010	-	1610				
1.2	1150	1010	-	1399				
1.4	1150	1010	-	1230				
1.8	1150	1010	-	948				
2.1	1150	1010	-	829				
2.3	1150	1010	-	731				
2.7	1150	1010	-	633				
3.1	1150	1010	-	551*				
3.5	1150	1010	-	489				
4.0	1150	1010	-	427				
4.5	1150	1010	-	379				
5.2	1150	1010	-	326				
5.9	1150	1010	-	288				
6.8	1150	1010	-	251				
7.7	1150	1010	-	221				
9.9	1150	1010	-	172				
11	1150	1010	-	153				
13	1150	1010	-	130				
2 2								
3.7	1150	1010	-	458				
4.3	1150	1010	-	397				
5.0	1150	1010	-	342				
5.6	1150	1010	-	302				
6.4	1150	1010	-	266				
7.2	1150	1010	-	236				
8.1	1150	1010	-	211				
9.1	1150	1010	-	186				
12	1150	1010	-	142				
14	1150	1010	-	124				
16	1150	1010	-	109				
18	1150	1010	-	96				
F37, n_e = 1700 rpm					1760 lb-in			
n _a [rpm]	T _{amax} [lb-in]	F _{Ra} [lb]	φ _(/R) [']	i	DR63 DRS71S DRS71M	DRS80 DRE80M DRE90M	DRS90M DRE90L	DRS90L DRS100M DRE100M DRE100LC
3								
13	1760	960	6.8	128.51				
14	1760	960	6.8	117.88				
17	1760	960	6.8	100.36				

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F37, $n_e = 1700$ rpm					1760 lb-in			
n_a [rpm]	T_{amax} [lb-in]	F_{Ra} [lb]	$\varphi_{(R)}$ [']	i	DR63 DRS71S DRS71M	DRS80 DRE80M DRE90M	DRS90M DRE90L	DRS90L DRS100M DRE100M DRE100LC
20	1760	960	6.8	86.53				
21	1760	960	6.8	80.65				
24	1760	960	6.9	70.50				
26	1760	960	6.9	66.09				
29	1760	960	6.9	58.32				
31	1760	960	7.5	54.54				
33	1760	960	6.9	51.70				
36	1760	960	7.6	47.02				
39	1760	960	7.6	43.83				
44	1760	960	7.7	38.31				
47	1760	930	7.7	35.91				
54	1760	880	7.7	31.69				
61	1760	830	7.8	28.09				
71	1760	770	7.8	23.88				









72	1760	765	6.1	23.63				
83	1760	715	6.2	20.57				
88	1760	690	6.2	19.27				
100	1760	645	6.4	17.03				
108	1760	625	6.4	15.81				
119	1760	590	6.5	14.33				
132	1760	555	6.6	12.87				
153	1680	530	6.7	11.08				
163	1630	520	6.8	10.42				
190	1540	500	6.9	8.97				
212	1500	475	7.4	8.01				
228	1280	475	9.9	7.44				
252	1230	460	10	6.74				
281	1190	445	10.2	6.05				
326	1100	430	10.5	5.21				
347	1060	425	10.6	4.90				
403	970	415	10.9	4.22				
451	920	400	11.9	3.77				

F37R17, $n_e = 1700$ rpm					1760 lb-in			
n_a [rpm]	T_{amax} [lb-in]	F_{Ra} [lb]	$\varphi_{(R)}$ [']	i	DR63 DRS71S DRS71M	DRS80		
3								
0.21	1760	960	-	8193				
0.24	1760	960	-	7064				
0.26	1760	960	-	6585				
0.30	1760	960	-	5756				
0.34	1760	960	-	4963				
0.38	1760	960	-	4434				
0.44	1760	960	-	3875				
0.50	1760	960	-	3392				
0.57	1760	960	-	2965				
0.66	1760	960	-	2587				
0.74	1760	960	-	2284				
0.85	1760	960	-	1997				
0.98	1760	960	-	1742				
1.1	1760	960	-	1545				

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F37R17, $n_e = 1700$ rpm					1760 lb-in	
n_a [rpm]	T_{amax} [lb-in]	F_{Ra} [lb]	$\varphi_{(R)}$ [']	i	DR63 DRS71S DRS71M	DRS80
 2  3						
0.88	1760	960	-	1929		
1.0	1760	960	-	1679		
1.1	1760	960	-	1550		
1.3	1760	960	-	1356		
1.4	1760	960	-	1180		
1.6	1760	960	-	1044		
1.9	1760	960	-	914		
2.1	1760	960	-	808		
2.4	1760	960	-	698		
2.8	1760	960	-	616		
3.1	1760	960	-	544		
3.6	1760	960	-	466		
4.1	1760	960	-	411		
4.7	1760	960	-	364		
 3  2						
1.2	1760	960	-	1370		
1.4	1760	960	-	1198		
1.6	1760	960	-	1047		
1.9	1760	960	-	915		
2.1	1760	960	-	807		
2.4	1760	960	-	707		
2.8	1760	960	-	617		
3.2	1760	960	-	538		
3.6	1760	960	-	477		
4.1	1760	960	-	412		
4.7	1760	960	-	365		
5.3	1760	960	-	322		
6.1	1760	960	-	278		
7.0	1760	960	-	242		
7.7	1760	960	-	221		
8.7	1760	960	-	195		
10	1760	960	-	168		
12	1760	960	-	147		
13	1760	960	-	127		
14	1760	960	-	121		
16	1760	960	-	108		
19	1760	960	-	91		
 2  2						
5.2	1760	960	-	326		
6.0	1760	960	-	285		
6.8	1760	960	-	250		
7.8	1760	960	-	219		
9.1	1760	960	-	186		
10	1760	960	-	167		
12	1760	960	-	145		
13	1760	960	-	129		
14	1760	960	-	118		
17	1760	960	-	98		
20	1760	960	-	87		

reducer.ir



F47, $n_e = 1700$ rpm					3530 lb-in				
n_a [rpm]	T_{amax} [lb-in]	F_{Ra} [lb]	$\varphi_{(R)}$ [']	i	DR63 DRS71S DRS71M	DRS80 DRE80M DRE90M	DRS90M DRE90L	DRS90L DRS100M DRE100M DRE100LC	DRS100LC
3									
8.9	3530	1330	6.1	190.76					
9.7	3530	1330	6.2	175.38					
11	3530	1330	6.2	150.06					
13	3530	1330	6.2	130.07					
14	3530	1330	6.2	121.57					
16	3530	1330	6.2	105.09					
19	3530	1330	6.2	89.29					
21	3530	1330	6.2	79.72					
25	3530	1330	6.3	68.09					
26	3530	1330	6.7	65.36					
30	3530	1330	6.8	56.49					
35	3530	1330	6.8	48.00*					
40	3530	1330	6.8	42.86					
46	3530	1330	6.9	36.61					
50	3530	1290	6.9	34.29					
59	3530	1180	7	28.88					
2									
55	3530	1220	5.7	30.86					
58	3530	1190	5.7	29.32					
66	3530	1110	5.8	25.72					
78	3530	1020	5.9	21.82					
86	3530	970	5.9	19.70					
98	3530	900	6	17.33					
104	3530	870	6	16.36					
122	3530	795	6.1	13.93					
134	3530	750	6.4	12.66					
155	3530	685	6.5	10.97					
190	2910	650	8	8.96					
216	3360	515	8.1	7.88					
228	3360	490	8.2	7.44*					
268	3090	485	8.4	6.34					
295	3000	465	9	5.76					
341	2830	450	9.2	4.99					

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F47R17, $n_e = 1700$ rpm					3530 lb-in				
n_a [rpm]	T_{amax} [lb-in]	F_{Ra} [lb]	$\varphi_{(R)}$ [']	i	DR63 DRS71S DRS71M	DRS80			
3 3									
0.14	3530	1330	-	12251					
0.16	3530	1330	-	10619					
0.17	3530	1330	-	9846					
0.20	3530	1330	-	8534					
0.23	3530	1330	-	7460					
0.26	3530	1330	-	6536					
0.30	3530	1330	-	5746					
0.34	3530	1330	-	5022					
0.39	3530	1330	-	4401					
0.44	3530	1330	-	3883					
0.49	3530	1330	-	3443					
0.57	3530	1330	-	2976					
0.65	3530	1330	-	2629					
0.74	3530	1330	-	2304					
0.84	3530	1330	-	2033					

reducer.ir



F47R17, $n_e = 1700$ rpm					3530 lb-in	
n_a [rpm]	T_{amax} [lb-in]	F_{Ra} [lb]	$\varphi_{(R)}$ [']	i	DR63 DRS71S DRS71M	DRS80
2 3						
0.67	3530	1330	-	2519		
0.71	3530	1330	-	2394		
0.78	3530	1330	-	2172		
0.84	3530	1330	-	2025		
0.96	3530	1330	-	1770		
1.1	3530	1330	-	1576		
1.2	3530	1330	-	1363		
1.4	3530	1330	-	1192		
1.6	3530	1330	-	1061		
1.8	3530	1330	-	931		
2.1	3530	1330	-	822		
2.4	3530	1330	-	706		
2.7	3530	1330	-	619		
3 2						
0.95	3530	1330	-	1785		
1.1	3530	1330	-	1578		
1.2	3530	1330	-	1364		
1.4	3530	1330	-	1203		
1.6	3530	1330	-	1049		
1.9	3530	1330	-	918		
2.1	3530	1330	-	809		
2.4	3530	1330	-	700		
2.7	3530	1330	-	622		
3.1	3530	1330	-	543		
3.6	3530	1330	-	475		
4.1	3530	1330	-	419		
4.6	3530	1330	-	370		
5.2	3530	1330	-	324		
5.9	3530	1330	-	288		
6.8	3530	1330	-	249		
7.8	3530	1330	-	218		
8.8	3530	1330	-	193		
9.7	3530	1330	-	175		
12	3530	1330	-	147		
13	3530	1330	-	130		
2 2						
3.2	3530	1330	-	524		
3.5	3530	1330	-	489		
4.0	3530	1330	-	427		
4.5	3530	1330	-	381		
5.1	3530	1330	-	334		
5.8	3530	1330	-	295		
6.7	3530	1330	-	253		
7.8	3530	1330	-	217		
8.9	3530	1330	-	190		
9.6	3530	1330	-	178		
11	3530	1330	-	149		
13	3530	1330	-	131		

reducer.ir

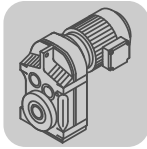








F57, $n_e = 1700$ rpm					5300 lb-in					
n_a [rpm]	T_{amax} [lb-in]	F_{Ra} [lb]	$\varphi_{(R)}$ [']	i	DR63 DRS71S DRS71M	DRS80 DRE80M DRE90M	DRS90M DRE90L	DRS90L DRS100M DRE100M DRE100LC DRE112M	DRS100LC DRS112M DRE132S	DRS132S DRS132M DRE132MC DRE160S
3										
8.5	5300	2070	6	199.70						
9.3	5300	2070	6.1	183.60						
11	5300	2070	6.1	157.09						
12	5300	2070	6.1	136.16						
13	5300	2070	6.1	127.27						
15	5300	2070	6.1	110.01						
18	5300	2070	6.1	93.47						
20	5300	2070	6.1	83.46						
23	5300	2070	6.5	72.98						
25	5300	2070	6.5	68.22						
29	5300	2070	6.5	58.97						
34	5300	1980	6.6	50.10						
38	5300	1880	6.6	44.73						
44	5300	1740	6.6	38.21						
47	5300	1690	6.6	35.79						
56	5220	1560	6.7	30.15						
2										
42	2560	2200	5.7	40.13						
50	4420	1780	5.7	34.24						
57	4820	1620	5.6	29.94						
60	4730	1590	5.7	28.45						
68	5080	1440	5.8	24.96						
80	5300	1290	5.8	21.17						
89	5300	1220	5.9	19.11						
101	5300	1130	5.9	16.81						
107	5300	1100	6	15.88						
126	5300	1000	6.1	13.52						
138	5300	940	6.3	12.29						
160	5300	860	6.4	10.64						
183	3710	960	7.6	9.31						
208	3710	900	7.8	8.19						
220	3710	870	7.8	7.73						
258	3710	790	8	6.58						
284	3710	745	8.6	5.98						
328	3670	690	8.8	5.18						

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F57R37, $n_e = 1700$ rpm					5300 lb-in				
n_a [rpm]	T_{amax} [lb-in]	F_{Ra} [lb]	$\varphi_{(R)}$ [']	i	DR63 DRS71S DRS71M	DRS80 DRE80M DRE90M	DRS90M DRE90L	DRS90L DRS100M DRE100M DRE100LC	DRS100LC
3 3									
0.11	5300	2070	-	14832					
0.12	5300	2070	-	13604					
0.13	5300	2070	-	12602					
0.15	5300	2070	-	11252					
0.17	5300	2070	-	9986					
0.19	5300	2070	-	8787					
0.21	5300	2070	-	7908					
0.25	5300	2070	-	6913					
0.28	5300	2070	-	6030					
0.32	5300	2070	-	5289					
0.37	5300	2070	-	4654					
0.42	5300	2070	-	4060					

reducer.ir



F57R37, $n_e = 1700$ rpm					5300 lb-in				
n_a [rpm]	T_{amax} [lb-in]	F_{Ra} [lb]	$\varphi_{(R)}$ [']	i	DR63 DRS71S DRS71M	DRS80 DRE80M DRE90M	DRS90M DRE90L	DRS90L DRS100M DRE100M DRE100LC	DRS100LC
0.48	5300	2070	-	3564					
0.54	5300	2070	-	3161					
0.62	5300	2070	-	2737					
0.71	5300	2070	-	2409					
0.80	5300	2070	-	2131					
0.92	5300	2070	-	1840					
1.0	5300	2070	-	1623					
1.2	5300	2070	-	1439					
1.4	5300	2070	-	1238					
 2 									
0.60	5300	2070	-	2854					
0.66	5300	2070	-	2576					
0.75	5300	2070	-	2266					
0.84	5300	2070	-	2012					
0.95	5300	2070	-	1791					
1.1	5300	2070	-	1617					
1.2	5300	2070	-	1422					
1.4	5300	2070	-	1243					
1.6	5300	2070	-	1066					
1.8	5300	2070	-	949					
2.0	5300	2070	-	856					
2.3	5300	2070	-	749					
2.6	5300	2070	-	658					
3.1	5300	2070	-	549					
3.5	5300	2070	-	483					
 3 									
1.5	5300	2070	-	1106					
1.8	5300	2070	-	967					
2.0	5300	2070	-	851					
2.3	5300	2070	-	738					
2.6	5300	2070	-	646					
3.0	5300	2070	-	558					
3.4	5300	2070	-	506					
3.8	5300	2070	-	452					
4.4	5300	2070	-	386					
5.0	5300	2070	-	338					
6.7	5300	2070	-	255					
8.5	5300	2070	-	201					
9.4	5300	2070	-	181					
11	5300	2070	-	155					
 2 									
4.0	5300	2070	-	426					
4.5	5300	2070	-	382					
5.2	5300	2070	-	330					
5.7	5300	2070	-	298					
6.5	5300	2070	-	262					
7.5	5300	2070	-	226					
8.5	5300	2070	-	200					
10	5300	2070	-	170					
11	5300	2070	-	152					
13	5300	2070	-	134					

reducer.ir



F67, $n_e = 1700$ rpm					7250 lb-in						
n_a [rpm]	T_{amax} [lb-in]	F_{Ra} [lb]	$\varphi_{(R)}$ [']	i	DR63 DRS71S DRS71M	DRS80 DRE80M DRE90M	DRS90M DRE90L	DRS90L DRS100M DRE100M DRE100LC DRE112M	DRS100LC DRS112M DRE132S	DRS132S DRS132M DRE132M DRE132MC DRE160S	DRS132MC
3											
7.4	7250	2320	5.7	228.99							
8.7	7250	2320	5.8	195.39							
10.0	7250	2320	5.7	170.85							
10	7250	2320	5.7	162.31							
12	7250	2320	5.8	142.40							
14	7250	2320	5.8	120.79							
16	7250	2320	5.8	109.04							
18	7250	2320	5.8	95.94							
19	7250	2320	5.8	90.59							
21	7250	2320	6.3	79.76							
25	7250	2320	6.3	67.65							
28	7250	2320	6.3	61.07							
32	7250	2320	6.3	53.73							
34	7250	2320	6.3	50.74							
39	7250	2320	6.3	43.20							
43	6900	2390	6.4	39.26							
50	6540	2470	6.5	34.01							
2											
47	7250	2320	5.3	36.30							
53	7250	2320	5.4	32.08							
62	7250	2320	5.4	27.41							
68	7250	2320	5.4	25.13							
77	7250	2320	5.5	22.05							
81	7250	2320	5.5	20.90*							
93	7250	2320	5.6	18.29							
103	7250	2320	5.8	16.48							
118	7250	2320	5.7	14.46							
133	7250	2320	5.8	12.76							
150	7250	2320	6	11.31							
176	7250	2240	6.1	9.66							
187	4680	2370	8	9.08							
198	5040	2270	8.1	8.60							
226	5390	2100	8.2	7.53							
251	5480	2000	8.7	6.78							
286	5390	1910	8.6	5.95							
324	5220	1830	8.8	5.25							
365	4950	1780	9.3	4.66							
428	4420	1740	9.6	3.97							

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F67R37, $n_e = 1700$ rpm					7250 lb-in				
n_a [rpm]	T_{amax} [lb-in]	F_{Ra} [lb]	$\varphi_{(R)}$ [']	i	DR63 DRS71S DRS71M	DRS80 DRE80M DRE90M	DRS90M DRE90L	DRS90L DRS100M DRE100M DRE100LC	DRS100LC
3 3									
0.09	7250	2320	-	19199					
0.10	7250	2320	-	17610					
0.11	7250	2320	-	14992					
0.13	7250	2320	-	12926					
0.15	7250	2320	-	11480					
0.17	7250	2320	-	10220					
0.19	7250	2320	-	8933					
0.21	7250	2320	-	7940					
0.24	7250	2320	-	7096					

reducer.ir



F..DRE/DRS
F.. → DRE/DRS

F67R37, n _e = 1700 rpm					7250 lb-in				
n _a [rpm]	T _{amax} [lb-in]	F _{Ra} [lb]	φ _(/R) [']	i	DR63 DRS71S DRS71M	DRS80 DRE80M DRE90M	DRS90M DRE90L	DRS90L DRS100M DRE100M DRE100LC	DRS100LC
0.28	7250	2320	-	6080					
0.32	7250	2320	-	5341					
0.36	7250	2320	-	4690					
0.42	7250	2320	-	4091					
0.48	7250	2320	-	3574					
0.54	7250	2320	-	3133					
0.62	7250	2320	-	2756					
0.70	7250	2320	-	2439					
2 3									
0.50	7250	2320	-	3377					
0.58	7250	2320	-	2912					
0.63	7250	2320	-	2714					
0.72	7250	2320	-	2372					
0.80	7250	2320	-	2126					
0.91	7250	2320	-	1859					
1.0	7250	2320	-	1631					
1.2	7250	2320	-	1437					
1.4	7250	2320	-	1256					
1.5	7250	2320	-	1126					
1.7	7250	2320	-	984					
2.0	7250	2320	-	864					
2.4	7250	2320	-	722					
2.7	7250	2320	-	634					
3.2	7250	2320	-	539					
3 2									
0.81	7250	2320	-	2106					
0.90	7250	2320	-	1884					
1.0	7250	2320	-	1635					
1.2	7250	2320	-	1429					
1.3	7250	2320	-	1271					
1.5	7250	2320	-	1102					
1.8	7250	2320	-	970					
2.0	7250	2320	-	858					
2.3	7250	2320	-	755					
2.7	7250	2320	-	641					
3.0	7250	2320	-	572					
3.3	7250	2320	-	509					
3.9	7250	2320	-	437					
4.4	7250	2320	-	384					
5.0	7250	2320	-	338					
5.6	7250	2320	-	305					
6.6	7250	2320	-	257					
7.4	7250	2320	-	231					
8.3	7250	2320	-	205					
9.7	7250	2320	-	175					
2 2									
3.4	7250	2320	-	500					
3.7	7250	2320	-	454					
4.3	7250	2320	-	392					
5.1	7250	2320	-	333					
5.7	7250	2320	-	297					
6.5	7250	2320	-	261					
7.1	7250	2320	-	238					
8.5	7250	2320	-	200					
9.7	7250	2320	-	176					

reducer.ir









F77, $n_e = 1700$ rpm					13200 lb-in						
n_a [rpm]	T_{amax} [lb-in]	F_{Ra} [lb]	$\varphi_{(R)}$ [']	i	DR63 DRS71S DRS71M	DRS80 DRE80M DRE90M	DRS90M DRE90L	DRS90L DRS100M DRE100M DRE100LC DRE112M	DRS100LC DRS112M DRE132S	DRS132S DRS132M DRE132M DRE132MC DRE160S	DRS132MC DRS160 DRE160M DRE160MC
3											
6.0	13200	3530	5.4	281.71							
6.5	13200	3530	5.4	262.93							
7.5	13200	3530	5.4	225.79							
8.6	13200	3530	5.4	198.31							
9.0	13200	3530	5.4	188.40							
10	13200	3530	5.5	166.47							
12	13200	3530	5.5	142.27							
13	13200	3530	5.5	130.42							
15	13200	3530	5.5	114.45							
16	13200	3530	5.5	108.46*							
18	13200	3530	5.5	94.93							
20	13200	3530	5.5	85.52							
23	13200	3530	5.5	75.02							
23	13200	3530	5.9	72.50							
26	13200	3530	5.9	66.46							
29	13200	3530	6	58.32							
31	13200	3530	6	55.27							
35	13200	3530	6	48.37							
39	13200	3530	6.1	43.58							
44	13200	3530	6	38.23							
50	13200	3530	6.1	33.74							
57	13200	3530	6.1	29.91							
67	12800	3610	6.2	25.54							
2											
46	9820	4010	4.9	36.58							
54	12200	3700	4.9	31.51							
59	12600	3640	4.9	28.75							
67	13200	3530	4.9	25.50*							
79	13200	3530	5	21.43							
86	13200	3530	5.1	19.70							
97	13200	3530	5.2	17.49							
109	13200	3420	5.2	15.64*							
121	13200	3280	5.4	14.06							
139	13200	3090	5.4	12.20							
156	13200	2950	5.5	10.93							
183	9550	2860	7.1	9.30							
206	9550	2720	7.1	8.26							
230	9550	2590	7.2	7.39							
256	9550	2470	7.5	6.64							
295	9550	2320	7.7	5.76							
329	9550	2210	7.8	5.16							
397	8930	2100	8.1	4.28							
F77R37, $n_e = 1700$ rpm					13200 lb-in						
n_a [rpm]	T_{amax} [lb-in]	F_{Ra} [lb]	$\varphi_{(R)}$ [']	i	DR63 DRS71S DRS71M	DRS80 DRE80M DRE90M	DRS90M DRE90L	DRS90L DRS100M DRE100M DRE100LC	DRS100LC		
3 3											
0.09	13200	3530	-	19180							
0.10	13200	3530	-	17593							
0.11	13200	3530	-	16128							
0.11	13200	3530	-	14978							
0.12	13200	3530	-	13731							

10

reducer.ir


F..DRE/DRS
 F.. → DRE/DRS

F77R37, $n_e = 1700$ rpm					13200 lb-in				
n_a [rpm]	T_{amax} [lb-in]	F_{Ra} [lb]	$\varphi_{(R)}$ [']	i	DR63 DRS71S DRS71M	DRS80 DRE80M DRE90M	DRS90M DRE90L	DRS90L DRS100M DRE100M DRE100LC	DRS100LC
0.14	13200	3530	-	12049					
0.15	13200	3530	-	11035					
0.18	13200	3530	-	9683					
0.20	13200	3530	-	8464					
0.23	13200	3530	-	7520					
0.26	13200	3530	-	6580					
0.29	13200	3530	-	5808					
0.34	13200	3530	-	5026					
0.38	13200	3530	-	4435					
0.44	13200	3530	-	3832					
0.50	13200	3530	-	3381					
0.57	13200	3530	-	2978					
0.65	13200	3530	-	2613					
0.74	13200	3530	-	2284					
0.84	13200	3530	-	2029					
 2  3									
0.34	9820	4010	-	4931					
0.38	9820	4010	-	4523					
0.44	9820	4010	-	3851					
0.51	9820	4010	-	3320					
0.55	9820	4010	-	3095					
0.63	9820	4010	-	2705					
0.67	9820	4010	-	2536					
0.76	9820	4010	-	2238					
0.83	9820	4010	-	2039					
0.97	9820	4010	-	1759					
1.0	9820	4010	-	1639					
1.2	9820	4010	-	1433					
1.3	9820	4010	-	1343					
1.4	9820	4010	-	1185					
1.6	9820	4010	-	1051					
1.9	9820	4010	-	893					
 3  2									
0.98	13200	3530	-	1728					
1.1	13200	3530	-	1544					
1.3	13200	3530	-	1354					
1.4	13200	3530	-	1200					
1.6	13200	3530	-	1053					
1.9	13200	3530	-	910					
2.1	13200	3530	-	810					
2.4	13200	3530	-	710					
2.8	13200	3530	-	615*					
3.2	13200	3530	-	538					
3.5	13200	3530	-	480					
4.1	13200	3530	-	413					
4.6	13200	3530	-	367					
5.3	13200	3530	-	323					
6.1	13200	3530	-	280					
6.9	13200	3530	-	247					
7.7	13200	3530	-	221					
8.5	13200	3530	-	199					
 2  2									
2.1	9820	4010	-	815					
2.4	9820	4010	-	706					
2.6	9820	4010	-	660					

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F77R37, $n_e = 1700$ rpm					13200 lb-in				
n_a [rpm]	T_{amax} [lb-in]	F_{Ra} [lb]	$\varphi_{(R)}$ [']	i	DR63 DRS71S DRS71M	DRS80 DRE80M DRE90M	DRS90M DRE90L	DRS90L DRS100M DRE100M DRE100LC	DRS100LC
3.0	9820	4010	-	571					
3.5	9820	4010	-	485					
3.9	9820	4010	-	433					
4.6	9820	4010	-	370					
4.9	9820	4010	-	346					
5.8	9820	4010	-	292					

F87, $n_e = 1700$ rpm					26500 lb-in								
n_a [rpm]	T_{amax} [lb-in]	F_{Ra} [lb]	$\varphi_{(R)}$ [']	i	DRS71M	DRS80 DRE80M DRE90M	DRS90M DRE90L	DRS90L DRS100M DRE100M DRE100LC DRE112M	DRS100LC DRS112M DRE132S	DRS132S DRS132M DRE132M DRE132MC DRE160S	DRS132MC DRS160 DRE160M DRE160MC DRE180S DRE180M	DRS180M DRS180L DRE180L DRE180LC	DRS180LC



6.3	26500	4450	7	270.68									
6.7	26500	4450	7	255.37									
7.4	26500	4450	7	228.93									
8.6	26500	4450	7	197.20									
9.4	26500	4450	7	179.97									
11	26500	4450	7	159.61									
13	26500	4450	7	134.16									
14	26500	4450	7	123.29									
16	26500	4450	7.1	109.49									
17	26500	4450	7.1	97.89									
19	26500	4450	7.1	88.01									
22	26500	4200	7.1	76.39									
25	26500	3960	7.1	68.40									
30	26500	3560	7.1	56.75									
34	26000	3370	7.5	50.36									
38	24900	3270	7.5	45.28									
43	24000	3090	7.5	39.30									
48	23000	2990	7.6	35.19									
58	22200	2760	7.6	29.20									



50	23000	2930	6.6	33.92									
59	21600	2790	6.6	28.78									
64	26500	2180	6.8	26.50									
72	26500	2000	6.8	23.68									
80	26500	1840	6.8	21.32*									
88	26500	1700	6.9	19.31									
99	26500	1530	6.9	17.12									
110	26500	1390	7	15.48									
130	26500	1180	7	13.12*									
148	26500	1010	7.1	11.46									
177	25400	910	7.2	9.58									
205	13500	1780	6.7	8.29									
231	13500	1650	6.8	7.35									
256	13500	1550	6.8	6.65									
302	13500	1390	7	5.63									
346	13500	1260	7.1	4.92									
413	12900	1170	7.4	4.12									

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F..DRE/DRS
F.. → DRE/DRS

F87R57, n _e = 1700 rpm					26500 lb-in						
n _a [rpm]	T _{amax} [lb-in]	F _{Ra} [lb]	φ _(/R) [']	i	DR63 DRS71S DRS71M	DRS80 DRE80M DRE90M	DRS90M DRE90L	DRS90L DRS100M DRE100M DRE100LC DRE112M	DRS100LC DRS112M DRE132S	DRS132S DRS132M DRE132M DRE132MC DRE160S	DRS132MC
3 3											
0.07	26500	4450	-	23042							
0.08	26500	4450	-	20462							
0.09	26500	4450	-	18238							
0.11	26500	4450	-	15877							
0.12	26500	4450	-	14099							
0.14	26500	4450	-	12205							
0.16	26500	4450	-	10433							
0.18	26500	4450	-	9381							
0.21	26500	4450	-	8142							
0.24	26500	4450	-	7100							
0.27	26500	4450	-	6273							
0.31	26500	4450	-	5510							
0.34	26500	4450	-	4954							
0.40	26500	4450	-	4245							
0.46	26500	4450	-	3721							
2 3											
0.34	26500	4450	-	4952							
0.37	26500	4450	-	4562							
0.43	26500	4450	-	3919							
0.49	26500	4450	-	3503							
0.53	26500	4450	-	3196							
0.60	26500	4450	-	2857							
0.67	26500	4450	-	2524							
0.80	26500	4450	-	2134							
0.89	26500	4450	-	1913*							
0.99	26500	4450	-	1717							
1.2	26500	4450	-	1476							
1.3	26500	4450	-	1278							
1.5	26500	4450	-	1142							
1.7	26500	4450	-	988							
1.9	26500	4450	-	883							
2.3	26500	4450	-	748							
3 2											
0.52	26500	4450	-	3244							
0.59	26500	4450	-	2881							
0.66	26500	4450	-	2576							
0.77	26500	4450	-	2199							
0.88	26500	4450	-	1930							
0.99	26500	4450	-	1709							
1.1	26500	4450	-	1493							
1.3	26500	4450	-	1300							
1.5	26500	4450	-	1148							
1.7	26500	4450	-	1010							
1.9	26500	4450	-	887							
2.2	26500	4450	-	780							
2.5	26500	4450	-	674							
2.8	26500	4450	-	609							
3.3	26500	4450	-	515							
3.8	26500	4450	-	452							
4.9	26500	4450	-	345							
5.7	26500	4450	-	300							
6.8	26500	4450	-	249							

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F87R57, $n_e = 1700$ rpm					26500 lb-in						
n_a [rpm]	T_{amax} [lb-in]	F_{Ra} [lb]	$\varphi_{(R)}$ [']	i	DR63 DRS71S DRS71M	DRS80 DRE80M DRE90M	DRS90M DRE90L	DRS90L DRS100M DRE100M DRE100LC DRE112M	DRS100LC DRS112M DRE132S	DRS132S DRS132M DRE132M DRE132MC DRE160S	DRS132MC
2 2											
2.6	26500	4450	-	662							
2.9	26500	4450	-	592							
3.3	26500	4450	-	519							
3.6	26500	4450	-	468							
4.3	26500	4450	-	398							
4.9	26500	4450	-	350							
5.4	26500	4450	-	315*							
6.0	26500	4450	-	281							
7.1	26500	4450	-	240							
8.1	26500	4450	-	211							
8.8	26500	4450	-	193							

F97, $n_e = 1700$ rpm					38000 lb-in								
n_a [rpm]	T_{amax} [lb-in]	F_{Ra} [lb]	$\varphi_{(R)}$ [']	i	DRS80 DRE80M DRE90M	DRS90M DRE90L	DRS90L DRS100M DRE100M DRE100LC DRE112M	DRS100LC DRS112M DRE132S	DRS132S DRS132M DRE132M DRE132MC DRE160S	DRS132MC DRS160 DRE160M DRE160MC DRE180S DRE180M	DRS180M DRS180L DRE180L DRE180LC	DRS180LC DRS200L DRE200L DRS225S DRE225S DRS225M DRE225M DRE225MC	DRS225MC
3													
6.1	38000	6720	6	276.77									
6.7	38000	6720	6	253.41									
7.6	38000	6720	6	223.88									
9.0	38000	6720	6	189.92									
9.7	38000	6720	6	174.87									
11	38000	6720	6	156.30									
12	38000	6720	6	140.71									
13	38000	6720	6	127.42									
15	38000	6720	6	112.99									
17	38000	6720	6	102.16									
17	38000	6720	6.2	97.58									
19	38000	6720	6.3	89.85									
20	38000	6720	6	86.59									
21	38000	6540	6.3	80.31									
22	38000	6350	6	75.63									
24	38000	6200	6.3	72.29									
26	38000	5890	6.3	65.47									
29	38000	5520	6.3	58.06									
32	38000	5230	6.3	52.49									
38	38000	4770	6.4	44.49									
44	38000	4410	6.4	38.86									
52	38000	3960	6.4	32.50									
2													
39	27100	5660	5.6	43.28									
46	27100	5230	5.6	36.64									
50	38000	4060	5.7	33.91									
56	38000	3800	5.8	30.39									
62	38000	3550	5.8	27.44*									
68	38000	3340	5.8	24.92									
77	38000	3070	5.9	22.11									
85	38000	2870	5.8	20.07									
99	38000	2560	5.9	17.25*									
113	38000	2300	5.9	15.06									
133	38000	1990	6	12.77									
152	36200	1910	6	11.16									
188	20800	2680	8.6	9.06									

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F..DRE/DRS
F.. → DRE/DRS

F97, n _e = 1700 rpm					38000 lb-in									
n _a [rpm]	T _{amax} [lb-in]	F _{Ra} [lb]	φ _(/R) [°]	i	DRS80 DRE80M DRE90M	DRS90M DRE90L	DRS90L DRS100M DRE100M DRE100LC DRE112M	DRS100LC DRS112M DRE132S	DRS132S DRS132M DRE132M DRE132MC DRE160S	DRS132MC DRS160 DRE160M DRE160MC DRE180S DRE180M	DRS180M DRS180L DRE180L	DRS180LC DRS200L DRE200L DRS225S DRE225S DRS225M DRE225M DRE225MC	DRS225MC	
207	20800	2530	8.5	8.22										
240	20800	2300	8.6	7.07										
276	19900	2200	8.7	6.17										
325	19000	2070	8.8	5.23										
372	18100	1980	9	4.57										
439	15900	2000	9	3.87										

F97R57, n _e = 1700 rpm					38000 lb-in									
n _a [rpm]	T _{amax} [lb-in]	F _{Ra} [lb]	φ _(/R) [°]	i	DR63 DRS71S DRS71M	DRS80 DRE80M DRE90M	DRS90M DRE90L	DRS90L DRS100M DRE100M DRE100LC DRE112M	DRS100LC DRS112M DRE132S	DRS132S DRS132M DRE132M DRE132MC DRE160S	DRS132MC			
3 3														
0.06	38000	6720	-	29211										
0.06	38000	6720	-	26911										
0.07	38000	6720	-	23814										
0.08	38000	6720	-	20813										
0.09	38000	6720	-	18119*										
0.11	38000	6720	-	15472										
0.12	38000	6720	-	14022										
0.14	38000	6720	-	12324										
0.16	38000	6720	-	10838										
0.18	38000	6720	-	9576										
0.20	38000	6720	-	8318										
0.23	38000	6720	-	7328										
0.26	38000	6720	-	6469										
0.30	38000	6720	-	5615										
0.34	38000	6720	-	4961*										
0.39	38000	6720	-	4333*										
2 3														
0.27	38000	6720	-	6338										
0.30	38000	6720	-	5680										
0.34	38000	6720	-	5016										
0.39	38000	6720	-	4367										
0.43	38000	6720	-	3914										
0.51	38000	6720	-	3357										
0.56	38000	6720	-	3009										
0.69	38000	6720	-	2448										
0.77	38000	6720	-	2199										
0.86	38000	6720	-	1971										
0.98	38000	6720	-	1741*										
1.2	38000	6720	-	1468										
1.3	38000	6720	-	1316										
1.4	38000	6720	-	1189*										
1.7	38000	6720	-	1023										
3 2														
0.44	38000	6720	-	3906										
0.51	38000	6720	-	3352										
0.58	38000	6720	-	2907										
0.67	38000	6720	-	2553										
0.76	38000	6720	-	2245										
0.86	38000	6720	-	1970										
0.99	38000	6720	-	1722										

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F97R57, n _e = 1700 rpm					38000 lb-in						
n _a [rpm]	T _{amax} [lb-in]	F _{Ra} [lb]	φ _(/R) [']	i	DR63 DRS71S DRS71M	DRS80 DRE80M DRE90M	DRS90M DRE90L	DRS90L DRS100M DRE100M DRE100LC DRE112M	DRS100LC DRS112M DRE132S	DRS132S DRS132M DRE132M DRE132MC DRE160S	DRS132MC
1.1	38000	6720	-	1527							
1.3	38000	6720	-	1327							
1.5	38000	6720	-	1171*							
1.7	38000	6720	-	1022							
1.9	38000	6720	-	898							
2.2	38000	6720	-	784							
2.5	38000	6720	-	690							
2.8	38000	6720	-	605							
3.2	38000	6720	-	529							
3.6	38000	6720	-	467							
4.2	38000	6720	-	406							
4.7	38000	6720	-	363							
6.0	38000	6720	-	285							
6.9	38000	6720	-	245							
8.2	38000	6720	-	208							
8.7	38000	6720	-	195							



1.9	38000	6720	-	892							
2.2	38000	6720	-	760							
2.5	38000	6720	-	667							
3.0	38000	6720	-	569							
3.3	38000	6720	-	510							
3.6	38000	6720	-	473*							
4.2	38000	6720	-	403							
4.7	38000	6720	-	361							
5.4	38000	6720	-	317							
6.2	38000	6720	-	275							
7.0	38000	6720	-	242							

F107, n _e = 1700 rpm					69300 lb-in						
n _a [rpm]	T _{amax} [lb-in]	F _{Ra} [lb]	φ _(/R) [']	i	DRS90L DRS100M DRE100M DRE100LC DRE112M	DRS100LC DRS112M DRE132S	DRS132S DRS132M DRE132MC DRE160S	DRS132MC DRS160 DRE160M DRE160MC DRE180S DRE180M	DRS180M DRS180L DRE180L DRE180LC	DRS180LC DRS200L DRE200L DRS225S DRE225S DRS225M DRE225M DRE225MC	DRS225MC
6.7	67900	11200	5.4	254.40*							
7.9	67900	11200	5.4	215.37							
8.5	67900	11200	5.4	199.31							
9.5	67900	11200	5.4	178.64							
11	67900	11200	5.4	161.28*							
12	67900	11200	5.4	146.49							
13	67900	11200	5.4	129.97							
14	67900	11200	5.4	117.94							
17	67900	11200	5.4	101.38*							
18	67900	11200	5.6	92.47*							
19	67900	11200	5.4	88.49							
20	67900	11200	5.7	83.99							
23	67900	11000	5.7	74.52							
25	67900	10600	5.7	67.62							
29	67900	9880	5.7	58.12*							
34	67900	9300	5.7	50.73							
40	67900	8640	5.7	43.03							



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F..DRE/DRS
F.. → DRE/DRS

F107, n _e = 1700 rpm					69300 lb-in							
n _a [rpm]	T _{amax} [lb-in]	F _{Ra} [lb]	φ _(/R) [']	i	DRS90L DRS100M DRE100M DRE100LC DRE112M	DRS100LC DRS112M DRE132S	DRS132S DRS132M DRE132M DRE132MC DRE160S	DRS132MC DRS160 DRE160M DRE160MC DRE180S DRE180M	DRS180M DRS180L DRE180L DRE180LC	DRS180LC DRS200L DRE200L DRS225S DRE225S DRS225M DRE225M DRE225MC	DRS225MC	
45	67900	8110	5.7	37.61								
53	67900	7390	5.8	31.80								
2												
50	65400	7880	5.1	33.79*								
62	69300	6640	5.2	27.57								
68	69300	6260	5.2	25.14								
78	69300	5670	5.2	21.76*								
89	69300	5170	5.2	19.20*								
103	69300	4600	5.3	16.58								
116	67900	4300	5.3	14.67								
138	61900	4390	5.4	12.33								
171	57500	4180	5.4	9.96								
175	43400	4660	6.7	9.69								
203	42400	4350	6.7	8.37								
230	40700	4220	6.8	7.40								
273	40700	3730	7	6.22								
338	40700	3140	7	5.03								

F107R77, n _e = 1700 rpm					69300 lb-in							
n _a [rpm]	T _{amax} [lb-in]	F _{Ra} [lb]	φ _(/R) [']	i	DR63 DRS71S DRS71M	DRS80 DRE80M DRE90M	DRS90M DRE90L	DRS90L DRS100M DRE100M DRE100LC DRE112M	DRS100LC DRS112M DRE132S	DRS132S DRS132M DRE132M DRE132MC DRE160S	DRS132MC DRS160 DRE160M DRE160MC	
3 3												
0.07	67900	11200	-	25375*								
0.08	67900	11200	-	21652								
0.09	67900	11200	-	18933								
0.10	67900	11200	-	16888								
0.12	67900	11200	-	14767								
0.15	67900	11200	-	11348*								
0.17	67900	11200	-	10039								
0.20	67900	11200	-	8548								
0.22	67900	11200	-	7674								
0.25	67900	11200	-	6767								
0.29	67900	11200	-	5954								
0.33	67900	11200	-	5223								
0.37	67900	11200	-	4567								
0.43	67900	11200	-	3948								
0.48	67900	11200	-	3521								
2 3												
0.32	69300	11100	-	5383*								
0.37	69300	11100	-	4593								
0.42	69300	11100	-	4016								
0.45	69300	11100	-	3815								
0.51	69300	11100	-	3347								
0.60	69300	11100	-	2839								
0.66	69300	11100	-	2563*								
0.75	69300	11100	-	2255								
0.80	69300	11100	-	2129								
0.94	69300	11100	-	1813								
1.1	69300	11100	-	1590								

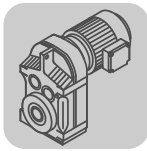
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F107R77, $n_e = 1700$ rpm					69300 lb-in							
n_a [rpm]	T_{amax} [lb-in]	F_{Ra} [lb]	$\varphi_{(R)}$ [']	i	DR63 DRS71S DRS71M	DRS80 DRE80M DRE90M	DRS90M DRE90L	DRS90L DRS100M DRE100M DRE100LC DRE112M	DRS100LC DRS112M DRE132S	DRS132S DRS132M DRE132M DRE132MC DRE160S	DRS132MC DRS160 DRE160M DRE160MC	
1.2	69300	11100	-	1436								
1.3	69300	11100	-	1263								
1.4	69300	11100	-	1193								
1.7	69300	11100	-	1015								
1.8	69300	11100	-	923								
2.1	69300	11100	-	800								
2.4	69300	11100	-	696								
3 2												
0.56	67900	11200	-	3037								
0.62	67900	11200	-	2756								
0.72	67900	11200	-	2369								
0.82	67900	11200	-	2068								
0.93	67900	11200	-	1826								
1.1	67900	11200	-	1597								
1.2	67900	11200	-	1401								
1.4	67900	11200	-	1243								
1.6	67900	11200	-	1087								
1.8	67900	11200	-	950								
2.0	67900	11200	-	834								
2.3	67900	11200	-	736								
2.7	67900	11200	-	640								
3.0	67900	11200	-	560								
3.5	67900	11200	-	489								
3.9	67900	11200	-	436								
4.6	67900	11200	-	370								
5.1	67900	11200	-	333								
5.8	67900	11200	-	291								
6.7	67900	11200	-	255								
7.6	67900	11200	-	225*								
8.9	67900	11200	-	190								
2 2												
2.6	69300	11100	-	644								
2.9	69300	11100	-	591								
3.3	69300	11100	-	518*								
3.5	69300	11100	-	491								
4.0	69300	11100	-	430								
4.4	69300	11100	-	387								
5.0	69300	11100	-	340								
5.7	69300	11100	-	300								
6.4	69300	11100	-	266								
F127, $n_e = 1700$ rpm					106100 lb-in							
n_a [rpm]	T_{amax} [lb-in]	F_{Ra} [lb]	$\varphi_{(R)}$ [']	i	DRS132S DRS132M DRE132M DRE132MC DRE160S	DRS132MC DRS160 DRE160M DRE160MC DRE180S DRE180M	DRS180M DRS180L DRE180L DRE180LC	DRS180LC DRS200L DRE200L DRS225S DRE225S DRS225M DRE225M DRE225MC	DRS225MC DVE250M DVE250M DVE280 DVE280S DVE280M			
3												
10.0	106100	20200	4.9	170.83								
11	106100	20200	4.9	153.67*								
14	106100	19000	4.9	125.37								
15	106100	18300	4.9	114.34								

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F..DRE/DRS
F.. → DRE/DRS

F127, n _e = 1700 rpm					106100 lb-in				
n _a [rpm]	T _{amax} [lb-in]	F _{Ra} [lb]	φ _(/R) [°]	i	DRS132S DRS132M DRE132M DRE132MC DRE160S	DRS132MC DRS160 DRE160M DRE160MC DRE180S DRE180M	DRS180M DRS180L DRE180L DRE180LC	DRS180LC DRS200L DRE200L DRS225S DRE225S DRS225M DRE225MC	DRS225MC DVE250M DVE250M DVE280 DVE280S DVE280M
17	106100	17200	4.9	98.95					
19	106100	16400	4.9	87.31*					
23	106100	15400	4.9	75.41*					
24	106100	14900	5.2	70.07					
27	106100	14300	5.2	63.91					
31	106100	13300	5.2	55.31					
35	106100	12500	5.2	48.80					
40	106100	11500	5.2	42.15					
46	106100	10700	5.2	37.28					
54	106100	9660	5.3	31.33					
67	106100	8400	5.3	25.30					
2									
63	75200	11500	4.6	26.86					
69	75200	11000	4.6	24.57					
80	106100	7440	4.7	21.38					
90	97300	7680	4.7	18.87					
104	97300	6930	4.7	16.36					
117	97300	6340	4.7	14.55					
136	88400	6550	4.8	12.54					
167	84000	6060	4.9	10.19					
192	61900	7490	6.3	8.86					
216	53000	7650	6.4	7.88					
250	61900	6610	6.5	6.80					
308	53000	6540	6.7	5.52					
363	53000	6060	6.8	4.68					

F127R77, n _e = 1700 rpm					106100 lb-in						
n _a [rpm]	T _{amax} [lb-in]	F _{Ra} [lb]	φ _(/R) [°]	i	DR63 DRS71S DRS71M	DRS80 DRE80M DRE90M	DRS90M DRE90L	DRS90L DRS100M DRE100M DRE100LC DRE112M	DRS100LC DRS112M DRE132S	DRS132S DRS132M DRE132M DRE132MC DRE160S	DRS132MC DRS160 DRE160M DRE160MC
3 3											
0.07	106100	20200	-	24478*							
0.08	106100	20200	-	22323							
0.09	106100	20200	-	19048							
0.10	106100	20200	-	16656							
0.12	106100	20200	-	14722*							
0.13	106100	20200	-	12912							
0.15	106100	20200	-	11656*							
0.17	106100	20200	-	10191							
0.19	106100	20200	-	8831							
0.22	106100	20200	-	7643							
0.25	106100	20200	-	6715							
0.29	106100	20200	-	5925							
0.33	106100	20200	-	5153							
0.38	106100	20200	-	4533							
0.43	106100	20200	-	3926							
0.49	106100	20200	-	3454							
0.56	106100	20200	-	3031							
3 2											
0.64	106100	20200	-	2672							

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F127R77, $n_e = 1700$ rpm					106100 lb-in						
n_a [rpm]	T_{amax} [lb-in]	F_{Ra} [lb]	$\varphi_{(R)}$ [']	i	DR63 DRS71S DRS71M	DRS80 DRE80M DRE90M	DRS90M DRE90L	DRS90L DRS100M DRE100M DRE100LC DRE112M	DRS100LC DRS112M DRE132S	DRS132S DRS132M DRE132M DRE132MC DRE160S	DRS132MC DRE160M DRE160MC
0.72	106100	20200	-	2357*							
0.83	106100	20200	-	2038							
0.95	106100	20200	-	1784							
1.1	106100	20200	-	1606							
1.2	106100	20200	-	1390							
1.4	106100	20200	-	1220							
1.6	106100	20200	-	1077							
1.8	106100	20200	-	930							
2.1	106100	20200	-	820							
2.3	106100	20200	-	727							
2.6	106100	20200	-	648							
3.1	106100	20200	-	549							
3.4	106100	20200	-	495							
4.0	106100	20200	-	428							
4.5	106100	20200	-	376							

F127R87, $n_e = 1700$ rpm					106100 lb-in								
n_a [rpm]	T_{amax} [lb-in]	F_{Ra} [lb]	$\varphi_{(R)}$ [']	i	DRS71M	DRS80 DRE80M DRE90M	DRS90M DRE90L	DRS90L DRS100M DRE100M DRE100LC DRE112M	DRS100LC DRS112M DRE132S	DRS132S DRS132M DRE132M DRE132MC DRE160S	DRS132MC DRE160M DRE160MC DRE180S DRE180M	DRS180M DRS180L DRE180L	DRS180LC
3.5	106100	20200	-	483									
4.1	106100	20200	-	418									
4.5	106100	20200	-	374									
5.4	106100	20200	-	312									
5.8	106100	20200	-	293									
6.6	106100	20200	-	259									
7.6	106100	20200	-	223									
8.6	106100	20200	-	198									
10	106100	20200	-	166									

F157, $n_e = 1700$ rpm					159200 lb-in							
n_a [rpm]	T_{amax} [lb-in]	F_{Ra} [lb]	$\varphi_{(R)}$ [']	i	DRS160 DRE160M DRE160MC DRE180S DRE180M	DRS180M DRS180L DRE180L DRE180LC	DRS180LC DRS200L DRE200L DRE225S DRE225S DRS225M DRE225M DRE225MC	DRS225MC DVE250M DVE250M DVE280 DVE280S DVE280M	DRS315K DRE315K DRS315S DRE315S	DRS315M DRE315M DRE315L DRS315L DRS315L		
3												
6.4	159200	22500	4.5	267.43								
7.8	159200	22500	4.5	217.62*								
9.5	159200	22500	4.5	178.20*								
10	159200	22500	4.5	162.96								
12	159200	22500	4.5	141.80*								
14	159200	22500	4.5	125.14								
16	159200	21900	4.5	108.49								
18	159200	20800	4.5	96.53*								
20	159200	19800	4.8	85.80*								
22	159200	19100	4.8	78.46								
25	159200	18000	4.8	68.28*								
28	159200	17000	4.8	60.25								
33	159200	16000	4.8	52.24								
37	159200	15200	4.8	46.48*								
42	159200	14100	4.9	40.06								
52	159200	12800	4.9	32.55								
62	159200	11800	4.9	27.60								

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F..DRE/DRS
F.. → DRE/DRS

F157, n _e = 1700 rpm					159200 lb-in					
n _a [rpm]	T _{amax} [lb-in]	F _{Ra} [lb]	φ/(R) [']	i	DRS160 DRE160M DRE160MC DRE180S DRE180M	DRS180M DRS180L DRE180L DRE180LC	DRS180LC DRS200L DRE200L DRS225S DRE225S DRS225M DRE225M DRE225MC	DRS225MC DVE250M DVE250M DVE280 DVE280S DVE280M	DRS315K DRE315K DRS315S DRE315S	DRS315M DRE315M DRS315L DRE315L DRS315L
2										
32	70700	20600	4.3	53.55						
39	88400	18400	4.3	43.94*						
48	97300	16500	4.4	35.75*						
59	150400	12500	4.4	28.60*						
67	132700	12700	4.4	25.43						
77	159200	10500	4.4	22.16						
86	150400	10400	4.4	19.77						
101	159200	9060	4.5	16.85						
122	150400	8570	4.6	13.96						
143	141500	8270	4.6	11.92						

F157R97, n _e = 1700 rpm					159200 lb-in								
n _a [rpm]	T _{amax} [lb-in]	F _{Ra} [lb]	φ/(R) [']	i	DRS71M	DRS80 DRE80M DRE90M	DRS90M DRE90L	DRS90L DRS100M DRE100M DRE100LC DRE112M	DRS100LC DRS112M DRE132S	DRS132S DRS132M DRE132M DRE132MC DRE160S	DRS132MC DRS160 DRE160M DRE160MC DRE180S DRE180M	DRS180M DRS180L DRE180L DRE180LC	DRS180LC DRS200L DRE200L DRS225S DRE225S DRS225M DRE225M DRE225MC
3 3													
0.05	159200	22500	-	31434									
0.06	159200	22500	-	26173									
0.07	159200	22500	-	23464									
0.08	159200	22500	-	20212									
0.09	159200	22500	-	17984*									
0.10	159200	22500	-	16358									
0.12	159200	22500	-	13751									
0.14	159200	22500	-	12235									
0.17	159200	22500	-	10033									
0.19	159200	22500	-	9021									
0.21	159200	22500	-	8026									
0.24	159200	22500	-	7075									
0.27	159200	22500	-	6295									
0.31	159200	22500	-	5404									
0.35	159200	22500	-	4831									
0.41	159200	22500	-	4130*									
0.47	159200	22500	-	3607									
0.53	159200	22500	-	3210									
0.61	159200	22500	-	2780									
1.2	159200	22500	-	1441									
3 2													
0.70	159200	22500	-	2427									
0.78	159200	22500	-	2185									
0.87	159200	22500	-	1944*									
1.0	159200	22500	-	1674									
1.3	159200	22500	-	1308									
1.5	159200	22500	-	1169									
1.8	159200	22500	-	953									
2.0	159200	22500	-	845									
2.2	159200	22500	-	764									
2.5	159200	22500	-	680									
3.0	159200	22500	-	576									
3.4	159200	22500	-	503									
3.8	159200	22500	-	446									

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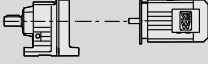

F157R97, n _e = 1700 rpm					159200 lb-in								
n _a [rpm]	T _{amax} [lb-in]	F _{Ra} [lb]	φ _(/R) [°]	i	DRS71M	DRS80 DRE80M DRE90M	DRS90M DRE90L	DRS90L DRS100M DRE100M DRE100LC DRE112M	DRS100LC DRS112M DRE132S	DRS132S DRS132M DRE132M DRE132MC DRE160S	DRS132MC DRS160 DRE160M DRE160MC DRE180S DRE180M	DRS180M DRS180L DRE180L DRE180LC	DRS180LC DRS200L DRE200L DRS225S DRE225S DRS225M DRE225M DRE225MC
4.8	159200	22500	-	353									
5.6	159200	22500	-	302									
6.2	159200	22500	-	273									
7.3	159200	22500	-	232									
8.4	159200	22500	-	202									
8.6	159200	22500	-	197									

reducer.ir



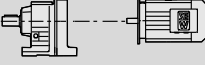


F..DRE/DRS
F..DRE/DRS [HP]

10.3 F..DRE/DRS [HP]

P_m [HP]	n_a [rpm]	T_a [lb-in]	i	$F_{Ra}^{1)}$ [lb]	SEW f_B		m [lbs]	
0.25	0.25	47000	6715	20200	2.3	FA 127R77 DRS 71S4	940	411
	0.29	41500	5925	20200	2.6	FAF 127R77 DRS 71S4	1030	411
						F 127R77 DRS 71S4	1020	411
						FF 127R77 DRS 71S4	1120	411
	0.25	45800	6767	12600	1.50			
	0.29	39100	5954	12900	1.75	FA 107R77 DRS 71S4	610	411
	0.33	33800	5223	13200	2.0	FAF 107R77 DRS 71S4	660	411
	0.37	31900	4567	13300	2.1	F 107R77 DRS 71S4	650	411
	0.43	24000	3948	13700	2.8	FF 107R77 DRS 71S4	710	411
	0.48	23800	3521	13700	2.8			
	0.32	38100	5383	13000	1.80	FA 107R77 DRS 71S4	590	411
	0.37	32500	4593	13300	2.1	FAF 107R77 DRS 71S4	640	411
	0.42	28400	4016	13500	2.4	F 107R77 DRS 71S4	630	411
	0.45	27000	3815	13500	2.6	FF 107R77 DRS 71S4	690	411
	0.51	23700	3347	13700	2.9			
	0.34	36500	4961	6830	1.05	FA 97R57 DRS 71S4	410	411
	0.39	31900	4333	7150	1.20	FAF 97R57 DRS 71S4	455	411
						F 97R57 DRS 71S4	425	411
						FF 97R57 DRS 71S4	500	411
	0.39	33200	4367	7060	1.15			
	0.43	29800	3914	7290	1.30			
	0.51	24800	3357	7580	1.55	FA 97R57 DRS 71S4	395	411
	0.57	22200	3009	7720	1.70	FAF 97R57 DRS 71S4	445	411
	0.69	17600	2448	7960	2.2	F 97R57 DRS 71S4	415	411
	0.77	16600	2199	8000	2.3	FF 97R57 DRS 71S4	485	411
	0.86	14900	1971	8080	2.6			
	0.98	12900	1741	8160	2.9			
	0.44	29500	3906	7300	1.30			
	0.51	25500	3352	7540	1.50	FA 97R57 DRS 71S4	405	411
	0.58	21200	2907	7780	1.80	FAF 97R57 DRS 71S4	455	411
	0.67	19300	2553	7880	1.95	F 97R57 DRS 71S4	425	411
	0.76	16900	2245	7990	2.2	FF 97R57 DRS 71S4	495	411
	0.86	14700	1970	8090	2.6			
	0.99	13100	1722	8160	2.9			
	0.46	24900	3721	5320	1.05	FA 87R57 DRS 71S4	265	411
						FAF 87R57 DRS 71S4	295	411
						F 87R57 DRS 71S4	280	411
						FF 87R57 DRS 71S4	310	411
	0.53	24100	3196	5390	1.10			
	0.60	21600	2857	5620	1.25	FA 87R57 DRS 71S4	260	411
	0.67	18800	2524	5850	1.40	FAF 87R57 DRS 71S4	285	411
	0.80	15300	2134	6110	1.75	F 87R57 DRS 71S4	270	411
	0.89	13900	1913	6210	1.90	FF 87R57 DRS 71S4	305	411
	0.99	12300	1717	6310	2.2			
	1.2	11200	1476	6380	2.4			
	1.3	9330	1278	6490	2.8			
	0.52	24700	3244	5330	1.05			
	0.59	21900	2881	5590	1.20	FA 87R57 DRS 71S4	265	411
	0.66	19600	2576	5790	1.35	FAF 87R57 DRS 71S4	290	411
	0.77	16600	2199	6020	1.60	F 87R57 DRS 71S4	275	411
	0.88	14400	1930	6180	1.85	FF 87R57 DRS 71S4	310	411
	0.99	12900	1709	6270	2.0			
	1.1	11300	1493	6370	2.3			
	1.3	9130	1300	6500	2.9			
	1.4	8900	1185	4110	1.10	FA 77R37 DRS 71S4	145	411
	1.6	7800	1051	4210	1.25	FAF 77R37 DRS 71S4	160	411
	1.9	6510	893	4310	1.50	F 77R37 DRS 71S4	155	411
						FF 77R37 DRS 71S4	180	411
	0.98	12900	1728	3580	1.00			
	1.1	11900	1544	3740	1.10			
	1.3	10400	1354	3940	1.25	FA 77R37 DRS 71S4	150	411
	1.4	9270	1200	4070	1.45	FAF 77R37 DRS 71S4	165	411
	1.6	8130	1053	4180	1.65	F 77R37 DRS 71S4	160	411
	1.9	6950	910	4280	1.90	FF 77R37 DRS 71S4	180	411
	2.1	5860	810	4350	2.3			
	2.4	5140	710	4390	2.6			
	2.8	4610	615	4420	2.9			

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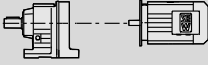




P_m [HP]	n_a [rpm]	T_a [lb-in]	i	$F_{Ra}^{1)}$ [lb]	SEW f_B		m [lbs]		
0.25	2.1	6470	815	4310	1.50	FA 77R37 DRS 71S4	145	411	
	2.4	5550	706	4370	1.75	FAF 77R37 DRS 71S4	160	411	
	2.6	5160	660	4390	1.90	F 77R37 DRS 71S4	155	411	
	3.0	4410	571	4430	2.2	FF 77R37 DRS 71S4	180	411	
	3.5	3680	485	4460	2.7				
	2.0	6600	864	2450	1.10	FA 67R37 DRS 71S4	99	411	
	2.4	5360	722	2670	1.35	FAF 67R37 DRS 71S4	115	411	
	2.7	4700	634	2750	1.55	F 67R37 DRS 71S4	105	411	
	3.2	3920	539	2840	1.85	FF 67R37 DRS 71S4	120	411	
	1.8	7070	970	2360	1.05				
2.0	6200	858	2530	1.15					
2.2	5460	755	2650	1.35	FA 67R37 DRS 71S4	100	411		
2.6	4630	641	2760	1.55	FAF 67R37 DRS 71S4	115	411		
3.0	4300	572	2800	1.70	F 67R37 DRS 71S4	105	411		
3.3	3680	509	2870	1.95	FF 67R37 DRS 71S4	120	411		
3.9	3180	437	2910	2.3					
4.4	2880	384	2920	2.5					
5.0	2580	338	2920	2.8					
3.4	3870	500	2850	1.85	FA 67R37 DRS 71S4	98	411		
3.8	3540	454	2880	2.0	FAF 67R37 DRS 71S4	110	411		
4.3	3030	392	2920	2.4	F 67R37 DRS 71S4	105	411		
5.1	2530	333	2920	2.9	FF 67R37 DRS 71S4	120	411		
2.6	5030	658	2120	1.05	FA 57R37 DRS 71S4	91	411		
3.1	4070	549	2290	1.30	FAF 57R37 DRS 71S4	105	411		
3.5	3580	483	2370	1.50	F 57R37 DRS 71S4	92	411		
					FF 57R37 DRS 71S4	105	411		
2.6	4990	646	2130	1.05					
3.0	4260	558	2260	1.25	FA 57R37 DRS 71S4	92	411		
3.4	3800	506	2330	1.40	FAF 57R37 DRS 71S4	105	411		
3.8	3290	452	2410	1.60	F 57R37 DRS 71S4	92	411		
4.4	2810	386	2480	1.90	FF 57R37 DRS 71S4	105	411		
5.0	2440	338	2530	2.2					
6.7	1850	255	2580	2.9					
4.0	3380	426	2400	1.55	FA 57R37 DRS 71S4	91	411		
4.4	2980	382	2460	1.80	FAF 57R37 DRS 71S4	105	411		
5.2	2550	330	2520	2.1	F 57R37 DRS 71S4	91	411		
5.7	2300	298	2550	2.3	FF 57R37 DRS 71S4	105	411		
6.5	2020	262	2580	2.6					
4.1	3180	419	1450	1.10					
4.6	2730	370	1570	1.30					
5.3	2530	324	1610	1.40	FA 47R17 DRS 71S4	58	411		
5.9	2180	288	1680	1.60	FAF 47R17 DRS 71S4	64	411		
6.8	1840	249	1740	1.90	F 47R17 DRS 71S4	60	411		
7.8	1650	218	1760	2.1	FF 47R17 DRS 71S4	67	411		
8.8	1450	193	1790	2.4					
9.8	1320	175	1800	2.7					
4.0	3330	427	1400	1.05					
4.5	2950	381	1510	1.20					
5.1	2590	334	1600	1.35	FA 47R17 DRS 71S4	56	411		
5.8	2260	295	1670	1.55	FAF 47R17 DRS 71S4	62	411		
6.7	1890	253	1730	1.85	F 47R17 DRS 71S4	58	411		
7.8	1710	217	1750	2.1	FF 47R17 DRS 71S4	65	411		
9.0	1480	190	1780	2.4					
9.6	1380	178	1790	2.6					
7.7	1700	221	990	1.05					
8.7	1500	195	1050	1.20					
10	1300	168	1100	1.35	FA 37R17 DRS 71S4	47	411		
12	1130	147	1140	1.55	FAF 37R17 DRS 71S4	51	411		
13	950	127	1170	1.85	F 37R17 DRS 71S4	48	411		
14	890	121	1180	1.95	FF 37R17 DRS 71S4	53	411		
16	800	108	1190	2.2					
19	675	91	1210	2.6					

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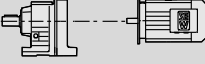


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F..DRE/DRS
F..DRE/DRS [HP]

P_m [HP]	n_a [rpm]	T_a [lb-in]	i	$F_{Ra}^{1)}$ [lb]	SEW f_B		m [lbs]		
0.25	7.8	1700	219	990	1.05				
	9.1	1440	186	1070	1.25				
	10	1290	167	1100	1.35	FA 37R17	DRS 71S4	47	411
	12	1150	145	1130	1.55	FAF 37R17	DRS 71S4	50	411
	13	1010	129	1160	1.75	F 37R17	DRS 71S4	48	411
	14	920	118	1180	1.90	FF 37R17	DRS 71S4	52	411
	17	760	98	1200	2.3				
	20	665	87	1210	2.7				
	11	1140	153	1010	1.00	FA 27R17	DRS 71S4	34	411
	13	950	130	1010	1.20	FAF 27R17	DRS 71S4	35	411
						F 27R17	DRS 71S4	35	411
						FF 27R17	DRS 71S4	37	411
	12	1110	142	1010	1.05	FA 27R17	DRS 71S4	33	411
	14	960	124	1010	1.20	FAF 27R17	DRS 71S4	35	411
	16	840	109	1010	1.35	F 27R17	DRS 71S4	34	411
	18	735	96	1010	1.55	FF 27R17	DRS 71S4	36	411
	8.5	1780	199.70	2580	3.0	FA 57	DRS 71S4	67	373
						FAF 57	DRS 71S4	79	372
						F 57	DRS 71S4	68	371
						FF 57	DRS 71S4	82	372
	8.9	1700	190.76	1750	2.1	FA 47	DRS 71S4	52	368
	9.7	1560	175.38	1770	2.3	FAF 47	DRS 71S4	58	367
	11	1340	150.06	1800	2.6	F 47	DRS 71S4	54	366
						FF 47	DRS 71S4	61	367
	13	1140	128.51	1140	1.55				
	14	1050	117.88	1150	1.70	FA 37	DRS 71S4	41	363
	17	890	100.36	1180	1.95	FAF 37	DRS 71S4	45	362
	20	770	86.53	1200	2.3	F 37	DRS 71S4	42	361
21	720	80.65	1200	2.4					
24	630	70.50	1210	2.8	FF 37	DRS 71S4	46	362	
26	590	66.09	1220	3.0					
13	1150	129.09	1010	1.00					
15	980	109.90	1010	1.15					
18	840	94.76	1010	1.35					
19	790	88.32	1010	1.45	FA 27	DRS 71S4	28	359	
22	690	77.21	1010	1.65	FAF 27	DRS 71S4	29	358	
23	645	72.37	1010	1.80	F 27	DRS 71S4	29	357	
27	570	63.86	1010	2.0	FF 27	DRS 71S4	31	358	
30	505	56.62	1010	2.3					
34	445	50.19	980	2.6					
36	415	46.78	960	2.8					
0.33	0.25	68700	6715	20200	1.55	FA 127R77	DRS 71S4	940	411
	0.29	60600	5925	20200	1.75	FAF 127R77	DRS 71S4	1030	411
	0.33	51500	5153	20200	2.1	F 127R77	DRS 71S4	1020	411
	0.37	44400	4533	20200	2.4	FF 127R77	DRS 71S4	1120	411
	0.43	39300	3926	20200	2.7				
	0.25	67700	6767	11200	1.00				
	0.29	58300	5954	11800	1.15	FA 107R77	DRS 71S4	610	411
	0.33	50700	5223	12300	1.35	FAF 107R77	DRS 71S4	660	411
	0.37	46700	4567	12500	1.45	F 107R77	DRS 71S4	650	411
	0.43	36700	3948	13100	1.85	FF 107R77	DRS 71S4	710	411
	0.48	35200	3521	13100	1.95				
	0.32	55700	5383	12000	1.25				
	0.37	47600	4593	12500	1.45	FA 107R77	DRS 71S4	590	411
	0.42	41600	4016	12800	1.65	FAF 107R77	DRS 71S4	640	411
	0.45	39500	3815	12900	1.75	F 107R77	DRS 71S4	630	411
	0.51	34600	3347	13200	2.0	FF 107R77	DRS 71S4	690	411
	0.60	29100	2839	13400	2.4				
	0.66	25900	2563	13600	2.7				
	0.56	31200	3037	13300	2.2	FA 107R77	DRS 71S4	610	411
	0.62	28300	2756	13500	2.4	FAF 107R77	DRS 71S4	650	411
	0.72	24300	2369	13700	2.8	F 107R77	DRS 71S4	640	411
						FF 107R77	DRS 71S4	710	411

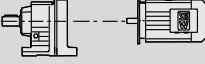

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P_m [HP]	n_a [rpm]	T_a [lb-in]	i	$F_{Ra}^{1)}$ [lb]	SEW f_B		m [lbs]		
0.33	0.51	35800	3357	6880	1.05				
	0.57	32100	3009	7140	1.20				
	0.69	25600	2448	7540	1.50	FA 97R57	DRS 71S4	395	411
	0.77	23800	2199	7640	1.60	FAF 97R57	DRS 71S4	445	411
	0.86	21300	1971	7770	1.80	F 97R57	DRS 71S4	415	411
	0.98	18600	1741	7910	2.0	FF 97R57	DRS 71S4	485	411
	1.2	15300	1468	8060	2.5				
	1.3	13700	1316	8130	2.8				
	0.51	36500	3352	6830	1.05				
	0.58	30700	2907	7230	1.25				
	0.67	27600	2553	7420	1.35				
	0.76	24300	2245	7610	1.55	FA 97R57	DRS 71S4	405	411
	0.86	21100	1970	7780	1.80	FAF 97R57	DRS 71S4	455	411
	0.99	18700	1722	7900	2.0	F 97R57	DRS 71S4	425	411
1.1	16600	1527	8000	2.3	FF 97R57	DRS 71S4	495	411	
1.3	13600	1327	8130	2.8					
1.4	12700	1171	8170	3.0					
0.80	22300	2134	5560	1.20					
0.89	20200	1913	5740	1.30					
0.99	17900	1717	5920	1.50	FA 87R57	DRS 71S4	260	411	
1.2	16000	1476	6060	1.65	FAF 87R57	DRS 71S4	285	411	
1.3	13500	1278	6240	1.95	F 87R57	DRS 71S4	270	411	
1.5	12000	1142	6330	2.2	FF 87R57	DRS 71S4	305	411	
1.7	10100	988	6440	2.6					
1.9	9100	883	6500	2.9					
0.77	23800	2199	5420	1.10					
0.88	20700	1930	5700	1.30					
0.99	18500	1709	5880	1.45	FA 87R57	DRS 71S4	265	411	
1.1	16200	1493	6050	1.65	FAF 87R57	DRS 71S4	290	411	
1.3	13300	1300	6240	2.00	F 87R57	DRS 71S4	275	411	
1.5	12000	1148	6330	2.2	FF 87R57	DRS 71S4	310	411	
1.7	10400	1010	6430	2.6					
1.9	9280	887	6490	2.9					
1.9	9430	893	4050	1.05	FA 77R37	DRS 71S4	145	411	
					FAF 77R37	DRS 71S4	160	411	
					F 77R37	DRS 71S4	155	411	
					FF 77R37	DRS 71S4	180	411	
1.4	13100	1200	3550	1.00					
1.6	11500	1053	3790	1.15					
1.9	9930	910	4000	1.35	FA 77R37	DRS 71S4	150	411	
2.1	8510	810	4150	1.55	FAF 77R37	DRS 71S4	165	411	
2.4	7460	710	4240	1.80	F 77R37	DRS 71S4	160	411	
2.8	6630	615	4300	2.0	FF 77R37	DRS 71S4	180	411	
3.2	5800	538	4350	2.3					
3.5	5130	480	4390	2.6					
2.1	9170	815	4080	1.05					
2.4	7890	706	4200	1.25					
2.6	7350	660	4250	1.35	FA 77R37	DRS 71S4	145	411	
3.0	6300	571	4320	1.55	FAF 77R37	DRS 71S4	160	411	
3.5	5290	485	4380	1.85	F 77R37	DRS 71S4	155	411	
3.9	4680	433	4410	2.1	FF 77R37	DRS 71S4	180	411	
4.6	3950	370	4450	2.5					
4.9	3680	346	4460	2.7					
2.7	6780	634	2420	1.05	FA 67R37	DRS 71S4	99	411	
3.2	5690	539	2620	1.25	FAF 67R37	DRS 71S4	115	411	
					F 67R37	DRS 71S4	105	411	
					FF 67R37	DRS 71S4	120	411	
2.6	6730	641	2430	1.10					
3.0	6170	572	2530	1.15					
3.3	5340	509	2670	1.35	FA 67R37	DRS 71S4	100	411	
3.9	4610	437	2770	1.55	FAF 67R37	DRS 71S4	115	411	
4.4	4130	384	2820	1.75	F 67R37	DRS 71S4	105	411	
5.0	3690	338	2860	1.95	FF 67R37	DRS 71S4	120	411	
5.6	3280	305	2900	2.2					
6.6	2740	257	2920	2.6					

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F..DRE/DRS
F..DRE/DRS [HP]

P_m [HP]	n_a [rpm]	T_a [lb-in]	i	$F_{Ra}^{1)}$ [lb]	SEW f_B		m [lbs]	
0.33	3.4	5530	500	2640	1.30			
	3.8	5050	454	2710	1.45			
	4.3	4330	392	2800	1.65	FA 67R37 DRS 71S4	98	411
	5.1	3630	333	2870	2.00	FAF 67R37 DRS 71S4	110	411
	5.7	3220	297	2910	2.2	F 67R37 DRS 71S4	105	411
	6.5	2820	261	2920	2.6	FF 67R37 DRS 71S4	120	411
	7.2	2530	238	2920	2.9			
	3.5	5160	483	2090	1.05	FA 57R37 DRS 71S4	91	411
						FAF 57R37 DRS 71S4	105	411
						F 57R37 DRS 71S4	92	411
					FF 57R37 DRS 71S4	105	411	
	3.8	4770	452	2170	1.10			
	4.4	4080	386	2290	1.30	FA 57R37 DRS 71S4	92	411
	5.0	3550	338	2370	1.50	FAF 57R37 DRS 71S4	105	411
	6.7	2690	255	2500	1.95	F 57R37 DRS 71S4	92	411
	8.5	2080	201	2580	2.6	FF 57R37 DRS 71S4	105	411
	9.4	1900	181	2580	2.8			
	4.0	4790	426	2160	1.10			
	4.4	4250	382	2260	1.25			
	5.2	3640	330	2360	1.45	FA 57R37 DRS 71S4	91	411
	5.7	3290	298	2410	1.60	FAF 57R37 DRS 71S4	105	411
	6.5	2890	262	2470	1.85	F 57R37 DRS 71S4	91	411
	7.5	2450	226	2530	2.2	FF 57R37 DRS 71S4	105	411
	8.5	2130	200	2570	2.5			
	10	1810	170	2580	2.9			
	5.9	3120	288	1470	1.15			
	6.8	2650	249	1590	1.35	FA 47R17 DRS 71S4	58	411
	7.8	2360	218	1650	1.50	FAF 47R17 DRS 71S4	64	411
	8.8	2080	193	1700	1.70	F 47R17 DRS 71S4	60	411
	9.8	1890	175	1730	1.85	FF 47R17 DRS 71S4	67	411
	12	1590	147	1770	2.2			
	13	1400	130	1790	2.5			
	5.8	3240	295	1430	1.10			
	6.7	2730	253	1570	1.30	FA 47R17 DRS 71S4	56	411
	7.8	2430	217	1630	1.45	FAF 47R17 DRS 71S4	62	411
	9.0	2110	190	1690	1.70	F 47R17 DRS 71S4	58	411
	9.6	1970	178	1720	1.80	FF 47R17 DRS 71S4	65	411
	11	1640	149	1760	2.2			
	13	1430	131	1790	2.5			
	12	1610	147	1020	1.10	FA 37R17 DRS 71S4	47	411
	13	1360	127	1090	1.30	FAF 37R17 DRS 71S4	51	411
	14	1290	121	1100	1.35	F 37R17 DRS 71S4	48	411
	16	1160	108	1130	1.50	FF 37R17 DRS 71S4	53	411
	19	970	91	1170	1.80			
	12	1630	145	1010	1.10	FA 37R17 DRS 71S4	47	411
	13	1440	129	1070	1.25	FAF 37R17 DRS 71S4	50	411
	14	1310	118	1100	1.35	F 37R17 DRS 71S4	48	411
	17	1080	98	1150	1.65	FF 37R17 DRS 71S4	52	411
	20	950	87	1170	1.85			
	18	1050	96	1010	1.10	FA 27R17 DRS 71S4	33	411
						FAF 27R17 DRS 71S4	35	411
						F 27R17 DRS 71S4	34	411
						FF 27R17 DRS 71S4	36	411
	3.9	5400	281.71	4380	2.4	FA 77 DRS 71S6	130	383
	4.2	5040	262.93	4400	2.6	FAF 77 DRS 71S6	145	382
						F 77 DRS 71S6	135	381
						FF 77 DRS 71S6	160	382
	4.8	4390	228.99	2790	1.65	FA 67 DRS 71S6	76	378
	5.6	3750	195.39	2860	1.95	FAF 67 DRS 71S6	90	377
	6.4	3280	170.85	2900	2.2	F 67 DRS 71S6	82	376
	6.8	3110	162.31	2910	2.3	FF 67 DRS 71S6	95	377
	7.7	2730	142.40	2920	2.6			
	7.4	2840	228.99	2920	2.6	FA 67 DRS 71S4	76	378
	8.7	2420	195.39	2920	3.0	FAF 67 DRS 71S4	90	377
						F 67 DRS 71S4	82	376
						FF 67 DRS 71S4	95	377

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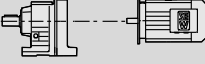



P _m [HP]	n _a [rpm]	T _a [lb-in]	i	F _{Ra} ¹⁾ [lb]	SEW f _B			m [lbs]		
0.33	5.5	3830	199.70	2330	1.40					
	6.0	3520	183.60	2380	1.50					
	7.0	3010	157.09	2450	1.75	FA	57	DRS	71S6	67 373
	8.1	2610	136.16	2510	2.0	FAF	57	DRS	71S6	79 372
	8.6	2440	127.27	2530	2.2	F	57	DRS	71S6	68 371
	10	2110	110.01	2570	2.5	FF	57	DRS	71S6	82 372
	12	1790	93.47	2580	3.0					
	8.5	2480	199.70	2530	2.1	FA	57	DRS	71S4	67 373
	9.3	2280	183.60	2550	2.3	FAF	57	DRS	71S4	79 372
	11	1950	157.09	2580	2.7	F	57	DRS	71S4	68 371
	FF	57	DRS	71S4	82 372					
	6.3	3360	175.38	1390	1.05					
7.3	2880	150.06	1530	1.25						
8.5	2490	130.07	1620	1.40						
9.0	2330	121.57	1650	1.50	FA	47	DRS	71S6	52 368	
10	2010	105.09	1710	1.75	FAF	47	DRS	71S6	58 367	
12	1710	89.29	1750	2.1	F	47	DRS	71S6	54 366	
14	1530	79.72	1780	2.3	FF	47	DRS	71S6	61 367	
16	1300	68.09	1800	2.7						
17	1250	65.36	1810	2.8						
8.9	2370	190.76	1650	1.50						
9.7	2170	175.38	1680	1.60	FA	47	DRS	71S4	52 368	
11	1860	150.06	1730	1.90	FAF	47	DRS	71S4	58 367	
13	1610	130.07	1770	2.2	F	47	DRS	71S4	54 366	
14	1510	121.57	1780	2.3	FF	47	DRS	71S4	61 367	
16	1300	105.09	1800	2.7						
13	1660	86.53	1000	1.05						
14	1540	80.65	1040	1.15						
16	1350	70.50	1090	1.30						
17	1260	66.09	1110	1.40						
19	1120	58.32	1140	1.60	FA	37	DRS	71S6	41 363	
20	1040	54.54	1150	1.70	FAF	37	DRS	71S6	45 362	
21	990	51.70	1160	1.80	F	37	DRS	71S6	42 361	
23	900	47.02	1180	1.95	FF	37	DRS	71S6	46 362	
25	840	43.83	1190	2.1						
29	735	38.31	1200	2.4						
31	685	35.91	1210	2.6						
35	605	31.69	1220	2.9						
13	1590	128.51	1020	1.10						
14	1460	117.88	1060	1.20						
17	1240	100.36	1110	1.40						
20	1070	86.53	1150	1.65	FA	37	DRS	71S4	41 363	
21	1000	80.65	1160	1.75	FAF	37	DRS	71S4	45 362	
24	870	70.50	1180	2.0	F	37	DRS	71S4	42 361	
26	820	66.09	1190	2.2	FF	37	DRS	71S4	46 362	
29	720	58.32	1200	2.4						
31	675	54.54	1210	2.6						
33	640	51.70	1210	2.8						
19	1080	56.62	1010	1.05						
22	960	50.19	1010	1.20	FA	27	DRS	71S6	28 359	
24	890	46.78	1010	1.30	FAF	27	DRS	71S6	29 358	
27	780	40.89	990	1.45	F	27	DRS	71S6	29 357	
29	735	38.33	980	1.55	FF	27	DRS	71S6	31 358	
33	645	33.83	950	1.75						
19	1090	88.32	1010	1.05						
22	950	77.21	1010	1.20						
23	890	72.37	1010	1.30						
27	790	63.86	990	1.45	FA	27	DRS	71S4	28 359	
30	700	56.62	970	1.65	FAF	27	DRS	71S4	29 358	
34	620	50.19	940	1.85	F	27	DRS	71S4	29 357	
36	580	46.78	920	2.00	FF	27	DRS	71S4	31 358	
42	505	40.89	890	2.3						
44	475	38.33	880	2.4						
50	420	33.83	850	2.7						
37	565	29.56	920	2.0	FA	27	DRS	71S6	27 359	
40	520	27.18	900	2.2	FAF	27	DRS	71S6	29 358	
47	445	23.25	870	2.6	F	27	DRS	71S6	28 357	
55	385	20.15	830	3.0	FF	27	DRS	71S6	30 358	

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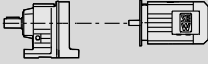


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F..DRE/DRS
F..DRE/DRS [HP]

P_m [HP]	n_a [rpm]	T_a [lb-in]	i	$F_{Ra}^{1)}$ [lb]	SEW f_B		m [lbs]	
0.50	0.25	106000	6715	20200	1.00			
	0.29	93500	5925	20200	1.15			
	0.33	80100	5153	20200	1.30	FA 127R77 DRS 71S4	940	411
	0.37	69500	4533	20200	1.55	FAF 127R77 DRS 71S4	1030	411
	0.43	61000	3926	20200	1.75	F 127R77 DRS 71S4	1020	411
	0.49	53000	3454	20200	2.0	FF 127R77 DRS 71S4	1120	411
	0.56	46200	3031	20200	2.3			
	0.64	42400	2672	20200	2.5	FA 127R77 DRS 71S4	940	411
	0.72	36600	2357	20200	2.9	FAF 127R77 DRS 71S4	1020	411
						F 127R77 DRS 71S4	1020	411
						FF 127R77 DRS 71S4	1120	411
	0.43	58600	3948	11800	1.15	FA 107R77 DRS 71S4	610	411
	0.48	54700	3521	12000	1.25	FAF 107R77 DRS 71S4	660	411
						F 107R77 DRS 71S4	650	411
						FF 107R77 DRS 71S4	710	411
	0.42	64100	4016	11400	1.10			
	0.45	60900	3815	11700	1.15			
	0.51	53400	3347	12100	1.30	FA 107R77 DRS 71S4	590	411
	0.60	45100	2839	12600	1.55	FAF 107R77 DRS 71S4	640	411
	0.66	40300	2563	12900	1.70	F 107R77 DRS 71S4	630	411
0.75	35000	2255	13100	2.00	FF 107R77 DRS 71S4	690	411	
0.80	32800	2129	13300	2.1				
0.94	27500	1813	13500	2.5				
1.1	25200	1590	13600	2.8				
0.56	48200	3037	12400	1.40	FA 107R77 DRS 71S4	610	411	
0.62	43700	2756	12700	1.55	FAF 107R77 DRS 71S4	650	411	
0.72	37600	2369	13000	1.80	F 107R77 DRS 71S4	640	411	
0.82	32800	2068	13300	2.1	FF 107R77 DRS 71S4	710	411	
0.93	27400	1826	13500	2.5				
1.1	25100	1597	13600	2.7				
0.77	36100	2199	6860	1.05				
0.86	32400	1971	7120	1.15	FA 97R57 DRS 71S4	395	411	
0.98	28400	1741	7370	1.35	FAF 97R57 DRS 71S4	445	411	
1.2	23600	1468	7650	1.60	F 97R57 DRS 71S4	415	411	
1.3	21100	1316	7780	1.80	FF 97R57 DRS 71S4	485	411	
1.4	18800	1189	7900	2.0				
1.7	16000	1023	8030	2.4				
0.76	36900	2245	6800	1.05				
0.86	32200	1970	7130	1.20	FA 97R57 DRS 71S4	405	411	
0.99	28400	1722	7370	1.35	FAF 97R57 DRS 71S4	455	411	
1.1	25200	1527	7560	1.50	F 97R57 DRS 71S4	425	411	
1.3	21100	1327	7780	1.80	FF 97R57 DRS 71S4	495	411	
1.4	19300	1171	7880	1.95				
1.7	16800	1022	7990	2.2				
1.9	14000	898	8120	2.7				
1.9	14900	892	8080	2.6	FA 97R57 DRS 71S4	395	411	
					FAF 97R57 DRS 71S4	440	411	
					F 97R57 DRS 71S4	410	411	
					FF 97R57 DRS 71S4	485	411	
1.2	24300	1476	5370	1.10				
1.3	20600	1278	5700	1.30	FA 87R57 DRS 71S4	260	411	
1.5	18400	1142	5880	1.45	FAF 87R57 DRS 71S4	285	411	
1.7	15700	988	6090	1.70	F 87R57 DRS 71S4	270	411	
1.9	14000	883	6200	1.90	FF 87R57 DRS 71S4	305	411	
2.3	11800	748	6340	2.2				
1.1	24600	1493	5340	1.10				
1.3	20600	1300	5700	1.30				
1.5	18400	1148	5880	1.45	FA 87R57 DRS 71S4	265	411	
1.7	16000	1010	6060	1.65	FAF 87R57 DRS 71S4	290	411	
1.9	14200	887	6190	1.85	F 87R57 DRS 71S4	275	411	
2.2	12400	780	6310	2.1	FF 87R57 DRS 71S4	310	411	
2.5	10500	674	6420	2.5				
2.8	9690	609	6470	2.7				
2.6	11000	662	6390	2.4	FA 87R57 DRS 71S4	255	411	
2.9	9850	592	6460	2.7	FAF 87R57 DRS 71S4	285	411	
					F 87R57 DRS 71S4	270	411	
					FF 87R57 DRS 71S4	305	411	

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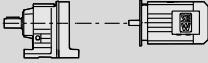



P_m [HP]	n_a [rpm]	T_a [lb-in]	i	$F_{Ra}^{1)}$ [lb]	SEW f_B		m [lbs]		
0.50	2.1	13000	810	3570	1.00				
	2.4	11400	710	3810	1.15				
	2.8	10000	615	3980	1.30				
	3.2	8820	538	4120	1.50	FA 77R37	DRS 71S4	150	411
	3.5	7830	480	4210	1.70	FAF 77R37	DRS 71S4	165	411
	4.1	6650	413	4300	2.00	F 77R37	DRS 71S4	160	411
	4.6	5980	367	4340	2.2	FF 77R37	DRS 71S4	180	411
	5.3	5330	323	4380	2.5				
	6.1	4560	280	4420	2.9				
	3.0	9540	571	4040	1.05				
3.5	8040	485	4190	1.20	FA 77R37	DRS 71S4	145	411	
3.9	7140	433	4260	1.35	FAF 77R37	DRS 71S4	160	411	
4.6	6050	370	4340	1.60	F 77R37	DRS 71S4	155	411	
4.9	5650	346	4360	1.75	FF 77R37	DRS 71S4	180	411	
5.8	4710	292	4410	2.1					
3.9	7060	437	2360	1.05					
4.4	6280	384	2510	1.15					
5.0	5590	338	2630	1.30	FA 67R37	DRS 71S4	100	411	
5.6	4990	305	2720	1.45	FAF 67R37	DRS 71S4	115	411	
6.6	4180	257	2820	1.75	F 67R37	DRS 71S4	105	411	
7.4	3680	231	2870	1.95	FF 67R37	DRS 71S4	120	411	
8.3	3310	205	2900	2.2					
9.7	2810	175	2920	2.6					
4.3	6560	392	2460	1.10					
5.1	5530	333	2640	1.30	FA 67R37	DRS 71S4	98	411	
5.7	4910	297	2730	1.50	FAF 67R37	DRS 71S4	110	411	
6.5	4310	261	2800	1.70	F 67R37	DRS 71S4	105	411	
7.2	3880	238	2850	1.85	FF 67R37	DRS 71S4	120	411	
8.5	3240	200	2900	2.2					
9.7	2840	176	2920	2.6					
6.7	4120	255	2280	1.30	FA 57R37	DRS 71S4	92	411	
8.5	3210	201	2420	1.65	FAF 57R37	DRS 71S4	105	411	
9.4	2910	181	2470	1.80	F 57R37	DRS 71S4	92	411	
11	2490	155	2520	2.1	FF 57R37	DRS 71S4	105	411	
5.7	4980	298	2130	1.05					
6.5	4380	262	2240	1.20	FA 57R37	DRS 71S4	91	411	
7.5	3730	226	2340	1.40	FAF 57R37	DRS 71S4	105	411	
8.5	3270	200	2420	1.60	F 57R37	DRS 71S4	91	411	
10	2780	170	2490	1.90	FF 57R37	DRS 71S4	105	411	
11	2460	152	2530	2.2					
13	2160	134	2570	2.4					
8.8	3170	193	1450	1.10	FA 47R17	DRS 71S4	58	411	
9.8	2870	175	1530	1.25	FAF 47R17	DRS 71S4	64	411	
12	2420	147	1640	1.45	F 47R17	DRS 71S4	60	411	
13	2130	130	1690	1.65	FF 47R17	DRS 71S4	67	411	
9.0	3180	190	1450	1.10	FA 47R17	DRS 71S4	56	411	
9.6	2980	178	1510	1.20	FAF 47R17	DRS 71S4	62	411	
11	2480	149	1620	1.40	F 47R17	DRS 71S4	58	411	
13	2180	131	1680	1.60	FF 47R17	DRS 71S4	65	411	
16	1760	108	970	1.00	FA 37R17	DRS 71S4	47	411	
19	1490	91	1050	1.20	FAF 37R17	DRS 71S4	51	411	
					F 37R17	DRS 71S4	48	411	
					FF 37R17	DRS 71S4	53	411	
17	1640	98	1010	1.10	FA 37R17	DRS 71S4	47	411	
20	1440	87	1070	1.20	FAF 37R17	DRS 71S4	50	411	
					F 37R17	DRS 71S4	48	411	
					FF 37R17	DRS 71S4	52	411	
3.9	8000	281.71	4190	1.65					
4.2	7470	262.93	4240	1.80	FA 77	DRS 71M6	130	383	
4.9	6410	225.79	4310	2.1	FAF 77	DRS 71M6	145	382	
5.6	5630	198.31	4360	2.4	F 77	DRS 71M6	140	381	
5.8	5350	188.40	4380	2.5	FF 77	DRS 71M6	165	382	
6.6	4730	166.47	4410	2.8					
6.0	5180	281.71	4390	2.6	FA 77	DRS 71S4	130	383	
6.5	4830	262.93	4410	2.7	FAF 77	DRS 71S4	145	382	
					F 77	DRS 71S4	135	381	
					FF 77	DRS 71S4	160	382	

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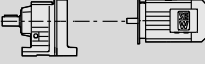




F..DRE/DRS
F..DRE/DRS [HP]

P_m [HP]	n_a [rpm]	T_a [lb-in]	i	$F_{Ra}^{1)}$ [lb]	SEW f_B		m [lbs]	
0.50	4.8	6500	228.99	2470	1.10			
	5.6	5550	195.39	2640	1.30			
	6.4	4850	170.85	2740	1.50			
	6.8	4610	162.31	2770	1.55	FA 67	DRS 71M6	79 378
	7.7	4040	142.40	2830	1.80	FAF 67	DRS 71M6	93 377
	9.1	3430	120.79	2890	2.1	F 67	DRS 71M6	85 376
	10	3090	109.04	2920	2.3	FF 67	DRS 71M6	98 377
	11	2720	95.94	2920	2.7			
	12	2570	90.59	2920	2.8			
	7.4	4210	228.99	2810	1.70			
	8.7	3590	195.39	2870	2.0	FA 67	DRS 71S4	76 378
	10.0	3140	170.85	2910	2.3	FAF 67	DRS 71S4	90 377
10	2980	162.31	2920	2.4	F 67	DRS 71S4	82 376	
12	2610	142.40	2920	2.8	FF 67	DRS 71S4	95 377	
6.0	5210	183.60	2090	1.00				
7.0	4460	157.09	2220	1.20				
8.1	3870	136.16	2320	1.35				
8.6	3610	127.27	2360	1.45	FA 57	DRS 71M6	70 373	
10	3120	110.01	2440	1.70	FAF 57	DRS 71M6	82 372	
12	2650	93.47	2500	2.0	F 57	DRS 71M6	71 371	
13	2370	83.46	2540	2.2	FF 57	DRS 71M6	85 372	
15	2070	72.98	2580	2.6				
16	1930	68.22	2580	2.7				
8.5	3670	199.70	2350	1.45				
9.3	3370	183.60	2400	1.55	FA 57	DRS 71S4	67 373	
11	2880	157.09	2470	1.85	FAF 57	DRS 71S4	79 372	
12	2500	136.16	2520	2.1	F 57	DRS 71S4	68 371	
13	2340	127.27	2540	2.3	FF 57	DRS 71S4	82 372	
15	2020	110.01	2580	2.6				
27	1140	40.13	2580	2.2	FA 57	DRS 71M6	69 373	
					FAF 57	DRS 71M6	81 372	
					F 57	DRS 71M6	69 371	
					FF 57	DRS 71M6	83 372	
9.0	3450	121.57	1360	1.00				
10	2980	105.09	1500	1.20				
12	2530	89.29	1610	1.40				
14	2260	79.72	1670	1.55	FA 47	DRS 71M6	54 368	
16	1930	68.09	1720	1.85	FAF 47	DRS 71M6	60 367	
17	1850	65.36	1730	1.90	F 47	DRS 71M6	56 366	
19	1600	56.49	1770	2.2	FF 47	DRS 71M6	63 367	
23	1360	48.00*	1800	2.6				
26	1210	42.86	1810	2.9				
8.9	3500	190.76	1340	1.00				
9.7	3220	175.38	1440	1.10				
11	2750	150.06	1560	1.30				
13	2390	130.07	1640	1.50	FA 47	DRS 71S4	52 368	
14	2230	121.57	1670	1.60	FAF 47	DRS 71S4	58 367	
16	1930	105.09	1720	1.85	F 47	DRS 71S4	54 366	
19	1640	89.29	1760	2.2	FF 47	DRS 71S4	61 367	
21	1460	79.72	1780	2.4				
25	1250	68.09	1810	2.8				
26	1200	65.36	1810	3.0				
19	1650	58.32	1000	1.05				
20	1550	54.54	1040	1.15				
21	1460	51.70	1060	1.20				
23	1330	47.02	1090	1.30	FA 37	DRS 71M6	44 363	
25	1240	43.83	1120	1.40	FAF 37	DRS 71M6	47 362	
29	1080	38.31	1150	1.60	F 37	DRS 71M6	45 361	
31	1020	35.91	1160	1.75	FF 37	DRS 71M6	49 362	
35	900	31.69	1180	1.95				
39	795	28.09	1190	2.2				
46	675	23.88	1170	2.6				

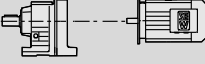

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P_m [HP]	n_a [rpm]	T_a [lb-in]	i	$F_{Ra}^{1)}$ [lb]	SEW f_B		m [lbs]		
0.50	20	1590	86.53	1020	1.10				
	21	1480	80.65	1060	1.20				
	24	1290	70.50	1100	1.35				
	26	1210	66.09	1120	1.45				
	29	1070	58.32	1150	1.65	FA 37	DRS 71S4	41	363
	31	1000	54.54	1160	1.75	FAF 37	DRS 71S4	45	362
	33	950	51.70	1170	1.85	F 37	DRS 71S4	42	361
	36	860	47.02	1180	2.0	FF 37	DRS 71S4	46	362
	39	800	43.83	1190	2.2				
	44	700	38.31	1190	2.5				
	47	660	35.91	1170	2.7				
	47	670	23.63	1170	2.6	FA 37	DRS 71M6	43	363
						FAF 37	DRS 71M6	47	362
						F 37	DRS 71M6	44	361
						FF 37	DRS 71M6	48	362
	29	1080	38.33	900	1.05	FA 27	DRS 71M6	30	359
	33	960	33.83	880	1.20	FAF 27	DRS 71M6	32	358
						F 27	DRS 71M6	31	357
						FF 27	DRS 71M6	33	358
	30	1040	56.62	890	1.10				
34	920	50.19	870	1.25	FA 27	DRS 71S4	28	359	
36	860	46.78	860	1.35	FAF 27	DRS 71S4	29	358	
42	750	40.89	840	1.55	F 27	DRS 71S4	29	357	
44	705	38.33	830	1.65	FF 27	DRS 71S4	31	358	
50	620	33.83	810	1.85					
37	830	29.56	860	1.35					
40	770	27.18	840	1.50	FA 27	DRS 71M6	30	359	
47	660	23.25	820	1.75	FAF 27	DRS 71M6	31	358	
55	570	20.15	790	2.0	F 27	DRS 71M6	31	357	
58	535	18.84	780	2.2	FF 27	DRS 71M6	33	358	
68	460	16.28	755	2.5					
80	390	13.84	725	2.9					
58	540	29.56	785	2.1	FA 27	DRS 71S4	27	359	
63	495	27.18	770	2.3	FAF 27	DRS 71S4	29	358	
73	425	23.25	740	2.7	F 27	DRS 71S4	28	357	
					FF 27	DRS 71S4	30	358	
0.75	0.27	140300	6295	23800	1.15	FA 157R97	DRS 71M4	1690	411
	0.31	115500	5404	25200	1.40	FAF 157R97	DRS 71M4	1820	411
	0.61	59400	2780	27000	2.7	F 157R97	DRS 71M4	1740	411
						FF 157R97	DRS 71M4	1970	411
	0.43	94300	3926	20200	1.15	FA 127R77	DRS 71M4	950	411
	0.49	82300	3454	20200	1.30	FAF 127R77	DRS 71M4	1030	411
	0.56	71900	3031	20200	1.50	F 127R77	DRS 71M4	1030	411
						FF 127R77	DRS 71M4	1130	411
	0.63	65300	2672	20200	1.60	FA 127R77	DRS 71M4	940	411
	0.72	56800	2357	20200	1.85	FAF 127R77	DRS 71M4	1030	411
	0.83	48900	2038	20200	2.2	F 127R77	DRS 71M4	1020	411
	0.95	42400	1784	20200	2.5	FF 127R77	DRS 71M4	1120	411
	1.0	37900	1606	20200	2.8				
	0.60	69400	2839	11100	1.00				
	0.66	62300	2563	11600	1.10				
	0.75	54300	2255	12100	1.30				
	0.79	51100	2129	12300	1.35	FA 107R77	DRS 71M4	590	411
	0.93	43100	1813	12700	1.60	FAF 107R77	DRS 71M4	640	411
	1.1	38800	1590	12900	1.80	F 107R77	DRS 71M4	630	411
	1.2	34900	1436	13200	2.00	FF 107R77	DRS 71M4	690	411
	1.3	30400	1263	13400	2.3				
	1.4	28600	1193	13500	2.4				
	1.7	24100	1015	13700	2.9				
	0.61	67400	2756	11200	1.00				
	0.71	57900	2369	11800	1.15				
	0.82	50500	2068	12300	1.35	FA 107R77	DRS 71M4	610	411
	0.93	43100	1826	12700	1.60	FAF 107R77	DRS 71M4	660	411
	1.1	38800	1597	12900	1.75	F 107R77	DRS 71M4	650	411
	1.2	33700	1401	13200	2.0	FF 107R77	DRS 71M4	710	411
	1.4	29300	1243	13400	2.3				
1.6	26400	1087	13600	2.6					

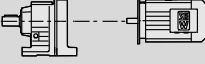


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F..DRE/DRS
F..DRE/DRS [HP]

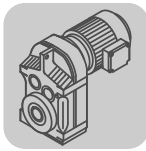
P_m [HP]	n_a [rpm]	T_a [lb-in]	i	$F_{Ra}^{1)}$ [lb]	SEW f_B		m [lbs]			
0.75	1.2	36200	1468	6850	1.05	FA 97R57 DRS 71M4	400	411		
	1.3	32400	1316	7120	1.15	FAF 97R57 DRS 71M4	445	411		
	1.4	29000	1189	7340	1.30	F 97R57 DRS 71M4	415	411		
	1.6	24800	1023	7590	1.55	FF 97R57 DRS 71M4	490	411		
	1.3	32500	1327	7110	1.15	FA 97R57 DRS 71M4	410	411		
	1.4	29300	1171	7320	1.30					
	1.6	25600	1022	7540	1.50					
	1.9	21700	898	7750	1.75					
	2.2	19300	784	7870	1.95					
	2.4	16700	690	8000	2.3					
2.8	14700	605	8090	2.6						
3.2	12800	529	8170	3.0						
1.9	22600	892	7700	1.70	FA 97R57 DRS 71M4				395	411
2.2	19200	760	7880	2.00	FAF 97R57 DRS 71M4				445	411
2.5	16800	667	7990	2.3	F 97R57 DRS 71M4	415	411			
3.0	14200	569	8110	2.7	FF 97R57 DRS 71M4	485	411			
3.3	12700	510	8170	3.0						
1.7	24200	988	5380	1.10	FA 87R57 DRS 71M4	260	411			
1.9	21600	883	5620	1.25	FAF 87R57 DRS 71M4	290	411			
2.3	18200	748	5900	1.45	F 87R57 DRS 71M4	275	411			
					FF 87R57 DRS 71M4	310	411			
1.7	24700	1010	5330	1.05	FA 87R57 DRS 71M4	265	411			
1.9	21800	887	5600	1.20						
2.2	19100	780	5830	1.40						
2.5	16300	674	6040	1.60						
2.8	14900	609	6140	1.80						
3.3	12500	515	6300	2.1						
3.7	11000	452	6390	2.4						
2.6	16700	662	6010	1.60				FA 87R57 DRS 71M4	260	411
2.9	14900	592	6140	1.75	FAF 87R57 DRS 71M4	285	411			
3.2	13100	519	6260	2.0	F 87R57 DRS 71M4	270	411			
3.6	11700	468	6340	2.2	FF 87R57 DRS 71M4	305	411			
4.2	9920	398	6450	2.7						
3.5	11900	480	3740	1.10	FA 77R37 DRS 71M4	150	411			
4.1	10100	413	3970	1.30						
4.6	9120	367	4090	1.45						
5.2	8090	323	4180	1.65						
6.0	6960	280	4280	1.90						
6.8	6160	247	4330	2.2						
7.7	5480	221	4370	2.4						
8.5	4880	199	4400	2.7						
4.6	9260	370	4070	1.05				FA 77R37 DRS 71M4	150	411
4.9	8650	346	4130	1.15				FAF 77R37 DRS 71M4	165	411
5.8	7240	292	4250	1.35	F 77R37 DRS 71M4	155	411			
					FF 77R37 DRS 71M4	180	411			
6.6	6380	257	2500	1.15	FA 67R37 DRS 71M4	105	411			
7.3	5660	231	2620	1.30	FAF 67R37 DRS 71M4	115	411			
8.2	5070	205	2710	1.45	F 67R37 DRS 71M4	110	411			
9.7	4310	175	2800	1.70	FF 67R37 DRS 71M4	125	411			
6.5	6570	261	2460	1.10	FA 67R37 DRS 71M4	100	411			
7.1	5940	238	2570	1.20	FAF 67R37 DRS 71M4	115	411			
8.4	4980	200	2720	1.45	F 67R37 DRS 71M4	105	411			
9.6	4370	176	2790	1.65	FF 67R37 DRS 71M4	120	411			
8.4	4930	201	2140	1.10	FA 57R37 DRS 71M4	94	411			
9.3	4470	181	2220	1.20	FAF 57R37 DRS 71M4	105	411			
11	3810	155	2330	1.40	F 57R37 DRS 71M4	95	411			
					FF 57R37 DRS 71M4	110	411			
8.4	5010	200	2120	1.05	FA 57R37 DRS 71M4	93	411			
9.9	4250	170	2260	1.25	FAF 57R37 DRS 71M4	105	411			
11	3780	152	2340	1.40	F 57R37 DRS 71M4	94	411			
13	3330	134	2410	1.60	FF 57R37 DRS 71M4	110	411			
13	3250	130	1430	1.10	FA 47R17 DRS 71M4	61	411			
					FAF 47R17 DRS 71M4	67	411			
					F 47R17 DRS 71M4	63	411			
					FF 47R17 DRS 71M4	70	411			

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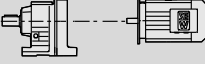




P_m [HP]	n_a [rpm]	T_a [lb-in]	i	$F_{Ra}^{1)}$ [lb]	SEW f_B		m [lbs]		
0.75	13	3310	131	1410	1.05	FA 47R17 DRS 71M4	59	411	
						FAF 47R17 DRS 71M4	65	411	
						F 47R17 DRS 71M4	61	411	
						FF 47R17 DRS 71M4	68	411	
	4.1	11200	270.68	6380	2.4	FA 87 DRS 80S6	225	388	
	4.4	10500	255.37	6410	2.5	FAF 87 DRS 80S6	250	387	
	4.9	9490	228.93	6480	2.8	F 87 DRS 80S6	235	386	
						FF 87 DRS 80S6	270	387	
	5.0	9360	225.79	4060	1.40				
	5.6	8220	198.31	4170	1.60				
	5.9	7810	188.40	4210	1.70	FA 77 DRS 80S6	135	383	
	6.7	6900	166.47	4280	1.90	FAF 77 DRS 80S6	150	382	
7.9	5900	142.27	4350	2.2	F 77 DRS 80S6	145	381		
8.6	5410	130.42	4380	2.4	FF 77 DRS 80S6	170	382		
9.8	4740	114.45	4410	2.8					
10	4500	108.46*	4420	3.0					
6.0	7740	281.71	4210	1.70					
6.4	7220	262.93	4260	1.85	FA 77 DRS 71M4	130	383		
7.5	6200	225.79	4330	2.1	FAF 77 DRS 71M4	145	382		
8.5	5450	198.31	4370	2.4	F 77 DRS 71M4	140	381		
9.0	5180	188.40	4390	2.6	FF 77 DRS 71M4	165	382		
10	4570	166.47	4420	2.9					
6.6	7080	170.85	2350	1.00					
6.9	6730	162.31	2430	1.10					
7.9	5900	142.40	2580	1.25					
9.3	5010	120.79	2720	1.45	FA 67 DRS 80S6	84	378		
10	4520	109.04	2780	1.60	FAF 67 DRS 80S6	98	377		
12	3980	95.94	2840	1.80	F 67 DRS 80S6	90	376		
12	3750	90.59	2860	1.95	FF 67 DRS 80S6	105	377		
14	3300	79.76	2900	2.2					
17	2800	67.65	2920	2.6					
18	2530	61.07	2920	2.9					
7.4	6290	228.99	2510	1.15					
8.6	5370	195.39	2660	1.35					
9.9	4690	170.85	2760	1.55					
10	4460	162.31	2780	1.65	FA 67 DRS 71M4	79	378		
12	3910	142.40	2840	1.85	FAF 67 DRS 71M4	93	377		
14	3320	120.79	2900	2.2	F 67 DRS 71M4	85	376		
16	2990	109.04	2920	2.4	FF 67 DRS 71M4	98	377		
18	2630	95.94	2920	2.8					
19	2490	90.59	2920	2.9					
15	3110	228.99	2920	2.3	FA 67 DRS 71M2	79	378		
18	2650	195.39	2920	2.7	FAF 67 DRS 71M2	93	377		
					F 67 DRS 71M2	85	376		
					FF 67 DRS 71M2	98	377		
8.8	5280	127.27	2070	1.00					
10	4560	110.01	2210	1.15					
12	3870	93.47	2320	1.35					
13	3460	83.46	2390	1.55	FA 57 DRS 80S6	75	373		
15	3020	72.98	2450	1.75	FAF 57 DRS 80S6	87	372		
16	2830	68.22	2480	1.90	F 57 DRS 80S6	76	371		
19	2440	58.97	2530	2.2	FF 57 DRS 80S6	90	372		
22	2070	50.10	2580	2.6					
25	1850	44.73	2580	2.9					
9.2	5040	183.60	2120	1.05					
11	4310	157.09	2250	1.25					
12	3740	136.16	2340	1.40					
13	3490	127.27	2380	1.50	FA 57 DRS 71M4	70	373		
15	3020	110.01	2450	1.75	FAF 57 DRS 71M4	82	372		
18	2570	93.47	2510	2.1	F 57 DRS 71M4	71	371		
20	2290	83.46	2550	2.3	FF 57 DRS 71M4	85	372		
23	2000	72.98	2580	2.6					
25	1870	68.22	2580	2.8					
17	2710	199.70	2500	1.95	FA 57 DRS 71M2	70	373		
19	2490	183.60	2520	2.1	FAF 57 DRS 71M2	82	372		
22	2130	157.09	2570	2.5	F 57 DRS 71M2	71	371		
25	1850	136.16	2580	2.9	FF 57 DRS 71M2	85	372		

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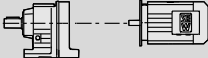




F..DRE/DRS
F..DRE/DRS [HP]

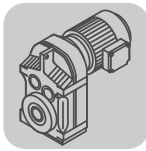
P_m [HP]	n_a [rpm]	T_a [lb-in]	i	$F_{Ra}^{1)}$ [lb]	SEW f_B		m [lbs]		
0.75	42	1100	40.13	2420	2.3	FA 57 DRS 71M4 FAF 57 DRS 71M4 F 57 DRS 71M4 FF 57 DRS 71M4	69 373 81 372 69 371 83 372		
	14	3300	79.72	1410	1.05				
	16	2820	68.09	1550	1.25				
	17	2710	65.36	1570	1.30				
	20	2340	56.49	1650	1.50	FA 47 DRS 80S6 FAF 47 DRS 80S6 F 47 DRS 80S6 FF 47 DRS 80S6	59 368 65 367 61 366 68 367		
	23	1990	48.00*	1710	1.80				
	26	1770	42.86	1750	2.00				
	31	1510	36.61	1780	2.3				
	33	1420	34.29	1790	2.5				
	39	1190	28.88	1810	3.0				
	14	3340	121.57	1400	1.05				
	16	2880	105.09	1530	1.20				
	19	2450	89.29	1630	1.45				
	21	2190	79.72	1680	1.60	FA 47 DRS 71M4 FAF 47 DRS 71M4 F 47 DRS 71M4 FF 47 DRS 71M4	54 368 60 367 56 366 63 367		
	25	1870	68.09	1730	1.90				
	26	1790	65.36	1740	1.95				
	30	1550	56.49	1770	2.3				
	35	1320	48.00*	1800	2.7				
	39	1170	42.86	1810	3.0				
	18	2590	190.76	1600	1.35				
20	2380	175.38	1640	1.50	FA 47 DRS 71M2 FAF 47 DRS 71M2 F 47 DRS 71M2 FF 47 DRS 71M2	54 368 60 367 56 366 63 367			
23	2030	150.06	1710	1.75					
26	1760	130.07	1750	2.0					
28	1650	121.57	1760	2.1					
33	1420	105.09	1790	2.5					
38	1210	89.29	1810	2.9					
36	1280	30.86	1800	2.8	FA 47 DRS 80S6 FAF 47 DRS 80S6 F 47 DRS 80S6 FF 47 DRS 80S6	58 368 64 367 59 366 66 367			
38	1210	29.32	1810	2.9					
29	1580	38.31	1020	1.10	FA 37 DRS 80S6 FAF 37 DRS 80S6 F 37 DRS 80S6 FF 37 DRS 80S6	49 363 52 362 50 361 54 362			
31	1490	35.91	1050	1.20					
35	1310	31.69	1100	1.35					
40	1160	28.09	1130	1.50					
47	990	23.88	1100	1.80					
29	1600	58.32	1020	1.10					
31	1490	54.54	1050	1.20					
33	1420	51.70	1070	1.25					
36	1290	47.02	1100	1.35	FA 37 DRS 71M4 FAF 37 DRS 71M4 F 37 DRS 71M4 FF 37 DRS 71M4	44 363 47 362 45 361 49 362			
39	1200	43.83	1120	1.45					
44	1050	38.31	1120	1.70					
47	980	35.91	1100	1.80					
53	870	31.69	1070	2.0					
60	770	28.09	1040	2.3					
71	655	23.88	1000	2.7					
27	1740	128.51	970	1.00					
29	1600	117.88	1020	1.10					
34	1360	100.36	1090	1.30					
40	1170	86.53	1130	1.50					
42	1090	80.65	1120	1.60	FA 37 DRS 71M2 FAF 37 DRS 71M2 F 37 DRS 71M2 FF 37 DRS 71M2	44 363 47 362 45 361 49 362			
49	950	70.50	1090	1.85					
52	890	66.09	1080	1.95					
59	790	58.32	1050	2.2					
63	740	54.54	1030	2.4					
66	700	51.70	1020	2.5					
73	635	47.02	1000	2.8					
78	595	43.83	980	3.0					
47	980	23.63	1100	1.80					
54	850	20.57	1070	2.1	FA 37 DRS 80S6 FAF 37 DRS 80S6 F 37 DRS 80S6 FF 37 DRS 80S6	48 363 51 362 49 361 53 362			
58	795	19.27	1050	2.2					
66	705	17.03	1020	2.5					
71	655	15.81	1000	2.7					
78	590	14.33	980	3.0					

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P_m [HP]	n_a [rpm]	T_a [lb-in]	i	$F_{Ra}^{1)}$ [lb]	SEW f_B			m [lbs]																							
0.75	72	645	23.63	1000	2.7	FA 37	DRS 71M4	43	363																						
						FAF 37	DRS 71M4	47	362																						
						F 37	DRS 71M4	44	361																						
						FF 37	DRS 71M4	48	362																						
	41	1120	40.89	760	1.00	FA 27	DRS 71M4	30	359																						
						FAF 27	DRS 71M4	32	358																						
						F 27	DRS 71M4	31	357																						
						FF 27	DRS 71M4	33	358																						
	44	1040	77.21	750	1.10	1.10																									
												47	980	72.37	745	1.15															
												54	860	63.86	730	1.35															
												60	765	56.62	715	1.50	FA 27	DRS 71M2	30	359											
												68	680	50.19	700	1.70	FAF 27	DRS 71M2	32	358											
												73	635	46.78	695	1.80	F 27	DRS 71M2	31	357											
												84	555	40.89	675	2.1	FF 27	DRS 71M2	33	358											
												89	520	38.33	665	2.2															
												101	455	33.83	645	2.5															
												48	960	23.25	745	1.20	1.20														
																							56	830	20.15	725	1.40				
	59	780	18.84	720	1.45																										
	69	675	16.28	700	1.70	FA 27	DRS 80S6	35	359																						
	81	570	13.84	680	2.0	FAF 27	DRS 80S6	36	358																						
	91	510	12.35	660	2.2	F 27	DRS 80S6	36	357																						
	106	435	10.55	640	2.6	FF 27	DRS 80S6	37	358																						
	113	405	9.88	630	2.8																										
	119	390	9.40	615	3.0																										
	57	810	29.56	725	1.40	1.40																									
																							62	745	27.18	715	1.55	FA 27	DRS 71M4	30	359
												73	635	23.25	695	1.80	FAF 27	DRS 71M4	31	358											
												84	550	20.15	675	2.1	F 27	DRS 71M4	31	357											
												90	515	18.84	665	2.2	FF 27	DRS 71M4	33	358											
												104	445	16.28	645	2.6															
												116	400	29.56	625	2.9															
												57	810	29.56	725	1.40	1.40														
																							62	745	27.18	715	1.55	FA 27	DRS 71M2	30	359
																							73	635	23.25	695	1.80	FAF 27	DRS 71M2	31	358
																							84	550	20.15	675	2.1	F 27	DRS 71M2	31	357
	90	515	18.84	665	2.2	FF 27	DRS 71M2	33	358																						
	104	445	16.28	645	2.6																										
	116	400	29.56	625	2.9																										
	1.0	0.32	160000	5404	22500	1.00																									
																							0.36	140200	4831	23800	1.15	FA 157R97	DRE 80M4	1700	411
																							0.42	117200	4130	25100	1.35	FAF 157R97	DRE 80M4	1830	411
																							0.63	82300	2780	26600	1.95	F 157R97	DRE 80M4	1750	411
		0.72	72700	2427	26900	2.2																									
													0.80	64100	2185	27000	2.5	FF 157R97	DRE 80M4	1980	411										
													0.89	57100	1944	27000	2.8	FA 157R97	DRE 80M4	1700	411										
													0.89	57100	1944	27000	2.8	FAF 157R97	DRE 80M4	1820	411										
0.57		97000	3031	20200	1.10																										
												0.57	97000	3031	20200	1.10	F 157R97	DRE 80M4	1740	411											
												0.57	97000	3031	20200	1.10	FF 157R97	DRE 80M4	1980	411											
												0.57	97000	3031	20200	1.10	FA 127R77	DRE 80M4	960	411											
0.65		87700	2672	20200	1.20																										
												0.74	76600	2357	20200	1.40	FAF 127R77	DRE 80M4	1040	411											
												0.85	66000	2038	20200	1.60	F 127R77	DRE 80M4	1040	411											
												0.98	57300	1784	20200	1.85	FF 127R77	DRE 80M4	1130	411											
												1.1	51400	1606	20200	2.1															
												1.2	44500	1390	20200	2.4															
												1.4	38700	1220	20200	2.7															
												0.82	69000	2129	11100	1.00															
0.96		58300	1813	11800	1.20																										
												1.1	52200	1590	12200	1.35	FA 107R77	DRE 80M4	600	411											
												1.2	46900	1436	12500	1.50	FAF 107R77	DRE 80M4	650	411											
												1.4	41000	1263	12800	1.70	F 107R77	DRE 80M4	640	411											
												1.5	38600	1193	13000	1.80	FF 107R77	DRE 80M4	700	411											
												1.7	32600	1015	13300	2.1															
												1.9	29500	923	13400	2.4															
												2.2	25300	800	13600	2.7															

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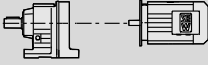




F..DRE/DRS
F..DRE/DRS [HP]

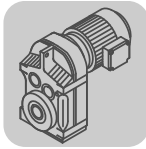
P _m [HP]	n _a [rpm]	T _a [lb-in]	i	F _{Ra} ¹⁾ [lb]	SEW f _B					m [lbs]		
1.0	0.84	67900	2068	11200	1.00							
	0.95	58400	1826	11800	1.15							
	1.1	52200	1597	12200	1.30							
	1.2	45500	1401	12600	1.50	FA	107R77	DRE	80M4	620	411	
	1.4	39700	1243	12900	1.70	FAF	107R77	DRE	80M4	670	411	
	1.6	35500	1087	13100	1.90	F	107R77	DRE	80M4	660	411	
	1.8	30400	950	13400	2.2	FF	107R77	DRE	80M4	720	411	
	2.1	26400	834	13600	2.6							
	2.4	23100	736	13700	2.9							
	1.7	33300	1023	7050	1.15	FA	97R57	DRE	80M4	410	411	
					FAF	97R57	DRE	80M4	460	411		
					F	97R57	DRE	80M4	425	411		
					FF	97R57	DRE	80M4	500	411		
1.7	34200	1022	7000	1.10								
1.9	29300	898	7320	1.30								
2.2	25900	784	7520	1.45	FA	97R57	DRE	80M4	420	411		
2.5	22500	690	7710	1.70	FAF	97R57	DRE	80M4	470	411		
2.9	19800	605	7850	1.90	F	97R57	DRE	80M4	440	411		
3.3	17200	529	7970	2.2	FF	97R57	DRE	80M4	510	411		
3.7	15200	467	8070	2.5								
4.3	13000	406	8160	2.9								
2.0	30200	892	7260	1.25								
2.3	25600	760	7540	1.50	FA	97R57	DRE	80M4	410	411		
2.6	22400	667	7710	1.70	FAF	97R57	DRE	80M4	455	411		
3.1	19000	569	7890	2.0	F	97R57	DRE	80M4	425	411		
3.4	17000	510	7980	2.2	FF	97R57	DRE	80M4	495	411		
3.7	15700	473	8040	2.4								
4.3	13300	403	8150	2.9								
2.3	24500	748	5350	1.10	FA	87R57	DRE	80M4	275	411		
					FAF	87R57	DRE	80M4	300	411		
					F	87R57	DRE	80M4	285	411		
					FF	87R57	DRE	80M4	320	411		
2.2	25600	780	5210	1.05								
2.6	21900	674	5590	1.20	FA	87R57	DRE	80M4	275	411		
2.9	20000	609	5760	1.35	FAF	87R57	DRE	80M4	305	411		
3.4	16800	515	6000	1.55	F	87R57	DRE	80M4	290	411		
3.8	14800	452	6150	1.80	FF	87R57	DRE	80M4	325	411		
5.0	11100	345	6380	2.4								
5.8	9630	300	6470	2.8								
2.6	22400	662	5550	1.20								
2.9	20000	592	5760	1.35	FA	87R57	DRE	80M4	270	411		
3.4	17500	519	5960	1.50	FAF	87R57	DRE	80M4	300	411		
3.7	15700	468	6080	1.70	F	87R57	DRE	80M4	285	411		
4.4	13300	398	6250	2.0	FF	87R57	DRE	80M4	315	411		
5.0	11600	350	6350	2.3								
5.5	10400	315	6420	2.5								
6.2	9290	281	6490	2.9								
4.7	12200	367	3700	1.10	FA	77R37	DRE	80M4	165	411		
5.4	10800	323	3900	1.25	FAF	77R37	DRE	80M4	175	411		
6.2	9300	280	4070	1.45	F	77R37	DRE	80M4	170	411		
7.0	8240	247	4170	1.60	FF	77R37	DRE	80M4	195	411		
7.9	7330	221	4250	1.80								
8.8	6550	199	4300	2.0								
6.0	9720	292	4020	1.00	FA	77R37	DRE	80M4	160	411		
					FAF	77R37	DRE	80M4	175	411		
					F	77R37	DRE	80M4	170	411		
					FF	77R37	DRE	80M4	190	411		
8.5	6790	205	2420	1.05	FA	67R37	DRE	80M4	115	411		
10.0	5780	175	2600	1.25	FAF	67R37	DRE	80M4	130	411		
					F	67R37	DRE	80M4	120	411		
					FF	67R37	DRE	80M4	135	411		
8.7	6680	200	2440	1.10	FA	67R37	DRE	80M4	110	411		
9.9	5860	176	2590	1.25	FAF	67R37	DRE	80M4	125	411		
					F	67R37	DRE	80M4	115	411		
					FF	67R37	DRE	80M4	130	411		
11	5110	155	2100	1.05	FA	57R37	DRE	80M4	105	411		
					FAF	57R37	DRE	80M4	115	411		
					F	57R37	DRE	80M4	105	411		
					FF	57R37	DRE	80M4	120	411		

reducer.



P_m [HP]	n_a [rpm]	T_a [lb-in]	i	$F_{Ra}^{1)}$ [lb]	SEW f_B		m [lbs]		
1.0	11	5080	152	2110	1.05	FA 57R37 DRE 80M4	105	411	
	13	4470	134	2220	1.20	FAF 57R37 DRE 80M4 F 57R37 DRE 80M4 FF 57R37 DRE 80M4	115 105 120	411 411 411	
	4.1	15300	276.77	8060	2.5	FA 97 DRE 90L6	385	393	
	4.5	14000	253.41	8120	2.7	FAF 97 DRE 90L6 F 97 DRE 90L6 FF 97 DRE 90L6	430 400 475	392 391 392	
	4.2	14900	270.68	6140	1.75	FA 87 DRE 90L6	245	388	
	4.5	14100	255.37	6200	1.90	FAF 87 DRE 90L6	270	387	
	5.0	12600	228.93	6290	2.1	F 87 DRE 90L6	255	386	
	5.8	10900	197.20	6400	2.4	FF 87 DRE 90L6	290	387	
	6.4	9960	179.97	6450	2.7				
	6.4	9850	270.68	6460	2.7	FA 87 DRE 80M4	230	388	
	6.8	9300	255.37	6490	2.8	FAF 87 DRE 80M4 F 87 DRE 80M4 FF 87 DRE 80M4	255 240 275	387 386 387	
	5.8	10900	198.31	3870	1.20				
	6.1	10400	188.40	3940	1.25				
	6.9	9210	166.47	4080	1.45				
	8.0	7870	142.27	4200	1.70	FA 77 DRE 90L6	155	383	
	8.8	7210	130.42	4260	1.85	FAF 77 DRE 90L6	170	382	
	10	6330	114.45	4320	2.1	F 77 DRE 90L6	165	381	
	11	6000	108.46*	4340	2.2	FF 77 DRE 90L6	190	382	
	12	5250	94.93	4380	2.5				
	13	4730	85.52	4410	2.8				
	7.7	8220	225.79	4170	1.60				
	8.8	7220	198.31	4260	1.85	FA 77 DRE 80M4	145	383	
	9.2	6860	188.40	4280	1.95	FAF 77 DRE 80M4	155	382	
	10	6060	166.47	4340	2.2	F 77 DRE 80M4	150	381	
	12	5180	142.27	4390	2.6	FF 77 DRE 80M4	175	382	
	13	4740	130.42	4410	2.8				
	9.5	6680	120.79	2440	1.10				
	10	6030	109.04	2560	1.20				
	12	5300	95.94	2670	1.35	FA 67 DRE 90L6	105	378	
	13	5010	90.59	2720	1.45	FAF 67 DRE 90L6	120	377	
	14	4410	79.76	2790	1.65	F 67 DRE 90L6	110	376	
	17	3740	67.65	2860	1.95	FF 67 DRE 90L6	125	377	
	19	3370	61.07	2890	2.2				
	21	2970	53.73	2920	2.4				
	23	2800	50.74	2920	2.6				
	8.9	7110	195.39	2350	1.00				
	10	6220	170.85	2530	1.15				
	11	5910	162.31	2580	1.25				
	12	5180	142.40	2690	1.40	FA 67 DRE 80M4	90	378	
	14	4390	120.79	2790	1.65	FAF 67 DRE 80M4	105	377	
	16	3970	109.04	2840	1.85	F 67 DRE 80M4	96	376	
	18	3490	95.94	2880	2.1	FF 67 DRE 80M4	110	377	
	19	3290	90.59	2900	2.2				
	22	2900	79.76	2920	2.5				
	26	2460	67.65	2920	3.0				
	18	3540	195.39	2880	2.0	FA 67 DRE 80M2	90	378	
	20	3100	170.85	2920	2.3	FAF 67 DRE 80M2	105	377	
	22	2940	162.31	2920	2.5	F 67 DRE 80M2	96	376	
	25	2580	142.40	2920	2.8	FF 67 DRE 80M2	110	377	
	12	5170	93.47	2090	1.05				
	14	4610	83.46	2200	1.15				
	16	4030	72.98	2300	1.30				
	17	3770	68.22	2340	1.40	FA 57 DRE 90L6	98	373	
	19	3260	58.97	2420	1.65	FAF 57 DRE 90L6	110	372	
	23	2770	50.10	2490	1.90	F 57 DRE 90L6	98	371	
	26	2470	44.73	2530	2.1	FF 57 DRE 90L6	110	372	
	30	2110	38.21	2570	2.5				
	32	1980	35.79	2540	2.7				

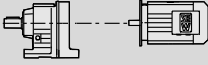

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F..DRE/DRS
F..DRE/DRS [HP]

P_m [HP]	n_a [rpm]	T_a [lb-in]	i	$F_{Ra}^{1)}$ [lb]	SEW f_B		m [lbs]		
1.0	13	4950	136.16	2130	1.05				
	14	4630	127.27	2190	1.15				
	16	4000	110.01	2300	1.35				
	19	3400	93.47	2400	1.55	FA 57	DRE 80M4	81	373
	21	3030	83.46	2450	1.75	FAF 57	DRE 80M4	93	372
	24	2650	72.98	2500	2.0	F 57	DRE 80M4	82	371
	26	2480	68.22	2530	2.1	FF 57	DRE 80M4	96	372
	30	2140	58.97	2570	2.5				
	35	1820	50.10	2490	2.9				
	22	2850	157.09	2480	1.85	FA 57	DRE 80M2	81	373
26	2470	136.16	2530	2.2	FAF 57	DRE 80M2	93	372	
27	2310	127.27	2550	2.3	F 57	DRE 80M2	82	371	
32	1990	110.01	2540	2.7	FF 57	DRE 80M2	96	372	
38	1650	29.94	2420	2.9	FA 57	DRE 90L6	96	373	
					FAF 57	DRE 90L6	110	372	
					F 57	DRE 90L6	97	371	
					FF 57	DRE 90L6	110	372	
20	3120	56.49	1460	1.15					
24	2650	48.00*	1590	1.35	FA 47	DRE 90L6	80	368	
27	2370	42.86	1650	1.50	FAF 47	DRE 90L6	86	367	
31	2020	36.61	1710	1.75	F 47	DRE 90L6	82	366	
33	1890	34.29	1730	1.85	FF 47	DRE 90L6	89	367	
40	1590	28.88	1770	2.2					
19	3250	89.29	1430	1.10					
22	2900	79.72	1530	1.20					
26	2480	68.09	1620	1.45	FA 47	DRE 80M4	65	368	
27	2380	65.36	1640	1.50	FAF 47	DRE 80M4	71	367	
31	2050	56.49	1700	1.70	F 47	DRE 80M4	67	366	
36	1740	48.00*	1750	2.0	FF 47	DRE 80M4	74	367	
41	1560	42.86	1760	2.3					
48	1330	36.61	1700	2.6					
51	1240	34.29	1670	2.8					
23	2720	150.06	1570	1.30					
27	2360	130.07	1650	1.50					
29	2200	121.57	1680	1.60	FA 47	DRE 80M2	65	368	
33	1900	105.09	1730	1.85	FAF 47	DRE 80M2	71	367	
39	1620	89.29	1770	2.2	F 47	DRE 80M2	67	366	
44	1440	79.72	1730	2.4	FF 47	DRE 80M2	74	367	
51	1230	68.09	1660	2.9					
53	1180	65.36	1650	3.0					
37	1700	30.86	1750	2.1	FA 47	DRE 90L6	79	368	
39	1620	29.32	1770	2.2	FAF 47	DRE 90L6	84	367	
45	1420	25.72	1720	2.5	F 47	DRE 90L6	80	366	
52	1200	21.82	1650	2.9	FF 47	DRE 90L6	87	367	
36	1750	31.69	970	1.00	FA 37	DRE 90L6	70	363	
41	1550	28.09	1040	1.15	FAF 37	DRE 90L6	73	362	
48	1320	23.88	1020	1.35	F 37	DRE 90L6	71	361	
					FF 37	DRE 90L6	75	362	
37	1710	47.02	990	1.05					
40	1590	43.83	1020	1.10					
45	1390	38.31	1030	1.25	FA 37	DRE 80M4	55	363	
48	1300	35.91	1020	1.35	FAF 37	DRE 80M4	58	362	
55	1150	31.69	1000	1.55	F 37	DRE 80M4	56	361	
62	1020	28.09	980	1.75	FF 37	DRE 80M4	60	362	
73	860	23.88	950	2.0					
40	1570	86.53	1030	1.15					
43	1460	80.65	1040	1.20					
50	1280	70.50	1020	1.40					
53	1190	66.09	1010	1.45					
60	1050	58.32	990	1.65	FA 37	DRE 80M2	55	363	
64	990	54.54	970	1.80	FAF 37	DRE 80M2	58	362	
68	930	51.70	960	1.90	F 37	DRE 80M2	56	361	
74	850	47.02	940	2.1	FF 37	DRE 80M2	60	362	
80	795	43.83	930	2.2					
91	695	38.31	900	2.5					
97	650	35.91	890	2.7					

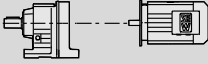


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P_m [HP]	n_a [rpm]	T_a [lb-in]	i	$F_{Ra}^{1)}$ [lb]	SEW f_B		m [lbs]	
1.0	56	1130	20.57	1000	1.55			
	59	1060	19.27	990	1.65			
	67	940	17.03	960	1.90	FA 37	DRE 90L6	69 363
	72	870	15.81	950	2.0	FAF 37	DRE 90L6	72 362
	80	790	14.33	930	2.2	F 37	DRE 90L6	70 361
	89	710	12.87	910	2.5	FF 37	DRE 90L6	74 362
	103	610	11.08	880	2.7			
	110	575	10.42	860	2.8			
	74	860	23.63	950	2.1	FA 37	DRE 80M4	54 363
	85	745	20.57	920	2.4	FAF 37	DRE 80M4	57 362
90	700	19.27	910	2.5	F 37	DRE 80M4	55 361	
102	620	17.03	880	2.8	FF 37	DRE 80M4	59 362	
62	1020	56.62	655	1.10				
70	910	50.19	645	1.25	FA 27	DRE 80M2	41 359	
75	840	46.78	640	1.35	FAF 27	DRE 80M2	43 358	
85	740	40.89	625	1.55	F 27	DRE 80M2	42 357	
91	695	38.33	620	1.65	FF 27	DRE 80M2	44 358	
103	610	33.83	605	1.85				
57	1110	20.15	660	1.05				
61	1040	18.84	655	1.10				
70	900	16.28	645	1.30				
83	765	13.84	630	1.50	FA 27	DRE 90L6	55 359	
93	680	12.35	620	1.70	FAF 27	DRE 90L6	57 358	
109	580	10.55	600	1.95	F 27	DRE 90L6	57 357	
116	545	9.88	595	2.1	FF 27	DRE 90L6	58 358	
122	520	9.40	575	2.2				
141	445	8.13	560	2.4				
166	380	6.91	540	2.6				
186	340	6.17	525	2.8				
75	840	23.25	640	1.35				
86	730	20.15	625	1.55	FA 27	DRE 80M4	40 359	
92	685	18.84	620	1.70	FAF 27	DRE 80M4	42 358	
107	590	16.28	605	1.95	F 27	DRE 80M4	42 357	
126	500	13.84	585	2.3	FF 27	DRE 80M4	43 358	
141	445	12.35	570	2.6				
165	380	10.55	550	3.0				
150	420	23.25	560	2.7	FA 27	DRE 80M2	40 359	
					FAF 27	DRE 80M2	42 358	
					F 27	DRE 80M2	42 357	
					FF 27	DRE 80M2	43 358	
1.5	0.63	126200	2780	24700	1.25	FA 157R97	DRE 90M4	1710 411
						FAF 157R97	DRE 90M4	1840 411
						F 157R97	DRE 90M4	1760 411
						FF 157R97	DRE 90M4	1990 411
	0.72	111600	2427	25400	1.45			
	0.80	99100	2185	25900	1.60	FA 157R97	DRE 90M4	1700 411
	0.89	88200	1944	26400	1.80	FAF 157R97	DRE 90M4	1830 411
	1.0	79200	1674	26700	2.0	F 157R97	DRE 90M4	1750 411
	1.3	60800	1308	27000	2.6	FF 157R97	DRE 90M4	1990 411
	1.5	53700	1169	27000	3.0			
	0.85	98600	2038	20200	1.10			
	0.98	85900	1784	20200	1.25			
	1.1	77100	1606	20200	1.40	FA 127R77	DRE 90M4	960 411
	1.2	66700	1390	20200	1.60	FAF 127R77	DRE 90M4	1050 411
	1.4	58200	1220	20200	1.80	F 127R77	DRE 90M4	1040 411
	1.6	51800	1077	20200	2.0	FF 127R77	DRE 90M4	1140 411
	1.9	44300	930	20200	2.4			
	2.1	38900	820	20200	2.7			
	1.4	61200	1263	11600	1.15			
	1.5	57700	1193	11900	1.20	FA 107R77	DRE 90M4	610 411
1.7	48900	1015	12400	1.40	FAF 107R77	DRE 90M4	660 411	
1.9	44300	923	12700	1.55	F 107R77	DRE 90M4	650 411	
2.2	38100	800	13000	1.80	FF 107R77	DRE 90M4	710 411	
2.5	33000	696	13300	2.1				

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F..DRE/DRS
F..DRE/DRS [HP]

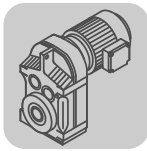
P_m [HP]	n_a [rpm]	T_a [lb-in]	i	$F_{Ra}^{1)}$ [lb]	SEW f_B		m [lbs]		
1.5	1.2	67900	1401	11200	1.00				
	1.4	59600	1243	11700	1.15				
	1.6	52900	1087	12100	1.30				
	1.8	45600	950	12600	1.50	FA 107R77	DRE 90M4	630	411
	2.1	39700	834	12900	1.70	FAF 107R77	DRE 90M4	680	411
	2.4	34900	736	13200	1.95	F 107R77	DRE 90M4	670	411
	2.7	30800	640	13400	2.2	FF 107R77	DRE 90M4	730	411
	3.1	26400	560	13600	2.6				
	3.6	23000	489	13700	2.9				
	2.7	31800	644	13300	2.2	FA 107R77	DRE 90M4	610	411
3.0	29100	591	13400	2.4	FAF 107R77	DRE 90M4	660	411	
3.4	25400	518	13600	2.7	F 107R77	DRE 90M4	650	411	
3.5	24000	491	13700	2.9	FF 107R77	DRE 90M4	710	411	
2.5	33500	690	7040	1.15					
2.9	29500	605	7310	1.30					
3.3	25600	529	7540	1.50	FA 97R57	DRE 90M4	430	411	
3.7	22600	467	7700	1.70	FAF 97R57	DRE 90M4	480	411	
4.3	19500	406	7860	1.95	F 97R57	DRE 90M4	450	411	
4.8	17500	363	7960	2.2	FF 97R57	DRE 90M4	520	411	
6.1	13800	285	8130	2.7					
2.3	38000	760	6720	1.00					
2.6	33200	667	7060	1.15					
3.1	28200	569	7380	1.35					
3.4	25300	510	7560	1.50	FA 97R57	DRE 90M4	420	411	
3.7	23300	473	7670	1.65	FAF 97R57	DRE 90M4	465	411	
4.3	19800	403	7850	1.90	F 97R57	DRE 90M4	435	411	
4.8	17700	361	7950	2.1	FF 97R57	DRE 90M4	510	411	
5.5	15400	317	8050	2.4					
6.3	13600	275	8130	2.8					
3.4	25100	515	5290	1.05					
3.8	22100	452	5580	1.20	FA 87R57	DRE 90M4	290	411	
5.0	16600	345	6020	1.60	FAF 87R57	DRE 90M4	315	411	
5.8	14400	300	6170	1.85	F 87R57	DRE 90M4	300	411	
7.0	11900	249	6330	2.2	FF 87R57	DRE 90M4	335	411	
3.4	25900	519	5000	1.00					
3.7	23300	468	5460	1.15					
4.4	19700	398	5780	1.35					
5.0	17300	350	5970	1.55	FA 87R57	DRE 90M4	280	411	
5.5	15500	315	6100	1.70	FAF 87R57	DRE 90M4	310	411	
6.2	13800	281	6210	1.90	F 87R57	DRE 90M4	295	411	
7.2	11900	240	6340	2.2	FF 87R57	DRE 90M4	330	411	
8.2	10400	211	6420	2.5					
9.0	9590	193	6470	2.8					
7.0	12100	247	3710	1.10	FA 77R37	DRE 90M4	170	411	
7.9	10800	221	3890	1.20	FAF 77R37	DRE 90M4	185	411	
8.8	9730	199	4020	1.35	F 77R37	DRE 90M4	180	411	
					FF 77R37	DRE 90M4	205	411	
6.3	14700	276.77	8090	2.6	FA 97	DRE 90M4	380	393	
6.9	13500	253.41	8140	2.8	FAF 97	DRE 90M4	425	392	
					F 97	DRE 90M4	395	391	
					FF 97	DRE 90M4	470	392	
6.4	14400	270.68	6170	1.85					
6.8	13600	255.37	6230	1.95	FA 87	DRE 90M4	240	388	
7.6	12200	228.93	6320	2.2	FAF 87	DRE 90M4	265	387	
8.8	10500	197.20	6420	2.5	F 87	DRE 90M4	250	386	
9.7	9610	179.97	6470	2.8	FF 87	DRE 90M4	285	387	
7.7	12000	225.79	3730	1.10					
8.8	10500	198.31	3920	1.25					
9.2	10000	188.40	3990	1.30					
10	8890	166.47	4110	1.50	FA 77	DRE 90M4	150	383	
12	7590	142.27	4230	1.75	FAF 77	DRE 90M4	165	382	
13	6960	130.42	4280	1.90	F 77	DRE 90M4	160	381	
15	6110	114.45	4330	2.2	FF 77	DRE 90M4	185	382	
16	5790	108.46*	4350	2.3					
18	5070	94.93	4390	2.6					
20	4560	85.52	4420	2.9					

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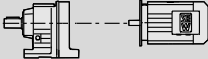



P _m [HP]	n _a [rpm]	T _a [lb-in]	i	F _{Ra} ¹⁾ [lb]	SEW f _B					m [lbs]	
						FA	FAF	DRE	90M2		
1.5	15	6040	225.79	4340	2.2	FA	77	DRE	90M2	150	383
	18	5310	198.31	4380	2.5	FAF	77	DRE	90M2	165	382
	18	5040	188.40	4400	2.6	F	77	DRE	90M2	160	381
	21	4450	166.47	4420	3.0	FF	77	DRE	90M2	185	382
	14	6450	120.79	2480	1.10						
	16	5820	109.04	2590	1.25						
	18	5120	95.94	2700	1.40						
	19	4830	90.59	2740	1.50	FA	67	DRE	90M4	100	378
	22	4260	79.76	2810	1.70	FAF	67	DRE	90M4	115	377
	26	3610	67.65	2870	2.0	F	67	DRE	90M4	105	376
	28	3260	61.07	2900	2.2	FF	67	DRE	90M4	120	377
	32	2870	53.73	2920	2.5						
	34	2710	50.74	2920	2.7						
	18	5230	195.39	2680	1.40						
	20	4570	170.85	2770	1.60						
	21	4340	162.31	2800	1.65	FA	67	DRE	90M2	100	378
	24	3810	142.40	2850	1.90	FAF	67	DRE	90M2	115	377
	29	3230	120.79	2910	2.2	F	67	DRE	90M2	105	376
	32	2920	109.04	2920	2.5	FF	67	DRE	90M2	120	377
	36	2560	95.94	2920	2.8						
38	2420	90.59	2920	3.0							
19	4990	93.47	2130	1.05							
21	4450	83.46	2220	1.20							
24	3890	72.98	2320	1.35	FA	57	DRE	90M4	92	373	
26	3640	68.22	2360	1.45	FAF	57	DRE	90M4	105	372	
30	3140	58.97	2430	1.70	F	57	DRE	90M4	92	371	
35	2670	50.10	2360	2.00	FF	57	DRE	90M4	105	372	
39	2380	44.73	2300	2.2							
46	2040	38.21	2210	2.6							
49	1910	35.79	2180	2.8							
22	4200	157.09	2270	1.25							
25	3640	136.16	2360	1.45							
27	3400	127.27	2390	1.55	FA	57	DRE	90M2	92	373	
32	2940	110.01	2410	1.80	FAF	57	DRE	90M2	105	372	
37	2500	93.47	2320	2.1	F	57	DRE	90M2	92	371	
42	2230	83.46	2260	2.4	FF	57	DRE	90M2	105	372	
48	1950	72.98	2190	2.7							
51	1820	68.22	2160	2.9							
51	1820	34.24	2160	2.4	FA	57	DRE	90M4	91	373	
					FAF	57	DRE	90M4	105	372	
					F	57	DRE	90M4	91	371	
					FF	57	DRE	90M4	105	372	
27	3490	65.36	1350	1.00							
31	3010	56.49	1500	1.15	FA	47	DRE	90M4	75	368	
36	2560	48.00*	1610	1.40	FAF	47	DRE	90M4	81	367	
41	2280	42.86	1630	1.55	F	47	DRE	90M4	76	366	
48	1950	36.61	1590	1.80	FF	47	DRE	90M4	83	367	
51	1830	34.29	1570	1.95							
60	1540	28.88	1510	2.3							
27	3480	130.07	1350	1.00							
29	3250	121.57	1430	1.10							
33	2810	105.09	1550	1.25	FA	47	DRE	90M2	75	368	
39	2390	89.29	1640	1.50	FAF	47	DRE	90M2	81	367	
44	2130	79.72	1610	1.65	F	47	DRE	90M2	76	366	
51	1820	68.09	1570	1.95	FF	47	DRE	90M2	83	367	
53	1750	65.36	1550	2.0							
61	1510	56.49	1510	2.3							
72	1280	48.00*	1450	2.8							
56	1640	30.86	1530	2.2	FA	47	DRE	90M4	73	368	
59	1560	29.32	1520	2.3	FAF	47	DRE	90M4	79	367	
68	1370	25.72	1470	2.6	F	47	DRE	90M4	75	366	
					FF	47	DRE	90M4	82	367	
55	1690	31.69	890	1.05	FA	37	DRE	90M4	64	363	
62	1500	28.09	880	1.20	FAF	37	DRE	90M4	67	362	
73	1270	23.88	860	1.40	F	37	DRE	90M4	65	361	
					FF	37	DRE	90M4	69	362	

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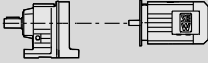



F..DRE/DRS
F..DRE/DRS [HP]

P_m [HP]	n_a [rpm]	T_a [lb-in]	i	$F_{Ra}^{1)}$ [lb]	SEW f_B		m [lbs]		
1.5	53	1770	66.09	890	1.00				
	60	1560	58.32	880	1.15				
	64	1460	54.54	880	1.20				
	67	1380	51.70	870	1.30				
	74	1250	47.02	860	1.40	FA 37	DRE 90M2	64	363
	79	1170	43.83	850	1.50	FAF 37	DRE 90M2	67	362
	91	1020	38.31	840	1.70	F 37	DRE 90M2	65	361
	97	960	35.91	830	1.85	FF 37	DRE 90M2	69	362
	109	840	31.69	810	2.1				
	124	750	28.09	790	2.4				
	145	635	23.88	765	2.8				
	74	1260	23.63	860	1.40				
	85	1090	20.57	850	1.60				
	90	1020	19.27	840	1.70	FA 37	DRE 90M4	64	363
	102	900	17.03	820	1.95	FAF 37	DRE 90M4	67	362
110	840	15.81	810	2.1	F 37	DRE 90M4	65	361	
121	765	14.33	795	2.3	FF 37	DRE 90M4	69	362	
135	685	12.87	775	2.6					
157	590	11.08	750	2.8					
167	555	10.42	740	2.9					
147	630	23.63	760	2.8	FA 37	DRE 90M2	64	363	
					FAF 37	DRE 90M2	67	362	
					F 37	DRE 90M2	65	361	
					FF 37	DRE 90M2	69	362	
85	1090	40.89	550	1.05	FA 27	DRE 90M2	50	359	
91	1020	38.33	545	1.10	FAF 27	DRE 90M2	52	358	
103	900	33.83	540	1.25	F 27	DRE 90M2	52	357	
					FF 27	DRE 90M2	53	358	
86	1070	20.15	550	1.05					
92	1000	18.84	545	1.15					
107	860	16.28	540	1.30					
126	735	13.84	530	1.55	FA 27	DRE 90M4	50	359	
141	660	12.35	525	1.75	FAF 27	DRE 90M4	51	358	
165	560	10.55	510	2.0	F 27	DRE 90M4	51	357	
176	525	9.88	505	2.2	FF 27	DRE 90M4	53	358	
185	500	9.40	490	2.3					
214	430	8.13	475	2.5					
252	365	6.91	460	2.7					
282	325	6.17	450	2.9					
149	620	23.25	520	1.85	FA 27	DRE 90M2	50	359	
172	535	20.15	505	2.1	FAF 27	DRE 90M2	51	358	
184	500	18.84	500	2.3	F 27	DRE 90M2	51	357	
213	435	16.28	485	2.6	FF 27	DRE 90M2	53	358	
2.0	0.72	155900	2427	22800	1.00				
	0.80	139100	2185	23900	1.15				
	0.89	123700	1944	24800	1.30	FA 157R97	DRE 90L4	1710	411
	1.0	109900	1674	25500	1.45	FAF 157R97	DRE 90L4	1840	411
	1.3	84700	1308	26500	1.90	F 157R97	DRE 90L4	1750	411
	1.5	75100	1169	26800	2.1	FF 157R97	DRE 90L4	1990	411
	1.8	60000	953	27000	2.6				
	1.1	106500	1606	20200	1.00				
	1.2	92100	1390	20200	1.15				
	1.4	80500	1220	20200	1.30				
	1.6	71500	1077	20200	1.50	FA 127R77	DRE 90L4	970	411
	1.9	61300	930	20200	1.75	FAF 127R77	DRE 90L4	1050	411
	2.1	53900	820	20200	1.95	F 127R77	DRE 90L4	1050	411
	2.4	47600	727	20200	2.2	FF 127R77	DRE 90L4	1150	411
	2.7	43000	648	20200	2.5				
3.2	36400	549	20200	2.9					
1.7	67400	1015	11200	1.05	FA 107R77	DRE 90L4	620	411	
1.9	61100	923	11600	1.15	FAF 107R77	DRE 90L4	660	411	
2.2	52700	800	12200	1.30	F 107R77	DRE 90L4	650	411	
2.5	45700	696	12600	1.50	FF 107R77	DRE 90L4	710	411	

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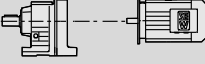

P_m [HP]	n_a [rpm]	T_a [lb-in]	i	$F_{Ra}^{1)}$ [lb]	SEW f_B		m [lbs]	
2.0	1.8	62900	950	11500	1.10			
	2.1	55000	834	12000	1.25			
	2.4	48300	736	12400	1.40	FA 107R77 DRE 90L4	640	411
	2.7	42500	640	12700	1.60	FAF 107R77 DRE 90L4	680	411
	3.1	36700	560	13100	1.85	F 107R77 DRE 90L4	670	411
	3.6	32000	489	13300	2.1	FF 107R77 DRE 90L4	730	411
	4.0	28900	436	13500	2.4			
	4.7	24500	370	13700	2.8			
	2.7	43700	644	12700	1.60			
	3.0	40000	591	12900	1.75	FA 107R77 DRE 90L4	610	411
	3.4	35000	518	13100	2.00	FAF 107R77 DRE 90L4	660	411
	3.5	33100	491	13200	2.1	F 107R77 DRE 90L4	650	411
	4.0	28900	430	13500	2.4	FF 107R77 DRE 90L4	710	411
	4.5	25900	387	13600	2.7			
	3.3	35300	529	6920	1.10			
	3.7	31200	467	7200	1.20			
	4.3	26900	406	7460	1.40	FA 97R57 DRE 90L4	440	411
	4.8	24100	363	7620	1.55	FAF 97R57 DRE 90L4	485	411
	6.1	19000	285	7890	2.00	F 97R57 DRE 90L4	455	411
	7.1	16400	245	8010	2.3	FF 97R57 DRE 90L4	530	411
	8.4	13900	208	8120	2.7			
	8.9	12900	195	8160	2.9			
	3.4	34700	510	6960	1.10			
	3.7	32100	473	7140	1.20			
	4.3	27200	403	7440	1.40	FA 97R57 DRE 90L4	425	411
	4.8	24400	361	7610	1.55	FAF 97R57 DRE 90L4	470	411
5.5	21300	317	7770	1.80	F 97R57 DRE 90L4	440	411	
6.3	18700	275	7900	2.0	FF 97R57 DRE 90L4	510	411	
7.2	16400	242	8010	2.3				
5.0	22900	345	5500	1.15	FA 87R57 DRE 90L4	295	411	
5.8	19900	300	5760	1.35	FAF 87R57 DRE 90L4	320	411	
7.0	16500	249	6030	1.60	F 87R57 DRE 90L4	305	411	
					FF 87R57 DRE 90L4	340	411	
5.0	23700	350	5420	1.10				
5.5	21400	315	5640	1.25	FA 87R57 DRE 90L4	285	411	
6.2	19000	281	5840	1.40	FAF 87R57 DRE 90L4	315	411	
7.2	16300	240	6040	1.60	F 87R57 DRE 90L4	300	411	
8.2	14300	211	6180	1.85	FF 87R57 DRE 90L4	335	411	
9.0	13100	193	6260	2.0				
6.3	20100	276.77	7830	1.90	FA 97 DRE 90L4	385	393	
6.9	18400	253.41	7920	2.1	FAF 97 DRE 90L4	430	392	
7.8	16300	223.88	8020	2.3	F 97 DRE 90L4	400	391	
9.2	13800	189.92	8130	2.8	FF 97 DRE 90L4	475	392	
10.0	12700	174.87	8170	3.0				
6.4	19700	270.68	5780	1.35				
6.8	18600	255.37	5870	1.45				
7.6	16600	228.93	6020	1.60	FA 87 DRE 90L4	245	388	
8.8	14300	197.20	6180	1.85	FAF 87 DRE 90L4	270	387	
9.7	13100	179.97	6260	2.0	F 87 DRE 90L4	255	386	
11	11600	159.61	6350	2.3	FF 87 DRE 90L4	290	387	
13	9770	134.16	6460	2.7				
14	8980	123.29	6500	3.0				
10	12100	166.47	3720	1.10				
12	10300	142.27	3950	1.30				
13	9500	130.42	4050	1.40				
15	8330	114.45	4160	1.60	FA 77 DRE 90L4	155	383	
16	7900	108.46*	4200	1.70	FAF 77 DRE 90L4	170	382	
18	6910	94.93	4280	1.90	F 77 DRE 90L4	165	381	
20	6220	85.52	4330	2.1	FF 77 DRE 90L4	190	382	
23	5460	75.02	4370	2.4				
24	5280	72.50	4380	2.5				
26	4840	66.46	4410	2.7				

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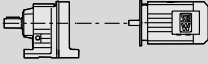




F..DRE/DRS
F..DRE/DRS [HP]

P_m [HP]	n_a [rpm]	T_a [lb-in]	i	$F_{Ra}^{1)}$ [lb]	SEW f_B		m [lbs]		
2.0	18	6980	95.94	2380	1.05				
	19	6590	90.59	2460	1.10				
	22	5800	79.76	2600	1.25				
	26	4920	67.65	2730	1.45	FA 67	DRE 90L4	105 378	
	28	4440	61.07	2790	1.65	FAF 67	DRE 90L4	120 377	
	32	3910	53.73	2840	1.85	F 67	DRE 90L4	110 376	
	34	3690	50.74	2860	1.95	FF 67	DRE 90L4	125 377	
	40	3140	43.20	2910	2.3				
	44	2850	39.26	2920	2.4				
	51	2470	34.01	2920	2.6				
	48	2640	36.30	2920	2.7	FA 67	DRE 90L4	105 378	
						FAF 67	DRE 90L4	115 377	
						F 67	DRE 90L4	110 376	
						FF 67	DRE 90L4	125 377	
	24	5310	72.98	2070	1.00				
	26	4960	68.22	2130	1.05				
	30	4290	58.97	2250	1.25	FA 57	DRE 90L4	98 373	
	35	3640	50.10	2210	1.45	FAF 57	DRE 90L4	110 372	
	39	3250	44.73	2170	1.65	F 57	DRE 90L4	98 371	
	46	2780	38.21	2100	1.90	FF 57	DRE 90L4	110 372	
	49	2600	35.79	2080	2.0				
	58	2190	30.15	2000	2.4				
	58	2180	29.94	2000	2.2	FA 57	DRE 90L4	96 373	
	61	2070	28.45	1970	2.3	FAF 57	DRE 90L4	110 372	
	70	1810	24.96	1910	2.8	F 57	DRE 90L4	97 371	
						FF 57	DRE 90L4	110 372	
	36	3490	48.00*	1350	1.00	FA 47	DRE 90L4	80 368	
	41	3120	42.86	1470	1.15	FAF 47	DRE 90L4	86 367	
	48	2660	36.61	1460	1.35	F 47	DRE 90L4	82 366	
	51	2490	34.29	1450	1.40	FF 47	DRE 90L4	89 367	
	60	2100	28.88	1420	1.70				
	56	2240	30.86	1430	1.55				
	59	2130	29.32	1420	1.65	FA 47	DRE 90L4	79 368	
	68	1870	25.72	1390	1.90	FAF 47	DRE 90L4	84 367	
	80	1580	21.82	1350	2.2	F 47	DRE 90L4	80 366	
	88	1430	19.70	1320	2.5	FF 47	DRE 90L4	87 367	
	100	1260	17.33	1280	2.8				
	106	1190	16.36	1270	3.0				
	73	1730	23.88	765	1.00	FA 37	DRE 90L4	70 363	
						FAF 37	DRE 90L4	73 362	
						F 37	DRE 90L4	71 361	
						FF 37	DRE 90L4	75 362	
	85	1490	20.57	760	1.20				
	90	1400	19.27	760	1.25				
	102	1240	17.03	750	1.45				
110	1150	15.81	745	1.55					
121	1040	14.33	735	1.70					
135	930	12.87	725	1.90					
157	800	11.08	705	2.1	FA 37	DRE 90L4	69 363		
167	755	10.42	700	2.2	FAF 37	DRE 90L4	72 362		
194	650	8.97	680	2.4	F 37	DRE 90L4	70 361		
217	580	8.01	665	2.6	FF 37	DRE 90L4	74 362		
234	540	7.44	640	2.4					
258	490	6.74	630	2.5					
288	440	6.05	615	2.7					
334	375	5.21	595	2.9					
355	355	4.90	585	3.0					
126	1000	13.84	470	1.15					
141	890	12.35	470	1.30					
165	765	10.55	465	1.50					
176	720	9.88	460	1.60					
185	680	9.40	440	1.70	FA 27	DRE 90L4	55 359		
214	590	8.13	435	1.85	FAF 27	DRE 90L4	57 358		
252	500	6.91	430	2.0	F 27	DRE 90L4	57 357		
282	445	6.17	420	2.2	FF 27	DRE 90L4	58 358		
330	380	5.27	410	2.3					
353	355	4.93	405	2.4					
419	300	4.16	390	2.5					

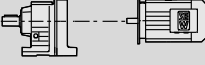

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P_m [HP]	n_a [rpm]	T_a [lb-in]	i	$F_{Ra}^{1)}$ [lb]	SEW f_B		m [lbs]		
3.0	1.2	131300	1441	24400	1.20	FA 157R97 DRE 100L4	1730	411	
						FAF 157R97 DRE 100L4	1860	411	
						F 157R97 DRE 100L4	1780	411	
						FF 157R97 DRE 100L4	2010	411	
1.3	127000	1308	24600	1.25	1.25				
						FA 157R97 DRE 100L4	1730	411	
						FAF 157R97 DRE 100L4	1860	411	
						F 157R97 DRE 100L4	1770	411	
						FF 157R97 DRE 100L4	2010	411	
3.6	45800	483	20200	2.3	2.3	FA 127R87 DRE 100L4	1030	411	
						FAF 127R87 DRE 100L4	1110	411	
						F 127R87 DRE 100L4	1110	411	
4.6	35800	374	20200	3.0	3.0	FF 127R87 DRE 100L4	1210	411	
1.6	106300	1077	20200	1.00	1.00				
						FA 127R77 DRE 100L4	990	411	
						FAF 127R77 DRE 100L4	1070	411	
						F 127R77 DRE 100L4	1070	411	
						FF 127R77 DRE 100L4	1170	411	
2.5	68200	696	11200	1.00	1.00	FA 107R77 DRE 100L4	630	411	
						FAF 107R77 DRE 100L4	680	411	
						F 107R77 DRE 100L4	670	411	
						FF 107R77 DRE 100L4	730	411	
2.7	63200	640	11500	1.05	1.05				
						FA 107R77 DRE 100L4	650	411	
						FAF 107R77 DRE 100L4	700	411	
						F 107R77 DRE 100L4	690	411	
						FF 107R77 DRE 100L4	750	411	
2.7	64800	644	11400	1.05	1.05				
						FA 107R77 DRE 100L4	630	411	
						FAF 107R77 DRE 100L4	680	411	
						F 107R77 DRE 100L4	670	411	
						FF 107R77 DRE 100L4	730	411	
4.8	35900	363	6880	1.05	1.05	FA 97R57 DRE 100L4	455	411	
						FAF 97R57 DRE 100L4	500	411	
						F 97R57 DRE 100L4	470	411	
						FF 97R57 DRE 100L4	540	411	
4.8	36200	361	6850	1.05	1.05	FA 97R57 DRE 100L4	440	411	
						FAF 97R57 DRE 100L4	490	411	
						F 97R57 DRE 100L4	460	411	
						FF 97R57 DRE 100L4	530	411	
7.0	24500	249	5350	1.10	1.10	FA 87R57 DRE 100L4	310	411	
						FAF 87R57 DRE 100L4	340	411	
						F 87R57 DRE 100L4	325	411	
						FF 87R57 DRE 100L4	360	411	
7.2	24200	240	5380	1.10	1.10	FA 87R57 DRE 100L4	305	411	
						FAF 87R57 DRE 100L4	330	411	
						F 87R57 DRE 100L4	315	411	
						FF 87R57 DRE 100L4	350	411	
6.8	27200	254.40*	13500	2.5	2.5	FA 107 DRE 100L4	570	398	
						FAF 107 DRE 100L4	620	397	
8.1	23000	215.37	13700	2.9	2.9	F 107 DRE 100L4	610	396	
						FF 107 DRE 100L4	670	397	

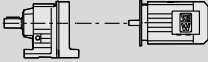

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F..DRE/DRS
F..DRE/DRS [HP]

P_m [HP]	n_a [rpm]	T_a [lb-in]	i	$F_{Ra}^{1)}$ [lb]	SEW f_B		m [lbs]	
3.0	6.3	29600	276.77	7300	1.30			
	6.8	27100	253.41	7450	1.40			
	7.8	23900	223.88	7630	1.60	FA 97	DRE 100L4	400 393
	9.1	20300	189.92	7820	1.85	FAF 97	DRE 100L4	450 392
	9.9	18700	174.87	7900	2.0	F 97	DRE 100L4	420 391
	11	16700	156.30	8000	2.3	FF 97	DRE 100L4	490 392
	12	15000	140.71	8070	2.5			
	14	13600	127.42	8130	2.8			
	7.6	24500	228.93	5350	1.10			
	8.8	21100	197.20	5660	1.25			
	9.6	19200	179.97	5820	1.40	FA 87	DRE 100L4	260 388
	11	17000	159.61	5990	1.55	FAF 87	DRE 100L4	290 387
	13	14300	134.16	6180	1.85	F 87	DRE 100L4	275 386
	14	13200	123.29	6260	2.0	FF 87	DRE 100L4	310 387
16	11700	109.49	6350	2.3				
18	10400	97.89	6310	2.5				
20	9420	88.01	6160	2.8				
15	12200	114.45	3700	1.10				
16	11600	108.46*	3790	1.15				
18	10100	94.93	3970	1.30				
20	9160	85.52	4080	1.45	FA 77	DRE 100L4	175 383	
23	8030	75.02	4190	1.65	FAF 77	DRE 100L4	190 382	
24	7760	72.50	4210	1.70	F 77	DRE 100L4	180 381	
26	7110	66.46	4260	1.85	FF 77	DRE 100L4	205 382	
30	6240	58.32	4330	2.1				
31	5920	55.27	4350	2.2				
36	5180	48.37	4390	2.6				
40	4660	43.58	4410	2.8				
47	3910	36.58	4450	2.5	FA 77	DRE 100L4	170 383	
					FAF 77	DRE 100L4	185 382	
					F 77	DRE 100L4	180 381	
					FF 77	DRE 100L4	205 382	
26	7240	67.65	2320	1.00				
28	6540	61.07	2470	1.10	FA 67	DRE 100L4	125 378	
32	5750	53.73	2610	1.25	FAF 67	DRE 100L4	135 377	
34	5430	50.74	2660	1.35	F 67	DRE 100L4	130 376	
40	4620	43.20	2760	1.55	FF 67	DRE 100L4	145 377	
44	4200	39.26	2810	1.65				
51	3640	34.01	2870	1.80				
54	3430	32.08	2890	2.1	FA 67	DRE 100L4	120 378	
63	2930	27.41	2920	2.5	FAF 67	DRE 100L4	135 377	
69	2690	25.13	2920	2.7	F 67	DRE 100L4	125 376	
					FF 67	DRE 100L4	140 377	
39	4790	44.73	1940	1.10	FA 57	DRE 100L4	115 373	
45	4090	38.21	1910	1.30	FAF 57	DRE 100L4	125 372	
48	3830	35.79	1890	1.40	F 57	DRE 100L4	115 371	
58	3220	30.15	1850	1.60	FF 57	DRE 100L4	130 372	
70	2670	24.96	1790	1.90	FA 57	DRE 100L4	115 373	
82	2260	21.17	1730	2.3	FAF 57	DRE 100L4	125 372	
91	2040	19.11	1700	2.6	F 57	DRE 100L4	115 371	
103	1800	16.81	1650	3.0	FF 57	DRE 100L4	130 372	
60	3090	28.88	1250	1.15	FA 47	DRE 100L4	98 368	
					FAF 47	DRE 100L4	105 367	
					F 47	DRE 100L4	100 366	
					FF 47	DRE 100L4	105 367	
67	2750	25.72	1240	1.30				
80	2330	21.82	1220	1.50				
88	2110	19.70	1200	1.70	FA 47	DRE 100L4	96 368	
100	1850	17.33	1180	1.90	FAF 47	DRE 100L4	100 367	
106	1750	16.36	1170	2.0	F 47	DRE 100L4	98 366	
125	1490	13.93	1140	2.4	FF 47	DRE 100L4	105 367	
137	1350	12.66	1120	2.6				

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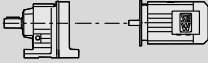




P_m [HP]	n_a [rpm]	T_a [lb-in]	i	$F_{Ra}^{1)}$ [lb]	SEW f_B		m [lbs]		
3.0	121	1530	14.33	635	1.15				
	135	1370	12.87	630	1.30				
	157	1180	11.08	630	1.40				
	166	1110	10.42	625	1.45				
	193	960	8.97	615	1.60	FA 37	DRE 100L4	87	363
	217	850	8.01	605	1.75	FAF 37	DRE 100L4	90	362
	257	720	6.74	575	1.70	F 37	DRE 100L4	88	361
	287	645	6.05	565	1.85	FF 37	DRE 100L4	92	362
	333	555	5.21	550	2.00				
	354	520	4.90	545	2.0				
	411	450	4.22	530	2.2				
	460	400	3.77	520	2.3				
	164	1130	10.55	385	1.00				
	176	1050	9.88	385	1.10				
	213	870	8.13	365	1.25	FA 27	DRE 100L4	73	359
	251	735	6.91	370	1.35	FAF 27	DRE 100L4	75	358
	281	660	6.17	370	1.45	F 27	DRE 100L4	74	357
	329	560	5.27	365	1.55	FF 27	DRE 100L4	76	358
	352	525	4.93	365	1.60				
	417	445	4.16	355	1.75				
5.0	1.8	154900	953	22900	1.05				
	2.1	136600	845	24100	1.15	FA 157R97	DRE 100LC4	1730	411
	2.3	122900	764	24800	1.30	FAF 157R97	DRE 100LC4	1860	411
	2.6	109300	680	25500	1.45	F 157R97	DRE 100LC4	1780	411
	3.0	91900	576	26200	1.75	FF 157R97	DRE 100LC4	2010	411
	3.9	72200	446	26900	2.2				
	3.6	78300	483	20200	1.35				
	4.2	68200	418	20200	1.55				
	4.7	60900	374	20200	1.75	FA 127R87	DRE 100LC4	1040	411
	5.6	50800	312	20200	2.1	FAF 127R87	DRE 100LC4	1120	411
	6.0	47500	293	20200	2.2	F 127R87	DRE 100LC4	1120	411
	6.8	41900	259	20200	2.5	FF 127R87	DRE 100LC4	1220	411
	7.8	36200	223	20200	2.9				
	3.2	91100	549	20200	1.15	FA 127R77	DRE 100LC4	990	411
	3.5	82000	495	20200	1.30	FAF 127R77	DRE 100LC4	1070	411
	4.1	71000	428	20200	1.50	F 127R77	DRE 100LC4	1070	411
	4.7	62200	376	20200	1.70	FF 127R77	DRE 100LC4	1170	411
	4.7	61400	370	11600	1.10				
	5.2	55200	333	12000	1.25	FA 107R77	DRE 100LC4	660	411
	6.0	48300	291	12400	1.40	FAF 107R77	DRE 100LC4	700	411
	6.8	42300	255	12800	1.60	F 107R77	DRE 100LC4	690	411
	7.8	37200	225	13000	1.80	FF 107R77	DRE 100LC4	750	411
	9.2	31500	190	13300	2.2				
	4.5	65000	387	11400	1.05	FA 107R77	DRE 100LC4	640	411
	5.2	56900	340	11900	1.20	FAF 107R77	DRE 100LC4	680	411
	5.8	50100	300	12300	1.40	F 107R77	DRE 100LC4	670	411
	6.6	44400	266	12600	1.55	FF 107R77	DRE 100LC4	730	411
	8.4	34600	208	6960	1.10	FA 97R57	DRE 100LC4	460	411
	9.0	32400	195	7120	1.15	FAF 97R57	DRE 100LC4	510	411
						F 97R57	DRE 100LC4	475	411
						FF 97R57	DRE 100LC4	550	411
	6.9	45400	254.40*	12600	1.50				
	8.1	38400	215.37	13000	1.75				
	8.8	35600	199.31	13100	1.90	FA 107	DRE 100LC4	570	398
	9.8	31900	178.64	13300	2.1	FAF 107	DRE 100LC4	620	397
	11	28800	161.28*	13500	2.4	F 107	DRE 100LC4	610	396
	12	26100	146.49	13600	2.6	FF 107	DRE 100LC4	670	397
	13	23200	129.97	13700	2.9				

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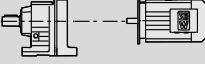



F..DRE/DRS
F..DRE/DRS [HP]

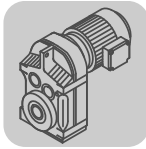
P_m [HP]	n_a [rpm]	T_a [lb-in]	i	$F_{Ra}^{1)}$ [lb]	SEW f_B		m [lbs]		
5.0	9.2	33900	189.92	7020	1.10				
	10	31200	174.87	7200	1.20				
	11	27900	156.30	7400	1.35				
	12	25100	140.71	7570	1.50				
	14	22700	127.42	7700	1.65	FA 97	DRE 100LC4	405	393
	15	20100	112.99	7830	1.90	FAF 97	DRE 100LC4	455	392
	17	18200	102.16	7930	2.1	F 97	DRE 100LC4	425	391
	18	17400	97.58	7970	2.2	FF 97	DRE 100LC4	495	392
	19	16000	89.85	8030	2.4				
	20	15400	86.59	8060	2.5				
	22	14300	80.31	8100	2.6				
	24	12900	72.29	8160	3.0				
	13	23900	134.16	5410	1.10				
	14	22000	123.29	5580	1.20				
	16	19500	109.49	5680	1.35				
	18	17400	97.89	5610	1.50	FA 87	DRE 100LC4	265	388
	20	15700	88.01	5520	1.70	FAF 87	DRE 100LC4	295	387
	23	13600	76.39	5400	1.95	F 87	DRE 100LC4	280	386
	26	12200	68.40	5300	2.2	FF 87	DRE 100LC4	310	387
	31	10100	56.75	5110	2.6				
	35	8990	50.36	4980	2.9				
	24	12900	72.50	3590	1.00				
	26	11800	66.46	3750	1.10				
	30	10400	58.32	3940	1.25				
32	9870	55.27	4010	1.35	FA 77	DRE 100LC4	180	383	
36	8640	48.37	4130	1.55	FAF 77	DRE 100LC4	195	382	
40	7780	43.58	4210	1.70	F 77	DRE 100LC4	185	381	
46	6820	38.23	4290	1.95	FF 77	DRE 100LC4	210	382	
52	6020	33.74	4340	2.2					
59	5340	29.91	4380	2.5					
69	4560	25.54	4420	2.8					
48	6530	36.58	4310	1.50	FA 77	DRE 100LC4	175	383	
56	5620	31.51	4360	2.2	FAF 77	DRE 100LC4	190	382	
61	5130	28.75	4390	2.5	F 77	DRE 100LC4	185	381	
69	4550	25.50*	4420	2.9	FF 77	DRE 100LC4	205	382	
51	6070	34.01	2550	1.10	FA 67	DRE 100LC4	130	378	
					FAF 67	DRE 100LC4	140	377	
					F 67	DRE 100LC4	135	376	
					FF 67	DRE 100LC4	150	377	
55	5730	32.08	2610	1.25					
64	4890	27.41	2730	1.50					
70	4480	25.13	2780	1.60					
79	3940	22.05	2840	1.85	FA 67	DRE 100LC4	125	378	
84	3730	20.90*	2860	1.95	FAF 67	DRE 100LC4	140	377	
96	3260	18.29	2900	2.2	F 67	DRE 100LC4	130	376	
106	2940	16.48	2920	2.5	FF 67	DRE 100LC4	145	377	
121	2580	14.46	2920	2.8					
193	1620	9.08	2790	2.9					
70	4450	24.96	1510	1.15					
83	3780	21.17	1500	1.40					
92	3410	19.11	1480	1.55					
104	3000	16.81	1460	1.75	FA 57	DRE 100LC4	120	373	
110	2830	15.88	1450	1.85	FAF 57	DRE 100LC4	130	372	
129	2410	13.52	1420	2.2	F 57	DRE 100LC4	120	371	
142	2190	12.29	1390	2.4	FF 57	DRE 100LC4	135	372	
164	1900	10.64	1360	2.8					
188	1660	9.31	1290	2.2					
214	1460	8.19	1260	2.5					
226	1380	7.73	1250	2.7					
89	3510	19.70	950	1.00					
101	3090	17.33	960	1.15					
107	2920	16.36	960	1.20					
126	2480	13.93	960	1.40	FA 47	DRE 100LC4	100	368	
138	2260	12.66	960	1.55	FAF 47	DRE 100LC4	105	367	
160	1950	10.97	950	1.80	F 47	DRE 100LC4	105	366	
195	1590	8.96	890	1.85	FF 47	DRE 100LC4	110	367	
222	1400	7.88	880	2.4					
235	1320	7.44*	870	2.5					
276	1130	6.34	850	2.7					
304	1020	5.76	840	2.9					

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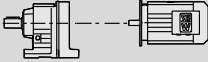



P_m [HP]	n_a [rpm]	T_a [lb-in]	i	$F_{Ra}^{1)}$ [lb]	SEW f_B		m [lbs]		
5.0	218	1430	8.01	485	1.05				
	260	1200	6.74	460	1.05				
	289	1080	6.05	465	1.10	FA 37	DRE 100LC4	91 363	
	336	930	5.21	465	1.20	FAF 37	DRE 100LC4	95 362	
	357	870	4.90	465	1.20	F 37	DRE 100LC4	92 361	
	415	750	4.22	460	1.30	FF 37	DRE 100LC4	96 362	
	464	670	3.77	455	1.40				
	421	740	4.16	280	1.05	FA 27	DRE 100LC4	78 359	
						FAF 27	DRE 100LC4	79 358	
						F 27	DRE 100LC4	79 357	
						FF 27	DRE 100LC4	81 358	
	5.4	2.1	146800	845	23400	1.10			
		2.3	132100	764	24300	1.20			
		2.6	117500	680	25100	1.35	FA 157R97	DRE 132S4	1760 411
3.1		98800	576	26000	1.60	FAF 157R97	DRE 132S4	1890 411	
4.0		77500	446	26700	2.0	F 157R97	DRE 132S4	1810 411	
						FF 157R97	DRE 132S4	2040 411	
3.6		84200	483	20200	1.25				
4.2		73300	418	20200	1.45				
4.7		65400	374	20200	1.60	FA 127R87	DRE 132S4	1070 411	
5.7		54600	312	20200	1.95	FAF 127R87	DRE 132S4	1150 411	
6.0		51000	293	20200	2.1	F 127R87	DRE 132S4	1150 411	
6.8		45000	259	20200	2.4	FF 127R87	DRE 132S4	1250 411	
7.9		38900	223	20200	2.7				
3.2		97800	549	20200	1.10	FA 127R77	DRE 132S4	1020 411	
3.6		88000	495	20200	1.20	FAF 127R77	DRE 132S4	1100 411	
4.1		76200	428	20200	1.40	F 127R77	DRE 132S4	1100 411	
4.7		66700	376	20200	1.60	FF 127R77	DRE 132S4	1200 411	
4.8		65800	370	11300	1.05				
5.3		59200	333	11800	1.15	FA 107R77	DRE 132S4	690 411	
6.1		51800	291	12200	1.30	FAF 107R77	DRE 132S4	740 411	
6.9		45300	255	12600	1.50	F 107R77	DRE 132S4	730 411	
7.8		39900	225	12900	1.70	FF 107R77	DRE 132S4	790 411	
9.3		33800	190	13200	2.0				
5.2		61100	340	11600	1.15	FA 107R77	DRE 132S4	670 411	
5.9		53800	300	12100	1.30	FAF 107R77	DRE 132S4	710 411	
6.6		47600	266	12500	1.45	F 107R77	DRE 132S4	700 411	
						FF 107R77	DRE 132S4	760 411	
8.5		37200	208	6780	1.00	FA 97R57	DRE 132S4	490 411	
9.0		34700	195	6960	1.10	FAF 97R57	DRE 132S4	540 411	
						F 97R57	DRE 132S4	510 411	
						FF 97R57	DRE 132S4	580 411	
6.9		48700	254.40*	12400	1.40				
8.2		41200	215.37	12800	1.65				
8.9		38100	199.31	13000	1.80	FA 107	DRE 132S4	600 398	
9.9		34200	178.64	13200	2.00	FAF 107	DRE 132S4	650 397	
11		30800	161.28*	13400	2.2	F 107	DRE 132S4	640 396	
12		28000	146.49	13500	2.4	FF 107	DRE 132S4	700 397	
14		24800	129.97	13600	2.7				
9.3		36300	189.92	6840	1.05				
10		33400	174.87	7050	1.15				
11		29900	156.30	7280	1.25				
13		26900	140.71	7460	1.40				
14	24300	127.42	7610	1.55	FA 97	DRE 132S4	435 393		
16	21600	112.99	7760	1.75	FAF 97	DRE 132S4	485 392		
17	19500	102.16	7860	1.95	F 97	DRE 132S4	455 391		
18	18600	97.58	7910	2.0	FF 97	DRE 132S4	530 392		
20	17200	89.85	7980	2.2					
20	16500	86.59	8010	2.3					
22	15300	80.31	8060	2.5					
24	13800	72.29	8130	2.8					

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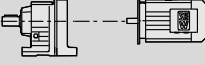




F..DRE/DRS
F..DRE/DRS [HP]

P_m [HP]	n_a [rpm]	T_a [lb-in]	i	$F_{Ra}^{(1)}$ [lb]	SEW f_B		m [lbs]	
5.4	13	25600	134.16	5190	1.05			
	14	23600	123.29	5440	1.10			
	16	20900	109.49	5520	1.25			
	18	18700	97.89	5460	1.40	FA 87	DRE 132S4	295 388
	20	16800	88.01	5390	1.60	FAF 87	DRE 132S4	325 387
	23	14600	76.39	5290	1.80	F 87	DRE 132S4	310 386
	26	13000	68.40	5190	2.0	FF 87	DRE 132S4	345 387
	31	10800	56.75	5020	2.4			
	35	9640	50.36	4900	2.7			
	39	8670	45.28	4800	2.9			
	27	12700	66.46	3620	1.05			
	30	11100	58.32	3850	1.20			
	32	10500	55.27	3920	1.25			
	36	9260	48.37	4070	1.45	FA 77	DRE 132S4	210 383
	40	8340	43.58	4160	1.60	FAF 77	DRE 132S4	225 382
	46	7310	38.23	4250	1.80	F 77	DRE 132S4	220 381
	52	6450	33.74	4310	2.0	FF 77	DRE 132S4	240 382
	59	5720	29.91	4360	2.3			
	69	4880	25.54	4400	2.6			
	56	6030	31.51	4340	2.0	FA 77	DRE 132S4	205 383
	61	5500	28.75	4370	2.3	FAF 77	DRE 132S4	220 382
	69	4880	25.50*	4400	2.7	F 77	DRE 132S4	215 381
						FF 77	DRE 132S4	240 382
	52	6510	34.01	2470	1.00	FA 67	DRE 132S4	160 378
						FAF 67	DRE 132S4	175 377
						F 67	DRE 132S4	165 376
						FF 67	DRE 132S4	180 377
	64	5240	27.41	2680	1.40			
	70	4810	25.13	2740	1.50			
	80	4220	22.05	2810	1.70			
	84	4000	20.90*	2830	1.80	FA 67	DRE 132S4	155 378
	96	3500	18.29	2880	2.1	FAF 67	DRE 132S4	170 377
	107	3150	16.48	2910	2.3	F 67	DRE 132S4	165 376
	122	2760	14.46	2920	2.6	FF 67	DRE 132S4	175 377
	138	2440	12.76	2920	3.0			
	194	1730	9.08	2770	2.7			
	83	4050	21.17	1450	1.30			
	92	3650	19.11	1440	1.45			
	105	3210	16.81	1420	1.65			
111	3040	15.88	1420	1.75				
131	2580	13.52	1390	2.0	FA 57	DRE 132S4	150 373	
144	2350	12.29	1370	2.3	FAF 57	DRE 132S4	160 372	
166	2030	10.64	1330	2.6	F 57	DRE 132S4	150 371	
190	1780	9.31	1270	2.1	FF 57	DRE 132S4	165 372	
216	1560	8.19	1240	2.4				
228	1480	7.73	1230	2.5				
268	1260	6.58	1190	3.0				
7.5	3.0	138600	576	23900	1.15			
	3.5	120300	503	25000	1.30			
	3.9	108400	446	25500	1.45			
	5.0	84200	353	26500	1.90	FA 157R97	DRE 132M4	1790 411
	5.8	73300	302	26800	2.2	FAF 157R97	DRE 132M4	1920 411
	6.4	66100	273	27000	2.4	F 157R97	DRE 132M4	1830 411
	7.6	55700	232	27000	2.9	FF 157R97	DRE 132M4	2070 411
	4.2	102100	418	20200	1.05			
	4.7	91200	374	20200	1.15			
	5.6	76100	312	20200	1.40	FA 127R87	DRE 132M4	1090 411
	6.0	71300	293	20200	1.50	FAF 127R87	DRE 132M4	1180 411
	6.8	62900	259	20200	1.70	F 127R87	DRE 132M4	1180 411
	7.9	54300	223	20200	1.95	FF 127R87	DRE 132M4	1270 411
	8.9	48000	198	20200	2.2			
	11	40400	166	20200	2.6			
	4.1	105700	428	20200	1.00	FA 127R77	DRE 132M4	1050 411
	4.7	92600	376	20200	1.15	FAF 127R77	DRE 132M4	1130 411
						F 127R77	DRE 132M4	1130 411
						FF 127R77	DRE 132M4	1230 411

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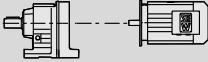




P_m [HP]	n_a [rpm]	T_a [lb-in]	i	$F_{Ra}^{1)}$ [lb]	SEW f_B		m [lbs]		
7.5	6.9	63000	255	11500	1.10	FA 107R77 DRE 132M4	720	411	
	7.8	55500	225	12000	1.20	FAF 107R77 DRE 132M4	760	411	
	9.2	46900	190	12500	1.45	F 107R77 DRE 132M4	750	411	
						FF 107R77 DRE 132M4	810	411	
	6.6	66200	266	11300	1.05	FA 107R77 DRE 132M4	690	411	
						FAF 107R77 DRE 132M4	740	411	
						F 107R77 DRE 132M4	730	411	
						FF 107R77 DRE 132M4	790	411	
	10	45200	170.83	20200	2.4	FA 127 DRE 132M4	960	403	
	11	40600	153.67*	20200	2.6	FAF 127 DRE 132M4	1050	402	
					F 127 DRE 132M4	1040	401		
					FF 127 DRE 132M4	1140	402		
6.9	67300	254.40*	11200	1.00					
8.2	57000	215.37	11900	1.20					
8.8	52700	199.31	12200	1.30					
9.8	47300	178.64	12500	1.45					
11	42700	161.28*	12700	1.60	FA 107	DRE 132M4	630	398	
12	38700	146.49	13000	1.75	FAF 107	DRE 132M4	680	397	
14	34400	129.97	13200	1.95	F 107	DRE 132M4	670	396	
15	31200	117.94	13300	2.2	FF 107	DRE 132M4	730	397	
17	26800	101.38*	13600	2.5					
19	24400	92.47*	13700	2.8					
20	23400	88.49	13700	2.9					
12	37200	140.71	6780	1.00					
14	33700	127.42	7030	1.15					
16	29900	112.99	7280	1.25					
17	27000	102.16	7460	1.40					
18	25800	97.58	7530	1.45					
20	23700	89.85	7640	1.60	FA 97	DRE 132M4	465	393	
20	22900	86.59	7690	1.65	FAF 97	DRE 132M4	510	392	
22	21200	80.31	7780	1.80	F 97	DRE 132M4	480	391	
23	20000	75.63	7840	1.90	FF 97	DRE 132M4	550	392	
24	19100	72.29	7780	2.00					
27	17300	65.47	7640	2.2					
30	15300	58.06	7450	2.5					
33	13800	52.49	7290	2.7					
41	11400	43.28	6980	2.4	FA 97	DRE 132M4	450	393	
48	9700	36.64	6700	2.8	FAF 97	DRE 132M4	500	392	
					F 97	DRE 132M4	465	391	
					FF 97	DRE 132M4	540	392	
18	25900	97.89	4770	1.00					
20	23300	88.01	4770	1.15					
23	20200	76.39	4750	1.30					
26	18100	68.40	4710	1.45	FA 87	DRE 132M4	325	388	
31	15000	56.75	4620	1.75	FAF 87	DRE 132M4	350	387	
35	13300	50.36	4550	1.95	F 87	DRE 132M4	335	386	
39	11900	45.28	4480	2.1	FF 87	DRE 132M4	370	387	
45	10400	39.30	4380	2.3					
50	9310	35.19	4290	2.5					
60	7730	29.20	4130	2.9					
52	8980	33.92	4260	2.6	FA 87	DRE 132M4	315	388	
61	7610	28.78	4120	2.8	FAF 87	DRE 132M4	345	387	
					F 87	DRE 132M4	330	386	
					FF 87	DRE 132M4	365	387	
36	12800	48.37	3610	1.05					
40	11500	43.58	3800	1.15	FA 77	DRE 132M4	235	383	
46	10100	38.23	3980	1.30	FAF 77	DRE 132M4	250	382	
52	8930	33.74	4110	1.50	F 77	DRE 132M4	245	381	
59	7910	29.91	4200	1.70	FF 77	DRE 132M4	270	382	
69	6760	25.54	4290	1.90					
69	6750	25.50*	4290	1.95	FA 77	DRE 132M4	235	383	
82	5670	21.43	4360	2.3	FAF 77	DRE 132M4	250	382	
89	5210	19.70	4390	2.5	F 77	DRE 132M4	240	381	
100	4630	17.49	4340	2.9	FF 77	DRE 132M4	265	382	

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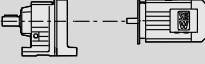



F..DRE/DRS
F..DRE/DRS [HP]

P_m [HP]	n_a [rpm]	T_a [lb-in]	i	$F_{Ra}^{1)}$ [lb]	SEW f_B		m [lbs]		
7.5	80	5830	22.05	2590	1.25				
	84	5530	20.90*	2640	1.30				
	96	4840	18.29	2740	1.50				
	106	4360	16.48	2800	1.65				
	121	3820	14.46	2850	1.90	FA 67	DRE 132M4	185	378
	138	3370	12.76	2890	2.2	FAF 67	DRE 132M4	195	377
	155	2990	11.31	2870	2.4	F 67	DRE 132M4	190	376
	182	2550	9.66	2780	2.8	FF 67	DRE 132M4	205	377
	193	2400	9.08	2680	1.95				
	204	2270	8.60	2650	2.2				
	233	1990	7.53	2570	2.7				
	104	4450	16.81	1240	1.20				
	111	4200	15.88	1240	1.25				
	130	3570	13.52	1240	1.50				
	143	3250	12.29	1230	1.65	FA 57	DRE 132M4	175	373
	165	2810	10.64	1220	1.90	FAF 57	DRE 132M4	190	372
	214	2160	8.19	1140	1.70	F 57	DRE 132M4	175	371
	227	2040	7.73	1130	1.80	FF 57	DRE 132M4	190	372
	267	1740	6.58	1110	2.1				
	293	1580	5.98	1090	2.4				
339	1370	5.18	1060	2.7					
10	4.0	147100	446	23400	1.10				
	5.0	114800	353	25200	1.40				
	5.9	99600	302	25900	1.60	FA 157R97	DRE 132MC4	1800	411
	6.5	89800	273	26300	1.75	FAF 157R97	DRE 132MC4	1920	411
	7.7	75800	232	26800	2.1	F 157R97	DRE 132MC4	1840	411
	8.8	65900	202	27000	2.4	FF 157R97	DRE 132MC4	2080	411
	9.0	64300	197	27000	2.5				
	5.7	103100	312	20200	1.05				
	6.1	96700	293	20200	1.10	FA 127R87	DRE 132MC4	1100	411
	6.9	85300	259	20200	1.25	FAF 127R87	DRE 132MC4	1180	411
	8.0	73700	223	20200	1.45	F 127R87	DRE 132MC4	1180	411
	9.0	65200	198	20200	1.65	FF 127R87	DRE 132MC4	1280	411
	11	54800	166	20200	1.95				
	9.3	63500	190	11500	1.05	FA 107R77	DRE 132MC4	720	411
						FAF 107R77	DRE 132MC4	770	411
						F 107R77	DRE 132MC4	760	411
						FF 107R77	DRE 132MC4	820	411
	10	60900	170.83	20200	1.75	FA 127	DRE 132MC4	970	403
	12	54800	153.67*	20200	1.95	FAF 127	DRE 132MC4	1050	402
	14	44700	125.37	20200	2.4	F 127	DRE 132MC4	1050	401
	16	40800	114.34	20200	2.6	FF 127	DRE 132MC4	1150	402
	9.9	63700	178.64	11500	1.05				
	11	57500	161.28*	11900	1.20				
	12	52200	146.49	12200	1.30				
	14	46300	129.97	12500	1.45	FA 107	DRE 132MC4	640	398
	15	42100	117.94	12800	1.60	FAF 107	DRE 132MC4	680	397
	18	36100	101.38*	13100	1.90	F 107	DRE 132MC4	670	396
	19	33000	92.47*	13300	2.1	FF 107	DRE 132MC4	730	397
	20	31500	88.49	13300	2.2				
	21	29900	83.99	13400	2.3				
	24	26600	74.52	13600	2.6				
	26	24100	67.62	13300	2.8				
	17	36400	102.16	6840	1.05				
	18	34800	97.58	6950	1.10				
	20	32000	89.85	7140	1.20				
	20	30900	86.59	7220	1.25				
	22	28600	80.31	7240	1.35	FA 97	DRE 132MC4	470	393
	23	27000	75.63	7190	1.40	FAF 97	DRE 132MC4	520	392
	25	25800	72.29	7150	1.45	F 97	DRE 132MC4	485	391
	27	23300	65.47	7060	1.65	FF 97	DRE 132MC4	560	392
31	20700	58.06	6940	1.85					
34	18700	52.49	6830	2.0					
40	15800	44.49	6630	2.4					
46	13800	38.86	6450	2.7					
41	15400	43.28	6590	1.75	FA 97	DRE 132MC4	455	393	
48	13000	36.64	6370	2.1	FAF 97	DRE 132MC4	510	392	
					F 97	DRE 132MC4	475	391	
					FF 97	DRE 132MC4	550	392	

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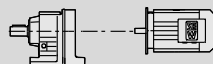

P_m [HP]	n_a [rpm]	T_a [lb-in]	i	$F_{Ra}^{1)}$ [lb]	SEW f_B		m [lbs]		
10	26	24400	68.40	4070	1.10				
	31	20200	56.75	4090	1.30				
	35	17900	50.36	4080	1.45	FA 87	DRE 132MC4	330 388	
	39	16100	45.28	4050	1.55	FAF 87	DRE 132MC4	360 387	
	45	14000	39.30	4000	1.70	F 87	DRE 132MC4	345 386	
	50	12500	35.19	3950	1.85	FF 87	DRE 132MC4	375 387	
	61	10400	29.20	3850	2.1				
	52	12100	33.92	3930	1.90	FA 87	DRE 132MC4	325 388	
	62	10200	28.78	3840	2.1	FAF 87	DRE 132MC4	350 387	
	67	9450	26.50	3790	2.8	F 87	DRE 132MC4	335 386	
						FF 87	DRE 132MC4	370 387	
	53	12000	33.74	3730	1.10	FA 77	DRE 132MC4	245 383	
	59	10600	29.91	3910	1.25	FAF 77	DRE 132MC4	255 382	
	70	9110	25.54	4090	1.40	F 77	DRE 132MC4	250 381	
						FF 77	DRE 132MC4	275 382	
	70	9100	25.50*	4090	1.45				
	83	7650	21.43	4220	1.75				
	90	7030	19.70	4270	1.90	FA 77	DRE 132MC4	240 383	
	101	6240	17.49	4180	2.1	FAF 77	DRE 132MC4	255 382	
	113	5580	15.64*	4080	2.4	F 77	DRE 132MC4	250 381	
126	5020	14.06	3990	2.6	FF 77	DRE 132MC4	270 382		
191	3320	9.30	3540	2.9					
97	6530	18.29	2470	1.10					
108	5880	16.48	2580	1.25					
123	5160	14.46	2690	1.40					
139	4550	12.76	2770	1.60					
157	4030	11.31	2740	1.80					
184	3440	9.66	2660	2.1	FA 67	DRE 132MC4	190 378		
196	3240	9.08	2550	1.45	FAF 67	DRE 132MC4	205 377		
206	3070	8.60	2520	1.65	F 67	DRE 132MC4	195 376		
236	2680	7.53	2460	2.0	FF 67	DRE 132MC4	210 377		
262	2420	6.78	2410	2.3					
298	2120	5.95	2350	2.5					
338	1870	5.25	2290	2.8					
381	1660	4.66	2230	3.0					
131	4820	13.52	1050	1.10					
144	4380	12.29	1060	1.20					
167	3790	10.64	1060	1.40	FA 57	DRE 132MC4	185 373		
217	2920	8.19	1010	1.25	FAF 57	DRE 132MC4	195 372		
230	2760	7.73	1010	1.35	F 57	DRE 132MC4	185 371		
270	2350	6.58	1000	1.60	FF 57	DRE 132MC4	195 372		
297	2130	5.98	990	1.75					
342	1850	5.18	980	2.00					
12.5	5.0	142100	353	23700	1.10				
	5.9	122900	302	24800	1.30	FA 157R97	DRE 160M4	1840 411	
	6.5	110900	273	25400	1.45	FAF 157R97	DRE 160M4	1970 411	
	7.6	93700	232	26200	1.70	F 157R97	DRE 160M4	1890 411	
	8.8	81500	202	26600	1.95	FF 157R97	DRE 160M4	2120 411	
	9.0	79400	197	26700	2.0				
	6.8	105300	259	20200	1.00	FA 127R87	DRE 160M4	1150 411	
	7.9	91000	223	20200	1.15	FAF 127R87	DRE 160M4	1230 411	
	9.0	80500	198	20200	1.30	F 127R87	DRE 160M4	1230 411	
	11	67600	166	20200	1.55	FF 127R87	DRE 160M4	1330 411	
	6.6	117400	267.43	25100	1.35				
	8.1	95500	217.62*	26100	1.65	FA 157	DRE 160M4	1560 408	
	9.9	78200	178.20*	26700	2.0	FAF 157	DRE 160M4	1690 407	
	11	71500	162.96	26900	2.2	F 157	DRE 160M4	1610 406	
	12	62200	141.80*	27000	2.6	FF 157	DRE 160M4	1850 407	
	14	54900	125.14	27000	2.9				
	10	75000	170.83	20200	1.40				
	12	67400	153.67*	20200	1.55	FA 127	DRE 160M4	1000 403	
	14	55000	125.37	20200	1.95	FAF 127	DRE 160M4	1090 402	
	15	50200	114.34	20200	2.1	F 127	DRE 160M4	1080 401	
18	43400	98.95	20200	2.4	FF 127	DRE 160M4	1180 402		
20	38300	87.31*	20100	2.8					

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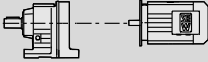



F..DRE/DRS
F..DRE/DRS [HP]

P_m [HP]	n_a [rpm]	T_a [lb-in]	i	$F_{Ra}^{1)}$ [lb]	SEW f_B		m [lbs]	
12.5	12	64300	146.49	11400	1.05			
	14	57000	129.97	11900	1.20			
	15	51700	117.94	12200	1.30			
	17	44500	101.38*	12600	1.55	FA 107	DRE 160M4	680 398
	19	40600	92.47*	12900	1.65	FAF 107	DRE 160M4	730 397
	20	38800	88.49	12900	1.75	F 107	DRE 160M4	720 396
	21	36800	83.99	13100	1.85	FF 107	DRE 160M4	780 397
	24	32700	74.52	13200	2.1			
	26	29600	67.62	13000	2.3			
	30	25500	58.12*	12600	2.7			
	20	38000	86.59	6660	1.00			
	22	35200	80.31	6660	1.10			
	23	33200	75.63	6650	1.15			
	24	31700	72.29	6630	1.20	FA 97	DRE 160M4	520 393
	27	28700	65.47	6590	1.30	FAF 97	DRE 160M4	560 392
	30	25400	58.06	6520	1.50	F 97	DRE 160M4	530 391
	34	23000	52.49	6450	1.65	FF 97	DRE 160M4	610 392
	40	19500	44.49	6310	1.95			
	46	17000	38.86	6170	2.2			
	54	14200	32.50	5980	2.7			
	52	14800	33.91	6020	2.6	FA 97	DRE 160M4	500 393
	58	13300	30.39	5900	2.8	FAF 97	DRE 160M4	550 392
						F 97	DRE 160M4	520 391
						FF 97	DRE 160M4	590 392
	31	24900	56.75	3640	1.05			
	35	22100	50.36	3670	1.20	FA 87	DRE 160M4	375 388
	39	19800	45.28	3690	1.25	FAF 87	DRE 160M4	405 387
	45	17200	39.30	3690	1.40	F 87	DRE 160M4	390 386
	50	15400	35.19	3670	1.50	FF 87	DRE 160M4	425 387
	61	12800	29.20	3620	1.75			
67	11600	26.50	3580	2.3	FA 87	DRE 160M4	370 388	
75	10400	23.68	3520	2.6	FAF 87	DRE 160M4	395 387	
83	9360	21.32*	3470	2.8	F 87	DRE 160M4	380 386	
					FF 87	DRE 160M4	415 387	
59	13100	29.91	3560	1.00	FA 77	DRE 160M4	290 383	
69	11200	25.54	3840	1.15	FAF 77	DRE 160M4	305 382	
					F 77	DRE 160M4	300 381	
					FF 77	DRE 160M4	320 382	
90	8650	19.70	4130	1.55				
101	7680	17.49	4050	1.75				
113	6860	15.64*	3970	1.95				
126	6170	14.06	3890	2.2	FA 77	DRE 160M4	285 383	
145	5360	12.20	3780	2.5	FAF 77	DRE 160M4	300 382	
162	4790	10.93	3690	2.8	F 77	DRE 160M4	295 381	
190	4080	9.30	3460	2.3	FF 77	DRE 160M4	320 382	
214	3620	8.26	3370	2.6				
240	3240	7.39	3290	3.0				
15	5.9	146500	302	23400	1.10	FA 157R97	DRE 160MC4	1850 411
	6.5	132300	273	24300	1.20	FAF 157R97	DRE 160MC4	1980 411
	7.7	111800	232	25400	1.40	F 157R97	DRE 160MC4	1900 411
	8.8	97300	202	26000	1.65	FF 157R97	DRE 160MC4	2130 411
	9.1	94800	197	26100	1.70			
	9.0	95900	198	20200	1.10	FA 127R87	DRE 160MC4	1160 411
	11	80600	166	20200	1.30	FAF 127R87	DRE 160MC4	1240 411
						F 127R87	DRE 160MC4	1240 411
						FF 127R87	DRE 160MC4	1340 411
	6.7	139600	267.43	23900	1.15			
	8.2	113600	217.62*	25300	1.40			
	10.0	93000	178.20*	26200	1.70	FA 157	DRE 160MC4	1580 408
	11	85000	162.96	26500	1.85	FAF 157	DRE 160MC4	1710 407
	13	74000	141.80*	26800	2.2	F 157	DRE 160MC4	1620 406
	14	65300	125.14	27000	2.4	FF 157	DRE 160MC4	1860 407
	16	56600	108.49	26700	2.8			
	33	27900	53.55	22500	2.5	FA 157	DRE 160MC4	1560 408
						FAF 157	DRE 160MC4	1690 407
						F 157	DRE 160MC4	1610 406
						FF 157	DRE 160MC4	1840 407

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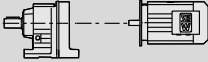


P_m [HP]	n_a [rpm]	T_a [lb-in]	i	$F_{Ra}^{1)}$ [lb]	SEW f_B		m [lbs]	
15	10	89100	170.83	20200	1.20			
	12	80200	153.67*	20200	1.30			
	14	65400	125.37	20200	1.60	FA 127	DRE 160MC4	1010 403
	16	59700	114.34	20200	1.80	FAF 127	DRE 160MC4	1100 402
	18	51600	98.95	20200	2.0	F 127	DRE 160MC4	1090 401
	20	45500	87.31*	19700	2.3	FF 127	DRE 160MC4	1190 402
	24	39300	75.41*	19100	2.7			
	25	36500	70.07	18800	2.9			
	14	67800	129.97	11200	1.00			
	15	61500	117.94	11600	1.10			
18	52900	101.38*	12200	1.30				
19	48200	92.47*	12400	1.40	FA 107	DRE 160MC4	690 398	
20	46200	88.49	12500	1.45	FAF 107	DRE 160MC4	740 397	
21	43800	83.99	12700	1.55	F 107	DRE 160MC4	730 396	
24	38900	74.52	12800	1.75	FF 107	DRE 160MC4	790 397	
26	35300	67.62	12600	1.90				
31	30300	58.12*	12200	2.2				
35	26400	50.73	11900	2.6				
25	37700	72.29	6080	1.00				
27	34100	65.47	6090	1.10				
31	30300	58.06	6080	1.25	FA 97	DRE 160MC4	530 393	
34	27400	52.49	6050	1.40	FAF 97	DRE 160MC4	580 392	
40	23200	44.49	5960	1.65	F 97	DRE 160MC4	540 391	
46	20200	38.86	5870	1.90	FF 97	DRE 160MC4	620 392	
55	16900	32.50	5720	2.2				
52	17700	33.91	5760	2.2	FA 97	DRE 160MC4	510 393	
59	15800	30.39	5660	2.4	FAF 97	DRE 160MC4	560 392	
65	14300	27.44*	5560	2.7	F 97	DRE 160MC4	530 391	
71	13000	24.92	5460	2.9	FF 97	DRE 160MC4	600 392	
39	23600	45.28	3310	1.05	FA 87	DRE 160MC4	385 388	
45	20500	39.30	3360	1.15	FAF 87	DRE 160MC4	415 387	
51	18300	35.19	3370	1.25	F 87	DRE 160MC4	400 386	
61	15200	29.20	3370	1.45	FF 87	DRE 160MC4	435 387	
67	13800	26.50	3350	1.90	FA 87	DRE 160MC4	380 388	
75	12300	23.68	3320	2.2	FAF 87	DRE 160MC4	410 387	
83	11100	21.32*	3290	2.4	F 87	DRE 160MC4	395 386	
92	10000	19.31	3250	2.6	FF 87	DRE 160MC4	425 387	
104	8930	17.12	3190	3.0				
90	10200	19.70	3960	1.30				
102	9130	17.49	3900	1.45				
114	8160	15.64*	3840	1.65				
127	7340	14.06	3770	1.80	FA 77	DRE 160MC4	300 383	
146	6370	12.20	3670	2.1	FAF 77	DRE 160MC4	310 382	
163	5700	10.93	3600	2.3	F 77	DRE 160MC4	305 381	
191	4850	9.30	3360	1.95	FF 77	DRE 160MC4	330 382	
216	4310	8.26	3280	2.2				
241	3850	7.39	3210	2.5				
268	3460	6.64	3140	2.8				
20	7.7	153600	232	22900	1.05	FA 157R97	DRE 180M4	1950 411
	8.8	133900	202	24200	1.20	FAF 157R97	DRE 180M4	2080 411
	9.0	130300	197	24400	1.20	F 157R97	DRE 180M4	2000 411
						FF 157R97	DRE 180M4	2230 411
	8.2	155300	217.62*	22800	1.00			
	10.0	127200	178.20*	24600	1.25			
	11	116300	162.96	25200	1.35	FA 157	DRE 180M4	1670 408
	13	101200	141.80*	25900	1.55	FAF 157	DRE 180M4	1800 407
	14	89300	125.14	26300	1.80	F 157	DRE 180M4	1710 406
	16	77400	108.49	25600	2.1	FF 157	DRE 180M4	1950 407
18	68900	96.53*	25100	2.3				
21	61200	85.80*	24400	2.6				
23	56000	78.46	24000	2.8				
33	38200	53.55	22000	1.85	FA 157	DRE 180M4	1650 408	
40	31300	43.94*	21000	2.8	FAF 157	DRE 180M4	1780 407	
					F 157	DRE 180M4	1700 406	
					FF 157	DRE 180M4	1940 407	

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F..DRE/DRS
F..DRE/DRS [HP]

P_m [HP]	n_a [rpm]	T_a [lb-in]	i	$F_{Ra}^{1)}$ [lb]	SEW f_B		m [lbs]		
20	14	89500	125.37	19600	1.20				
	16	81600	114.34	19400	1.30				
	18	70600	98.95	19000	1.50	FA 127	DRE 180M4	1110	403
	20	62300	87.31*	18700	1.70	FAF 127	DRE 180M4	1190	402
	24	53800	75.41*	18200	1.95	F 127	DRE 180M4	1190	401
	25	50000	70.07	18000	2.1	FF 127	DRE 180M4	1290	402
	28	45600	63.91	17700	2.3				
	32	39400	55.31	17200	2.7				
	19	66000	92.47*	11300	1.05				
	20	63100	88.49	11500	1.10				
	21	59900	83.99	11700	1.15				
	24	53200	74.52	11800	1.30	FA 107	DRE 180M4	790	398
	26	48200	67.62	11700	1.40	FAF 107	DRE 180M4	840	397
	31	41500	58.12*	11500	1.65	F 107	DRE 180M4	830	396
	35	36200	50.73	11300	1.90	FF 107	DRE 180M4	890	397
	41	30700	43.03	11000	2.2				
	47	26800	37.61	10700	2.5				
	56	22700	31.80	10400	3.0				
	53	24100	33.79*	10500	2.7	FA 107	DRE 180M4	770	398
						FAF 107	DRE 180M4	820	397
					F 107	DRE 180M4	810	396	
					FF 107	DRE 180M4	870	397	
34	37400	52.49	5160	1.00	FA 97	DRE 180M4	630	393	
40	31700	44.49	5210	1.20	FAF 97	DRE 180M4	670	392	
46	27700	38.86	5210	1.35	F 97	DRE 180M4	640	391	
55	23200	32.50	5170	1.65	FF 97	DRE 180M4	710	392	
52	24200	33.91	5190	1.55					
58	21700	30.39	5150	1.75	FA 97	DRE 180M4	610	393	
65	19500	27.44*	5100	1.95	FAF 97	DRE 180M4	660	392	
71	17700	24.92	5040	2.1	F 97	DRE 180M4	630	391	
80	15700	22.11	4960	2.4	FF 97	DRE 180M4	700	392	
88	14300	20.07	4890	2.7					
61	20800	29.20	2820	1.05	FA 87	DRE 180M4	485	388	
					FAF 87	DRE 180M4	510	387	
					F 87	DRE 180M4	500	386	
					FF 87	DRE 180M4	530	387	
67	18900	26.50	2860	1.40					
75	16900	23.68	2880	1.55					
83	15200	21.32*	2890	1.75					
92	13700	19.31	2890	1.95	FA 87	DRE 180M4	480	388	
104	12200	17.12	2880	2.2	FAF 87	DRE 180M4	510	387	
115	11000	15.48	2860	2.4	F 87	DRE 180M4	490	386	
135	9360	13.12*	2810	2.8	FF 87	DRE 180M4	530	387	
214	5910	8.29	2560	2.3					
241	5240	7.35	2510	2.6					
267	4740	6.65	2460	2.8					
25	10.0	156900	178.20*	22700	1.00				
	11	143500	162.96	23600	1.10				
	13	124800	141.80*	24700	1.30				
	14	110200	125.14	25300	1.45	FA 157	DRE 180L4	1710	408
	16	95500	108.49	24700	1.65	FAF 157	DRE 180L4	1840	407
	18	85000	96.53*	24200	1.85	F 157	DRE 180L4	1760	406
	21	75500	85.80*	23700	2.1	FF 157	DRE 180L4	1990	407
	23	69000	78.46	23300	2.3				
	26	60100	68.28*	22700	2.6				
	29	53000	60.25	22100	3.0				
	40	38600	43.94*	20600	2.3	FA 157	DRE 180L4	1700	408
						FAF 157	DRE 180L4	1830	407
						F 157	DRE 180L4	1740	406
						FF 157	DRE 180L4	1980	407
	16	100600	114.34	18300	1.05				
	18	87100	98.95	18100	1.20				
	20	76800	87.31*	17800	1.40				
	24	66400	75.41*	17500	1.60	FA 127	DRE 180L4	1150	403
	25	61700	70.07	17300	1.70	FAF 127	DRE 180L4	1240	402
	28	56200	63.91	17000	1.90	F 127	DRE 180L4	1230	401
32	48700	55.31	16600	2.2	FF 127	DRE 180L4	1330	402	
36	42900	48.80	16300	2.5					
42	37100	42.15	15800	2.9					

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P _m [HP]	n _a [rpm]	T _a [lb-in]	i	F _{Ra} ¹⁾ [lb]	SEW f _B			m [lbs]		
25	24	65600	74.52	11000	1.05					
	26	59500	67.62	10900	1.15					
	31	51100	58.12*	10800	1.35	FA	107	DRE	180L4	830 398
	35	44600	50.73	10700	1.50	FAF	107	DRE	180L4	880 397
	41	37800	43.03	10500	1.80	F	107	DRE	180L4	870 396
	47	33100	37.61	10300	2.0	FF	107	DRE	180L4	930 397
	56	28000	31.80	10000	2.4					
	53	29700	33.79*	10100	2.2	FA	107	DRE	180L4	810 398
	64	24200	27.57	9780	2.9	FAF	107	DRE	180L4	860 397
						F	107	DRE	180L4	850 396
						FF	107	DRE	180L4	910 397
	46	34200	38.86	4640	1.10	FA	97	DRE	180L4	670 393
	55	28600	32.50	4690	1.35	FAF	97	DRE	180L4	720 392
						F	97	DRE	180L4	690 391
						FF	97	DRE	180L4	760 392
	65	24100	27.44*	4690	1.55					
	71	21900	24.92	4670	1.75					
	80	19400	22.11	4630	1.95	FA	97	DRE	180L4	660 393
	88	17600	20.07	4590	2.2	FAF	97	DRE	180L4	700 392
	103	15100	17.25*	4510	2.5	F	97	DRE	180L4	670 391
	118	13200	15.06	4420	2.9	FF	97	DRE	180L4	750 392
	196	7980	9.06	3920	2.6					
	216	7240	8.22	3850	2.9					
	83	18700	21.32*	2540	1.40					
92	17000	19.31	2570	1.55						
104	15000	17.12	2600	1.75						
115	13600	15.48	2600	1.95	FA	87	DRE	180L4	520 388	
135	11500	13.12*	2600	2.3	FAF	87	DRE	180L4	550 387	
155	10000	11.46	2570	2.6	F	87	DRE	180L4	530 386	
214	7300	8.29	2410	1.85	FF	87	DRE	180L4	570 387	
241	6470	7.35	2370	2.1						
267	5850	6.65	2340	2.3						
315	4960	5.63	2280	2.7						
30	13	148000	141.80*	23300	1.10					
	14	130600	125.14	24200	1.20					
	16	113200	108.49	23800	1.40					
	18	100700	96.53*	23400	1.60	FA	157	DRE	180LC4	1740 408
	21	89500	85.80*	23000	1.80	FAF	157	DRE	180LC4	1870 407
	23	81900	78.46	22700	1.95	F	157	DRE	180LC4	1780 406
	26	71200	68.28*	22100	2.2	FF	157	DRE	180LC4	2020 407
	30	62900	60.25	21600	2.5					
	34	54500	52.24	21000	2.9					
	41	45800	43.94*	20200	1.95	FA	157	DRE	180LC4	1720 408
	50	37300	35.75*	19300	2.6	FAF	157	DRE	180LC4	1850 407
						F	157	DRE	180LC4	1770 406
						FF	157	DRE	180LC4	2000 407
	18	103300	98.95	17100	1.05					
	20	91100	87.31*	17000	1.15					
	24	78700	75.41*	16700	1.35					
	25	73100	70.07	16600	1.45	FA	127	DRE	180LC4	1180 403
	28	66700	63.91	16400	1.60	FAF	127	DRE	180LC4	1260 402
	32	57700	55.31	16100	1.85	F	127	DRE	180LC4	1260 401
	36	50900	48.80	15800	2.1	FF	127	DRE	180LC4	1360 402
	42	44000	42.15	15400	2.4					
	48	38900	37.28	15000	2.7					
	66	28000	26.86	14000	2.7	FA	127	DRE	180LC4	1150 403
	72	25600	24.57	13800	2.9	FAF	127	DRE	180LC4	1230 402
						F	127	DRE	180LC4	1230 401
						FF	127	DRE	180LC4	1330 402
	31	60600	58.12*	10200	1.10	FA	107	DRE	180LC4	860 398
	35	52900	50.73	10100	1.30	FAF	107	DRE	180LC4	910 397
	41	44900	43.03	10000	1.50	F	107	DRE	180LC4	900 396
	47	39200	37.61	9870	1.75	FF	107	DRE	180LC4	960 397
	56	33200	31.80	9670	2.0					
	53	35200	33.79*	9750	1.85	FA	107	DRE	180LC4	840 398
	65	28700	27.57	9470	2.4	FAF	107	DRE	180LC4	880 397
	71	26200	25.14	9330	2.6	F	107	DRE	180LC4	870 396
						FF	107	DRE	180LC4	930 397

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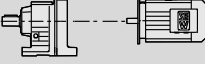
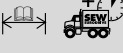
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F..DRE/DRS
F..DRE/DRS [HP]

P_m [HP]	n_a [rpm]	T_a [lb-in]	i	$F_{Ra}^{1)}$ [lb]	SEW f_B		m [lbs]			
30	55	33900	32.50	4210	1.10	FA 97	DRE 180LC4	690	393	
						FAF 97	DRE 180LC4	740	392	
						F 97	DRE 180LC4	710	391	
						FF 97	DRE 180LC4	780	392	
		65	28600	27.44*	4290	1.35				
		71	26000	24.92	4300	1.45				
		80	23000	22.11	4310	1.65				
		89	20900	20.07	4290	1.80	FA 97	DRE 180LC4	680	393
		103	18000	17.25*	4250	2.1	FAF 97	DRE 180LC4	730	392
		118	15700	15.06	4200	2.4	F 97	DRE 180LC4	700	391
		139	13300	12.77	4110	2.8	FF 97	DRE 180LC4	770	392
		196	9460	9.06	3770	2.2				
		216	8580	8.22	3700	2.4				
		252	7380	7.07	3600	2.8				
		83	22200	21.32*	2200	1.20				
		92	20100	19.31	2260	1.30				
		104	17800	17.12	2320	1.50				
		115	16100	15.48	2350	1.65				
		136	13700	13.12*	2380	1.95	FA 87	DRE 180LC4	540	388
		155	11900	11.46	2390	2.2	FAF 87	DRE 180LC4	570	387
	186	10000	9.58	2370	2.6	F 87	DRE 180LC4	560	386	
	215	8650	8.29	2260	1.55	FF 87	DRE 180LC4	590	387	
	242	7670	7.35	2240	1.75					
	268	6940	6.65	2220	1.95					
	316	5880	5.63	2170	2.3					
	362	5130	4.92	2130	2.6					
40	16	154400	108.49	21700	1.05					
		137400	96.53*	21600	1.15					
		122100	85.80*	21300	1.30					
		111700	78.46	21100	1.45	FA 157	DRE 200L4	1930	408	
		97200	68.28*	20800	1.65	FAF 157	DRE 200L4	2060	407	
		85800	60.25	20400	1.85	F 157	DRE 200L4	1980	406	
		74300	52.24	20000	2.1	FF 157	DRE 200L4	2210	407	
		66100	46.48*	19600	2.4					
		57000	40.06	19000	2.8					
		50	50900	35.75*	18600	1.90	FA 157	DRE 200L4	1920	408
						FAF 157	DRE 200L4	2050	407	
						F 157	DRE 200L4	1970	406	
						FF 157	DRE 200L4	2200	407	
		25	99700	70.07	15000	1.05				
		28	91000	63.91	15000	1.15				
		32	78700	55.31	14800	1.35	FA 127	DRE 200L4	1370	403
		36	69400	48.80	14700	1.55	FAF 127	DRE 200L4	1450	402
		42	60000	42.15	14400	1.75	F 127	DRE 200L4	1450	401
		48	53000	37.28	14200	2.0	FF 127	DRE 200L4	1550	402
		57	44600	31.33	13800	2.4				
		70	36000	25.30	13300	3.0				
		66	38200	26.86	13400	1.95	FA 127	DRE 200L4	1350	403
		72	34900	24.57	13200	2.2	FAF 127	DRE 200L4	1430	402
							F 127	DRE 200L4	1430	401
							FF 127	DRE 200L4	1520	402
		41	61200	43.03	8900	1.10	FA 107	DRE 200L4	1060	398
		47	53500	37.61	8910	1.25	FAF 107	DRE 200L4	1100	397
		56	45200	31.80	8850	1.50	F 107	DRE 200L4	1090	396
							FF 107	DRE 200L4	1150	397
		65	39200	27.57	8760	1.75	FA 107	DRE 200L4	1030	398
		71	35800	25.14	8680	1.95	FAF 107	DRE 200L4	1080	397
		82	30900	21.76*	8540	2.2	F 107	DRE 200L4	1070	396
	93	27300	19.20*	8390	2.5	FF 107	DRE 200L4	1070	396	
	107	23600	16.58	8200	2.9			1130	397	

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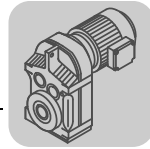
P_m [HP]	n_a [rpm]	T_a [lb-in]	i	$F_{Ra}^{1)}$ [lb]	SEW f_B		m [lbs]		
40	80	31400	22.11	3560	1.20				
	89	28500	20.07	3620	1.35				
	103	24500	17.25*	3670	1.55				
	118	21400	15.06	3690	1.75				
	139	18100	12.77	3680	2.1				
	159	15800	11.16	3650	2.3	FA 97	DRE 200L4	870	393
	196	12900	9.06	3420	1.60	FAF 97	DRE 200L4	920	392
	216	11700	8.22	3390	1.80	F 97	DRE 200L4	890	391
	252	10000	7.07	3330	2.1	FF 97	DRE 200L4	960	392
	289	8780	6.17	3270	2.3				
	340	7450	5.23	3180	2.6				
	389	6510	4.57	3100	2.8				
460	5500	3.87	3000	2.9					
50	21	151100	85.80*	19900	1.05				
	23	138100	78.46	19800	1.15				
	26	120200	68.28*	19600	1.30	FA 157	DRE 225S4	2000	408
	29	106100	60.25	19400	1.50	FAF 157	DRE 225S4	2130	407
	34	92000	52.24	19100	1.75	F 157	DRE 225S4	2040	406
	38	81800	46.48*	18800	1.95	FF 157	DRE 225S4	2280	407
	44	70500	40.06	18400	2.3				
	55	57300	32.55	17700	2.8				
	50	62900	35.75*	18000	1.55	FA 157	DRE 225S4	1990	408
	62	50300	28.60*	17300	3.0	FAF 157	DRE 225S4	2110	407
	70	44700	25.43	16900	3.0	F 157	DRE 225S4	2030	406
						FF 157	DRE 225S4	2270	407
	32	97400	55.31	13700	1.10				
	36	85900	48.80	13700	1.25	FA 127	DRE 225S4	1440	403
	42	74200	42.15	13600	1.45	FAF 127	DRE 225S4	1520	402
	48	65600	37.28	13400	1.60	F 127	DRE 225S4	1520	401
	57	55100	31.33	13200	1.90	FF 127	DRE 225S4	1620	402
	70	44500	25.30	12800	2.4				
	66	47300	26.86	12900	1.60	FA 127	DRE 225S4	1410	403
	72	43200	24.57	12700	1.75	FAF 127	DRE 225S4	1490	402
	83	37600	21.38	12400	2.8	F 127	DRE 225S4	1490	401
	94	33200	18.87	12200	2.9	FF 127	DRE 225S4	1590	402
	47	66200	37.61	8060	1.05	FA 107	DRE 225S4	1120	398
	56	56000	31.80	8140	1.20	FAF 107	DRE 225S4	1170	397
						F 107	DRE 225S4	1160	396
						FF 107	DRE 225S4	1220	397
	64	48500	27.57	8140	1.45				
	71	44200	25.14	8120	1.55				
	82	38300	21.76*	8050	1.80	FA 107	DRE 225S4	1100	398
	92	33800	19.20*	7960	2.0	FAF 107	DRE 225S4	1140	397
	107	29200	16.58	7830	2.4	F 107	DRE 225S4	1130	396
	121	25800	14.67	7710	2.6	FF 107	DRE 225S4	1190	397
	144	21700	12.33	7510	2.8				
	183	17000	9.69	7070	2.5				
	212	14700	8.37	6890	2.9				
	88	35300	20.07	3020	1.10				
103	30300	17.25*	3160	1.25					
118	26500	15.06	3240	1.45					
139	22400	12.77	3300	1.70					
159	19600	11.16	3320	1.85	FA 97	DRE 225S4	940	393	
196	15900	9.06	3110	1.30	FAF 97	DRE 225S4	990	392	
216	14400	8.22	3110	1.45	F 97	DRE 225S4	960	391	
251	12400	7.07	3090	1.70	FF 97	DRE 225S4	1030	392	
288	10800	6.17	3060	1.85					
339	9210	5.23	3000	2.1					
388	8050	4.57	2950	2.2					
459	6810	3.87	2870	2.3					
60	26	145800	68.28*	18300	1.10				
	30	128700	60.25	18200	1.25	FA 157	DRE 225M4	2050	408
	34	111500	52.24	18100	1.45	FAF 157	DRE 225M4	2170	407
	38	99200	46.48*	17900	1.60	F 157	DRE 225M4	2090	406
	44	85500	40.06	17600	1.85	FF 157	DRE 225M4	2330	407
	55	69500	32.55	17100	2.3				
	64	58900	27.60	16600	2.7				

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F..DRE/DRS
F..DRE/DRS [HP]

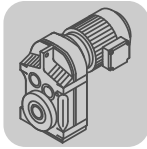
P_m [HP]	n_a [rpm]	T_a [lb-in]	i	$F_{Ra}^{1)}$ [lb]	SEW f_B					m [lbs]			
60	50	76300	35.75*	17300	1.25	FA	157	DRE	225M4	2030	408		
	62	61000	28.60*	16700	2.5	FAF	157	DRE	225M4	2160	407		
	70	54300	25.43	16400	2.4	F	157	DRE	225M4	2080	406		
						FF	157	DRE	225M4	2310	407		
	36	104200	48.80	12300	1.00	FA	127	DRE	225M4	1480	403		
	42	90000	42.15	12600	1.20	FAF	127	DRE	225M4	1570	402		
	48	79600	37.28	12600	1.35	F	127	DRE	225M4	1560	401		
	57	66900	31.33	12500	1.60	FF	127	DRE	225M4	1660	402		
	70	54000	25.30	12200	1.95								
	66	57300	26.86	12300	1.30	FA	127	DRE	225M4	1460	403		
	72	52400	24.57	12200	1.45	FAF	127	DRE	225M4	1540	402		
	83	45600	21.38	12000	2.3	F	127	DRE	225M4	1540	401		
	94	40200	18.87	11700	2.4	FF	127	DRE	225M4	1640	402		
	109	34900	16.36	11500	2.8								
	56	67900	31.80	7200	1.00	FA	107	DRE	225M4	1170	398		
						FAF	107	DRE	225M4	1210	397		
						F	107	DRE	225M4	1200	396		
						FF	107	DRE	225M4	1260	397		
	65	58800	27.57	7440	1.20								
	71	53700	25.14	7470	1.30								
	82	46400	21.76*	7490	1.50	FA	107	DRE	225M4	1140	398		
	93	41000	19.20*	7470	1.70	FAF	107	DRE	225M4	1190	397		
	107	35400	16.58	7410	1.95	F	107	DRE	225M4	1180	396		
	121	31300	14.67	7330	2.2	FF	107	DRE	225M4	1240	397		
144	26300	12.33	7190	2.4									
179	21200	9.96	6970	2.7									
184	20700	9.69	6790	2.1									
213	17800	8.37	6640	2.4									
240	15800	7.40	6510	2.6									
103	36800	17.25*	2580	1.05									
118	32100	15.06	2730	1.20									
139	27200	12.77	2870	1.40	FA	97	DRE	225M4	990	393			
159	23800	11.16	2940	1.50	FAF	97	DRE	225M4	1030	392			
196	19300	9.06	2760	1.10	F	97	DRE	225M4	1000	391			
216	17500	8.22	2790	1.20	FF	97	DRE	225M4	1080	392			
252	15000	7.07	2820	1.40									
289	13100	6.17	2820	1.50									
340	11100	5.23	2800	1.70									
389	9760	4.57	2770	1.85									
460	8260	3.87	2720	1.95									
75	29	157700	60.25	16800	1.00	FA	157	DV	250M4	2350	408		
	34	136700	52.24	16800	1.15	FAF	157	DV	250M4	2480	407		
	38	121600	46.48*	16800	1.30	F	157	DV	250M4	2400	406		
	44	104800	40.06	16600	1.50	FF	157	DV	250M4	2640	407		
	55	85200	32.55	16300	1.85								
	64	72200	27.60	15900	2.2								
	62	74800	28.60*	16000	2.0	FA	157	DV	250M4	2340	408		
	70	66500	25.43	15800	2.00	FAF	157	DV	250M4	2470	407		
	80	58000	22.16	15400	2.8	F	157	DV	250M4	2390	406		
	90	51700	19.77	15100	2.9	FF	157	DV	250M4	2620	407		
	48	97500	37.28	11300	1.10	FA	127	DV	250M4	1780	403		
	57	82000	31.33	11600	1.30	FAF	127	DV	250M4	1860	402		
	70	66200	25.30	11500	1.60	F	127	DV	250M4	1860	401		
						FF	127	DV	250M4	1960	402		
	83	55900	21.38	11400	1.90								
	94	49300	18.87	11200	1.95	FA	127	DV	250M4	1760	403		
	109	42800	16.36	11000	2.3	FAF	127	DV	250M4	1840	402		
	122	38000	14.55	10800	2.6	F	127	DV	250M4	1840	401		
	142	32800	12.54	10600	2.7	FF	127	DV	250M4	1930	402		
	200	23100	8.86	9800	2.7								
	225	20600	7.88	9570	2.6								
	100	44	143000	40.06	14700	1.10	FA	157	DV	280S4	2650	408	
		55	116100	32.55	14700	1.35	FAF	157	DV	280S4	2780	407	
		64	98500	27.60	14600	1.60	F	157	DV	280S4	2690	406	
						FF	157	DV	280S4	2930	407		

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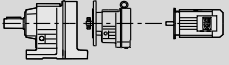
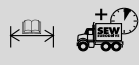


P _m [HP]	n _a [rpm]	T _a [lb-in]	i	F _{Ra} ¹⁾ [lb]	SEW f _B					m [lbs]		
						FA	FAF	F	FF			
100	62	102100	28.60*	14600	1.45							
	70	90800	25.43	14500	1.45							
	80	79100	22.16	14300	2.0							
	90	70500	19.77	14200	2.1							
	105	60100	16.85	13900	2.6							
	70	90300	25.30	9700	1.20	FA	127	DV	280S4	2090	403	
						FAF	127	DV	280S4	2170	402	
						F	127	DV	280S4	2170	401	
						FF	127	DV	280S4	2270	402	
		83	76300	21.38	10100	1.40						
		94	67300	18.87	10100	1.45						
		109	58300	16.36	10100	1.65						
		122	51900	14.55	10000	1.85	FA	127	DV	280S4	2060	403
		142	44700	12.54	9850	2.00	FAF	127	DV	280S4	2140	402
		174	36300	10.19	9590	2.3	F	127	DV	280S4	2140	401
		200	31600	8.86	9260	1.95	FF	127	DV	280S4	2240	402
		225	28100	7.88	9090	1.90						
		261	24200	6.80	8870	2.6						
	322	19700	5.52	8530	2.7							
125	55	139400	32.55	13500	1.15	FA	157	DV	280M4	2650	408	
	64	118200	27.60	13600	1.35	FAF	157	DV	280M4	2780	407	
						F	157	DV	280M4	2700	406	
						FF	157	DV	280M4	2930	407	
		62	122500	28.60*	13600	1.25						
		70	108900	25.43	13600	1.20						
		80	94900	22.16	13500	1.70	FA	157	DV	280M4	2640	408
		90	84700	19.77	13400	1.80	FAF	157	DV	280M4	2770	407
		105	72100	16.85	13300	2.2	F	157	DV	280M4	2690	406
		127	59800	13.96	13000	2.5	FF	157	DV	280M4	2920	407
		149	51000	11.92	12700	2.8						
		83	91500	21.38	8680	1.15						
		94	80800	18.87	9060	1.20						
		109	70000	16.36	9340	1.40						
		122	62300	14.55	9380	1.55	FA	127	DV	280M4	2070	403
		142	53700	12.54	9320	1.65	FAF	127	DV	280M4	2150	402
		174	43600	10.19	9160	1.95	F	127	DV	280M4	2150	401
		200	37900	8.86	8860	1.65	FF	127	DV	280M4	2250	402
	225	33700	7.88	8740	1.55							
	261	29100	6.80	8560	2.1							
	322	23600	5.52	8280	2.2							
	379	20000	4.68	8030	2.6							
150	65	143600	27.60	12300	1.10	FA	157	DRE	315K4	3200	408	
						FAF	157	DRE	315K4	3330	407	
						F	157	DRE	315K4	3240	406	
						FF	157	DRE	315K4	3480	407	
		81	115300	22.16	12500	1.40	FA	157	DRE	315K4/ERF/NS	3180	408
		90	102800	19.77	12500	1.45	FAF	157	DRE	315K4/ERF/NS	3310	407
		106	87600	16.85	12400	1.80	F	157	DRE	315K4/ERF/NS	3230	406
		128	72600	13.96	12300	2.1	FF	157	DRE	315K4/ERF/NS	3470	407
		150	62000	11.92	12100	2.3						
	200	81	157200	22.16	10400	1.00	FA	157	DRE	315S4/ERF/NS	3360	408
		90	140200	19.77	10600	1.05	FAF	157	DRE	315S4/ERF/NS	3490	407
		106	119500	16.85	10800	1.35	F	157	DRE	315S4/ERF/NS	3410	406
128		99000	13.96	10900	1.50	FF	157	DRE	315S4/ERF/NS	3640	407	
150		84500	11.92	10900	1.65							
250	106	147700	16.85	9400	1.10	FA	157	DRE	315M4	3710	408	
	128	122400	13.96	9760	1.25	FAF	157	DRE	315M4	3840	407	
	150		104400	11.92	9930	1.35	F	157	DRE	315M4	3760	406
							FF	157	DRE	315M4	3990	407
300	128	148800	13.96	8420	1.00	FA	157	DRE	315L4	3890	408	
	150		127000	11.92	8780	1.10	FAF	157	DRE	315L4	4020	407
							F	157	DRE	315L4	3930	406
							FF	157	DRE	315L4	4170	407

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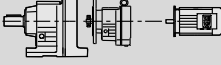




10.4 F..R..DRE/DRS [lb-in]

$T_a \text{ max}$ [lb-in]	n_a [rpm]	i	$F_{Ra}^{1)}$ [lb]		m [lbs]		
1150	0.19	8972	1010				
	0.22	7736	1010				
	0.24	7211	1010				
	0.27	6303	1010				
	0.31	5435	1010	FA 27R17	DRS 71S4	34	411
	0.35	4855	1010	FAF 27R17	DRS 71S4	36	411
	0.40	4243	1010	F 27R17	DRS 71S4	36	411
	0.46	3715	1010	FF 27R17	DRS 71S4	37	411
	0.52	3247	1010				
	0.59	2878	1010				
	0.68	2515	1010				
	0.77	2217	1010				
	0.90	1898	1010				
	1.0	1645	1010				
	1.1	1525	1010				
	1.3	1322	1010				
	1.5	1146	1010	FA 27R17	DRS 71S4	34	411
	1.7	1013	1010	FAF 27R17	DRS 71S4	35	411
	1.9	890	1010	F 27R17	DRS 71S4	35	411
	2.2	778	1010	FF 27R17	DRS 71S4	37	411
	2.5	682	1010				
	2.8	602	1010				
	3.3	520	1010				
	0.87	1948	1010				
	0.93	1826	1010				
	1.1	1610	1010				
	1.2	1399	1010				
	1.4	1230	1010				
	1.8	948	1010				
	2.0	829	1010				
	2.3	731	1010				
	2.7	633	1010	FA 27R17	DRS 71S4	34	411
	3.1	551	1010	FAF 27R17	DRS 71S4	35	411
	3.5	489	1010	F 27R17	DRS 71S4	35	411
	4.0	427	1010	FF 27R17	DRS 71S4	37	411
	4.5	379	1010				
	5.2	326	1010				
	5.9	288	1010				
	6.8	251	1010				
	7.7	221	1010				
	9.9	172	1010				
	11	153	1010				
	13	130	1010				
	3.7	458	1010				
4.3	397	1010					
5.0	342	1010					
5.6	302	1010					
6.4	266	1010	FA 27R17	DRS 71S4	33	411	
7.2	236	1010	FAF 27R17	DRS 71S4	35	411	
8.0	211	1010	F 27R17	DRS 71S4	34	411	
9.1	186	1010	FF 27R17	DRS 71S4	36	411	
12	142	1010					
14	124	1010					
16	109	1010					
18	96	1010					

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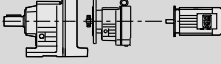




$T_{a \max}$ [lb-in]	n_a [rpm]	i	$F_{Ra}^{1)}$ [lb]		m [lbs]	 		
1760	0.21	8193	960					
	0.24	7064	960					
	0.26	6585	960					
	0.30	5756	960					
	0.34	4963	960					
	0.38	4434	960					
	0.44	3875	960		FA 37R17	DRS 71S4	48	411
	0.50	3392	960		FAF 37R17	DRS 71S4	51	411
	0.57	2965	960		F 37R17	DRS 71S4	49	411
	0.66	2587	960		FF 37R17	DRS 71S4	53	411
	0.74	2284	960					
	0.85	1997	960					
	0.98	1742	960					
	1.1	1545	960					
	0.88	1929	960					
	1.0	1679	960					
	1.1	1550	960					
	1.2	1356	960					
	1.4	1180	960					
	1.6	1044	960		FA 37R17	DRS 71S4	48	411
	1.9	914	960		FAF 37R17	DRS 71S4	51	411
	2.1	808	960		F 37R17	DRS 71S4	49	411
	2.4	698	960		FF 37R17	DRS 71S4	53	411
	2.8	616	960					
	3.1	544	960					
	3.6	466	960					
	4.1	411	960					
	4.7	364	960					
	1.2	1370	960					
	1.4	1198	960					
	1.6	1047	960					
	1.9	915	960					
	2.1	807	960					
	2.4	707	960					
	2.8	617	960					
	3.2	538	960					
	3.6	477	960		FA 37R17	DRS 71S4	47	411
	4.1	412	960		FAF 37R17	DRS 71S4	51	411
	4.7	365	960		F 37R17	DRS 71S4	48	411
	5.3	322	960		FF 37R17	DRS 71S4	53	411
	6.1	278	960					
	7.0	242	960					
	7.7	221	960					
	8.7	195	960					
	10	168	960					
12	147	960						
13	127	960						
14	121	960						
16	108	960		FA 37R17	DRS 71M4	50	411	
18	91	960		FAF 37R17	DRS 71M4	54	411	
				F 37R17	DRS 71M4	51	411	
				FF 37R17	DRS 71M4	55	411	
5.2	326	960						
6.0	285	960						
6.8	250	960						
7.8	219	960		FA 37R17	DRS 71S4	47	411	
9.1	186	960		FAF 37R17	DRS 71S4	50	411	
10	167	960		F 37R17	DRS 71S4	48	411	
12	145	960		FF 37R17	DRS 71S4	52	411	
13	129	960						
14	118	960						
17	98	960		FA 37R17	DRS 71M4	50	411	
20	87	960		FAF 37R17	DRS 71M4	53	411	
				F 37R17	DRS 71M4	51	411	
				FF 37R17	DRS 71M4	55	411	

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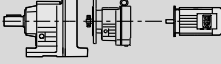




F..DRE/DRS
F..R..DRE/DRS [lb-in]

$T_a \text{ max}$ [lb-in]	n_a [rpm]	i	$F_{Ra}^{1)}$ [lb]		m [lbs]			
3530	0.14	12251	1330					
	0.16	10619	1330					
	0.17	9846	1330					
	0.20	8534	1330					
	0.23	7460	1330					
	0.26	6536	1330					
	0.30	5746	1330		FA 47R17	DRS 71S4	59	411
	0.34	5022	1330		FAF 47R17	DRS 71S4	65	411
	0.39	4401	1330		F 47R17	DRS 71S4	60	411
	0.44	3883	1330		FF 47R17	DRS 71S4	67	411
	0.49	3443	1330					
	0.57	2976	1330					
	0.65	2629	1330					
	0.74	2304	1330					
	0.84	2033	1330					
	0.67	2519	1330					
	0.71	2394	1330					
	0.78	2172	1330					
	0.84	2025	1330					
	0.96	1770	1330					
	1.1	1576	1330		FA 47R17	DRS 71S4	57	411
	1.2	1363	1330		FAF 47R17	DRS 71S4	63	411
	1.4	1192	1330		F 47R17	DRS 71S4	59	411
	1.6	1061	1330		FF 47R17	DRS 71S4	66	411
	1.8	931	1330					
	2.1	822	1330					
	2.4	706	1330					
	2.8	619	1330					
	0.95	1785	1330					
	1.1	1578	1330					
	1.2	1364	1330					
	1.4	1203	1330					
1.6	1049	1330						
1.8	918	1330						
2.1	809	1330		FA 47R17	DRS 71S4	58	411	
2.4	700	1330		FAF 47R17	DRS 71S4	64	411	
2.7	622	1330		F 47R17	DRS 71S4	60	411	
3.1	543	1330		FF 47R17	DRS 71S4	67	411	
3.6	475	1330						
4.1	419	1330						
4.6	370	1330						
5.3	324	1330						
5.9	288	1330						
6.8	249	1330						
7.8	218	1330						
8.7	193	1330		FA 47R17	DRS 71M4	61	411	
9.7	175	1330		FAF 47R17	DRS 71M4	67	411	
12	147	1330		F 47R17	DRS 71M4	63	411	
				FF 47R17	DRS 71M4	70	411	
13	130	1330		FA 47R17	DRE 80M4	71	411	
				FAF 47R17	DRE 80M4	77	411	
				F 47R17	DRE 80M4	73	411	
				FF 47R17	DRE 80M4	80	411	
3.2	524	1330						
3.5	489	1330						
4.0	427	1330		FA 47R17	DRS 71S4	56	411	
4.5	381	1330		FAF 47R17	DRS 71S4	62	411	
5.1	334	1330		F 47R17	DRS 71S4	58	411	
5.8	295	1330		FF 47R17	DRS 71S4	65	411	
6.7	253	1330						
7.8	217	1330						
8.9	190	1330		FA 47R17	DRS 71M4	59	411	
9.5	178	1330		FAF 47R17	DRS 71M4	65	411	
11	149	1330		F 47R17	DRS 71M4	61	411	
				FF 47R17	DRS 71M4	68	411	
13	131	1330		FA 47R17	DRE 80M4	70	411	
				FAF 47R17	DRE 80M4	76	411	
				F 47R17	DRE 80M4	71	411	
				FF 47R17	DRE 80M4	78	411	

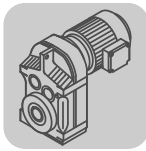
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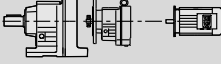


$T_a \text{ max}$ [lb-in]	n_a [rpm]	i	$F_{Ra}^{1)}$ [lb]		m [lbs]			
5300	0.11	14832	2070					
	0.12	13604	2070					
	0.13	12602	2070					
	0.15	11252	2070					
	0.17	9986	2070					
	0.19	8787	2070					
	0.21	7908	2070					
	0.25	6913	2070					
	0.28	6030	2070					
	0.32	5289	2070		FA 57R37	DRS 71S4	93	411
	0.37	4654	2070		FAF 57R37	DRS 71S4	105	411
	0.42	4060	2070		F 57R37	DRS 71S4	93	411
	0.48	3564	2070		FF 57R37	DRS 71S4	105	411
	0.54	3161	2070					
	0.62	2737	2070					
	0.71	2409	2070					
	0.80	2131	2070					
	0.92	1840	2070					
	1.0	1623	2070					
	1.2	1439	2070					
	1.4	1238	2070					
	0.60	2854	2070					
	0.66	2576	2070					
	0.75	2266	2070					
	0.84	2012	2070					
	0.95	1791	2070					
	1.0	1617	2070		FA 57R37	DRS 71S4	91	411
	1.2	1422	2070		FAF 57R37	DRS 71S4	105	411
	1.4	1243	2070		F 57R37	DRS 71S4	92	411
	1.6	1066	2070		FF 57R37	DRS 71S4	105	411
	1.8	949	2070					
	2.0	856	2070					
	2.3	749	2070					
	2.6	658	2070					
	3.1	549	2070					
	3.5	483	2070					
	1.5	1106	2070					
	1.8	967	2070					
	2.0	851	2070					
2.3	738	2070		FA 57R37	DRS 71S4	92	411	
2.6	646	2070		FAF 57R37	DRS 71S4	105	411	
3.0	558	2070		F 57R37	DRS 71S4	92	411	
3.4	506	2070		FF 57R37	DRS 71S4	105	411	
3.8	452	2070						
4.4	386	2070						
5.0	338	2070						
6.6	255	2070		FA 57R37	DRS 71M4	94	411	
				FAF 57R37	DRS 71M4	105	411	
				F 57R37	DRS 71M4	95	411	
				FF 57R37	DRS 71M4	110	411	
8.7	201	2070		FA 57R37	DRE 80M4	105	411	
9.6	181	2070		FAF 57R37	DRE 80M4	115	411	
				F 57R37	DRE 80M4	105	411	
				FF 57R37	DRE 80M4	120	411	
11	155	2070		FA 57R37	DRE 90M4	115	411	
				FAF 57R37	DRE 90M4	125	411	
				F 57R37	DRE 90M4	115	411	
				FF 57R37	DRE 90M4	130	411	
4.0	426	2070		FA 57R37	DRS 71S4	91	411	
4.4	382	2070		FAF 57R37	DRS 71S4	105	411	
5.2	330	2070		F 57R37	DRS 71S4	91	411	
				FF 57R37	DRS 71S4	105	411	
5.7	298	2070		FA 57R37	DRS 71M4	93	411	
6.4	262	2070		FAF 57R37	DRS 71M4	105	411	
7.5	226	2070		F 57R37	DRS 71M4	94	411	
				FF 57R37	DRS 71M4	110	411	

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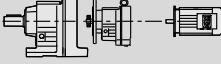
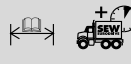


F..DRE/DRS
F..R..DRE/DRS [lb-in]

$T_a \text{ max}$ [lb-in]	n_a [rpm]	i	$F_{Ra}^{1)}$ [lb]		m [lbs]		
5300	8.7	200	2070	FA 57R37 DRE 80M4	105	411	
		170	2070	FAF 57R37 DRE 80M4	115	411	
				F 57R37 DRE 80M4	105	411	
				FF 57R37 DRE 80M4	120	411	
	11	152	2070	FA 57R37 DRE 90M4	115	411	
		134	2070	FAF 57R37 DRE 90M4	125	411	
				F 57R37 DRE 90M4	115	411	
				FF 57R37 DRE 90M4	130	411	
7250	0.09	19199	2320				
	0.10	17610	2320				
	0.11	14992	2320				
	0.13	12926	2320				
	0.15	11480	2320				
	0.17	10220	2320				
	0.19	8933	2320				
	0.21	7940	2320	FA 67R37 DRS 71S4	100	411	
	0.24	7096	2320	FAF 67R37 DRS 71S4	115	411	
	0.28	6080	2320	F 67R37 DRS 71S4	105	411	
	0.32	5341	2320	FF 67R37 DRS 71S4	120	411	
	0.36	4690	2320				
	0.42	4091	2320				
	0.48	3574	2320				
	0.54	3133	2320				
	0.62	2756	2320				
	0.70	2439	2320				
	0.50	3377	2320				
	0.58	2912	2320				
	0.63	2714	2320				
	0.72	2372	2320				
	0.80	2126	2320				
	0.91	1859	2320	FA 67R37 DRS 71S4	99	411	
	1.0	1631	2320	FAF 67R37 DRS 71S4	115	411	
	1.2	1437	2320	F 67R37 DRS 71S4	105	411	
	1.4	1256	2320	FF 67R37 DRS 71S4	120	411	
	1.5	1126	2320				
	1.7	984	2320				
	2.0	864	2320				
	2.4	722	2320				
	2.7	634	2320				
	3.2	539	2320				
	0.81	2106	2320				
	0.90	1884	2320				
	1.0	1635	2320				
	1.2	1429	2320				
	1.3	1271	2320	FA 67R37 DRS 71S4	100	411	
	1.5	1102	2320	FAF 67R37 DRS 71S4	115	411	
	1.8	970	2320	F 67R37 DRS 71S4	105	411	
	2.0	858	2320	FF 67R37 DRS 71S4	120	411	
	2.2	755	2320				
	2.6	641	2320				
	3.0	572	2320				
	3.3	509	2320				
	3.9	437	2320	FA 67R37 DRS 71M4	105	411	
	4.4	384	2320	FAF 67R37 DRS 71M4	115	411	
	5.0	338	2320	F 67R37 DRS 71M4	110	411	
	5.6	305	2320	FF 67R37 DRS 71M4	125	411	
6.8	257	2320	FA 67R37 DRE 80M4	115	411		
7.5	231	2320	FAF 67R37 DRE 80M4	130	411		
			F 67R37 DRE 80M4	120	411		
			FF 67R37 DRE 80M4	135	411		
8.5	205	2320	FA 67R37 DRE 90M4	125	411		
10.0	175	2320	FAF 67R37 DRE 90M4	135	411		
			F 67R37 DRE 90M4	130	411		
			FF 67R37 DRE 90M4	145	411		
3.4	500	2320	FA 67R37 DRS 71S4	98	411		
3.8	454	2320	FAF 67R37 DRS 71S4	110	411		
			F 67R37 DRS 71S4	105	411		
			FF 67R37 DRS 71S4	120	411		

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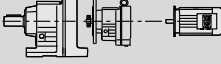


$T_a \text{ max}$ [lb-in]	n_a [rpm]	i	$F_{Ra}^{1)}$ [lb]		m [lbs]	
7250	4.3	392	2320	FA 67R37 DRS 71M4	100	411
	5.1	333	2320	FAF 67R37 DRS 71M4	115	411
	5.7	297	2320	F 67R37 DRS 71M4	105	411
				FF 67R37 DRS 71M4	120	411
	6.7	261	2320	FA 67R37 DRE 80M4	110	411
	7.3	238	2320	FAF 67R37 DRE 80M4	125	411
				F 67R37 DRE 80M4	115	411
				FF 67R37 DRE 80M4	130	411
	8.7	200	2320	FA 67R37 DRE 90M4	120	411
	9.9	176	2320	FAF 67R37 DRE 90M4	135	411
				F 67R37 DRE 90M4	125	411
				FF 67R37 DRE 90M4	140	411
13200	0.09	19180	3530			
	0.10	17593	3530			
	0.11	16128	3530			
	0.11	14978	3530			
	0.12	13731	3530			
	0.14	12049	3530			
	0.15	11035	3530			
	0.18	9683	3530			
	0.20	8464	3530	FA 77R37 DRS 71S4	150	411
	0.23	7520	3530	FAF 77R37 DRS 71S4	165	411
	0.26	6580	3530	F 77R37 DRS 71S4	160	411
	0.29	5808	3530	FF 77R37 DRS 71S4	180	411
	0.34	5026	3530			
	0.38	4435	3530			
	0.44	3832	3530			
	0.50	3381	3530			
	0.57	2978	3530			
	0.65	2613	3530			
0.74	2284	3530				
0.84	2029	3530				
9820	0.34	4931	4010			
	0.38	4523	4010			
	0.44	3851	4010			
	0.51	3320	4010			
	0.55	3095	4010			
	0.63	2705	4010			
	0.67	2536	4010	FA 77R37 DRS 71S4	145	411
	0.76	2238	4010	FAF 77R37 DRS 71S4	160	411
	0.83	2039	4010	F 77R37 DRS 71S4	155	411
	0.97	1759	4010	FF 77R37 DRS 71S4	180	411
	1.0	1639	4010			
	1.2	1433	4010			
	1.3	1343	4010			
	1.4	1185	4010			
1.6	1051	4010				
1.9	893	4010				
13200	0.98	1728	3530			
	1.1	1544	3530	FA 77R37 DRS 71S4	150	411
	1.3	1354	3530	FAF 77R37 DRS 71S4	165	411
	1.4	1200	3530	F 77R37 DRS 71S4	160	411
	1.6	1053	3530	FF 77R37 DRS 71S4	180	411
	1.9	910	3530			
	2.1	810	3530	FA 77R37 DRS 71M4	150	411
	2.4	710	3530	FAF 77R37 DRS 71M4	165	411
	2.8	615	3530	F 77R37 DRS 71M4	160	411
	3.1	538	3530	FF 77R37 DRS 71M4	185	411
	3.6	480	3530	FA 77R37 DRE 80M4	165	411
	4.2	413	3530	FAF 77R37 DRE 80M4	175	411
				F 77R37 DRE 80M4	170	411
				FF 77R37 DRE 80M4	195	411
	4.7	367	3530	FA 77R37 DRE 90M4	170	411
	5.4	323	3530	FAF 77R37 DRE 90M4	185	411
	6.2	280	3530	F 77R37 DRE 90M4	180	411
				FF 77R37 DRE 90M4	205	411

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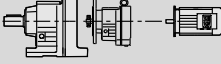




F..DRE/DRS
F..R..DRE/DRS [lb-in]

$T_{a \max}$ [lb-in]	n_a [rpm]	i	$F_{Ra}^{1)}$ [lb]		m [lbs]			
13200	7.0	247	3530	FA 77R37 DRE 90L4	180	411		
	7.9	221	3530	FAF 77R37 DRE 90L4	190	411		
	8.8	199	3530	F 77R37 DRE 90L4	185	411		
				FF 77R37 DRE 90L4	210	411		
9820	2.1	815	4010	FA 77R37 DRS 71S4	145	411		
	2.4	706	4010	FAF 77R37 DRS 71S4	160	411		
	2.6	660	4010	F 77R37 DRS 71S4	155	411		
				FF 77R37 DRS 71S4	180	411		
	3.0	571	4010	FA 77R37 DRS 71M4	150	411		
	3.5	485	4010	FAF 77R37 DRS 71M4	165	411		
	3.9	433	4010	F 77R37 DRS 71M4	155	411		
				FF 77R37 DRS 71M4	180	411		
	4.7	370	4010	FA 77R37 DRE 80M4	160	411		
	5.0	346	4010	FAF 77R37 DRE 80M4	175	411		
				F 77R37 DRE 80M4	170	411		
				FF 77R37 DRE 80M4	190	411		
		6.0	292	4010	FA 77R37 DRE 90M4	170	411	
				FAF 77R37 DRE 90M4	185	411		
				F 77R37 DRE 90M4	180	411		
				FF 77R37 DRE 90M4	200	411		
26500	0.07	23042	4450					
	0.08	20462	4450					
	0.09	18238	4450					
	0.11	15877	4450					
	0.12	14099	4450					
	0.14	12205	4450					
	0.16	10433	4450	FA 87R57 DRS 71S4	265	411		
	0.18	9381	4450	FAF 87R57 DRS 71S4	295	411		
	0.21	8142	4450	F 87R57 DRS 71S4	280	411		
	0.24	7100	4450	FF 87R57 DRS 71S4	310	411		
	0.27	6273	4450					
	0.31	5510	4450					
	0.34	4954	4450					
	0.40	4245	4450					
	0.46	3721	4450					
	0.34	4952	4450					
	0.37	4562	4450					
	0.43	3919	4450					
	0.49	3503	4450	FA 87R57 DRS 71S4	260	411		
	0.53	3196	4450	FAF 87R57 DRS 71S4	285	411		
	0.60	2857	4450	F 87R57 DRS 71S4	270	411		
	0.67	2524	4450	FF 87R57 DRS 71S4	305	411		
	0.80	2134	4450					
	0.89	1913	4450					
	0.99	1717	4450					
	1.2	1476	4450	FA 87R57 DRS 71M4	260	411		
	1.3	1278	4450	FAF 87R57 DRS 71M4	290	411		
	1.5	1142	4450	F 87R57 DRS 71M4	275	411		
				FF 87R57 DRS 71M4	310	411		
	1.8	988	4450	FA 87R57 DRE 80M4	275	411		
	2.0	883	4450	FAF 87R57 DRE 80M4	300	411		
				F 87R57 DRE 80M4	285	411		
				FF 87R57 DRE 80M4	320	411		
	2.3	748	4450	FA 87R57 DRE 90M4	285	411		
			FAF 87R57 DRE 90M4	310	411			
			F 87R57 DRE 90M4	295	411			
			FF 87R57 DRE 90M4	330	411			
0.52	3244	4450						
0.59	2881	4450	FA 87R57 DRS 71S4	265	411			
0.66	2576	4450	FAF 87R57 DRS 71S4	290	411			
0.77	2199	4450	F 87R57 DRS 71S4	275	411			
0.88	1930	4450	FF 87R57 DRS 71S4	310	411			
0.99	1709	4450						
1.1	1493	4450	FA 87R57 DRS 71M4	265	411			
1.3	1300	4450	FAF 87R57 DRS 71M4	295	411			
1.5	1148	4450	F 87R57 DRS 71M4	280	411			
			FF 87R57 DRS 71M4	315	411			

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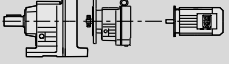



$T_{a \max}$ [lb-in]	n_a [rpm]	i	$F_{Ra}^{1)}$ [lb]		m [lbs]			
26500	1.7	1010	4450	FA 87R57 DRE 80M4	275	411		
		887	4450	FAF 87R57 DRE 80M4	305	411		
	2.0			F 87R57 DRE 80M4	290	411		
				FF 87R57 DRE 80M4	325	411		
	2.2	780	4450	FA 87R57 DRE 90M4	290	411		
		674	4450	FAF 87R57 DRE 90M4	315	411		
	2.6			F 87R57 DRE 90M4	300	411		
		609	4450	FF 87R57 DRE 90M4	335	411		
	3.4	515	4450	FA 87R57 DRE 90L4	295	411		
		452	4450	FAF 87R57 DRE 90L4	320	411		
	3.8			F 87R57 DRE 90L4	305	411		
				FF 87R57 DRE 90L4	340	411		
	5.0	345	4450	FA 87R57 DRE 100L4	310	411		
		300	4450	FAF 87R57 DRE 100L4	340	411		
	5.8			F 87R57 DRE 100L4	325	411		
				FF 87R57 DRE 100L4	360	411		
	7.0	249	4450	FA 87R57 DRE 100LC4	315	411		
				FAF 87R57 DRE 100LC4	345	411		
	2.6	662	4450	F 87R57 DRE 100LC4	330	411		
		592	4450	FF 87R57 DRE 100LC4	360	411		
	2.6	662	4450	FA 87R57 DRE 90M4	280	411		
		592	4450	FAF 87R57 DRE 90M4	310	411		
	3.4	519	4450	F 87R57 DRE 90M4	295	411		
		468	4450	FF 87R57 DRE 90M4	330	411		
	3.7			FA 87R57 DRE 90L4	285	411		
		398	4450	FAF 87R57 DRE 90L4	315	411		
	4.4			F 87R57 DRE 90L4	300	411		
				FF 87R57 DRE 90L4	335	411		
	5.0	350	4450	FA 87R57 DRE 100L4	305	411		
		315	4450	FAF 87R57 DRE 100L4	330	411		
	6.2	281	4450	F 87R57 DRE 100L4	315	411		
				FF 87R57 DRE 100L4	350	411		
	7.3	240	4450	FA 87R57 DRE 100LC4	310	411		
		211	4450	FAF 87R57 DRE 100LC4	335	411		
	8.3			F 87R57 DRE 100LC4	320	411		
		193	4450	FF 87R57 DRE 100LC4	355	411		
	38000	0.06	29211	6720				
		0.06	26911	6720				
		0.07	23814	6720				
		0.08	20813	6720				
		0.09	18119	6720				
		0.11	15472	6720				
		0.12	14022	6720	FA 97R57 DRS 71S4	410	411	
		0.14	12324	6720	FAF 97R57 DRS 71S4	455	411	
		0.16	10838	6720	F 97R57 DRS 71S4	425	411	
		0.18	9576	6720	FF 97R57 DRS 71S4	500	411	
		0.20	8318	6720				
		0.23	7328	6720				
0.26		6469	6720					
0.30		5615	6720					
0.34		4961	6720					
0.39		4333	6720					
0.27		6338	6720					
0.30		5680	6720					
0.34		5016	6720	FA 97R57 DRS 71S4	395	411		
0.39		4367	6720	FAF 97R57 DRS 71S4	445	411		
0.43		3914	6720	F 97R57 DRS 71S4	415	411		
0.51		3357	6720	FF 97R57 DRS 71S4	485	411		
0.57		3009	6720					
0.69		2448	6720					
0.77		2199	6720	FA 97R57 DRS 71M4	400	411		
0.86		1971	6720	FAF 97R57 DRS 71M4	445	411		
0.97		1741	6720	F 97R57 DRS 71M4	415	411		
				FF 97R57 DRS 71M4	490	411		
1.2		1468	6720	FA 97R57 DRE 80M4	410	411		
1.3		1316	6720	FAF 97R57 DRE 80M4	460	411		
1.5		1189	6720	F 97R57 DRE 80M4	425	411		
				FF 97R57 DRE 80M4	500	411		

reducer

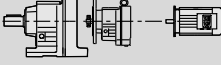




F..DRE/DRS
F..R..DRE/DRS [lb-in]

T _{a max} [lb-in]	n _a [rpm]	i	F _{Ra} ¹⁾ [lb]				m [lbs]	
38000	1.7	1023	6720	FA	97R57	DRE 90M4	420	411
				FAF	97R57	DRE 90M4	470	411
				F	97R57	DRE 90M4	435	411
				FF	97R57	DRE 90M4	510	411
	0.44	3906	6720	FA	97R57	DRS 71S4	405	411
	0.51	3352	6720	FAF	97R57	DRS 71S4	455	411
	0.58	2907	6720	F	97R57	DRS 71S4	425	411
	0.67	2553	6720	FF	97R57	DRS 71S4	495	411
	0.75	2245	6720	FA	97R57	DRS 71M4	410	411
	0.86	1970	6720	FAF	97R57	DRS 71M4	460	411
	0.98	1722	6720	F	97R57	DRS 71M4	425	411
	1.1	1527	6720	FF	97R57	DRS 71M4	500	411
	1.3	1327	6720	FA	97R57	DRE 80M4	420	411
	1.5	1171	6720	FAF	97R57	DRE 80M4	470	411
				F	97R57	DRE 80M4	440	411
				FF	97R57	DRE 80M4	510	411
	1.7	1022	6720	FA	97R57	DRE 90M4	430	411
	1.9	898	6720	FAF	97R57	DRE 90M4	480	411
	2.2	784	6720	F	97R57	DRE 90M4	450	411
				FF	97R57	DRE 90M4	520	411
	2.5	690	6720	FA	97R57	DRE 90L4	440	411
	2.9	605	6720	FAF	97R57	DRE 90L4	485	411
				F	97R57	DRE 90L4	455	411
				FF	97R57	DRE 90L4	530	411
	3.3	529	6720	FA	97R57	DRE 100L4	455	411
	3.7	467	6720	FAF	97R57	DRE 100L4	500	411
	4.3	406	6720	F	97R57	DRE 100L4	470	411
				FF	97R57	DRE 100L4	540	411
	4.8	363	6720	FA	97R57	DRE 100LC4	460	411
	6.1	285	6720	FAF	97R57	DRE 100LC4	510	411
	7.2	245	6720	F	97R57	DRE 100LC4	475	411
				FF	97R57	DRE 100LC4	550	411
	8.4	208	6720	FA	97R57	DRE 132M4	520	411
	9.0	195	6720	FAF	97R57	DRE 132M4	570	411
				F	97R57	DRE 132M4	530	411
				FF	97R57	DRE 132M4	610	411
	2.0	892	6720	FA	97R57	DRE 90M4	420	411
				FAF	97R57	DRE 90M4	465	411
				F	97R57	DRE 90M4	435	411
				FF	97R57	DRE 90M4	510	411
	2.3	760	6720	FA	97R57	DRE 90L4	425	411
	2.6	667	6720	FAF	97R57	DRE 90L4	470	411
	3.1	569	6720	F	97R57	DRE 90L4	440	411
				FF	97R57	DRE 90L4	510	411
	3.4	510	6720	FA	97R57	DRE 100L4	440	411
3.7	473	6720	FAF	97R57	DRE 100L4	490	411	
4.3	403	6720	F	97R57	DRE 100L4	460	411	
			FF	97R57	DRE 100L4	530	411	
4.8	361	6720	FA	97R57	DRE 100LC4	445	411	
5.5	317	6720	FAF	97R57	DRE 100LC4	495	411	
6.4	275	6720	F	97R57	DRE 100LC4	465	411	
7.2	242	6720	FF	97R57	DRE 100LC4	540	411	
67900	0.07	25375	11200					
	0.08	21652	11200					
	0.09	18933	11200					
	0.10	16888	11200					
	0.12	14767	11200					
	0.15	11348	11200	FA	107R77	DRS 71S4	610	411
	0.17	10039	11200	FAF	107R77	DRS 71S4	660	411
	0.20	8548	11200	F	107R77	DRS 71S4	650	411
	0.22	7674	11200	FF	107R77	DRS 71S4	710	411
	0.25	6767	11200					
	0.29	5954	11200					
	0.33	5223	11200					
	0.37	4567	11200					

reducer.ir



$T_a \text{ max}$ [lb-in]	n_a [rpm]	i	$F_{Ra} \text{ 1)}$ [lb]		m [lbs]		
67900	0.43	3948	11200	FA 107R77 DRS 71M4	610	411	
		3521	11200	FAF 107R77 DRS 71M4	660	411	
	0.48			F 107R77 DRS 71M4	650	411	
				FF 107R77 DRS 71M4	710	411	
69300	0.32	5383	11100	FA 107R77 DRS 71S4	590	411	
		4593	11100	FAF 107R77 DRS 71S4	640	411	
	0.37			F 107R77 DRS 71S4	630	411	
				FF 107R77 DRS 71S4	690	411	
	0.42	4016	11100	FA 107R77 DRS 71M4	590	411	
		3815	11100	FAF 107R77 DRS 71M4	640	411	
	0.44			F 107R77 DRS 71M4	630	411	
				FF 107R77 DRS 71M4	690	411	
	0.50	3347	11100	F 107R77 DRS 71M4	630	411	
		2839	11100	FF 107R77 DRS 71M4	690	411	
	0.60			FA 107R77 DRE 80M4	600	411	
				FAF 107R77 DRE 80M4	650	411	
	0.68	2563	11100	F 107R77 DRE 80M4	640	411	
		2255	11100	FF 107R77 DRE 80M4	700	411	
	0.77			FA 107R77 DRE 80M4	600	411	
				FAF 107R77 DRE 80M4	650	411	
	0.82	2129	11100	F 107R77 DRE 80M4	640	411	
		1813	11100	FF 107R77 DRE 80M4	700	411	
	0.96			FA 107R77 DRE 90M4	610	411	
				FAF 107R77 DRE 90M4	660	411	
	1.1	1590	11100	F 107R77 DRE 90M4	650	411	
		1436	11100	FF 107R77 DRE 90M4	710	411	
	1.2			FA 107R77 DRE 90L4	620	411	
				FAF 107R77 DRE 90L4	660	411	
	1.4	1263	11100	F 107R77 DRE 90L4	650	411	
		1193	11100	FF 107R77 DRE 90L4	710	411	
	1.5			FA 107R77 DRE 90L4	620	411	
				FAF 107R77 DRE 90L4	660	411	
	1.7	1015	11100	F 107R77 DRE 90L4	650	411	
		923	11100	FF 107R77 DRE 90L4	710	411	
	1.9			FA 107R77 DRE 100L4	630	411	
				FAF 107R77 DRE 100L4	680	411	
	2.2	800	11100	F 107R77 DRE 100L4	670	411	
				FF 107R77 DRE 100L4	730	411	
	2.5			FA 107R77 DRE 100LC4	640	411	
				FAF 107R77 DRE 100LC4	680	411	
67900	0.56	3037	11200	F 107R77 DRE 100LC4	680	411	
				FF 107R77 DRE 100LC4	740	411	
0.63	0.73	2756	11200	FA 107R77 DRS 71M4	610	411	
		2369	11200	FAF 107R77 DRS 71M4	660	411	
			F 107R77 DRS 71M4	650	411		
			FF 107R77 DRS 71M4	710	411		
0.84	2068	11200	FA 107R77 DRE 80M4	620	411		
	1826	11200	FAF 107R77 DRE 80M4	670	411		
1.1	1597	11200	F 107R77 DRE 80M4	660	411		
	1401	11200	FF 107R77 DRE 80M4	720	411		
1.2			FA 107R77 DRE 90M4	630	411		
			FAF 107R77 DRE 90M4	680	411		
1.4	1243	11200	F 107R77 DRE 90M4	670	411		
	1087	11200	FF 107R77 DRE 90M4	730	411		
1.4			FA 107R77 DRE 90L4	640	411		
			FAF 107R77 DRE 90L4	680	411		
1.6			F 107R77 DRE 90L4	670	411		
			FF 107R77 DRE 90L4	730	411		
1.8	950	11200	FA 107R77 DRE 90L4	640	411		
	834	11200	FAF 107R77 DRE 90L4	680	411		
2.1			F 107R77 DRE 90L4	670	411		
			FF 107R77 DRE 90L4	730	411		
2.4	736	11200	FA 107R77 DRE 100L4	650	411		
			FAF 107R77 DRE 100L4	700	411		
2.7			F 107R77 DRE 100L4	690	411		
			FF 107R77 DRE 100L4	750	411		
3.1	640	11200	FA 107R77 DRE 100LC4	660	411		
	560	11200	FAF 107R77 DRE 100LC4	700	411		
3.6			F 107R77 DRE 100LC4	690	411		
			FF 107R77 DRE 100LC4	750	411		
4.0	489	11200	FA 107R77 DRE 132M4	720	411		
	436	11200	FAF 107R77 DRE 132M4	760	411		
4.8	370	11200	F 107R77 DRE 132M4	750	411		
	333	11200	FF 107R77 DRE 132M4	810	411		
5.3			FA 107R77 DRE 132MC4	720	411		
			FAF 107R77 DRE 132MC4	770	411		
6.0	291	11200	F 107R77 DRE 132MC4	760	411		
			FF 107R77 DRE 132MC4	820	411		
7.0	255	11200	FA 107R77 DRE 160M4	770	411		
	225	11200	FAF 107R77 DRE 160M4	820	411		
7.9			F 107R77 DRE 160M4	810	411		
			FF 107R77 DRE 160M4	870	411		
9.3			FA 107R77 DRE 160M4	770	411		
			FAF 107R77 DRE 160M4	820	411		
9.3			F 107R77 DRE 160M4	810	411		
			FF 107R77 DRE 160M4	870	411		

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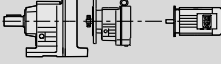
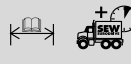


F..DRE/DRS
F..R..DRE/DRS [lb-in]

$T_{a \max}$ [lb-in]	n_a [rpm]	i	$F_{Ra}^{1)}$ [lb]		m [lbs]		
69300	2.7	644	11100	FA 107R77 DRE 100LC4	640	411	
	3.0	591	11100	FAF 107R77 DRE 100LC4	680	411	
	3.4	518	11100	F 107R77 DRE 100LC4	670	411	
	3.6	491	11100	FF 107R77 DRE 100LC4	730	411	
	4.1	430	11100				
	4.6	387	11100	FA 107R77 DRE 132S4	670	411	
				FAF 107R77 DRE 132S4	710	411	
				F 107R77 DRE 132S4	700	411	
				FF 107R77 DRE 132S4	760	411	
	5.2	340	11100	FA 107R77 DRE 132M4	690	411	
	5.8	300	11100	FAF 107R77 DRE 132M4	740	411	
				F 107R77 DRE 132M4	730	411	
				FF 107R77 DRE 132M4	790	411	
	6.7	266	11100	FA 107R77 DRE 132MC4	700	411	
				FAF 107R77 DRE 132MC4	750	411	
				F 107R77 DRE 132MC4	740	411	
			FF 107R77 DRE 132MC4	800	411		
106100	0.07	24478	20200				
	0.08	22323	20200				
	0.09	19048	20200				
	0.10	16656	20200	FA 127R77 DRS 71S4	940	411	
	0.12	14722	20200	FAF 127R77 DRS 71S4	1030	411	
	0.13	12912	20200	F 127R77 DRS 71S4	1020	411	
	0.15	11656	20200	FF 127R77 DRS 71S4	1120	411	
	0.17	10191	20200				
	0.19	8831	20200				
	0.22	7643	20200				
	0.25	6715	20200	FA 127R77 DRS 71M4	950	411	
	0.29	5925	20200	FAF 127R77 DRS 71M4	1030	411	
	0.33	5153	20200	F 127R77 DRS 71M4	1030	411	
	0.37	4533	20200	FF 127R77 DRS 71M4	1130	411	
	0.44	3926	20200	FA 127R77 DRE 80M4	960	411	
	0.50	3454	20200	FAF 127R77 DRE 80M4	1040	411	
				F 127R77 DRE 80M4	1040	411	
				FF 127R77 DRE 80M4	1140	411	
	0.57	3031	20200	FA 127R77 DRE 90M4	970	411	
				FAF 127R77 DRE 90M4	1050	411	
				F 127R77 DRE 90M4	1050	411	
				FF 127R77 DRE 90M4	1140	411	
	0.65	2672	20200	FA 127R77 DRE 90M4	960	411	
	0.74	2357	20200	FAF 127R77 DRE 90M4	1050	411	
				F 127R77 DRE 90M4	1040	411	
				FF 127R77 DRE 90M4	1140	411	
	0.85	2038	20200	FA 127R77 DRE 90L4	970	411	
	0.98	1784	20200	FAF 127R77 DRE 90L4	1050	411	
	1.1	1606	20200	F 127R77 DRE 90L4	1050	411	
				FF 127R77 DRE 90L4	1150	411	
	1.2	1390	20200	FA 127R77 DRE 100L4	990	411	
	1.4	1220	20200	FAF 127R77 DRE 100L4	1070	411	
	1.6	1077	20200	F 127R77 DRE 100L4	1070	411	
				FF 127R77 DRE 100L4	1170	411	
	1.9	930	20200	FA 127R77 DRE 100LC4	990	411	
	2.1	820	20200	FAF 127R77 DRE 100LC4	1070	411	
	2.4	727	20200	F 127R77 DRE 100LC4	1070	411	
	2.7	648	20200	FF 127R77 DRE 100LC4	1170	411	
	3.2	549	20200	FA 127R77 DRE 132M4	1050	411	
	3.6	495	20200	FAF 127R77 DRE 132M4	1130	411	
			F 127R77 DRE 132M4	1130	411		
			FF 127R77 DRE 132M4	1230	411		
4.2	428	20200	FA 127R77 DRE 132MC4	1060	411		
4.7	376	20200	FAF 127R77 DRE 132MC4	1140	411		
			F 127R77 DRE 132MC4	1140	411		
			FF 127R77 DRE 132MC4	1230	411		
3.6	483	20200	FA 127R87 DRE 132M4	1090	411		
			FAF 127R87 DRE 132M4	1180	411		
			F 127R87 DRE 132M4	1180	411		
			FF 127R87 DRE 132M4	1270	411		

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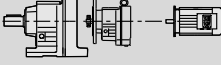
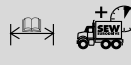


$T_{a \max}$ [lb-in]	n_a [rpm]	i	$F_{Ra}^{1)}$ [lb]		m [lbs]	
106100	4.2	418	20200	FA 127R87 DRE 132MC4	1100	411
		374	20200	FAF 127R87 DRE 132MC4	1180	411
	5.7	312	20200	F 127R87 DRE 132MC4	1180	411
		293	20200	FF 127R87 DRE 132MC4	1280	411
	6.0	293	20200	FA 127R87 DRE 160M4	1150	411
				FAF 127R87 DRE 160M4	1230	411
	6.9	259	20200	F 127R87 DRE 160M4	1230	411
				FF 127R87 DRE 160M4	1330	411
	8.0	223	20200	FA 127R87 DRE 160MC4	1160	411
				FAF 127R87 DRE 160MC4	1240	411
	9.0	198	20200	F 127R87 DRE 160MC4	1240	411
				FF 127R87 DRE 160MC4	1340	411
	11	166	20200	FA 127R87 DRE 180M4	1260	411
				FAF 127R87 DRE 180M4	1340	411
				F 127R87 DRE 180M4	1340	411
				FF 127R87 DRE 180M4	1440	411
159200	0.05	31434	22500			
	0.06	26173	22500			
	0.07	23464	22500	FA 157R97 DRS 71M4	1690	411
	0.08	20212	22500	FAF 157R97 DRS 71M4	1820	411
	0.09	17984	22500	F 157R97 DRS 71M4	1740	411
	0.10	16358	22500	FF 157R97 DRS 71M4	1970	411
	0.12	13751	22500			
	0.14	12235	22500			
	0.17	10033	22500			
	0.19	9021	22500	FA 157R97 DRE 80M4	1700	411
	0.22	8026	22500	FAF 157R97 DRE 80M4	1830	411
	0.25	7075	22500	F 157R97 DRE 80M4	1750	411
	0.28	6295	22500	FF 157R97 DRE 80M4	1980	411
	0.32	5404	22500			
	0.36	4831	22500	FA 157R97 DRE 90M4	1710	411
	0.42	4130	22500	FAF 157R97 DRE 90M4	1840	411
				F 157R97 DRE 90M4	1760	411
				FF 157R97 DRE 90M4	1990	411
	0.48	3607	22500	FA 157R97 DRE 100L4	1730	411
	0.54	3210	22500	FAF 157R97 DRE 100L4	1860	411
				F 157R97 DRE 100L4	1780	411
				FF 157R97 DRE 100L4	2010	411
	0.63	2780	22500	FA 157R97 DRE 90L4	1720	411
				FAF 157R97 DRE 90L4	1850	411
				F 157R97 DRE 90L4	1760	411
				FF 157R97 DRE 90L4	2000	411
	1.2	1441	22500	FA 157R97 DRE 100LC4	1740	411
				FAF 157R97 DRE 100LC4	1870	411
				F 157R97 DRE 100LC4	1780	411
				FF 157R97 DRE 100LC4	2020	411
	0.71	2427	22500	FA 157R97 DRE 100L4	1730	411
	0.79	2185	22500	FAF 157R97 DRE 100L4	1860	411
	0.89	1944	22500	F 157R97 DRE 100L4	1770	411
	1.0	1674	22500	FF 157R97 DRE 100L4	2010	411
	1.3	1308	22500	FA 157R97 DRE 100LC4	1730	411
	1.5	1169	22500	FAF 157R97 DRE 100LC4	1860	411
				F 157R97 DRE 100LC4	1780	411
				FF 157R97 DRE 100LC4	2010	411
	1.8	953	22500	FA 157R97 DRE 132S4	1760	411
				FAF 157R97 DRE 132S4	1890	411
				F 157R97 DRE 132S4	1810	411
				FF 157R97 DRE 132S4	2040	411
	2.1	845	22500	FA 157R97 DRE 132M4	1790	411
	2.3	764	22500	FAF 157R97 DRE 132M4	1920	411
	2.6	680	22500	F 157R97 DRE 132M4	1830	411
				FF 157R97 DRE 132M4	2070	411
	3.1	576	22500	FA 157R97 DRE 132MC4	1800	411
	3.5	503	22500	FAF 157R97 DRE 132MC4	1920	411
			F 157R97 DRE 132MC4	1840	411	
			FF 157R97 DRE 132MC4	2080	411	

reducer.ir



F..DRE/DRS
F..R..DRE/DRS [lb-in]

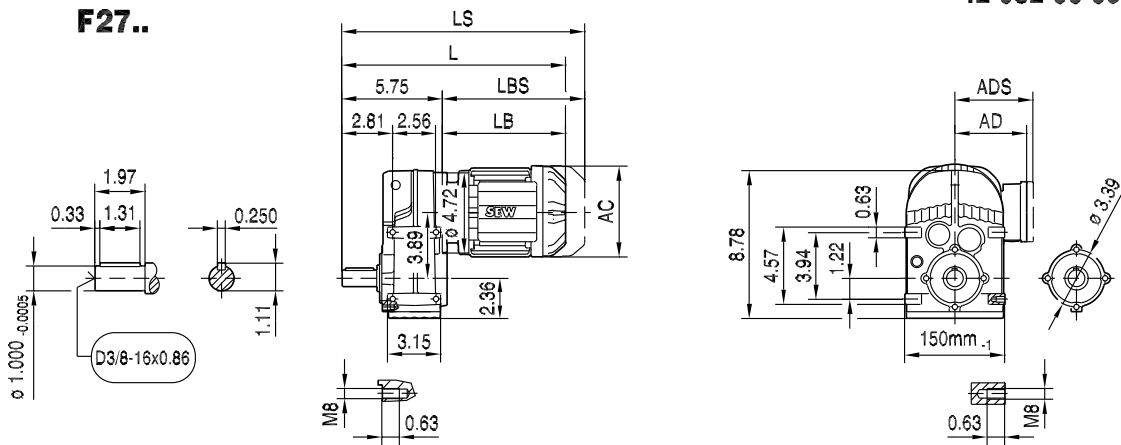
$T_a \text{ max}$ [lb-in]	n_a [rpm]	i	$F_{Ra} \text{ } ^{1)}$ [lb]		m [lbs]	
159200	4.0	446	22500	FA 157R97 DRE 160M4	1840	411
				FAF 157R97 DRE 160M4	1970	411
				F 157R97 DRE 160M4	1890	411
				FF 157R97 DRE 160M4	2120	411
	5.0	353	22500	FA 157R97 DRE 160MC4	1850	411
				FAF 157R97 DRE 160MC4	1980	411
				F 157R97 DRE 160MC4	1900	411
				FF 157R97 DRE 160MC4	2130	411
	5.9	302	22500	FA 157R97 DRE 180M4	1950	411
				FAF 157R97 DRE 180M4	2080	411
	6.5	273	22500	F 157R97 DRE 180M4	2000	411
				FF 157R97 DRE 180M4	2230	411
	7.7	232	22500	FA 157R97 DRE 180L4	1990	411
				FAF 157R97 DRE 180L4	2120	411
				F 157R97 DRE 180L4	2040	411
				FF 157R97 DRE 180L4	2280	411
8.8	202	22500	FA 157R97 DRE 180L4	1990	411	
			FAF 157R97 DRE 180L4	2120	411	
			F 157R97 DRE 180L4	2040	411	
			FF 157R97 DRE 180L4	2280	411	
9.0	197	22500	FA 157R97 DRE 180L4	1990	411	
			FAF 157R97 DRE 180L4	2120	411	
			F 157R97 DRE 180L4	2040	411	
			FF 157R97 DRE 180L4	2280	411	

reducer.ir

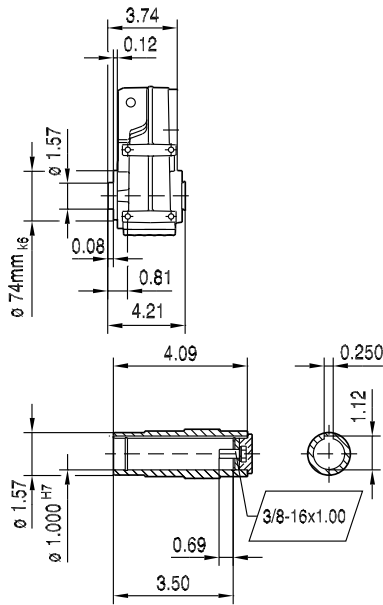


10.5 F..[in]

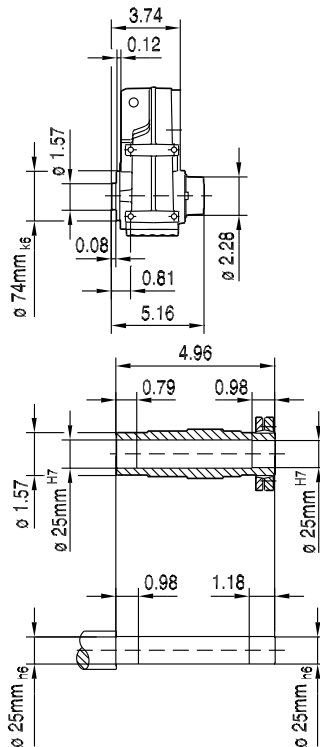
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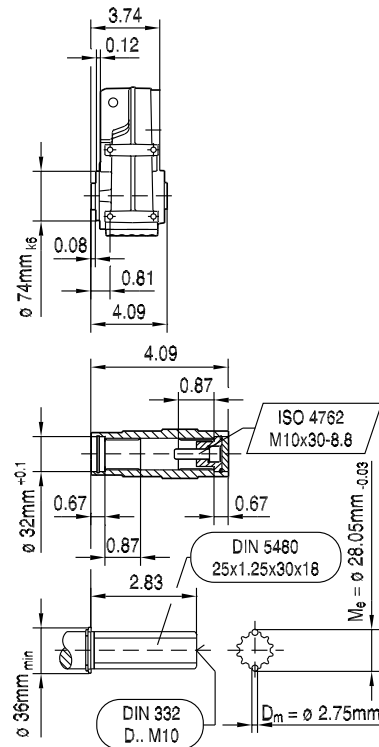
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FH27B..
max. DR71..



FV27B..

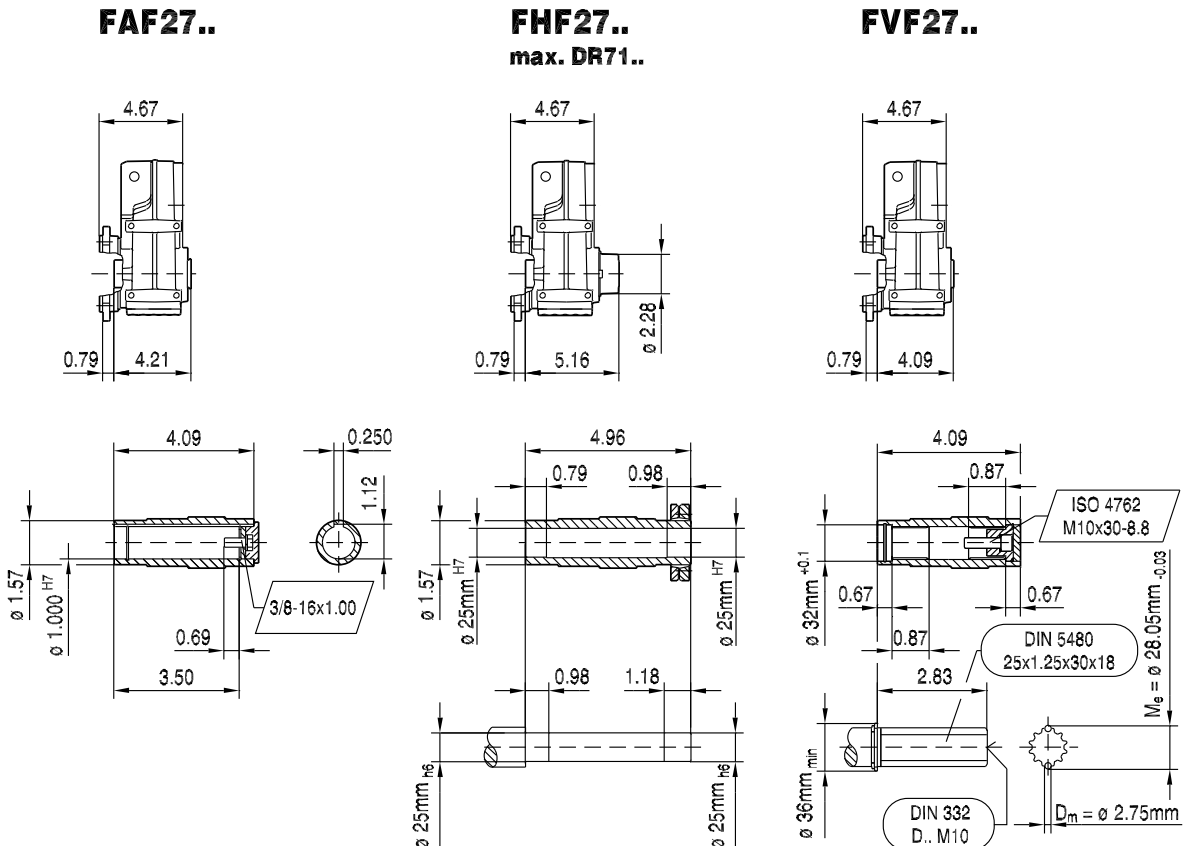
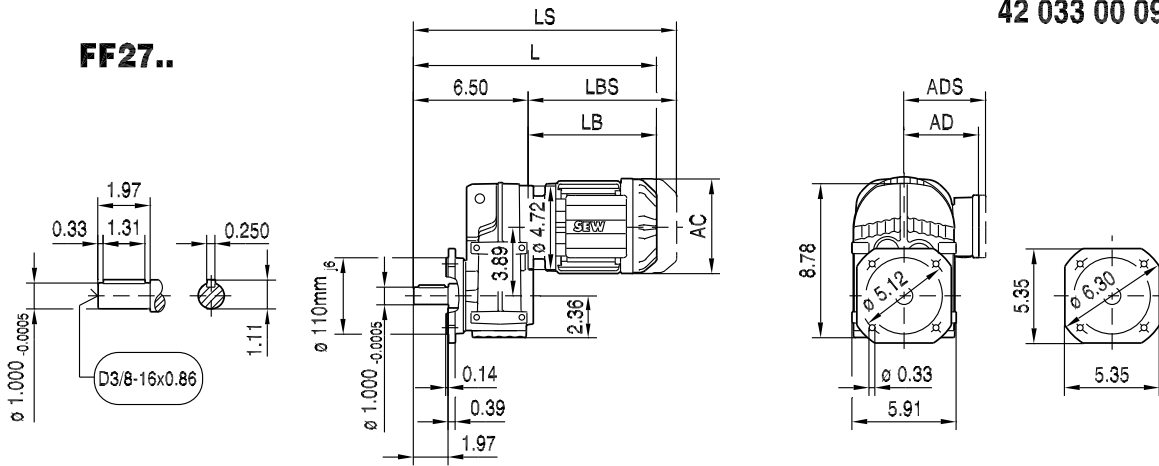


(→ 125)	DR63..	DR71S	DR71M	DR80S	DR80M	DR90M	DR90L	DR100M	DR100L/LC
AC	5.20	5.47	5.47	6.14	6.14	7.05	7.05	7.76	7.76
AD	4.13	4.69	4.69	5.04	5.04	5.51	5.51	6.18	6.18
ADS	4.13	5.08	5.08	5.47	5.47	5.91	5.91	6.22	6.22
L	13.27	13.74	14.72	15.08	16.30	16.46	17.24	18.43	19.61
LS	15.43	16.42	17.40	18.27	19.49	20.12	20.91	22.09	23.27
LB	7.52	7.99	8.98	9.33	10.55	10.71	11.50	12.68	13.86
LBS	9.69	10.67	11.65	12.52	13.74	14.37	15.16	16.34	17.52

reducer.ir

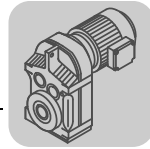


42 033 00 09



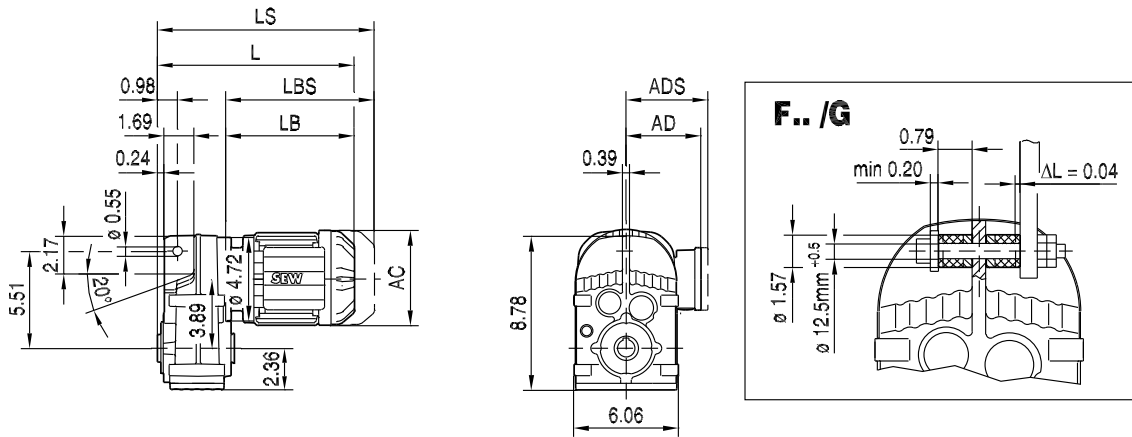
(→ 125)	DR63..	DR71S	DR71M	DR80S	DR80M	DR90M	DR90L	DR100M	DR100L/LC
AC	5.20	5.47	5.47	6.14	6.14	7.05	7.05	7.76	7.76
AD	4.13	4.69	4.69	5.04	5.04	5.51	5.51	6.18	6.18
ADS	4.13	5.08	5.08	5.47	5.47	5.91	5.91	6.22	6.22
L	14.02	14.49	15.47	15.83	17.05	17.20	17.99	19.17	20.35
LS	16.18	17.17	18.15	19.02	20.24	20.87	21.65	22.83	24.02
LB	7.52	7.99	8.98	9.33	10.55	10.71	11.50	12.68	13.86
LBS	9.69	10.67	11.65	12.52	13.74	14.37	15.16	16.34	17.52

reducer.ir



FA27..

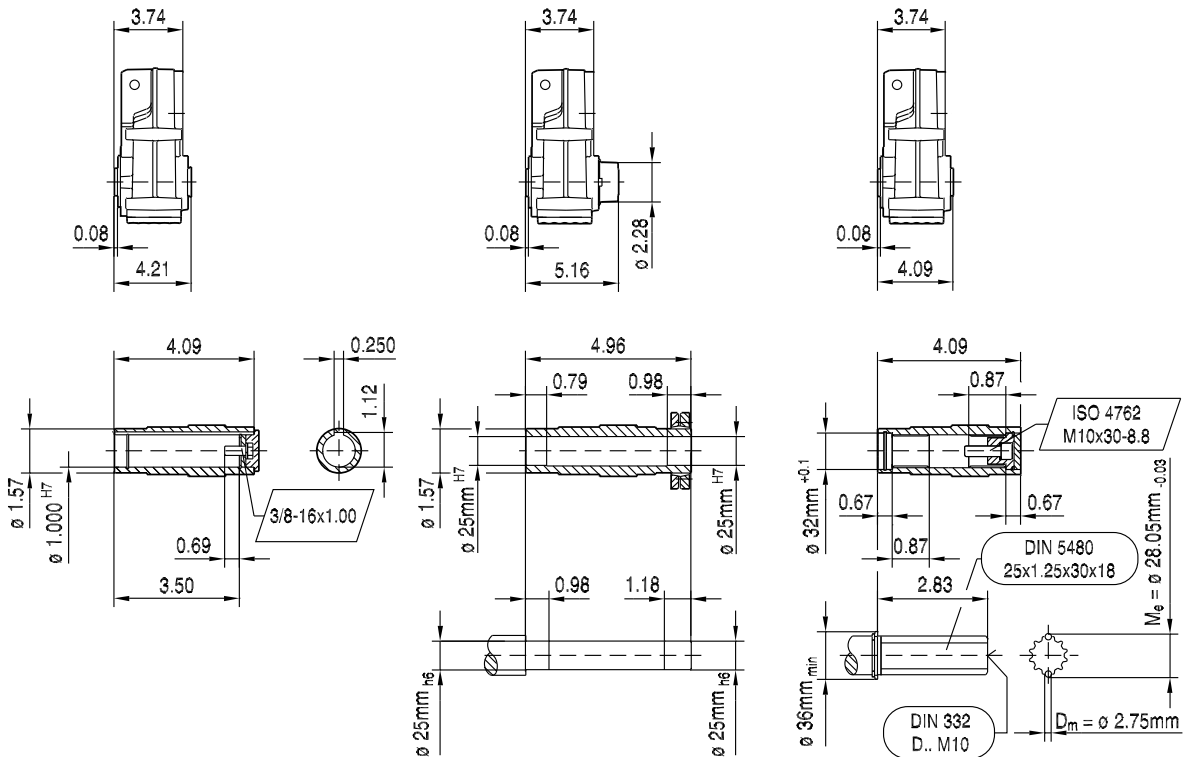
42 034 00 09



FA27..

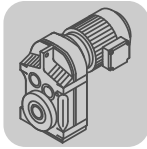
FH27..
max. DR71..

FV27..

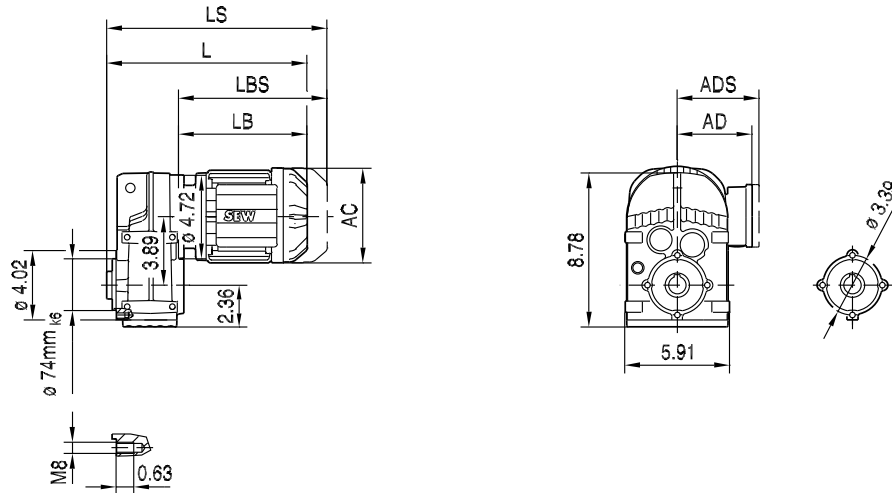


(→ 125)	DR63..	DR71S	DR71M	DR80S	DR80M	DR90M	DR90L	DR100M	DR100L/LC
AC	5.20	5.47	5.47	6.14	6.14	7.05	7.05	7.76	7.76
AD	4.13	4.69	4.69	5.04	5.04	5.51	5.51	6.18	6.18
ADS	4.13	5.08	5.08	5.47	5.47	5.91	5.91	6.22	6.22
L	11.26	11.73	12.72	13.07	14.29	14.45	15.24	16.42	17.60
LS	13.43	14.41	15.39	16.26	17.48	18.11	18.90	20.08	21.26
LB	7.52	7.99	8.98	9.33	10.55	10.71	11.50	12.68	13.86
LBS	9.69	10.67	11.65	12.52	13.74	14.37	15.16	16.34	17.52

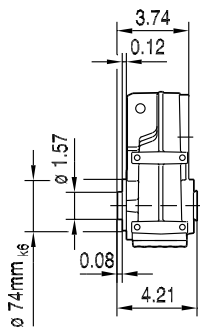
reducer.ir



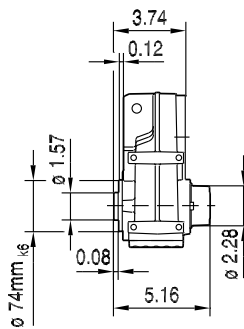
FAZ27..



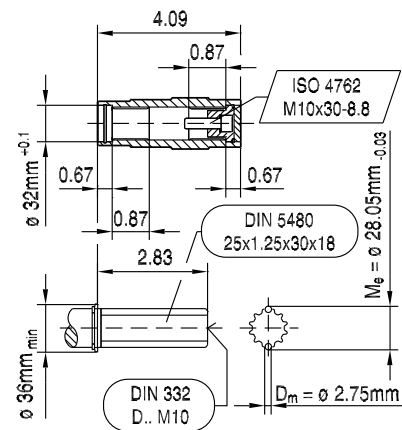
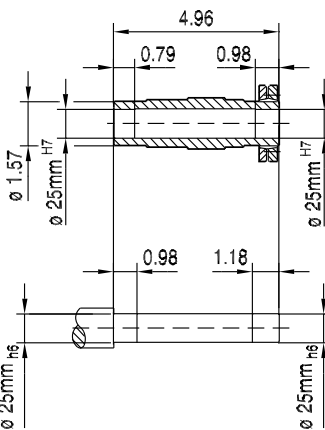
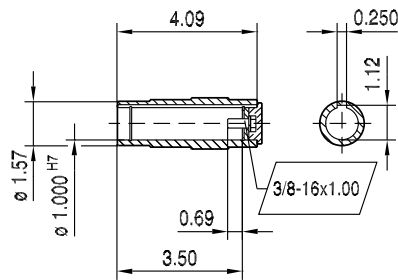
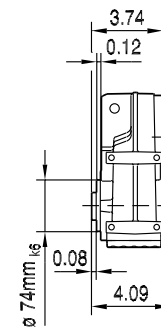
FAZ27..



FHZ27..
max. DR71..



FVZ27..

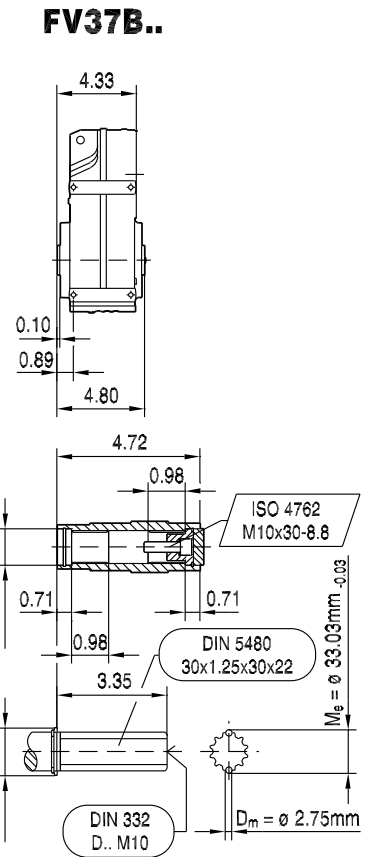
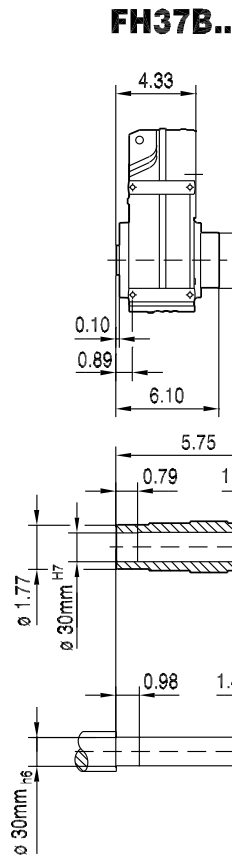
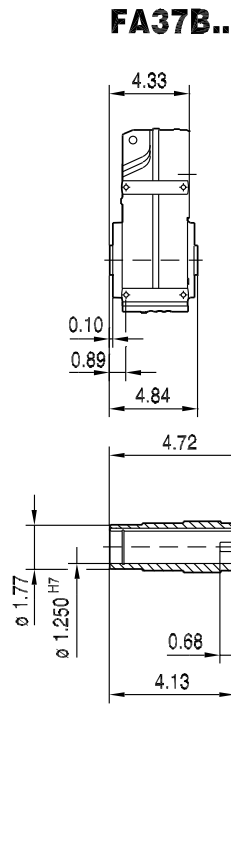
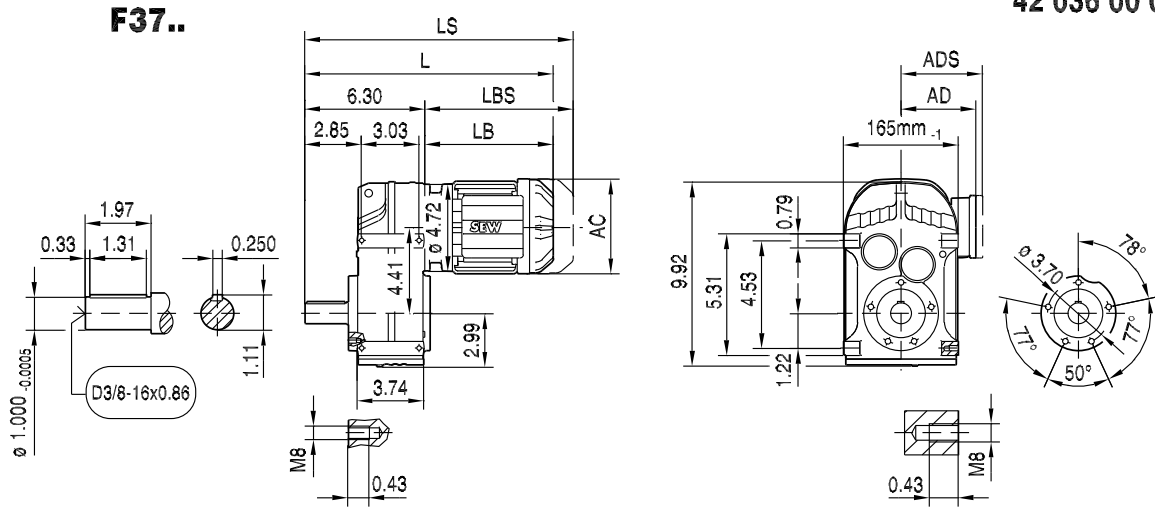


(→ 125)	DR63..	DR71S	DR71M	DR80S	DR80M	DR90M	DR90L	DR100M	DR100L/LC
AC	5.20	5.47	5.47	6.14	6.14	7.05	7.05	7.76	7.76
AD	4.13	4.69	4.69	5.04	5.04	5.51	5.51	6.18	6.18
ADS	4.13	5.08	5.08	5.47	5.47	5.91	5.91	6.22	6.22
L	11.26	11.73	12.72	13.07	14.29	14.45	15.24	16.42	17.60
LS	13.43	14.41	15.39	16.26	17.48	18.11	18.90	20.08	21.26
LB	7.52	7.99	8.98	9.33	10.55	10.71	11.50	12.68	13.86
LBS	9.69	10.67	11.65	12.52	13.74	14.37	15.16	16.34	17.52

reducer.ir



42 036 00 09

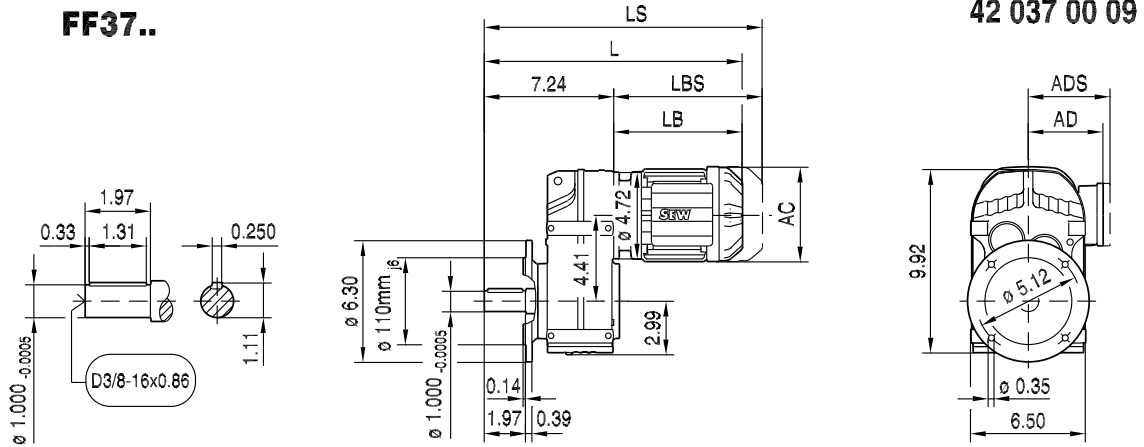


(→ 125)	DR63..	DR71S	DR71M	DR80S	DR80M	DR90M	DR90L	DR100M	DR100L/LC
AC	5.20	5.47	5.47	6.14	6.14	7.05	7.05	7.76	7.76
AD	4.13	4.69	4.69	5.04	5.04	5.51	5.51	6.18	6.18
ADS	4.13	5.08	5.08	5.47	5.47	5.91	5.91	6.22	6.22
L	13.82	14.29	15.28	15.63	16.85	17.01	17.80	18.98	20.16
LS	15.98	16.97	17.95	18.82	20.04	20.67	21.46	22.64	23.82
LB	7.52	7.99	8.98	9.33	10.55	10.71	11.50	12.68	13.86
LBS	9.69	10.67	11.65	12.52	13.74	14.37	15.16	16.34	17.52

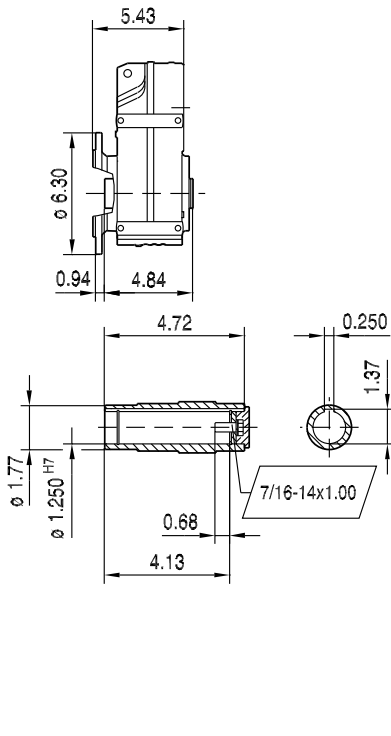
reducer.ir



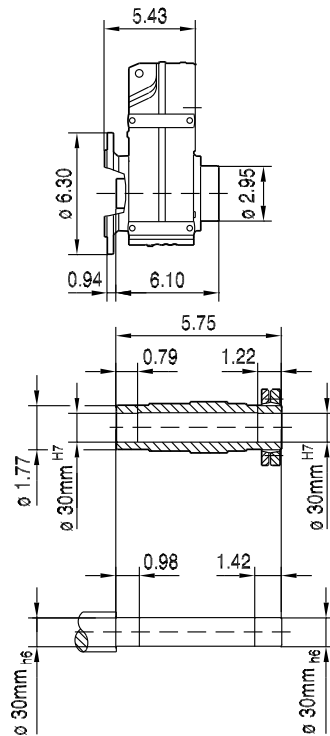
FF37..



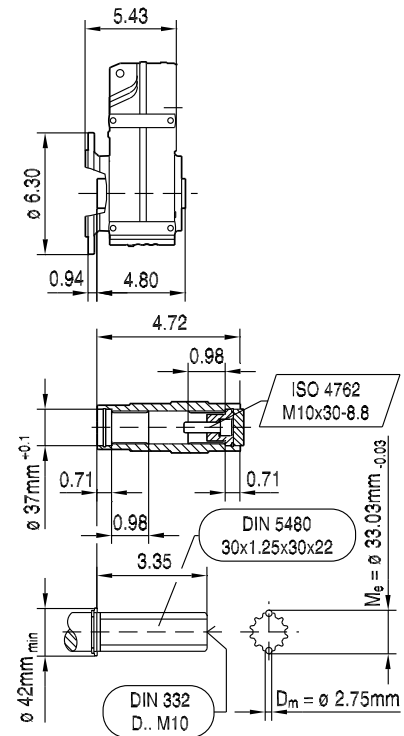
FAF37..



FHF37..



FVF37..



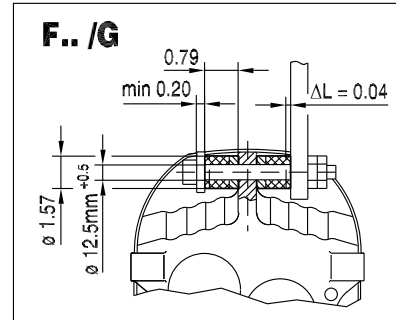
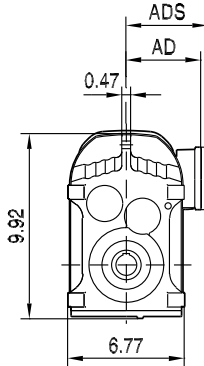
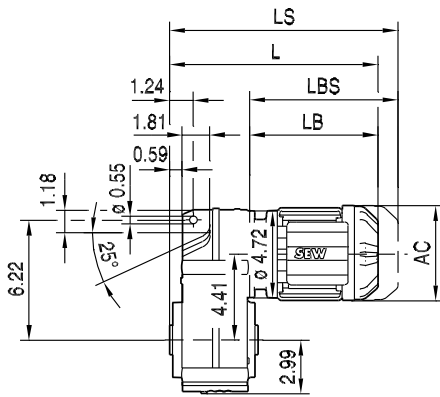
(→ 125)	DR63..	DR71S	DR71M	DR80S	DR80M	DR90M	DR90L	DR100M	DR100L/LC
AC	5.20	5.47	5.47	6.14	6.14	7.05	7.05	7.76	7.76
AD	4.13	4.69	4.69	5.04	5.04	5.51	5.51	6.18	6.18
ADS	4.13	5.08	5.08	5.47	5.47	5.91	5.91	6.22	6.22
L	14.76	15.24	16.22	16.57	17.80	17.95	18.74	19.92	21.10
LS	16.93	17.91	18.90	19.76	20.98	21.61	22.40	23.58	24.76
LB	7.52	7.99	8.98	9.33	10.55	10.71	11.50	12.68	13.86
LBS	9.69	10.67	11.65	12.52	13.74	14.37	15.16	16.34	17.52

reducer.ir



FA37..

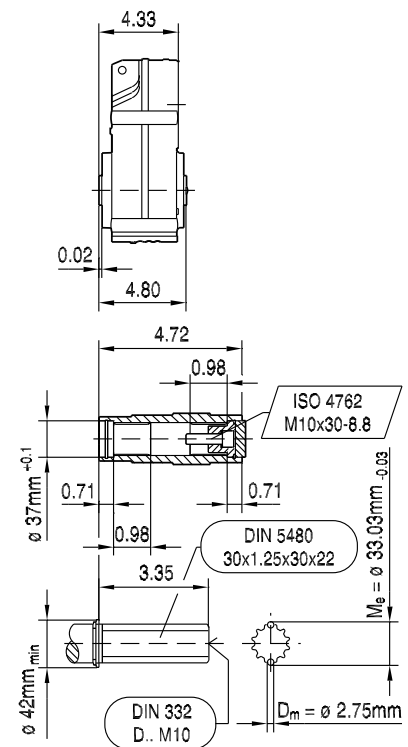
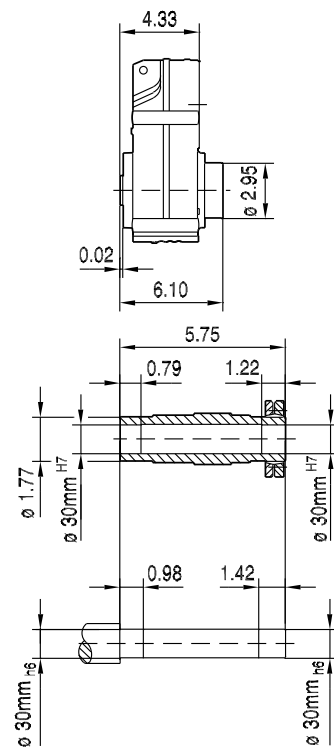
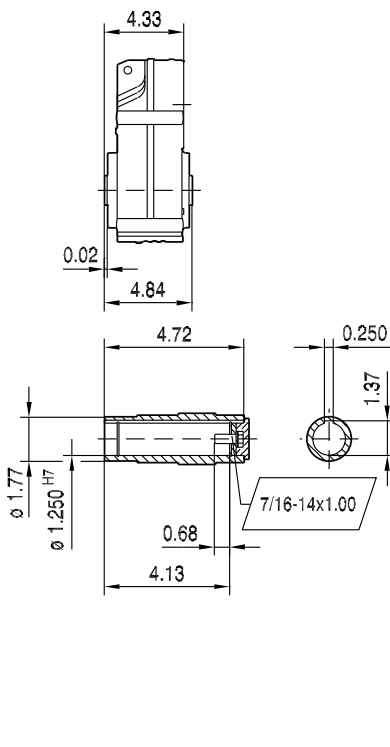
42 038 00 09



FA37..

FH37..

FV37..



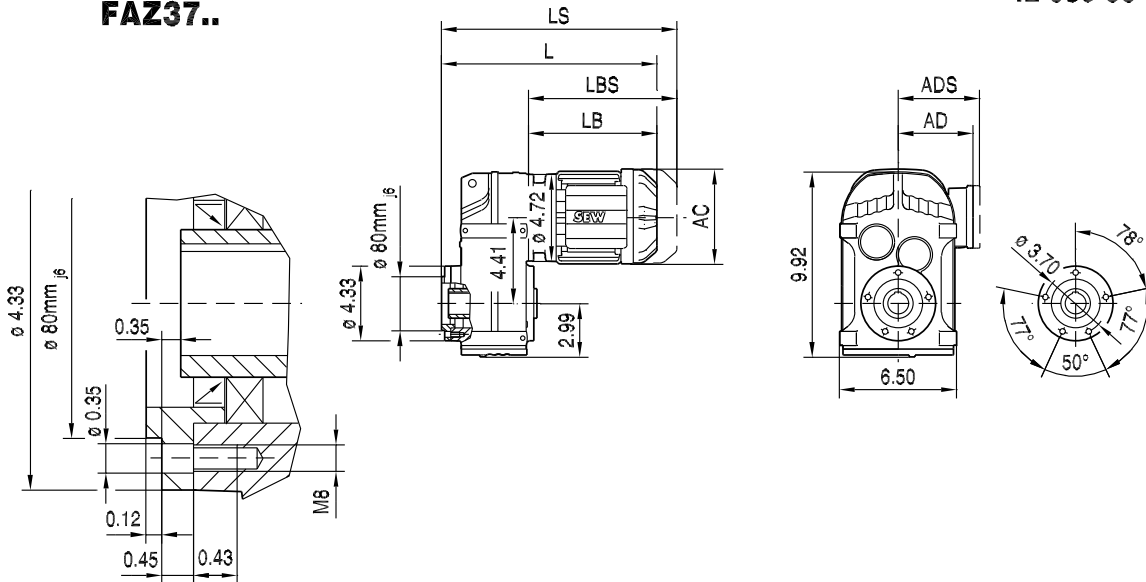
(→ 125)	DR63..	DR71S	DR71M	DR80S	DR80M	DR90M	DR90L	DR100M	DR100L/LC
AC	5.20	5.47	5.47	6.14	6.14	7.05	7.05	7.76	7.76
AD	4.13	4.69	4.69	5.04	5.04	5.51	5.51	6.18	6.18
ADS	4.13	5.08	5.08	5.47	5.47	5.91	5.91	6.22	6.22
L	11.85	12.32	13.31	13.66	14.88	15.04	15.83	17.01	18.19
LS	14.02	15.00	15.98	16.85	18.07	18.70	19.49	20.67	21.85
LB	7.52	7.99	8.98	9.33	10.55	10.71	11.50	12.68	13.86
LBS	9.69	10.67	11.65	12.52	13.74	14.37	15.16	16.34	17.52

reducer.ir

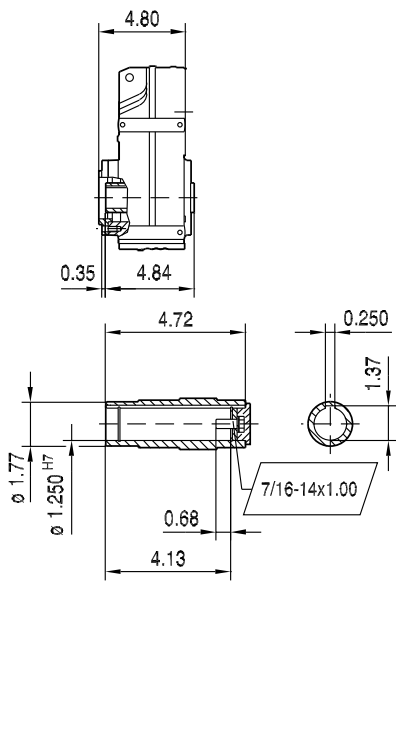


42 039 00 09

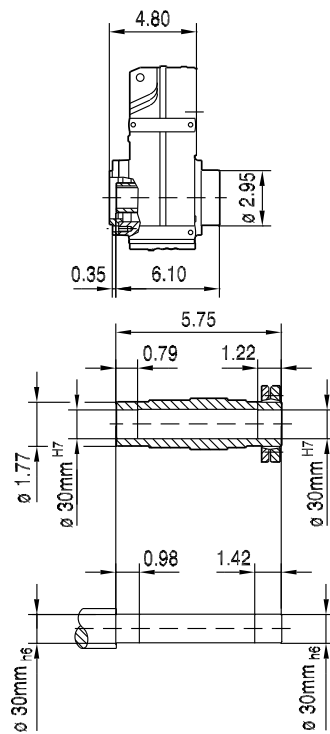
FAZ37..



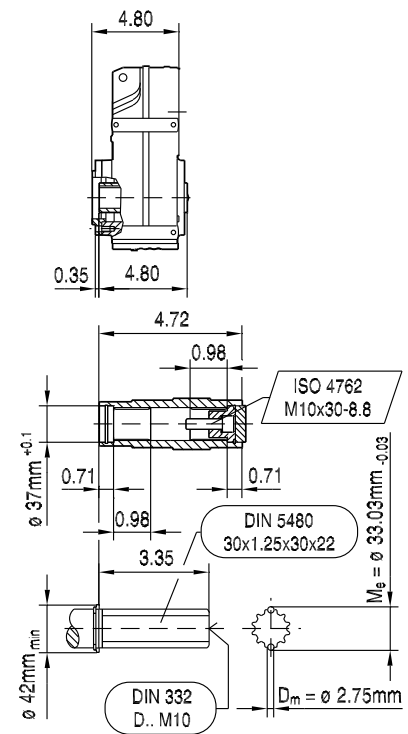
FAZ37..



FHZ37..



FVZ37..



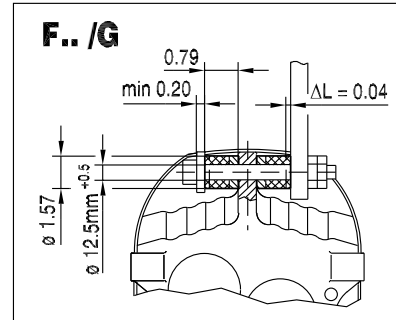
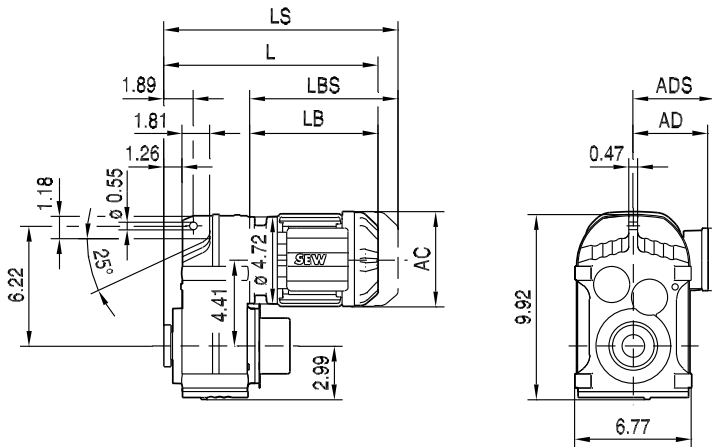
(→ 125)	DR63..	DR71S	DR71M	DR80S	DR80M	DR90M	DR90L	DR100M	DR100L/LC
AC	5.20	5.47	5.47	6.14	6.14	7.05	7.05	7.76	7.76
AD	4.13	4.69	4.69	5.04	5.04	5.51	5.51	6.18	6.18
ADS	4.13	5.08	5.08	5.47	5.47	5.91	5.91	6.22	6.22
L	12.32	12.80	13.78	14.13	15.35	15.51	16.30	17.48	18.66
LS	14.49	15.47	16.46	17.32	18.54	19.17	19.96	21.14	22.32
LB	7.52	7.99	8.98	9.33	10.55	10.71	11.50	12.68	13.86
LBS	9.69	10.67	11.65	12.52	13.74	14.37	15.16	16.34	17.52

reducer.ir



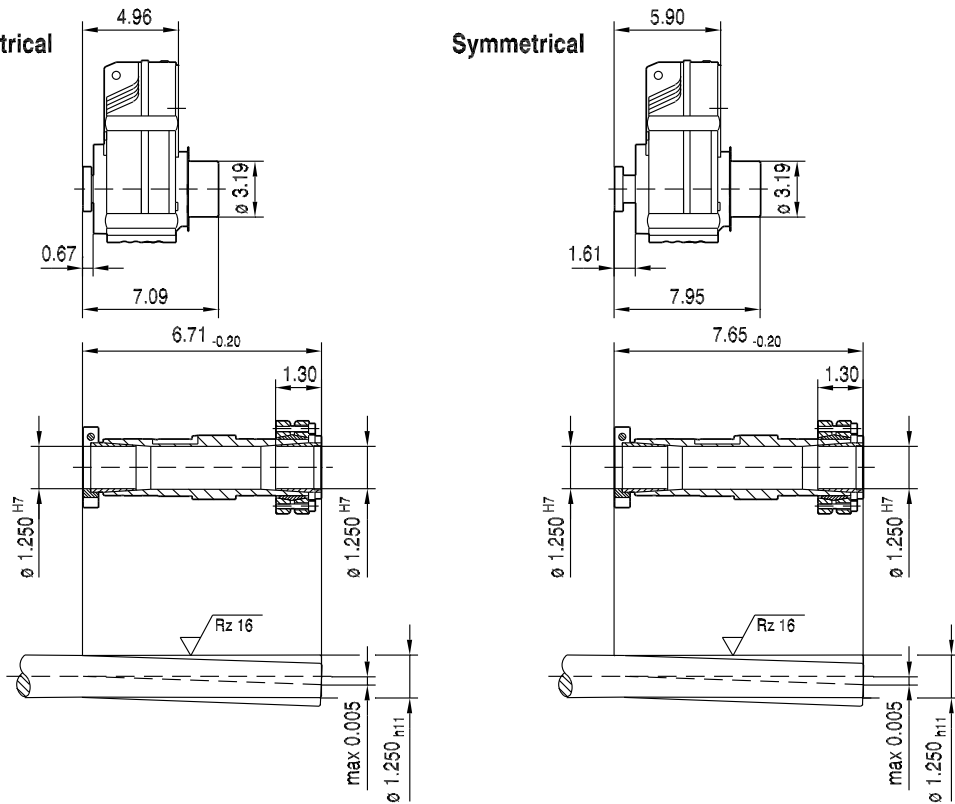
FT37..

42 040 00 09



NON-Symmetrical

Symmetrical



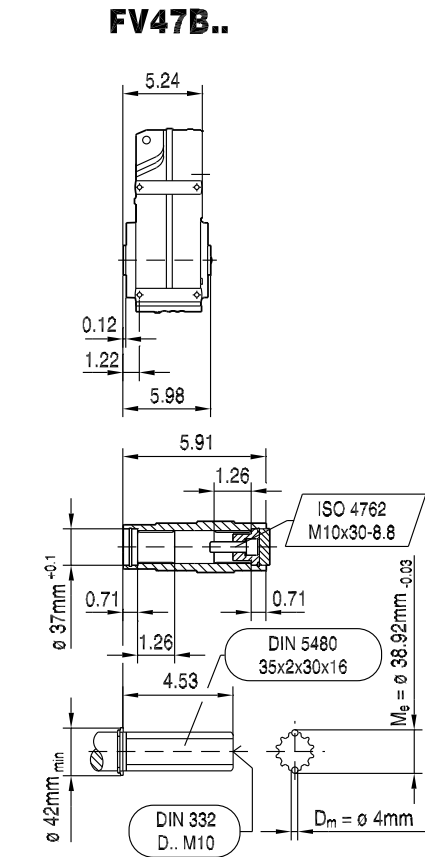
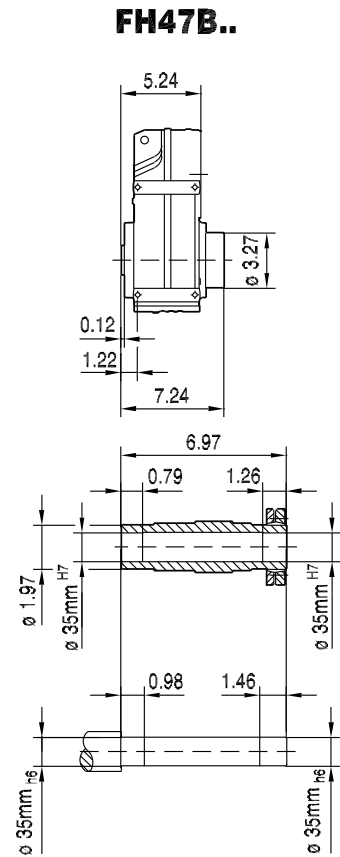
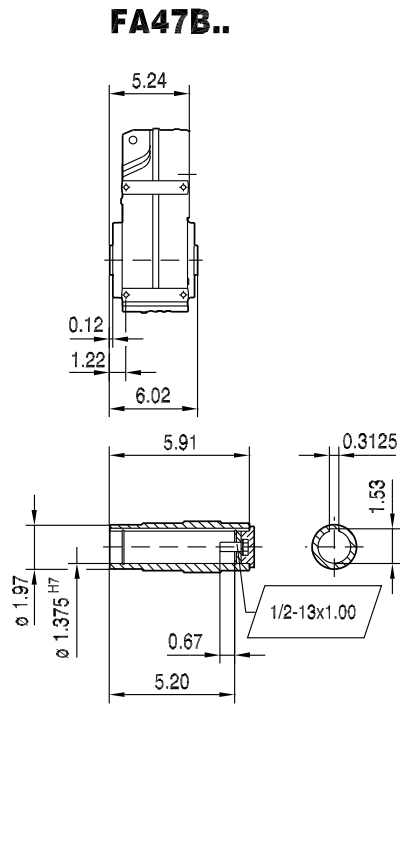
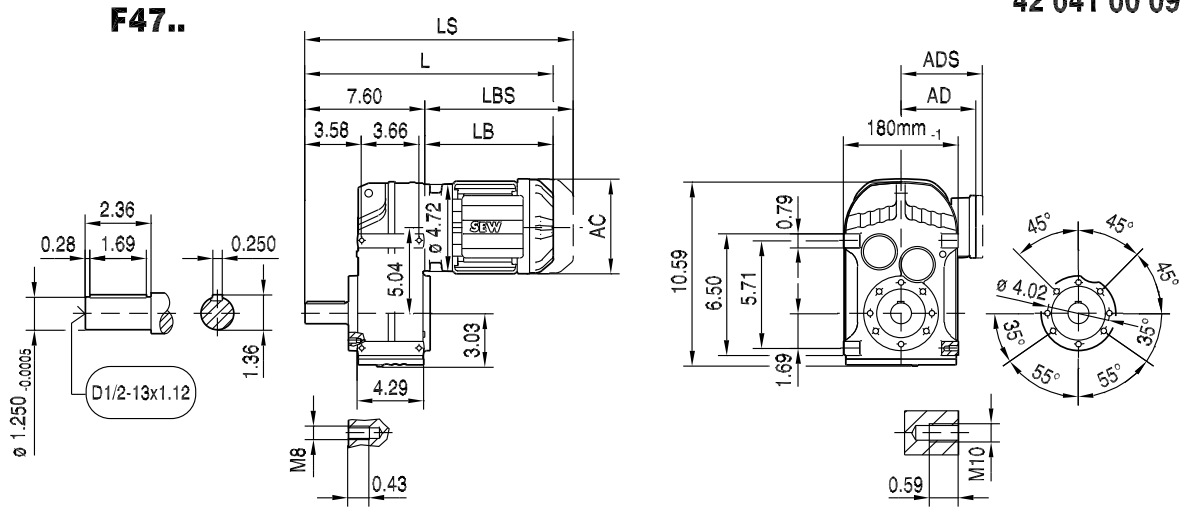
10

(→ 125)	DR63..	DR71S	DR71M				
AC	5.20	5.47	5.47				
AD	4.13	4.69	4.69				
ADS	4.13	5.08	5.08				
L	12.48	12.95	13.94				
LS	14.65	15.63	16.61				
LB	7.52	7.99	8.98				
LBS	9.69	10.67	11.65				

reducer.ir



42 041 00 09

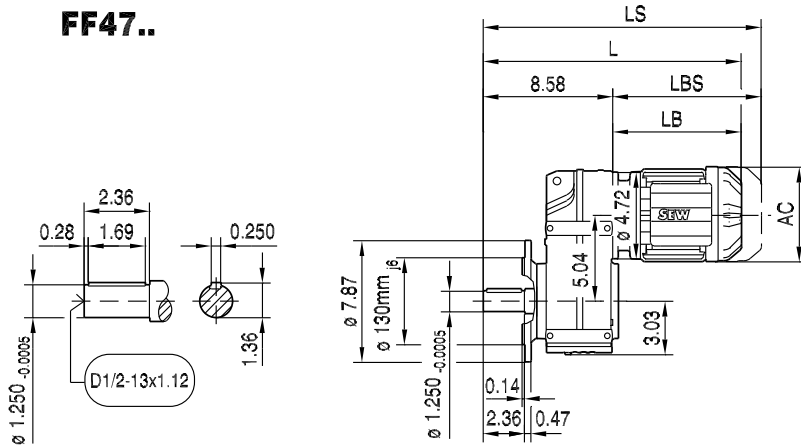


(→ 125)	DR63..	DR71S	DR71M	DR80S	DR80M	DR90M	DR90L	DR100M	DR100L/LC
AC	5.20	5.47	5.47	6.14	6.14	7.05	7.05	7.76	7.76
AD	4.13	4.69	4.69	5.04	5.04	5.51	5.51	6.18	6.18
ADS	4.13	5.08	5.08	5.47	5.47	5.91	5.91	6.22	6.22
L	15.12	15.59	16.57	16.93	18.15	18.31	19.09	20.28	21.46
LS	17.28	18.27	19.25	20.12	21.34	21.97	22.76	23.94	25.12
LB	7.52	7.99	8.98	9.33	10.55	10.71	11.50	12.68	13.86
LBS	9.69	10.67	11.65	12.52	13.74	14.37	15.16	16.34	17.52

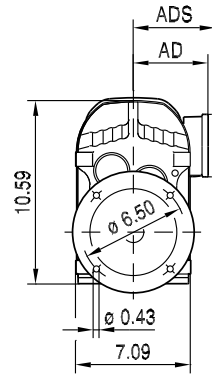
reducer.ir



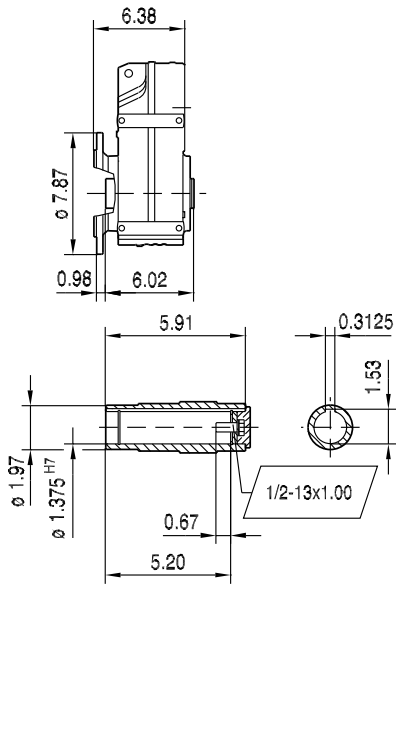
FF47..



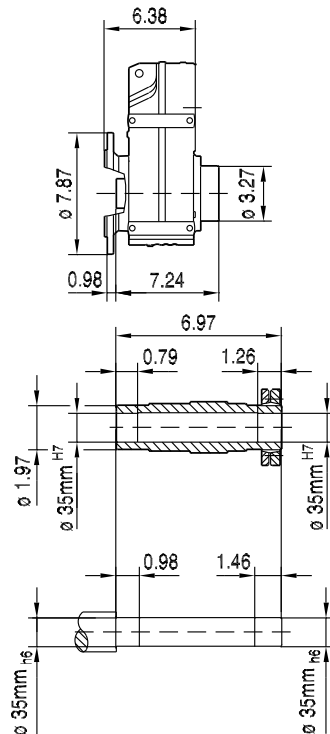
42 042 00 09



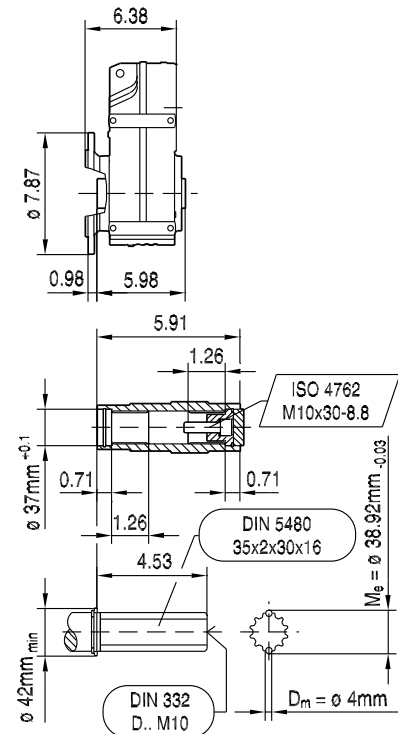
FAF47..



FHF47..



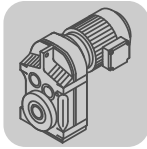
FVF47..



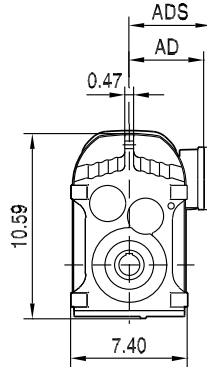
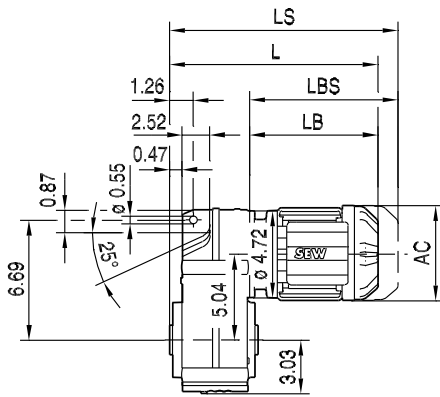
10

(→ 125)	DR63..	DR71S	DR71M	DR80S	DR80M	DR90M	DR90L	DR100M	DR100L/LC
AC	5.20	5.47	5.47	6.14	6.14	7.05	7.05	7.76	7.76
AD	4.13	4.69	4.69	5.04	5.04	5.51	5.51	6.18	6.18
ADS	4.13	5.08	5.08	5.47	5.47	5.91	5.91	6.22	6.22
L	16.10	16.57	17.56	17.91	19.13	19.29	20.08	21.26	22.44
LS	18.27	19.25	20.24	21.10	22.32	22.95	23.74	24.92	26.10
LB	7.52	7.99	8.98	9.33	10.55	10.71	11.50	12.68	13.86
LBS	9.69	10.67	11.65	12.52	13.74	14.37	15.16	16.34	17.52

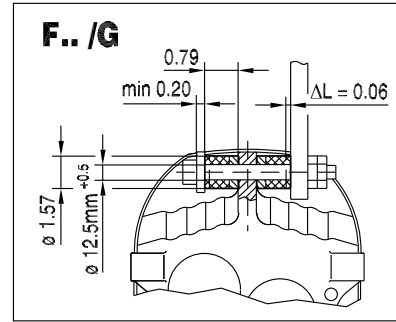
reducer.ir



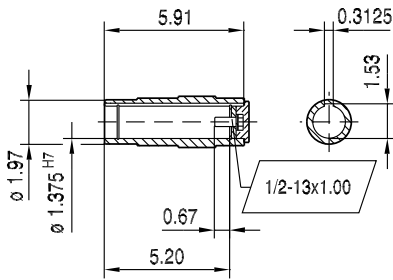
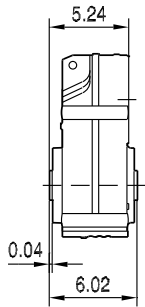
FA47..



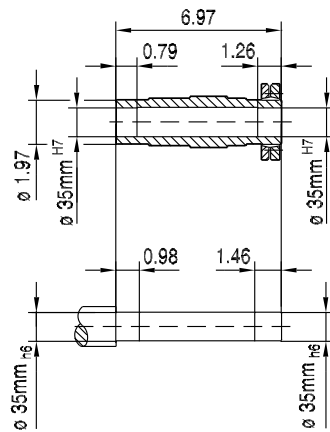
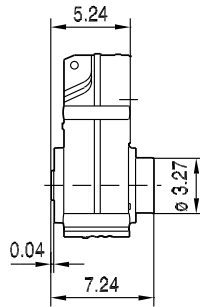
42 043 00 09



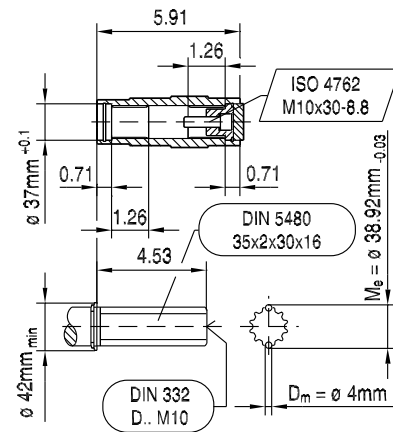
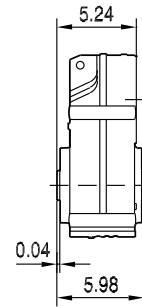
FA47..



FH47..



FV47..



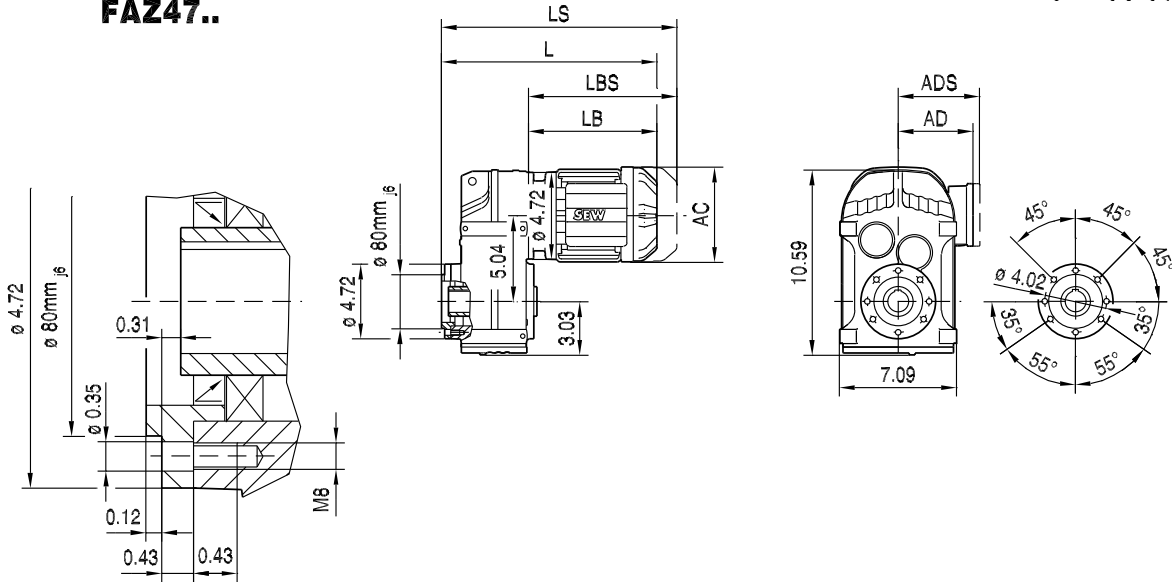
(→ 125)	DR63..	DR71S	DR71M	DR80S	DR80M	DR90M	DR90L	DR100M	DR100L/LC
AC	5.20	5.47	5.47	6.14	6.14	7.05	7.05	7.76	7.76
AD	4.13	4.69	4.69	5.04	5.04	5.51	5.51	6.18	6.18
ADS	4.13	5.08	5.08	5.47	5.47	5.91	5.91	6.22	6.22
L	12.76	13.23	14.21	14.57	15.79	15.94	16.73	17.91	19.09
LS	14.92	15.91	16.89	17.76	18.98	19.61	20.39	21.57	22.76
LB	7.52	7.99	8.98	9.33	10.55	10.71	11.50	12.68	13.86
LBS	9.69	10.67	11.65	12.52	13.74	14.37	15.16	16.34	17.52

reducer.ir

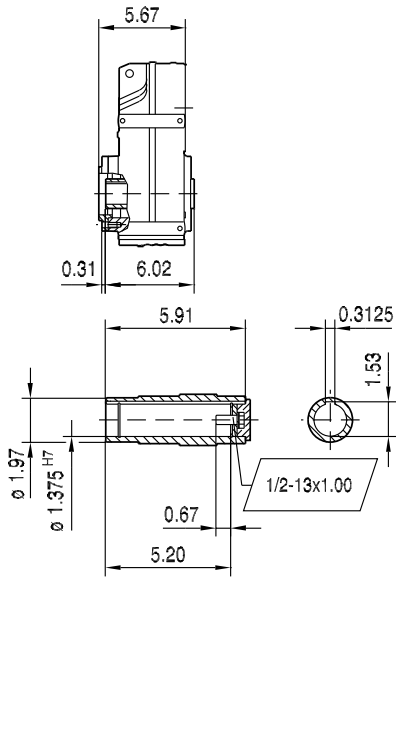


42 044 00 09

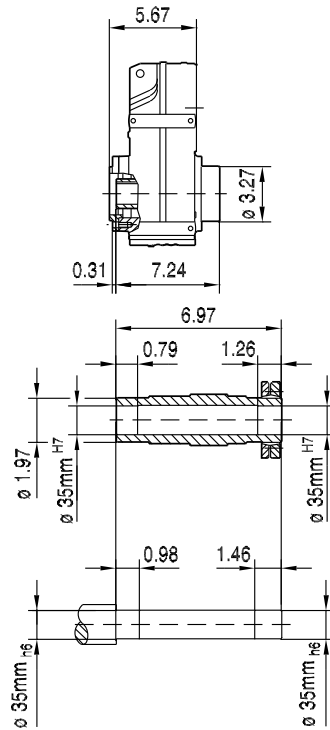
FAZ47..



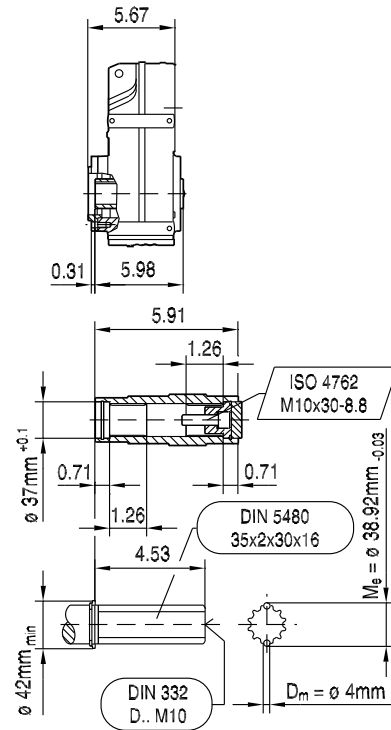
FAZ47..



FHZ47..



FVZ47..



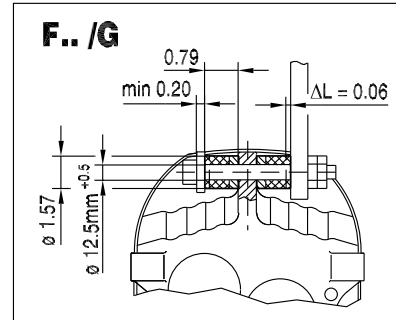
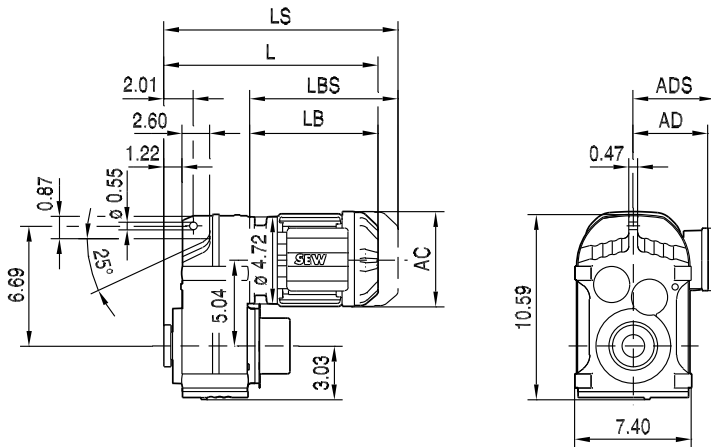
(→ 125)	DR63..	DR71S	DR71M	DR80S	DR80M	DR90M	DR90L	DR100M	DR100L/LC
AC	5.20	5.47	5.47	6.14	6.14	7.05	7.05	7.76	7.76
AD	4.13	4.69	4.69	5.04	5.04	5.51	5.51	6.18	6.18
ADS	4.13	5.08	5.08	5.47	5.47	5.91	5.91	6.22	6.22
L	13.19	13.66	14.65	15.00	16.22	16.38	17.17	18.35	19.53
LS	15.35	16.34	17.32	18.19	19.41	20.04	20.83	22.01	23.19
LB	7.52	7.99	8.98	9.33	10.55	10.71	11.50	12.68	13.86
LBS	9.69	10.67	11.65	12.52	13.74	14.37	15.16	16.34	17.52

reducer.ir

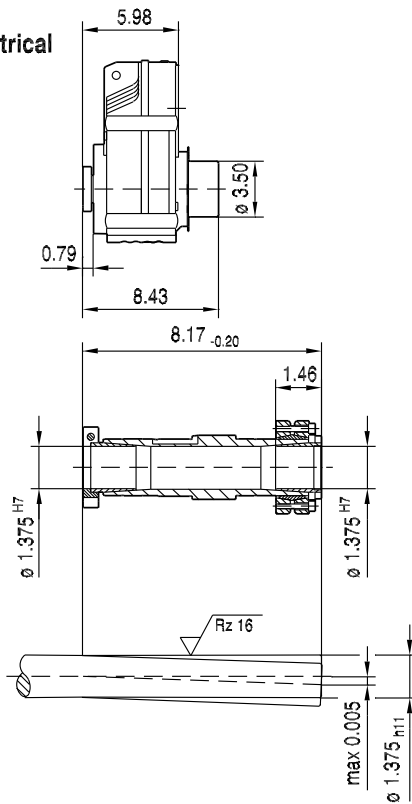


42 045 00 09

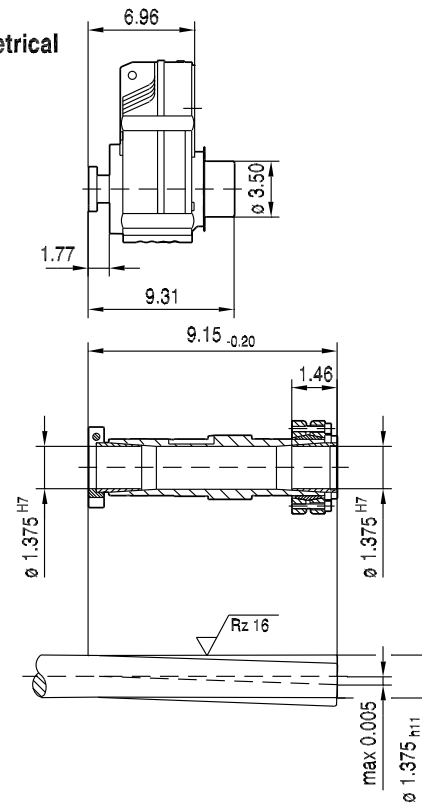
FT47..



NON-Symmetrical



Symmetrical

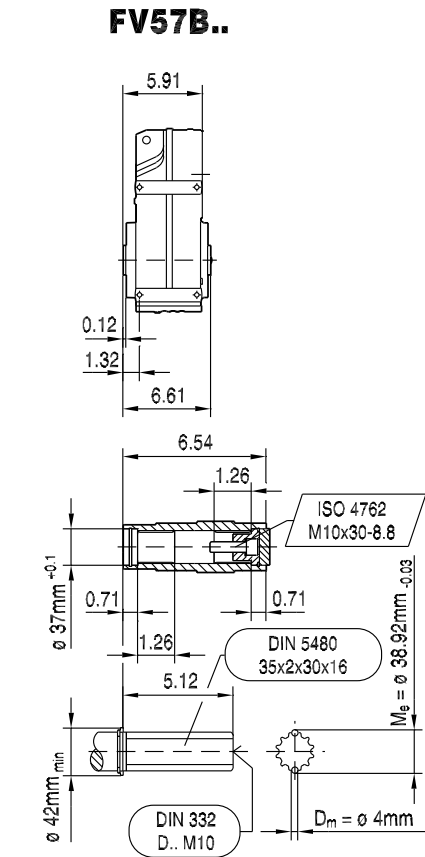
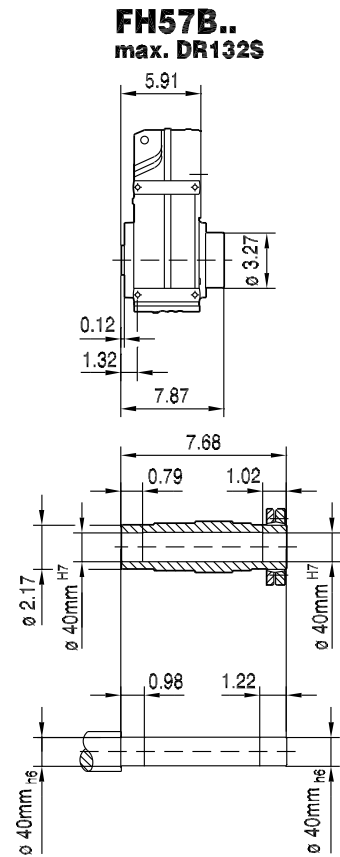
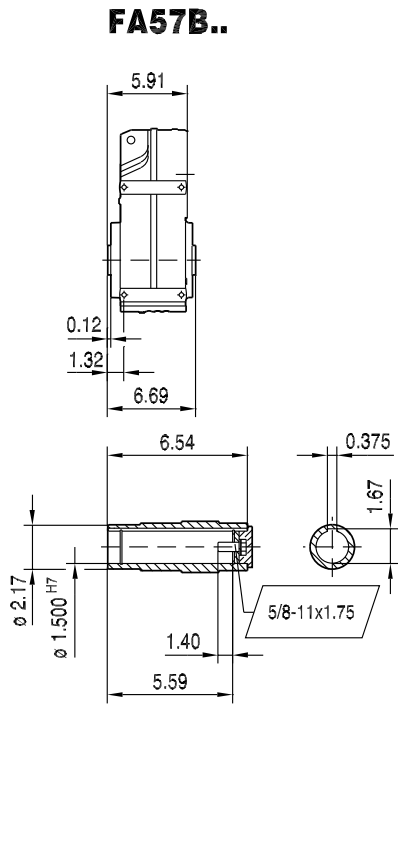
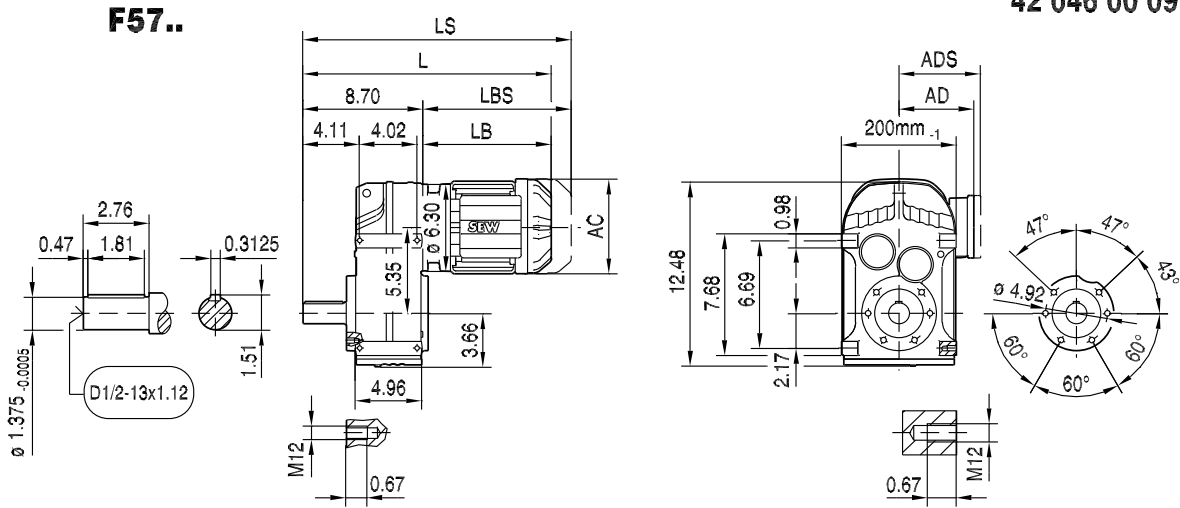


(→ 125)	DR63..	DR71S	DR71M				
AC	5.20	5.47	5.47				
AD	4.13	4.69	4.69				
ADS	4.13	5.08	5.08				
L	13.50	13.98	14.96				
LS	15.67	16.65	17.64				
LB	7.52	7.99	8.98				
LBS	9.69	10.67	11.65				

reducer.ir

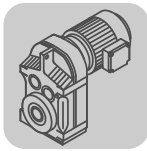


42 046 00 09

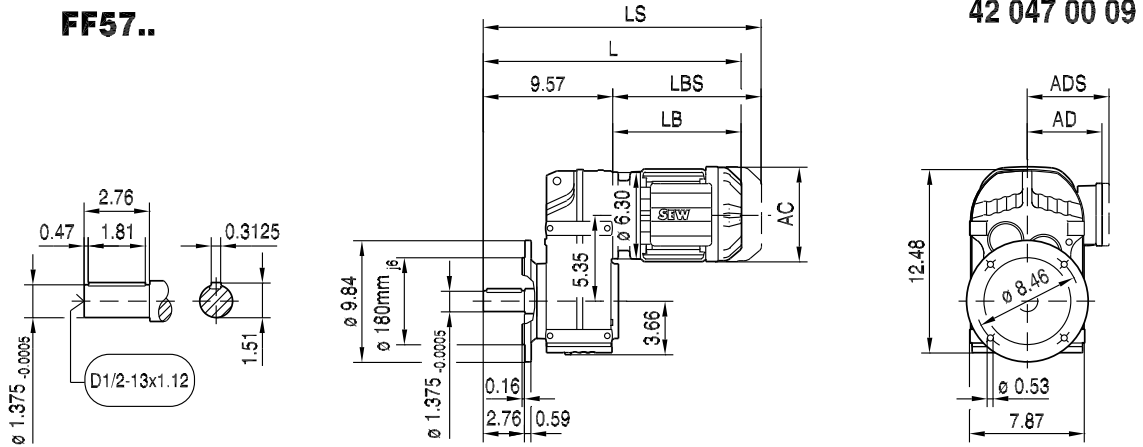


(→ 125)	DR63..	DR71S	DR71M	DR80S	DR80M	DR90M	DR90L	DR100M	DR100L/C	DR132S	DR132M/MC
AC	5.20	5.47	5.47	6.14	6.14	7.05	7.05	7.76	7.76	8.70	8.70
AD	4.13	4.69	4.69	5.04	5.04	5.51	5.51	6.18	6.18	6.69	6.69
ADS	4.13	5.08	5.08	5.47	5.47	5.91	5.91	6.22	6.22	6.77	6.77
L	15.98	16.42	17.40	17.76	18.98	19.06	19.84	21.02	22.20	24.06	26.02
LS	18.15	19.09	20.08	20.94	22.17	22.72	23.50	24.69	25.87	28.46	30.43
LB	7.28	7.72	8.70	9.06	10.28	10.35	11.14	12.32	13.50	15.35	17.32
LBS	9.45	10.39	11.38	12.24	13.46	14.02	14.80	15.98	17.17	19.76	21.73

10

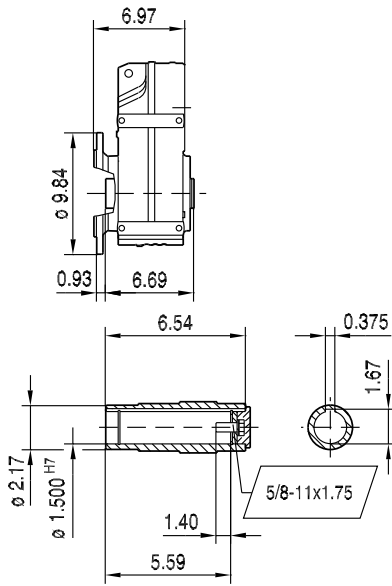


FF57..

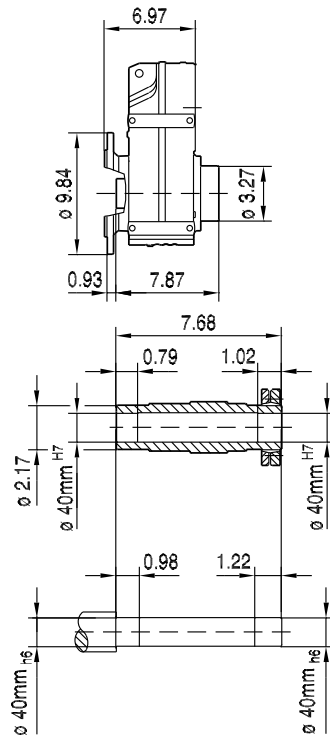


42 047 00 09

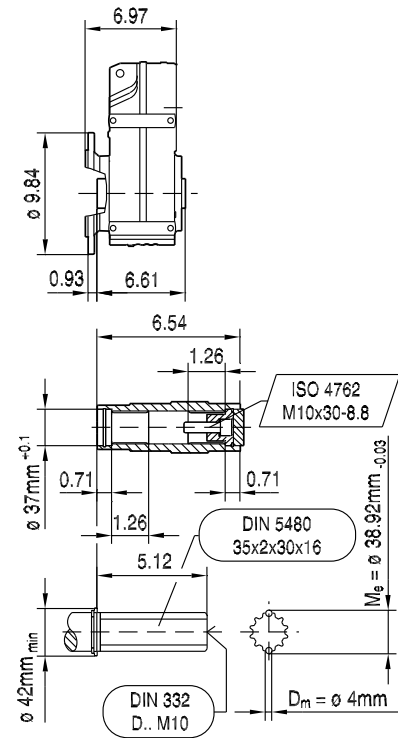
FAF57..



FHF57..
max. DR132S



FVF57..



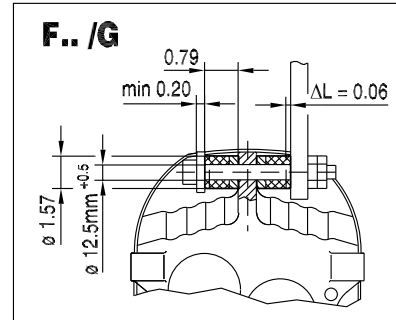
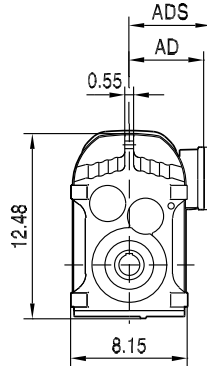
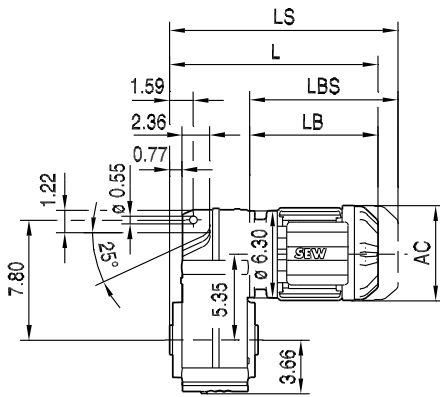
(→ 125)	DR63..	DR71S	DR71M	DR80S	DR80M	DR90M	DR90L	DR100M	DR100L/LC	DR132S	DR132M/MC
AC	5.20	5.47	5.47	6.14	6.14	7.05	7.05	7.76	7.76	8.70	8.70
AD	4.13	4.69	4.69	5.04	5.04	5.51	5.51	6.18	6.18	6.69	6.69
ADS	4.13	5.08	5.08	5.47	5.47	5.91	5.91	6.22	6.22	6.77	6.77
L	16.85	17.28	18.27	18.62	19.84	19.92	20.71	21.89	23.07	24.92	26.89
LS	19.02	19.96	20.94	21.81	23.03	23.58	24.37	25.55	26.73	29.33	31.30
LB	7.28	7.72	8.70	9.06	10.28	10.35	11.14	12.32	13.50	15.35	17.32
LBS	9.45	10.39	11.38	12.24	13.46	14.02	14.80	15.98	17.17	19.76	21.73

reducer.ir



FA57..

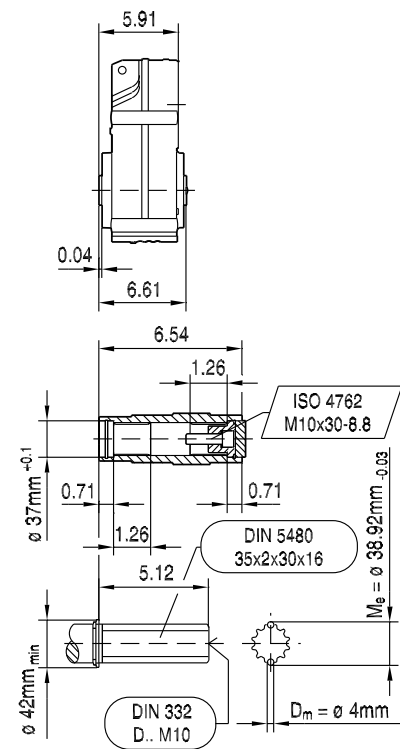
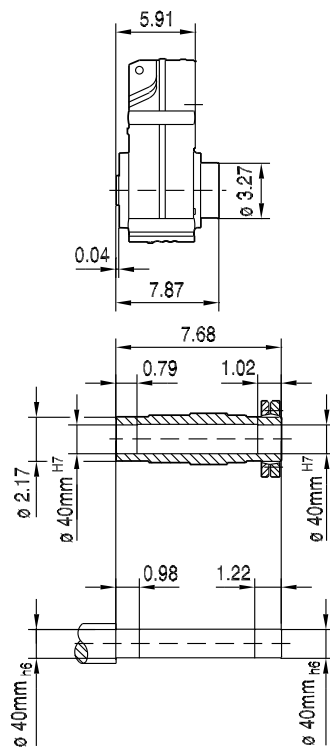
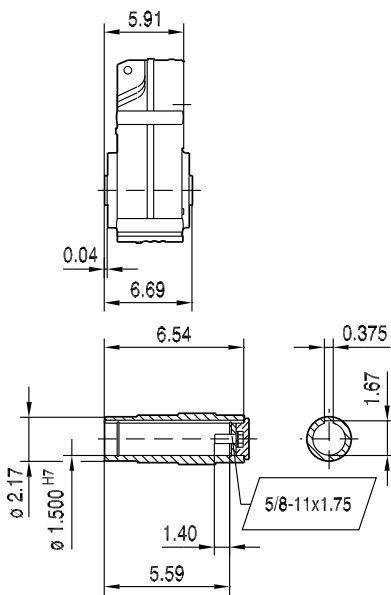
42 048 00 09



FA57..

FH57..
max. DR132S

FV57..



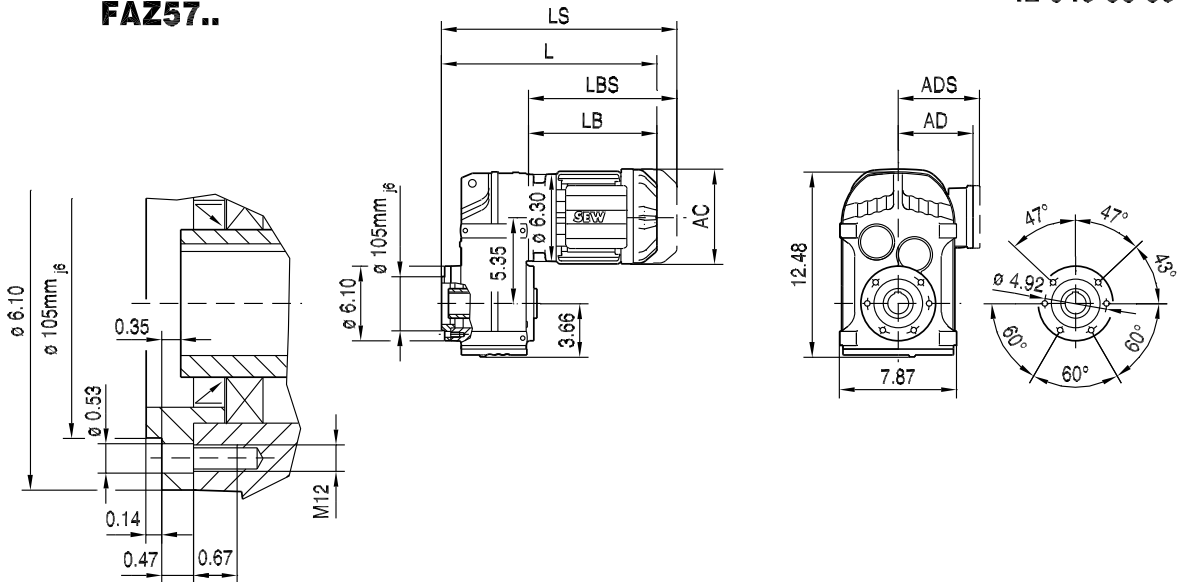
(→ 125)	DR63..	DR71S	DR71M	DR80S	DR80M	DR90M	DR90L	DR100M	DR100L/LC	DR132S	DR132M/MC
AC	5.20	5.47	5.47	6.14	6.14	7.05	7.05	7.76	7.76	8.70	8.70
AD	4.13	4.69	4.69	5.04	5.04	5.51	5.51	6.18	6.18	6.69	6.69
ADS	4.13	5.08	5.08	5.47	5.47	5.91	5.91	6.22	6.22	6.77	6.77
L	13.19	13.62	14.61	14.96	16.18	16.26	17.05	18.23	19.41	21.26	23.23
LS	15.35	16.30	17.28	18.15	19.37	19.92	20.71	21.89	23.07	25.67	27.64
LB	7.28	7.72	8.70	9.06	10.28	10.35	11.14	12.32	13.50	15.35	17.32
LBS	9.45	10.39	11.38	12.24	13.46	14.02	14.80	15.98	17.17	19.76	21.73

reducer.ir

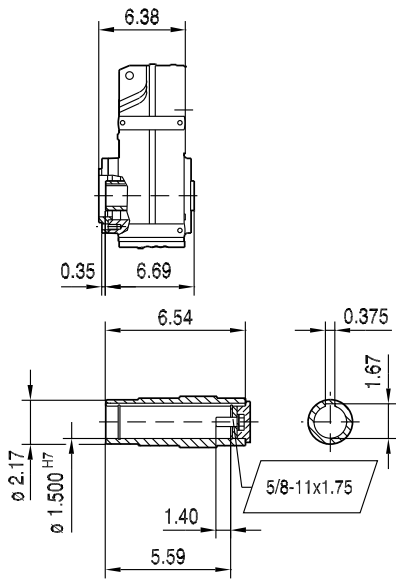


42 049 00 09

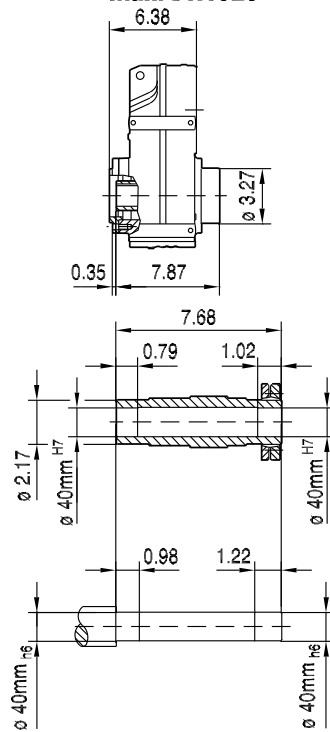
FAZ57..



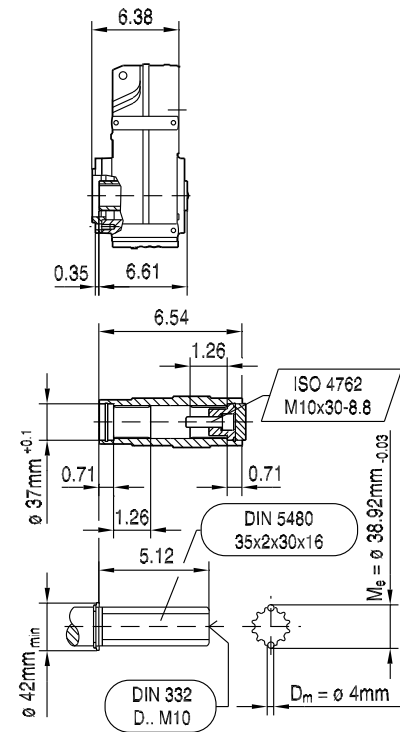
FAZ57..



FHZ57..
max. DR132S

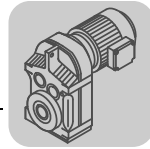


FVZ57..



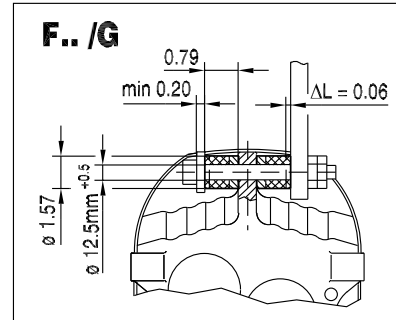
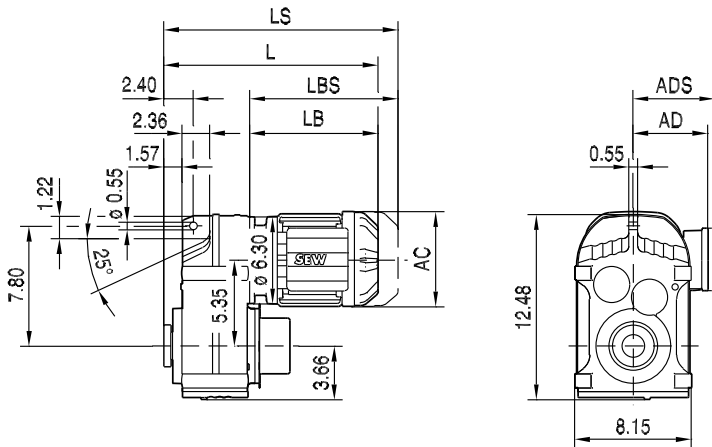
(→ 125)	DR63..	DR71S	DR71M	DR80S	DR80M	DR90M	DR90L	DR100M	DR100L/LC	DR132S	DR132M/MC
AC	5.20	5.47	5.47	6.14	6.14	7.05	7.05	7.76	7.76	8.70	8.70
AD	4.13	4.69	4.69	5.04	5.04	5.51	5.51	6.18	6.18	6.69	6.69
ADS	4.13	5.08	5.08	5.47	5.47	5.91	5.91	6.22	6.22	6.77	6.77
L	13.66	14.09	15.08	15.43	16.65	16.73	17.52	18.70	19.88	21.73	23.70
LS	15.83	16.77	17.76	18.62	19.84	20.39	21.18	22.36	23.54	26.14	28.11
LB	7.28	7.72	8.70	9.06	10.28	10.35	11.14	12.32	13.50	15.35	17.32
LBS	9.45	10.39	11.38	12.24	13.46	14.02	14.80	15.98	17.17	19.76	21.73

reducer.ir



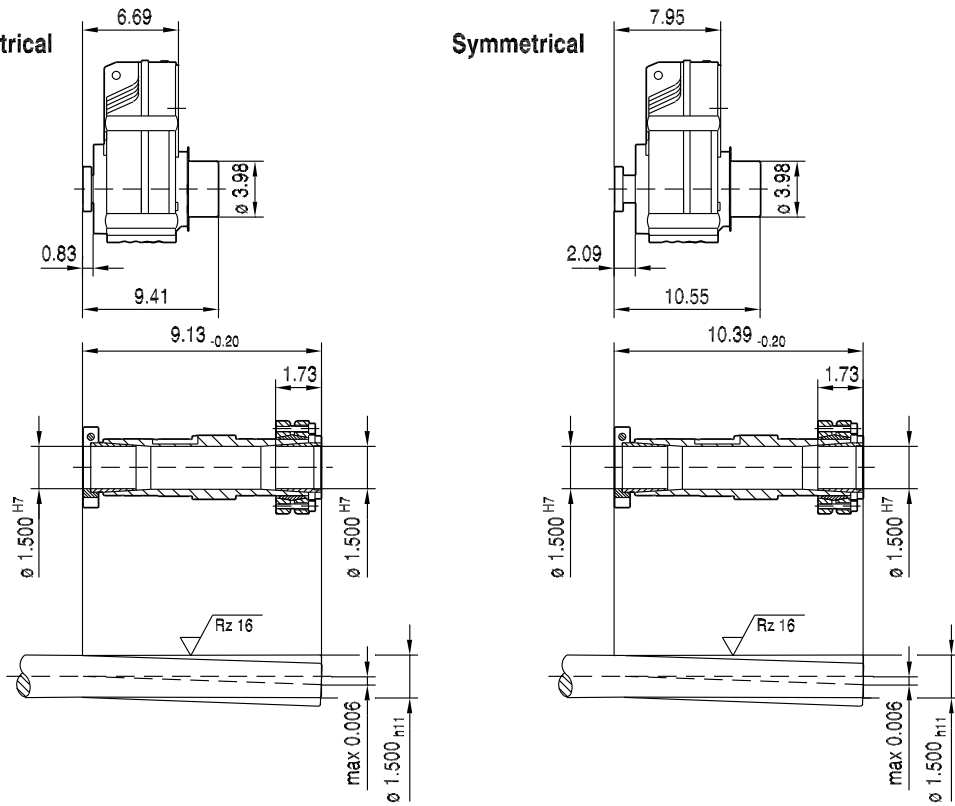
FT57..

42 050 00 09



NON-Symmetrical

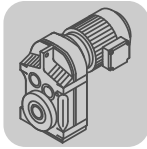
Symmetrical



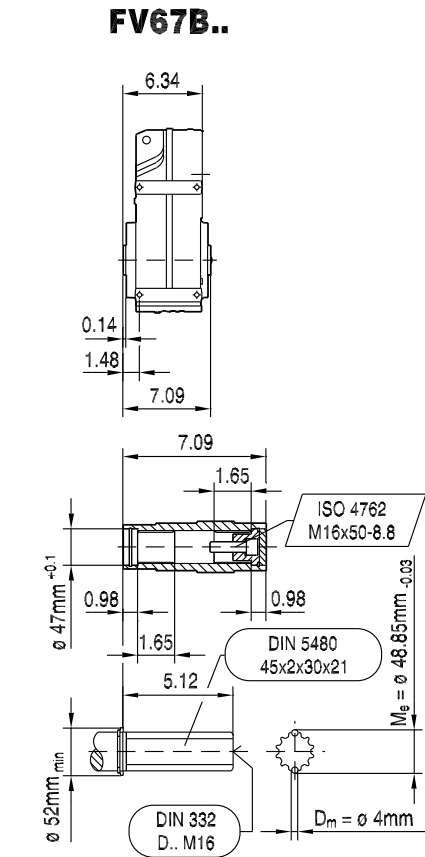
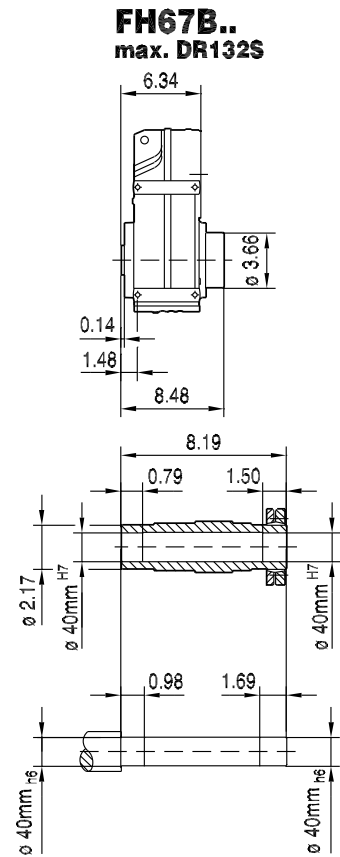
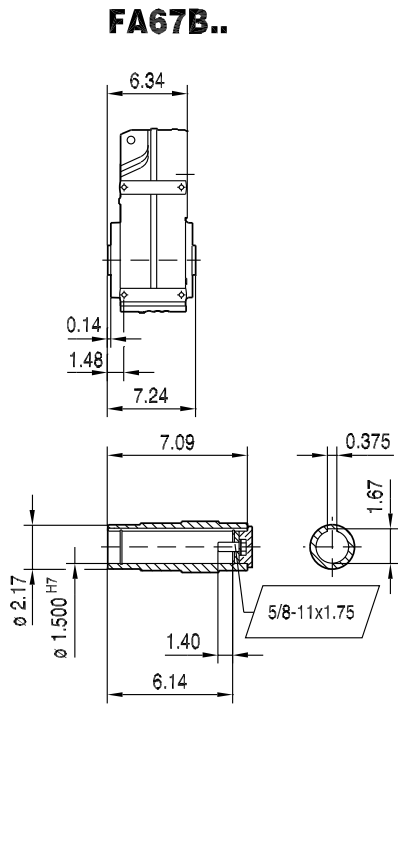
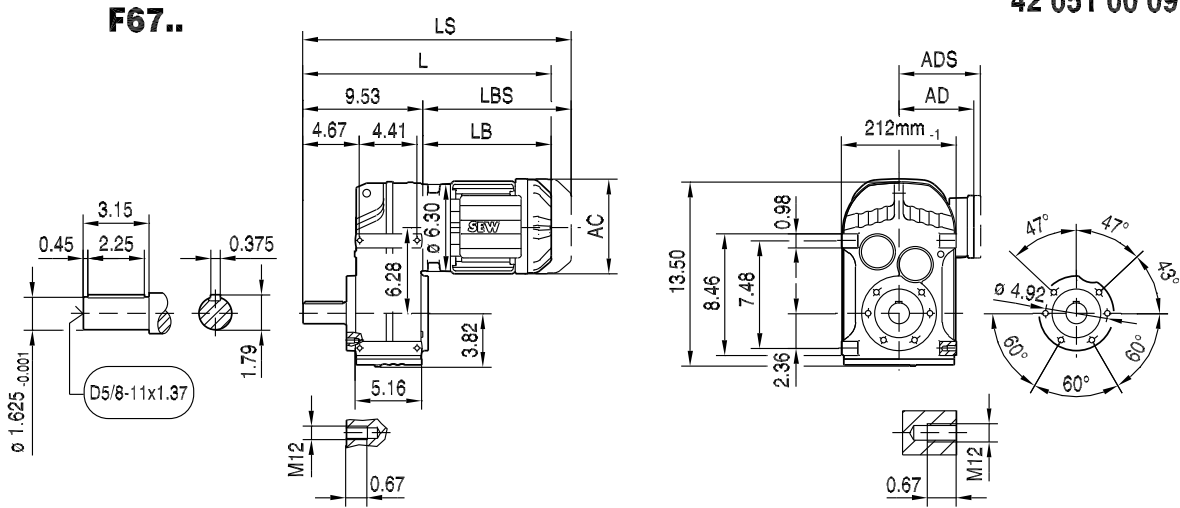
10

(→ 125)	DR63..	DR71S	DR71M	DR80S	DR80M	DR90M	DR90L				
AC	5.20	5.47	5.47	6.14	6.14	7.05	7.05				
AD	4.13	4.69	4.69	5.04	5.04	5.51	5.51				
ADS	4.13	5.08	5.08	5.47	5.47	5.91	5.91				
L	13.98	14.41	15.39	15.75	16.97	17.05	17.83				
LS	16.14	17.09	18.07	18.94	20.16	20.71	21.50				
LB	7.28	7.72	8.70	9.06	10.28	10.35	11.14				
LBS	9.45	10.39	11.38	12.24	13.46	14.02	14.80				

reducer.ir



42 051 00 09

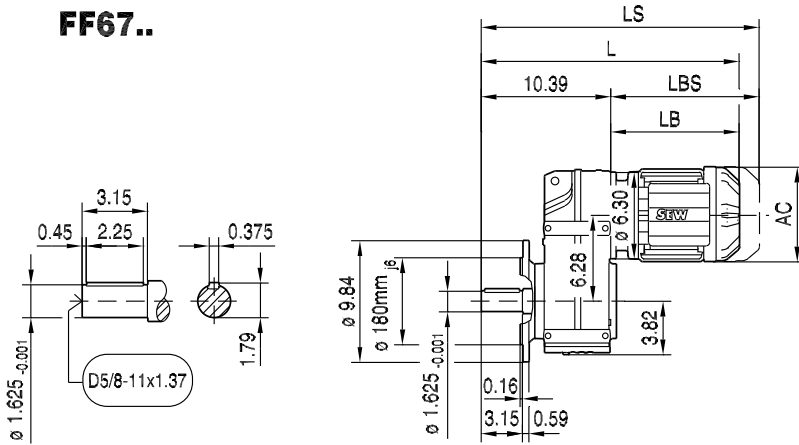


(→ 125)	DR63..	DR71S	DR71M	DR80S	DR80M	DR90M	DR90L	DR100M	DR100L/LC	DR132S	DR132M/MC
AC	5.20	5.47	5.47	6.14	6.14	7.05	7.05	7.76	7.76	8.70	8.70
AD	4.13	4.69	4.69	5.04	5.04	5.51	5.51	6.18	6.18	6.69	6.69
ADS	4.13	5.08	5.08	5.47	5.47	5.91	5.91	6.22	6.22	6.77	6.77
L	16.81	17.24	18.23	18.58	19.80	19.88	20.67	21.85	23.03	24.88	26.85
LS	18.98	19.92	20.91	21.77	22.99	23.54	24.33	25.51	26.69	29.29	31.26
LB	7.28	7.72	8.70	9.06	10.28	10.35	11.14	12.32	13.50	15.35	17.32
LBS	9.45	10.39	11.38	12.24	13.46	14.02	14.80	15.98	17.17	19.76	21.73

reducer.ir

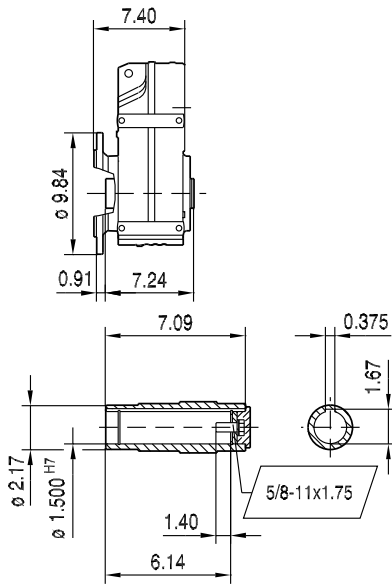


FF67..

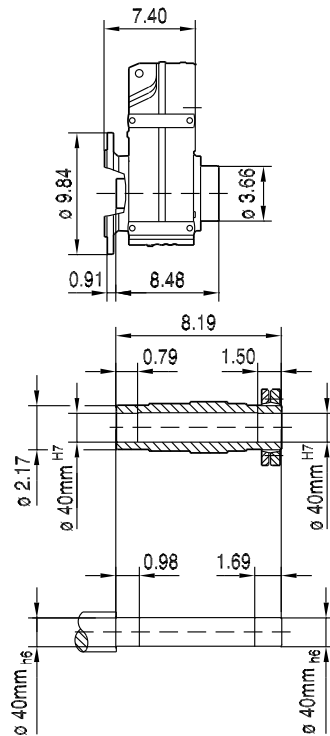


42 052 00 09

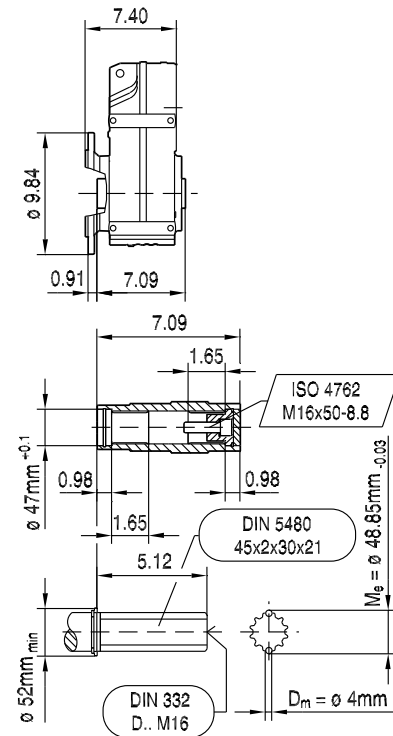
FAF67..



FHF67..
max. DR132S



FVF67..



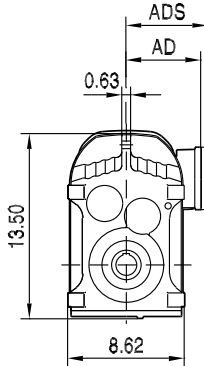
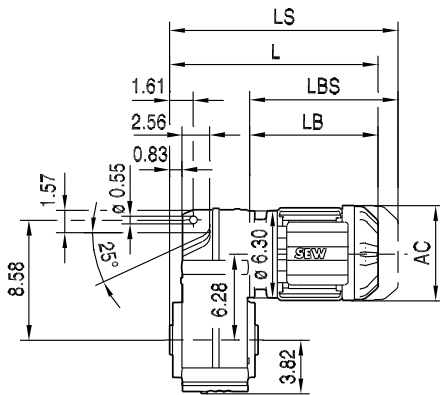
10

(→ 125)	DR63..	DR71S	DR71M	DR80S	DR80M	DR90M	DR90L	DR100M	DR100L/LC	DR132S	DR132M/MC
AC	5.20	5.47	5.47	6.14	6.14	7.05	7.05	7.76	7.76	8.70	8.70
AD	4.13	4.69	4.69	5.04	5.04	5.51	5.51	6.18	6.18	6.69	6.69
ADS	4.13	5.08	5.08	5.47	5.47	5.91	5.91	6.22	6.22	6.77	6.77
L	17.68	18.11	19.09	19.45	20.67	20.75	21.54	22.72	23.90	25.75	27.72
LS	19.84	20.79	21.77	22.64	23.86	24.41	25.20	26.38	27.56	30.16	32.13
LB	7.28	7.72	8.70	9.06	10.28	10.35	11.14	12.32	13.50	15.35	17.32
LBS	9.45	10.39	11.38	12.24	13.46	14.02	14.80	15.98	17.17	19.76	21.73

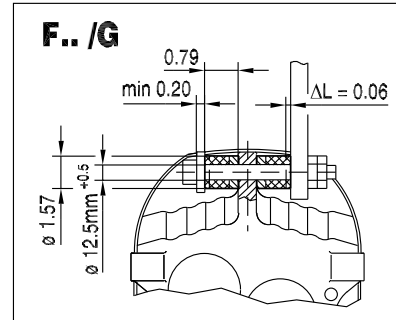
reducer.ir



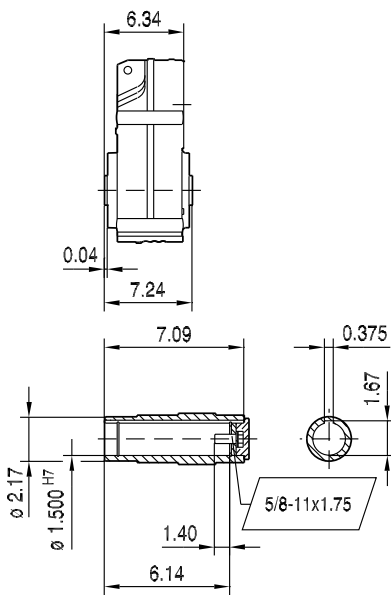
FA67..



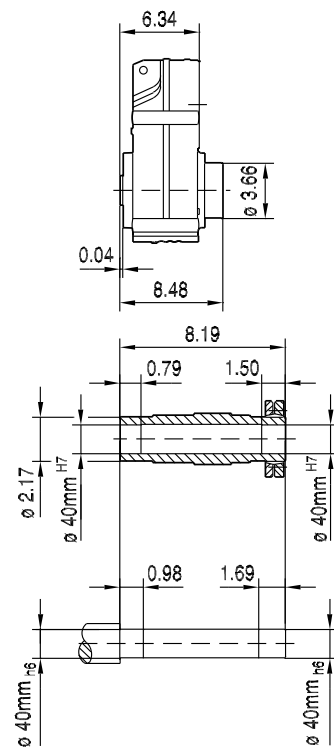
42 053 00 09



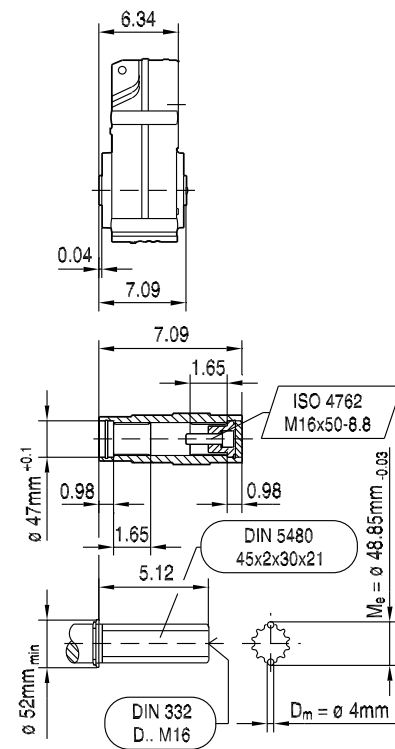
FA67..



FH67..
max. DR132S



FV67..



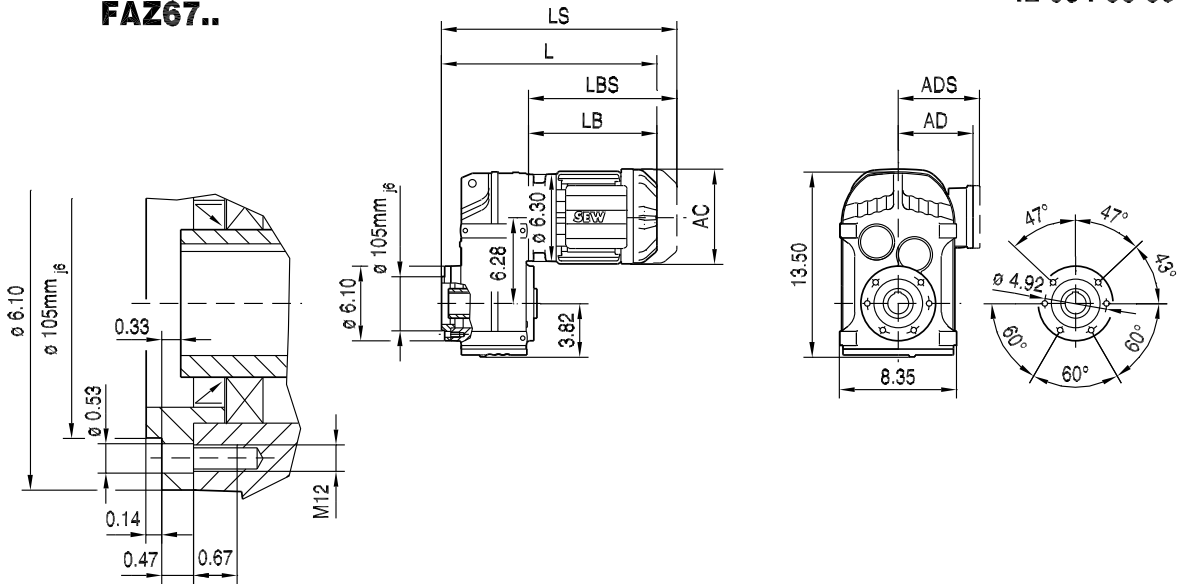
(→ 125)	DR63..	DR71S	DR71M	DR80S	DR80M	DR90M	DR90L	DR100M	DR100L/LC	DR132S	DR132M/MC
AC	5.20	5.47	5.47	6.14	6.14	7.05	7.05	7.76	7.76	8.70	8.70
AD	4.13	4.69	4.69	5.04	5.04	5.51	5.51	6.18	6.18	6.69	6.69
ADS	4.13	5.08	5.08	5.47	5.47	5.91	5.91	6.22	6.22	6.77	6.77
L	13.62	14.06	15.04	15.39	16.61	16.69	17.48	18.66	19.84	21.69	23.66
LS	15.79	16.73	17.72	18.58	19.80	20.35	21.14	22.32	23.50	26.10	28.07
LB	7.28	7.72	8.70	9.06	10.28	10.35	11.14	12.32	13.50	15.35	17.32
LBS	9.45	10.39	11.38	12.24	13.46	14.02	14.80	15.98	17.17	19.76	21.73

reducer.ir

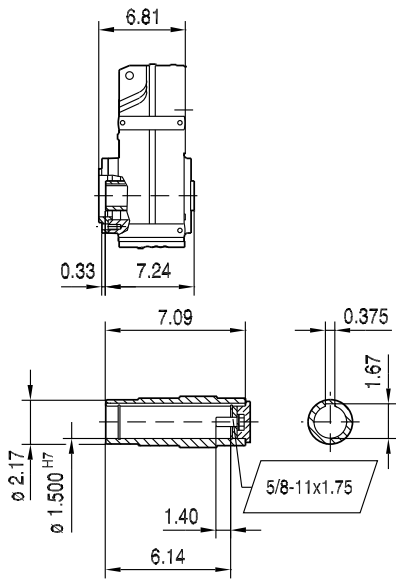


42 054 00 09

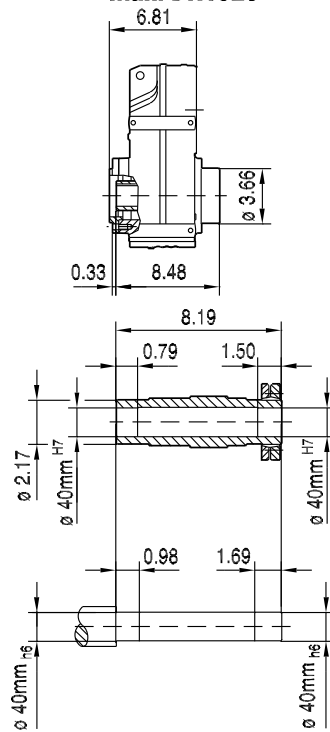
FAZ67..



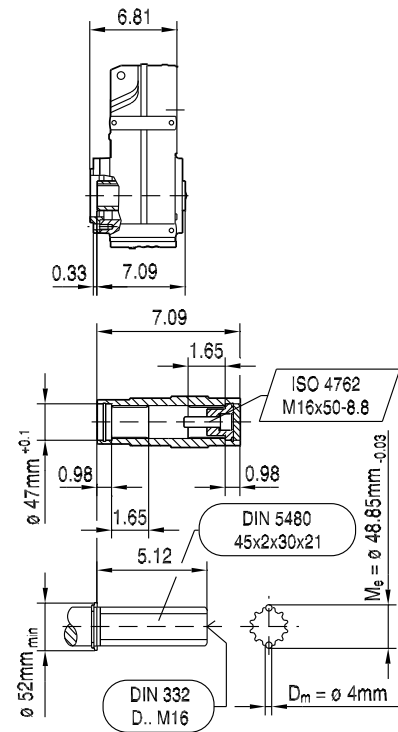
FAZ67..



FHZ67..
max. DR132S



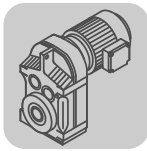
FVZ67..



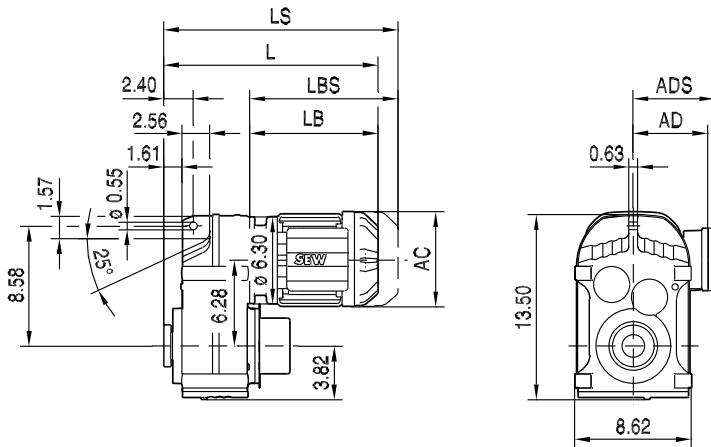
10

(→ 125)	DR63..	DR71S	DR71M	DR80S	DR80M	DR90M	DR90L	DR100M	DR100L/LC	DR132S	DR132M/MC
AC	5.20	5.47	5.47	6.14	6.14	7.05	7.05	7.76	7.76	8.70	8.70
AD	4.13	4.69	4.69	5.04	5.04	5.51	5.51	6.18	6.18	6.69	6.69
ADS	4.13	5.08	5.08	5.47	5.47	5.91	5.91	6.22	6.22	6.77	6.77
L	14.09	14.53	15.51	15.87	17.09	17.17	17.95	19.13	20.31	22.17	24.13
LS	16.26	17.20	18.19	19.06	20.28	20.83	21.61	22.80	23.98	26.57	28.54
LB	7.28	7.72	8.70	9.06	10.28	10.35	11.14	12.32	13.50	15.35	17.32
LBS	9.45	10.39	11.38	12.24	13.46	14.02	14.80	15.98	17.17	19.76	21.73

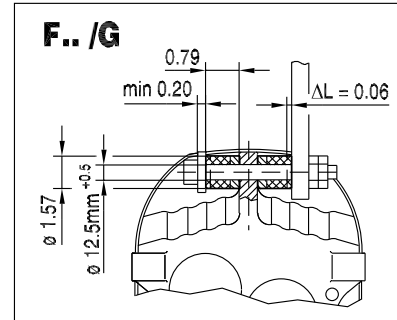
reducer.ir



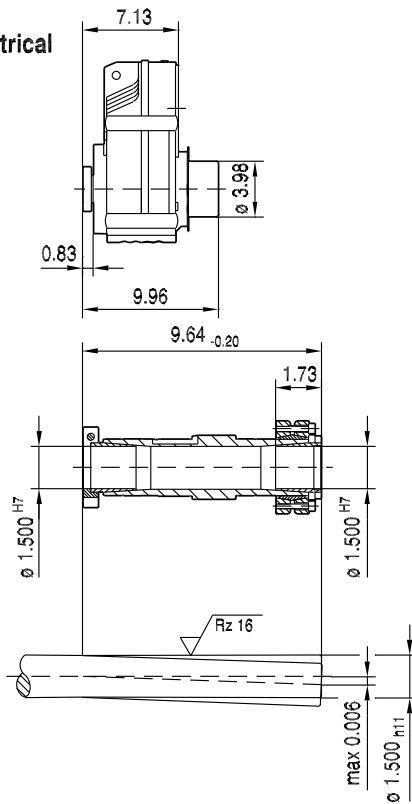
FT67..



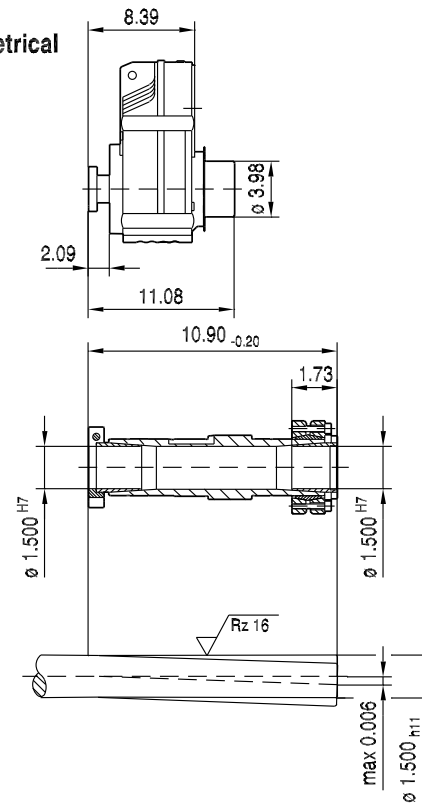
42 055 00 09



NON-Symmetrical



Symmetrical

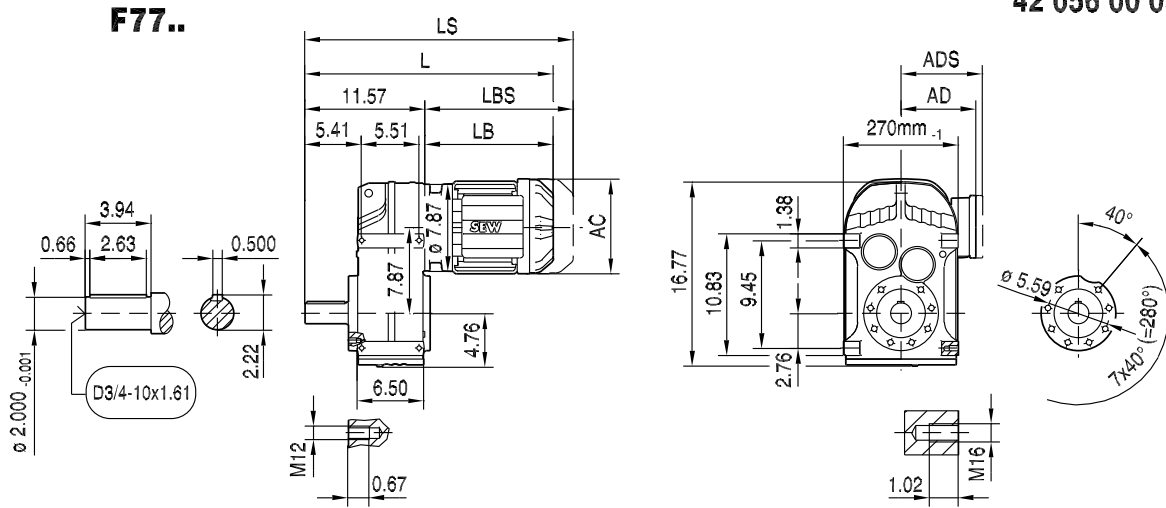


(→ 125)	DR63..	DR71S	DR71M	DR80S	DR80M	DR90M	DR90L	DR100M	DR100L/LC		
AC	5.20	5.47	5.47	6.14	6.14	7.05	7.05	7.76	7.76		
AD	4.13	4.69	4.69	5.04	5.04	5.51	5.51	6.18	6.18		
ADS	4.13	5.08	5.08	5.47	5.47	5.91	5.91	6.22	6.22		
L	14.41	14.84	15.83	16.22	17.44	17.48	18.27	19.45	20.63		
LS	16.57	17.52	18.50	19.41	20.63	21.14	21.93	23.11	24.29		
LB	7.28	7.72	8.70	9.06	10.28	10.35	11.14	12.32	13.50		
LBS	9.45	10.39	11.38	12.24	13.46	14.02	14.80	15.98	17.17		

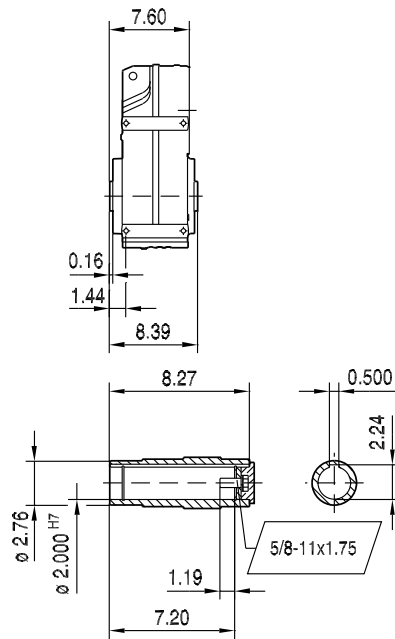
reducer.ir



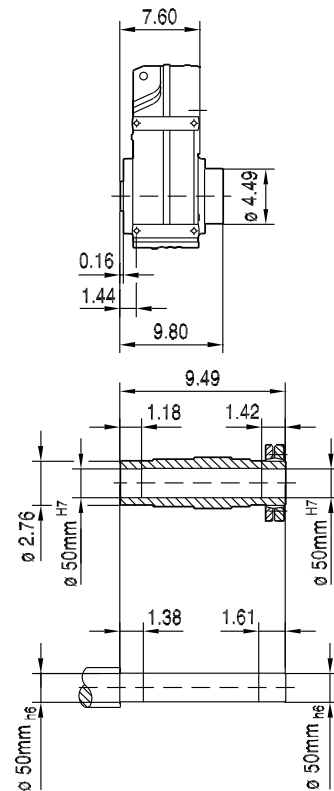
42 056 00 09



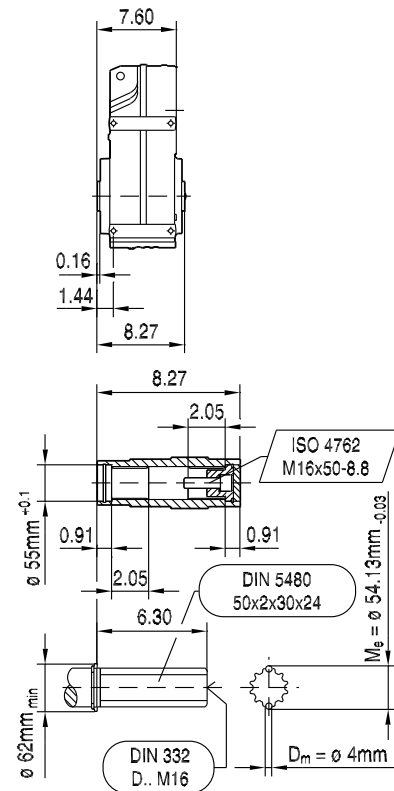
FA77B..



FH77B..



FV77B..

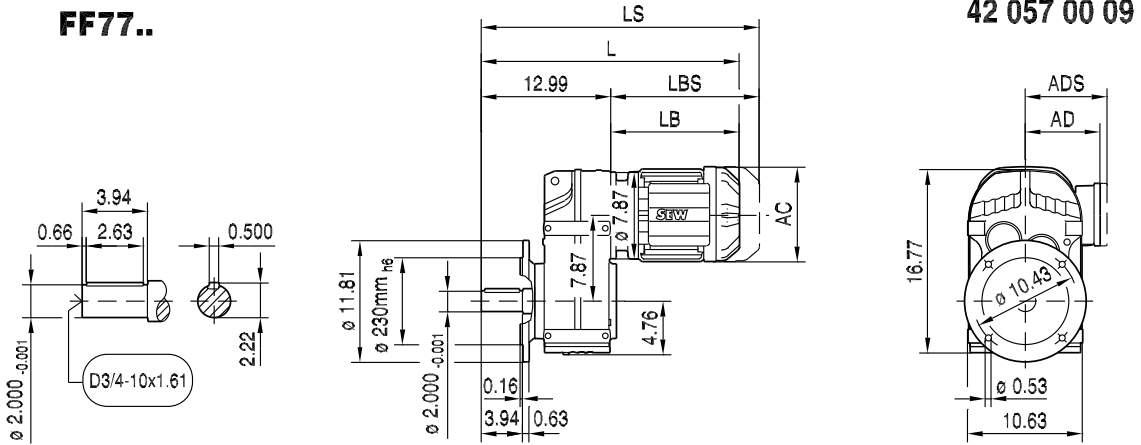


(→ 125)	DR71S	DR71M	DR80S	DR80M	DR90M	DR90L	DR100M	DR100L/LC	DR132S	DR132M/MC	DR160..
AC	5.47	5.47	6.14	6.14	7.05	7.05	7.76	7.76	8.70	8.70	10.63
AD	4.69	4.69	5.04	5.04	5.51	5.51	6.18	6.18	6.69	6.69	8.98
ADS	5.08	5.08	5.47	5.47	5.91	5.91	6.22	6.22	6.77	6.77	8.98
L	19.02	20.00	20.35	21.57	21.65	22.44	23.62	24.80	26.50	28.46	30.08
LS	21.69	22.68	23.54	24.76	25.31	26.10	27.28	28.46	30.91	32.87	35.47
LB	7.44	8.43	8.78	10.00	10.08	10.87	12.05	13.23	14.92	16.89	18.50
LBS	10.12	11.10	11.97	13.19	13.74	14.53	15.71	16.89	19.33	21.30	23.90

reducer.ir

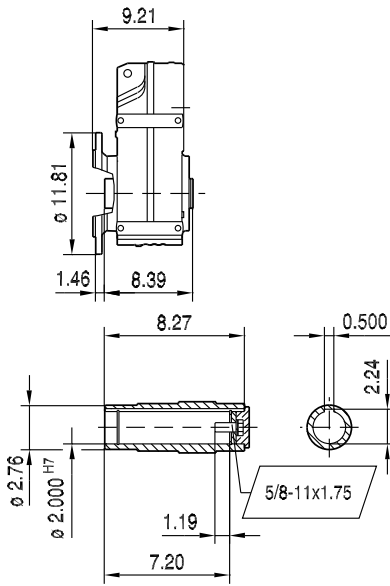


FF77..

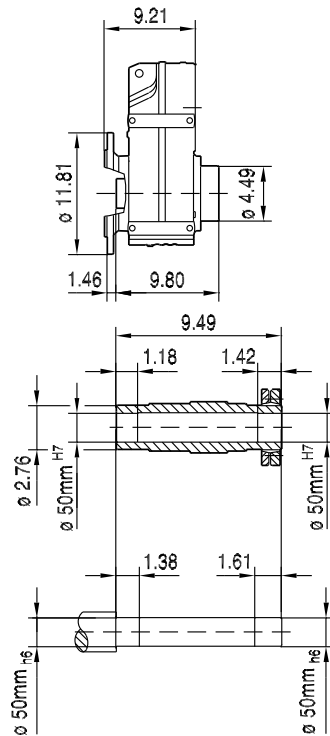


42 057 00 09

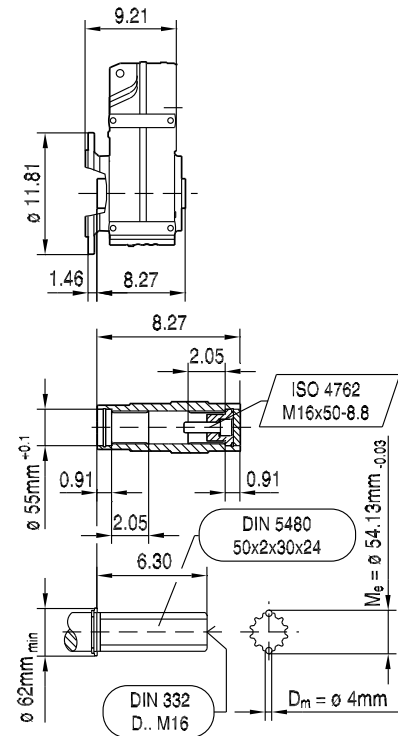
FAF77..



FHF77..

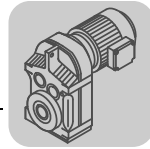


FVF77..

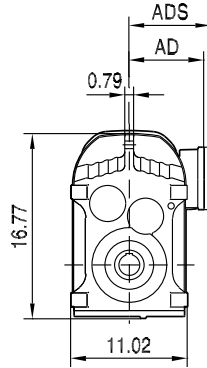
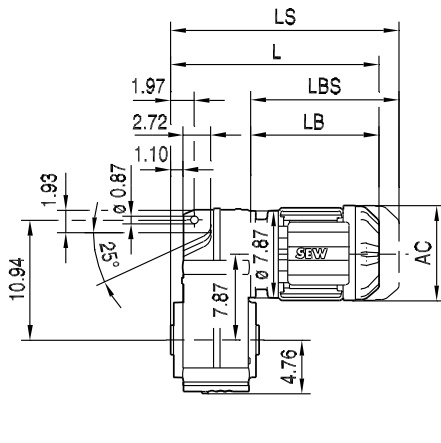


(→ 125)	DR71S	DR71M	DR80S	DR80M	DR90M	DR90L	DR100M	DR100L/LC	DR132S	DR132M/MC	DR160..
AC	5.47	5.47	6.14	6.14	7.05	7.05	7.76	7.76	8.70	8.70	10.63
AD	4.69	4.69	5.04	5.04	5.51	5.51	6.18	6.18	6.69	6.69	8.98
ADS	5.08	5.08	5.47	5.47	5.91	5.91	6.22	6.22	6.77	6.77	8.98
L	20.43	21.42	21.77	22.99	23.07	23.86	25.04	26.22	27.91	29.88	31.50
LS	23.11	24.09	24.96	26.18	26.73	27.52	28.70	29.88	32.32	34.29	36.89
LB	7.44	8.43	8.78	10.00	10.08	10.87	12.05	13.23	14.92	16.89	18.50
LBS	10.12	11.10	11.97	13.19	13.74	14.53	15.71	16.89	19.33	21.30	23.90

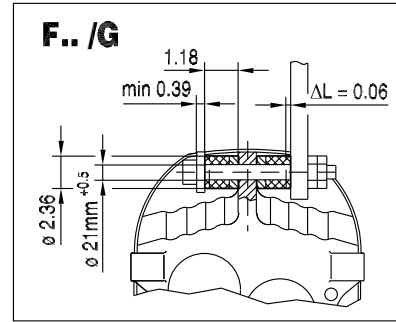
reducer.ir



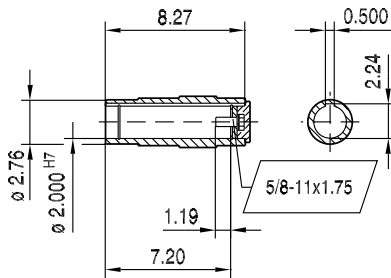
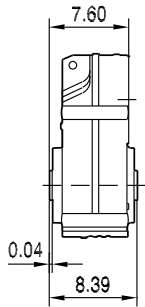
FA77..



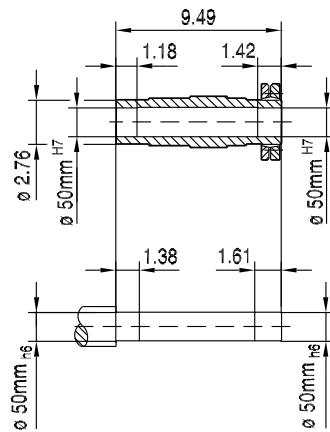
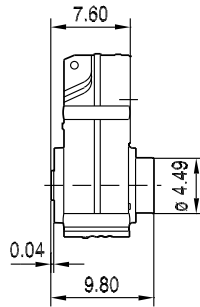
42 058 00 09



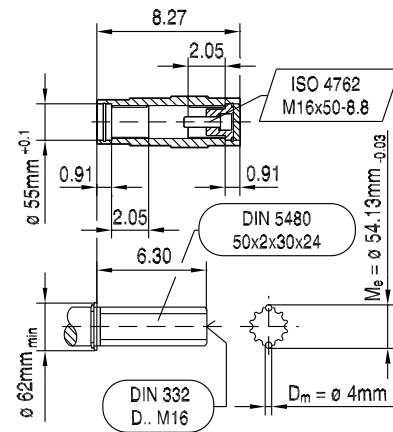
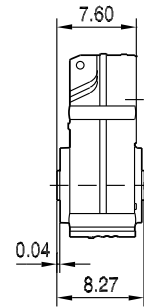
FA77..



FH77..

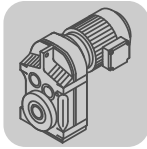


FV77..



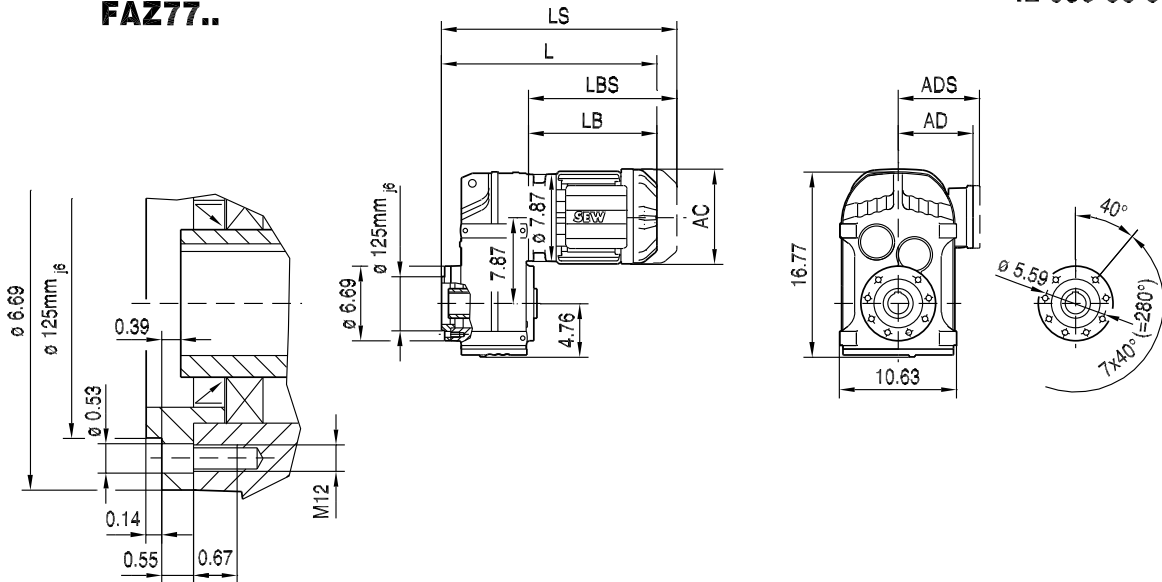
(→ 125)	DR71S	DR71M	DR80S	DR80M	DR90M	DR90L	DR100M	DR100L/LC	DR132S	DR132M/MC	DR160..
AC	5.47	5.47	6.14	6.14	7.05	7.05	7.76	7.76	8.70	8.70	10.63
AD	4.69	4.69	5.04	5.04	5.51	5.51	6.18	6.18	6.69	6.69	8.98
ADS	5.08	5.08	5.47	5.47	5.91	5.91	6.22	6.22	6.77	6.77	8.98
L	15.04	16.02	16.38	17.60	17.68	18.46	19.65	20.83	22.52	24.49	26.10
LS	17.72	18.70	19.57	20.79	21.34	22.13	23.31	24.49	26.93	28.90	31.50
LB	7.44	8.43	8.78	10.00	10.08	10.87	12.05	13.23	14.92	16.89	18.50
LBS	10.12	11.10	11.97	13.19	13.74	14.53	15.71	16.89	19.33	21.30	23.90

reducer.ir

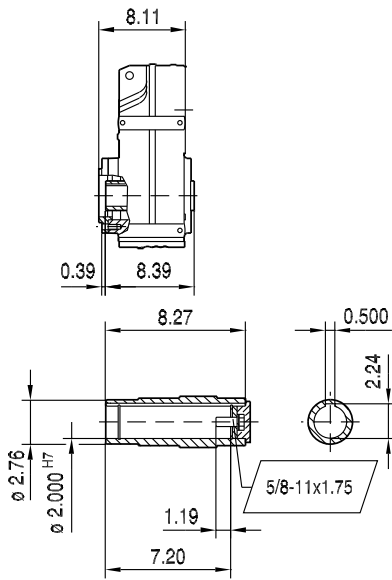


42 059 00 09

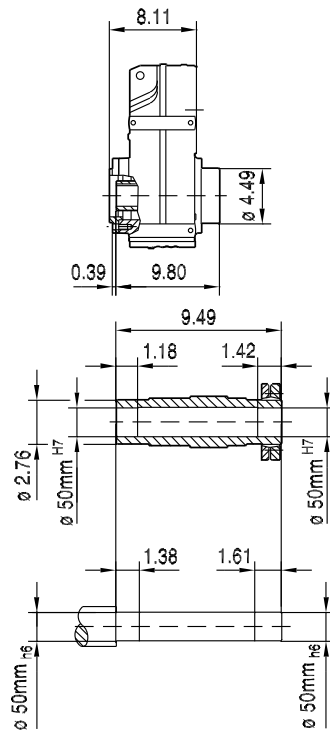
FAZ77..



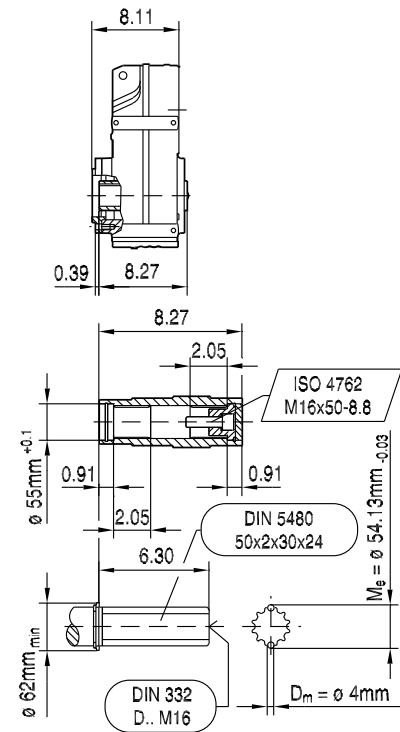
FAZ77..



FHZ77..



FVZ77..

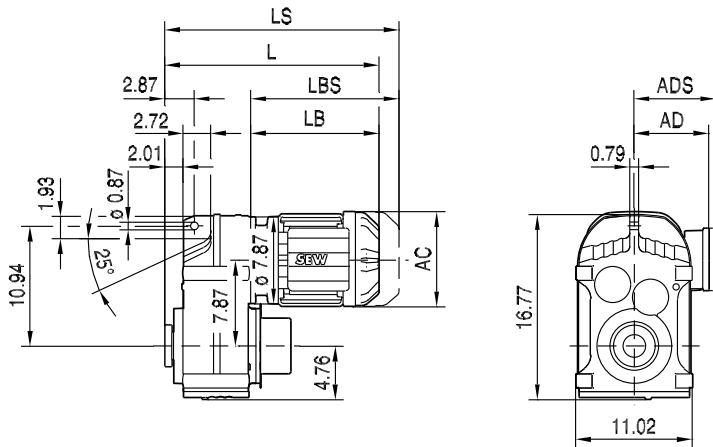


(→ 125)	DR71S	DR71M	DR80S	DR80M	DR90M	DR90L	DR100M	DR100L/LC	DR132S	DR132M/MC	DR160..
AC	5.47	5.47	6.14	6.14	7.05	7.05	7.76	7.76	8.70	8.70	10.63
AD	4.69	4.69	5.04	5.04	5.51	5.51	6.18	6.18	6.69	6.69	8.98
ADS	5.08	5.08	5.47	5.47	5.91	5.91	6.22	6.22	6.77	6.77	8.98
L	15.55	16.54	16.89	18.11	18.19	18.98	20.16	21.34	23.03	25.00	26.61
LS	18.23	19.21	20.08	21.30	21.85	22.64	23.82	25.00	27.44	29.41	32.01
LB	7.44	8.43	8.78	10.00	10.08	10.87	12.05	13.23	14.92	16.89	18.50
LBS	10.12	11.10	11.97	13.19	13.74	14.53	15.71	16.89	19.33	21.30	23.90

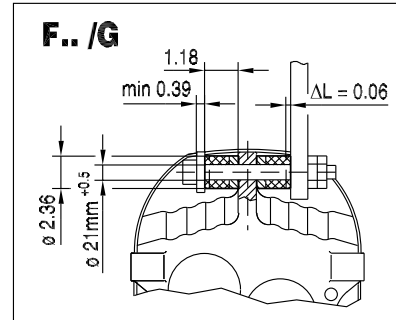
reducer.ir



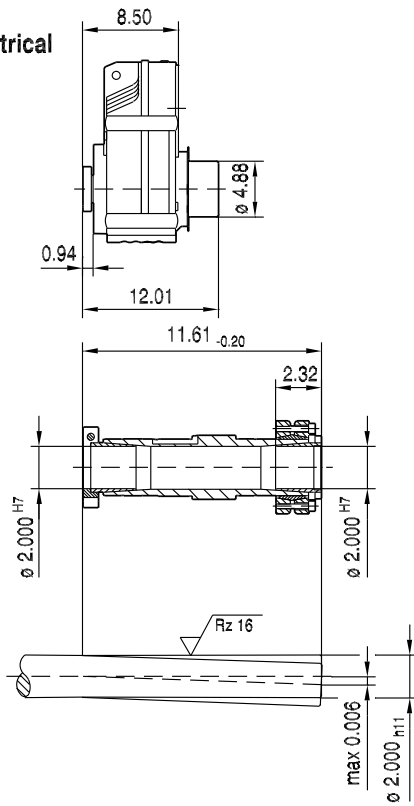
FT77..



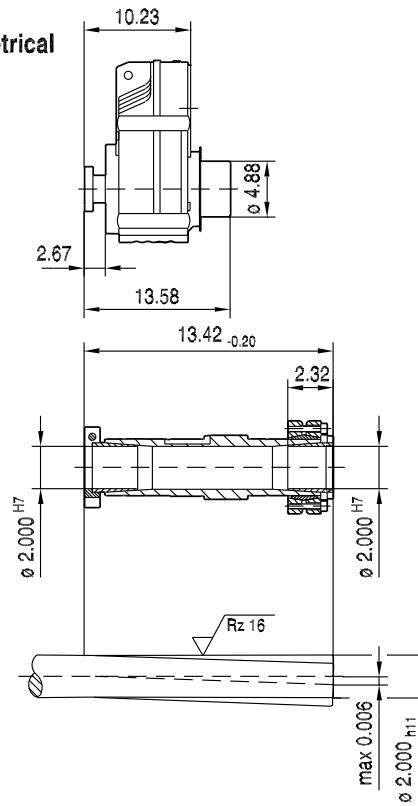
42 060 00 09



NON-Symmetrical



Symmetrical



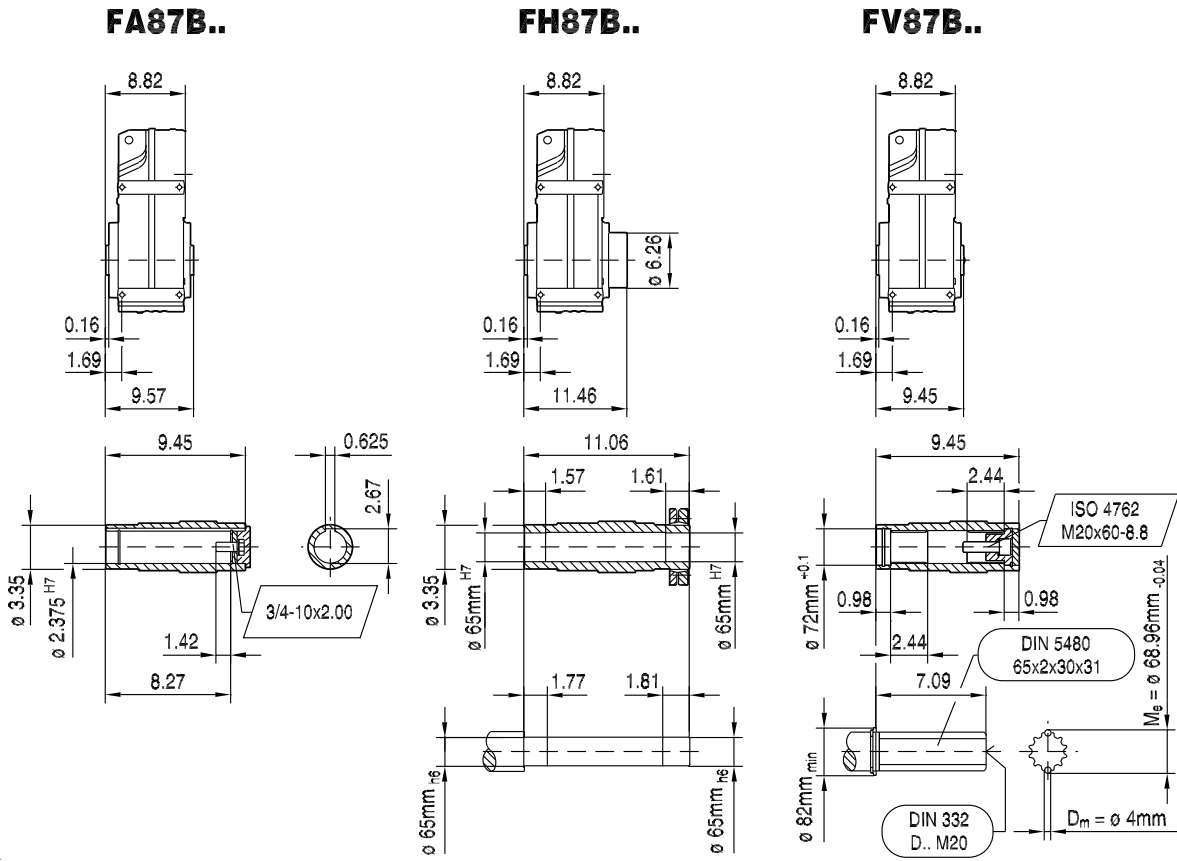
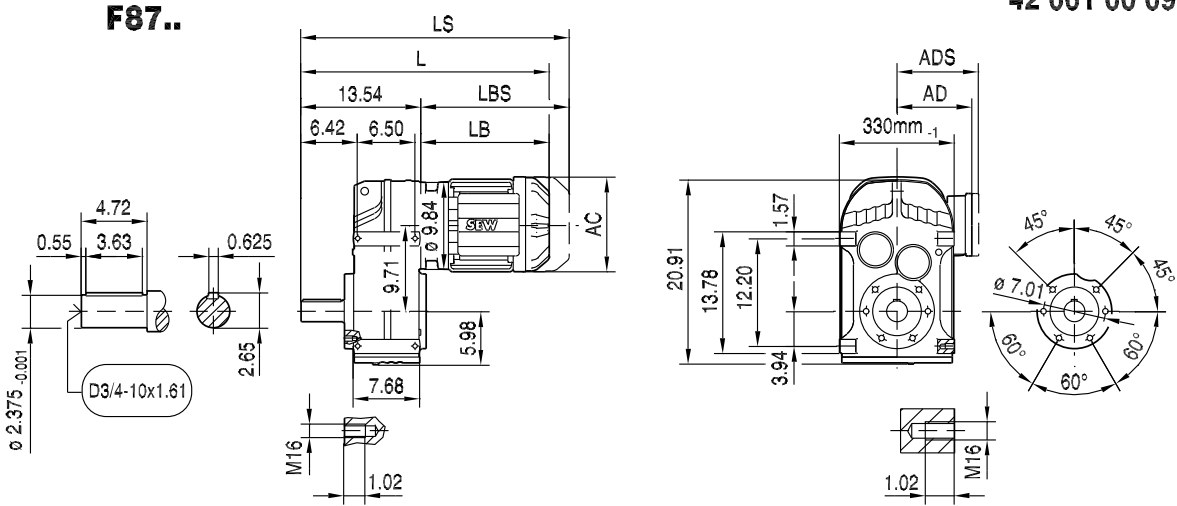
10

(→ 125)	DR71S	DR71M	DR80S	DR80M	DR90M	DR90L	DR100M	DR100L/LC	DR132S	DR132M/MC	DR160..
AC	5.47	5.47	6.14	6.14	7.05	7.05	7.76	7.76	8.70	8.70	10.63
AD	4.69	4.69	5.04	5.04	5.51	5.51	6.18	6.18	6.69	6.69	8.98
ADS	5.08	5.08	5.47	5.47	5.91	5.91	6.22	6.22	6.77	6.77	8.98
L	15.94	16.93	17.28	18.50	18.58	19.37	20.55	21.73	23.43	25.39	27.01
LS	18.62	19.61	20.47	21.69	22.24	23.03	24.21	25.39	27.83	29.80	32.40
LB	7.44	8.43	8.78	10.00	10.08	10.87	12.05	13.23	14.92	16.89	18.50
LBS	10.12	11.10	11.97	13.19	13.74	14.53	15.71	16.89	19.33	21.30	23.90

reducer.ir



42 061 00 09

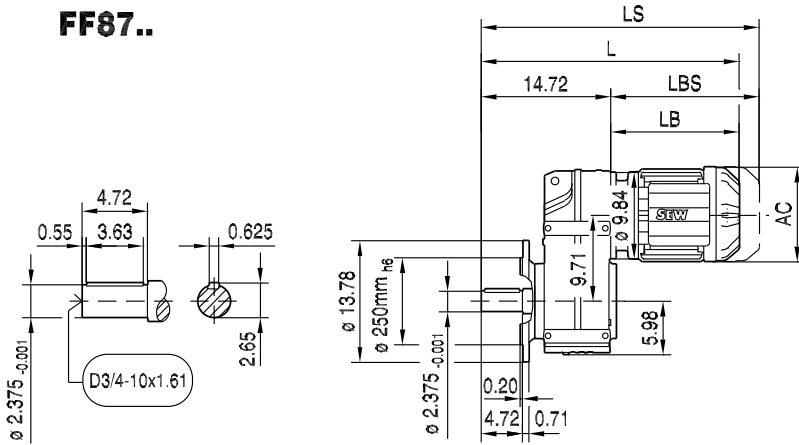


(→ 125)	DR80S	DR80M	DR90M	DR90L	DR100M	DR100L/LC	DR132S	DR132M/MC	DR160..	DR180S/M	DR180L/LC
AC	6.14	6.14	7.05	7.05	7.76	7.76	8.70	8.70	10.63	12.44	12.44
AD	5.04	5.04	5.51	5.51	6.18	6.18	6.69	6.69	8.98	9.96	9.96
ADS	5.47	5.47	5.91	5.91	6.22	6.22	6.77	6.77	8.98	9.96	9.96
L	22.13	23.35	23.43	24.21	25.39	26.57	28.27	30.24	31.85	34.57	36.93
LS	25.31	26.54	27.09	27.87	29.06	30.24	32.68	34.65	37.24	42.01	44.37
LB	8.58	9.80	9.88	10.67	11.85	13.03	14.72	16.69	18.31	21.02	23.39
LBS	11.77	12.99	13.54	14.33	15.51	16.69	19.13	21.10	23.70	28.46	30.83

reducer.ir

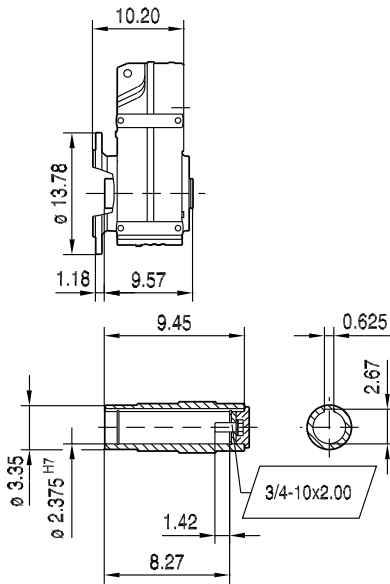


FF87..

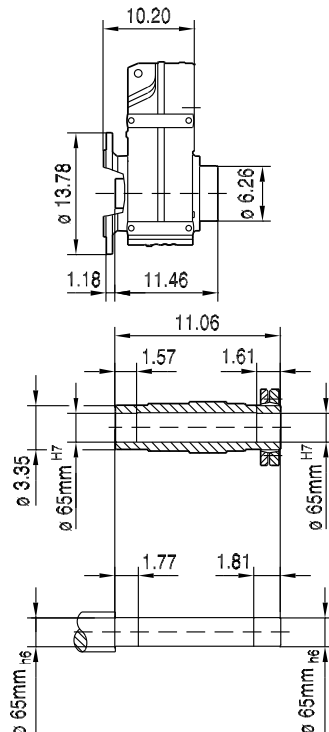


42 062 00 09

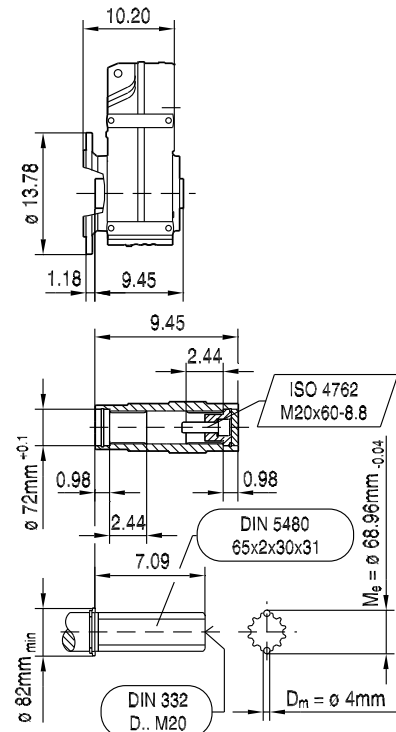
FAF87..



FHF87..



FVF87..



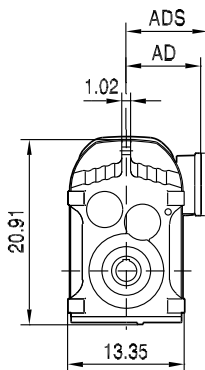
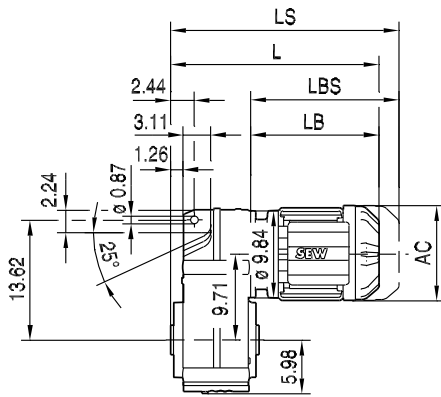
10

(→ 125)	DR80S	DR80M	DR90M	DR90L	DR100M	DR100L/LC	DR132S	DR132M/MC	DR160..	DR180S/M	DR180L/LC
AC	6.14	6.14	7.05	7.05	7.76	7.76	8.70	8.70	10.63	12.44	12.44
AD	5.04	5.04	5.51	5.51	6.18	6.18	6.69	6.69	8.98	9.96	9.96
ADS	5.47	5.47	5.91	5.91	6.22	6.22	6.77	6.77	8.98	9.96	9.96
L	23.31	24.53	24.61	25.39	26.57	27.76	29.45	31.42	33.03	35.75	38.11
LS	26.50	27.72	28.27	29.06	30.24	31.42	33.86	35.83	38.43	43.19	45.55
LB	8.58	9.80	9.88	10.67	11.85	13.03	14.72	16.69	18.31	21.02	23.39
LBS	11.77	12.99	13.54	14.33	15.51	16.69	19.13	21.10	23.70	28.46	30.83

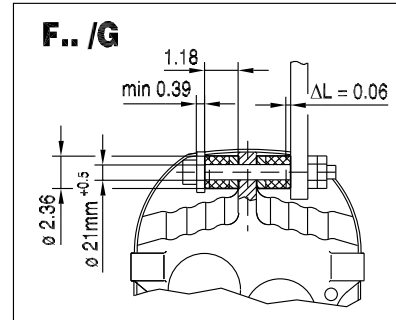
reducer.ir



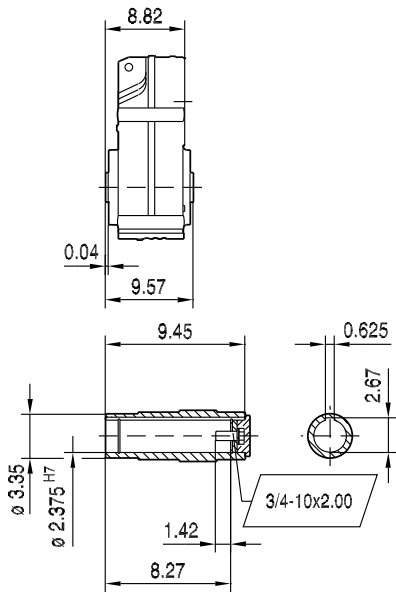
FA87..



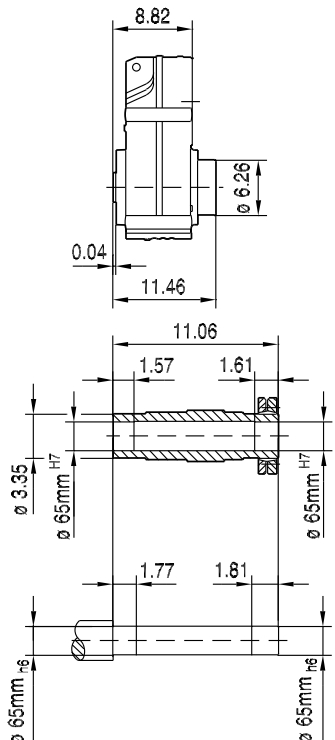
42 063 00 09



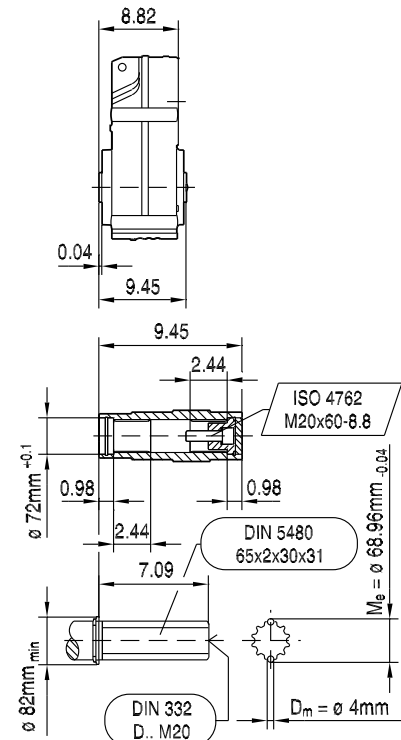
FA87..



FH87..



FV87..



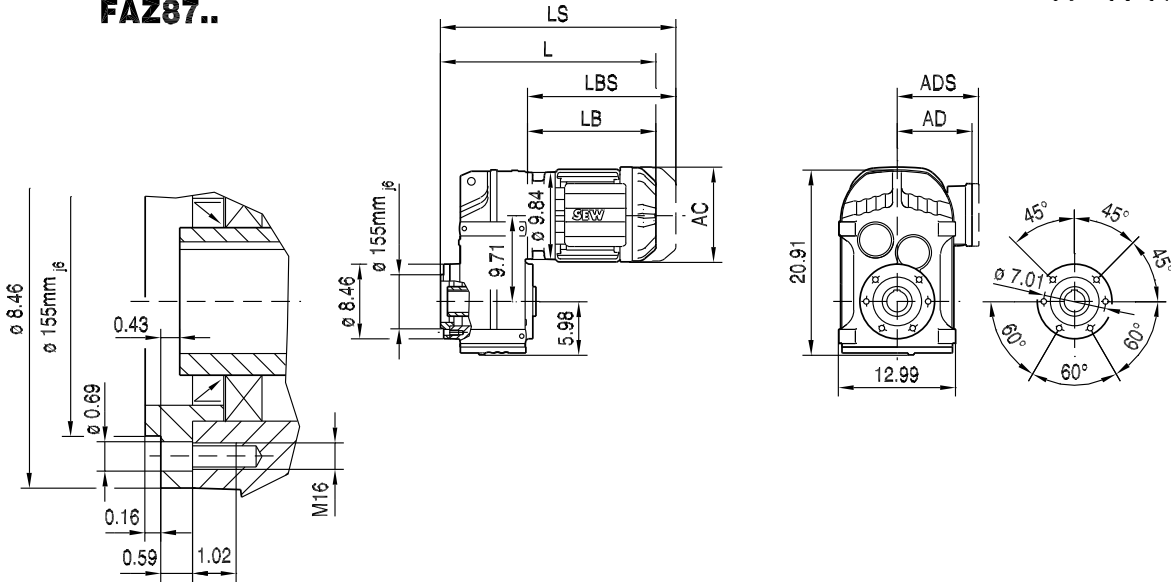
(→ 125)	DR80S	DR80M	DR90M	DR90L	DR100M	DR100L/LC	DR132S	DR132M/MC	DR160..	DR180S/M	DR180L/LC
AC	6.14	6.14	7.05	7.05	7.76	7.76	8.70	8.70	10.63	12.44	12.44
AD	5.04	5.04	5.51	5.51	6.18	6.18	6.69	6.69	8.98	9.96	9.96
ADS	5.47	5.47	5.91	5.91	6.22	6.22	6.77	6.77	8.98	9.96	9.96
L	17.40	18.62	18.70	19.49	20.67	21.85	23.54	25.51	27.13	29.84	32.20
LS	20.59	21.81	22.36	23.15	24.33	25.51	27.95	29.92	32.52	37.28	39.65
LB	8.58	9.80	9.88	10.67	11.85	13.03	14.72	16.69	18.31	21.02	23.39
LBS	11.77	12.99	13.54	14.33	15.51	16.69	19.13	21.10	23.70	28.46	30.83

reducer.ir

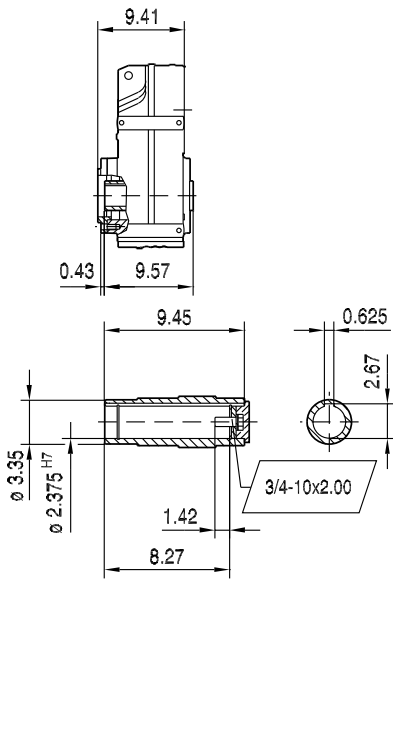


42 064 00 09

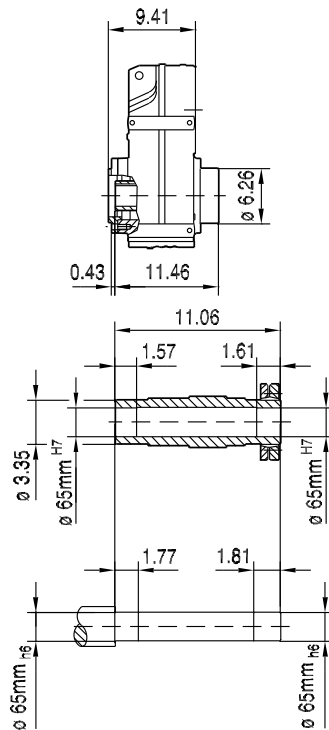
FAZ87..



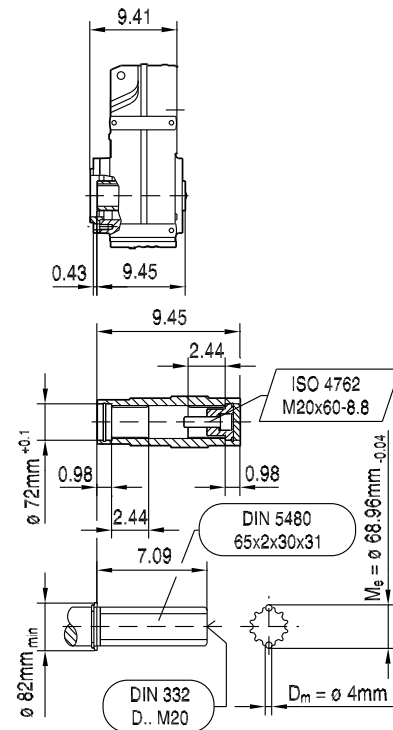
FAZ87..



FHZ87..



FVZ87..



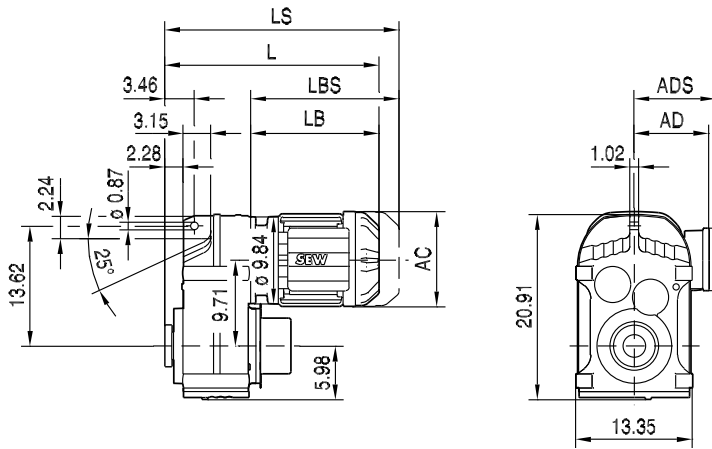
10

(→ 125)	DR80S	DR80M	DR90M	DR90L	DR100M	DR100L/LC	DR132S	DR132M/MC	DR160..	DR180S/M	DR180L/LC
AC	6.14	6.14	7.05	7.05	7.76	7.76	8.70	8.70	10.63	12.44	12.44
AD	5.04	5.04	5.51	5.51	6.18	6.18	6.69	6.69	8.98	9.96	9.96
ADS	5.47	5.47	5.91	5.91	6.22	6.22	6.77	6.77	8.98	9.96	9.96
L	17.99	19.21	19.29	20.08	21.26	22.44	24.13	26.10	27.72	30.43	32.80
LS	21.18	22.40	22.95	23.74	24.92	26.10	28.54	30.51	33.11	37.87	40.24
LB	8.58	9.80	9.88	10.67	11.85	13.03	14.72	16.69	18.31	21.02	23.39
LBS	11.77	12.99	13.54	14.33	15.51	16.69	19.13	21.10	23.70	28.46	30.83

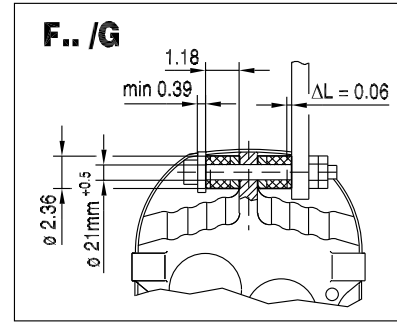
reducer.ir



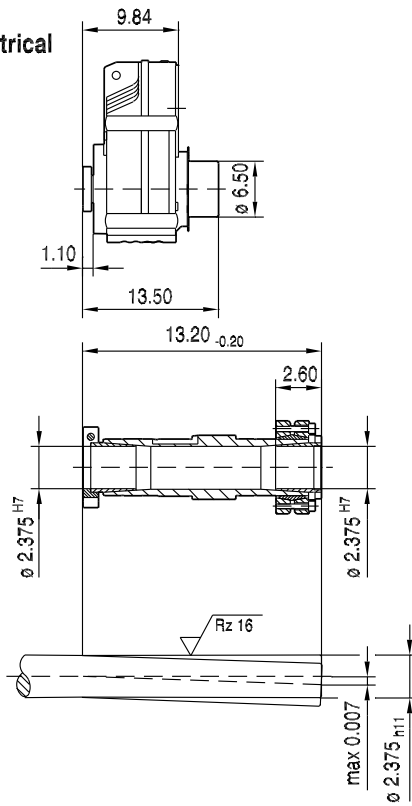
FT87..



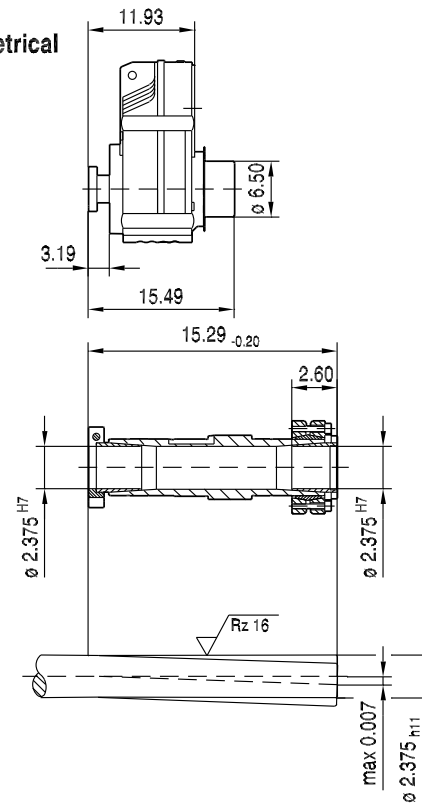
42 065 00 09



NON-Symmetrical

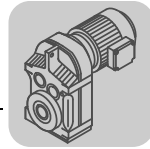


Symmetrical

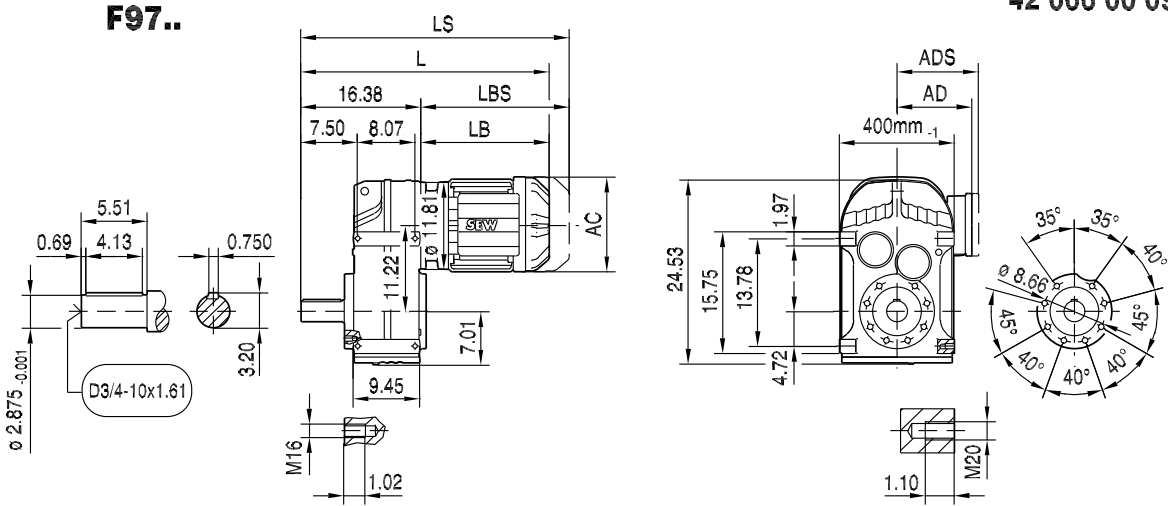


(→ 125)	DR80S	DR80M	DR90M	DR90L	DR100M	DR100L/LC	DR132S	DR132M/MC	DR160..	DR180S/M	DR180L/LC
AC	6.14	6.14	7.05	7.05	7.76	7.76	8.70	8.70	10.63	12.44	12.44
AD	5.04	5.04	5.51	5.51	6.18	6.18	6.69	6.69	8.98	9.96	9.96
ADS	5.47	5.47	5.91	5.91	6.22	6.22	6.77	6.77	8.98	9.96	9.96
L	18.43	19.65	19.72	20.51	21.69	22.87	24.57	26.54	28.15	30.87	33.23
LS	21.61	22.83	23.39	24.17	25.35	26.54	28.98	30.94	33.54	38.31	40.67
LB	8.58	9.80	9.88	10.67	11.85	13.03	14.72	16.69	18.31	21.02	23.39
LBS	11.77	12.99	13.54	14.33	15.51	16.69	19.13	21.10	23.70	28.46	30.83

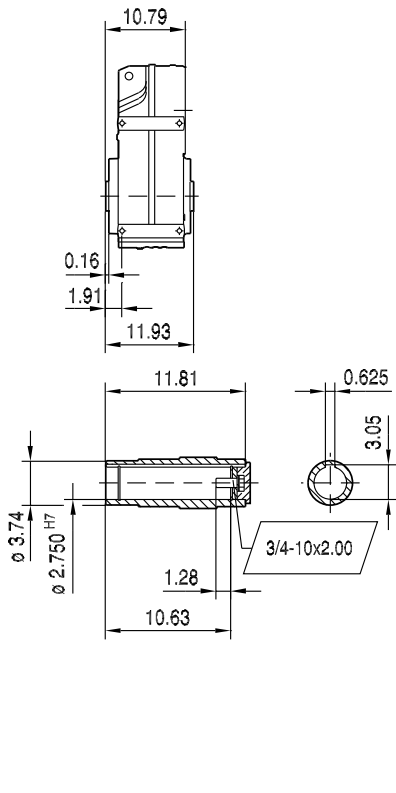
reducer.ir



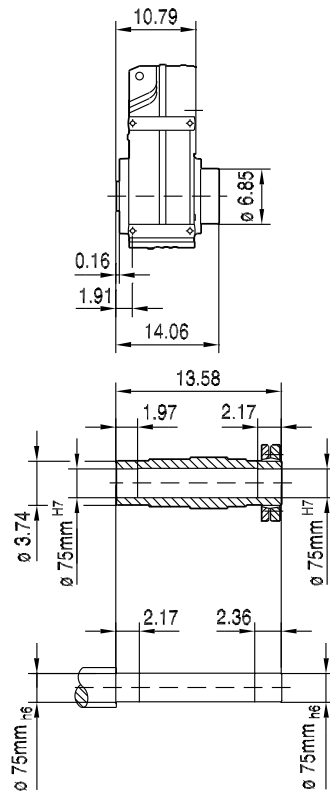
42 066 00 09



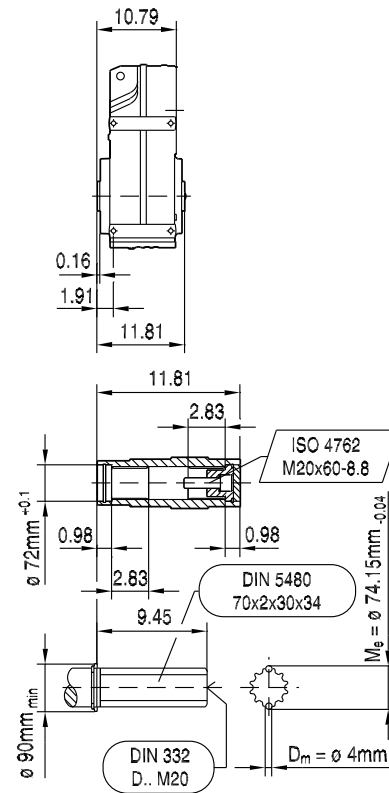
FA97B..



FH97B..



FV97B..



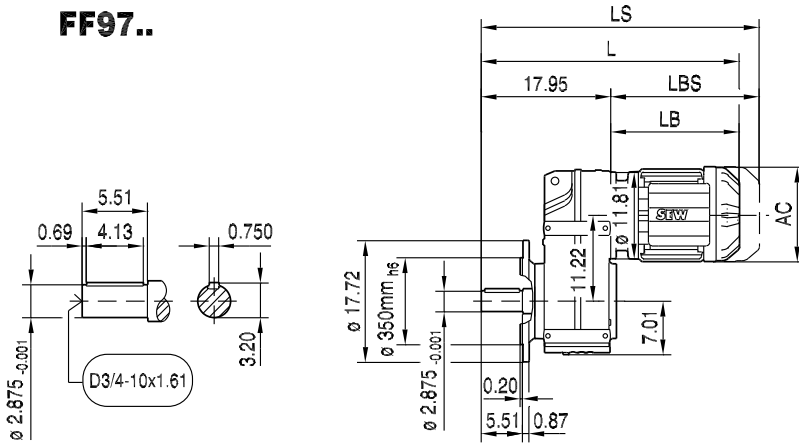
10

(→ 125)	DR90L	DR100M	DR100L/LC	DR132S	DR132M/MC	DR160..	DR180S/M	DR180L/LC	DR200	DR225S	DR225M/MC
AC	7.05	7.76	7.76	8.70	8.70	10.63	12.44	12.44	15.51	15.51	15.51
AD	5.51	6.18	6.18	6.69	6.69	8.98	9.96	9.96	11.14	11.14	11.14
ADS	5.91	6.22	6.22	6.77	6.77	8.98	9.96	9.96	11.14	11.14	11.14
L	26.85	28.03	29.21	30.91	32.87	34.49	37.20	39.57	42.44	42.44	44.41
LS	30.51	31.69	32.87	35.31	37.28	39.88	44.65	47.01	50.51	50.51	52.48
LB	10.47	11.65	12.83	14.53	16.50	18.11	20.83	23.19	26.06	26.06	28.03
LBS	14.13	15.31	16.50	18.94	20.91	23.50	26.27	30.63	34.13	34.13	36.10

reducer.ir

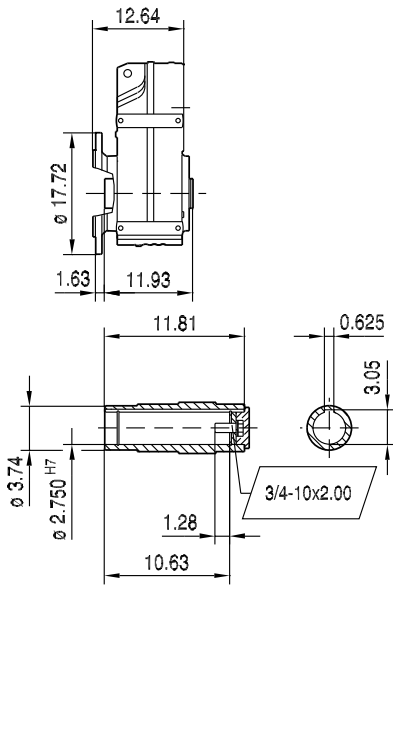


FF97..

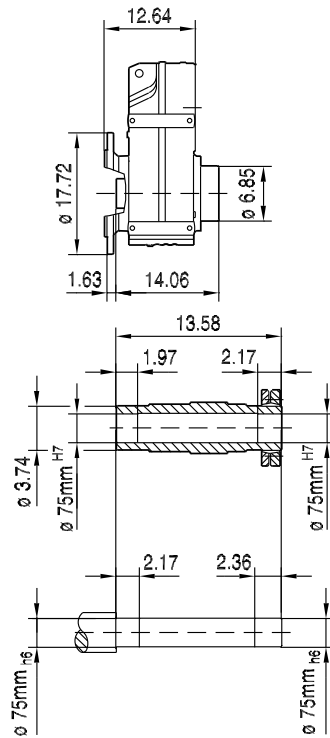


42 067 00 09

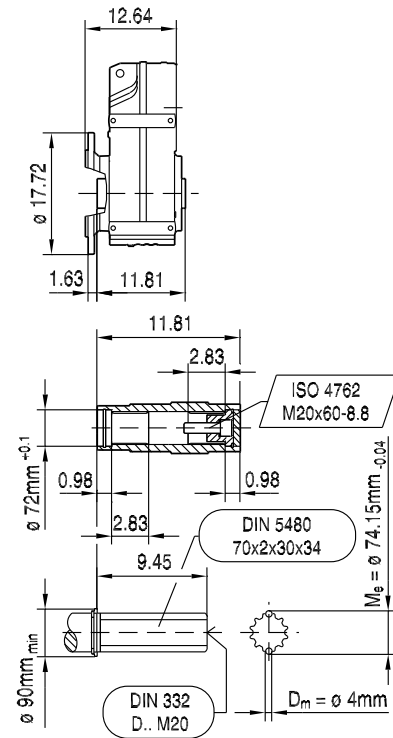
FAF97..



FHF97..



FVF97..



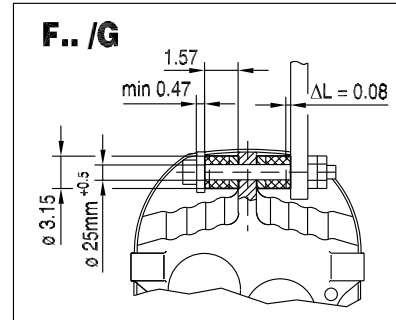
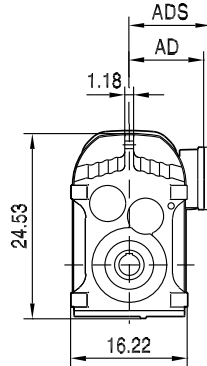
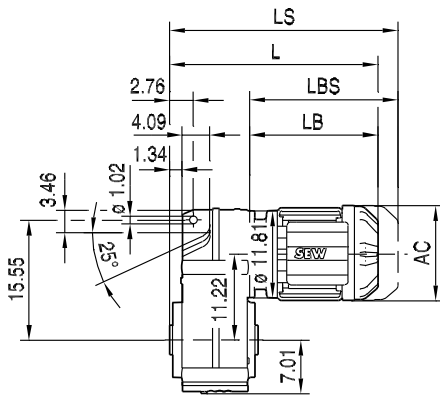
(→ 125)	DR90L	DR100M	DR100L/LC	DR132S	DR132M/MC	DR160..	DR180S/M	DR180L/LC	DR200	DR225S	DR225M/MC
AC	7.05	7.76	7.76	8.70	8.70	10.63	12.44	12.44	15.51	15.51	15.51
AD	5.51	6.18	6.18	6.69	6.69	8.98	9.96	9.96	11.14	11.14	11.14
ADS	5.91	6.22	6.22	6.77	6.77	8.98	9.96	9.96	11.14	11.14	11.14
L	28.43	29.61	30.79	32.48	34.45	36.06	38.78	41.14	44.02	44.02	45.98
LS	32.09	33.27	34.45	36.89	38.86	41.46	46.22	48.58	52.09	52.09	54.06
LB	10.47	11.65	12.83	14.53	16.50	18.11	20.83	23.19	26.06	26.06	28.03
LBS	14.13	15.31	16.50	18.94	20.91	23.50	26.27	30.63	34.13	34.13	36.10

reducer.ir



FA97..

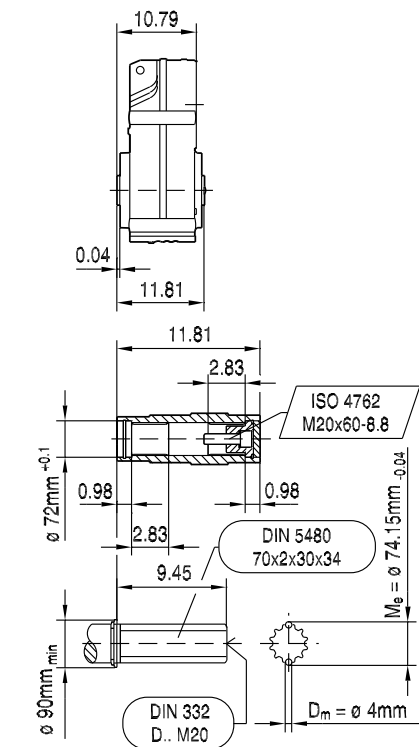
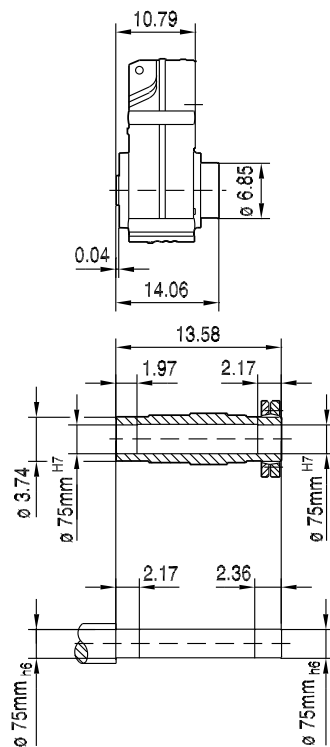
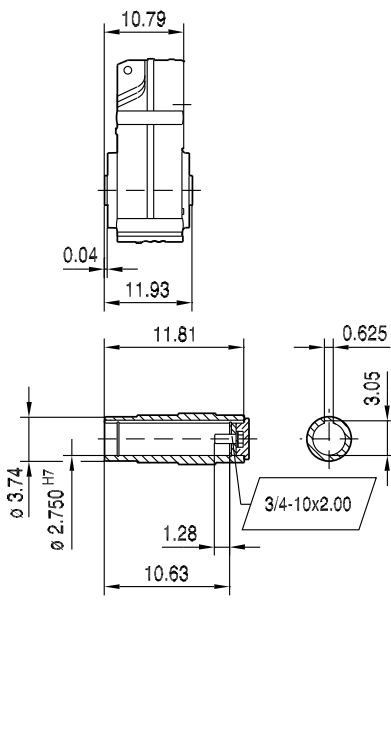
42 068 00 09



FA97..

FH97..

FV97..



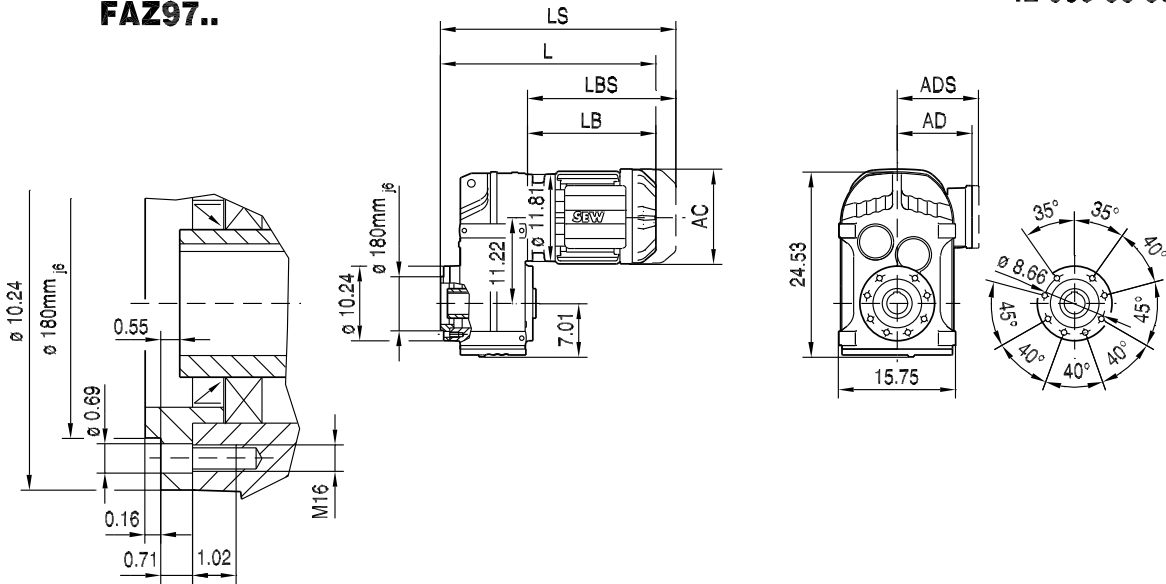
(→ 125)	DR90L	DR100M	DR100L/LC	DR132S	DR132M/MC	DR160..	DR180S/M	DR180L/LC	DR200	DR225S	DR225M/MC
AC	7.05	7.76	7.76	8.70	8.70	10.63	12.44	12.44	15.51	15.51	15.51
AD	5.51	6.18	6.18	6.69	6.69	8.98	9.96	9.96	11.14	11.14	11.14
ADS	5.91	6.22	6.22	6.77	6.77	8.98	9.96	9.96	11.14	11.14	11.14
L	21.26	22.44	23.62	25.31	27.28	28.90	31.61	33.98	36.85	36.85	38.82
LS	24.92	26.10	27.28	29.72	31.69	34.29	39.06	41.42	44.92	44.92	46.89
LB	10.47	11.65	12.83	14.53	16.50	18.11	20.83	23.19	26.06	26.06	28.03
LBS	14.13	15.31	16.50	18.94	20.91	23.50	28.27	30.63	34.13	34.13	36.10

reducer.ir

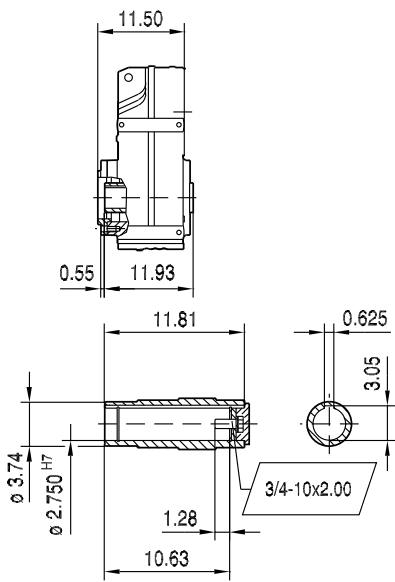


42 069 00 09

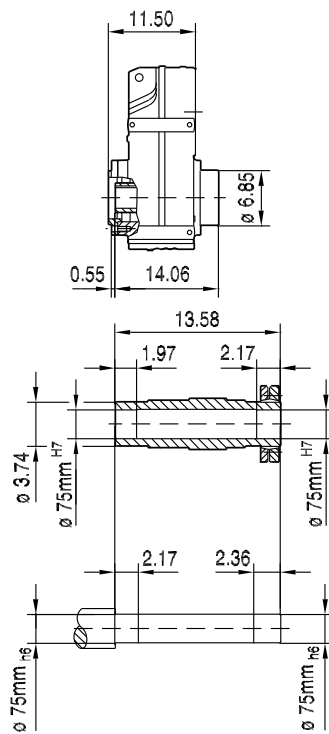
FAZ97..



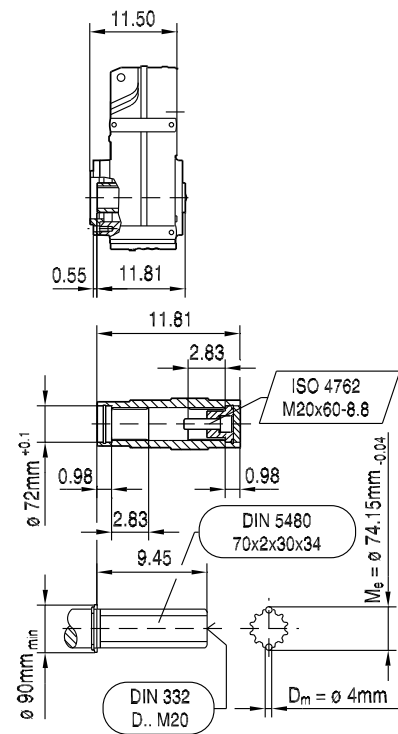
FAZ97..



FHZ97..



FVZ97..



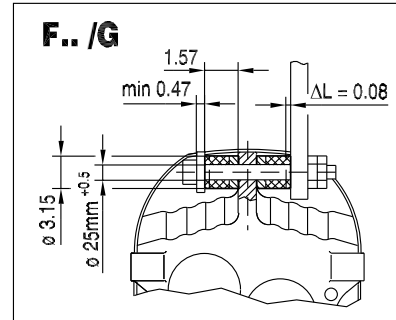
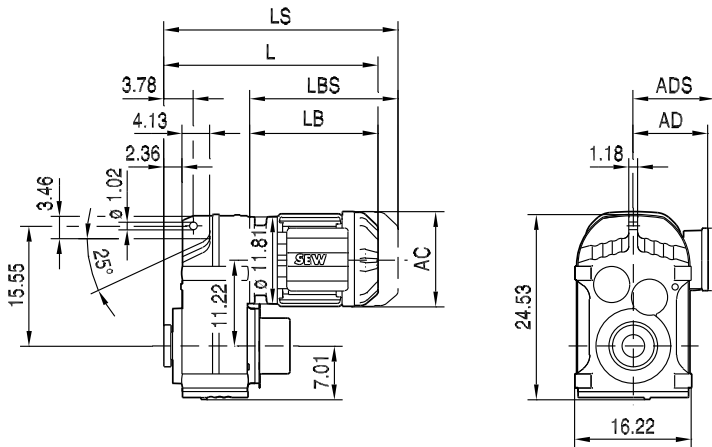
(→ 125)	DR90L	DR100M	DR100L/LC	DR132S	DR132M/MC	DR160..	DR180S/M	DR180L/LC	DR200	DR225S	DR225M/MC
AC	7.05	7.76	7.76	8.70	8.70	10.63	12.44	12.44	15.51	15.51	15.51
AD	5.51	6.18	6.18	6.69	6.69	8.98	9.96	9.96	11.14	11.14	11.14
ADS	5.91	6.22	6.22	6.77	6.77	8.98	9.96	9.96	11.14	11.14	11.14
L	21.97	23.15	24.33	26.02	27.99	29.61	32.32	34.69	37.56	37.56	39.53
LS	25.63	26.81	27.99	30.43	32.40	35.00	39.76	42.13	45.63	45.63	47.60
LB	10.47	11.65	12.83	14.53	16.50	18.11	20.83	23.19	26.06	26.06	28.03
LBS	14.13	15.31	16.50	18.94	20.91	23.50	28.27	30.63	34.13	34.13	36.10

reducer.ir



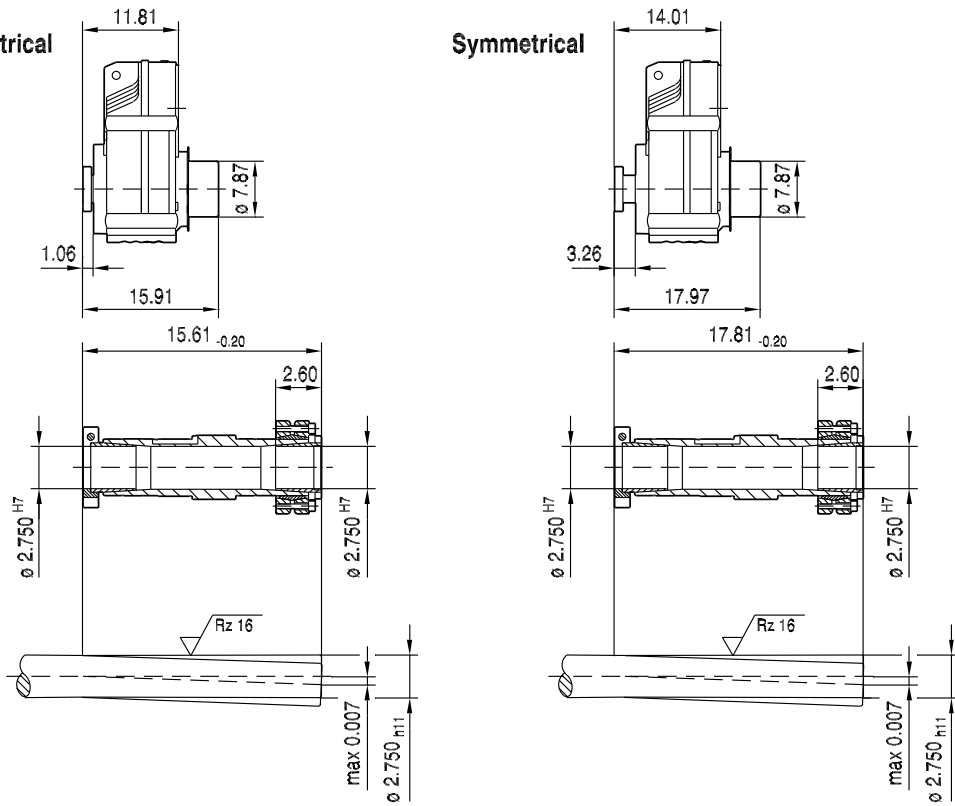
FT97..

42 070 00 09



NON-Symmetrical

Symmetrical



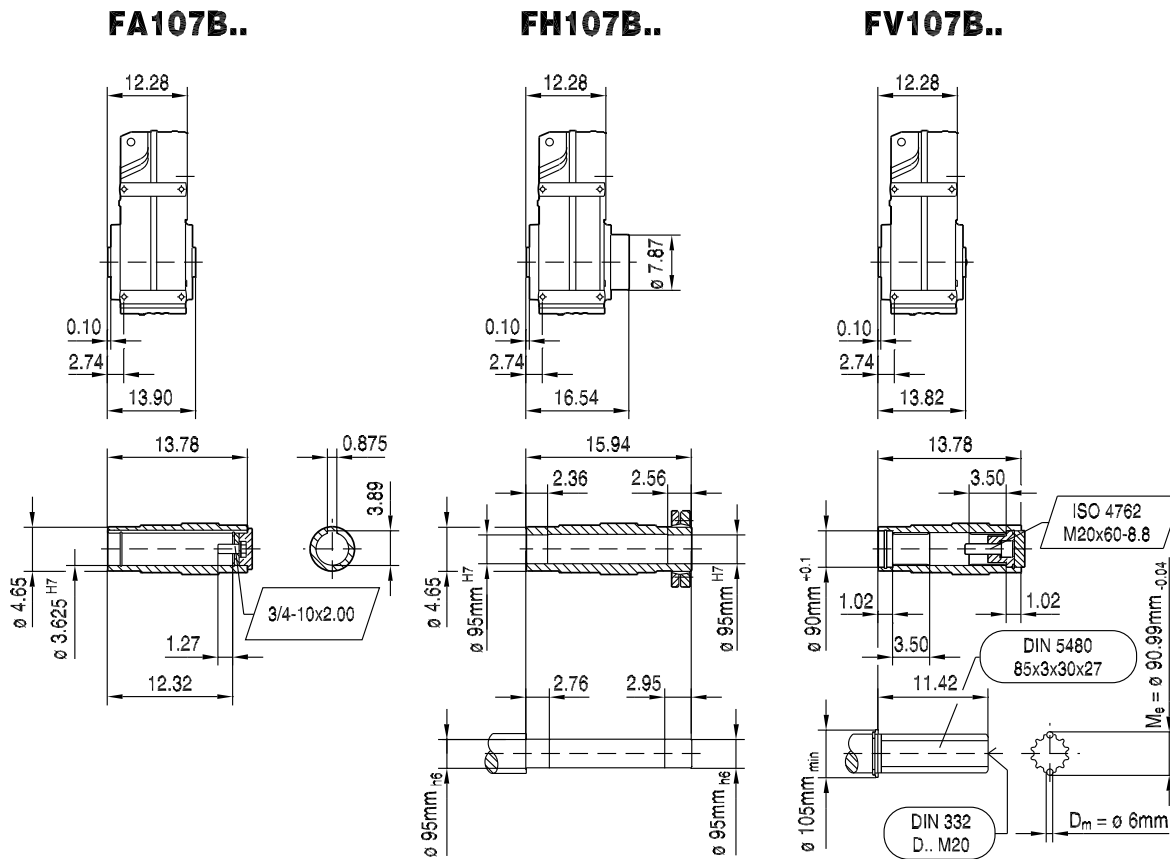
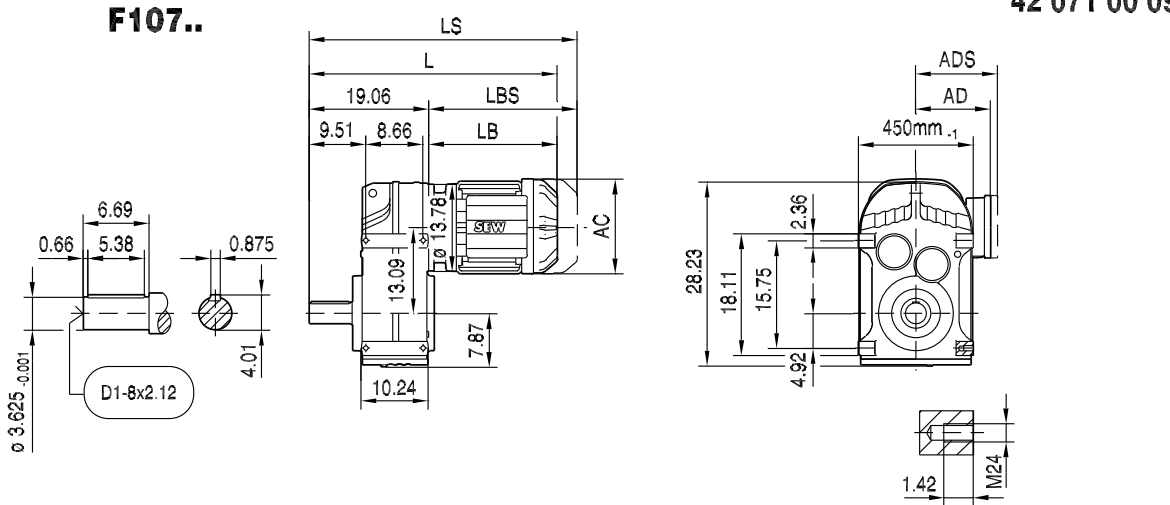
10

(→ 125)	DR90L	DR100M	DR100L/LC	DR132S	DR132M/MC	DR160..	DR180S/M	DR180L/LC	DR200	DR225S	DR225M/MC
AC	7.05	7.76	7.76	8.70	8.70	10.63	12.44	12.44	15.51	15.51	15.51
AD	5.51	6.18	6.18	6.69	6.69	8.98	9.96	9.96	11.14	11.14	11.14
ADS	5.91	6.22	6.22	6.77	6.77	8.98	9.96	9.96	11.14	11.14	11.14
L	22.28	23.46	24.65	26.34	28.31	29.92	32.64	35.00	37.87	37.87	39.84
LS	25.94	27.13	28.31	30.75	32.72	35.31	40.08	42.44	45.94	45.94	47.91
LB	10.47	11.65	12.83	14.53	16.50	18.11	20.83	23.19	26.06	26.06	28.03
LBS	14.13	15.31	16.50	18.94	20.91	23.50	28.27	30.63	34.13	34.13	36.10

reducer.ir



42 071 00 09

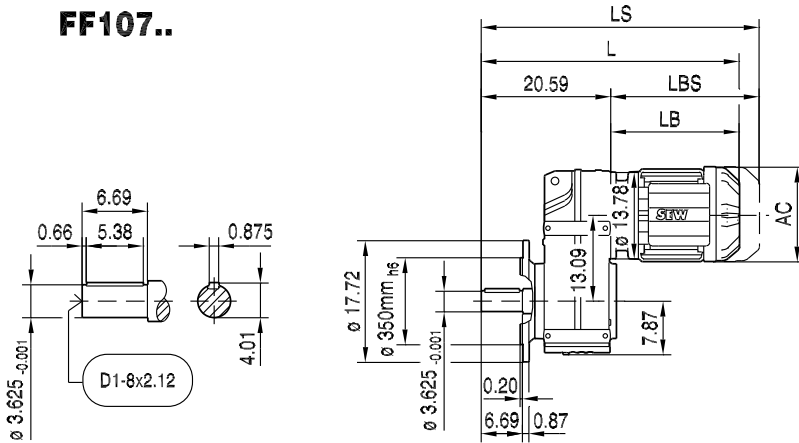


(→ 125)	DR100L/LC	DR132S	DR132M/MC	DR160..	DR180S/M	DR180L/LC	DR200	DR225S	DR225M/MC
AC	7.76	8.70	8.70	10.63	12.44	12.44	15.51	15.51	15.51
AD	6.18	6.69	6.69	8.98	9.96	9.96	11.14	11.14	11.14
ADS	6.22	6.77	6.77	8.98	9.96	9.96	11.14	11.14	11.14
L	31.65	33.35	35.31	36.93	39.65	42.01	44.88	44.88	46.85
LS	35.31	37.76	39.72	42.32	47.09	49.45	52.95	52.95	54.92
LB	12.60	14.29	16.26	17.87	20.59	22.95	25.83	25.83	27.80
LBS	16.26	18.70	20.67	23.27	26.03	30.39	33.90	33.90	35.87

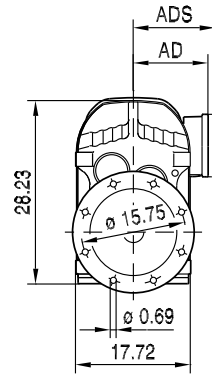
reducer.ir



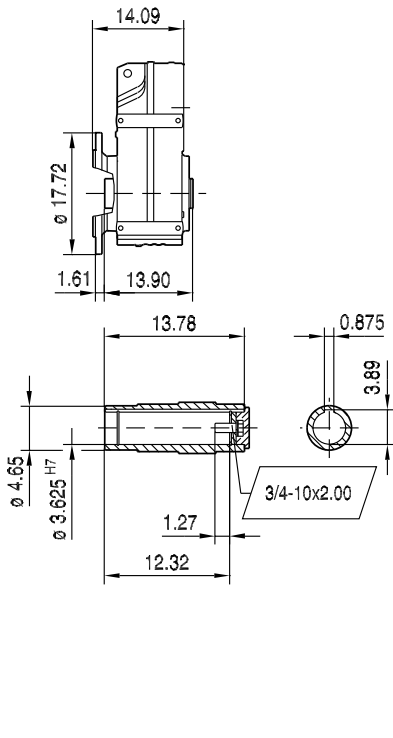
FF107..



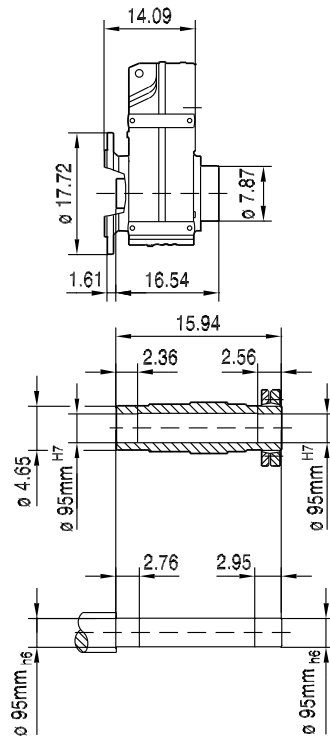
42 072 00 09



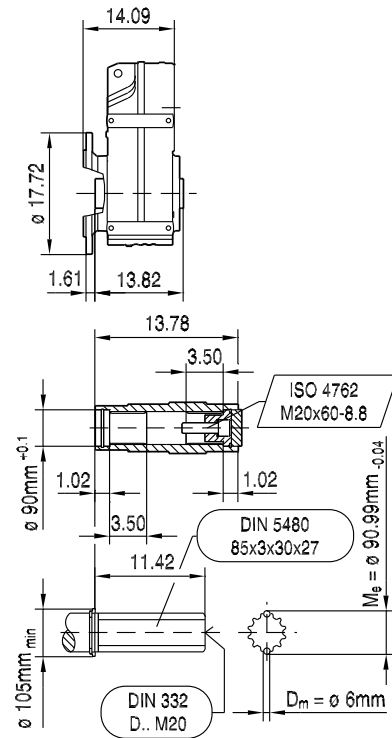
FAF107..



FHF107..



FVF107..



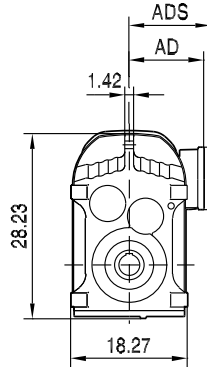
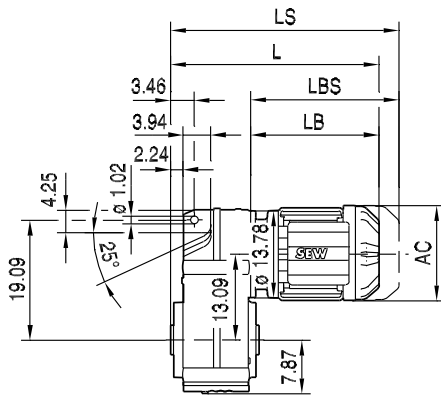
10

(→ 125)	DR100L/LC	DR132S	DR132M/MC	DR160..	DR180S/M	DR180L/LC	DR200	DR225S	DR225M/MC
AC	7.76	8.70	8.70	10.63	12.44	12.44	15.51	15.51	15.51
AD	6.18	6.69	6.69	8.98	9.96	9.96	11.14	11.14	11.14
ADS	6.22	6.77	6.77	8.98	9.96	9.96	11.14	11.14	11.14
L	33.19	34.88	36.85	38.46	41.18	43.54	46.42	46.42	48.39
LS	36.85	39.29	41.26	43.86	48.62	50.98	54.49	54.49	56.46
LB	12.60	14.29	16.26	17.87	20.59	22.95	25.83	25.83	27.80
LBS	16.26	18.70	20.67	23.27	26.03	30.39	33.90	33.90	35.87

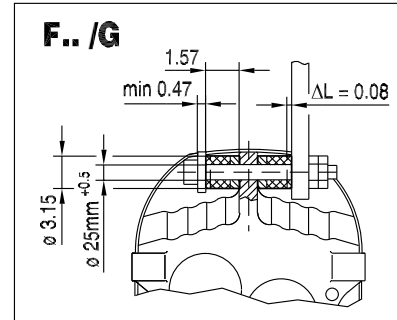
reducer.ir



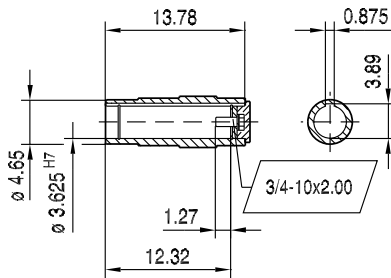
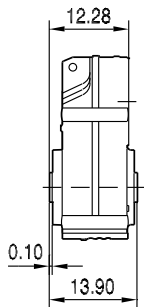
FA107..



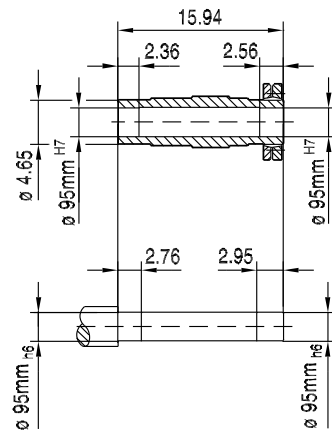
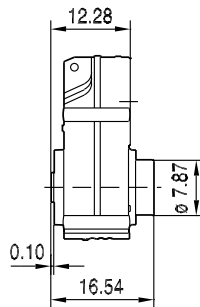
42 073 00 09



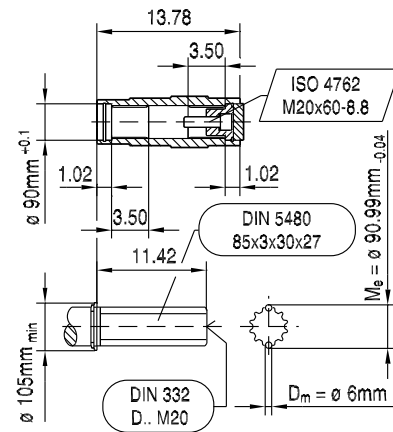
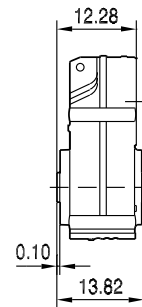
FA107..



FH107..



FV107..



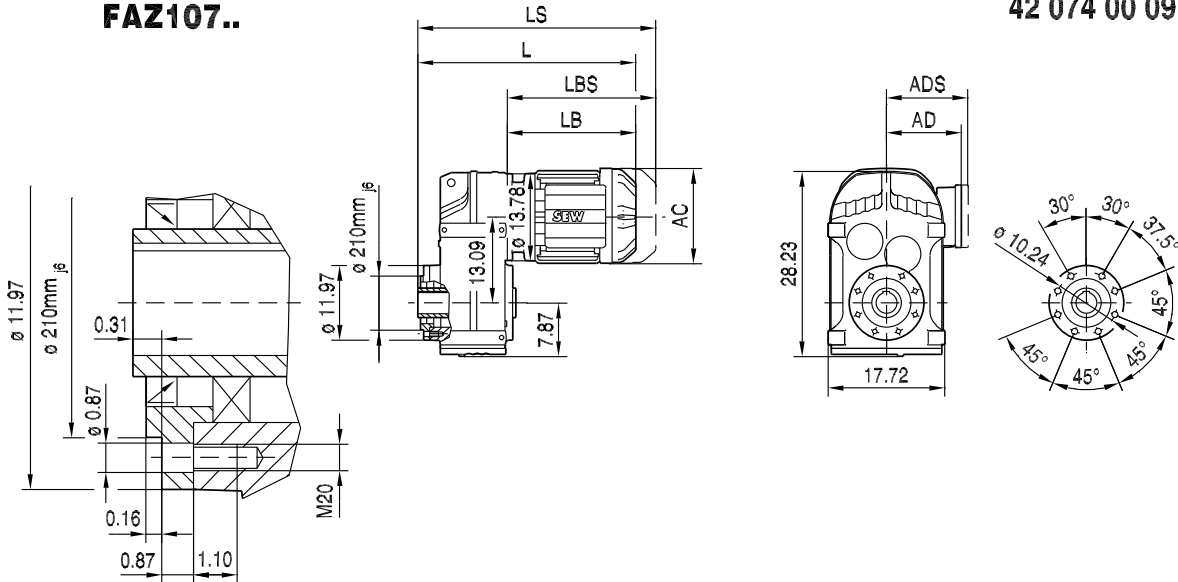
(→ 125)	DR100L/LC	DR132S	DR132M/MC	DR160..	DR180S/M	DR180L/LC	DR200	DR225S	DR225M/MC
AC	7.76	8.70	8.70	10.63	12.44	12.44	15.51	15.51	15.51
AD	6.18	6.69	6.69	8.98	9.96	9.96	11.14	11.14	11.14
ADS	6.22	6.77	6.77	8.98	9.96	9.96	11.14	11.14	11.14
L	24.88	26.57	28.54	30.16	32.87	35.24	38.11	38.11	40.08
LS	28.54	30.98	32.95	35.55	40.31	42.68	46.18	46.18	48.15
LB	12.60	14.29	16.26	17.87	20.59	22.95	25.83	25.83	27.80
LBS	16.26	18.70	20.67	23.27	26.03	30.39	33.90	33.90	35.87

reducer.ir



FAZ107..

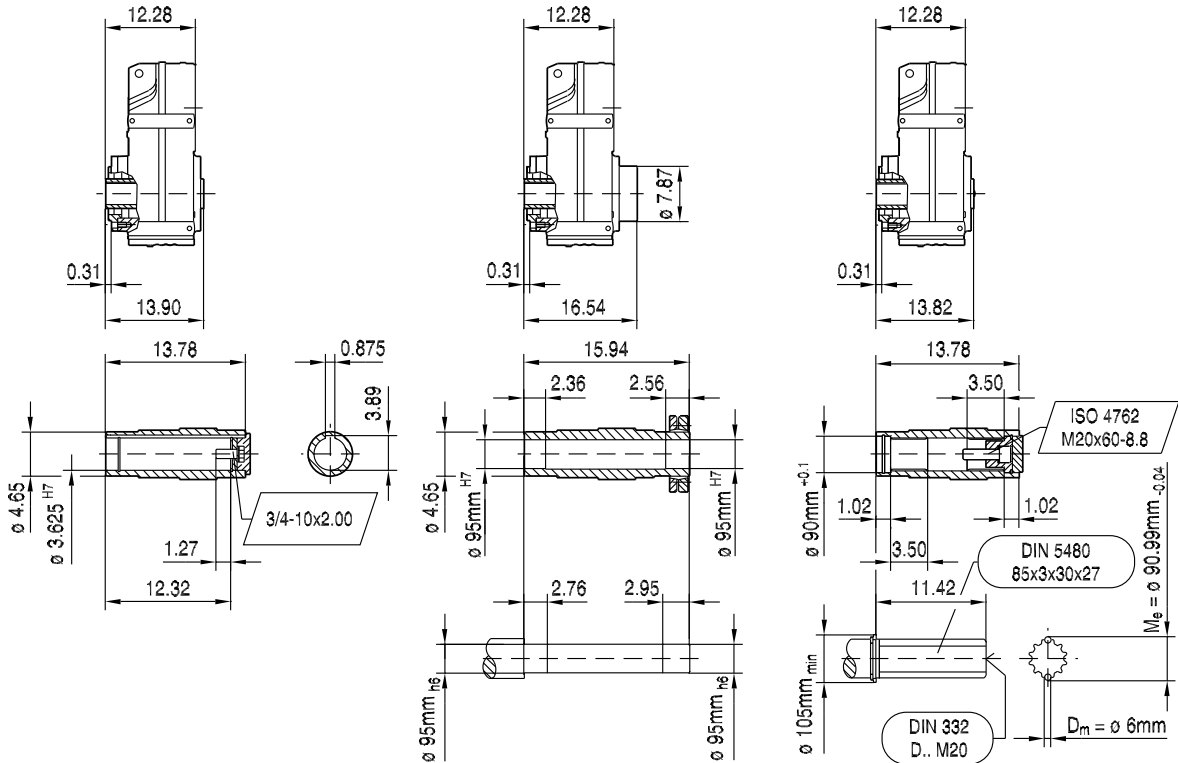
42 074 00 09



FAZ107..

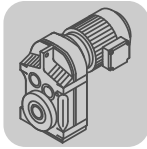
FHZ107..

FVZ107..

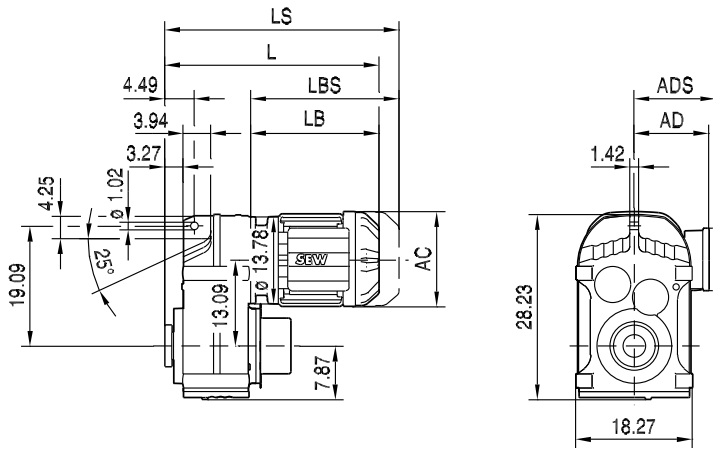


(→ 125)	DR100L/LC	DR132S	DR132M/MC	DR160..	DR180S/M	DR180L/LC	DR200	DR225S	DR225M/MC
AC	7.76	8.70	8.70	10.63	12.44	12.44	15.51	15.51	15.51
AD	6.18	6.69	6.69	8.98	9.96	9.96	11.14	11.14	11.14
ADS	6.22	6.77	6.77	8.98	9.96	9.96	11.14	11.14	11.14
L	24.88	26.57	28.54	30.16	32.87	35.24	38.11	38.11	40.08
LS	28.54	30.98	32.95	35.55	40.31	42.68	46.18	46.18	48.15
LB	12.60	14.29	16.26	17.87	20.59	22.95	25.83	25.83	27.80
LBS	16.26	18.70	20.67	23.27	26.03	30.39	33.90	33.90	35.87

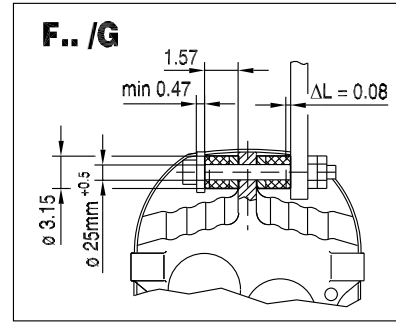
reducer.ir



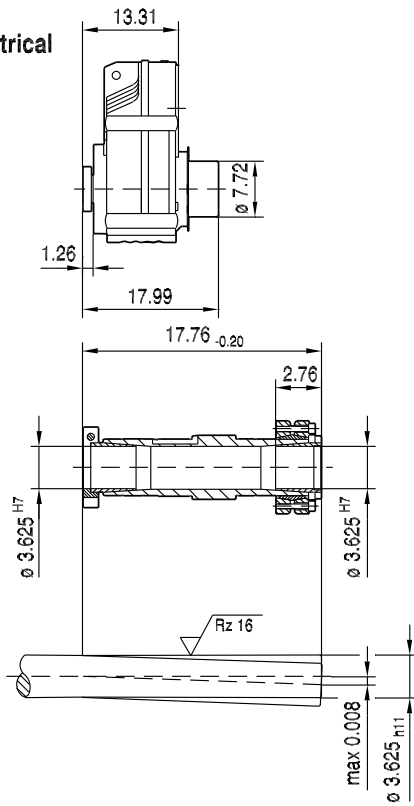
FT107..



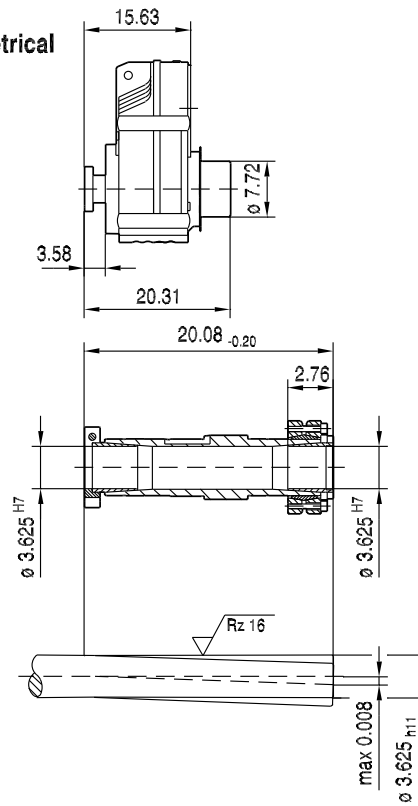
42 075 00 09



NON-Symmetrical



Symmetrical



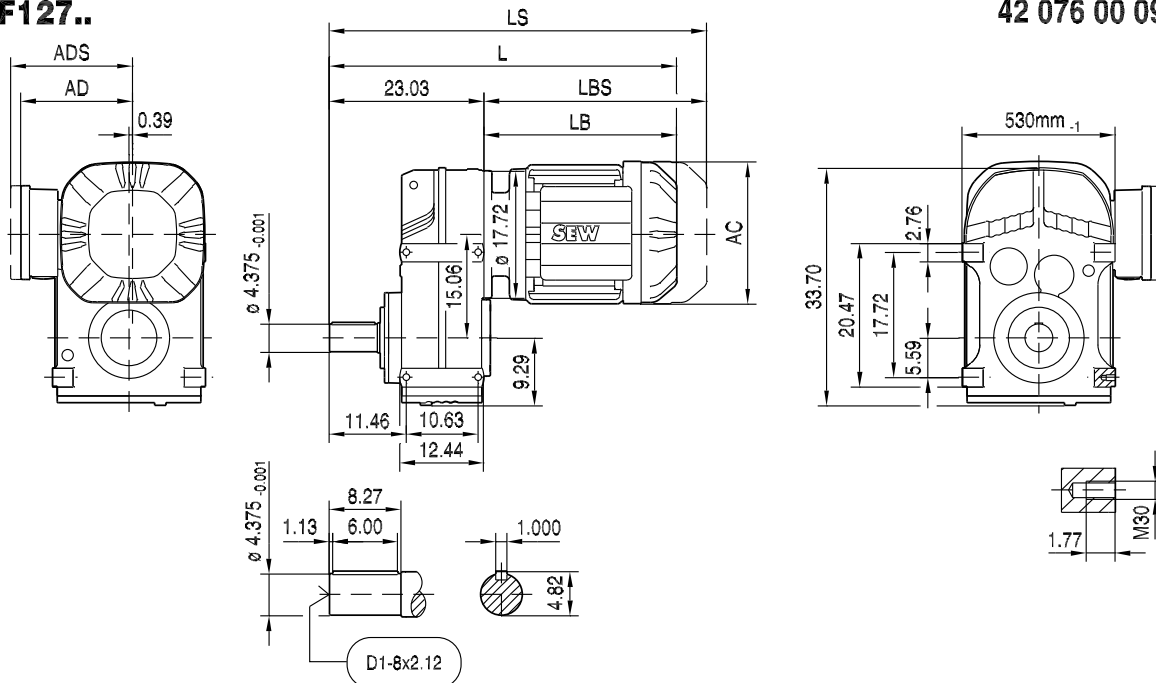
(→ 125)	DR100L/LC	DR132S	DR132M/MC	DR160..	DR180S/M	DR180L/LC	DR200	DR225S	DR225M/MC
AC	7.76	8.70	8.70	10.63	12.44	12.44	15.51	15.51	15.51
AD	6.18	6.69	6.69	8.98	9.96	9.96	11.14	11.14	11.14
ADS	6.22	6.77	6.77	8.98	9.96	9.96	11.14	11.14	11.14
L	25.91	27.60	29.57	31.18	33.90	36.26	39.13	39.13	41.10
LS	29.57	32.01	33.98	36.57	41.34	43.70	47.20	47.20	49.17
LB	12.60	14.29	16.26	17.87	20.59	22.95	25.83	25.83	27.80
LBS	16.26	18.70	20.67	23.27	26.03	30.39	33.90	33.90	35.87

reducer.ir



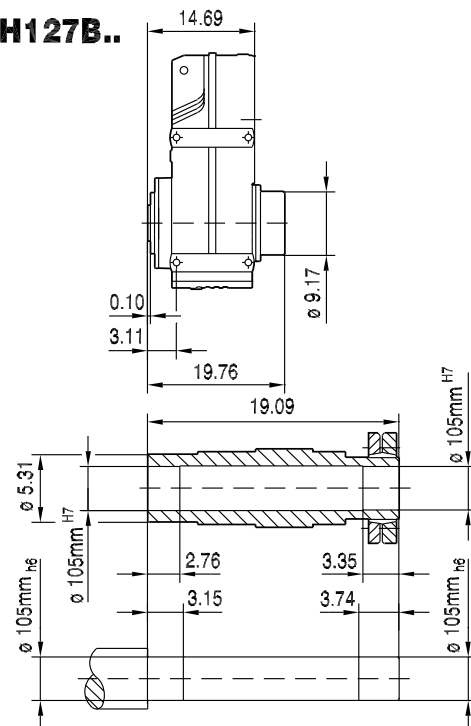
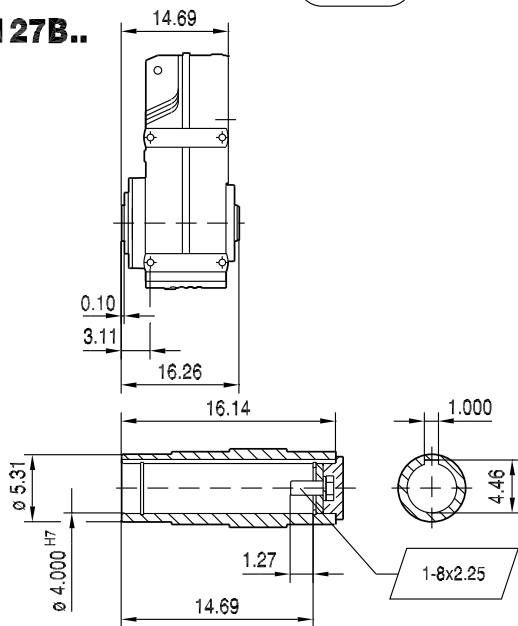
F127..

42 076 00 09



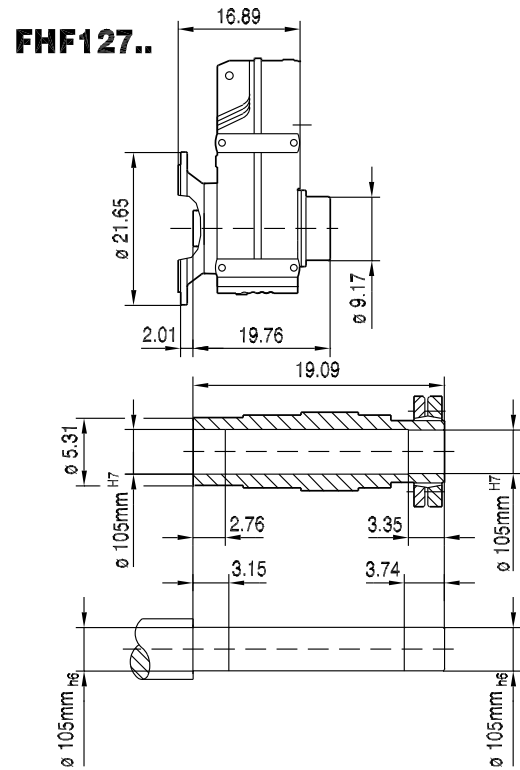
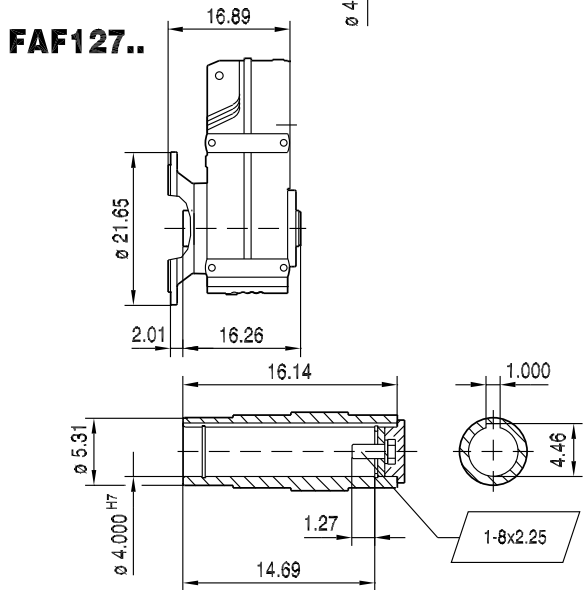
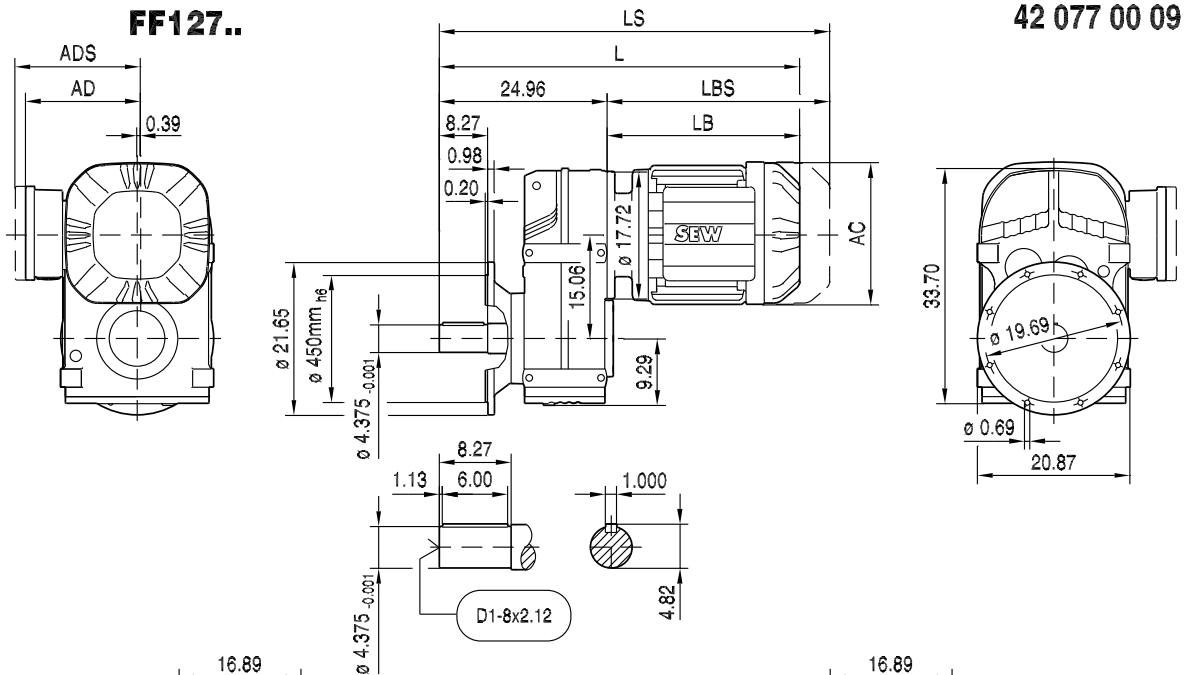
FA127B..

FH127B..



(→ 125)	DR132M/MC	DR160..	DR180S/M	DR180L/LC	DR200	DR225S	DR225M/MC	DV250M	DV280..
AC	8.70	10.63	12.44	12.44	15.51	15.51	15.51	20.08	20.08
AD	6.69	8.98	9.96	9.96	11.14	11.14	11.14	15.63	15.63
ADS	6.77	8.98	9.96	9.96	11.14	11.14	11.14	15.63	15.63
L	38.70	40.31	43.03	45.39	48.27	48.27	50.24	53.74	53.74
LS	43.11	45.71	50.47	52.83	56.34	56.34	58.31	61.02	61.02
LB	15.67	17.28	20.00	22.36	25.24	25.24	27.20	30.71	30.71
LBS	20.08	22.68	27.44	29.80	35.81	33.37	35.28	37.99	37.99

reducer.ir



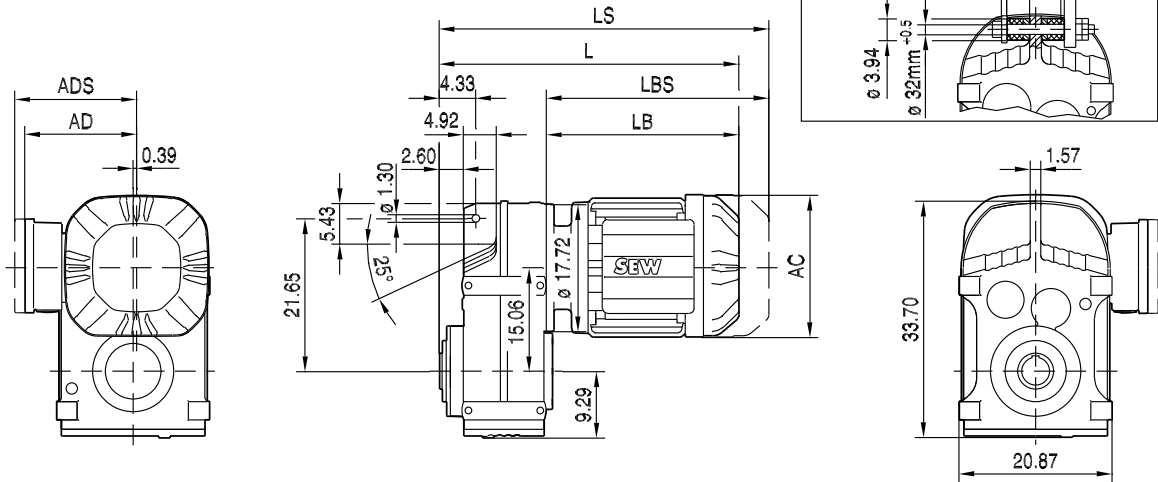
(→ 125)	DR132M/MC	DR160..	DR180S/M	DR180L/LC	DR200	DR225S	DR225M/MC	DV250M	DV280..
AC	8.70	10.63	12.44	12.44	15.51	15.51	15.51	20.08	20.08
AD	6.69	8.98	9.96	9.96	11.14	11.14	11.14	15.63	15.63
ADS	6.77	8.98	9.96	9.96	11.14	11.14	11.14	15.63	15.63
L	40.63	42.24	44.96	47.32	50.20	50.20	52.17	55.67	55.67
LS	45.04	47.64	52.40	54.76	58.27	58.27	60.24	62.95	62.95
LB	15.67	17.28	20.00	22.36	25.24	25.24	27.20	30.71	30.71
LBS	20.08	22.68	27.44	29.80	35.81	33.37	35.28	37.99	37.99

reducer.ir



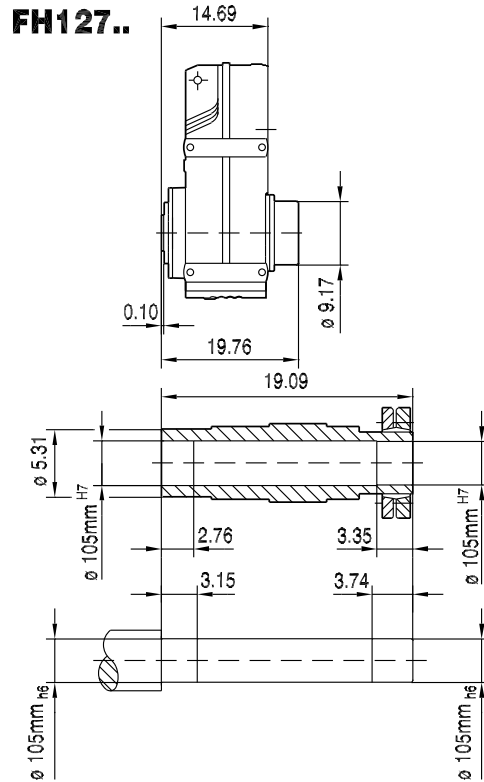
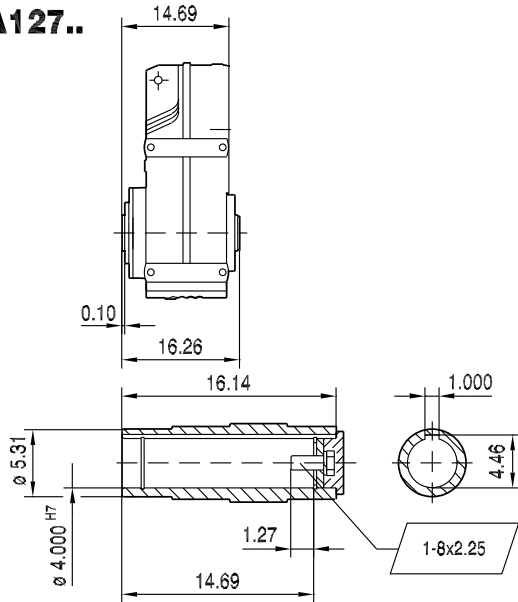
FA127..

42 078 00 09



FA127..

FH127..



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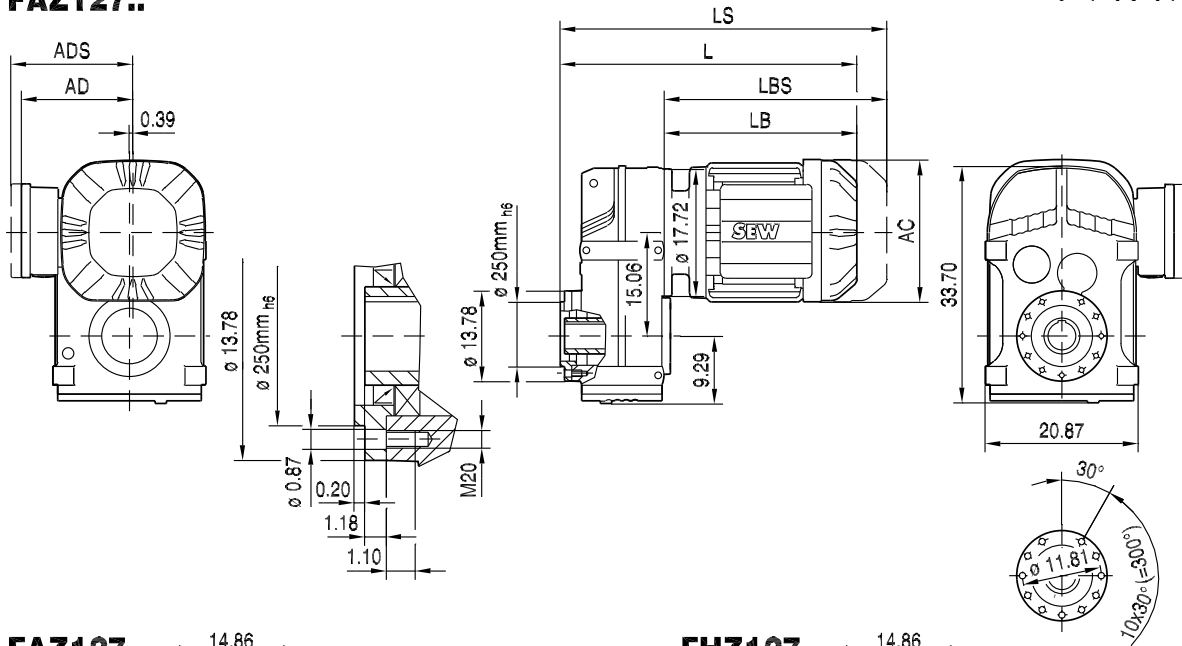
(→ 125)	DR132M/MC	DR160..	DR180S/M	DR180L/LC	DR200	DR225S	DR225M/MC	DV250M	DV280..
AC	8.70	10.63	12.44	12.44	15.51	15.51	15.51	20.08	20.08
AD	6.69	8.98	9.96	9.96	11.14	11.14	11.14	15.63	15.63
ADS	6.77	8.98	9.96	9.96	11.14	11.14	11.14	15.63	15.63
L	30.35	31.97	34.69	37.05	39.92	39.92	41.89	45.39	45.39
LS	34.76	37.36	42.13	44.49	47.99	47.99	49.96	52.68	52.68
LB	15.67	17.28	20.00	22.36	25.24	25.24	27.20	30.71	30.71
LBS	20.08	22.68	27.44	29.80	35.81	35.81	35.28	37.99	37.99

reducer.ir

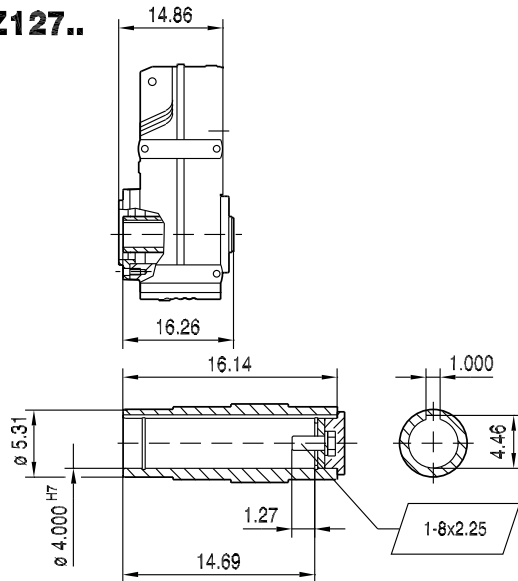


42 079 00 09

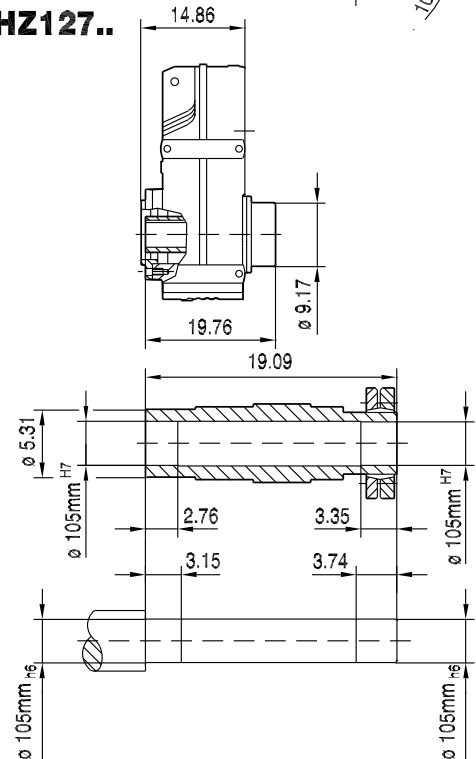
FAZ127..



FAZ127..



FHZ127..



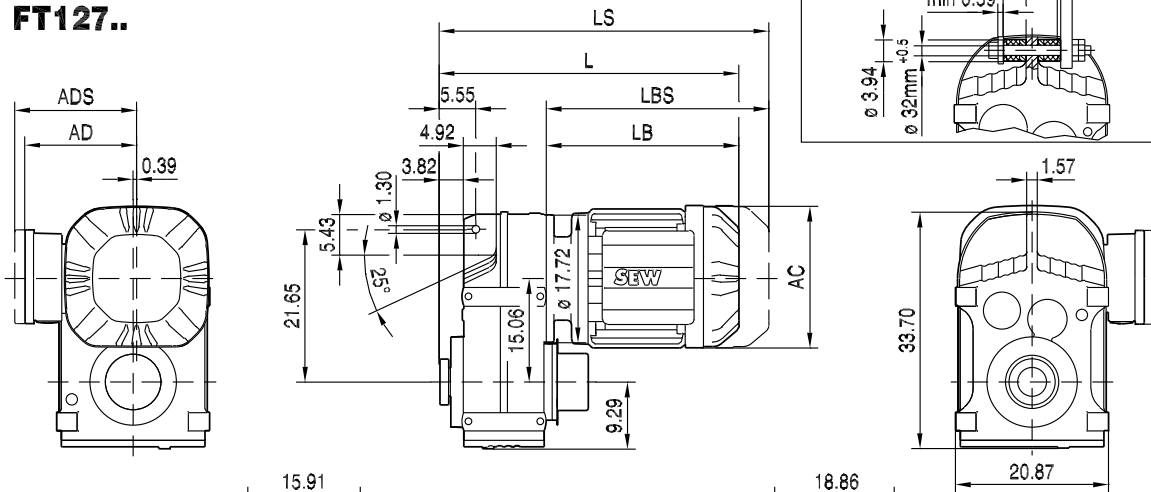
(→ 125)	DR132M/MC	DR160..	DR180S/M	DR180L/LC	DR200	DR225S	DR225M/MC	DV250M	DV280..
AC	8.70	10.63	12.44	12.44	15.51	15.51	15.51	20.08	20.08
AD	6.69	8.98	9.96	9.96	11.14	11.14	11.14	15.63	15.63
ADS	6.77	8.98	9.96	9.96	11.14	11.14	11.14	15.63	15.63
L	30.55	32.17	34.88	37.24	40.12	40.12	42.09	45.59	45.59
LS	34.96	37.56	42.32	44.69	48.19	48.19	50.16	52.83	52.83
LB	15.67	17.28	20.00	22.36	25.24	25.24	27.20	30.71	30.71
LBS	20.08	22.68	27.44	29.80	35.81	33.37	35.28	37.99	37.99

reducer.ir

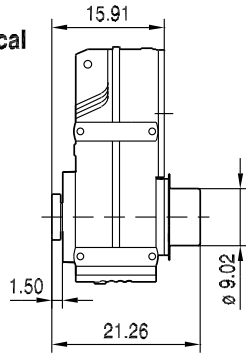


42 080 00 09

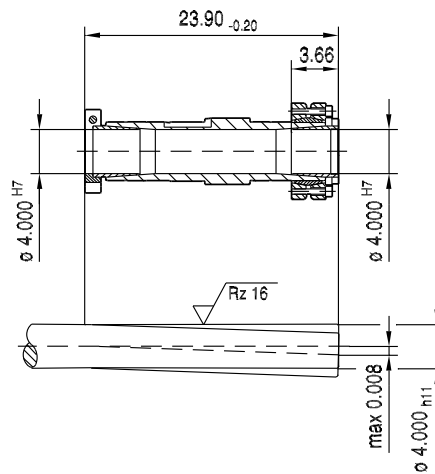
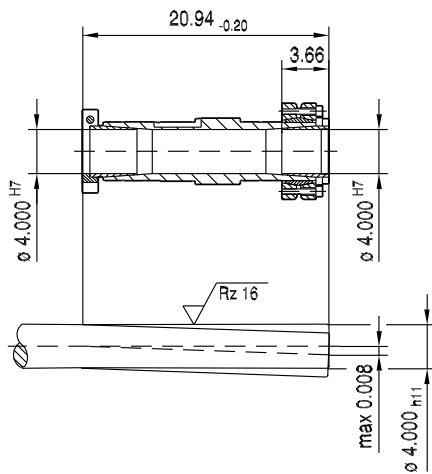
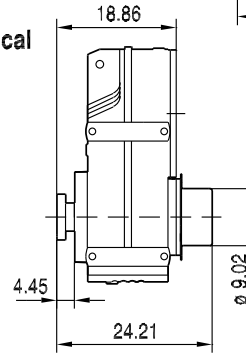
FT127..



NON-Symmetrical



Symmetrical



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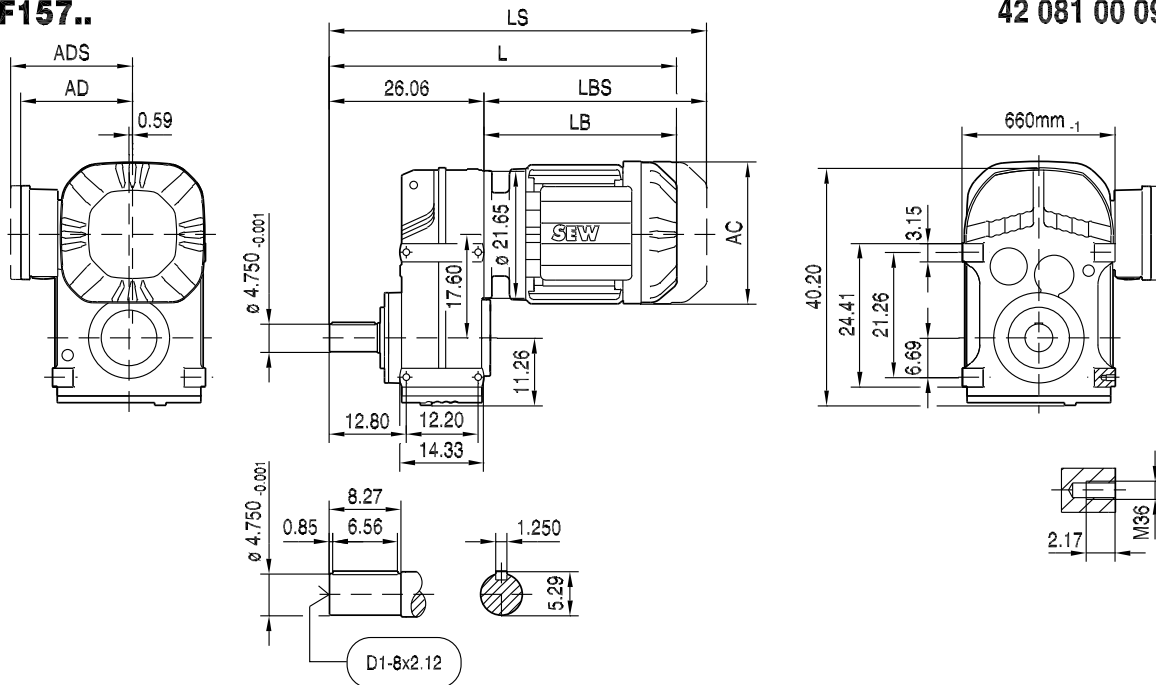
(→ 125)	DR132M/MC	DR160..	DR180S/M	DR180L/LC	DR200	DR225S	DR225M/MC	DV250M	DV280..
AC	8.70	10.63	12.44	12.44	15.51	15.51	15.51	20.08	20.08
AD	6.69	8.98	9.96	9.96	11.14	11.14	11.14	15.63	15.63
ADS	6.77	8.98	9.96	9.96	11.14	11.14	11.14	15.63	15.63
L	31.57	33.19	35.91	38.27	41.14	41.14	43.11	46.61	46.61
LS	35.98	38.58	43.35	45.71	49.21	49.21	51.18	53.90	53.90
LB	15.67	17.28	20.00	22.36	25.24	25.24	27.20	30.71	30.71
LBS	20.08	22.68	27.44	29.80	35.81	35.81	35.28	37.99	37.99

reducer.ir



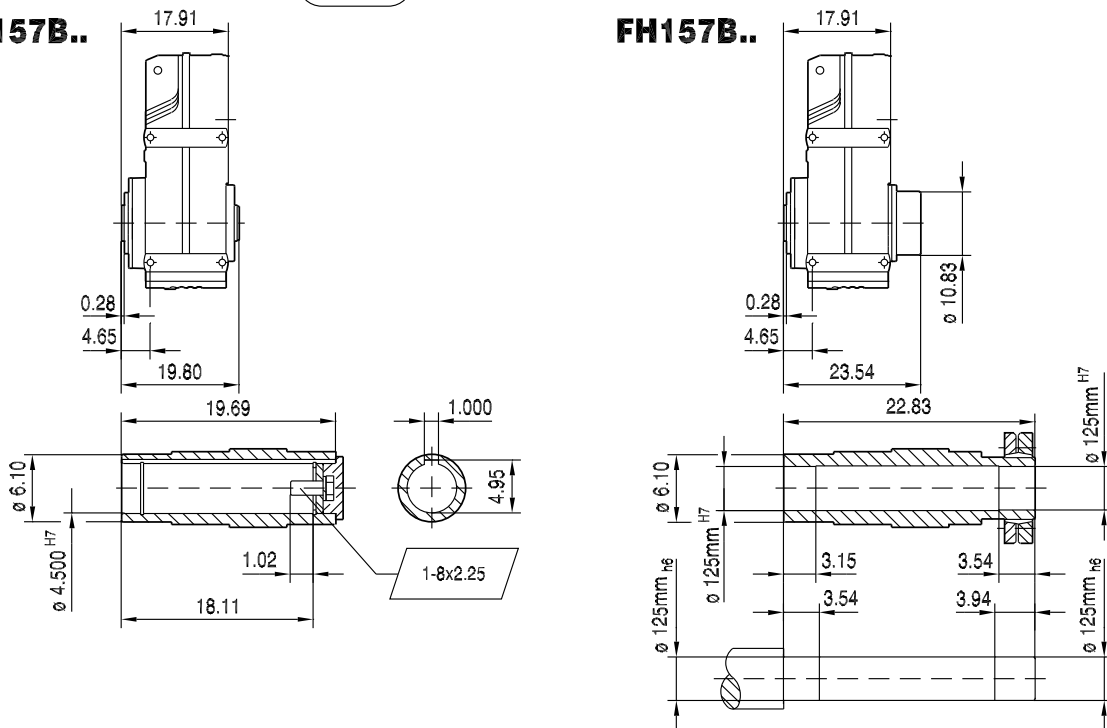
F157..

42 081 00 09



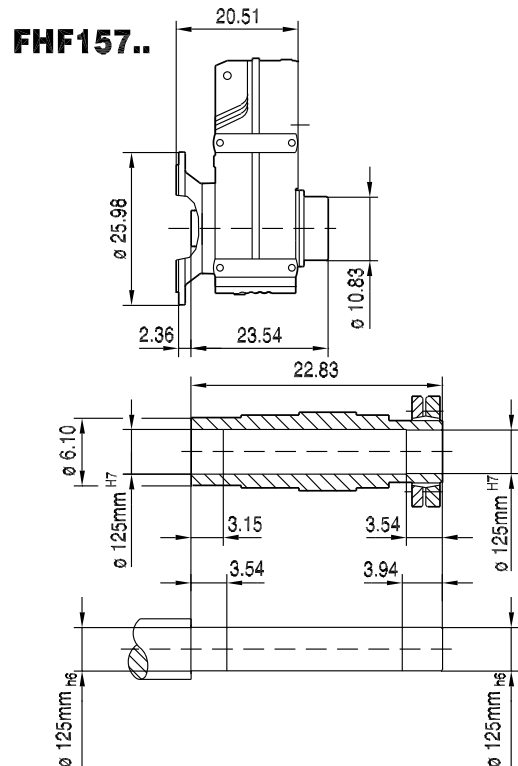
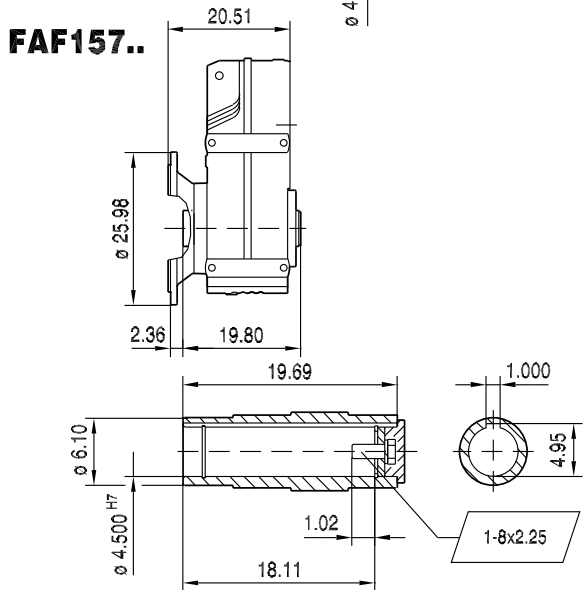
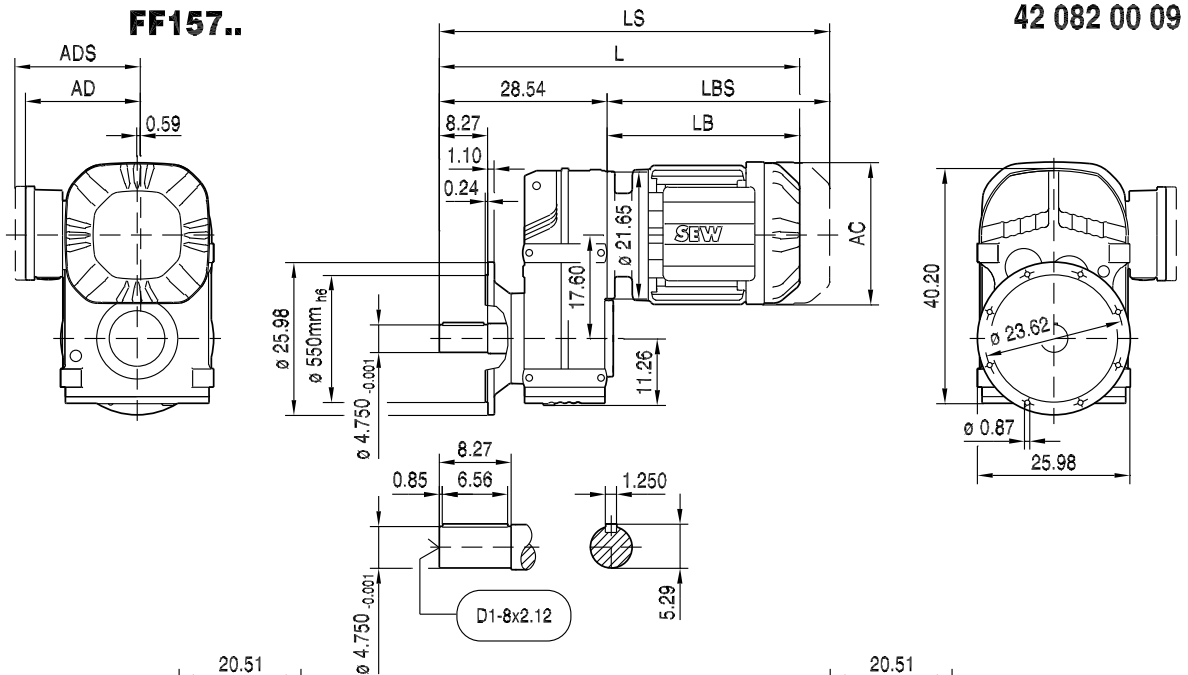
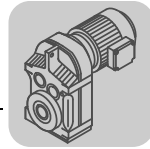
FA157B..

FH157B..



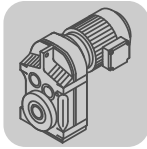
(→ 125)	DR160..	DR180S/M	DR180L/LC	DR200	DR225S	DR225M/MC	DV250M	DV280..	DR315K/S	DR315M/L
AC	10.63	12.44	12.44	15.51	15.51	15.51	20.08	20.08	24.57	24.57
AD	8.98	9.96	9.96	11.14	11.14	11.14	15.63	15.63	19.92	20.51
ADS	8.98	9.96	9.96	11.14	11.14	11.14	15.63	15.63	19.92	20.51
L	43.03	45.75	48.11	50.98	50.98	52.95	56.42	56.42	63.11	68.23
LS	48.43	53.19	55.55	59.06	59.06	61.02	63.70	63.70	72.99	78.11
LB	16.97	19.69	22.05	24.92	24.92	26.89	30.35	30.35	37.05	42.17
LBS	22.36	27.13	29.49	32.99	32.99	34.96	37.64	37.64	46.93	52.05

reducer.ir



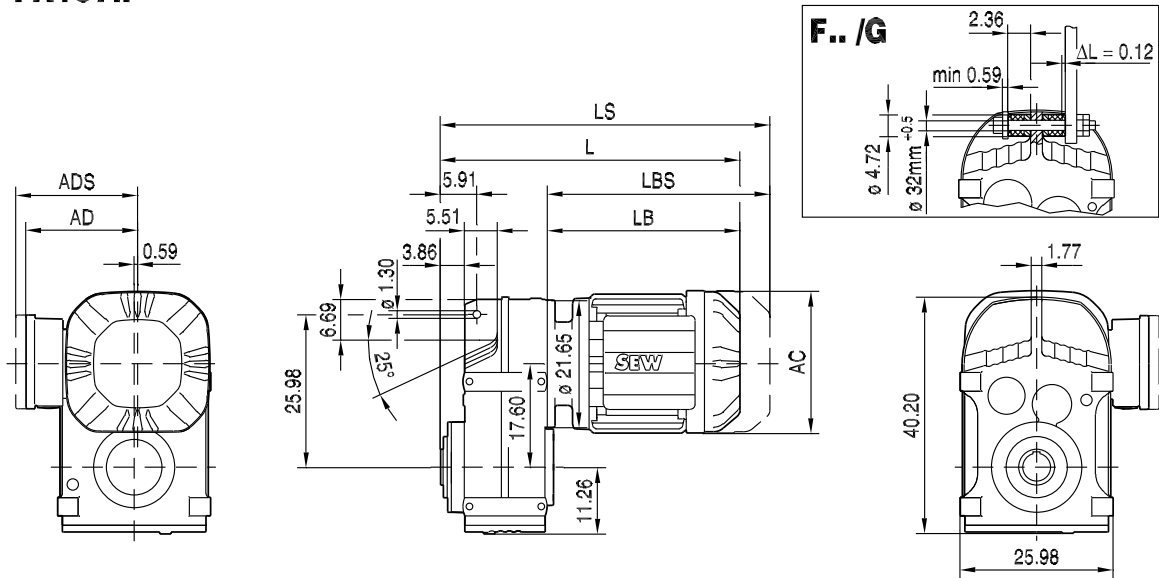
(→ 125)	DR160..	DR180S/M	DR180L/LC	DR200	DR225S	DR225M/MC	DV250M	DV280..	DR315K/S	DR315M/L
AC	10.63	12.44	12.44	15.51	15.51	15.51	20.08	20.08	24.57	24.57
AD	8.98	9.96	9.96	11.14	11.14	11.14	15.63	15.63	19.92	20.51
ADS	8.98	9.96	9.96	11.14	11.14	11.14	15.63	15.63	19.92	20.51
L	45.51	48.23	50.59	53.46	53.46	55.43	58.90	58.90	65.59	70.71
LS	50.91	55.67	58.03	61.54	61.54	63.50	66.18	66.18	75.47	80.59
LB	16.97	19.69	22.05	24.92	24.92	26.89	30.35	30.35	37.05	42.17
LBS	22.36	27.13	29.49	32.99	32.99	34.96	37.64	37.64	46.93	52.05

reducer.ir



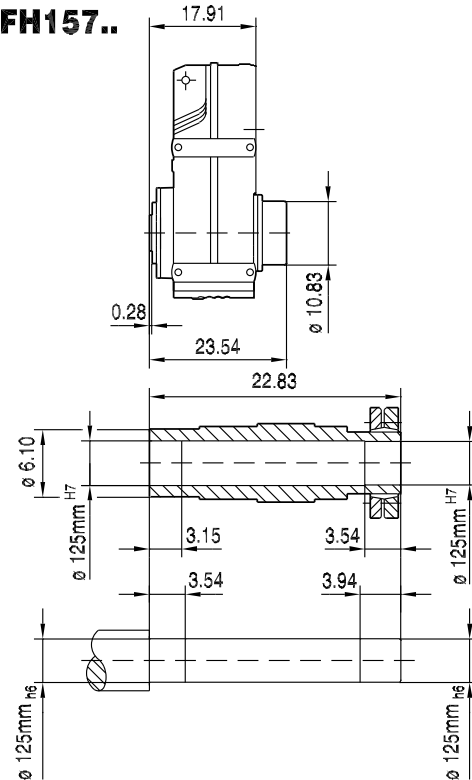
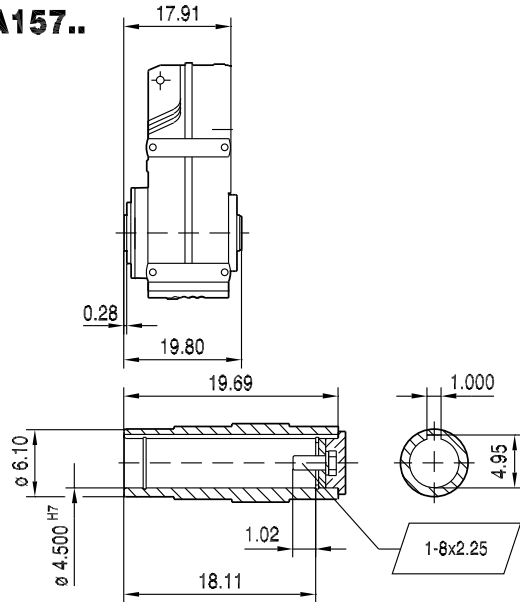
FA157..

42 083 00 09



FA157..

FH157..



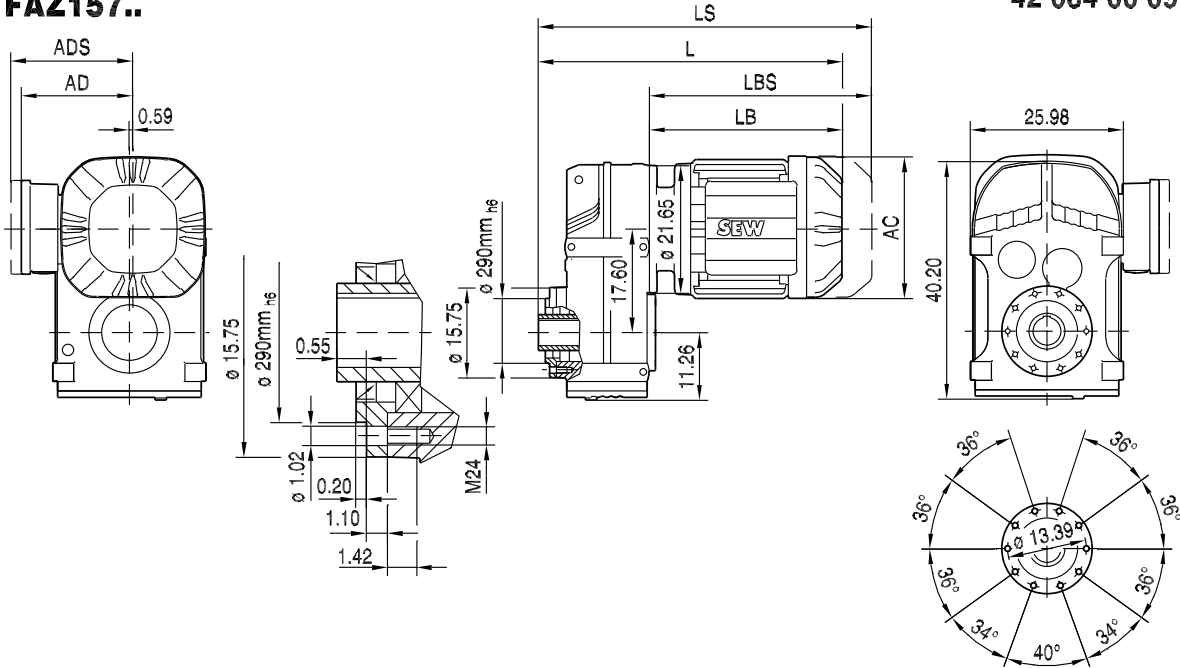
(→ 125)	DR160..	DR180S/M	DR180L/LC	DR200	DR225S	DR225M/MC	DV250M	DV280..	DR315K/S	DR315M/L
AC	10.63	12.44	12.44	15.51	15.51	15.51	20.08	20.08	24.57	24.57
AD	8.98	9.96	9.96	11.14	11.14	11.14	15.63	15.63	19.92	20.51
ADS	8.98	9.96	9.96	11.14	11.14	11.14	15.63	15.63	19.92	20.51
L	34.88	37.60	39.96	42.83	42.83	44.80	48.27	48.27	54.96	60.08
LS	40.28	45.04	47.40	50.91	50.91	52.87	55.55	55.55	64.84	69.96
LB	16.97	19.69	22.05	24.92	24.92	26.89	30.35	30.35	37.05	42.17
LBS	22.36	27.13	29.49	32.99	32.99	34.96	37.64	37.64	46.93	52.05

reducer.ir



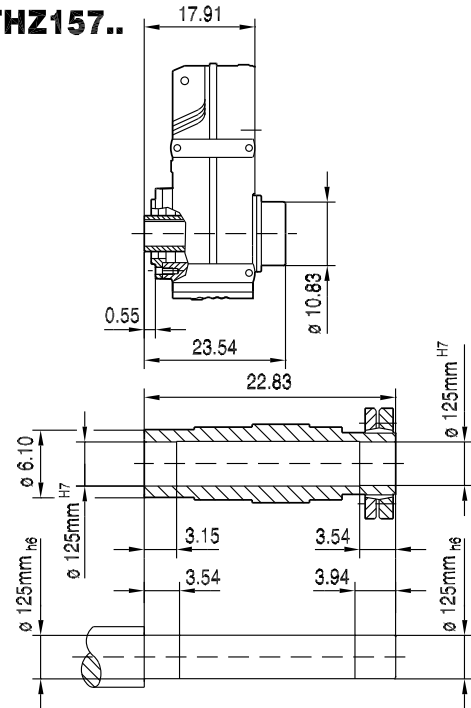
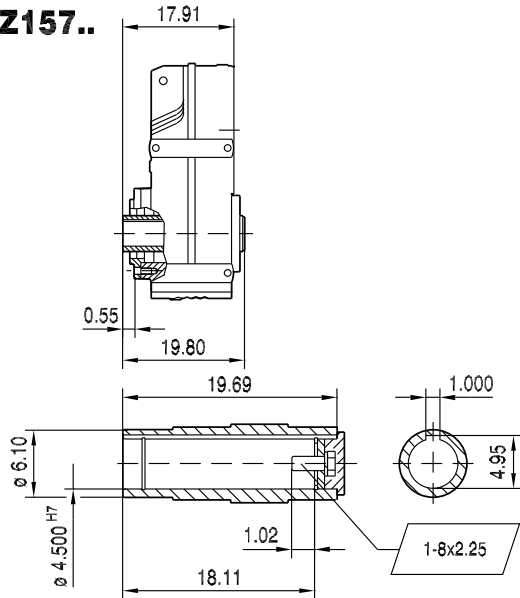
FAZ157..

42 084 00 09



FAZ157..

FHZ157..



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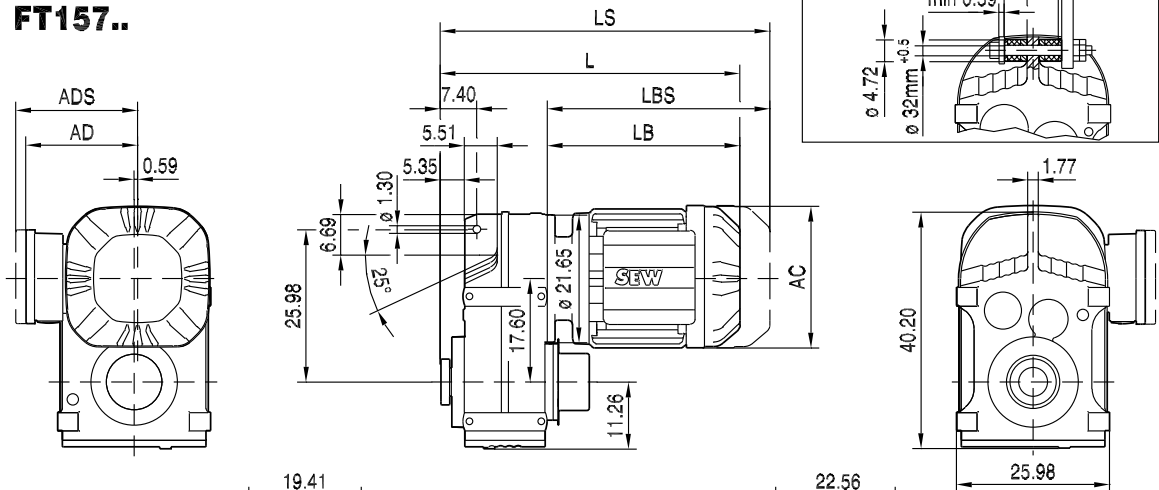
(→ 125)	DR160..	DR180S/M	DR180L/LC	DR200	DR225S	DR225M/MC	DV250M	DV280..	DR315K/S	DR315M/L
AC	10.63	12.44	12.44	15.51	15.51	15.51	20.08	20.08	24.57	24.57
AD	8.98	9.96	9.96	11.14	11.14	11.14	15.63	15.63	19.92	20.51
ADS	8.98	9.96	9.96	11.14	11.14	11.14	15.63	15.63	19.92	20.51
L	34.88	37.60	39.96	42.83	42.83	44.80	48.27	48.27	54.96	60.08
LS	40.28	45.04	47.40	50.91	50.91	52.87	55.55	55.55	64.84	69.96
LB	16.97	19.69	22.05	24.92	24.92	26.89	30.35	30.35	37.05	42.17
LBS	22.36	27.13	29.49	32.99	32.99	34.96	37.64	37.64	46.93	52.05

reducer.ir

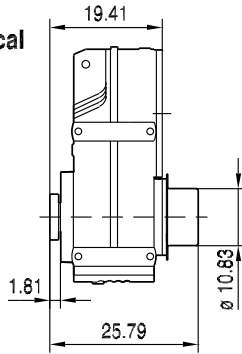


42 085 00 09

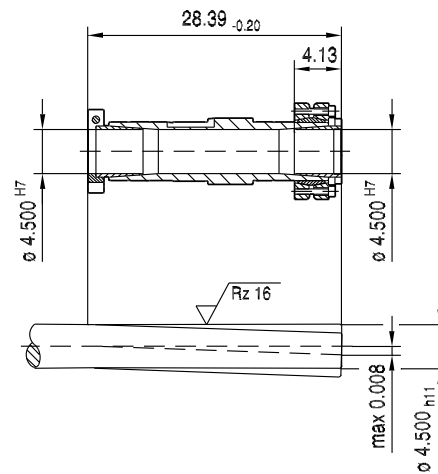
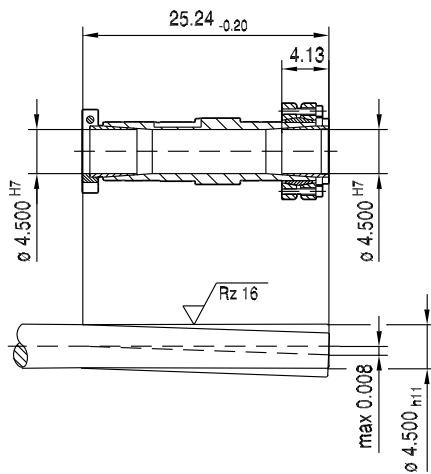
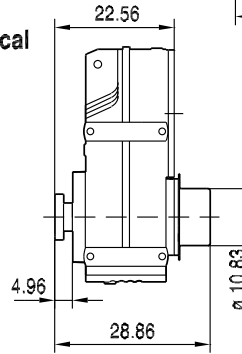
FT157..



NON-Symmetrical



Symmetrical

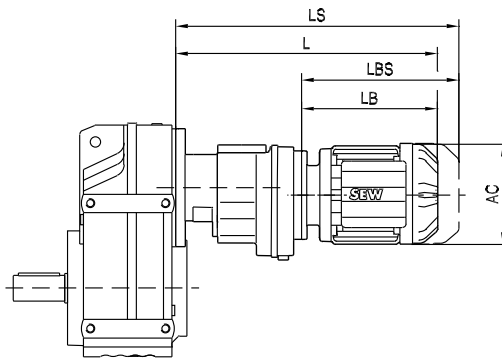


(→ 125)	DR160..	DR180S/M	DR180L/LC	DR200	DR225S	DR225M/MC	DV250M	DV280..	DR315K/S	DR315M/L
AC	10.63	12.44	12.44	15.51	15.51	15.51	20.08	20.08	24.57	24.57
AD	8.98	9.96	9.96	11.14	11.14	11.14	15.63	15.63	19.92	20.51
ADS	8.98	9.96	9.96	11.14	11.14	11.14	15.63	15.63	19.92	20.51
L	36.38	39.09	41.46	44.33	44.33	46.30	49.76	49.76	56.46	61.57
LS	41.77	46.54	48.90	52.40	52.40	54.37	57.05	57.05	66.34	71.46
LB	16.97	19.69	22.05	24.92	24.92	26.89	30.35	30.35	37.05	42.17
LBS	22.36	27.13	29.49	32.99	32.99	34.96	37.64	37.64	46.93	52.05

reducer.ir



42 121 00 06



(→ 14)		AC	L	LS	LB	LBS
F..27R17	DR63..	5.20	12.76	14.92	5.87	8.03
F..37R17	DR63..	5.20	12.76	14.92	5.87	8.03
	DR71S..	5.47	13.19	15.87	6.30	8.98
F..47R17	DR63..	5.20	12.76	14.92	5.87	8.03
	DR71S..	5.47	13.19	15.87	6.30	8.98
	DR71M..	5.47	14.17	16.85	7.28	9.96
F..57R37	DR63..	5.20	14.02	16.18	7.52	9.69
	DR71S..	5.47	14.45	17.13	7.95	10.63
	DR71M..	5.47	15.43	18.11	8.94	11.61
	DR80S..	6.14	15.79	18.98	9.29	12.48
F..67R37	DR63..	5.20	14.02	16.18	7.52	9.69
	DR71S..	5.47	14.45	17.13	7.95	10.63
	DR71M..	5.47	15.43	18.11	8.94	11.61
	DR80S..	6.14	15.79	18.98	9.29	12.48
	DR80M..	6.14	17.01	20.20	10.51	13.70
F..77R37	DR63..	5.20	13.70	15.87	7.52	9.69
	DR71S..	5.47	14.13	16.81	7.95	10.63
	DR71M..	5.47	15.12	17.80	8.94	11.61
	DR80S..	6.14	15.47	18.66	9.29	12.48
	DR80M..	6.14	16.69	19.88	10.51	13.70
F..87R57	DR63..	5.20	15.79	17.95	7.28	9.45
	DR71S..	5.47	16.22	18.86	7.72	10.35
	DR71M..	5.47	17.20	19.84	8.70	11.34
	DR80S..	6.14	17.56	20.75	9.06	12.24
	DR80M..	6.14	18.78	21.97	10.28	13.46
	DR90M..	7.05	18.82	22.52	10.31	14.02
	DR90L..	7.05	19.61	23.31	11.10	14.80
DR100M..	7.76	20.79	24.49	12.28	15.98	
F..97R57	DR63..	5.20	15.59	17.76	7.28	9.45
	DR71S..	5.47	16.02	18.66	7.72	10.35
	DR71M..	5.47	17.01	19.65	8.70	11.34
	DR80S..	6.14	17.36	20.55	9.06	12.24
	DR80M..	6.14	18.58	21.77	10.28	13.46
	DR90M..	7.05	18.62	22.32	10.31	14.02
	DR90L..	7.05	19.41	23.11	11.10	14.80
	DR100M..	7.76	20.59	24.29	12.28	15.98
DR100LC..	7.76	21.77	25.47	13.46	17.17	
F..107R77	DR63..	5.20	16.77	18.94	7.05	9.21
	DR71S..	5.47	17.20	19.84	7.48	10.12
	DR71M..	5.47	18.19	20.83	8.46	11.10
	DR80S..	6.14	18.50	21.69	8.78	11.97
	DR80M..	6.14	19.72	22.91	10.00	13.19
DR90M..	7.05	19.72	23.43	10.00	13.70	

(→ 14)		AC	L	LS	LB	LBS
F..107R77	DR90L..	7.05	20.51	24.21	10.79	14.49
	DR100M..	7.76	21.69	25.39	11.97	15.67
	DR100LC..	7.76	22.87	26.57	13.15	16.85
	DR132S..	8.70	24.65	29.06	14.92	19.33
	DR132M..	8.70	26.61	31.02	16.89	21.30
F..127R77	DR63..	5.20	16.18	18.35	7.05	9.21
	DR71S..	5.47	16.61	19.25	7.48	10.12
	DR71M..	5.47	17.60	20.24	8.46	11.10
	DR80S..	6.14	17.91	21.10	8.78	11.97
	DR80M..	6.14	19.13	22.32	10.00	13.19
	DR90M..	7.05	19.13	22.83	10.00	13.70
	DR90L..	7.05	19.92	23.62	10.79	14.49
	DR100M..	7.76	21.10	24.80	11.97	15.67
	DR100LC..	7.76	22.28	25.98	13.15	16.85
	DR132S..	8.70	24.06	28.46	14.92	19.33
F..127R87	DR132S..	8.70	25.75	30.16	14.72	19.13
	DR132M/MC..	8.70	27.72	32.13	16.69	21.10
	DR160..	10.71	29.33	34.72	18.31	23.70
F..157R97	DR71M..	5.47	20.83	23.46	8.03	10.67
	DR80S..	6.14	21.18	24.37	8.39	11.57
	DR80M..	6.14	22.40	25.59	9.61	12.80
	DR90M..	7.05	22.40	26.10	9.61	13.31
	DR90L..	7.05	23.19	26.89	10.39	14.09
	DR100M..	7.76	24.37	28.07	11.57	15.28
	DR100LC..	7.76	25.55	29.25	12.76	16.46
	DR132S..	8.70	27.32	31.73	14.53	18.94
	DR132M/MC..	8.70	29.29	33.70	16.50	20.91
	DR160..	10.71	30.91	36.30	18.11	23.50
DR180M..	12.48	34.29	42.13	21.50	29.33	

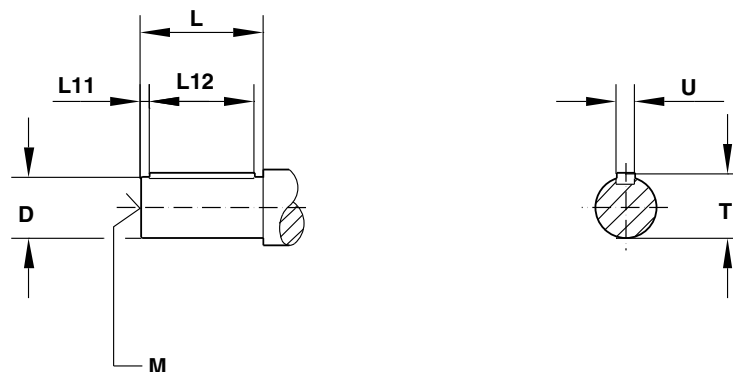
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10.6 Available output shafts F series

10.6.3 F Series inch solid shafts



Model ¹	D	T	U	L	L11	L12	M	Change ²
F...37	1	1.11	1/4	1.97	0.32	1-5/16	3/8 - 16 x 0.87	0
F...47	1.25	1.36	1/4	2.36	0.26	1-11/16	1/2 - 13 x 1.12	0
F...57	1.375	1.51	5/16	2.76	0.43	1-13/16	1/2 - 13 x 1.12	0
F...67	1.375	1.51	5/16	2.76	0.47	1-13/16	1/2 - 13 x 1.12	-0.39
	1.625	1.79	3/8	3.15	0.38	2-1/4	5/8 - 11 x 1.38	0
F...77	1.75	1.92	3/8	3.54	0.4	2-3/4	5/8 - 11 x 1.38	-0.39
	2	2.22	1/2	3.94	0.64	2-5/8	3/4 - 10 x 1.61	0
F...87	2.375	2.65	5/8	4.72	0.51	3-5/8	3/4 - 10 x 1.61	0
F...97	2.875	3.2	3/4	5.51	0.67	4-1/8	3/4 - 10 x 1.61	0
F...107	3.625	4.01	7/8	6.69	0.63	5-3/8	1 - 8 x 2.13	0
F...127	4.375	4.82	1	8.27	1.09	6	1 - 8 x 2.13	0
F...157	4.75	5.29	1-1/4	8.27	0.82	6-9/16	1 - 8 x 2.13	0

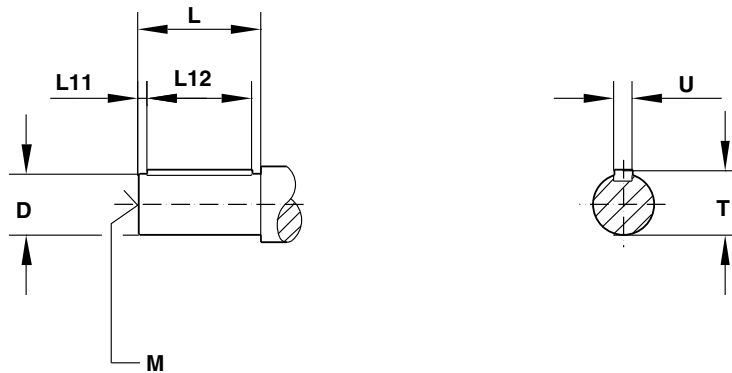
1 Longer shafts to match older designs are available for flanged units.

2 Compared to standard shaft as shown in dimension pages.

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10.6.4 F Series metric solid shafts



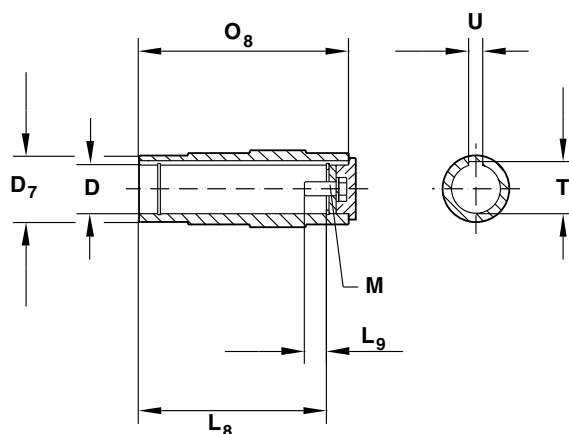
Model ¹	D	T	U	L	L11	L12	M	Change ²
F...37	25	28	8	50	5	40	M10 x 22	0
F...47	30	33	8	60	3.5	50	M10 x 22	0
F...57	35	38	10	70	7	56	M12 x 28	0
F...67	40	43	12	80	5	70	M16 x 36	0
	35	38	10	70	7	56	M12 x 28	-10
F...77	50	53.5	14	100	10	80	M16 x 36	0
	45	48.5	14	90	5	80	M16 x 36	-10
F...87	60	64	18	120	5	110	M20 x 42	0
F...97	70	74.5	20	140	7.5	125	M20 x 42	0
F...107	90	95	25	170	5	160	M24 x 50	0
F...127	110	116	28	210	15	180	M24 x 50	0
F...157	120	127	32	210	5	200	M24 x 50	0

1 Longer shafts to match older designs are available for flanged units.

2 Compared to standard shaft as shown in dimension pages.

10

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10.6.5 F Series inch hollow shafts


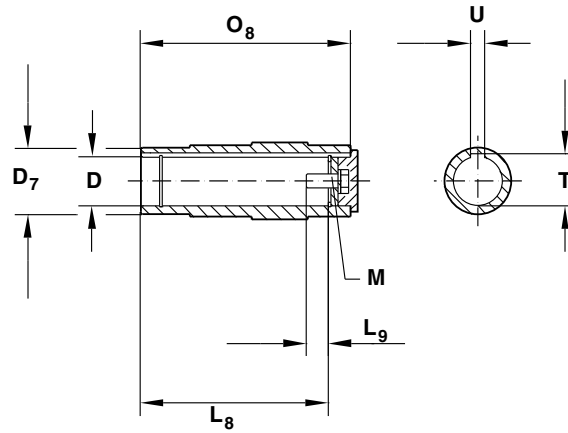
Model	O ₈	D	D ₇	T	U	L ₈	L ₉	M
FA...37	4.72	1.25	1.77	1.37	1/4	4.13	0.67	7/16 - 14 x 1
FA...47	5.91	1.375	1.97	1.52	5/16	5.2	0.65	1/2 - 13 x 1
	5.91	1.25	1.97	1.37	1/4	5.2	0.67	7/16 - 14 x 1
FA...57	6.54	1.5	2.17	1.67	3/8	5.59	1.36	5/8 - 11 x 1-3/4
	6.54	1.4375 ¹	2.17	1.61	3/8	5.59	1.36	5/8 - 11 x 1-3/4
FA...67	7.09	1.5	2.17	1.67	3/8	6.14	1.36	5/8 - 11 x 1-3/4
	7.09	1.4375 ¹	2.17	1.61	3/8	6.14	1.36	5/8 - 11 x 1-3/4
FA...77	8.27	2	2.76	2.22	1/2	7.2	1.16	5/8 - 11 x 1-3/4
	8.27	1.9375 ¹	2.76	2.16	1/2	7.2	1.16	5/8 - 11 x 1-3/4
FA...87	9.45	2.375	3.35	2.65	5/8	8.27	1.39	3/4 - 10 x 2
	9.45	2.4375 ¹	3.35	2.62	5/8	8.27	1.39	3/4 - 10 x 2
FA...97	11.81	2.75	3.74	3.03	5/8	10.63	1.24	3/4 - 10 x 2
	11.81	2.9375 ¹	3.74	3.14	3/4	10.63	1.24	3/4 - 10 x 2
FA...107	13.78	3.625	4.65	3.89	7/8	12.32	1.24	3/4 - 10 x 2
	13.78	3.25	4.65	3.59	3/4	12.32	1.24	3/4 - 10 x 2
	13.78	3.4375 ¹	4.65	3.7	7/8	12.32	1.24	3/4 - 10 x 2
FA...127	16.14	4	5.31	4.44	1	14.69	1.26	1 - 8 x 2-1/4
FA...157	19.69	4.5	6.1	4.95	1	18.11	1.26	1 - 8 x 2-1/4

¹ INX shaft options incur an additional charge.

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10.6.6 F Series metric hollow shafts

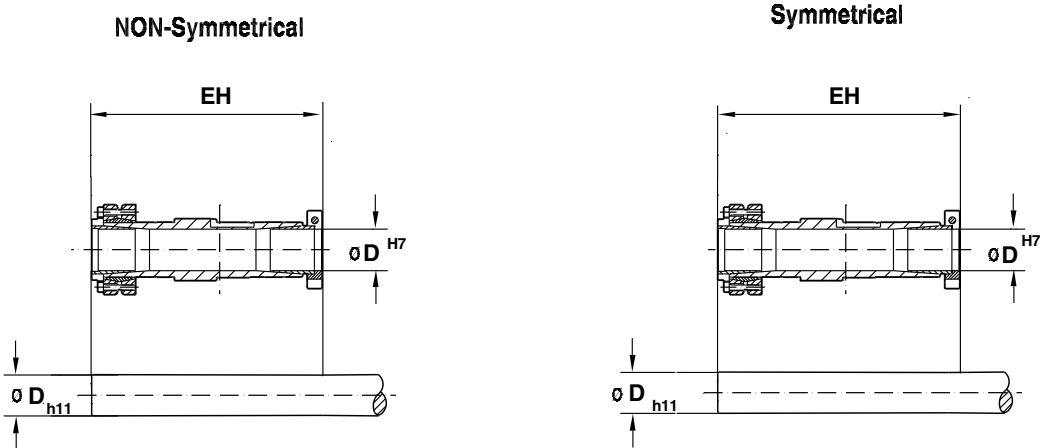


Model	O_8	D	D_7	T	U	L_8	L_9	M
FA...37	120	30	45	33.3	8	105	17	M10 x 25
FA...47	150	35	50	38.3	10	132	22	M12 x 30
	150	30	50	33.3	8	132	16	M10 x 25
FA...57	166	40	55	43.3	12	142	29	M16 x 40
FA...67	180	40	55	43.3	12	156	29	M16 x 40
FA...77	210	50	70	53.8	14	183	32	M16 x 45
FA...87	240	60	85	64.4	18	210	36	M20 x 50
FA...97	300	70	95	74.9	20	270	34	M20 x 50
FA...107	350	90	118	95.4	25	313	40	M24 x 60
	350	80	118	85.4	22	313	30	M20 x 50
FA...127	410	100	135	106.4	28	373	38	M24 x 60
FA...157	500	120	135	127.4	32	460	36	M24 x 60

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10.6.7 F Series TorqLOC



Metric and inch bores are available as shown below.

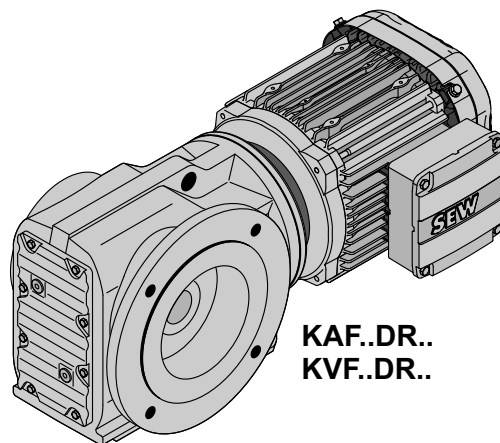
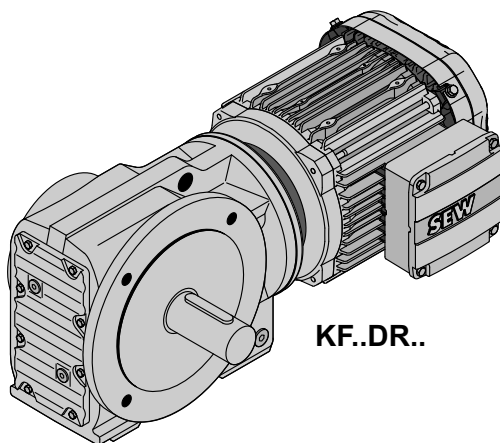
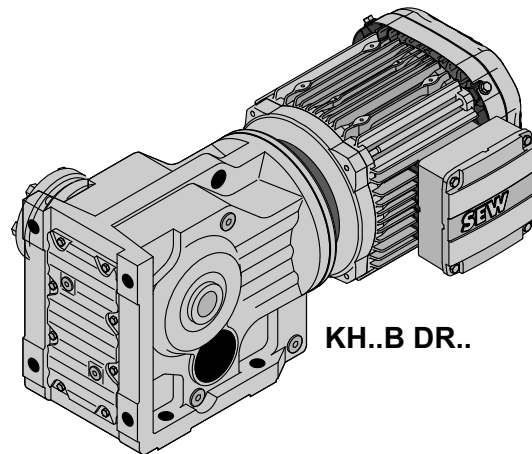
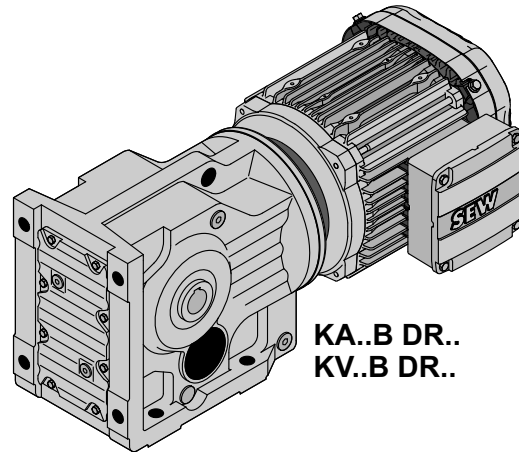
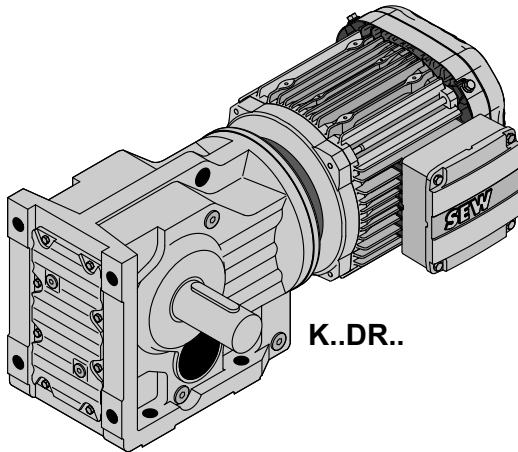
Model	Inch shafts					Metric shafts			NON-Symmetrical	Symmetrical
	D Dimension					D Dimension			EH	
FT37	1.00	1.1875	1.25	-	-	25	30	-	6.69	7.60
FT47	1.1875	1.25	1.375	1.4375	-	30	35	-	8.15	9.09
FT57	1.375	1.4375	1.50	1.625	-	35	38	40	9.13	10.33
FT67	1.375	1.4375	1.50	1.625	1.688	35	38	40	9.65	10.85
FT77	1.625	1.75	1.9375	2.00	-	50	-	-	11.57	13.21
FT87	1.9375	2.00	2.375	2.4375	-	51	62	65	13.19	15.24
FT97	2.4375	2.75	2.9375	-	-	62	70	75	15.59	17.76
FT107	3.250	3.4375	3.625	3.750	-	80	90	95	17.76	20.09
FT127	3.4375	3.750	4.00	4.1875	-	105	-	-	20.94	23.89
FT157	4.4375	4.50	4.9375	5.00	-	110	125	-	25.24	28.39

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11 K..DRE/DRS

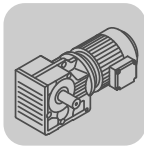
11.1 K, KA..(B), KV..(B), KH..(B), KT, KF, KAF, KVF, KHf, KAZ, KVZ..DR..



11

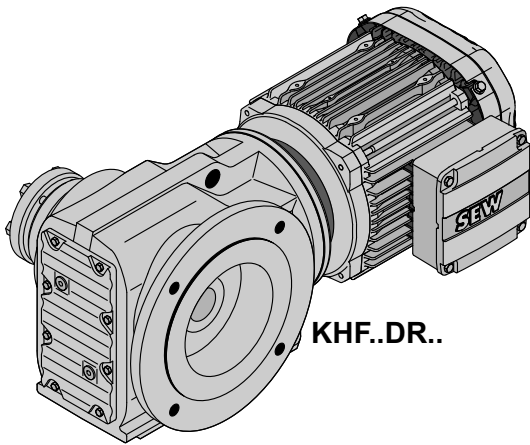
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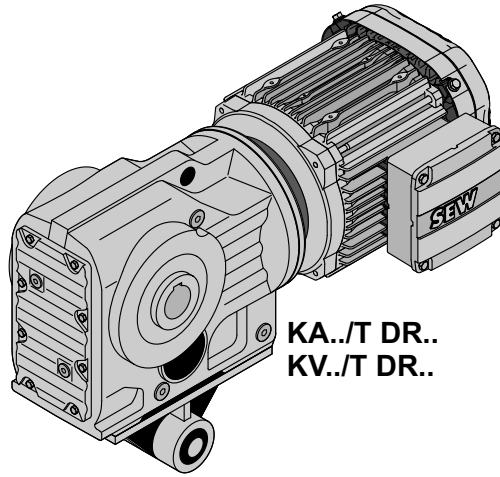


K..DRE/DRS

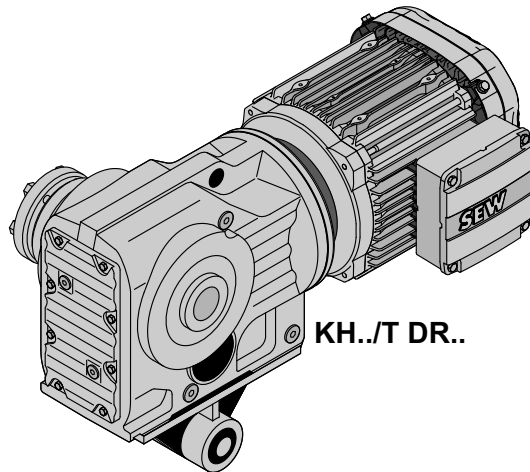
K, KA..(B), KV..(B), KH..(B), KT, KF, KAF, KVF, KHf, KAZ, KVZ..DR..



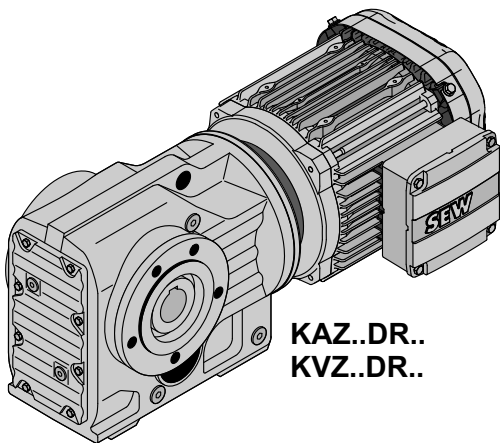
KHF..DR..



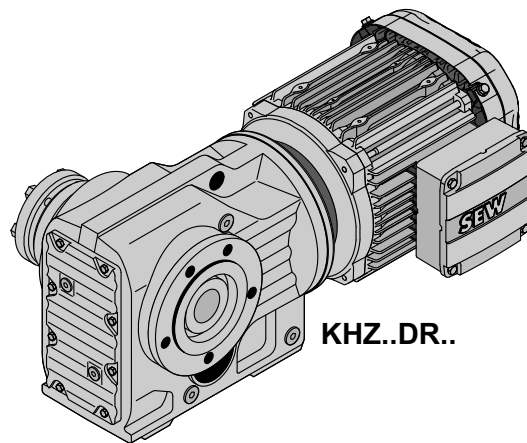
**KA../T DR..
KV../T DR..**



KH../T DR..



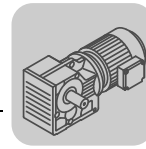
**KAZ..DR..
KVZ..DR..**



KHZ..DR..

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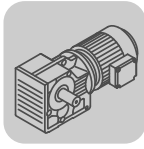


11.2 K.. → DRE/DRS

K37, n _e = 1700 rpm					1760 lb-in			
n _a [rpm]	T _{amax} [lb-in]	F _{Ra} [lb]	φ _(/R) [']	i	DR63 DRS71S DRS71M	DRS80 DRE80M DRE90M	DRS90M DRE90L	DRS90L DRS100M DRE100M DRE100LC
16	1760	1270	6.8	106.38				
17	1760	1270	6.8	97.81				
20	1760	1210	6.9	83.69				
23	1760	1140	6.9	72.54				
25	1760	1100	6.9	67.80				
29	1760	1030	6.9	58.60				
34	1760	960	7	49.79				
38	1760	900	7	44.46				
45	1760	840	7	37.97				
48	1760	810	7.1	35.57				
57	1760	745	7.1	29.96				
59	1760	730	8.1	28.83				
68	1760	675	8.1	24.99				
73	1720	660	8.2	23.36				
84	1630	630	8.3	20.19				
99	1590	590	8.4	17.15				
111	1540	565	8.5	15.31				
130	1450	535	8.6	13.08				
140	1410	525	11.9	12.14				
162	1410	485	12.2	10.49				
191	1410	445	12.4	8.91				
214	1370	425	12.5	7.96				
250	1320	395	12.8	6.80				
267	1280	390	12.9	6.37				
317	1230	365	13.2	5.36				
427	1100	335	13	3.98				

K37R17, n _e = 1700 rpm					1760 lb-in			
n _a [rpm]	T _{amax} [lb-in]	F _{Ra} [lb]	φ _(/R) [']	i	DR63 DRS71S DRS71M	DRS80		
3 3								
0.25	1760	1270	-	6832				
0.29	1760	1270	-	5922				
0.31	1760	1270	-	5491				
0.36	1760	1270	-	4759				
0.41	1760	1270	-	4160				
0.47	1760	1270	-	3645				
0.53	1760	1270	-	3205				
0.61	1760	1270	-	2801				
0.69	1760	1270	-	2454				
0.78	1760	1270	-	2166				
0.90	1760	1270	-	1891				
1.0	1760	1270	-	1660				
1.2	1760	1270	-	1466				
1.3	1760	1270	-	1288				
1.5	1760	1270	-	1136				
3 2								
1.7	1760	1270	-	996				
1.9	1760	1270	-	876				
2.2	1760	1270	-	761				
2.5	1760	1270	-	671				
2.9	1760	1270	-	585				
3.3	1760	1270	-	512				

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K37R17, n_e = 1700 rpm					1760 lb-in	
n _a [rpm]	T _{amax} [lb-in]	F _{Ra} [lb]	φ _(/R) [']	i	DR63 DRS71S DRS71M	DRS80
3.8	1760	1270	-	451		
4.3	1760	1270	-	396		
4.9	1760	1270	-	346		
5.6	1760	1270	-	304		
6.4	1760	1270	-	267		
7.3	1760	1270	-	234		
8.3	1760	1270	-	205		
9.4	1760	1270	-	181		
11	1760	1270	-	160		
12	1760	1270	-	136		
13	1760	1270	-	127		
15	1760	1270	-	110		
18	1760	1270	-	96		

K47, n_e = 1700 rpm					3530 lb-in				
n _a [rpm]	T _{amax} [lb-in]	F _{Ra} [lb]	φ _(/R) [']	i	DR63 DRS71S DRS71M	DRS80 DRE80M DRE90M	DRS90M DRE90L	DRS90L DRS100M DRE100M DRE100LC DRE112M	DRS100LC DRS112M DRE132S
13	3530	1330	6.4	131.87*					
14	3530	1330	6.4	121.48*					
16	3530	1330	6.4	104.37					
19	3530	1330	6.4	90.86					
20	3530	1330	6.4	85.12*					
23	3530	1330	6.5	75.20*					
24	3530	1330	6.5	69.84					
27	3530	1330	6.5	63.30*					
30	3530	1330	6.5	56.83					
35	3530	1330	6.6	48.95*					
37	3530	1330	6.6	46.03*					
43	3530	1310	6.6	39.61					
48	3530	1240	6.7	35.39					
54	3530	1160	7.5	31.30					
58	3530	1120	7.5	29.32					
66	3530	1050	7.6	25.91					
71	3530	1000	7.7	24.06					
78	3530	950	7.7	21.81					
87	3530	890	7.7	19.58					
101	3360	850	7.8	16.86					
107	3360	820	7.9	15.86					
125	3180	780	8	13.65					
139	3090	745	8.3	12.19					
144	2470	820	10.5	11.77					
161	2470	775	10.6	10.56					
187	2470	715	10.7	9.10					
199	2380	705	10.8	8.56					
231	2210	685	11	7.36					
258	2120	660	11.5	6.58					
293	2030	635	11.8	5.81					
366	1810	605	12	4.64					

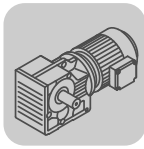
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K47R37, n _e = 1700 rpm					3530 lb-in				
n _a [rpm]	T _{amax} [lb-in]	F _{Ra} [lb]	φ _(/R) [']	i	DR63 DRS71S DRS71M	DRS80 DRE80M DRE90M	DRS90M DRE90L	DRS90L DRS100M DRE100M DRE100LC	DRS100LC
3 3									
0.17	3530	1330	-	10138					
0.20	3530	1330	-	8534					
0.22	3530	1330	-	7662					
0.25	3530	1330	-	6826					
0.28	3530	1330	-	5983					
0.33	3530	1330	-	5159					
0.37	3530	1330	-	4601*					
0.43	3530	1330	-	3940					
0.49	3530	1330	-	3477					
0.56	3530	1330	-	3043					
0.62	3530	1330	-	2733					
0.72	3530	1330	-	2354					
0.82	3530	1330	-	2063					
0.93	3530	1330	-	1819					
1.1	3530	1330	-	1586					
1.2	3530	1330	-	1388					
3 2									
1.4	3530	1330	-	1222					
1.5	3530	1330	-	1097					
1.8	3530	1330	-	945					
2.0	3530	1330	-	831*					
2.4	3530	1330	-	718*					
2.7	3530	1330	-	639					
3.1	3530	1330	-	552					
3.4	3530	1330	-	495					
4.0	3530	1330	-	426					
4.5	3530	1330	-	375					
5.2	3530	1330	-	327					
5.9	3530	1330	-	289					
6.6	3530	1330	-	256					
7.6	3530	1330	-	225					
8.6	3530	1330	-	198					
9.9	3530	1330	-	171					
11	3530	1330	-	153					
13	3530	1330	-	131					
15	3530	1330	-	112					
17	3530	1330	-	99					
18	3530	1330	-	94					

K57, n _e = 1700 rpm					5300 lb-in					
n _a [rpm]	T _{amax} [lb-in]	F _{Ra} [lb]	φ _(/R) [']	i	DR63 DRS71S DRS71M	DRS80 DRE80M DRE90M	DRS90M DRE90L	DRS90L DRS100M DRE100M DRE100LC DRE112M	DRS100LC DRS112M	DRE132MC DRE160S
12	5300	1720	5.9	145.14*						
14	5300	1720	5.9	123.85						
16	5300	1720	5.9	108.29						
17	5300	1720	5.9	102.88*						
19	5300	1720	5.9	90.26*						
22	5300	1720	5.9	76.56*						
25	5300	1720	6	69.12						
28	5300	1720	6	60.81*						
30	5300	1720	6	57.42*						

reducer.ir



K57, $n_e = 1700$ rpm					5300 lb-in					
n_a [rpm]	T_{amax} [lb-in]	F_{Ra} [lb]	$\varphi_{(R)}$ [']	i	DR63 DRS71S DRS71M	DRS80 DRE80M DRE90M	DRS90M DRE90L	DRS90L DRS100M DRE100M DRE100LC DRE112M	DRS100LC DRS112M	DRE132MC DRE160S
35	5300	1720	6	48.89						
38	5300	1720	6.1	44.43						
44	5300	1680	6.1	38.49						
48	5300	1620	6.8	35.70						
56	5300	1480	6.9	30.28						
62	5300	1400	6.9	27.34						
71	5300	1310	6.9	24.05						
75	5300	1270	6.9	22.71						
88	5080	1190	7	19.34						
97	4910	1160	7.2	17.57						
112	4730	1090	7.3	15.22						
128	4510	1050	7.4	13.25						
143	3670	1040	9.4	11.92						
151	3670	1010	9.5	11.26						
177	3580	940	9.6	9.59						
195	3450	910	10	8.71						
225	3220	880	10.2	7.55						
259	3050	850	10.4	6.57						
362	2650	770	11	4.69						

K57R37, $n_e = 1700$ rpm					5300 lb-in				
n_a [rpm]	T_{amax} [lb-in]	F_{Ra} [lb]	$\varphi_{(R)}$ [']	i	DR63 DRS71S DRS71M	DRS80 DRE80M DRE90M	DRS90M DRE90L	DRS90L DRS100M DRE100M DRE100LC	DRS100LC
3 3									
0.14	5300	1720	-	12169					
0.15	5300	1720	-	11162*					
0.18	5300	1720	-	9503					
0.20	5300	1720	-	8547					
0.23	5300	1720	-	7277					
0.26	5300	1720	-	6478*					
0.30	5300	1720	-	5662*					
0.34	5300	1720	-	5033					
0.39	5300	1720	-	4340					
0.44	5300	1720	-	3854					
0.50	5300	1720	-	3390					
0.58	5300	1720	-	2924					
0.66	5300	1720	-	2593					
0.76	5300	1720	-	2249					
0.86	5300	1720	-	1986					
3 2									
0.98	5300	1720	-	1743					
1.1	5300	1720	-	1539					
1.3	5300	1720	-	1354					
1.4	5300	1720	-	1174					
1.6	5300	1720	-	1036*					
1.9	5300	1720	-	906*					
2.1	5300	1720	-	806					
2.4	5300	1720	-	699					
2.8	5300	1720	-	615					
3.1	5300	1720	-	544*					
3.6	5300	1720	-	473					
4.0	5300	1720	-	421					
4.7	5300	1720	-	362					

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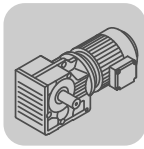


K57R37, n _e = 1700 rpm					5300 lb-in				
n _a [rpm]	T _{amax} [lb-in]	F _{Ra} [lb]	φ _(/R) [']	i	DR63 DRS71S DRS71M	DRS80 DRE80M DRE90M	DRS90M DRE90L	DRS90L DRS100M DRE100M DRE100LC	DRS100LC
5.3	5300	1720	-	319					
6.1	5300	1720	-	280					
6.9	5300	1720	-	246					
7.9	5300	1720	-	215					
8.9	5300	1720	-	192					
10	5300	1720	-	166					
12	5300	1720	-	145					
13	5300	1720	-	129					
15	5300	1720	-	111					
18	5300	1720	-	97					

K67, n _e = 1700 rpm					7250 lb-in						
n _a [rpm]	T _{amax} [lb-in]	F _{Ra} [lb]	φ _(/R) [']	i	DR63 DRS71S DRS71M	DRS80 DRE80M DRE90M	DRS90M DRE90L	DRS90L DRS100M DRE100M DRE100LC DRE112M	DRS100LC DRS112M DRE132S	DRS132S DRS132M DRE132M DRE132MC DRE160S	DRS132MC
12	7250	2320	6.2	144.79*							
14	7250	2320	6.2	123.54							
16	7250	2320	6.1	108.03							
17	7250	2320	6.1	102.62							
19	7250	2320	6.2	90.04							
22	7250	2320	6.2	76.37							
25	7250	2320	6.2	68.95							
28	7250	2320	6.2	60.66							
30	7250	2320	6.2	57.28							
35	7250	2320	6.3	48.77							
38	7250	2320	6.3	44.32							
44	7070	2360	6.4	38.39							
48	7250	2320	7.1	35.62							
56	7250	2320	7.1	30.22							
62	7250	2320	7.1	27.28							
71	7070	2360	7.2	24.00							
75	6900	2390	7.2	22.66							
88	6720	2430	7.3	19.30							
97	6540	2470	7.5	17.54							
112	6190	2530	7.5	15.19							
129	5920	2560	7.6	13.22							
136	4680	2570	8.6	12.48							
160	4420	2460	8.8	10.63							
176	4240	2390	9.1	9.66							
203	3890	2320	9.3	8.37							
234	3710	2230	9.4	7.28							
327	3090	2060	10	5.20							

K67R37, n _e = 1700 rpm					7250 lb-in				
n _a [rpm]	T _{amax} [lb-in]	F _{Ra} [lb]	φ _(/R) [']	i	DR63 DRS71S DRS71M	DRS80 DRE80M DRE90M	DRS90M DRE90L	DRS90L DRS100M DRE100M DRE100LC	DRS100LC
3 3									
0.14	7250	2320	-	12139					
0.15	7250	2320	-	11134					
0.18	7250	2320	-	9479					
0.21	7250	2320	-	8173					
0.23	7250	2320	-	7259					
0.26	7250	2320	-	6462					
0.30	7250	2320	-	5648					

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K67R37, n_e = 1700 rpm					7250 lb-in				
n _a [rpm]	T _{amax} [lb-in]	F _{Ra} [lb]	φ _(/R) [']	i	DR63 DRS71S DRS71M	DRS80 DRE80M DRE90M	DRS90M DRE90L	DRS90L DRS100M DRE100M DRE100LC	DRS100LC
0.35	7250	2320	-	4846					
0.39	7250	2320	-	4329					
0.45	7250	2320	-	3750					
0.51	7250	2320	-	3315					
0.58	7250	2320	-	2917					
0.67	7250	2320	-	2532					
0.76	7250	2320	-	2244					
0.86	7250	2320	-	1981					
3 2									
0.98	7250	2320	-	1739					
1.1	7250	2320	-	1535					
1.3	7250	2320	-	1351					
1.5	7250	2320	-	1171					
1.6	7250	2320	-	1034					
1.9	7250	2320	-	903					
2.1	7250	2320	-	793					
2.4	7250	2320	-	697					
2.8	7250	2320	-	613					
3.1	7250	2320	-	542					
3.6	7250	2320	-	471					
4.0	7250	2320	-	420					
4.7	7250	2320	-	361					
5.3	7250	2320	-	323					
6.1	7250	2320	-	279					
6.9	7250	2320	-	246					
7.8	7250	2320	-	217					
8.9	7250	2320	-	191					
10	7250	2320	-	166					
12	7250	2320	-	144					
14	7250	2320	-	122					

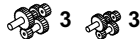
K77, n_e = 1700 rpm					13700 lb-in						
n _a [rpm]	T _{amax} [lb-in]	F _{Ra} [lb]	φ _(/R) [']	i	DR63 DRS71S DRS71M	DRS80 DRE80M DRE90M	DRS90M DRE90L	DRS90L DRS100M DRE100M DRE100LC DRE112M	DRS100LC DRS112M DRE132S	DRS132S DRS132M DRE132M DRE132MC DRE160S	DRS132MC DRS160 DRE160M DRE160MC
8.8	12800	3610	5.4	192.18							
9.5	12800	3610	5.4	179.37							
11	13700	3460	5.4	154.02							
13	13700	3460	5.4	135.28							
13	13700	3460	5.4	128.52							
15	13700	3460	5.4	113.56							
18	13700	3460	5.4	97.05							
19	13700	3460	5.4	88.97							
22	13700	3460	5.4	78.07							
23	13700	3460	5.4	73.99							
26	13700	3460	5.5	64.75							
29	13700	3460	5.5	58.34							
33	13700	3460	5.5	51.18							
38	13700	3460	5.5	45.16							
42	13700	3460	5.6	40.04							
44	13200	3530	6	38.39							
48	13700	3460	6	35.20							
55	13700	3460	6.1	30.89							
58	13700	3460	6.1	29.27							
66	13700	3460	6.1	25.62							

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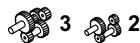


K77, n _e = 1700 rpm					13700 lb-in						
n _a [rpm]	T _{amax} [lb-in]	F _{Ra} [lb]	φ _(/R) [']	i	DR63 DRS71S DRS71M	DRS80 DRE80M DRE90M	DRS90M DRE90L	DRS90L DRS100M DRE100M DRE100LC DRE112M	DRS100LC DRS112M DRE132S	DRS132S DRS132M DRE132M DRE132MC DRE160S	DRS132MC DRS160 DRE160M DRE160MC
74	13700	3460	6.3	23.08							
84	13200	3460	6.3	20.25							
95	12800	3330	6.3	17.87							
107	12300	3210	6.4	15.84							
126	11800	3060	6.5	13.52							
138	8840	3140	7.9	12.36							
157	8750	2990	7.8	10.84							
178	8310	2890	7.9	9.56							
200	7870	2810	8.2	8.48							
235	7250	2710	8.3	7.24							

K77R37, n _e = 1700 rpm					13700 lb-in				
n _a [rpm]	T _{amax} [lb-in]	F _{Ra} [lb]	φ _(/R) [']	i	DR63 DRS71S DRS71M	DRS80 DRE80M DRE90M	DRS90M DRE90L	DRS90L DRS100M DRE100M DRE100LC	DRS100LC

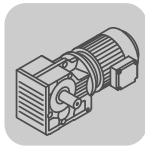


0.11	13700	3460	-	15310					
0.12	13700	3460	-	14043					
0.14	13700	3460	-	11955					
0.17	13700	3460	-	10217					
0.19	13700	3460	-	8809					
0.23	13700	3460	-	7528					
0.26	13700	3460	-	6606					
0.29	13700	3460	-	5774					
0.33	13700	3460	-	5089					
0.38	13700	3460	-	4489					
0.43	13700	3460	-	3961					
0.49	13700	3460	-	3485					
0.59	13700	3460	-	2901					
0.63	13700	3460	-	2717					
0.72	13700	3460	-	2370					



0.83	13700	3460	-	2050					
0.96	13700	3460	-	1772					
1.1	13700	3460	-	1514					
1.2	13700	3460	-	1388					
1.4	13700	3460	-	1218					
1.6	13700	3460	-	1053					
1.8	13700	3460	-	924					
2.1	13700	3460	-	815					
2.4	13700	3460	-	709					
2.7	13700	3460	-	622					
3.1	13700	3460	-	552					
3.5	13700	3460	-	485					
4.0	13700	3460	-	428					
4.6	13700	3460	-	367					
5.2	13700	3460	-	328					
5.9	13700	3460	-	290					
6.7	13700	3460	-	252					
7.7	13700	3460	-	221					
8.7	13700	3460	-	195					
9.7	13700	3460	-	175					
11	13700	3460	-	154					

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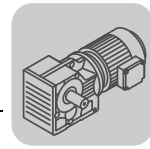


K..DRE/DRS
K.. → DRE/DRS

K87, n _e = 1700 rpm					23800 lb-in								
n _a [rpm]	T _{amax} [lb-in]	F _{Ra} [lb]	φ _(/R) [°]	i	DRS71M	DRS80 DRE80M DRE90M	DRS90M DRE90L	DRS90L DRS100M DRE100M DRE100LC DRE112M	DRS100LC DRS112M DRE132S	DRS132S DRS132M DRE132M DRE132MC DRE160S	DRS132MC DRS160 DRE160M DRE160MC DRE180S DRE180M	DRS180M DRS180L DRE180L	DRS180LC
8.6	23800	6130	5.3	197.37									
9.8	23800	6130	5.3	174.19									
10	23800	6130	5.3	164.34*									
12	23800	6130	5.4	147.32*									
13	23800	6130	5.4	126.91*									
15	23800	6130	5.4	115.82									
17	23800	6130	5.4	102.71*									
20	23800	6130	5.4	86.34									
21	23800	5970	5.4	79.34									
24	23800	5670	5.4	70.46									
27	23800	5410	5.4	63.00*									
30	23800	5160	5.5	56.64									
35	23800	4840	5.5	49.16									
39	23000	4700	5.5	44.02									
47	22100	4400	5.5	36.52*									
54	23800	3930	6.1	31.39									
61	23000	3790	6.1	27.88									
68	22100	3680	6.1	24.92									
76	20300	3680	6.2	22.41									
87	20300	3440	6.3	19.45									
98	19400	3350	6.3	17.42									
106	15900	3290	6.5	16.00									
118	18500	3150	6.4	14.45									
135	17600	3030	6.5	12.56									
152	13200	3080	6.7	11.17									
170	13200	2920	6.8	10.00									
205	12300	2780	7	8.29									
236	11500	2720	7.1	7.21									

K87R57, n _e = 1700 rpm					23800 lb-in									
n _a [rpm]	T _{amax} [lb-in]	F _{Ra} [lb]	φ _(/R) [°]	i	DR63 DRS71S DRS71M	DRS80 DRE80M DRE90M	DRS90M DRE90L	DRS90L DRS100M DRE100M DRE100LC DRE112M	DRS100LC DRS112M DRE132S	DRS132S DRS132M DRE132M DRE132MC DRE160S	DRS132MC			
					3 3									
0.11	23800	6130	-	14829										
0.13	23800	6130	-	13168										
0.14	23800	6130	-	11737										
0.17	23800	6130	-	10217										
0.19	23800	6130	-	9073										
0.22	23800	6130	-	7854										
0.25	23800	6130	-	6832										
0.29	23800	6130	-	5930										
0.32	23800	6130	-	5240										
0.37	23800	6130	-	4562										
0.42	23800	6130	-	4037										
0.47	23800	6130	-	3609										
0.55	23800	6130	-	3107										
0.62	23800	6130	-	2728										
0.72	23800	6130	-	2371										
					3 2									
0.81	23800	6130	-	2088										
0.92	23800	6130	-	1854										
1.0	23800	6130	-	1657										
1.2	23800	6130	-	1415										
1.4	23800	6130	-	1229										

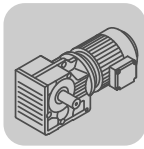
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K87R57, n _e = 1700 rpm					23800 lb-in						
n _a [rpm]	T _{amax} [lb-in]	F _{Ra} [lb]	φ _(/R) [']	i	DR63 DRS71S DRS71M	DRS80 DRE80M DRE90M	DRS90M DRE90L	DRS90L DRS100M DRE100M DRE100LC DRE112M	DRS100LC DRS112M DRE132S	DRS132S DRS132M DRE132M DRE132MC DRE160S	DRS132MC
1.6	23800	6130	-	1078							
1.8	23800	6130	-	951							
2.0	23800	6130	-	837							
2.3	23800	6130	-	726							
2.7	23800	6130	-	638							
3.0	23800	6130	-	562*							
3.6	23800	6130	-	474*							
4.0	23800	6130	-	426							
4.6	23800	6130	-	373							
5.2	23800	6130	-	330							
5.8	23800	6130	-	294							
6.8	23800	6130	-	250							
7.2	23800	6130	-	236							
8.5	23800	6130	-	201							
9.3	23800	6130	-	183							
11	23800	6130	-	159							
12	23000	6160	-	141							

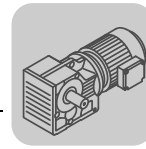
K97, n _e = 1700 rpm					38000 lb-in								
n _a [rpm]	T _{amax} [lb-in]	F _{Ra} [lb]	φ _(/R) [']	i	DRS80 DRE80M DRE90M	DRS90M DRE90L	DRS90L DRS100M DRE100M DRE100LC DRE112M	DRS100LC DRS112M DRE132S	DRS132S DRS132M DRE132M DRE132MC DRE160S	DRS132MC DRS160 DRE160M DRE160MC DRE180S DRE180M	DRS180M DRS180L DRE180L DRE180LC	DRS180LC DRS200L DRE200L DRS225S DRE225S DRS225M DRE225M DRE225MC	DRS225MC
9.7	38000	8990	6.8	176.05*									
11	38000	8990	6.8	153.21*									
12	38000	8990	6.8	140.28									
14	38000	8990	6.8	123.93*									
16	38000	8710	6.8	105.13									
18	38000	8420	6.8	96.80									
20	38000	8030	6.8	86.52									
22	38000	7670	6.8	77.89*									
24	38000	7350	6.9	70.54									
27	38000	6970	6.9	62.55									
30	38000	6660	6.9	56.55									
35	38000	6180	6.9	47.93*									
41	38000	5800	6.9	41.87									
44	38000	5560	7.4	38.30									
50	38000	5260	7.5	34.23									
55	38000	5000	7.5	30.82									
61	38000	4750	7.5	27.91									
69	38000	4460	7.6	24.75									
76	38000	4230	7.6	22.37									
90	38000	3860	7.6	18.96									
103	38000	3580	7.7	16.56									
123	38000	3220	7.7	13.85									
142	34400	3260	7.8	11.99									
163	25300	3320	9.7	10.41									
195	23500	3200	9.8	8.71									
225	21200	3210	10	7.54									

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K97R57, n_e = 1700 rpm					38000 lb-in						
n _a [rpm]	T _{amax} [lb-in]	F _{Ra} [lb]	φ _(/R) [']	i	DR63 DRS71S DRS71M	DRS80 DRE80M DRE90M	DRS90M DRE90L	DRS90L DRS100M DRE100M DRE100LC DRE112M	DRS100LC DRS112M DRE132S	DRS132S DRS132M DRE132M DRE132MC DRE160S	DRS132MC
3 3											
0.09	38000	8990	-	18091							
0.10	38000	8990	-	16666							
0.11	38000	8990	-	14897							
0.13	38000	8990	-	13182							
0.15	38000	8990	-	11677							
0.16	38000	8990	-	10317							
0.19	38000	8990	-	9083							
0.21	38000	8990	-	8054							
0.24	38000	8990	-	6970							
0.28	38000	8990	-	6027							
0.32	38000	8990	-	5391							
0.36	38000	8990	-	4669							
0.42	38000	8990	-	4082							
0.47	38000	8990	-	3583							
0.55	38000	8990	-	3108*							
0.62	38000	8990	-	2757							
3 2											
0.70	38000	8990	-	2419							
0.80	38000	8990	-	2123							
0.92	38000	8990	-	1856							
1.0	38000	8990	-	1625							
1.2	38000	8990	-	1430							
1.3	38000	8990	-	1261							
1.5	38000	8990	-	1102							
1.8	38000	8990	-	957							
2.0	38000	8990	-	855							
2.3	38000	8990	-	743							
2.6	38000	8990	-	652*							
3.0	38000	8990	-	573							
3.4	38000	8990	-	504							
3.9	38000	8990	-	437							
4.5	38000	8990	-	382*							
5.0	38000	8990	-	342*							
5.6	38000	8990	-	305							
6.6	38000	8990	-	258							
7.3	38000	8990	-	232							
8.5	38000	8990	-	199							
K107, n_e = 1700 rpm					70700 lb-in						
n _a [rpm]	T _{amax} [lb-in]	F _{Ra} [lb]	φ _(/R) [']	i	DRS90L DRS100M DRE100M DRE100LC DRE112M	DRS100LC DRS112M DRE132S	DRS132S DRS132M DRE132M DRE132MC DRE160S	DRS132MC DRS160 DRE160M DRE160MC DRE180S DRE180M	DRS180M DRS180L DRE180L DRE180LC	DRS180LC DRS200L DRE200L DRS225S DRE225S DRS225M DRE225M DRE225MC	DRS225MC
12	70700	13600	5.7	143.47*							
14	70700	12600	5.7	121.46							
15	70700	12100	5.8	112.41*							
17	70700	11500	5.8	100.75							
19	70700	10900	5.8	90.96*							
21	70700	10300	5.8	82.61							
23	70700	9680	5.8	73.30							
26	70700	9150	5.8	66.52*							

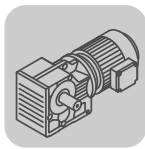
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K107, $n_e = 1700$ rpm					70700 lb-in						
n_a [rpm]	T_{amax} [lb-in]	F_{Ra} [lb]	$\varphi_{(R)}$ [']	i	DRS90L DRS100M DRE100M DRE100LC DRE112M	DRS100LC DRS112M DRE132S	DRS132S DRS132M DRE132M DRE132MC DRE160S	DRS132MC DRS160 DRE160M DRE160MC DRE180S DRE180M	DRS180M DRS180L DRE180L DRE180LC	DRS180LC DRS200L DRE200L DRS225S DRE225S DRS225M DRE225M DRE225MC	DRS225MC
30	70700	8360	5.8	57.17*							
34	69300	7840	5.8	49.90							
40	65100	7580	5.8	42.33*							
46	63700	7130	5.8	37.00*							
52	63700	6570	6.4	32.69							
54	60100	6840	5.9	31.28*							
59	63700	6040	6.5	29.00							
65	63700	5620	6.4	26.32							
75	63700	4970	6.5	22.62							
86	63700	4400	6.5	19.74							
101	62300	3920	6.5	16.75							
116	60900	3600	6.6	14.64							
127	38000	6010	8.8	13.43							
145	38000	5640	8.8	11.73							
171	37000	5290	8.9	9.94							
196	36000	5050	9	8.69							
231	31800	5010	9	7.35							

K107R77, $n_e = 1700$ rpm					70700 lb-in								
n_a [rpm]	T_{amax} [lb-in]	F_{Ra} [lb]	$\varphi_{(R)}$ [']	i	DR63 DRS71S DRS71M	DRS80 DRE80M DRE90M	DRS90M DRE90L	DRS90L DRS100M DRE100M DRE100LC DRE112M	DRS100LC DRS112M DRE132S	DRS132S DRS132M DRE132M DRE132MC DRE160S	DRS132MC DRS160 DRE160M DRE160MC		
					3 3								
0.12	70700	14600	-	14311*									
0.14	70700	14600	-	12211									
0.16	70700	14600	-	10677									
0.18	70700	14600	-	9524									
0.20	70700	14600	-	8328									
0.23	70700	14600	-	7270									
0.27	70700	14600	-	6184									
0.30	70700	14600	-	5662									
0.33	70700	14600	-	5138									
0.39	70700	14600	-	4359*									
0.45	70700	14600	-	3810*									
0.51	70700	14600	-	3358									
0.57	70700	14600	-	2977*									
0.65	70700	14600	-	2599									
0.74	70700	14600	-	2286									
0.88	70700	14600	-	1939									
					3 2								
0.99	70700	14600	-	1713									
1.1	70700	14600	-	1554									
1.3	70700	14600	-	1336*									
1.5	70700	14600	-	1166									
1.7	70700	14600	-	1030									
1.9	70700	14600	-	904									
2.1	70700	14600	-	793*									
2.4	70700	14600	-	696*									
2.8	70700	14600	-	615									
3.3	70700	14600	-	522									
3.7	70700	14600	-	461*									

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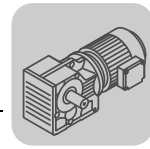
K..DRE/DRS
K.. → DRE/DRS

K107R77, n_e = 1700 rpm					70700 lb-in						
n _a [rpm]	T _{amax} [lb-in]	F _{Ra} [lb]	φ _(/R) [']	i	DR63 DRS71S DRS71M	DRS80 DRE80M DRE90M	DRS90M DRE90L	DRS90L DRS100M DRE100M DRE100LC DRE112M	DRS100LC DRS112M DRE132S	DRS132S DRS132M DRE132M DRE132MC DRE160S	DRS132MC DRS160 DRE160M DRE160MC
4.2	70700	14600	-	408*							
4.7	70700	14600	-	364							
5.3	70700	14600	-	318							
5.9	70700	14600	-	286*							
6.8	70700	14600	-	251							
7.7	70700	14600	-	222*							
8.7	70700	14600	-	196*							
9.8	63700	14600	-	174							
11	63700	14600	-	154							
12	63700	14100	-	140							

K127, n_e = 1700 rpm					115000 lb-in						
n _a [rpm]	T _{amax} [lb-in]	F _{Ra} [lb]	φ _(/R) [']	i	DRS132S DRS132M DRE132M DRE132MC DRE160S	DRS132MC DRS160 DRE160M DRE160MC DRE180S DRE180M	DRS180M DRS180L DRE180L DRE180LC	DRS180LC DRS200L DRE200L DRS225S DRE225S DRS225M DRE225M DRE225MC	DRS225MC DVE250M DVE250M DVE280 DVE280S DVE280M		
12	115000	17800	5.2	146.07							
12	115000	17800	5.2	136.14							
14	115000	17700	5.2	122.48							
15	115000	16900	5.2	110.18							
19	115000	15500	5.2	89.89							
21	115000	14900	5.3	81.98							
24	115000	13900	5.3	70.95*							
27	115000	13200	5.3	62.60							
31	115000	12300	5.3	54.07							
36	115000	11600	5.3	47.82							
42	115000	10600	5.3	40.19							
47	115000	10100	5.6	36.25							
54	115000	9320	5.6	31.37							
61	115000	8710	5.7	27.68							
71	115000	7940	5.7	23.91							
80	115000	7200	5.7	21.15							
96	115000	6160	5.8	17.77							
118	107000	5880	5.8	14.35							
133	75400	7190	8	12.79							
158	70700	6880	8.1	10.74							
196	63900	6630	8.1	8.68							

K127R77, n_e = 1700 rpm					115000 lb-in						
n _a [rpm]	T _{amax} [lb-in]	F _{Ra} [lb]	φ _(/R) [']	i	DR63 DRS71S DRS71M	DRS80 DRE80M DRE90M	DRS90M DRE90L	DRS90L DRS100M DRE100M DRE100LC DRE112M	DRS100LC DRS112M DRE132S	DRS132S DRS132M DRE132M DRE132MC DRE160S	DRS132MC DRS160 DRE160M DRE160MC
3 3											
0.10	115000	17800	-	17550							
0.11	115000	17800	-	16006							
0.11	115000	17800	-	14975							
0.14	115000	17800	-	12440							
0.16	115000	17800	-	10915							
0.17	115000	17800	-	9819							
0.20	115000	17800	-	8443							
0.23	115000	17800	-	7482							
0.26	115000	17800	-	6565							

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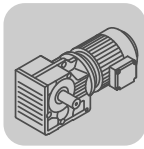


K127R77, $n_e = 1700$ rpm					115000 lb-in						
n_a [rpm]	T_{amax} [lb-in]	F_{Ra} [lb]	$\varphi/(R)$ [']	i	DR63 DRS71S DRS71M	DRS80 DRE80M DRE90M	DRS90M DRE90L	DRS90L DRS100M DRE100M DRE100LC DRE112M	DRS100LC DRS112M DRE132S	DRS132S DRS132M DRE132M DRE132MC DRE160S	DRS132MC DRS160 DRE160M DRE160MC
0.29	115000	17800	-	5804							
0.34	115000	17800	-	5027							
0.38	115000	17800	-	4423							
0.44	115000	17800	-	3889							
0.51	115000	17800	-	3311							
0.56	115000	17800	-	3009							
0.65	115000	17800	-	2607							
0.75	115000	17800	-	2268							
3 2											
0.88	115000	17800	-	1926							
0.97	115000	17800	-	1757							
1.1	115000	17800	-	1541							
1.3	115000	17800	-	1342							
1.4	115000	17800	-	1177							
1.7	115000	17800	-	1025							
1.9	115000	17800	-	899							
2.2	115000	17800	-	790							
2.4	115000	17800	-	704							
2.8	115000	17800	-	610							
3.1	115000	17800	-	549							
3.6	115000	17800	-	477							
4.1	115000	17800	-	418							

K127R87, $n_e = 1700$ rpm					115000 lb-in								
n_a [rpm]	T_{amax} [lb-in]	F_{Ra} [lb]	$\varphi/(R)$ [']	i	DRS71M	DRS80 DRE80M DRE90M	DRS90M DRE90L	DRS90L DRS100M DRE100M DRE100LC DRE112M	DRS100LC DRS112M DRE132S	DRS132S DRS132M DRE132M DRE132MC DRE160S	DRS132MC DRS160 DRE160M DRE160MC DRE180S DRE180M	DRS180M DRS180L DRE180L	DRS180LC
3.2	115000	17800	-	536									
3.6	115000	17800	-	473									
4.1	115000	17800	-	418									
4.6	115000	17800	-	367									
5.2	115000	17800	-	330									
5.9	115000	17800	-	287									
6.7	115000	17800	-	253									
8.0	115000	17800	-	213									
8.5	106100	17900	-	200									
10	106100	17900	-	166									
12	106100	17900	-	147									

K157, $n_e = 1700$ rpm					159200 lb-in						
n_a [rpm]	T_{amax} [lb-in]	F_{Ra} [lb]	$\varphi/(R)$ [']	i	DRS160 DRE160M DRE160MC DRE180S DRE180M	DRS180M DRS180L DRE180L DRE180LC	DRS180LC DRS200L DRE200L DRS225S DRE225S DRS225M DRE225M DRE225MC	DRS225MC DVE250M DRE250M DVE280 DVE280S DVE280M	DRS315K DRE315K DRS315S DRE315S	DRS315M DRE315M DRE315L DRS315L	
11	159200	24100	5.2	150.41							
14	159200	22100	5.2	122.39							
17	159200	20300	5.2	100.22							
19	159200	19500	5.2	91.65							
21	159200	18300	5.2	79.75							
24	159200	17400	5.2	70.38							
28	159200	16300	5.2	61.02							
31	159200	15400	5.2	54.29							

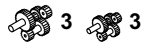
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K..DRE/DRS
K.. → DRE/DRS

K157, n _e = 1700 rpm					159200 lb-in					
n _a [rpm]	T _{amax} [lb-in]	F _{Ra} [lb]	φ _(/R) [']	i	DRS160 DRE160M DRE160MC DRE180S DRE180M	DRS180M DRS180L DRE180L DRE180LC	DRS180LC DRS200L DRE200L DRS225S DRE225S DRS225M DRE225M DRE225MC	DRS225MC DVE250M DRE250M DVE280 DRE280S DVE280M	DRS315K DRE315K DRS315S DRE315S	DRS315M DRE315M DRS315L DRE315L DRS315L
36	159200	14300	5.2	46.79						
45	159200	12900	5.3	38.02						
54	159200	11700	5.6	31.30						
62	159200	10900	5.6	27.62						
71	159200	10100	5.6	23.95						
80	159200	9450	5.6	21.31						
93	159200	8660	5.7	18.37						
114	159200	7600	5.8	14.92						
134	150400	7300	5.8	12.65						

K157R97, n _e = 1700 rpm					159200 lb-in								
n _a [rpm]	T _{amax} [lb-in]	F _{Ra} [lb]	φ _(/R) [']	i	DRS71M	DRS80 DRE80M DRE90M	DRS90M DRE90L	DRS90L DRS100M DRE100M DRE100LC DRE112M	DRS100LC DRS112M DRE132S	DRS132S DRS132M DRE132M DRE132MC DRE160S	DRS132MC DRS160 DRE160M DRE160MC DRE180S DRE180M	DRS180M DRS180L DRE180L	DRS180LC DRS200L DRE200L DRS225S DRE225S DRS225M DRE225M DRE225MC

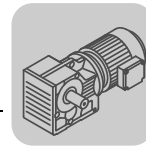


0.10	159200	25200	-	17679									
0.11	159200	25200	-	15729									
0.12	159200	25200	-	14721									
0.13	159200	25200	-	13097									
0.15	159200	25200	-	11368									
0.17	159200	25200	-	10114									
0.19	159200	25200	-	8718									
0.22	159200	25200	-	7734									
0.25	159200	25200	-	6881									
0.29	159200	25200	-	5931									
0.34	159200	25200	-	5074									
0.38	159200	25200	-	4514									
0.43	159200	25200	-	3979									
0.48	159200	25200	-	3516									
0.56	159200	25200	-	3051									
0.65	159200	25200	-	2610									
0.73	159200	25200	-	2322									
0.84	159200	25200	-	2029									
0.94	159200	25200	-	1805									



1.0	159200	25200	-	1659									
1.2	159200	25200	-	1365									
1.4	159200	25200	-	1229*									
1.6	159200	25200	-	1093*									
1.8	159200	25200	-	942									
2.0	159200	25200	-	854									
2.2	159200	25200	-	756*									
2.6	159200	25200	-	661									
3.0	159200	25200	-	567									
3.4	159200	25200	-	504									
3.9	159200	25200	-	434*									
4.5	159200	25200	-	379									
5.1	159200	25200	-	333									
5.8	159200	25200	-	291									

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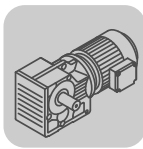


K157R107, $n_e = 1700$ rpm					159200 lb-in							
n_a [rpm]	T_{amax} [lb-in]	F_{Ra} [lb]	$\varphi_{(R)}$ [']	i	DRS90L DRS100M DRE100M DRE100LC DRE112M	DRS100LC DRS112M DRE132S	DRS132S DRS132M DRE132M DRE132MC DRE160S	DRS132MC DRS160 DRE160M DRE160MC DRE180S DRE180M	DRS180M DRS180L DRE180L DRE180LC	DRS180LC DRS200L DRE200L DRS225S DRE225S DRS225M DRE225M DRE225MC	DRS225MC	
4.4	159200	25200	-	385								
5.2	159200	25200	-	325								
5.7	159200	25200	-	299								
6.7	159200	25200	-	253								
7.4	159200	25200	-	230								
8.0	159200	25200	-	213								
9.1	159200	25200	-	187								
11	159200	24500	-	157								
14	159200	22100	-	122								
16	159200	20900	-	107								

K167, $n_e = 1700$ rpm					283100 lb-in							
n_a [rpm]	T_{amax} [lb-in]	F_{Ra} [lb]	$\varphi_{(R)}$ [']	i	DRS160 DRE160M DRE160MC DRE180S DRE180M	DRS180M DRS180L DRE180L DRE180LC	DRS180LC DRS200L DRE200L DRS225S DRE225S DRS225M DRE225M DRE225MC	DRS225MC DVE250M DRE250M DVE280 DVE280S DVE280M	DRS315K DRE315K DRS315S DRE315S	DRS315M DRE315M DRE315L DRS315L DRE315L		
10	283100	33700	4.5	164.50								
13	283100	33700	4.5	134.99								
15	283100	33500	4.5	109.83								
19	283100	30500	4.5	87.86								
22	283100	28900	4.5	78.14								
25	283100	27200	4.5	68.07								
28	283100	25900	4.5	60.74								
33	283100	24100	4.6	51.77								
40	283100	22000	4.6	42.89								
46	283100	20400	4.6	36.61								
53	283100	19100	4.8	32.25								
59	283100	18000	4.8	28.77								
69	283100	16600	4.9	24.52								
84	283100	14900	4.9	20.32								
98	283100	13600	5	17.34								

K167R97, $n_e = 1700$ rpm					283100 lb-in									
n_a [rpm]	T_{amax} [lb-in]	F_{Ra} [lb]	$\varphi_{(R)}$ [']	i	DRS71M	DRS80 DRE80M DRE90M	DRS90M DRE90L	DRS90L DRS100M DRE100M DRE100LC DRE112M	DRS100LC DRS112M DRE132S	DRS132S DRS132M DRE132M DRE132MC DRE160S	DRS132MC DRS160 DRE160M DRE160MC DRE180S DRE180M	DRS180M DRS180L DRE180L DRE180LC	DRS180LC DRS200L DRE200L DRS225S DRE225S DRS225M DRE225M DRE225MC	
3 3														
0.09	283100	33700	-	19723										
0.10	283100	33700	-	17406										
0.11	283100	33700	-	15000										
0.13	283100	33700	-	13238										
0.15	283100	33700	-	11573										
0.17	283100	33700	-	10264										
0.20	283100	33700	-	8628										
0.26	283100	33700	-	6562										
0.32	283100	33700	-	5355										
0.36	283100	33700	-	4788										
0.42	283100	33700	-	4079										

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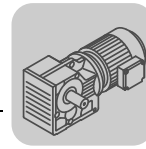


K167R97, $n_e = 1700$ rpm						283100 lb-in							
n_a [rpm]	T_{amax} [lb-in]	F_{Ra} [lb]	$\varphi_{(R)}$ [']	i	DRS71M	DRS80 DRE80M DRE90M	DRS90M DRE90L	DRS90L DRS100M DRE100M DRE100LC DRE112M	DRS100LC DRS112M DRE132S	DRS132S DRS132M DRE132M DRE132MC DRE160S	DRS132MC DRS160 DRE160M DRE160MC DRE180S DRE180M	DRS180M DRS180L DRE180L DRE180LC	DRS180LC DRS200L DRE200L DRS225S DRE225S DRS225M DRE225M DRE225MC
0.50	283100	33700	-	3376									
0.62	283100	33700	-	2755									
0.75	283100	33700	-	2263									
3 2													
0.78	283100	33700	-	2182									
1.00	283100	33700	-	1704									
1.2	283100	33700	-	1408									
1.3	283100	33700	-	1296									
1.5	283100	33700	-	1101									
1.8	283100	33700	-	944									
2.0	283100	33700	-	843									
2.2	283100	33700	-	757									
2.7	283100	33700	-	632									
3.0	283100	33700	-	561									
3.5	283100	33700	-	481									
4.0	283100	33700	-	423									
4.6	283100	33700	-	369									

K167R107, $n_e = 1700$ rpm						283100 lb-in						
n_a [rpm]	T_{amax} [lb-in]	F_{Ra} [lb]	$\varphi_{(R)}$ [']	i	DRS90L DRS100M DRE100M DRE100LC DRE112M	DRS100LC DRS112M DRE132S	DRS132S DRS132M DRE132M DRE132MC DRE160S	DRS132MC DRS160 DRE160M DRE160MC DRE180S DRE180M	DRS180M DRS180L DRE180L DRE180LC	DRS180LC DRS200L DRE200L DRS225S DRE225S DRS225M DRE225M DRE225MC	DRS225MC	
5.3	283100	33700	-	318								
6.1	283100	33700	-	278								
7.0	283100	33700	-	244								
8.0	283100	33700	-	213								
8.3	283100	33700	-	206								
9.4	283100	33700	-	180								
11	283100	33700	-	160								
13	283100	33700	-	135								
14	283100	33700	-	118								

K187, $n_e = 1700$ rpm						442300 lb-in						
n_a [rpm]	T_{amax} [lb-in]	F_{Ra} [lb]	$\varphi_{(R)}$ [']	i	DRS160 DRE160M DRE160MC DRE180S DRE180M	DRS180M DRS180L DRE180L DRE180LC	DRS180LC DRS200L DRE200L DRS225S DRE225S DRS225M DRE225M DRE225MC	DRS225MC DVE250M DVE250M DVE280 DVE280S DVE280M	DRS315K DRE315K DRS315S DRE315S	DRS315M DRE315M DRE315L DRS315L DRS315L		
9.5	442300	42700	3.8	179.86								
10	442300	42700	3.8	165.21								
12	442300	40800	3.8	144.59								
13	442300	38900	3.8	129.69								
15	442300	36600	3.8	112.60								
17	442300	35000	3.8	102.16								
19	442300	32700	3.8	88.00								
23	442300	30200	3.8	73.96								
27	442300	28200	3.8	64.04								
32	442300	25800	3.9	53.36								
37	442300	23700	3.9	45.50*								

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K187, $n_e = 1700$ rpm					442300 lb-in					
n_a [rpm]	T_{amax} [lb-in]	F_{Ra} [lb]	$\varphi_{(R)}$ [']	i	DRS160 DRE160M DRE160MC DRE180S DRE180M	DRS180M DRS180L DRE180L DRE180LC	DRS180LC DRS200L DRE200L DRS225S DRE225S DRS225M DRE225MC	DRS225MC DVE250M DVE250M DVE280 DVE280S DVE280M	DRS315K DRE315K DRS315S DRE315S	DRS315M DRE315M DRS315L DRE315L DRS315L
40	442300	22900	4.1	42.51						
44	442300	21800	4.1	38.57						
51	442300	20000	4.2	33.23						
61	442300	18100	4.2	27.92						
70	421100	17500	4.2	24.18						
84	388400	16900	4.3	20.15						
99	366300	16300	4.3	17.18						

K187R97, $n_e = 1700$ rpm					442300 lb-in								
n_a [rpm]	T_{amax} [lb-in]	F_{Ra} [lb]	$\varphi_{(R)}$ [']	i	DRS71M	DRS80 DRE80M DRE90M	DRS90M DRE90L	DRS90L DRS100M DRE100M DRE100LC DRE112M	DRS100LC DRS112M DRE132S	DRS132S DRS132M DRE132M DRE132MC DRE160S	DRS132MC DRS160 DRE160M DRE160MC DRE180S DRE180M	DRS180M DRS180L DRE180L DRE180LC	DRS180LC DRS200L DRE200L DRS225S DRE225S DRS225M DRE225M DRE225MC

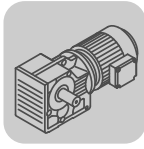


0.05	442300	42700	-	32625									
0.06	442300	42700	-	27165									
0.07	442300	42700	-	24353									
0.09	442300	42700	-	19144									
0.10	442300	42700	-	16978									
0.12	442300	42700	-	14272									
0.13	442300	42700	-	13116									
0.15	442300	42700	-	11647									
0.16	442300	42700	-	10413									
0.18	442300	42700	-	9363									
0.21	442300	42700	-	8126									
0.23	442300	42700	-	7343									
0.25	442300	42700	-	6747									
0.28	442300	42700	-	5991									
0.32	442300	42700	-	5358									
0.35	442300	42700	-	4817									
0.39	442300	42700	-	4370									
0.60	442300	42700	-	2818*									



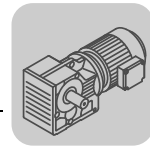
0.47	442300	42700	-	3609									
0.56	442300	42700	-	3062									
0.67	442300	42700	-	2519									
0.75	442300	42700	-	2268									
0.83	442300	42700	-	2054									
0.93	442300	42700	-	1821									
1.1	442300	42700	-	1605									
1.2	442300	42700	-	1395									
1.4	442300	42700	-	1196									
1.6	442300	42700	-	1046									
1.8	442300	42700	-	945									
2.3	442300	42700	-	738									
2.7	442300	42700	-	621									
3.2	442300	42700	-	527									

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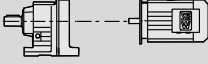



K187R107, $n_e = 1700$ rpm					442300 lb-in							
n_a [rpm]	T_{amax} [lb-in]	F_{Ra} [lb]	$\varphi_{(R)}$ [']	i	DRS90L DRS100M DRE100M DRE100LC DRE112M	DRS100LC DRS112M DRE132S	DRS132S DRS132M DRE132M DRE132MC DRE160S	DRS132MC DRS160 DRE160M DRE160MC DRE180S DRE180M	DRS180M DRS180L DRE180L DRE180LC	DRS180LC DRS200L DRE200L DRS225S DRE225S DRS225M DRE225M DRE225MC	DRS225MC	
2.0	442300	42700	-	835								
2.3	442300	42700	-	729								
2.7	442300	42700	-	622								
3.3	442300	42700	-	520								
3.7	442300	42700	-	454								
4.8	442300	42700	-	355								
6.5	442300	42700	-	261								
7.7	442300	42700	-	221								
8.8	442300	42700	-	193								
10	442300	42700	-	163								

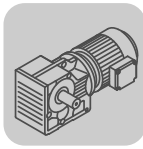
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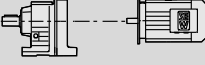


11.3 K..DRE/DRS [HP]

P_m [HP]	n_a [rpm]	T_a [lb-in]	i	$F_{Ra}^{1)}$ [lb]	SEW f_B		m [lbs]		
0.25	0.26	45600	6565	18500	2.5	K 127R77 DRS 71S4	1040	535	
						KF 127R77 DRS 71S4	1130	535	
						KA 127R77 DRS 71S4	980	535	
						KAF 127R77 DRS 71S4	1060	535	
0.27	41500	6184	14600	1.70	K 107R77 DRS 71S4	690	535		
						0.30 36300 5662 14600 1.95	KF 107R77 DRS 71S4	710	535
						0.33 33000 5138 14600 2.1	KA 107R77 DRS 71S4	630	535
						0.39 29800 4359 14600 2.4	KAF 107R77 DRS 71S4	680	535
						0.45 26100 3810 14600 2.7			
0.36	33400	4669	8990	1.15	K 97R57 DRS 71S4	400	535		
						0.42 30100 4082 8990 1.25	KF 97R57 DRS 71S4	445	535
						0.47 26200 3583 8990 1.45	KA 97R57 DRS 71S4	360	535
						0.55 23000 3108 8990 1.65	KAF 97R57 DRS 71S4	415	535
						0.62 19600 2757 8990 1.95			
0.70	18100	2419	8990	2.1	K 97R57 DRS 71S4	400	535		
						0.80 15700 2123 8990 2.4	KF 97R57 DRS 71S4	440	535
						0.92 14000 1856 8990 2.7	KA 97R57 DRS 71S4	360	535
							KAF 97R57 DRS 71S4	415	535
0.55	22700	3107	6170	1.05	K 87R57 DRS 71S4	265	535		
						0.62 19200 2728 6270 1.25	KF 87R57 DRS 71S4	285	535
						0.72 16900 2371 6320 1.40	KA 87R57 DRS 71S4	240	535
0.81	15700	2088	6350	1.50	KAF 87R57 DRS 71S4	270	535		
						0.92 14000 1854 6380 1.70	K 87R57 DRS 71S4	265	535
						1.0 12500 1657 6410 1.90	KF 87R57 DRS 71S4	285	535
						1.2 10600 1415 6440 2.2	KA 87R57 DRS 71S4	240	535
1.4	9220	1229	6460	2.6	KAF 87R57 DRS 71S4	265	535		
						1.6 7970 1078 6480 3.0			
						0.96 13400 1772 3510 1.00			
						1.1 11400 1514 3810 1.20			
1.2	10500	1388	3930	1.30	K 77R37 DRS 71S4	160	535		
						1.4 9230 1218 4080 1.50	KF 77R37 DRS 71S4	175	535
						1.6 8070 1053 4190 1.70	KA 77R37 DRS 71S4	140	535
						1.8 7080 924 4270 1.95	KAF 77R37 DRS 71S4	160	535
						2.1 6240 815 4330 2.2			
						2.4 4980 709 4400 2.8			
						1.9 6650 903 2440 1.10			
2.1	6240	793	2520	1.15	K 67R37 DRS 71S4	105	535		
						2.4 5040 697 2710 1.45	KF 67R37 DRS 71S4	115	535
						2.8 4430 613 2790 1.65	KA 67R37 DRS 71S4	99	535
						3.1 3890 542 2850 1.85	KAF 67R37 DRS 71S4	110	535
						3.6 3600 471 2870 2.0			
						4.0 3010 420 2920 2.4			
						4.7 2720 361 2920 2.7			
						2.4 5050 699 1770 1.05			
2.8	4440	615	1890	1.20	K 57R37 DRS 71S4	92	535		
						3.1 3900 544 1950 1.35	KF 57R37 DRS 71S4	105	535
						3.6 3560 473 1990 1.50	KA 57R37 DRS 71S4	88	535
						4.0 3010 421 2050 1.75	KAF 57R37 DRS 71S4	100	535
						4.7 2720 362 2080 1.95			
						5.3 2400 319 2110 2.2			
						6.1 2000 280 2140 2.6			
						6.9 1760 246 2160 3.0			
						4.0 3170 426 1450 1.10			
4.5	2690	375	1580	1.30	K 47R37 DRS 71S4	79	535		
						5.2 2470 327 1630 1.45	KF 47R37 DRS 71S4	86	535
						5.9 2170 289 1680 1.65	KA 47R37 DRS 71S4	77	535
						6.6 1830 256 1740 1.90	KAF 47R37 DRS 71S4	84	535
						7.6 1670 225 1760 2.1			
						8.6 1420 198 1790 2.5			
						9.9 1230 171 1810 2.9			

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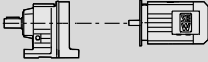



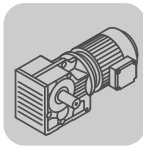
K..DRE/DRS K..DRE/DRS [HP]

P_m [HP]	n_a [rpm]	T_a [lb-in]	i	$F_{Ra}^{1)}$ [lb]	SEW f_B		m [lbs]		
0.25	8.3	1560	205	1320	1.15				
	9.4	1360	181	1370	1.30				
	11	1190	160	1400	1.50	K 37R17	DRS 71S4	47	535
	12	990	136	1430	1.75	KF 37R17	DRS 71S4	52	535
	13	960	127	1440	1.85	KA 37R17	DRS 71S4	47	535
	15	810	110	1460	2.2	KAF 37R17	DRS 71S4	51	535
	18	705	96	1470	2.5				
	13	1170	131.87*	1810	3.0	K 47	DRS 71S4	55	486
						KF 47	DRS 71S4	62	487
						KA 47	DRS 71S4	53	488
						KAF 47	DRS 71S4	59	487
	16	950	106.38	1440	1.85				
	17	870	97.81	1450	2.0	K 37	DRS 71S4	41	481
	20	745	83.69	1450	2.4	KF 37	DRS 71S4	46	482
	23	645	72.54	1400	2.7	KA 37	DRS 71S4	41	483
25	605	67.80	1370	2.9	KAF 37	DRS 71S4	44	482	
0.33	0.26	66600	6565	18300	1.75	K 127R77	DRS 71S4	1040	535
	0.29	56400	5804	18400	2.0	KF 127R77	DRS 71S4	1130	535
	0.34	49900	5027	18500	2.3	KA 127R77	DRS 71S4	980	535
	0.38	43000	4423	18500	2.7	KAF 127R77	DRS 71S4	1060	535
	0.27	61400	6184	14600	1.15				
	0.30	54500	5662	14600	1.30				
	0.33	49500	5138	14600	1.45	K 107R77	DRS 71S4	690	535
	0.39	43800	4359	14600	1.60	KF 107R77	DRS 71S4	710	535
	0.45	38300	3810	14600	1.85	KA 107R77	DRS 71S4	630	535
	0.51	32600	3358	14600	2.2	KAF 107R77	DRS 71S4	680	535
	0.57	29500	2977	14600	2.4				
	0.65	25800	2599	14600	2.7				
	0.47	37700	3583	8990	1.00	K 97R57	DRS 71S4	400	535
	0.55	33000	3108	8990	1.15	KF 97R57	DRS 71S4	445	535
	0.62	28500	2757	8990	1.35	KA 97R57	DRS 71S4	360	535
						KAF 97R57	DRS 71S4	415	535
	0.70	26000	2419	8990	1.45				
	0.80	22600	2123	8990	1.70	K 97R57	DRS 71S4	400	535
	0.92	20000	1856	8990	1.90	KF 97R57	DRS 71S4	440	535
	1.0	16800	1625	8990	2.2	KA 97R57	DRS 71S4	360	535
	1.2	14600	1430	8990	2.6	KAF 97R57	DRS 71S4	415	535
	1.4	13600	1261	8990	2.8				
	0.81	22500	2088	6170	1.05				
	0.92	20000	1854	6250	1.20				
	1.0	17900	1657	6300	1.35	K 87R57	DRS 71S4	265	535
	1.2	15200	1415	6360	1.55	KF 87R57	DRS 71S4	285	535
	1.4	13200	1229	6400	1.80	KA 87R57	DRS 71S4	240	535
	1.6	11400	1078	6430	2.1	KAF 87R57	DRS 71S4	265	535
	1.8	9870	951	6450	2.4				
	2.0	8550	837	6470	2.8				
	1.4	13100	1218	3550	1.05				
	1.6	11400	1053	3810	1.20				
	1.8	10000	924	3980	1.35	K 77R37	DRS 71S4	160	535
2.1	8890	815	4110	1.55	KF 77R37	DRS 71S4	175	535	
2.4	7290	709	4250	1.90	KA 77R37	DRS 71S4	140	535	
2.7	6400	622	4320	2.1	KAF 77R37	DRS 71S4	160	535	
3.1	5750	552	4360	2.4					
3.5	5050	485	4400	2.7					
2.8	6420	613	2490	1.15					
3.1	5650	542	2620	1.30					
3.6	5150	471	2700	1.40	K 67R37	DRS 71S4	105	535	
4.0	4370	420	2790	1.65	KF 67R37	DRS 71S4	115	535	
4.7	3900	361	2840	1.85	KA 67R37	DRS 71S4	99	535	
5.3	3460	323	2890	2.1	KAF 67R37	DRS 71S4	110	535	
6.1	2910	279	2920	2.5					
6.9	2550	246	2920	2.8					

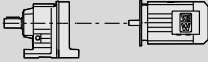


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P_m [HP]	n_a [rpm]	T_a [lb-in]	i	$F_{Ra}^{1)}$ [lb]	SEW f_B		m [lbs]	
0.33	3.6	5110	473	1750	1.05			
	4.0	4380	421	1900	1.20			
	4.7	3910	362	1950	1.35	K 57R37 DRS 71S4	92	535
	5.3	3440	319	2010	1.55	KF 57R37 DRS 71S4	105	535
	6.1	2910	280	2060	1.80	KA 57R37 DRS 71S4	88	535
	6.9	2560	246	2100	2.1	KAF 57R37 DRS 71S4	100	535
	7.9	2260	215	2120	2.3			
	8.8	2010	192	2140	2.6			
	5.2	3530	327	1330	1.00			
	5.9	3120	289	1470	1.15			
6.6	2670	256	1580	1.30	K 47R37 DRS 71S4	79	535	
7.6	2400	225	1640	1.45	KF 47R37 DRS 71S4	86	535	
8.6	2060	198	1700	1.70	KA 47R37 DRS 71S4	77	535	
9.9	1790	171	1740	1.95	KAF 47R37 DRS 71S4	84	535	
11	1600	153	1770	2.2				
13	1400	131	1790	2.5				
15	1180	112	1810	3.0				
11	1710	160	1280	1.05	K 37R17 DRS 71S4	47	535	
12	1440	136	1350	1.25	KF 37R17 DRS 71S4	52	535	
13	1380	127	1360	1.30	KA 37R17 DRS 71S4	47	535	
15	1180	110	1400	1.50	KAF 37R17 DRS 71S4	51	535	
18	1020	96	1430	1.75				
7.6	2780	144.79*	2920	2.6	K 67 DRS 71S6	80	496	
					KF 67 DRS 71S6	93	497	
					KA 67 DRS 71S6	74	498	
					KAF 67 DRS 71S6	87	497	
7.6	2780	145.14*	2070	1.90	K 57 DRS 71S6	67	491	
8.9	2370	123.85	2110	2.2	KF 57 DRS 71S6	78	492	
10	2070	108.29	2140	2.6	KA 57 DRS 71S6	63	493	
11	1970	102.88*	2150	2.7	KAF 57 DRS 71S6	75	492	
12	1800	145.14*	2160	2.9	K 57 DRS 71S4	67	491	
					KF 57 DRS 71S4	78	492	
					KA 57 DRS 71S4	63	493	
					KAF 57 DRS 71S4	75	492	
8.3	2530	131.87*	1610	1.40				
9.0	2330	121.48*	1650	1.50				
11	2000	104.37	1710	1.75	K 47 DRS 71S6	55	486	
12	1740	90.86	1750	2.0	KF 47 DRS 71S6	62	487	
13	1630	85.12*	1760	2.2	KA 47 DRS 71S6	53	488	
15	1440	75.20*	1790	2.4	KAF 47 DRS 71S6	59	487	
16	1340	69.84	1800	2.6				
17	1210	63.30*	1810	2.9				
13	1630	131.87*	1760	2.2	K 47 DRS 71S4	55	486	
14	1500	121.48*	1780	2.3	KF 47 DRS 71S4	62	487	
16	1290	104.37	1800	2.7	KA 47 DRS 71S4	53	488	
					KAF 47 DRS 71S4	59	487	
13	1600	83.69	1310	1.10				
15	1390	72.54	1360	1.25				
16	1300	67.80	1380	1.35	K 37 DRS 71S6	41	481	
19	1120	58.60	1410	1.55	KF 37 DRS 71S6	46	482	
22	950	49.79	1360	1.85	KA 37 DRS 71S6	41	483	
25	850	44.46	1320	2.1	KAF 37 DRS 71S6	44	482	
29	725	37.97	1270	2.4				
31	680	35.57	1250	2.6				
16	1320	106.38	1380	1.35				
17	1210	97.81	1400	1.45	K 37 DRS 71S4	41	481	
20	1030	83.69	1380	1.70	KF 37 DRS 71S4	46	482	
23	900	72.54	1340	1.95	KA 37 DRS 71S4	41	483	
25	840	67.80	1320	2.1	KAF 37 DRS 71S4	44	482	
29	725	58.60	1270	2.4				
34	615	49.79	1220	2.9				
0.50	0.26	102800	6565	18000	1.10			
	0.29	88300	5804	18100	1.30			
	0.34	77500	5027	18200	1.50	K 127R77 DRS 71S4	1040	535
	0.38	67300	4423	18300	1.70	KF 127R77 DRS 71S4	1130	535
	0.44	58800	3889	18400	1.95	KA 127R77 DRS 71S4	980	535
	0.51	49300	3311	18500	2.3	KAF 127R77 DRS 71S4	1060	535
	0.56	44300	3009	18500	2.6			



K..DRE/DRS
K..DRE/DRS [HP]

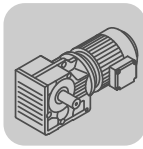
P_m [HP]	n_a [rpm]	T_a [lb-in]	i	$F_{Ra}^{1)}$ [lb]	SEW f_B		m [lbs]				
0.50	0.39	67800	4359	14600	1.05						
	0.45	59300	3810	14600	1.20						
	0.51	51100	3358	14600	1.40	K	107R77	DRS	71S4	690	535
	0.57	45900	2977	14600	1.55	KF	107R77	DRS	71S4	710	535
	0.65	40100	2599	14600	1.75	KA	107R77	DRS	71S4	630	535
	0.74	34800	2286	14600	2.0	KAF	107R77	DRS	71S4	680	535
	0.88	29500	1939	14600	2.4						
	0.99	26900	1713	14600	2.6	K	107R77	DRS	71S4	680	535
	1.1	24400	1554	14600	2.9	KF	107R77	DRS	71S4	710	535
						KA	107R77	DRS	71S4	620	535
						KAF	107R77	DRS	71S4	680	535
	0.80	34400	2123	8990	1.10						
	0.92	30300	1856	8990	1.25						
	1.0	25900	1625	8990	1.45	K	97R57	DRS	71S4	400	535
	1.2	22500	1430	8990	1.70	KF	97R57	DRS	71S4	440	535
	1.4	20600	1261	8990	1.85	KA	97R57	DRS	71S4	360	535
	1.5	18000	1102	8990	2.1	KAF	97R57	DRS	71S4	415	535
	1.8	15700	957	8990	2.4						
	2.0	14100	855	8990	2.7						
	1.2	23100	1415	6160	1.05						
	1.4	20000	1229	6240	1.20						
	1.6	17400	1078	6310	1.35	K	87R57	DRS	71S4	265	535
	1.8	15100	951	6360	1.55	KF	87R57	DRS	71S4	285	535
	2.0	13200	837	6400	1.80	KA	87R57	DRS	71S4	240	535
2.3	11400	726	6430	2.1	KAF	87R57	DRS	71S4	265	535	
2.7	10100	638	6450	2.4							
3.0	8860	562	6470	2.7							
2.1	13400	815	3510	1.00							
2.4	11200	709	3840	1.20							
2.7	9860	622	4010	1.40							
3.1	8830	552	4120	1.55	K	77R37	DRS	71S4	160	535	
3.5	7750	485	4210	1.75	KF	77R37	DRS	71S4	175	535	
4.0	6830	428	4280	2.0	KA	77R37	DRS	71S4	140	535	
4.6	5970	367	4340	2.3	KAF	77R37	DRS	71S4	160	535	
5.2	5300	328	4380	2.6							
5.9	4710	290	4410	2.9							
4.0	6710	420	2430	1.10							
4.7	5940	361	2580	1.20							
5.3	5270	323	2680	1.35	K	67R37	DRS	71S4	105	535	
6.1	4460	279	2780	1.65	KF	67R37	DRS	71S4	115	535	
6.9	3920	246	2840	1.85	KA	67R37	DRS	71S4	99	535	
7.8	3480	217	2880	2.1	KAF	67R37	DRS	71S4	110	535	
8.9	3070	191	2920	2.4							
10	2630	166	2920	2.8							
5.3	5240	319	1730	1.00							
6.1	4470	280	1880	1.20							
6.9	3930	246	1950	1.35							
7.9	3470	215	2000	1.55	K	57R37	DRS	71S4	92	535	
8.8	3080	192	2040	1.70	KF	57R37	DRS	71S4	105	535	
10	2670	166	2090	2.00	KA	57R37	DRS	71S4	88	535	
12	2330	145	2120	2.3	KAF	57R37	DRS	71S4	100	535	
13	2110	129	2140	2.5							
15	1780	111	2160	3.0							
8.6	3160	198	1450	1.10							
9.9	2740	171	1560	1.30							
11	2450	153	1630	1.45	K	47R37	DRS	71S4	79	535	
13	2140	131	1690	1.65	KF	47R37	DRS	71S4	86	535	
15	1810	112	1740	1.95	KA	47R37	DRS	71S4	77	535	
17	1610	99	1770	2.2	KAF	47R37	DRS	71S4	84	535	
18	1520	94	1780	2.3							
18	1560	96	1320	1.15	K	37R17	DRS	71S4	47	535	
					KF	37R17	DRS	71S4	52	535	
					KA	37R17	DRS	71S4	47	535	
					KAF	37R17	DRS	71S4	51	535	
5.7	5460	192.18	4370	2.4	K	77	DRS	71M6	140	501	
6.1	5090	179.37	4390	2.5	KF	77	DRS	71M6	160	502	
					KA	77	DRS	71M6	125	503	
					KAF	77	DRS	71M6	140	502	

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P _m [HP]	n _a [rpm]	T _a [lb-in]	i	F _{Ra} ¹⁾ [lb]	SEW f _B			m [lbs]		
0.50	7.6	4110	144.79*	2820	1.75	K 67 KF 67 KA 67 KAF 67	DRS 71M6	83	496	
	8.9	3510	123.54	2880	2.1			96	497	
	10	3070	108.03	2920	2.4			77	498	
	11	2910	102.62	2920	2.5			90	497	
	12	2550	90.04	2920	2.8					
	12	2660	144.79*	2920	2.7	K 67 KF 67 KA 67 KAF 67	DRS 71S4	80	496	
								93	497	
								74	498	
								87	497	
	7.6	4120	145.14*	1930	1.30	K 57 KF 57 KA 57 KAF 57	DRS 71M6	70	491	
	8.9	3510	123.85	2000	1.50			81	492	
	10	3070	108.29	2040	1.75			66	493	
	11	2920	102.88*	2060	1.80			78	492	
	12	2560	90.26*	2100	2.1					
	14	2170	76.56*	2130	2.4					
16	1960	69.12	2150	2.7						
12	2660	145.14*	2090	2.00	K 57 KF 57 KA 57 KAF 57	DRS 71S4	67	491		
14	2270	123.85	2120	2.3			78	492		
16	1990	108.29	2150	2.7			63	493		
17	1890	102.88*	2150	2.8			75	492		
9.0	3450	121.48*	1360	1.05	K 47 KF 47 KA 47 KAF 47	DRS 71M6	57	486		
11	2960	104.37	1510	1.20			65	487		
12	2580	90.86	1600	1.35			55	488		
13	2410	85.12*	1640	1.45			62	487		
15	2130	75.20*	1690	1.65			55	488		
16	1980	69.84	1710	1.80			62	487		
17	1790	63.30*	1740	1.95			53	488		
19	1610	56.83	1770	2.2			59	487		
22	1390	48.95*	1790	2.5						
24	1300	46.03*	1800	2.7						
13	2420	131.87*	1640	1.45	K 47 KF 47 KA 47 KAF 47	DRS 71S4	55	486		
14	2230	121.48*	1670	1.60			62	487		
16	1910	104.37	1720	1.85			53	488		
19	1670	90.86	1760	2.1			59	487		
20	1560	85.12*	1770	2.3						
23	1380	75.20*	1790	2.6						
24	1280	69.84	1800	2.8						
19	1660	58.60	1280	1.05	K 37 KF 37 KA 37 KAF 37	DRS 71M6	44	481		
22	1410	49.79	1250	1.25			49	482		
25	1260	44.46	1230	1.40			43	483		
29	1070	37.97	1190	1.65			47	482		
31	1010	35.57	1180	1.75						
37	850	29.96	1130	2.1						
38	810	28.83	1130	2.2						
44	710	24.99	1090	2.5						
47	660	23.36	1070	2.6						
54	570	20.19	1030	2.8						
20	1530	83.69	1270	1.15	K 37 KF 37 KA 37 KAF 37	DRS 71S4	41	481		
23	1330	72.54	1240	1.35			46	482		
25	1240	67.80	1220	1.40			41	483		
29	1070	58.60	1190	1.65			44	482		
34	910	49.79	1150	1.95						
38	810	44.46	1120	2.2						
45	695	37.97	1080	2.5						
48	650	35.57	1070	2.7						
0.75	0.26	145000	6562	33700	1.95	K 167R97	DRS 71M4	2610	535	
	0.32	113600	5355	33700	2.5	KH 167R97	DRS 71M4	2530	535	
	0.25	152100	6881	25300	1.05	K 157R97	DRS 71M4	1740	535	
	0.28	131100	5931	25500	1.20	KF 157R97	DRS 71M4	1920	535	
	0.42	87900	3979	25900	1.80	KA 157R97	DRS 71M4	1660	535	
	0.55	67400	3051	26000	2.4	KAF 157R97	DRS 71M4	1790	535	
	0.38	104500	4423	17900	1.10	K 127R77	DRS 71M4	1040	535	
	0.43	91500	3889	18100	1.25	KF 127R77	DRS 71M4	1140	535	
	0.51	77100	3311	18200	1.50	KA 127R77	DRS 71M4	980	535	
	0.56	69600	3009	18300	1.65	KAF 127R77	DRS 71M4	1060	535	
	0.65	59600	2607	18400	1.95					

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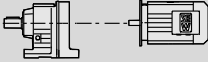



K..DRE/DRS
K..DRE/DRS [HP]

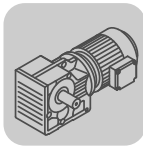
P_m [HP]	n_a [rpm]	T_a [lb-in]	i	$F_{Ra}^{1)}$ [lb]	SEW f_B		m [lbs]		
0.75	0.88	46400	1926	18500	2.5	K 127R77 DRS 71M4 KF 127R77 DRS 71M4 KA 127R77 DRS 71M4 KAF 127R77 DRS 71M4	1040	535	
	0.96	42300	1757	18500	2.7		1130	535	
0.57	0.65	70900	2977	14600	1.00	K 107R77 DRS 71M4 KF 107R77 DRS 71M4 KA 107R77 DRS 71M4 KAF 107R77 DRS 71M4	690	535	
	0.74	54000	2286	14600	1.15		720	535	
	0.87	45800	1939	14600	1.30		630	535	
	0.99	41500	1713	14600	1.55		680	535	
	1.1	37700	1554	14600	1.70		690	535	
1.1	1.3	32400	1336	14600	1.90	K 107R77 DRS 71M4 KF 107R77 DRS 71M4 KA 107R77 DRS 71M4 KAF 107R77 DRS 71M4	710	535	
	1.4	28300	1166	14600	2.2		630	535	
	1.6	24100	1030	14600	2.5		680	535	
	1.2	34700	1430	8990	2.9		K 97R57 DRS 71M4 KF 97R57 DRS 71M4 KA 97R57 DRS 71M4 KAF 97R57 DRS 71M4	400	535
	1.3	31300	1261	8990	1.10			445	535
	1.5	27400	1102	8990	1.20			360	535
	1.8	24000	957	8990	1.40			415	535
	2.0	21400	855	8990	1.60			K 87R57 DRS 71M4 KF 87R57 DRS 71M4 KA 87R57 DRS 71M4 KAF 87R57 DRS 71M4	265
2.3	17800	743	8990	1.75	285	535			
2.6	15700	652	8990	1.85	240	535			
3.0	14200	573	8990	2.1	270	535			
1.8	23200	951	6150	2.3	K 77R37 DRS 71M4 KF 77R37 DRS 71M4 KA 77R37 DRS 71M4 KAF 77R37 DRS 71M4	160	535		
2.0	20300	837	6240	1.35		180	535		
2.3	17600	726	6310	1.55		145	535		
2.6	15600	638	6350	1.75		160	535		
3.0	13600	562	6390	1.90		K 67R37 DRS 71M4 KF 67R37 DRS 71M4 KA 67R37 DRS 71M4 KAF 67R37 DRS 71M4	110	535	
3.6	11400	474	6430	2.2			120	535	
4.0	10300	426	6450	2.5			100	535	
4.5	9050	373	6470	2.9			115	535	
3.1	13500	552	3490	1.00	K 57R37 DRS 71M4 KF 57R37 DRS 71M4 KA 57R37 DRS 71M4 KAF 57R37 DRS 71M4		95	535	
3.5	11800	485	3750	1.15			105	535	
4.0	10400	428	3940	1.30			90	535	
4.6	9090	367	4090	1.50			105	535	
5.2	8080	328	4180	1.70		K 47R37 DRS 71M4 KF 47R37 DRS 71M4 KA 47R37 DRS 71M4 KAF 47R37 DRS 71M4	82	535	
5.8	7180	290	4260	1.90			89	535	
6.7	6190	252	4330	2.2			80	535	
7.6	5430	221	4380	2.5			86	535	
8.7	4790	195	4410	2.9	K 87 DRS 80S6 KF 87 DRS 80S6 KA 87 DRS 80S6 KAF 87 DRS 80S6		225	506	
6.1	6830	279	2410	1.05			245	507	
6.9	6010	246	2560	1.20			195	508	
7.8	5350	217	2670	1.35			225	507	
8.8	4700	191	2760	1.55		K 77 DRS 80S6 KF 77 DRS 80S6 KA 77 DRS 80S6 KAF 77 DRS 80S6	145	501	
10	4040	166	2830	1.80			165	502	
12	3560	144	2880	2.0			130	503	
14	3020	122	2920	2.4			145	502	
7.9	5320	215	1710	1.00	K 77 DRS 71M4 KF 77 DRS 71M4 KA 77 DRS 71M4 KAF 77 DRS 71M4		140	501	
8.8	4710	192	1840	1.15			160	502	
10	4080	166	1930	1.30			125	503	
12	3570	145	1990	1.50			140	501	
13	3220	129	2030	1.65		K 77 DRS 71M4 KF 77 DRS 71M4 KA 77 DRS 71M4 KAF 77 DRS 71M4	140	501	
15	2730	111	2080	1.95			160	502	
17	2400	97	2110	2.2			125	503	
13	3260	131	1420	1.10			K 87 DRS 80S6 KF 87 DRS 80S6 KA 87 DRS 80S6 KAF 87 DRS 80S6	82	535
15	2770	112	1560	1.25	89			535	
17	2470	99	1630	1.45	80			535	
18	2330	94	1650	1.50	86			535	
5.7	8180	197.37	6480	2.9	K 87 DRS 80S6 KF 87 DRS 80S6 KA 87 DRS 80S6 KAF 87 DRS 80S6			225	506
7.3	6390	154.02	4320	2.2		245		507	
8.3	5610	135.28	4360	2.4		195		508	
8.7	5330	128.52	4380	2.6		225		507	
9.9	4710	113.56	4410	2.9		K 77 DRS 71M4 KF 77 DRS 71M4 KA 77 DRS 71M4 KAF 77 DRS 71M4	145	501	
8.8	5280	192.18	4380	2.4			165	502	
9.4	4930	179.37	4400	2.6			130	503	
							145	502	
					140		501		
					160		502		
					125		503		
					140		502		

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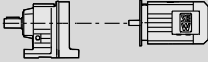




P_m [HP]	n_a [rpm]	T_a [lb-in]	i	$F_{Ra}^{1)}$ [lb]	SEW f_B		m [lbs]	
0.75	9.1	5120	123.54	2700	1.40			
	10	4480	108.03	2780	1.60			
	11	4250	102.62	2810	1.70	K 67	DRS 80S6	88 496
	12	3730	90.04	2860	1.95	KF 67	DRS 80S6	100 497
	15	3160	76.37	2910	2.3	KA 67	DRS 80S6	82 498
	16	2860	68.95	2920	2.5	KAF 67	DRS 80S6	95 497
	18	2510	60.66	2920	2.9			
	12	3980	144.79*	2840	1.80	K 67	DRS 71M4	83 496
	14	3390	123.54	2890	2.1	KF 67	DRS 71M4	96 497
16	2970	108.03	2920	2.4	KA 67	DRS 71M4	77 498	
16	2820	102.62	2920	2.6	KAF 67	DRS 71M4	90 497	
19	2470	90.04	2920	2.9				
9.0	5130	123.85	1750	1.05				
10	4490	108.29	1880	1.20				
11	4260	102.88*	1910	1.25				
12	3740	90.26*	1970	1.40	K 57	DRS 80S6	75 491	
15	3170	76.56*	2030	1.65	KF 57	DRS 80S6	86 492	
16	2860	69.12	2070	1.85	KA 57	DRS 80S6	71 493	
18	2520	60.81*	2100	2.1	KAF 57	DRS 80S6	83 492	
20	2380	57.42*	2110	2.2				
23	2020	48.89	2140	2.6				
25	1840	44.43	2160	2.9				
12	3990	145.14*	1940	1.35				
14	3400	123.85	2010	1.55	K 57	DRS 71M4	70 491	
16	2970	108.29	2060	1.80	KF 57	DRS 71M4	81 492	
16	2820	102.88*	2070	1.90	KA 57	DRS 71M4	66 493	
19	2480	90.26*	2100	2.1	KAF 57	DRS 71M4	78 492	
22	2100	76.56*	2140	2.5				
24	1900	69.12	2150	2.8				
24	1970	145.14*	2150	2.7	K 57	DRS 71M2	70 491	
					KF 57	DRS 71M2	81 492	
					KA 57	DRS 71M2	66 493	
					KAF 57	DRS 71M2	78 492	
13	3530	85.12*	1330	1.00				
15	3110	75.20*	1470	1.15				
16	2890	69.84	1530	1.20				
18	2620	63.30*	1590	1.35				
20	2350	56.83	1650	1.50	K 47	DRS 80S6	62 486	
23	2030	48.95*	1710	1.75	KF 47	DRS 80S6	70 487	
24	1910	46.03*	1730	1.85	KA 47	DRS 80S6	61 488	
28	1640	39.61	1760	2.2	KAF 47	DRS 80S6	67 487	
32	1460	35.39	1780	2.4				
36	1290	31.30	1800	2.7				
38	1210	29.32	1810	2.9				
14	3340	121.48*	1400	1.05				
16	2870	104.37	1530	1.25				
19	2490	90.86	1620	1.40				
20	2340	85.12*	1650	1.50	K 47	DRS 71M4	57 486	
22	2060	75.20*	1700	1.70	KF 47	DRS 71M4	65 487	
24	1920	69.84	1720	1.85	KA 47	DRS 71M4	55 488	
27	1740	63.30*	1750	2.0	KAF 47	DRS 71M4	62 487	
30	1560	56.83	1770	2.3				
35	1340	48.95*	1800	2.6				
37	1260	46.03*	1800	2.8				
26	1790	131.87*	1740	2.00	K 47	DRS 71M2	57 486	
28	1650	121.48*	1760	2.1	KF 47	DRS 71M2	65 487	
33	1410	104.37	1790	2.5	KA 47	DRS 71M2	55 488	
38	1230	90.86	1810	2.9	KAF 47	DRS 71M2	62 487	
29	1570	37.97	1070	1.10				
31	1470	35.57	1060	1.20				
37	1240	29.96	1040	1.40				
39	1190	28.83	1030	1.50				
45	1030	24.99	1010	1.70	K 37	DRS 80S6	48 481	
48	960	23.36	990	1.80	KF 37	DRS 80S6	54 482	
55	830	20.19	970	1.95	KA 37	DRS 80S6	48 483	
65	710	17.15	930	2.2	KAF 37	DRS 80S6	52 482	
73	635	15.31	910	2.4				
86	540	13.08	880	2.7				
92	500	12.14	860	2.8				

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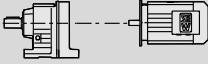



K..DRE/DRS
K..DRE/DRS [HP]

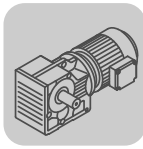
P_m [HP]	n_a [rpm]	T_a [lb-in]	i	$F_{Ra}^{1)}$ [lb]	SEW f_B		m [lbs]		
0.75	29	1610	58.60	1070	1.10				
	34	1360	49.79	1050	1.30				
	38	1220	44.46	1030	1.45				
	44	1040	37.97	1010	1.70	K 37	DRS 71M4	44	481
	48	970	35.57	1000	1.80	KF 37	DRS 71M4	49	482
	56	820	29.96	960	2.2	KA 37	DRS 71M4	43	483
	59	790	28.83	960	2.2	KAF 37	DRS 71M4	47	482
	68	685	24.99	930	2.6				
	72	640	23.36	910	2.7				
	84	550	20.19	880	3.0				
	32	1440	106.38	1060	1.20				
	35	1320	97.81	1050	1.35				
	41	1130	83.69	1020	1.55	K 37	DRS 71M2	44	481
	47	980	72.54	1000	1.80	KF 37	DRS 71M2	49	482
	50	920	67.80	980	1.90	KA 37	DRS 71M2	43	483
	58	795	58.60	960	2.2	KAF 37	DRS 71M2	47	482
	69	675	49.79	920	2.6				
	77	600	44.46	900	2.9				
1.0	0.26	202000	6747	42700	2.2	K 187R97	DRE 80M4	3900	535
	0.29	176000	5991	42700	2.5	KH 187R97	DRE 80M4	3760	535
	0.32	154200	5358	42700	2.9				
	0.27	198700	6562	33700	1.40				
	0.32	157300	5355	33700	1.80	K 167R97	DRE 80M4	2620	535
	0.36	137800	4788	33700	2.0	KH 167R97	DRE 80M4	2540	535
	0.43	122100	4079	33700	2.3				
	0.52	102200	3376	33700	2.8				
	0.34	142900	5074	25400	1.10				
	0.39	127100	4514	25600	1.25	K 157R97	DRE 80M4	1750	535
	0.44	120500	3979	25600	1.30	KF 157R97	DRE 80M4	1930	535
	0.49	101200	3516	25800	1.55	KA 157R97	DRE 80M4	1670	535
	0.57	92400	3051	25900	1.70	KAF 157R97	DRE 80M4	1800	535
	0.67	73500	2610	26000	2.2				
	0.75	65400	2322	26000	2.4				
	0.53	104400	3311	17900	1.10	K 127R77	DRE 80M4	1060	535
	0.58	94300	3009	18100	1.20	KF 127R77	DRE 80M4	1150	535
	0.67	81000	2607	18200	1.40	KA 127R77	DRE 80M4	990	535
	0.77	69900	2268	18300	1.65	KAF 127R77	DRE 80M4	1080	535
	0.90	62500	1926	18400	1.85	K 127R77	DRE 80M4	1050	535
	0.99	57000	1757	18400	2.0	KF 127R77	DRE 80M4	1150	535
	1.1	49600	1541	18500	2.3	KA 127R77	DRE 80M4	990	535
	1.3	43500	1342	18500	2.6	KAF 127R77	DRE 80M4	1070	535
	0.90	61700	1939	14600	1.15	K 107R77	DRE 80M4	700	535
						KF 107R77	DRE 80M4	730	535
						KA 107R77	DRE 80M4	640	535
						KAF 107R77	DRE 80M4	690	535
	1.0	55800	1713	14600	1.25				
	1.1	50600	1554	14600	1.40	K 107R77	DRE 80M4	700	535
	1.3	43500	1336	14600	1.65	KF 107R77	DRE 80M4	730	535
	1.5	38000	1166	14600	1.85	KA 107R77	DRE 80M4	640	535
	1.7	32700	1030	14600	2.2	KAF 107R77	DRE 80M4	690	535
	1.9	28400	904	14600	2.5				
	2.2	25700	793	14600	2.8				
	1.6	36500	1102	8990	1.05				
	1.8	32000	957	8990	1.20				
	2.0	28600	855	8990	1.35	K 97R57	DRE 80M4	410	535
	2.3	24000	743	8990	1.60	KF 97R57	DRE 80M4	455	535
	2.7	21100	652	8990	1.80	KA 97R57	DRE 80M4	370	535
	3.0	19000	573	8990	2.0	KAF 97R57	DRE 80M4	425	535
	3.4	16200	504	8990	2.3				
	4.0	13900	437	8990	2.7				
2.4	23600	726	6140	1.00					
2.7	20900	638	6220	1.15					
3.1	18300	562	6290	1.30					
3.7	15400	474	6360	1.55	K 87R57	DRE 80M4	280	535	
4.1	13800	426	6390	1.70	KF 87R57	DRE 80M4	300	535	
4.7	12100	373	6420	1.95	KA 87R57	DRE 80M4	250	535	
5.3	10600	330	6440	2.2	KAF 87R57	DRE 80M4	280	535	
5.9	9490	294	6460	2.5					
7.0	8240	250	6480	2.9					

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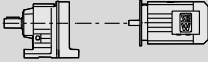




P_m [HP]	n_a [rpm]	T_a [lb-in]	i	$F_{Ra}^{1)}$ [lb]	SEW f_B		m [lbs]	
1.0	4.7	12100	367	3710	1.15			
	5.3	10800	328	3900	1.25			
	6.0	9590	290	4040	1.45	K 77R37	DRE 80M4	170 535
	6.9	8280	252	4170	1.65	KF 77R37	DRE 80M4	190 535
	7.9	7270	221	4250	1.90	KA 77R37	DRE 80M4	155 535
	8.9	6410	195	4310	2.1	KAF 77R37	DRE 80M4	170 535
	10.0	5700	175	4360	2.4			
	11	5030	154	4400	2.7			
	8.0	7170	217	2330	1.00	K 67R37	DRE 80M4	120 535
	9.1	6290	191	2510	1.15	KF 67R37	DRE 80M4	130 535
10	5430	166	2660	1.35	KA 67R37	DRE 80M4	110 535	
12	4770	144	2750	1.50	KAF 67R37	DRE 80M4	125 535	
14	4050	122	2830	1.80				
12	4790	145	1820	1.10	K 57R37	DRE 80M4	105 535	
14	4300	129	1910	1.25	KF 57R37	DRE 80M4	115 535	
16	3660	111	1980	1.45	KA 57R37	DRE 80M4	100 535	
18	3220	97	2030	1.65	KAF 57R37	DRE 80M4	115 535	
18	3300	99	1410	1.05	K 47R37	DRE 80M4	93 535	
18	3130	94	1460	1.15	KF 47R37	DRE 80M4	100 535	
					KA 47R37	DRE 80M4	91 535	
					KAF 47R37	DRE 80M4	97 535	
6.6	9640	174.19	6460	2.5	K 87	DRE 90L6	245 506	
7.0	9090	164.34*	6470	2.6	KF 87	DRE 90L6	265 507	
7.8	8150	147.32*	6480	2.9	KA 87	DRE 90L6	220 508	
					KAF 87	DRE 90L6	245 507	
8.5	7480	135.28	4240	1.85	K 77	DRE 90L6	165 501	
8.9	7110	128.52	4260	1.95	KF 77	DRE 90L6	185 502	
10	6280	113.56	4320	2.2	KA 77	DRE 90L6	150 503	
12	5370	97.05	4380	2.6	KAF 77	DRE 90L6	165 502	
13	4920	88.97	4400	2.8				
11	5600	154.02	4360	2.4	K 77	DRE 80M4	150 501	
13	4920	135.28	4400	2.8	KF 77	DRE 80M4	170 502	
14	4680	128.52	4410	2.9	KA 77	DRE 80M4	135 503	
					KAF 77	DRE 80M4	150 502	
11	5970	108.03	2570	1.20				
11	5670	102.62	2620	1.30				
13	4980	90.04	2720	1.45	K 67	DRE 90L6	110 496	
15	4220	76.37	2810	1.70	KF 67	DRE 90L6	125 497	
17	3810	68.95	2850	1.90	KA 67	DRE 90L6	105 498	
19	3350	60.66	2900	2.2	KAF 67	DRE 90L6	115 497	
20	3170	57.28	2910	2.3				
23	2690	48.77	2920	2.7				
26	2450	44.32	2920	3.0				
14	4490	123.54	2780	1.60				
16	3930	108.03	2840	1.85	K 67	DRE 80M4	94 496	
17	3730	102.62	2860	1.95	KF 67	DRE 80M4	105 497	
19	3270	90.04	2900	2.2	KA 67	DRE 80M4	88 498	
23	2780	76.37	2920	2.6	KAF 67	DRE 80M4	100 497	
25	2510	68.95	2920	2.9				
13	4990	90.26*	1780	1.05				
15	4230	76.56*	1910	1.25				
17	3820	69.12	1960	1.40				
19	3360	60.81*	2010	1.60	K 57	DRE 90L6	98 491	
20	3170	57.42*	2030	1.65	KF 57	DRE 90L6	110 492	
23	2700	48.89	2080	1.95	KA 57	DRE 90L6	93 493	
26	2450	44.43	2100	2.2	KAF 57	DRE 90L6	105 492	
30	2120	38.49	2130	2.5				
32	1970	35.70	2150	2.7				
14	4510	123.85	1880	1.20				
16	3940	108.29	1950	1.35				
17	3740	102.88*	1970	1.40				
19	3280	90.26*	2020	1.60	K 57	DRE 80M4	81 491	
23	2780	76.56*	2070	1.90	KF 57	DRE 80M4	92 492	
25	2510	69.12	2100	2.1	KA 57	DRE 80M4	77 493	
29	2210	60.81*	2130	2.4	KAF 57	DRE 80M4	89 492	
30	2090	57.42*	2140	2.5				
36	1780	48.89	2160	3.0				

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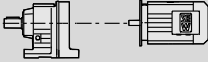



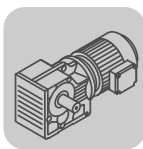
K..DRE/DRS K..DRE/DRS [HP]

P_m [HP]	n_a [rpm]	T_a [lb-in]	i	$F_{Ra}^{1)}$ [lb]	SEW f_B		m [lbs]		
1.0	28	2240	123.85	2120	2.4	K 57	DRE 80M2	81	491
	32	1960	108.29	2150	2.7	KF 57	DRE 80M2	92	492
	34	1860	102.88*	2160	2.8	KA 57	DRE 80M2	77	493
						KAF 57	DRE 80M2	89	492
	18	3500	63.30*	1340	1.00				
	20	3140	56.83	1460	1.15				
	23	2700	48.95*	1570	1.30				
	25	2540	46.03*	1610	1.40				
	29	2190	39.61	1680	1.60	K 47	DRE 90L6	85	486
	32	1950	35.39	1720	1.80	KF 47	DRE 90L6	92	487
37	1730	31.30	1750	2.0	KA 47	DRE 90L6	83	488	
39	1620	29.32	1740	2.2	KAF 47	DRE 90L6	89	487	
44	1430	25.91	1700	2.5					
48	1330	24.06	1670	2.7					
53	1200	21.81	1630	2.9					
19	3300	90.86	1410	1.05					
20	3090	85.12*	1470	1.15					
23	2730	75.20*	1570	1.30					
25	2540	69.84	1610	1.40	K 47	DRE 80M4	68	486	
27	2300	63.30*	1660	1.55	KF 47	DRE 80M4	76	487	
31	2060	56.83	1700	1.70	KA 47	DRE 80M4	67	488	
36	1780	48.95*	1740	2.00	KAF 47	DRE 80M4	73	487	
38	1670	46.03*	1760	2.1					
44	1440	39.61	1700	2.4					
49	1280	35.39	1660	2.8					
33	1890	104.37	1730	1.85	K 47	DRE 80M2	68	486	
38	1650	90.86	1750	2.1	KF 47	DRE 80M2	76	487	
41	1540	85.12*	1720	2.3	KA 47	DRE 80M2	67	488	
46	1360	75.20*	1680	2.6	KAF 47	DRE 80M2	73	487	
50	1260	69.84	1650	2.8					
38	1650	29.96	930	1.05					
46	1380	24.99	920	1.30					
49	1290	23.36	910	1.35					
57	1110	20.19	890	1.45	K 37	DRE 90L6	69	481	
67	940	17.15	870	1.70	KF 37	DRE 90L6	74	482	
75	840	15.31	850	1.85	KA 37	DRE 90L6	69	483	
88	720	13.08	830	2.0	KAF 37	DRE 90L6	73	482	
94	670	12.14	820	2.1					
109	580	10.49	795	2.4					
128	490	8.91	765	2.9					
39	1610	44.46	930	1.10					
46	1380	37.97	920	1.30					
49	1290	35.57	910	1.35					
58	1090	29.96	890	1.60	K 37	DRE 80M4	54	481	
60	1050	28.83	890	1.70	KF 37	DRE 80M4	59	482	
70	910	24.99	870	1.95	KA 37	DRE 80M4	54	483	
74	850	23.36	860	2.0	KAF 37	DRE 80M4	58	482	
86	735	20.19	830	2.2					
101	620	17.15	800	2.6					
114	555	15.31	785	2.8					
42	1510	83.69	920	1.15					
48	1310	72.54	910	1.35					
51	1230	67.80	910	1.45	K 37	DRE 80M2	54	481	
60	1060	58.60	890	1.65	KF 37	DRE 80M2	59	482	
70	900	49.79	860	1.95	KA 37	DRE 80M2	54	483	
78	800	44.46	850	2.2	KAF 37	DRE 80M2	58	482	
92	685	37.97	820	2.6					
98	645	35.57	810	2.7					
1.5	0.26	307800	6747	42700	1.45				
	0.29	269900	5991	42700	1.65	K 187R97	DRE 90M4	3910	535
	0.32	238200	5358	42700	1.85	KH 187R97	DRE 90M4	3760	535
	0.36	211200	4817	42700	2.1				
	0.40	191600	4370	42700	2.3				
	0.48	169500	3609	42700	2.6	K 187R97	DRE 90M4	3910	535
					KH 187R97	DRE 90M4	3760	535	

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P_m [HP]	n_a [rpm]	T_a [lb-in]	i	$F_{Ra}^{1)}$ [lb]	SEW f_B		m [lbs]		
1.5	0.32	241200	5355	33700	1.15				
	0.36	212900	4788	33700	1.35				
	0.43	186100	4079	33700	1.50	K	167R97	DRE 90M4	2630 535
	0.52	155100	3376	33700	1.80	KH	167R97	DRE 90M4	2540 535
	0.63	124100	2755	33700	2.3				
	0.80	102500	2182	33700	2.8	K	167R97	DRE 90M4	2620 535
						KH	167R97	DRE 90M4	2540 535
	0.49	156300	3516	25200	1.00	K	157R97	DRE 90M4	1760 535
	0.57	140200	3051	25400	1.15	KF	157R97	DRE 90M4	1930 535
	0.67	114400	2610	25700	1.40	KA	157R97	DRE 90M4	1680 535
0.75	101800	2322	25800	1.55	KAF	157R97	DRE 90M4	1810 535	
1.0	77100	1659	26000	2.1	K	157R97	DRE 90M4	1750 535	
1.3	62200	1365	26100	2.6	KF	157R97	DRE 90M4	1930 535	
1.4	55300	1229	26100	2.9	KA	157R97	DRE 90M4	1670 535	
					KAF	157R97	DRE 90M4	1800 535	
0.77	105500	2268	17900	1.10	K	127R77	DRE 90M4	1060 535	
					KF	127R77	DRE 90M4	1160 535	
					KA	127R77	DRE 90M4	1000 535	
					KAF	127R77	DRE 90M4	1080 535	
0.90	93000	1926	18100	1.25					
0.99	84800	1757	18200	1.35					
1.1	74100	1541	18300	1.55	K	127R77	DRE 90M4	1060 535	
1.3	64800	1342	18400	1.75	KF	127R77	DRE 90M4	1150 535	
1.5	56600	1177	18400	2.0	KA	127R77	DRE 90M4	1000 535	
1.7	49500	1025	18500	2.3	KAF	127R77	DRE 90M4	1080 535	
1.9	43200	899	18500	2.7					
1.3	64700	1336	14600	1.10					
1.5	56500	1166	14600	1.25					
1.7	49000	1030	14600	1.45	K	107R77	DRE 90M4	710 535	
1.9	42700	904	14600	1.65	KF	107R77	DRE 90M4	730 535	
2.2	38300	793	14600	1.85	KA	107R77	DRE 90M4	650 535	
2.5	33400	696	14600	2.1	KAF	107R77	DRE 90M4	700 535	
2.8	29100	615	14600	2.4					
3.3	24700	522	14600	2.9					
2.3	35800	743	8990	1.05					
2.7	31500	652	8990	1.20					
3.0	28200	573	8990	1.35	K	97R57	DRE 90M4	425 535	
3.4	24200	504	8990	1.55	KF	97R57	DRE 90M4	465 535	
4.0	20900	437	8990	1.80	KA	97R57	DRE 90M4	380 535	
4.6	18500	382	8990	2.0	KAF	97R57	DRE 90M4	435 535	
5.1	16300	342	8990	2.3					
5.7	14900	305	8990	2.5					
3.7	22900	474	6160	1.05					
4.1	20600	426	6230	1.15					
4.7	18100	373	6290	1.30	K	87R57	DRE 90M4	290 535	
5.3	15800	330	6350	1.50	KF	87R57	DRE 90M4	310 535	
5.9	14200	294	6380	1.70	KA	87R57	DRE 90M4	260 535	
7.0	12200	250	6420	1.95	KAF	87R57	DRE 90M4	290 535	
7.4	11500	236	6430	2.1					
8.6	9800	201	6460	2.4					
9.5	8880	183	6470	2.7					
6.9	12200	252	3690	1.10	K	77R37	DRE 90M4	180 535	
7.9	10700	221	3900	1.25	KF	77R37	DRE 90M4	200 535	
8.9	9510	195	4050	1.45	KA	77R37	DRE 90M4	165 535	
10.0	8470	175	4150	1.60	KAF	77R37	DRE 90M4	180 535	
11	7470	154	4240	1.85					
12	7090	144	2350	1.00	K	67R37	DRE 90M4	130 535	
14	6010	122	2560	1.20	KF	67R37	DRE 90M4	140 535	
					KA	67R37	DRE 90M4	120 535	
					KAF	67R37	DRE 90M4	135 535	
18	4780	97	1820	1.10	K	57R37	DRE 90M4	115 535	
					KF	57R37	DRE 90M4	125 535	
					KA	57R37	DRE 90M4	110 535	
					KAF	57R37	DRE 90M4	125 535	
8.8	10500	197.37	6440	2.3	K	87	DRE 90M4	240 506	
10.0	9300	174.19	6460	2.6	KF	87	DRE 90M4	260 507	
11	8770	164.34*	6470	2.7	KA	87	DRE 90M4	210 508	
					KAF	87	DRE 90M4	240 507	



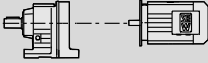


K..DRE/DRS

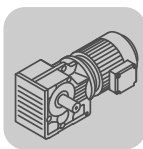
K..DRE/DRS [HP]

P_m [HP]	n_a [rpm]	T_a [lb-in]	i	$F_{Ra}^{1)}$ [lb]	SEW f_B		m [lbs]		
1.5	11	8220	154.02	4170	1.65				
	13	7220	135.28	4260	1.90	K 77	DRE 90M4	160	501
	14	6860	128.52	4280	2.0	KF 77	DRE 90M4	180	502
	15	6060	113.56	4340	2.3	KA 77	DRE 90M4	145	503
	18	5180	97.05	4390	2.6	KAF 77	DRE 90M4	160	502
	20	4750	88.97	4410	2.9				
	14	6590	123.54	2460	1.10				
	16	5760	108.03	2600	1.25				
	17	5480	102.62	2650	1.30				
	19	4800	90.04	2740	1.50	K 67	DRE 90M4	105	496
	23	4070	76.37	2830	1.80	KF 67	DRE 90M4	115	497
	25	3680	68.95	2870	1.95	KA 67	DRE 90M4	99	498
	29	3240	60.66	2900	2.2	KAF 67	DRE 90M4	110	497
	30	3050	57.28	2920	2.4				
	36	2600	48.77	2920	2.8				
	28	3300	123.54	2900	2.2	K 67	DRE 90M2	105	496
	32	2890	108.03	2920	2.5	KF 67	DRE 90M2	115	497
	34	2740	102.62	2920	2.6	KA 67	DRE 90M2	99	498
						KAF 67	DRE 90M2	110	497
19	4820	90.26*	1810	1.10					
23	4080	76.56*	1930	1.30					
25	3690	69.12	1980	1.45					
29	3240	60.81*	2030	1.65	K 57	DRE 90M4	92	491	
30	3060	57.42*	2050	1.75	KF 57	DRE 90M4	105	492	
36	2610	48.89	2090	2.0	KA 57	DRE 90M4	88	493	
39	2370	44.43	2110	2.2	KAF 57	DRE 90M4	100	492	
45	2050	38.49	2140	2.6					
49	1900	35.70	2150	2.8					
28	3310	123.85	2020	1.60					
32	2900	108.29	2060	1.85	K 57	DRE 90M2	92	491	
34	2750	102.88*	2080	1.95	KF 57	DRE 90M2	105	492	
38	2410	90.26*	2110	2.2	KA 57	DRE 90M2	88	493	
45	2050	76.56*	2140	2.6	KAF 57	DRE 90M2	100	492	
50	1850	69.12	2150	2.9					
27	3380	63.30*	1390	1.05					
31	3030	56.83	1490	1.15					
36	2610	48.95*	1600	1.35					
38	2450	46.03*	1600	1.45	K 47	DRE 90M4	79	486	
44	2110	39.61	1570	1.65	KF 47	DRE 90M4	86	487	
49	1890	35.39	1540	1.85	KA 47	DRE 90M4	77	488	
56	1670	31.30	1510	2.1	KAF 47	DRE 90M4	84	487	
59	1560	29.32	1490	2.3					
67	1380	25.91	1450	2.6					
72	1280	24.06	1430	2.8					
33	2790	104.37	1550	1.25					
38	2430	90.86	1600	1.45					
41	2280	85.12*	1590	1.55					
46	2010	75.20*	1560	1.75	K 47	DRE 90M2	79	486	
50	1870	69.84	1540	1.90	KF 47	DRE 90M2	86	487	
55	1690	63.30*	1510	2.1	KA 47	DRE 90M2	77	488	
61	1520	56.83	1480	2.3	KAF 47	DRE 90M2	84	487	
71	1310	48.95*	1430	2.7					
75	1230	46.03*	1410	2.9					
58	1600	29.96	775	1.10					
60	1530	28.83	770	1.15					
70	1330	24.99	765	1.35					
74	1240	23.36	765	1.40					
86	1070	20.19	755	1.50	K 37	DRE 90M4	64	481	
101	910	17.15	735	1.75	KF 37	DRE 90M4	69	482	
114	810	15.31	725	1.90	KA 37	DRE 90M4	63	483	
133	695	13.08	705	2.1	KAF 37	DRE 90M4	67	482	
143	645	12.14	695	2.2					
166	560	10.49	675	2.5					
195	475	8.91	655	3.0					

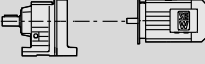


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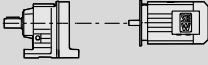


P_m [HP]	n_a [rpm]	T_a [lb-in]	i	$F_{Ra}^{1)}$ [lb]	SEW f_B		m [lbs]		
1.5	59	1560	58.60	775	1.15				
	70	1330	49.79	765	1.35				
	78	1190	44.46	760	1.50				
	91	1010	37.97	745	1.75	K 37	DRE 90M2	64	481
	98	950	35.57	740	1.85	KF 37	DRE 90M2	69	482
	116	800	29.96	720	2.2	KA 37	DRE 90M2	63	483
	120	770	28.83	720	2.3	KAF 37	DRE 90M2	67	482
	139	665	24.99	700	2.6				
	149	625	23.36	690	2.8				
2.0	0.26	428700	6747	42700	1.05				
	0.29	377300	5991	42700	1.15				
	0.32	334200	5358	42700	1.30	K 187R97	DRE 90L4	3920	535
	0.36	297500	4817	42700	1.50	KH 187R97	DRE 90L4	3770	535
	0.40	269900	4370	42700	1.65				
	0.48	235000	3609	42700	1.90				
	0.57	197900	3062	42700	2.2	K 187R97	DRE 90L4	3910	535
	0.69	160500	2519	42700	2.8	KH 187R97	DRE 90L4	3760	535
	0.43	259200	4079	33700	1.10				
	0.52	215600	3376	33700	1.30	K 167R97	DRE 90L4	2630	535
	0.63	173500	2755	33700	1.65	KH 167R97	DRE 90L4	2550	535
	0.80	142000	2182	33700	2.00	K 167R97	DRE 90L4	2630	535
	1.0	109500	1704	33700	2.6	KH 167R97	DRE 90L4	2540	535
	0.75	143400	2322	25400	1.10				
						K 157R97	DRE 90L4	1770	535
						KF 157R97	DRE 90L4	1940	535
						KA 157R97	DRE 90L4	1690	535
						KAF 157R97	DRE 90L4	1820	535
	1.0	107200	1659	25800	1.50				
	1.3	87000	1365	25900	1.85	K 157R97	DRE 90L4	1760	535
	1.4	77600	1229	26000	2.0	KF 157R97	DRE 90L4	1930	535
	1.6	69000	1093	26000	2.3	KA 157R97	DRE 90L4	1680	535
	1.8	59500	942	26100	2.7	KAF 157R97	DRE 90L4	1810	535
	2.0	53300	854	26100	3.0				
	1.1	102100	1541	18000	1.15				
	1.3	89100	1342	18100	1.30				
	1.5	77900	1177	18200	1.45	K 127R77	DRE 90L4	1070	535
	1.7	68100	1025	18300	1.70	KF 127R77	DRE 90L4	1160	535
	1.9	59500	899	18400	1.95	KA 127R77	DRE 90L4	1000	535
	2.2	51300	790	18500	2.2	KAF 127R77	DRE 90L4	1090	535
	2.5	46400	704	18500	2.5				
	2.8	39900	610	18500	2.9				
	1.7	67700	1030	14600	1.05				
	1.9	59100	904	14600	1.20				
	2.2	52600	793	14600	1.35				
	2.5	46000	696	14600	1.55	K 107R77	DRE 90L4	710	535
	2.8	40200	615	14600	1.75	KF 107R77	DRE 90L4	740	535
	3.3	34100	522	14600	2.1	KA 107R77	DRE 90L4	650	535
	3.8	30000	461	14600	2.4	KAF 107R77	DRE 90L4	710	535
	4.3	26500	408	14600	2.7				
	4.8	23900	364	14600	3.0				
	3.4	33300	504	8990	1.15				
4.0	28800	437	8990	1.30					
4.6	25400	382	8990	1.50	K 97R57	DRE 90L4	430	535	
5.1	22500	342	8990	1.70	KF 97R57	DRE 90L4	475	535	
5.7	20500	305	8990	1.85	KA 97R57	DRE 90L4	390	535	
6.8	17300	258	8990	2.2	KAF 97R57	DRE 90L4	445	535	
7.5	15500	232	8990	2.4					
8.7	13300	199	8990	2.8					
5.3	21800	330	6190	1.10					
5.9	19500	294	6260	1.20					
7.0	16800	250	6320	1.40	K 87R57	DRE 90L4	295	535	
7.4	15800	236	6350	1.50	KF 87R57	DRE 90L4	315	535	
8.6	13400	201	6390	1.75	KA 87R57	DRE 90L4	270	535	
9.5	12200	183	6420	1.95	KAF 87R57	DRE 90L4	295	535	
11	10500	159	6440	2.3					
12	9380	141	6460	2.4					
8.9	13000	195	3570	1.05	K 77R37	DRE 90L4	185	535	
10.0	11600	175	3790	1.20	KF 77R37	DRE 90L4	205	535	
11	10200	154	3960	1.35	KA 77R37	DRE 90L4	170	535	
					KAF 77R37	DRE 90L4	185	535	



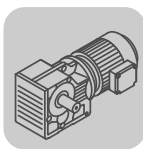
K..DRE/DRS K..DRE/DRS [HP]

P_m [HP]	n_a [rpm]	T_a [lb-in]	i	$F_{Ra}^{(1)}$ [lb]	SEW f_B		m [lbs]		
2.0	9.9	12800	176.05*	8990	3.0	K 97	DRE 90L4	375	511
						KF 97	DRE 90L4	420	512
						KA 97	DRE 90L4	335	513
						KAF 97	DRE 90L4	390	512
	10.0	12600	174.19	6410	1.90	K 87	DRE 90L4	245	506
	11	11900	164.34*	6420	2.0	KF 87	DRE 90L4	265	507
	12	10700	147.32*	6440	2.2	KA 87	DRE 90L4	220	508
	14	9240	126.91*	6460	2.6	KAF 87	DRE 90L4	245	507
	15	8430	115.82	6470	2.8				
	13	9850	135.28	4010	1.40				
	14	9360	128.52	4060	1.45				
	15	8270	113.56	4170	1.65	K 77	DRE 90L4	165	501
	18	7060	97.05	4270	1.95	KF 77	DRE 90L4	185	502
	20	6480	88.97	4310	2.1	KA 77	DRE 90L4	150	503
	22	5680	78.07	4360	2.4	KAF 77	DRE 90L4	165	502
	24	5380	73.99	4380	2.5				
	27	4710	64.75	4410	2.9				
	19	6550	90.04	2460	1.10				
	23	5560	76.37	2640	1.30				
	25	5020	68.95	2710	1.45				
	29	4410	60.66	2790	1.65	K 67	DRE 90L4	110	496
	30	4170	57.28	2820	1.75	KF 67	DRE 90L4	125	497
	36	3550	48.77	2880	2.0	KA 67	DRE 90L4	105	498
	39	3220	44.32	2910	2.2	KAF 67	DRE 90L4	115	497
	45	2790	38.39	2920	2.5				
	49	2590	35.62	2920	2.8				
	25	5030	69.12	1770	1.05				
	29	4420	60.81*	1890	1.20				
	30	4180	57.42*	1920	1.25				
	36	3560	48.89	1990	1.50	K 57	DRE 90L4	98	491
	39	3230	44.43	2030	1.65	KF 57	DRE 90L4	110	492
	45	2800	38.49	2070	1.90	KA 57	DRE 90L4	93	493
	49	2600	35.70	2050	2.0	KAF 57	DRE 90L4	105	492
	57	2200	30.28	1980	2.4				
	64	1990	27.34	1940	2.7				
	38	3350	46.03*	1400	1.05				
	44	2880	39.61	1420	1.25				
	49	2570	35.39	1410	1.35				
	56	2280	31.30	1390	1.55				
	59	2130	29.32	1380	1.65	K 47	DRE 90L4	85	486
	67	1880	25.91	1350	1.90	KF 47	DRE 90L4	92	487
	72	1750	24.06	1340	2.0	KA 47	DRE 90L4	83	488
	80	1580	21.81	1310	2.2	KAF 47	DRE 90L4	89	487
	89	1420	19.58	1290	2.5				
	103	1220	16.86	1250	2.7				
	110	1150	15.86	1230	2.9				
	148	850	11.77	1140	2.9				
	74	1700	23.36	660	1.00				
86	1470	20.19	660	1.10					
101	1240	17.15	660	1.25					
114	1110	15.31	655	1.40					
133	950	13.08	645	1.55	K 37	DRE 90L4	69	481	
143	880	12.14	640	1.60	KF 37	DRE 90L4	74	482	
166	760	10.49	630	1.85	KA 37	DRE 90L4	69	483	
195	645	8.91	615	2.2	KAF 37	DRE 90L4	73	482	
219	575	7.96	600	2.4					
256	495	6.80	585	2.7					
273	460	6.37	575	2.8					
3.0	0.40	408200	4370	42700	1.10	K 187R97	DRE 100L4	3930	535
	0.62	254800	2818	42700	1.75	KH 187R97	DRE 100L4	3790	535
	0.48	350500	3609	42700	1.25				
	0.57	296000	3062	42700	1.50				
	0.69	241300	2519	42700	1.85				
	0.77	215800	2268	42700	2.0	K 187R97	DRE 100L4	3930	535
	0.84	194200	2054	42700	2.3	KH 187R97	DRE 100L4	3780	535
	0.95	170500	1821	42700	2.6				
	1.1	151700	1605	42700	2.9				
	0.63	260600	2755	33700	1.10	K 167R97	DRE 100L4	2650	535
	0.77	207600	2263	33700	1.35	KH 167R97	DRE 100L4	2570	535



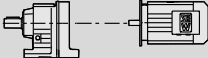
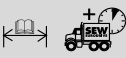
P_m [HP]	n_a [rpm]	T_a [lb-in]	i	$F_{Ra}^{1)}$ [lb]	SEW f_B		m [lbs]					
3.0	0.80	211900	2182	33700	1.35							
	1.0	164100	1704	33700	1.70	K	167R97	DRE	100L4	2640	535	
	1.2	136000	1408	33700	2.1	KH	167R97	DRE	100L4	2560	535	
	1.3	124800	1296	33700	2.3							
	1.6	103100	1101	33700	2.8							
	1.3	130700	1365	25500	1.20							
	1.4	116900	1229	25700	1.35	K	157R97	DRE	100L4	1780	535	
	1.6	104000	1093	25800	1.55	KF	157R97	DRE	100L4	1950	535	
	1.8	89700	942	25900	1.80	KA	157R97	DRE	100L4	1700	535	
	2.0	80700	854	26000	1.95	KAF	157R97	DRE	100L4	1830	535	
	2.3	69200	756	26000	2.3							
	3.1	53000	567	26100	3.0							
	3.2	51100	536	18500	2.2	K	127R87	DRE	100L4	1130	535	
	3.7	44500	473	18500	2.6	KF	127R87	DRE	100L4	1220	535	
	4.2	40300	418	18500	2.8	KA	127R87	DRE	100L4	1070	535	
						KAF	127R87	DRE	100L4	1150	535	
	1.7	100900	1025	18000	1.15							
	1.9	88300	899	18100	1.30	K	127R77	DRE	100L4	1080	535	
	2.2	76600	790	18300	1.50	KF	127R77	DRE	100L4	1180	535	
	2.5	68900	704	18300	1.65	KA	127R77	DRE	100L4	1020	535	
	2.8	59500	610	18400	1.95	KAF	127R77	DRE	100L4	1100	535	
	3.2	53700	549	18400	2.1							
	3.6	46300	477	18500	2.5							
	4.2	40900	418	18500	2.8							
	2.5	68300	696	14600	1.05	K	107R77	DRE	100L4	730	535	
	2.8	59900	615	14600	1.20	KF	107R77	DRE	100L4	760	535	
	3.3	50800	522	14600	1.40	KA	107R77	DRE	100L4	670	535	
	3.8	44700	461	14600	1.60	KAF	107R77	DRE	100L4	720	535	
	4.2	39500	408	14600	1.80							
	4.8	35600	364	14600	2.00							
	5.5	31100	318	14600	2.3							
	6.1	28000	286	14600	2.5							
	6.9	24500	251	14600	2.9							
	4.5	37600	382	8990	1.00	K	97R57	DRE	100L4	445	535	
	5.1	33400	342	8990	1.15	KF	97R57	DRE	100L4	490	535	
	5.7	30400	305	8990	1.25	KA	97R57	DRE	100L4	405	535	
	6.7	25600	258	8990	1.50	KAF	97R57	DRE	100L4	460	535	
	7.5	23000	232	8990	1.65							
8.7	19700	199	8990	1.90								
7.3	23500	236	6140	1.00	K	87R57	DRE	100L4	310	535		
8.6	19900	201	6250	1.20	KF	87R57	DRE	100L4	330	535		
9.5	18100	183	6290	1.30	KA	87R57	DRE	100L4	285	535		
11	15600	159	6350	1.50	KAF	87R57	DRE	100L4	315	535		
12	13900	141	6390	1.65								
9.9	18800	176.05*	8990	2.0	K	97	DRE	100L4	395	511		
11	16400	153.21*	8990	2.3	KF	97	DRE	100L4	435	512		
12	15000	140.28	8990	2.5	KA	97	DRE	100L4	355	513		
14	13200	123.93*	8990	2.9	KAF	97	DRE	100L4	405	512		
12	15700	147.32*	6350	1.50	K	87	DRE	100L4	260	506		
14	13500	126.91*	6390	1.75	KF	87	DRE	100L4	280	507		
15	12400	115.82	6410	1.95	KA	87	DRE	100L4	235	508		
17	11000	102.71*	6440	2.2	KAF	87	DRE	100L4	265	507		
20	9240	86.34	6460	2.6								
22	8500	79.34	6470	2.8								
15	12100	113.56	3710	1.15	K	77	DRE	100L4	185	501		
18	10300	97.05	3950	1.30	KF	77	DRE	100L4	200	502		
20	9530	88.97	4040	1.45	KA	77	DRE	100L4	165	503		
22	8360	78.07	4160	1.65	KAF	77	DRE	100L4	185	502		
23	7920	73.99	4200	1.75								
27	6930	64.75	4280	2.00								
30	6250	58.34	4330	2.2								
34	5480	51.18	4370	2.5								
38	4830	45.16	4410	2.8								

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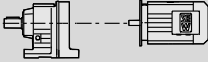

K..DRE/DRS

K..DRE/DRS [HP]

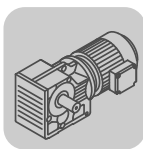
P_m [HP]	n_a [rpm]	T_a [lb-in]	i	$F_{Ra}^{1)}$ [lb]	SEW f_B		m [lbs]	
3.0	29	6490	60.66	2470	1.10			
	30	6130	57.28	2540	1.20			
	36	5220	48.77	2690	1.40			
	39	4740	44.32	2750	1.55	K 67	DRE 100L4	130 496
	45	4110	38.39	2820	1.70	KF 67	DRE 100L4	140 497
	49	3810	35.62	2850	1.90	KA 67	DRE 100L4	120 498
	57	3230	30.22	2910	2.2	KAF 67	DRE 100L4	135 497
	64	2920	27.28	2920	2.5			
	72	2570	24.00	2920	2.8			
	77	2420	22.66	2920	2.8			
	35	5230	48.89	1730	1.00			
	39	4760	44.43	1830	1.10			
	45	4120	38.49	1860	1.30			
	49	3820	35.70	1850	1.40			
	57	3240	30.28	1810	1.65	K 57	DRE 100L4	115 491
	63	2920	27.34	1780	1.80	KF 57	DRE 100L4	125 492
	72	2570	24.05	1750	2.1	KA 57	DRE 100L4	110 493
	76	2430	22.71	1730	2.2	KAF 57	DRE 100L4	125 492
	90	2070	19.34	1680	2.5			
	99	1880	17.57	1650	2.6			
114	1630	15.22	1600	2.9				
146	1270	11.92	1480	2.9				
67	2770	25.91	1180	1.30				
80	2330	21.81	1170	1.50				
89	2090	19.58	1160	1.70				
103	1800	16.86	1140	1.85				
109	1690	15.86	1130	2.00	K 47	DRE 100L4	100 486	
127	1460	13.65	1110	2.2	KF 47	DRE 100L4	110 487	
142	1300	12.19	1080	2.4	KA 47	DRE 100L4	100 488	
147	1260	11.77	1060	1.95	KAF 47	DRE 100L4	105 487	
164	1130	10.56	1040	2.2				
191	970	9.10	1010	2.5				
203	910	8.56	1000	2.6				
236	785	7.36	970	2.8				
133	1400	13.08	545	1.05				
165	1120	10.49	550	1.25				
195	950	8.91	545	1.50	K 37	DRE 100L4	87 481	
218	850	7.96	540	1.60	KF 37	DRE 100L4	92 482	
255	725	6.80	530	1.80	KA 37	DRE 100L4	87 483	
273	680	6.37	525	1.90	KAF 37	DRE 100L4	90 482	
324	570	5.36	515	2.2				
436	425	3.98	485	2.6				
5.0	0.62	440600	2818	42700	1.00	K 187R97	DRE 100LC4	3940 535
						KH 187R97	DRE 100LC4	3790 535
	0.69	409400	2519	42700	1.10			
	0.77	367200	2268	42700	1.20			
	0.85	331200	2054	42700	1.35			
	0.96	292100	1821	42700	1.50			
	1.1	258900	1605	42700	1.70	K 187R97	DRE 100LC4	3930 535
	1.2	220800	1395	42700	2.0	KH 187R97	DRE 100LC4	3780 535
	1.5	191800	1196	42700	2.3			
	1.7	167700	1046	42700	2.6			
	1.8	150800	945	42700	2.9			
	1.0	277900	1704	33700	1.00			
	1.2	230000	1408	33700	1.25			
	1.4	211300	1296	33700	1.35			
	1.6	176600	1101	33700	1.60	K 167R97	DRE 100LC4	2650 535
	1.8	152300	944	33700	1.85	KH 167R97	DRE 100LC4	2570 535
	2.1	133500	843	33700	2.1			
	2.3	120800	757	33700	2.3			
	2.8	101300	632	33700	2.8			
	1.9	152600	942	25300	1.05			
2.0	137600	854	25500	1.15	K 157R97	DRE 100LC4	1780 535	
2.3	119600	756	25700	1.35	KF 157R97	DRE 100LC4	1960 535	
3.1	90800	567	25900	1.75	KA 157R97	DRE 100LC4	1700 535	
3.5	80800	504	26000	1.95	KAF 157R97	DRE 100LC4	1830 535	
4.0	68700	434	26000	2.3				

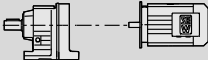


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P_m [HP]	n_a [rpm]	T_a [lb-in]	i	$F_{Ra}^{1)}$ [lb]	SEW f_B		m [lbs]	
5.0	3.3	86800	536	18100	1.30			
	3.7	76100	473	18300	1.50			
	4.2	68500	418	18300	1.70	K 127R87 DRE 100LC4	1130	535
	4.8	59900	367	18400	1.90	KF 127R87 DRE 100LC4	1230	535
	5.3	53700	330	18400	2.1	KA 127R87 DRE 100LC4	1070	535
	6.1	46100	287	18500	2.5	KAF 127R87 DRE 100LC4	1150	535
	6.9	40700	253	18500	2.8			
	2.9	100200	610	18000	1.15	K 127R77 DRE 100LC4	1090	535
	3.2	90300	549	18100	1.25	KF 127R77 DRE 100LC4	1180	535
	3.7	78200	477	18200	1.45	KA 127R77 DRE 100LC4	1030	535
	4.2	68800	418	18300	1.65	KAF 127R77 DRE 100LC4	1110	535
	4.3	66800	408	14600	1.05			
	4.8	59900	364	14600	1.20			
	5.5	52300	318	14600	1.35			
	6.1	47100	286	14600	1.50	K 107R77 DRE 100LC4	730	535
	7.0	41200	251	14600	1.70	KF 107R77 DRE 100LC4	760	535
	7.9	36300	222	14600	1.95	KA 107R77 DRE 100LC4	670	535
	8.9	32100	196	14600	2.2	KAF 107R77 DRE 100LC4	730	535
	10	28700	174	14600	2.2			
	11	25400	154	14600	2.5			
	13	23100	140	14600	2.8			
	8.8	33200	199	8990	1.15	K 97R57 DRE 100LC4	450	535
						KF 97R57 DRE 100LC4	495	535
						KA 97R57 DRE 100LC4	410	535
						KAF 97R57 DRE 100LC4	465	535
	12	25600	143.47*	14600	2.8	K 107 DRE 100LC4	650	516
						KF 107 DRE 100LC4	680	517
						KA 107 DRE 100LC4	590	518
						KAF 107 DRE 100LC4	640	517
	9.9	31400	176.05*	8990	1.20			
	11	27300	153.21*	8990	1.40			
	12	25000	140.28	8990	1.50	K 97 DRE 100LC4	395	511
	14	22100	123.93*	8990	1.70	KF 97 DRE 100LC4	440	512
	17	18700	105.13	8990	2.0	KA 97 DRE 100LC4	355	513
	18	17200	96.80	8990	2.2	KAF 97 DRE 100LC4	410	512
	20	15400	86.52	8990	2.5			
	22	13900	77.89*	8990	2.7			
	14	22600	126.91*	6170	1.05			
	15	20600	115.82	6230	1.15			
	17	18300	102.71*	6290	1.30			
	20	15400	86.34	6360	1.55	K 87 DRE 100LC4	265	506
	22	14100	79.34	6380	1.70	KF 87 DRE 100LC4	285	507
	25	12500	70.46	6410	1.90	KA 87 DRE 100LC4	240	508
	28	11200	63.00*	6430	2.1	KAF 87 DRE 100LC4	270	507
	31	10100	56.64	6450	2.4			
	36	8780	49.16	6320	2.7			
	40	7860	44.02	6180	2.9			
	24	13200	73.99	3540	1.05			
27	11500	64.75	3800	1.20				
30	10400	58.34	3940	1.30				
34	9140	51.18	4080	1.50				
39	8060	45.16	4190	1.70	K 77 DRE 100LC4	185	501	
44	7150	40.04	4260	1.90	KF 77 DRE 100LC4	205	502	
46	6850	38.39	4280	1.95	KA 77 DRE 100LC4	170	503	
50	6280	35.20	4320	2.2	KAF 77 DRE 100LC4	190	502	
57	5510	30.89	4370	2.5				
60	5220	29.27	4390	2.6				
68	4570	25.62	4420	3.0				

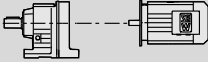


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K..DRE/DRS
K..DRE/DRS [HP]

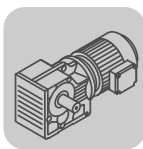
P_m [HP]	n_a [rpm]	T_a [lb-in]	i	$F_{Ra}^{1)}$ [lb]	SEW f_B		m [lbs]		
5.0	46	6850	38.39	2400	1.05				
	49	6360	35.62	2500	1.15				
	58	5390	30.22	2660	1.35				
	64	4870	27.28	2730	1.50				
	73	4280	24.00	2800	1.65				
	77	4040	22.66	2830	1.70				
	91	3440	19.30	2890	1.95	K 67	DRE 100LC4	130	496
	100	3130	17.54	2910	2.1	KF 67	DRE 100LC4	145	497
	115	2710	15.19	2920	2.3	KA 67	DRE 100LC4	125	498
	132	2360	13.22	2920	2.5	KAF 67	DRE 100LC4	140	497
	140	2220	12.48	2920	2.1				
	165	1890	10.63	2860	2.3				
	181	1720	9.66	2800	2.5				
	209	1490	8.37	2700	2.6				
	240	1300	7.28	2620	2.9				
	64	4880	27.34	1450	1.10				
	73	4290	24.05	1460	1.25				
	77	4050	22.71	1450	1.30				
	90	3450	19.34	1440	1.45				
	100	3130	17.57	1430	1.55	K 57	DRE 100LC4	120	491
115	2710	15.22	1410	1.75	KF 57	DRE 100LC4	130	492	
132	2360	13.25	1390	1.90	KA 57	DRE 100LC4	115	493	
147	2120	11.92	1320	1.70	KAF 57	DRE 100LC4	125	492	
155	2010	11.26	1310	1.85					
183	1710	9.59	1270	2.1					
201	1550	8.71	1250	2.2					
232	1340	7.55	1220	2.4					
266	1170	6.57	1190	2.6					
89	3490	19.58	880	1.00					
104	3010	16.86	900	1.10					
110	2830	15.86	910	1.20					
128	2430	13.65	910	1.30					
144	2170	12.19	910	1.40	K 47	DRE 100LC4	105	486	
149	2100	11.77	890	1.20	KF 47	DRE 100LC4	115	487	
166	1880	10.56	880	1.30	KA 47	DRE 100LC4	105	488	
192	1620	9.10	880	1.50	KAF 47	DRE 100LC4	110	487	
204	1520	8.56	870	1.55					
238	1310	7.36	860	1.70					
266	1170	6.58	840	1.80					
301	1030	5.81	830	1.95					
378	820	4.64	795	2.2					
257	1210	6.80	415	1.10	K 37	DRE 100LC4	92	481	
275	1130	6.37	420	1.15	KF 37	DRE 100LC4	97	482	
326	950	5.36	420	1.30	KA 37	DRE 100LC4	91	483	
440	710	3.98	420	1.55	KAF 37	DRE 100LC4	95	482	
5.4	0.70	439600	2519	42700	1.00				
	0.78	394300	2268	42700	1.10				
	0.86	355800	2054	42700	1.25				
	0.97	313900	1821	42700	1.40	K 187R97	DRE 132S4	3960	535
	1.1	278100	1605	42700	1.60	KH 187R97	DRE 132S4	3820	535
	1.3	237500	1395	42700	1.85				
	1.5	206200	1196	42700	2.2				
	1.7	180200	1046	42700	2.4				
	1.9	162100	945	42700	2.7				
	1.2	246800	1408	33700	1.15				
	1.4	226800	1296	33700	1.25				
	1.6	189700	1101	33700	1.50	K 167R97	DRE 132S4	2680	535
	1.9	163600	944	33700	1.75	KH 167R97	DRE 132S4	2600	535
	2.1	143600	843	33700	1.95				
	2.3	129800	757	33700	2.2				
	2.8	108900	632	33700	2.6				
	2.1	147800	854	25400	1.10	K 157R97	DRE 132S4	1810	535
	2.3	128700	756	25600	1.25	KF 157R97	DRE 132S4	1990	535
	3.1	97600	567	25800	1.65	KA 157R97	DRE 132S4	1730	535
	3.5	86800	504	25900	1.85	KAF 157R97	DRE 132S4	1860	535
4.1	73900	434	26000	2.2					
5.3	56600	333	26100	2.8					

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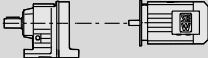




P_m [HP]	n_a [rpm]	T_a [lb-in]	i	$F_{Ra}^{1)}$ [lb]	SEW f_B		m [lbs]		
5.4	3.3	93300	536	18100	1.25				
	3.7	81800	473	18200	1.40				
	4.2	73500	418	18300	1.55	K 127R87	DRE 132S4	1170	535
	4.8	64300	367	18400	1.80	KF 127R87	DRE 132S4	1260	535
	5.3	57700	330	18400	2.00	KA 127R87	DRE 132S4	1100	535
	6.2	49500	287	18500	2.3	KAF 127R87	DRE 132S4	1190	535
	7.0	43800	253	18500	2.6				
	2.9	107600	610	17900	1.05	K 127R77	DRE 132S4	1120	535
	3.2	96900	549	18000	1.20	KF 127R77	DRE 132S4	1210	535
	3.7	83900	477	18200	1.35	KA 127R77	DRE 132S4	1060	535
	4.2	73800	418	18300	1.55	KAF 127R77	DRE 132S4	1140	535
	4.8	64200	364	14600	1.10				
	5.6	56100	318	14600	1.25				
	6.2	50500	286	14600	1.40				
	7.0	44200	251	14600	1.60	K 107R77	DRE 132S4	770	535
	8.0	39000	222	14600	1.80	KF 107R77	DRE 132S4	790	535
	9.0	34500	196	14600	2.0	KA 107R77	DRE 132S4	710	535
	10	30800	174	14600	2.1	KAF 107R77	DRE 132S4	760	535
	11	27300	154	14600	2.3				
	13	24800	140	14600	2.6				
	8.8	35600	199	8990	1.05	K 97R57	DRE 132S4	480	535
						KF 97R57	DRE 132S4	530	535
						KA 97R57	DRE 132S4	440	535
						KAF 97R57	DRE 132S4	495	535
12	27400	143.47*	14600	2.6	K 107	DRE 132S4	680	516	
					KF 107	DRE 132S4	710	517	
					KA 107	DRE 132S4	620	518	
					KAF 107	DRE 132S4	670	517	
12	29300	153.21*	8990	1.30					
13	26800	140.28	8990	1.40					
14	23700	123.93*	8990	1.60	K 97	DRE 132S4	430	511	
17	20100	105.13	8990	1.90	KF 97	DRE 132S4	470	512	
18	18500	96.80	8990	2.0	KA 97	DRE 132S4	390	513	
20	16500	86.52	8990	2.3	KAF 97	DRE 132S4	445	512	
23	14900	77.89*	8990	2.6					
25	13500	70.54	8990	2.8					
15	22100	115.82	6180	1.10					
17	19600	102.71*	6260	1.20					
20	16500	86.34	6330	1.45					
22	15100	79.34	6360	1.55	K 87	DRE 132S4	300	506	
25	13400	70.46	6390	1.75	KF 87	DRE 132S4	320	507	
28	12000	63.00*	6420	2.00	KA 87	DRE 132S4	270	508	
31	10800	56.64	6410	2.2	KAF 87	DRE 132S4	300	507	
36	9410	49.16	6240	2.5					
40	8420	44.02	6110	2.7					
27	12300	64.75	3670	1.10					
30	11100	58.34	3850	1.25					
34	9800	51.18	4020	1.40					
39	8640	45.16	4130	1.60	K 77	DRE 132S4	220	501	
44	7660	40.04	4220	1.80	KF 77	DRE 132S4	235	502	
46	7350	38.39	4250	1.80	KA 77	DRE 132S4	200	503	
50	6730	35.20	4290	2.0	KAF 77	DRE 132S4	220	502	
57	5910	30.89	4350	2.3					
60	5600	29.27	4370	2.4					
69	4900	25.62	4400	2.8					
58	5780	30.22	2600	1.25					
65	5220	27.28	2690	1.40					
74	4590	24.00	2770	1.55					
78	4330	22.66	2800	1.60					
92	3690	19.30	2870	1.80					
101	3350	17.54	2900	1.95	K 67	DRE 132S4	165	496	
116	2900	15.19	2920	2.1	KF 67	DRE 132S4	175	497	
134	2530	13.22	2920	2.3	KA 67	DRE 132S4	160	498	
141	2380	12.48	2920	1.95	KAF 67	DRE 132S4	170	497	
166	2030	10.63	2820	2.2					
183	1840	9.66	2770	2.3					
211	1600	8.37	2680	2.4					
242	1390	7.28	2590	2.7					

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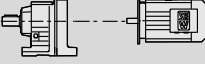




K..DRE/DRS
K..DRE/DRS [HP]

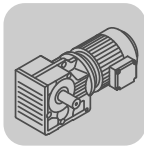
P_m [HP]	n_a [rpm]	T_a [lb-in]	i	$F_{Ra}^{1)}$ [lb]	SEW f_B		m [lbs]			
5.4	65	5230	27.34	1390	1.00					
	73	4600	24.05	1400	1.15					
	78	4340	22.71	1400	1.20					
	91	3700	19.34	1400	1.35					
	100	3360	17.57	1390	1.45					
	116	2910	15.22	1370	1.60					
	133	2530	13.25	1350	1.80	K 57	DRE 132S4	150	491	
	148	2280	11.92	1280	1.60	KF 57	DRE 132S4	160	492	
	157	2150	11.26	1270	1.70	KA 57	DRE 132S4	145	493	
	184	1830	9.59	1250	1.95	KAF 57	DRE 132S4	160	492	
	203	1660	8.71	1230	2.1					
	234	1440	7.55	1200	2.2					
	269	1250	6.57	1170	2.4					
	376	890	4.69	1090	3.0					
		105	3220	16.86	860	1.05				
		111	3030	15.86	860	1.10				
		129	2610	13.65	870	1.20				
		145	2330	12.19	880	1.35				
		150	2250	11.77	850	1.10	K 47	DRE 132S4	140	486
		167	2020	10.56	850	1.20	KF 47	DRE 132S4	145	487
	194	1740	9.10	850	1.40	KA 47	DRE 132S4	135	488	
	206	1630	8.56	850	1.45	KAF 47	DRE 132S4	145	487	
	240	1410	7.36	830	1.55					
	268	1250	6.58	820	1.70					
	304	1110	5.81	810	1.85					
	381	880	4.64	780	2.0					
7.5	2.1	197500	835	42700	2.2	K 187R107	DRE 132M4	4090	535	
	2.4	171000	729	42700	2.6	KH 187R107	DRE 132M4	3950	535	
	0.96	438600	1821	42700	1.00					
	1.1	388000	1605	42700	1.15					
	1.3	333100	1395	42700	1.35					
	1.5	288100	1196	42700	1.55	K 187R97	DRE 132M4	3990	535	
	1.7	251800	1046	42700	1.75	KH 187R97	DRE 132M4	3840	535	
	1.9	226900	945	42700	1.95					
	2.4	177300	738	42700	2.5					
	2.8	149000	621	42700	3.0					
		1.6	265100	1101	33700	1.05				
		1.9	228200	944	33700	1.25				
		2.1	201300	843	33700	1.40				
		2.3	181700	757	33700	1.55				
		2.8	152200	632	33700	1.85	K 167R97	DRE 132M4	2710	535
		3.1	132900	561	33700	2.1	KH 167R97	DRE 132M4	2620	535
		3.6	115700	481	33700	2.4				
		4.2	100300	423	33700	2.8				
		4.6	88400	385	25900	1.80	K 157R107	DRE 132M4	1940	535
		5.9	70000	299	26000	2.3	KF 157R107	DRE 132M4	2120	535
		6.9	58700	253	26100	2.7	KA 157R107	DRE 132M4	1860	535
							KAF 157R107	DRE 132M4	1990	535
		2.7	156700	661	25200	1.00				
		3.1	136400	567	25500	1.15				
		3.5	121400	504	25600	1.30	K 157R97	DRE 132M4	1840	535
		4.0	103600	434	25800	1.55	KF 157R97	DRE 132M4	2010	535
		4.6	89900	379	25900	1.75	KA 157R97	DRE 132M4	1760	535
		5.3	79400	333	26000	2.0	KAF 157R97	DRE 132M4	1890	535
		6.0	68900	291	26000	2.3				
		3.7	114200	473	17800	1.00				
		4.2	102400	418	18000	1.10				
		4.8	89500	367	18100	1.30				
		5.3	80300	330	18200	1.45	K 127R87	DRE 132M4	1190	535
		6.1	69100	287	18300	1.65	KF 127R87	DRE 132M4	1290	535
		6.9	61100	253	18400	1.90	KA 127R87	DRE 132M4	1130	535
		8.2	51400	213	18500	2.2	KAF 127R87	DRE 132M4	1210	535
		8.8	49000	200	18500	2.2				
		11	40500	166	18500	2.6				
		12	35700	147	18500	3.0				
		4.2	102500	418	18000	1.10	K 127R77	DRE 132M4	1150	535
						KF 127R77	DRE 132M4	1240	535	
						KA 127R77	DRE 132M4	1080	535	
						KAF 127R77	DRE 132M4	1170	535	

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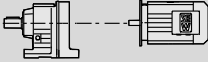


P_m [HP]	n_a [rpm]	T_a [lb-in]	i	$F_{Ra}^{1)}$ [lb]	SEW f_B		m [lbs]				
7.5	6.1	70100	286	14600	1.00						
	7.0	61400	251	14600	1.15						
	7.9	54100	222	14600	1.30	K	107R77	DRE	132M4	790	535
	8.9	47900	196	14600	1.45	KF	107R77	DRE	132M4	820	535
	10	42900	174	14600	1.50	KA	107R77	DRE	132M4	730	535
	11	37900	154	14600	1.70	KAF	107R77	DRE	132M4	790	535
	13	34400	140	14600	1.85						
	12	38600	146.07	18500	3.0	K	127	DRE	132M4	1060	521
						KF	127	DRE	132M4	1150	522
						KA	127	DRE	132M4	1000	523
						KAF	127	DRE	132M4	1080	522
	12	37900	143.47*	14600	1.85	K	107	DRE	132M4	710	516
	14	32100	121.46	14600	2.2	KF	107	DRE	132M4	730	517
	16	29700	112.41*	14600	2.4	KA	107	DRE	132M4	650	518
	17	26600	100.75	14600	2.6	KAF	107	DRE	132M4	700	517
	19	24000	90.96*	14600	2.9						
	14	32800	123.93*	8990	1.15						
	17	27800	105.13	8990	1.35						
	18	25600	96.80	8990	1.50	K	97	DRE	132M4	455	511
	20	22900	86.52	8990	1.65	KF	97	DRE	132M4	500	512
23	20600	77.89*	8990	1.85	KA	97	DRE	132M4	415	513	
25	18600	70.54	8960	2.0	KAF	97	DRE	132M4	470	512	
28	16500	62.55	8770	2.3							
31	14900	56.55	8600	2.5							
37	12600	47.93*	8320	3.0							
20	22800	86.34	6160	1.05							
22	21000	79.34	6180	1.15							
25	18600	70.46	6130	1.30							
28	16600	63.00*	6070	1.45	K	87	DRE	132M4	325	506	
31	14900	56.64	5990	1.60	KF	87	DRE	132M4	345	507	
36	13000	49.16	5880	1.85	KA	87	DRE	132M4	300	508	
40	11600	44.02	5790	1.95	KAF	87	DRE	132M4	325	507	
48	9660	36.52*	5610	2.3							
56	8310	31.39	5460	2.9							
34	13500	51.18	3490	1.00							
39	11900	45.16	3740	1.15							
44	10600	40.04	3920	1.30							
57	8170	30.89	4180	1.70							
60	7740	29.27	4210	1.75	K	77	DRE	132M4	245	501	
69	6780	25.62	4290	2.0	KF	77	DRE	132M4	265	502	
76	6110	23.08	4330	2.2	KA	77	DRE	132M4	230	503	
87	5360	20.25	4350	2.5	KAF	77	DRE	132M4	245	502	
98	4730	17.87	4240	2.7							
111	4190	15.84	4140	3.0							
142	3270	12.36	3860	2.7							
73	6350	24.00	2500	1.10							
77	5990	22.66	2570	1.15							
91	5100	19.30	2700	1.30							
100	4640	17.54	2760	1.40							
116	4020	15.19	2830	1.55	K	67	DRE	132M4	190	496	
133	3490	13.22	2880	1.70	KF	67	DRE	132M4	205	497	
141	3300	12.48	2770	1.40	KA	67	DRE	132M4	185	498	
165	2810	10.63	2700	1.55	KAF	67	DRE	132M4	195	497	
182	2550	9.66	2650	1.65							
210	2210	8.37	2580	1.75							
241	1920	7.28	2510	1.95							
337	1370	5.20	2330	2.2							
100	4650	17.57	1180	1.05							
115	4030	15.22	1190	1.15							
132	3500	13.25	1190	1.30							
147	3150	11.92	1120	1.15	K	57	DRE	132M4	180	491	
156	2980	11.26	1120	1.25	KF	57	DRE	132M4	190	492	
183	2530	9.59	1120	1.40	KA	57	DRE	132M4	175	493	
201	2300	8.71	1110	1.50	KAF	57	DRE	132M4	185	492	
233	1990	7.55	1100	1.60							
267	1730	6.57	1080	1.75							
374	1240	4.69	1020	2.1							

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K..DRE/DRS

K..DRE/DRS [HP]

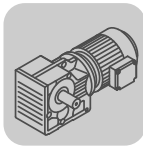
P_m [HP]	n_a [rpm]	T_a [lb-in]	i	$F_{Ra}^{1)}$ [lb]	SEW f_B					m [lbs]		
10	2.1	269400	835	42700	1.65							
	2.4	233700	729	42700	1.90	KH	187R107	DRE	132MC4	4100	535	
	2.9	199200	622	42700	2.2	KH	187R107	DRE	132MC4	3950	535	
	3.4	169400	520	42700	2.6							
	1.5	391000	1196	42700	1.15							
	1.7	341700	1046	42700	1.30							
	1.9	308200	945	42700	1.45	K	187R97	DRE	132MC4	4000	535	
	2.4	240900	738	42700	1.85	KH	187R97	DRE	132MC4	3850	535	
	2.9	202400	621	42700	2.2							
	3.4	170900	527	42700	2.6							
	5.6	103600	318	33700	2.7	K	167R107	DRE	132MC4	2820	535	
						KH	167R107	DRE	132MC4	2730	535	
	2.1	274000	843	33700	1.05							
	2.3	246800	757	33700	1.15							
	2.8	206600	632	33700	1.35							
	3.2	181100	561	33700	1.55	K	167R97	DRE	132MC4	2710	535	
	3.7	157100	481	33700	1.80	KH	167R97	DRE	132MC4	2630	535	
	4.2	136700	423	33700	2.1							
	4.8	119600	369	33700	2.4							
	4.6	121500	385	25600	1.30	K	157R107	DRE	132MC4	1950	535	
	5.9	95700	299	25900	1.65	KF	157R107	DRE	132MC4	2120	535	
	7.0	80500	253	26000	2.00	KA	157R107	DRE	132MC4	1870	535	
	8.3	68300	213	26000	2.3	KAF	157R107	DRE	132MC4	2000	535	
	4.1	140900	434	25400	1.15	K	157R97	DRE	132MC4	1850	535	
	4.7	122600	379	25600	1.30	KF	157R97	DRE	132MC4	2020	535	
	5.3	108100	333	25800	1.45	KA	157R97	DRE	132MC4	1770	535	
	6.1	94000	291	25900	1.70	KAF	157R97	DRE	132MC4	1890	535	
	5.4	108800	330	17900	1.05							
	6.2	93800	287	18100	1.25	K	127R87	DRE	132MC4	1200	535	
	7.0	82900	253	18200	1.40	KF	127R87	DRE	132MC4	1290	535	
	8.3	69700	213	18300	1.65	KA	127R87	DRE	132MC4	1140	535	
	8.9	66400	200	18300	1.60	KAF	127R87	DRE	132MC4	1220	535	
	11	54900	166	18400	1.95							
	12	48500	147	18500	2.2							
	9.0	64900	196	14600	1.10	K	107R77	DRE	132MC4	800	535	
	10	58000	174	14600	1.10	KF	107R77	DRE	132MC4	830	535	
	12	51300	154	14600	1.25	KA	107R77	DRE	132MC4	740	535	
	13	46600	140	14600	1.35	KAF	107R77	DRE	132MC4	790	535	
	12	52100	146.07	18400	2.2	K	127	DRE	132MC4	1070	521	
	13	48600	136.14	18500	2.4	KF	127	DRE	132MC4	1160	522	
	14	43700	122.48	18500	2.6	KA	127	DRE	132MC4	1000	523	
	16	39300	110.18	18500	2.9	KAF	127	DRE	132MC4	1090	522	
	12	51200	143.47*	14600	1.40							
	15	43300	121.46	14600	1.65							
	16	40100	112.41*	14400	1.75	K	107	DRE	132MC4	710	516	
	18	35900	100.75	14200	1.95	KF	107	DRE	132MC4	740	517	
	20	32400	90.96*	13900	2.2	KA	107	DRE	132MC4	650	518	
	21	29400	82.61	13700	2.4	KAF	107	DRE	132MC4	710	517	
	24	26100	73.30	13400	2.7							
	27	23700	66.52*	13100	3.0							
	17	37500	105.13	8600	1.00							
	18	34500	96.80	8570	1.10							
	21	30800	86.52	8510	1.25							
	23	27800	77.89*	8440	1.35	K	97	DRE	132MC4	460	511	
	25	25100	70.54	8350	1.50	KF	97	DRE	132MC4	510	512	
	28	22300	62.55	8220	1.70	KA	97	DRE	132MC4	420	513	
	31	20100	56.55	8110	1.90	KAF	97	DRE	132MC4	475	512	
	37	17100	47.93*	7900	2.2							
	42	14900	41.87	7720	2.6							
	46	13600	38.30	7590	2.8							

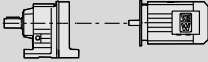


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P _m [HP]	n _a [rpm]	T _a [lb-in]	i	F _{Ra} ¹⁾ [lb]	SEW f _B			m [lbs]			
10	28	22400	63.00*	5450	1.05						
	31	20200	56.64	5440	1.20						
	36	17500	49.16	5400	1.35						
	40	15700	44.02	5350	1.45						
	49	13000	36.52*	5240	1.70	K	87	DRE	132MC4	330	506
	57	11200	31.39	5140	2.1	KF	87	DRE	132MC4	350	507
	64	9940	27.88	5050	2.3	KA	87	DRE	132MC4	305	508
	71	8890	24.92	4950	2.5	KAF	87	DRE	132MC4	335	507
	79	7990	22.41	4860	2.5						
	91	6940	19.45	4730	2.9						
	111	5710	16.00	4450	2.8						
	57	11000	30.89	3870	1.25						
	61	10400	29.27	3940	1.30						
	69	9140	25.62	4080	1.50						
	77	8230	23.08	4170	1.65						
	88	7220	20.25	4110	1.85						
	99	6370	17.87	4030	2.0	K	77	DRE	132MC4	250	501
	112	5650	15.84	3950	2.2	KF	77	DRE	132MC4	270	502
	131	4820	13.52	3830	2.5	KA	77	DRE	132MC4	235	503
	144	4400	12.36	3690	2.0	KAF	77	DRE	132MC4	255	502
	164	3860	10.84	3600	2.3						
	186	3410	9.56	3510	2.4						
	209	3020	8.48	3420	2.6						
	245	2580	7.24	3300	2.8						
	101	6250	17.54	2520	1.05						
	117	5420	15.19	2660	1.15						
	134	4710	13.22	2690	1.25						
	142	4450	12.48	2560	1.05	K	67	DRE	132MC4	195	496
167	3790	10.63	2520	1.15	KF	67	DRE	132MC4	210	497	
184	3440	9.66	2490	1.25	KA	67	DRE	132MC4	190	498	
212	2980	8.37	2440	1.30	KAF	67	DRE	132MC4	205	497	
244	2590	7.28	2380	1.45							
341	1850	5.20	2240	1.65							
185	3420	9.59	940	1.05	K	57	DRE	132MC4	185	491	
204	3110	8.71	950	1.10	KF	57	DRE	132MC4	195	492	
235	2690	7.55	960	1.20	KA	57	DRE	132MC4	180	493	
270	2340	6.57	960	1.30	KAF	57	DRE	132MC4	190	492	
378	1670	4.69	940	1.60							
12.5	2.1	333500	835	42700	1.35						
	2.4	289600	729	42700	1.55						
	2.8	246900	622	42700	1.80	K	187R107	DRE	160M4	4150	535
	3.4	209700	520	42700	2.1	KH	187R107	DRE	160M4	4000	535
	3.9	182100	454	42700	2.4						
	1.7	422000	1046	42700	1.05						
	1.9	380800	945	42700	1.15						
	2.4	297600	738	42700	1.50	K	187R97	DRE	160M4	4040	535
	2.8	250100	621	42700	1.75	KH	187R97	DRE	160M4	3900	535
	3.4	211200	527	42700	2.1						
	5.6	128200	318	33700	2.2	K	167R107	DRE	160M4	2860	535
	6.4	111400	278	33700	2.5	KH	167R107	DRE	160M4	2780	535
	7.3	96200	244	33700	2.9						
	2.8	255100	632	33700	1.10						
	3.2	224200	561	33700	1.25						
	3.7	194000	481	33700	1.45	K	167R97	DRE	160M4	2760	535
	4.2	169200	423	33700	1.65	KH	167R97	DRE	160M4	2680	535
	4.8	147800	369	33700	1.90						
	4.6	151000	385	25300	1.05						
	5.4	126400	325	25600	1.25						
	5.9	118600	299	25700	1.35	K	157R107	DRE	160M4	2000	535
	7.0	100000	253	25800	1.60	KF	157R107	DRE	160M4	2170	535
	7.7	89400	230	25900	1.80	KA	157R107	DRE	160M4	1920	535
	8.3	84800	213	25900	1.90	KAF	157R107	DRE	160M4	2050	535
	9.4	72700	187	26000	2.2						
	11	61700	157	26100	2.6						
	4.7	151700	379	25300	1.05	K	157R97	DRE	160M4	1890	535
	5.3	133600	333	25500	1.20	KF	157R97	DRE	160M4	2070	535
	6.1	116300	291	25700	1.35	KA	157R97	DRE	160M4	1810	535
						KAF	157R97	DRE	160M4	1940	535

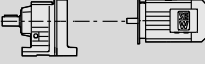
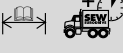
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K..DRE/DRS
K..DRE/DRS [HP]

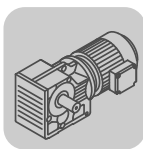
P_m [HP]	n_a [rpm]	T_a [lb-in]	i	$F_{Ra}^{1)}$ [lb]	SEW f_B		m [lbs]		
12.5	7.0	102400	253	18000	1.10				
	8.3	86000	213	18200	1.35	K 127R87	DRE 160M4	1240	535
	8.8	81900	200	18200	1.30	KF 127R87	DRE 160M4	1340	535
	11	67800	166	18300	1.55	KA 127R87	DRE 160M4	1180	535
	12	59800	147	18400	1.75	KAF 127R87	DRE 160M4	1260	535
	11	63300	154	14400	1.00	K 107R77	DRE 160M4	850	535
	13	57400	140	14300	1.10	KF 107R77	DRE 160M4	870	535
						KA 107R77	DRE 160M4	790	535
						KAF 107R77	DRE 160M4	840	535
	12	66000	150.41	26000	2.4	K 157	DRE 160M4	1620	526
	14	53700	122.39	26100	3.0	KF 157	DRE 160M4	1790	527
						KA 157	DRE 160M4	1530	528
						KAF 157	DRE 160M4	1660	527
	13	59700	136.14	18400	1.90	K 127	DRE 160M4	1100	521
	14	53700	122.48	18400	2.1	KF 127	DRE 160M4	1190	522
	16	48300	110.18	18500	2.4	KA 127	DRE 160M4	1040	523
	20	39400	89.89	18500	2.9	KAF 127	DRE 160M4	1120	522
	16	49300	112.41*	13700	1.45				
	18	44200	100.75	13600	1.60				
	19	39900	90.96*	13400	1.75	K 107	DRE 160M4	760	516
	21	36200	82.61	13200	1.95	KF 107	DRE 160M4	790	517
	24	32100	73.30	12900	2.2	KA 107	DRE 160M4	700	518
	27	29200	66.52*	12700	2.4	KAF 107	DRE 160M4	750	517
	31	25100	57.17*	12400	2.8				
	20	37900	86.52	7890	1.00				
	23	34200	77.89*	7880	1.10				
	25	30900	70.54	7850	1.25				
	28	27400	62.55	7780	1.40	K 97	DRE 160M4	510	511
	31	24800	56.55	7710	1.55	KF 97	DRE 160M4	550	512
	37	21000	47.93*	7560	1.80	KA 97	DRE 160M4	470	513
	42	18300	41.87	7420	2.1	KAF 97	DRE 160M4	520	512
	46	16800	38.30	7320	2.3				
	52	15000	34.23	7190	2.5				
	57	13500	30.82	7060	2.8				
	36	21500	49.16	4990	1.10				
	40	19300	44.02	4990	1.20				
	48	16000	36.52*	4940	1.40				
	56	13700	31.39	4880	1.75				
	64	12200	27.88	4820	1.90	K 87	DRE 160M4	375	506
	71	10900	24.92	4750	2.0	KF 87	DRE 160M4	395	507
	79	9830	22.41	4680	2.1	KA 87	DRE 160M4	350	508
	91	8540	19.45	4580	2.4	KAF 87	DRE 160M4	380	507
	102	7640	17.42	4490	2.6				
	111	7020	16.00	4300	2.3				
	123	6340	14.45	4330	2.9				
159	4900	11.17	4020	2.7					
77	10100	23.08	3970	1.35					
87	8880	20.25	3920	1.50					
99	7840	17.87	3860	1.65					
112	6950	15.84	3800	1.80	K 77	DRE 160M4	300	501	
131	5930	13.52	3700	2.0	KF 77	DRE 160M4	315	502	
143	5420	12.36	3550	1.65	KA 77	DRE 160M4	280	503	
163	4750	10.84	3480	1.85	KAF 77	DRE 160M4	300	502	
185	4200	9.56	3400	2.00					
209	3720	8.48	3330	2.1					
245	3170	7.24	3220	2.3					
15	2.1	398100	835	42700	1.10				
	2.4	346100	729	42700	1.30				
	2.9	295100	622	42700	1.50	K 187R107	DRE 160MC4	4160	535
	3.4	250400	520	42700	1.75	KH 187R107	DRE 160MC4	4010	535
	3.9	217700	454	42700	2.0				
	5.0	167800	355	42700	2.6				
	2.4	354800	738	42700	1.25				
	2.9	298200	621	42700	1.50	K 187R97	DRE 160MC4	4050	535
	3.4	252000	527	42700	1.75	KH 187R97	DRE 160MC4	3910	535

reducer.ir



P_m [HP]	n_a [rpm]	T_a [lb-in]	i	$F_{Ra}^{1)}$ [lb]	SEW f_B		m [lbs]		
15	5.6	153100	318	33700	1.85				
	6.4	133100	278	33700	2.1				
	7.3	115100	244	33700	2.5	K	167R107	DRE 160MC4	2880 535
	8.4	100100	213	33700	2.8	KH	167R107	DRE 160MC4	2790 535
	8.6	97600	206	33700	2.9				
	3.2	267600	561	33700	1.05				
	3.7	231200	481	33700	1.20	K	167R97	DRE 160MC4	2770 535
	4.2	202000	423	33700	1.40	KH	167R97	DRE 160MC4	2690 535
	4.8	176400	369	33700	1.60				
	5.5	151600	325	25300	1.05				
	6.0	141800	299	25400	1.10				
	7.0	119600	253	25700	1.35	K	157R107	DRE 160MC4	2010 535
	7.7	107300	230	25800	1.50	KF	157R107	DRE 160MC4	2180 535
	8.4	101500	213	25800	1.55	KA	157R107	DRE 160MC4	1930 535
	9.5	87200	187	25900	1.85	KAF	157R107	DRE 160MC4	2060 535
11	74000	157	26000	2.2					
15	58300	122	26100	2.7					
5.4	159400	333	25200	1.00	K	157R97	DRE 160MC4	1900 535	
6.1	138800	291	25500	1.15	KF	157R97	DRE 160MC4	2080 535	
					KA	157R97	DRE 160MC4	1820 535	
					KAF	157R97	DRE 160MC4	1950 535	
8.4	102500	213	18000	1.10	K	127R87	DRE 160MC4	1260 535	
8.9	97600	200	18000	1.10	KF	127R87	DRE 160MC4	1350 535	
11	80800	166	18200	1.30	KA	127R87	DRE 160MC4	1190 535	
12	71300	147	18300	1.50	KAF	127R87	DRE 160MC4	1280 535	
12	78500	150.41	26000	2.0	K	157	DRE 160MC4	1630 526	
15	63900	122.39	26100	2.5	KF	157	DRE 160MC4	1800 527	
					KA	157	DRE 160MC4	1550 528	
					KAF	157	DRE 160MC4	1670 527	
13	71000	136.14	18300	1.60	K	127	DRE 160MC4	1110 521	
15	63900	122.48	18400	1.80	KF	127	DRE 160MC4	1200 522	
16	57500	110.18	18400	2.0	KA	127	DRE 160MC4	1050 523	
20	46900	89.89	18500	2.4	KAF	127	DRE 160MC4	1130 522	
22	42800	81.98	18500	2.7					
16	58600	112.41*	13000	1.20					
18	52600	100.75	12900	1.35					
20	47400	90.96*	12800	1.50	K	107	DRE 160MC4	770 516	
22	43100	82.61	12600	1.65	KF	107	DRE 160MC4	800 517	
24	38200	73.30	12500	1.85	KA	107	DRE 160MC4	710 518	
27	34700	66.52*	12300	2.0	KAF	107	DRE 160MC4	760 517	
31	29800	57.17*	12000	2.4					
36	26000	49.90	11700	2.7					
42	22100	42.33*	11300	3.0					
25	36800	70.54	7310	1.05					
28	32600	62.55	7310	1.15					
31	29500	56.55	7280	1.30					
37	25000	47.93*	7200	1.50	K	97	DRE 160MC4	520 511	
43	21800	41.87	7100	1.75	KF	97	DRE 160MC4	560 512	
46	19900	38.30	7030	1.90	KA	97	DRE 160MC4	480 513	
52	17800	34.23	6920	2.1	KAF	97	DRE 160MC4	530 512	
58	16000	30.82	6820	2.4					
64	14500	27.91	6710	2.6					
72	12900	24.75	6570	3.0					
40	22900	44.02	4600	1.00					
49	19000	36.52*	4620	1.15					
57	16300	31.39	4600	1.45					
64	14500	27.88	4570	1.60					
71	13000	24.92	4530	1.70					
79	11600	22.41	4480	1.75	K	87	DRE 160MC4	390 506	
92	10100	19.45	4400	2.0	KF	87	DRE 160MC4	410 507	
102	9090	17.42	4330	2.1	KA	87	DRE 160MC4	360 508	
111	8350	16.00	4130	1.90	KAF	87	DRE 160MC4	390 507	
123	7540	14.45	4200	2.5					
142	6550	12.56	4100	2.7					
159	5820	11.17	3900	2.3					
178	5210	10.00	3830	2.5					
215	4320	8.29	3690	2.9					

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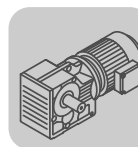


K..DRE/DRS

K..DRE/DRS [HP]

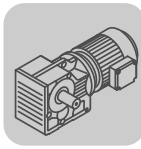
P_m [HP]	n_a [rpm]	T_a [lb-in]	i	$F_{Ra}^{1)}$ [lb]	SEW f_B		m [lbs]		
15	77	12000	23.08	3730	1.15				
	88	10500	20.25	3710	1.25				
	100	9320	17.87	3680	1.40				
	112	8260	15.84	3630	1.50	K 77	DRE 160MC4	310	501
	132	7050	13.52	3560	1.70	KF 77	DRE 160MC4	330	502
	144	6450	12.36	3410	1.35	KA 77	DRE 160MC4	295	503
	164	5650	10.84	3350	1.55	KAF 77	DRE 160MC4	310	502
	186	4990	9.56	3290	1.65				
	210	4420	8.48	3220	1.80				
246	3770	7.24	3140	1.90					
20	2.9	406500	622	42700	1.10				
	3.4	344500	520	42700	1.30				
	3.9	299800	454	42700	1.50	K 187R107	DRE 180M4	4260	535
	5.0	231600	355	42700	1.90	KH 187R107	DRE 180M4	4110	535
	6.8	172400	261	42700	2.6				
	2.9	409400	621	42700	1.10	K 187R97	DRE 180M4	4150	535
	3.4	346300	527	42700	1.30	KH 187R97	DRE 180M4	4000	535
	5.6	210700	318	33700	1.35				
	6.4	183300	278	33700	1.55				
	7.3	158800	244	33700	1.80				
	8.3	138300	213	33700	2.0	K 167R107	DRE 180M4	2970	535
	8.6	134900	206	33700	2.1	KH 167R107	DRE 180M4	2890	535
	9.8	116200	180	33700	2.4				
	11	105400	160	33700	2.7				
	4.2	277800	423	33700	1.00	K 167R97	DRE 180M4	2870	535
	4.8	242400	369	33700	1.15	KH 167R97	DRE 180M4	2780	535
	7.7	148600	230	25300	1.05				
	8.3	140000	213	25400	1.15	K 157R107	DRE 180M4	2110	535
	9.5	120700	187	25600	1.30	KF 157R107	DRE 180M4	2280	535
	11	102400	157	25800	1.55	KA 157R107	DRE 180M4	2030	535
	14	80500	122	26000	2.00	KAF 157R107	DRE 180M4	2160	535
	17	70100	107	25400	2.3				
	12	97900	147	18000	1.10	K 127R87	DRE 180M4	1350	535
						KF 127R87	DRE 180M4	1450	535
						KA 127R87	DRE 180M4	1290	535
						KAF 127R87	DRE 180M4	1370	535
	11	117400	164.50	33700	2.4	K 167	DRE 180M4	2590	531
	13	96300	134.99	33700	2.9	KH 167	DRE 180M4	2500	532
	12	107300	150.41	25800	1.50	K 157	DRE 180M4	1720	526
	14	87300	122.39	25700	1.80	KF 157	DRE 180M4	1890	527
	18	71500	100.22	24800	2.2	KA 157	DRE 180M4	1640	528
	19	65400	91.65	24400	2.4	KAF 157	DRE 180M4	1770	527
	22	56900	79.75	23700	2.8				
13	97200	136.14	18000	1.20					
14	87400	122.48	18100	1.30					
16	78600	110.18	18200	1.45	K 127	DRE 180M4	1210	521	
20	64100	89.89	18400	1.80	KF 127	DRE 180M4	1300	522	
22	58500	81.98	18200	1.95	KA 127	DRE 180M4	1140	523	
25	50600	70.95*	17800	2.3	KAF 127	DRE 180M4	1230	522	
28	44600	62.60	17400	2.6					
33	38600	54.07	16900	3.0					
20	64900	90.96*	11300	1.10					
21	58900	82.61	11400	1.20					
24	52300	73.30	11400	1.35					
27	47400	66.52*	11300	1.50	K 107	DRE 180M4	870	516	
31	40800	57.17*	11200	1.75	KF 107	DRE 180M4	900	517	
36	35600	49.90	11000	1.95	KA 107	DRE 180M4	810	518	
42	30200	42.33*	10700	2.2	KAF 107	DRE 180M4	860	517	
48	26400	37.00*	10500	2.4					
54	23300	32.69	10300	2.7					
57	22300	31.28*	10200	2.7					

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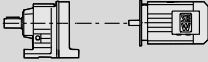




P _m [HP]	n _a [rpm]	T _a [lb-in]	i	F _{Ra} ¹⁾ [lb]	SEW f _B			m [lbs]		
20	37	34200	47.93*	6390	1.10					
	42	29800	41.87	6400	1.25					
	46	27300	38.30	6390	1.40					
	52	24400	34.23	6350	1.55	K 97	DRE 180M4	620	511	
	58	21900	30.82	6300	1.75	KF 97	DRE 180M4	660	512	
	64	19900	27.91	6240	1.90	KA 97	DRE 180M4	580	513	
	72	17600	24.75	6160	2.2	KAF 97	DRE 180M4	630	512	
	79	15900	22.37	6080	2.4					
	94	13500	18.96	5930	2.8					
	57	22400	31.39	4000	1.05					
	64	19800	27.88	4030	1.15					
	71	17700	24.92	4050	1.25					
	79	15900	22.41	4050	1.25					
	91	13800	19.45	4030	1.45					
	102	12400	17.42	4000	1.55	K 87	DRE 180M4	485	506	
	111	11400	16.00	3760	1.40	KF 87	DRE 180M4	510	507	
	123	10300	14.45	3930	1.80	KA 87	DRE 180M4	460	508	
	141	8960	12.56	3860	1.95	KAF 87	DRE 180M4	490	507	
	159	7970	11.17	3650	1.65					
	178	7130	10.00	3600	1.85					
214	5920	8.29	3500	2.1						
246	5140	7.21	3420	2.2						
25	3.4	426300	520	42700	1.05					
	3.9	371200	454	42700	1.20					
	5.0	286900	355	42700	1.55					
	6.8	213400	261	42700	2.1	KH 187R107	DRE 180L4	4300	535	
	8.0	180400	221	42700	2.4	KH 187R107	DRE 180L4	4150	535	
	9.2	157200	193	42700	2.8					
	3.4	428200	527	42700	1.05	K 187R97	DRE 180L4	4200	535	
						KH 187R97	DRE 180L4	4050	535	
	5.6	260700	318	33700	1.10					
	6.4	227000	278	33700	1.25					
	7.3	196800	244	33700	1.45					
	8.3	171500	213	33700	1.65					
	8.6	167200	206	33700	1.70	KH 167R107	DRE 180L4	3020	535	
	9.8	144300	180	33700	1.95	KH 167R107	DRE 180L4	2930	535	
	11	130500	160	33700	2.2					
	13	110300	135	33700	2.6					
	15	96100	118	33700	2.9					
	9.5	149800	187	25300	1.05	K 157R107	DRE 180L4	2150	535	
	11	127100	157	25600	1.25	KF 157R107	DRE 180L4	2320	535	
	14	99700	122	25000	1.60	KA 157R107	DRE 180L4	2070	535	
	17	86900	107	24500	1.85	KAF 157R107	DRE 180L4	2200	535	
	9.9	158300	179.86	42700	2.8	K 187	DRE 180L4	3920	533	
						KH 187	DRE 180L4	3770	534	
	13	118800	134.99	33700	2.4	K 167	DRE 180L4	2630	531	
	16	96700	109.83	33700	2.9	KH 167	DRE 180L4	2550	532	
	14	107700	122.39	24500	1.50					
	18	88200	100.22	23900	1.80	K 157	DRE 180L4	1760	526	
	19	80700	91.65	23500	1.95	KF 157	DRE 180L4	1940	527	
	22	70200	79.75	23000	2.3	KA 157	DRE 180L4	1680	528	
	25	61900	70.38	22400	2.6	KAF 157	DRE 180L4	1810	527	
29	53700	61.02	21800	3.0						
16	97000	110.18	17800	1.20						
20	79100	89.89	17500	1.45						
22	72100	81.98	17300	1.60	K 127	DRE 180L4	1250	521		
25	62400	70.95*	17000	1.85	KF 127	DRE 180L4	1340	522		
28	55100	62.60	16700	2.1	KA 127	DRE 180L4	1190	523		
33	47600	54.07	16300	2.4	KAF 127	DRE 180L4	1270	522		
37	42100	47.82	16000	2.7						

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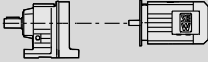




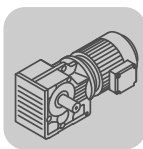
K..DRE/DRS
K..DRE/DRS [HP]

P_m [HP]	n_a [rpm]	T_a [lb-in]	i	$F_{Ra}^{1)}$ [lb]	SEW f_B		m [lbs]		
25	24	64500	73.30	10200	1.10				
	27	58500	66.52*	10400	1.20				
	31	50300	57.17*	10500	1.40				
	36	43900	49.90	10400	1.60	K 107	DRE 180L4	910	516
	42	37200	42.33*	10200	1.75	KF 107	DRE 180L4	940	517
	48	32500	37.00*	10000	1.95	KA 107	DRE 180L4	850	518
	54	28700	32.69	9870	2.2	KAF 107	DRE 180L4	900	517
	57	27500	31.28*	9810	2.2				
	61	25500	29.00	9690	2.5				
	67	23100	26.32	9540	2.8				
	42	36800	41.87	5790	1.05				
	58	27100	30.82	5850	1.40				
	64	24500	27.91	5840	1.55	K 97	DRE 180L4	660	511
	72	21700	24.75	5800	1.75	KF 97	DRE 180L4	700	512
	79	19600	22.37	5750	1.95	KA 97	DRE 180L4	620	513
	94	16600	18.96	5650	2.3	KAF 97	DRE 180L4	670	512
	107	14500	16.56	5560	2.6				
	171	9160	10.41	4970	2.8				
	71	21900	24.92	3620	1.00				
	79	19700	22.41	3660	1.05				
	91	17100	19.45	3690	1.20				
	102	15300	17.42	3700	1.25	K 87	DRE 180L4	530	506
	123	12700	14.45	3680	1.45	KF 87	DRE 180L4	550	507
	141	11000	12.56	3640	1.60	KA 87	DRE 180L4	500	508
159	9830	11.17	3430	1.35	KAF 87	DRE 180L4	530	507	
178	8800	10.00	3400	1.50					
214	7300	8.29	3340	1.70					
246	6350	7.21	3280	1.80					
30	3.9	441200	454	42700	1.00				
	5.0	341200	355	42700	1.30				
	6.8	253700	261	42700	1.75	K 187R107	DRE 180LC4	4320	535
	8.0	214600	221	42700	2.1	KH 187R107	DRE 180LC4	4180	535
	9.2	187100	193	42700	2.4				
	11	157500	163	42700	2.8				
	6.4	269800	278	33700	1.05				
	7.3	234100	244	33700	1.20				
	8.4	204000	213	33700	1.40				
	8.6	199000	206	33700	1.40	K 167R107	DRE 180LC4	3040	535
	9.9	171800	180	33700	1.65	KH 167R107	DRE 180LC4	2960	535
	11	155100	160	33700	1.80				
	13	131200	135	33700	2.2				
	15	114400	118	33700	2.5				
	11	151400	157	24500	1.05	K 157R107	DRE 180LC4	2170	535
	15	118600	122	23900	1.35	KF 157R107	DRE 180LC4	2350	535
	17	103400	107	23600	1.55	KA 157R107	DRE 180LC4	2090	535
						KAF 157R107	DRE 180LC4	2220	535
	9.9	187800	179.86	42700	2.4	K 187	DRE 180LC4	3940	533
	11	172500	165.21	42700	2.6	KH 187	DRE 180LC4	3790	534
	12	150900	144.59	42700	2.9				
	13	140900	134.99	33700	2.0	K 167	DRE 180LC4	2660	531
	16	114600	109.83	33700	2.5	KH 167	DRE 180LC4	2570	532
	15	127800	122.39	23400	1.25				
	18	104600	100.22	22900	1.50				
	19	95700	91.65	22700	1.65	K 157	DRE 180LC4	1790	526
	22	83200	79.75	22200	1.90	KF 157	DRE 180LC4	1960	527
	25	73400	70.38	21800	2.2	KA 157	DRE 180LC4	1710	528
	29	63700	61.02	21200	2.5	KAF 157	DRE 180LC4	1840	527
	33	56600	54.29	20800	2.8				
	16	115000	110.18	16600	1.00				
	20	93800	89.89	16500	1.25				
	22	85600	81.98	16400	1.35	K 127	DRE 180LC4	1280	521
	25	74000	70.95*	16300	1.55	KF 127	DRE 180LC4	1370	522
	28	65300	62.60	16000	1.75	KA 127	DRE 180LC4	1210	523
	33	56400	54.07	15700	2.0	KAF 127	DRE 180LC4	1300	522
	37	49900	47.82	15400	2.3				
	44	41900	40.19	15000	2.7				

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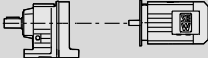
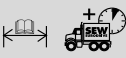


P_m [HP]	n_a [rpm]	T_a [lb-in]	i	$F_{Ra}^{1)}$ [lb]	SEW f_B		m [lbs]		
30	27	69400	66.52*	9070	1.00				
	31	59700	57.17*	9460	1.20				
	36	52100	49.90	9660	1.35				
	42	44200	42.33*	9680	1.45				
	48	38600	37.00*	9590	1.65	K 107	DRE 180LC4	940	516
	54	34100	32.69	9470	1.85	KF 107	DRE 180LC4	960	517
	57	32600	31.28*	9420	1.85	KA 107	DRE 180LC4	880	518
	61	30200	29.00	9330	2.1	KAF 107	DRE 180LC4	930	517
	68	27400	26.32	9210	2.3				
	79	23600	22.62	8990	2.7				
	133	14000	13.43	7980	2.7				
	58	32100	30.82	5400	1.20				
	64	29100	27.91	5430	1.30				
	72	25800	24.75	5430	1.45				
	80	23300	22.37	5420	1.65	K 97	DRE 180LC4	680	511
	94	19700	18.96	5370	1.90	KF 97	DRE 180LC4	730	512
	107	17200	16.56	5310	2.2	KA 97	DRE 180LC4	640	513
	129	14400	13.85	5200	2.6	KAF 97	DRE 180LC4	700	512
	148	12500	11.99	5100	2.8				
	171	10800	10.41	4790	2.3				
204	9090	8.71	4670	2.6					
236	7870	7.54	4560	2.7					
92	20300	19.45	3370	1.00					
102	18100	17.42	3400	1.05					
123	15000	14.45	3430	1.25	K 87	DRE 180LC4	550	506	
142	13100	12.56	3430	1.35	KF 87	DRE 180LC4	570	507	
159	11600	11.17	3210	1.15	KA 87	DRE 180LC4	530	508	
178	10400	10.00	3200	1.25	KAF 87	DRE 180LC4	550	507	
215	8650	8.29	3170	1.45					
247	7520	7.21	3140	1.55					
40	6.8	347200	261	42700	1.25				
	8.0	293900	221	42700	1.50	K 187R107	DRE 200L4	4520	535
	9.2	256400	193	42700	1.75	KH 187R107	DRE 200L4	4370	535
	11	216100	163	42700	2.0				
	8.4	279700	213	33700	1.00				
	8.6	272700	206	33700	1.05				
	9.9	235700	180	33700	1.20	K 167R107	DRE 200L4	3240	535
	11	212300	160	33700	1.35	KH 167R107	DRE 200L4	3150	535
	13	179700	135	33700	1.60				
	15	156800	118	33700	1.80				
	17	141700	107	21400	1.10	K 157R107	DRE 200L4	2370	535
						KF 157R107	DRE 200L4	2540	535
						KA 157R107	DRE 200L4	2290	535
						KAF 157R107	DRE 200L4	2420	535
	9.9	256100	179.86	42700	1.75				
	11	235200	165.21	42700	1.90				
	12	205800	144.59	42700	2.2	K 187	DRE 200L4	4140	533
	14	184600	129.69	42700	2.4	KH 187	DRE 200L4	3990	534
	16	160300	112.60	42700	2.8				
	16	156300	109.83	33700	1.80				
	20	125100	87.86	33700	2.3	K 167	DRE 200L4	2850	531
	23	111200	78.14	33700	2.5	KH 167	DRE 200L4	2770	532
	26	96900	68.07	33700	2.9				
	18	142700	100.22	20800	1.10				
	19	130500	91.65	20700	1.20				
	22	113500	79.75	20500	1.40	K 157	DRE 200L4	1980	526
	25	100200	70.38	20300	1.60	KF 157	DRE 200L4	2160	527
	29	86800	61.02	19900	1.85	KA 157	DRE 200L4	1900	528
	33	77300	54.29	19600	2.1	KAF 157	DRE 200L4	2030	527
	38	66600	46.79	19200	2.4				
47	54100	38.02	18500	2.9					
25	101000	70.95*	14500	1.15					
28	89100	62.60	14500	1.30					
33	76900	54.07	14400	1.50	K 127	DRE 200L4	1470	521	
37	68000	47.82	14300	1.70	KF 127	DRE 200L4	1560	522	
44	57200	40.19	14000	2.0	KA 127	DRE 200L4	1410	523	
49	51600	36.25	13900	2.2	KAF 127	DRE 200L4	1490	522	
57	44600	31.37	13600	2.6					
64	39400	27.68	13300	2.9					



K..DRE/DRS

K..DRE/DRS [HP]

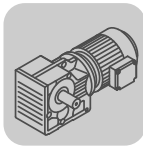
P_m [HP]	n_a [rpm]	T_a [lb-in]	i	$F_{Ra}^{1)}$ [lb]	SEW f_B		m [lbs]		
40	42	60200	42.33*	7970	1.10				
	48	52600	37.00*	8270	1.20				
	57	44500	31.28*	8480	1.35				
	61	41200	29.00	8510	1.55				
	68	37400	26.32	8460	1.70				
	79	32200	22.62	8350	2.00	K 107	DRE 200L4	1130	516
	90	28100	19.74	8230	2.3	KF 107	DRE 200L4	1160	517
	106	23800	16.75	8050	2.6	KA 107	DRE 200L4	1070	518
	122	20800	14.64	7880	2.9	KAF 107	DRE 200L4	1120	517
	133	19100	13.43	7530	2.00				
	152	16600	11.73	7380	2.3				
	179	14100	9.94	7170	2.6				
	205	12300	8.69	6990	2.9				
	72	35200	24.75	4610	1.10				
	80	31800	22.37	4670	1.20				
	94	26900	18.96	4740	1.40				
	107	23500	16.56	4760	1.60	K 97	DRE 200L4	880	511
	129	19700	13.85	4740	1.95	KF 97	DRE 200L4	920	512
	148	17000	11.99	4700	2.0	KA 97	DRE 200L4	840	513
	171	14800	10.41	4370	1.70	KAF 97	DRE 200L4	890	512
204	12300	8.71	4310	1.90					
236	10700	7.54	4250	2.00					
50	6.8	430200	261	42700	1.05				
	8.0	364300	221	42700	1.20	K 187R107	DRE 225S4	4580	535
	9.2	318000	193	42700	1.40	KH 187R107	DRE 225S4	4440	535
	11	268200	163	42700	1.65				
	11	263100	160	33700	1.10	K 167R107	DRE 225S4	3300	535
	13	222800	135	33700	1.25	KH 167R107	DRE 225S4	3220	535
	15	194400	118	33700	1.45				
	9.9	316700	179.86	42700	1.40				
	11	290900	165.21	42700	1.50				
	12	254600	144.59	42700	1.75	K 187	DRE 225S4	4200	533
	14	228400	129.69	42700	1.95	KH 187	DRE 225S4	4050	534
	16	198300	112.60	42700	2.2				
	17	179900	102.16	42700	2.5				
	20	154900	88.00	42700	2.8				
	16	193400	109.83	33700	1.45				
	20	154700	87.86	33700	1.85	K 167	DRE 225S4	2920	531
	23	137600	78.14	33700	2.1	KH 167	DRE 225S4	2840	532
	26	119800	68.07	33700	2.4				
	29	106900	60.74	33600	2.6				
	22	140400	79.75	19000	1.15				
	25	123900	70.38	19000	1.30	K 157	DRE 225S4	2050	526
	29	107400	61.02	18800	1.50	KF 157	DRE 225S4	2220	527
	33	95600	54.29	18600	1.65	KA 157	DRE 225S4	1970	528
	38	82400	46.79	18300	1.95	KAF 157	DRE 225S4	2100	527
	47	66900	38.02	17800	2.4				
	57	55100	31.30	17200	2.9				
	28	110200	62.60	13200	1.05				
	33	95200	54.07	13300	1.20				
	37	84200	47.82	13300	1.35	K 127	DRE 225S4	1540	521
	44	70700	40.19	13200	1.60	KF 127	DRE 225S4	1630	522
	49	63800	36.25	13100	1.80	KA 127	DRE 225S4	1470	523
	57	55200	31.37	12900	2.1	KAF 127	DRE 225S4	1560	522
	64	48700	27.68	12700	2.4				
74	42000	23.91	12500	2.7					
57	55000	31.28*	7280	1.10					
61	51000	29.00	7450	1.25					
67	46300	26.32	7610	1.35					
78	39800	22.62	7770	1.60					
90	34700	19.74	7740	1.85	K 107	DRE 225S4	1200	516	
106	29400	16.75	7640	2.1	KF 107	DRE 225S4	1220	517	
121	25700	14.64	7520	2.4	KA 107	DRE 225S4	1140	518	
132	23600	13.43	7150	1.60	KAF 107	DRE 225S4	1190	517	
151	20600	11.73	7040	1.85					
179	17500	9.94	6890	2.1					
204	15300	8.69	6750	2.4					
242	12900	7.35	6550	2.5					

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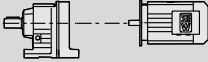




P_m [HP]	n_a [rpm]	T_a [lb-in]	i	$F_{Ra}^{1)}$ [lb]	SEW f_B		m [lbs]		
50	94	33300	18.96	4180	1.15				
	107	29100	16.56	4270	1.30				
	128	24300	13.85	4330	1.55	K 97	DRE 225S4	940	511
	148	21100	11.99	4350	1.65	KF 97	DRE 225S4	990	512
	171	18300	10.41	4000	1.40	KA 97	DRE 225S4	900	513
	204	15300	8.71	4010	1.55	KAF 97	DRE 225S4	960	512
	236	13200	7.54	3990	1.60				
60	8.0	442600	221	42700	1.00	K 187R107	DRE 225M4	4630	535
	9.2	386400	193	42700	1.15	KH 187R107	DRE 225M4	4480	535
	11	326000	163	42700	1.35				
	13	270600	135	33700	1.05	K 167R107	DRE 225M4	3350	535
	15	236300	118	33700	1.20	KH 167R107	DRE 225M4	3260	535
	9.9	384100	179.86	42700	1.15				
	11	352800	165.21	42700	1.25				
	12	308800	144.59	42700	1.45				
	14	277000	129.69	42700	1.60	K 187	DRE 225M4	4250	533
	16	240500	112.60	42700	1.85	KH 187	DRE 225M4	4100	534
	17	218200	102.16	42700	2.0				
	20	187900	88.00	42000	2.4				
	24	157900	73.96	40700	2.8				
	16	234500	109.83	33700	1.20				
	20	187600	87.86	33700	1.50				
	23	166900	78.14	33700	1.70	K 167	DRE 225M4	2970	531
	26	145400	68.07	33100	1.95	KH 167	DRE 225M4	2880	532
	29	129700	60.74	32500	2.2				
	34	110500	51.77	31600	2.6				
	25	150300	70.38	17500	1.05				
	29	130300	61.02	17500	1.20				
	33	115900	54.29	17500	1.35	K 157	DRE 225M4	2100	526
	38	99900	46.79	17300	1.60	KF 157	DRE 225M4	2270	527
	47	81200	38.02	17000	1.95	KA 157	DRE 225M4	2020	528
	57	66800	31.30	16600	2.4	KAF 157	DRE 225M4	2140	527
	64	59000	27.62	16200	2.7				
	33	115400	54.07	12000	1.00				
	37	102100	47.82	12100	1.15				
	44	85800	40.19	12200	1.35				
	49	77400	36.25	12200	1.50	K 127	DRE 225M4	1580	521
	57	66900	31.37	12100	1.70	KF 127	DRE 225M4	1670	522
	64	59100	27.68	12000	1.95	KA 127	DRE 225M4	1520	523
74	51000	23.91	11900	2.2	KAF 127	DRE 225M4	1600	522	
84	45100	21.15	11700	2.6					
139	27300	12.79	10500	2.8					
61	61900	29.00	6080	1.05					
68	56100	26.32	6420	1.15					
79	48300	22.62	6800	1.30					
90	42100	19.74	7010	1.50					
106	35700	16.75	7160	1.75	K 107	DRE 225M4	1240	516	
122	31200	14.64	7110	1.95	KF 107	DRE 225M4	1270	517	
133	28600	13.43	6700	1.35	KA 107	DRE 225M4	1180	518	
152	25000	11.73	6650	1.50	KAF 107	DRE 225M4	1240	517	
179	21200	9.94	6550	1.75					
205	18500	8.69	6450	1.95					
242	15600	7.35	6310	2.0					
107	35300	16.56	3720	1.10					
129	29500	13.85	3870	1.30	K 97	DRE 225M4	990	511	
148	25600	11.99	3950	1.35	KF 97	DRE 225M4	1040	512	
171	22200	10.41	3580	1.15	KA 97	DRE 225M4	950	513	
204	18500	8.71	3650	1.25	KAF 97	DRE 225M4	1010	512	
236	16000	7.54	3680	1.30					
75	12	378500	144.59	42500	1.15				
	14	339500	129.69	42200	1.30				
	16	294700	112.60	41700	1.50				
	17	267400	102.16	41200	1.65	K 187	DVE 250M4	4560	533
	20	230400	88.00	40400	1.90	KH 187	DVE 250M4	4410	534
	24	193600	73.96	39300	2.3				
	28	167600	64.04	38400	2.6				

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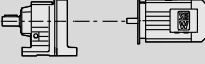




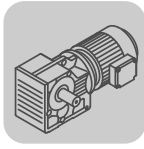
K..DRE/DRS
K..DRE/DRS [HP]

P_m [HP]	n_a [rpm]	T_a [lb-in]	i	$F_{Ra}^{1)}$ [lb]	SEW f_B		m [lbs]		
75	20	230000	87.86	32400	1.25				
	23	204500	78.14	32100	1.40				
	26	178200	68.07	31600	1.60				
	29	159000	60.74	31200	1.80	KH 167	DVE 250M4	3270	531
	34	135500	51.77	30400	2.1	KH 167	DVE 250M4	3190	532
	41	112300	42.89	29500	2.5				
	48	95800	36.61	28700	3.0				
	29	159700	61.02	15900	1.00				
	33	142100	54.29	16000	1.10				
	38	122500	46.79	16100	1.30	K 157	DVE 250M4	2400	526
	47	99500	38.02	16000	1.60	KF 157	DVE 250M4	2580	527
	57	81900	31.30	15700	1.95	KA 157	DVE 250M4	2320	528
	64	72300	27.62	15500	2.2	KAF 157	DVE 250M4	2450	527
	74	62700	23.95	15200	2.5				
	83	55700	21.31	15000	2.8				
	44	105200	40.19	11000	1.10				
	57	82100	31.37	11200	1.40				
	64	72400	27.68	11200	1.60				
	74	62500	23.91	11200	1.85	K 127	DVE 250M4	1880	521
	84	55300	21.15	11100	2.1	KF 127	DVE 250M4	1970	522
100	46500	17.77	10900	2.5	KA 127	DVE 250M4	1820	523	
124	37500	14.35	10600	2.8	KAF 127	DVE 250M4	1900	522	
139	33400	12.79	10100	2.3					
165	28100	10.74	9850	2.5					
205	22700	8.68	9510	2.8					
100	16	401900	112.60	37500	1.10				
	17	364700	102.16	37400	1.20				
	20	314100	88.00	37100	1.40				
	24	264000	73.96	36600	1.70	KH 187	DVE 280S4	4850	533
	28	228600	64.04	36000	1.95	KH 187	DVE 280S4	4700	534
	33	190500	53.36	35100	2.3				
	39	162400	45.50*	34200	2.7				
	42	151700	42.51	33800	2.9				
	23	278900	78.14	28600	1.00				
	26	243000	68.07	28600	1.15				
	29	216800	60.74	28500	1.30				
	34	184800	51.77	28200	1.55	K 167	DVE 280S4	3570	531
	41	153100	42.89	27600	1.85	KH 167	DVE 280S4	3480	532
	48	130600	36.61	27000	2.2				
	55	115100	32.25	26500	2.5				
	62	102700	28.77	26000	2.8				
	47	135700	38.02	14000	1.15				
	57	111700	31.30	14100	1.45				
	64	98600	27.62	14100	1.60	K 157	DVE 280S4	2700	526
	74	85500	23.95	14000	1.85	KF 157	DVE 280S4	2870	527
83	76000	21.31	13800	2.1	KA 157	DVE 280S4	2620	528	
97	65500	18.37	13600	2.4	KAF 157	DVE 280S4	2750	527	
119	53200	14.92	13300	3.0					
57	111900	31.37	9300	1.05					
64	98800	27.68	9530	1.15					
74	85300	23.91	9710	1.35	K 127	DVE 280S4	2190	521	
84	75400	21.15	9790	1.50	KF 127	DVE 280S4	2280	522	
100	63400	17.77	9810	1.80	KA 127	DVE 280S4	2120	523	
124	51200	14.35	9730	2.1	KAF 127	DVE 280S4	2210	522	
139	45600	12.79	9210	1.65					
165	38300	10.74	9100	1.85					
205	30900	8.68	8900	2.1					
125	17	437600	102.16	34500	1.00				
	20	377000	88.00	34700	1.15				
	24	316800	73.96	34500	1.40				
	28	274300	64.04	34200	1.60	KH 187	DVE 280M4	4860	533
	33	228600	53.36	33600	1.95	KH 187	DVE 280M4	4710	534
	39	194900	45.50*	32900	2.3				
	42	182100	42.51	32600	2.4				
	46	165200	38.57	32100	2.7				

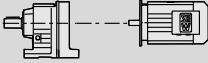


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P_m [HP]	n_a [rpm]	T_a [lb-in]	i	$F_{Ra}^{1)}$ [lb]	SEW f_B		m [lbs]		
125	29	260200	60.74	26500	1.10				
	34	221700	51.77	26400	1.30				
	41	183700	42.89	26200	1.55				
	48	156800	36.61	25800	1.80	K 167	DVE 280M4	3570	531
	55	138100	32.25	25500	2.0	KH 167	DVE 280M4	3490	532
	62	123200	28.77	25100	2.3				
	72	105000	24.52	24500	2.7				
	57	134100	31.30	12800	1.20				
	64	118300	27.62	13000	1.35				
	74	102600	23.95	13000	1.55	K 157	DVE 280M4	2700	526
	83	91200	21.31	13000	1.75	KF 157	DVE 280M4	2880	527
	97	78600	18.37	12900	2.0	KA 157	DVE 280M4	2620	528
	119	63900	14.92	12700	2.5	KAF 157	DVE 280M4	2750	527
	140	54200	12.65	12400	2.8				
74	102300	23.91	8620	1.10					
84	90500	21.15	8830	1.25					
100	76100	17.77	9010	1.50	K 127	DVE 280M4	2190	521	
124	61400	14.35	9080	1.75	KF 127	DVE 280M4	2290	522	
139	54700	12.79	8540	1.40	KA 127	DVE 280M4	2130	523	
165	46000	10.74	8540	1.55	KAF 127	DVE 280M4	2210	522	
205	37100	8.68	8450	1.70					
150	24	384800	73.96	31700	1.15				
	28	333200	64.04	31800	1.35				
	33	277700	53.36	31600	1.60				
	39	236700	45.50*	31200	1.85	K 187	DRE 315K4	5400	533
	42	221200	42.51	31000	2.0	KH 187	DRE 315K4	5250	534
	46	200700	38.57	30700	2.2				
	54	172900	33.23	30100	2.6				
	34	269400	51.77	24100	1.05				
	42	223200	42.89	24300	1.25				
	49	190500	36.61	24200	1.50				
	55	167800	32.25	24000	1.70	K 167	DRE 315K4	4120	531
	62	149700	28.77	23800	1.90	KH 167	DRE 315K4	4030	532
	73	127600	24.52	23400	2.2				
	88	105700	20.32	22800	2.7				
75	124600	23.95	11800	1.30					
84	110800	21.31	11900	1.45	K 157	DRE 315K4/ERF/NS	3250	526	
97	95500	18.37	11900	1.65	KF 157	DRE 315K4/ERF/NS	3420	527	
120	77600	14.92	11900	2.0	KA 157	DRE 315K4/ERF/NS	3170	528	
141	65800	12.65	11800	2.3	KAF 157	DRE 315K4/ERF/NS	3300	527	
200	33	378600	53.36	27600	1.15				
	39	322800	45.50*	27800	1.35				
	42	301600	42.51	27800	1.45				
	46	273700	38.57	27800	1.60				
	54	235700	33.23	27600	1.90	K 187	DRE 315S4	5580	533
	64	198100	27.92	27200	2.2	KH 187	DRE 315S4	5430	534
	74	171500	24.18	26800	2.4				
	89	142900	20.15	26100	2.7				
	104	121900	17.18	25500	3.0				
	49	259700	36.61	21000	1.10				
	55	228800	32.25	21200	1.25				
	62	204100	28.77	21300	1.40	K 167	DRE 315S4	4290	531
	73	174000	24.52	21200	1.65	KH 167	DRE 315S4	4210	532
	88	144100	20.32	21000	1.95				
103	123000	17.34	20700	2.3					
84	151200	21.31	9630	1.05	K 157	DRE 315S4/ERF/NS	3430	526	
97	130300	18.37	10000	1.20	KF 157	DRE 315S4/ERF/NS	3600	527	
120	105800	14.92	10300	1.50	KA 157	DRE 315S4/ERF/NS	3340	528	
141	89800	12.65	10400	1.65	KAF 157	DRE 315S4/ERF/NS	3470	527	
250	39	398800	45.50*	24900	1.10				
	54	291200	33.23	25400	1.50				
	64	244800	27.92	25400	1.80				
	74	211900	24.18	25200	2.00	K 187	DRE 315M4	5930	533
	88	176600	20.15	24800	2.2	KH 187	DRE 315M4	5780	534
	104	150600	17.18	24300	2.4				
	73	214900	24.52	19300	1.30				
	88	178100	20.32	19400	1.60	K 167	DRE 315M4	4650	531
	103	152000	17.34	19400	1.85	KH 167	DRE 315M4	4560	532



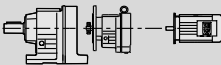

K..DRE/DRS K..DRE/DRS [HP]

P_m [HP]	n_a [rpm]	T_a [lb-in]	i	$F_{Ra}^{1)}$ [lb]	SEW f_B		m [lbs]		
250	119	130800	14.92	8950	1.20	K 157	DRE 315M4	3780	526
	141	110900	12.65	9270	1.35	KF 157	DRE 315M4	3950	527
						KA 157	DRE 315M4	3700	528
						KAF 157	DRE 315M4	3820	527
300	54	354200	33.23	23000	1.25				
	64	297700	27.92	23300	1.50	K 187	DRE 315L4/ERF/NS	6100	533
	74	257700	24.18	23400	1.65	KH 187	DRE 315L4/ERF/NS	5960	534
	88	214800	20.15	23300	1.80				
	104	183100	17.18	23100	2.0				
	73	261400	24.52	17200	1.10	K 167	DRE 315L4/ERF/NS	4820	531
	88	216600	20.32	17600	1.30	KH 167	DRE 315L4/ERF/NS	4740	532
	103	184800	17.34	17800	1.55				
	119	159100	14.92	7370	1.00	K 157	DRE 315L4	3950	526
	141	134900	12.65	7940	1.10	KF 157	DRE 315L4	4130	527
						KA 157	DRE 315L4	3870	528
						KAF 157	DRE 315L4	4000	527

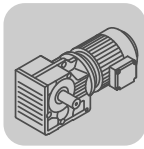
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11.4 K..R..DRE/DRS [lb-in]

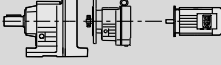
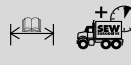
$T_a \text{ max}$ [lb-in]	n_a [rpm]	i	$F_{Ra}^{1)}$ [lb]		m [lbs]			
1760	0.25	6832	1270					
	0.29	5922	1270					
	0.31	5491	1270					
	0.36	4759	1270					
	0.41	4160	1270					
	0.47	3645	1270					
	0.53	3205	1270		K 37R17	DRS 71S4	48	535
	0.61	2801	1270		KF 37R17	DRS 71S4	53	535
	0.69	2454	1270		KA 37R17	DRS 71S4	47	535
	0.78	2166	1270		KAF 37R17	DRS 71S4	51	535
	0.90	1891	1270					
	1.0	1660	1270					
	1.2	1466	1270					
	1.3	1288	1270					
	1.5	1136	1270					
	1.7	996	1270					
	1.9	876	1270					
	2.2	761	1270					
	2.5	671	1270					
	2.9	585	1270					
	3.3	512	1270					
	3.8	451	1270					
	4.3	396	1270		K 37R17	DRS 71S4	47	535
	4.9	346	1270		KF 37R17	DRS 71S4	52	535
	5.6	304	1270		KA 37R17	DRS 71S4	47	535
	6.4	267	1270		KAF 37R17	DRS 71S4	51	535
	7.3	234	1270					
	8.3	205	1270					
	9.4	181	1270					
	11	160	1270					
	12	136	1270					
	13	127	1270					
	15	110	1270					
	18	96	1270		K 37R17	DRS 71M4	50	535
					KF 37R17	DRS 71M4	55	535
				KA 37R17	DRS 71M4	50	535	
				KAF 37R17	DRS 71M4	53	535	
3530	0.17	10138	1330					
	0.20	8534	1330					
	0.22	7662	1330					
	0.25	6826	1330					
	0.28	5983	1330					
	0.33	5159	1330					
	0.37	4601	1330					
	0.43	3940	1330		K 47R37	DRS 71S4	80	535
	0.49	3477	1330		KF 47R37	DRS 71S4	87	535
	0.56	3043	1330		KA 47R37	DRS 71S4	78	535
	0.62	2733	1330		KAF 47R37	DRS 71S4	84	535
	0.72	2354	1330					
	0.82	2063	1330					
	0.93	1819	1330					
	1.1	1586	1330					
	1.2	1388	1330					
	1.4	1222	1330					
	1.6	1097	1330					
	1.8	945	1330					
	2.0	831	1330					
	2.4	718	1330					
	2.7	639	1330		K 47R37	DRS 71S4	79	535
	3.1	552	1330		KF 47R37	DRS 71S4	86	535
	3.4	495	1330		KA 47R37	DRS 71S4	77	535
	4.0	426	1330		KAF 47R37	DRS 71S4	84	535
4.5	375	1330						
5.2	327	1330						
5.9	289	1330						
6.6	256	1330						
7.6	225	1330						

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K..DRE/DRS

K..R..DRE/DRS [lb-in]

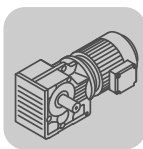
$T_{a \max}$ [lb-in]	n_a [rpm]	i	$F_{Ra}^{1)}$ [lb]		m [lbs]	
3530	8.5	198	1330	K 47R37 DRS 71M4	82	535
	9.9	171	1330	KF 47R37 DRS 71M4	89	535
	11	153	1330	KA 47R37 DRS 71M4	80	535
				KAF 47R37 DRS 71M4	86	535
	13	131	1330	K 47R37 DRE 80M4	93	535
	16	112	1330	KF 47R37 DRE 80M4	100	535
				KA 47R37 DRE 80M4	91	535
				KAF 47R37 DRE 80M4	97	535
	18	99	1330	K 47R37 DRE 90M4	100	535
	18	94	1330	KF 47R37 DRE 90M4	110	535
				KA 47R37 DRE 90M4	100	535
				KAF 47R37 DRE 90M4	105	535
5300	0.14	12169	1720			
	0.15	11162	1720			
	0.18	9503	1720			
	0.20	8547	1720			
	0.23	7277	1720			
	0.26	6478	1720			
	0.30	5662	1720	K 57R37 DRS 71S4	93	535
	0.34	5033	1720	KF 57R37 DRS 71S4	105	535
	0.39	4340	1720	KA 57R37 DRS 71S4	88	535
	0.44	3854	1720	KAF 57R37 DRS 71S4	100	535
	0.50	3390	1720			
	0.58	2924	1720			
	0.66	2593	1720			
	0.76	2249	1720			
	0.86	1986	1720			
	0.98	1743	1720			
	1.1	1539	1720			
	1.3	1354	1720			
	1.4	1174	1720			
	1.6	1036	1720	K 57R37 DRS 71S4	92	535
	1.9	906	1720	KF 57R37 DRS 71S4	105	535
	2.1	806	1720	KA 57R37 DRS 71S4	88	535
	2.4	699	1720	KAF 57R37 DRS 71S4	100	535
	2.8	615	1720			
	3.1	544	1720			
	3.6	473	1720			
	4.0	421	1720			
	4.7	362	1720			
	5.3	319	1720	K 57R37 DRS 71M4	95	535
	6.0	280	1720	KF 57R37 DRS 71M4	105	535
	6.9	246	1720	KA 57R37 DRS 71M4	90	535
	7.9	215	1720	KAF 57R37 DRS 71M4	105	535
	9.1	192	1720	K 57R37 DRE 80M4	105	535
	10	166	1720	KF 57R37 DRE 80M4	115	535
				KA 57R37 DRE 80M4	100	535
				KAF 57R37 DRE 80M4	115	535
12	145	1720	K 57R37 DRE 90M4	115	535	
14	129	1720	KF 57R37 DRE 90M4	125	535	
16	111	1720	KA 57R37 DRE 90M4	110	535	
			KAF 57R37 DRE 90M4	125	535	
18	97	1720	K 57R37 DRE 90L4	120	535	
			KF 57R37 DRE 90L4	130	535	
			KA 57R37 DRE 90L4	115	535	
			KAF 57R37 DRE 90L4	130	535	

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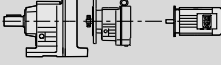




$T_{a \max}$ [lb-in]	n_a [rpm]	i	$F_{Ra}^{1)}$ [lb]		m [lbs]		
7250	0.14	12139	2320				
	0.15	11134	2320				
	0.18	9479	2320				
	0.21	8173	2320				
	0.23	7259	2320				
	0.26	6462	2320				
	0.30	5648	2320		K 67R37	DRS 71S4	105 535
	0.35	4846	2320		KF 67R37	DRS 71S4	120 535
	0.39	4329	2320		KA 67R37	DRS 71S4	100 535
	0.45	3750	2320		KAF 67R37	DRS 71S4	110 535
	0.51	3315	2320				
	0.58	2917	2320				
	0.67	2532	2320				
	0.76	2244	2320				
	0.86	1981	2320				
	0.98	1739	2320				
	1.1	1535	2320				
	1.3	1351	2320				
	1.4	1171	2320				
	1.6	1034	2320		K 67R37	DRS 71S4	105 535
	1.9	903	2320		KF 67R37	DRS 71S4	115 535
	2.1	793	2320		KA 67R37	DRS 71S4	99 535
	2.4	697	2320		KAF 67R37	DRS 71S4	110 535
	2.8	613	2320				
	3.1	542	2320				
	3.6	471	2320				
	4.0	420	2320		K 67R37	DRS 71M4	110 535
	4.7	361	2320		KF 67R37	DRS 71M4	120 535
	5.2	323	2320		KA 67R37	DRS 71M4	100 535
					KAF 67R37	DRS 71M4	115 535
	6.2	279	2320		K 67R37	DRE 80M4	120 535
	7.1	246	2320		KF 67R37	DRE 80M4	130 535
				KA 67R37	DRE 80M4	110 535	
				KAF 67R37	DRE 80M4	125 535	
8.0	217	2320		K 67R37	DRE 90M4	130 535	
9.1	191	2320		KF 67R37	DRE 90M4	140 535	
10	166	2320		KA 67R37	DRE 90M4	120 535	
				KAF 67R37	DRE 90M4	135 535	
12	144	2320		K 67R37	DRE 90L4	135 535	
14	122	2320		KF 67R37	DRE 90L4	145 535	
				KA 67R37	DRE 90L4	125 535	
				KAF 67R37	DRE 90L4	140 535	
13700	0.11	15310	3460				
	0.12	14043	3460				
	0.14	11955	3460				
	0.17	10217	3460				
	0.19	8809	3460				
	0.23	7528	3460				
	0.26	6606	3460		K 77R37	DRS 71S4	160 535
	0.29	5774	3460		KF 77R37	DRS 71S4	175 535
	0.33	5089	3460		KA 77R37	DRS 71S4	140 535
	0.38	4489	3460		KAF 77R37	DRS 71S4	160 535
	0.43	3961	3460				
	0.49	3485	3460				
	0.59	2901	3460				
	0.63	2717	3460				
	0.72	2370	3460				
	0.83	2050	3460				
	0.96	1772	3460				
	1.1	1514	3460		K 77R37	DRS 71S4	160 535
	1.2	1388	3460		KF 77R37	DRS 71S4	175 535
	1.4	1218	3460		KA 77R37	DRS 71S4	140 535
	1.6	1053	3460		KAF 77R37	DRS 71S4	160 535
	1.8	924	3460				
	2.1	815	3460		K 77R37	DRS 71M4	160 535
	2.4	709	3460		KF 77R37	DRS 71M4	180 535
2.7	622	3460		KA 77R37	DRS 71M4	145 535	
				KAF 77R37	DRS 71M4	160 535	

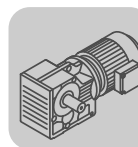
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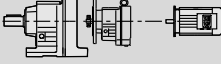




K..DRE/DRS K..R..DRE/DRS [lb-in]

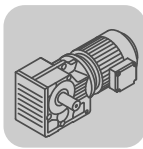
$T_{a \max}$ [lb-in]	n_a [rpm]	i	$F_{Ra}^{1)}$ [lb]				m [lbs]		
13700	3.2	552	3460	K	77R37	DRE 80M4	170	535	
	3.6	485	3460	KF	77R37	DRE 80M4	190	535	
	4.1	428	3460	KA	77R37	DRE 80M4	155	535	
				KAF	77R37	DRE 80M4	170	535	
	4.7	367	3460	K	77R37	DRE 90M4	180	535	
	5.3	328	3460	KF	77R37	DRE 90M4	200	535	
	6.0	290	3460	KA	77R37	DRE 90M4	165	535	
				KAF	77R37	DRE 90M4	180	535	
	6.9	252	3460	K	77R37	DRE 90L4	185	535	
	7.9	221	3460	KF	77R37	DRE 90L4	205	535	
				KA	77R37	DRE 90L4	170	535	
				KAF	77R37	DRE 90L4	185	535	
	8.9	195	3460	K	77R37	DRE 100L4	205	535	
	9.9	175	3460	KF	77R37	DRE 100L4	225	535	
	11	154	3460	KA	77R37	DRE 100L4	190	535	
				KAF	77R37	DRE 100L4	205	535	
23800	0.11	14829	6130						
	0.13	13168	6130						
	0.14	11737	6130						
	0.17	10217	6130						
	0.19	9073	6130						
	0.22	7854	6130						
	0.25	6832	6130	K	87R57	DRS 71S4	265	535	
	0.29	5930	6130	KF	87R57	DRS 71S4	285	535	
	0.32	5240	6130	KA	87R57	DRS 71S4	240	535	
	0.37	4562	6130	KAF	87R57	DRS 71S4	270	535	
	0.42	4037	6130						
	0.47	3609	6130						
	0.55	3107	6130						
	0.62	2728	6130						
	0.72	2371	6130						
	0.81	2088	6130	K	87R57	DRS 71S4	265	535	
	0.92	1854	6130	KF	87R57	DRS 71S4	285	535	
	1.0	1657	6130	KA	87R57	DRS 71S4	240	535	
				KAF	87R57	DRS 71S4	265	535	
	1.2	1415	6130	K	87R57	DRS 71M4	265	535	
	1.4	1229	6130	KF	87R57	DRS 71M4	285	535	
	1.6	1078	6130	KA	87R57	DRS 71M4	240	535	
				KAF	87R57	DRS 71M4	270	535	
	1.8	951	6130	K	87R57	DRE 80M4	280	535	
	2.1	837	6130	KF	87R57	DRE 80M4	300	535	
				KA	87R57	DRE 80M4	250	535	
				KAF	87R57	DRE 80M4	280	535	
	2.4	726	6130	K	87R57	DRE 90M4	290	535	
	2.7	638	6130	KF	87R57	DRE 90M4	310	535	
	3.1	562	6130	KA	87R57	DRE 90M4	260	535	
				KAF	87R57	DRE 90M4	290	535	
	3.7	474	6130	K	87R57	DRE 90L4	295	535	
	4.1	426	6130	KF	87R57	DRE 90L4	315	535	
	4.7	373	6130	KA	87R57	DRE 90L4	270	535	
				KAF	87R57	DRE 90L4	295	535	
	5.3	330	6130	K	87R57	DRE 100L4	310	535	
5.9	294	6130	KF	87R57	DRE 100L4	330	535		
6.9	250	6130	KA	87R57	DRE 100L4	285	535		
			KAF	87R57	DRE 100L4	315	535		
7.4	236	6130	K	87R57	DRE 100LC4	315	535		
8.7	201	6130	KF	87R57	DRE 100LC4	335	535		
9.6	183	6130	KA	87R57	DRE 100LC4	290	535		
11	159	6130	KAF	87R57	DRE 100LC4	320	535		
12	141	6160	K	87R57	DRE 100LC4	315	535		
			KF	87R57	DRE 100LC4	335	535		
			KA	87R57	DRE 100LC4	290	535		
			KAF	87R57	DRE 100LC4	320	535		

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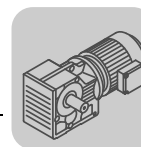
$T_{a \max}$ [lb-in]	n_a [rpm]	i	$F_{Ra}^{1)}$ [lb]		m [lbs]	 
38000	0.09	18091	8990			
38000	0.10	16666	8990			
38000	0.11	14897	8990			
38000	0.13	13182	8990			
38000	0.15	11677	8990			
38000	0.16	10317	8990			
38000	0.19	9083	8990	K 97R57	400	535
38000	0.21	8054	8990	KF 97R57	445	535
38000	0.24	6970	8990	KA 97R57	360	535
38000	0.28	6027	8990	KAF 97R57	415	535
	0.32	5391	8990			
	0.36	4669	8990			
	0.42	4082	8990			
	0.47	3583	8990			
	0.55	3108	8990			
	0.62	2757	8990			
	0.70	2419	8990	K 97R57	400	535
				KF 97R57	440	535
				KA 97R57	360	535
				KAF 97R57	415	535
	0.80	2123	8990	K 97R57	400	535
	0.91	1856	8990	KF 97R57	445	535
	1.0	1625	8990	KA 97R57	360	535
				KAF 97R57	415	535
	1.2	1430	8990	K 97R57	410	535
	1.4	1261	8990	KF 97R57	455	535
				KA 97R57	370	535
				KAF 97R57	425	535
	1.6	1102	8990	K 97R57	425	535
	1.8	957	8990	KF 97R57	465	535
	2.0	855	8990	KA 97R57	380	535
				KAF 97R57	435	535
	2.3	743	8990	K 97R57	430	535
	2.7	652	8990	KF 97R57	475	535
	3.0	573	8990	KA 97R57	390	535
				KAF 97R57	445	535
	3.4	504	8990	K 97R57	445	535
	4.0	437	8990	KF 97R57	490	535
				KA 97R57	405	535
				KAF 97R57	460	535
	4.6	382	8990	K 97R57	450	535
	5.1	342	8990	KF 97R57	495	535
	5.7	305	8990	KA 97R57	410	535
	6.8	258	8990	KAF 97R57	465	535
	7.6	232	8990			
	8.8	199	8990	K 97R57	510	535
				KF 97R57	550	535
				KA 97R57	470	535
				KAF 97R57	520	535
70700	0.12	14311	14600			
	0.14	12211	14600			
	0.16	10677	14600			
	0.18	9524	14600	K 107R77	690	535
	0.20	8328	14600	KF 107R77	710	535
	0.23	7270	14600	KA 107R77	630	535
	0.27	6184	14600	KAF 107R77	680	535
	0.30	5662	14600			
	0.33	5138	14600			
	0.39	4359	14600	K 107R77	690	535
	0.44	3810	14600	KF 107R77	720	535
	0.50	3358	14600	KA 107R77	630	535
	0.57	2977	14600	KAF 107R77	680	535
	0.67	2599	14600	K 107R77	700	535
	0.76	2286	14600	KF 107R77	730	535
				KA 107R77	640	535
				KAF 107R77	690	535

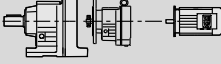
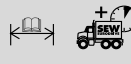
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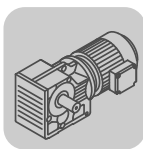


K..DRE/DRS
K..R..DRE/DRS [lb-in]

$T_{a \max}$ [lb-in]	n_a [rpm]	i	$F_{Ra}^{1)}$ [lb]		m [lbs]	
70700	0.90	1939	14600	K 107R77 DRE 90M4	710	535
				KF 107R77 DRE 90M4	740	535
				KA 107R77 DRE 90M4	650	535
				KAF 107R77 DRE 90M4	700	535
	1.0	1713	14600	K 107R77 DRE 90M4	710	535
				KF 107R77 DRE 90M4	730	535
	1.1	1554	14600	KA 107R77 DRE 90M4	650	535
				KAF 107R77 DRE 90M4	700	535
	1.3	1336	14600	K 107R77 DRE 90L4	710	535
				KF 107R77 DRE 90L4	740	535
	1.5	1166	14600	KA 107R77 DRE 90L4	650	535
				KAF 107R77 DRE 90L4	710	535
	1.7	1030	14600	K 107R77 DRE 100L4	730	535
				KF 107R77 DRE 100L4	760	535
	1.9	904	14600	KA 107R77 DRE 100L4	670	535
				KAF 107R77 DRE 100L4	720	535
	2.5	696	14600	K 107R77 DRE 100LC4	730	535
				KF 107R77 DRE 100LC4	760	535
	3.4	522	14600	KA 107R77 DRE 100LC4	670	535
				KAF 107R77 DRE 100LC4	730	535
	3.8	461	14600	K 107R77 DRE 132S4	770	535
				KF 107R77 DRE 132S4	790	535
	4.3	408	14600	KA 107R77 DRE 132S4	710	535
				KAF 107R77 DRE 132S4	760	535
	4.8	364	14600	K 107R77 DRE 132M4	790	535
				KF 107R77 DRE 132M4	820	535
	5.5	318	14600	KA 107R77 DRE 132M4	730	535
KAF 107R77 DRE 132M4				790	535	
6.2	286	14600	K 107R77 DRE 132MC4	800	535	
			KF 107R77 DRE 132MC4	830	535	
7.1	251	14600	KA 107R77 DRE 132MC4	740	535	
			KAF 107R77 DRE 132MC4	790	535	
8.0	222	14600	K 107R77 DRE 160M4	850	535	
			KF 107R77 DRE 160M4	870	535	
9.0	196	14600	KA 107R77 DRE 160M4	790	535	
			KAF 107R77 DRE 160M4	840	535	
63700	10	174	14600	K 107R77 DRE 160M4	850	535
				KF 107R77 DRE 160M4	870	535
				KA 107R77 DRE 160M4	790	535
				KAF 107R77 DRE 160M4	840	535
	12	154	14400	K 107R77 DRE 160MC4	860	535
				KF 107R77 DRE 160MC4	880	535
13	140	13800	KA 107R77 DRE 160MC4	800	535	
			KAF 107R77 DRE 160MC4	850	535	
115000	0.10	17550	17800	K 127R77 DRS 71S4	1040	535
	0.11	16006	17800	KA 127R77 DRS 71S4	980	535
	0.14	14975	17800	K 127R77 DRS 71M4	1040	535
	0.16	12440	17800	KA 127R77 DRS 71M4	980	535
	0.17	10915	17800	K 127R77 DRE 80M4	1060	535
	0.20	9819	17800	KA 127R77 DRE 80M4	990	535
	0.23	8443	17800	K 127R77 DRE 90M4	1060	535
	0.26	7482	17800	KA 127R77 DRE 90M4	1000	535
	0.29	6565	17800	K 127R77 DRE 90L4	1070	535
	0.34	5804	17800	KA 127R77 DRE 90L4	1010	535
	0.39	5027	17800	K 127R77 DRE 90L4	1070	535
	0.45	4423	17800	KA 127R77 DRE 90L4	1010	535
	0.53	3889	17800	K 127R77 DRE 90L4	1070	535
	0.58	3311	17800	KA 127R77 DRE 90L4	1010	535
KAF 127R77 DRE 90L4						
0.67	3009	17800	K 127R77 DRE 90L4	1070	535	
						KF 127R77 DRE 90L4
0.77	2607	17800	KA 127R77 DRE 90L4	1010	535	
						KAF 127R77 DRE 90L4
0.77	2268	17800	K 127R77 DRE 90L4	1070	535	
						KF 127R77 DRE 90L4
0.77	2268	17800	KA 127R77 DRE 90L4	1010	535	
						KAF 127R77 DRE 90L4

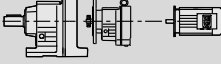




$T_{a \max}$ [lb-in]	n_a [rpm]	i	$F_{Ra}^{1)}$ [lb]		m [lbs]	
115000	0.90	1926	17800	K 127R77 DRE 90L4	1070	535
		1757	17800	KF 127R77 DRE 90L4	1160	535
	0.99			KA 127R77 DRE 90L4	1000	535
				KAF 127R77 DRE 90L4	1090	535
	1.1	1541	17800	K 127R77 DRE 100L4	1080	535
		1342	17800	KF 127R77 DRE 100L4	1180	535
	1.3			KA 127R77 DRE 100L4	1020	535
				KAF 127R77 DRE 100L4	1100	535
	1.5	1177	17800	K 127R77 DRE 100L4	1080	535
				KF 127R77 DRE 100L4	1180	535
	1.7	1025	17800	K 127R77 DRE 100LC4	1090	535
		899	17800	KF 127R77 DRE 100LC4	1180	535
	2.0	790	17800	KA 127R77 DRE 100LC4	1030	535
		704	17800	KAF 127R77 DRE 100LC4	1110	535
	2.2	610	17800	K 127R77 DRE 132M4	1150	535
		549	17800	KF 127R77 DRE 132M4	1240	535
	2.5	477	17800	KA 127R77 DRE 132M4	1080	535
				KAF 127R77 DRE 132M4	1170	535
	2.9	418	17800	K 127R77 DRE 132MC4	1150	535
				KF 127R77 DRE 132MC4	1250	535
	3.2			KA 127R77 DRE 132MC4	1090	535
				KAF 127R77 DRE 132MC4	1170	535
	3.3	536	17800	K 127R87 DRE 132M4	1190	535
				KF 127R87 DRE 132M4	1290	535
	3.7			KA 127R87 DRE 132M4	1130	535
				KAF 127R87 DRE 132M4	1210	535
	4.2	473	17800	K 127R87 DRE 132MC4	1200	535
		418	17800	KF 127R87 DRE 132MC4	1290	535
	4.4	367	17800	KA 127R87 DRE 132MC4	1140	535
				KAF 127R87 DRE 132MC4	1220	535
5.4	330	17800	K 127R87 DRE 160M4	1240	535	
	287	17800	KF 127R87 DRE 160M4	1340	535	
6.2			KA 127R87 DRE 160M4	1180	535	
			KAF 127R87 DRE 160M4	1260	535	
7.0	253	17800	K 127R87 DRE 160MC4	1260	535	
			KF 127R87 DRE 160MC4	1350	535	
8.3			KA 127R87 DRE 160MC4	1190	535	
			KAF 127R87 DRE 160MC4	1280	535	
8.3	213	17800	K 127R87 DRE 180M4	1350	535	
			KF 127R87 DRE 180M4	1450	535	
106100			KA 127R87 DRE 180M4	1290	535	
			KAF 127R87 DRE 180M4	1370	535	
106100	8.9	200	17900	K 127R87 DRE 180M4	1350	535
	11	166	17900	KF 127R87 DRE 180M4	1450	535
106100				KA 127R87 DRE 180M4	1290	535
				KAF 127R87 DRE 180M4	1370	535
106100	12	147	17900	K 127R87 DRE 180L4	1400	535
				KF 127R87 DRE 180L4	1490	535
106100				KA 127R87 DRE 180L4	1330	535
				KAF 127R87 DRE 180L4	1420	535
159200	0.10	17679	25200			
	0.11	15729	25200			
159200	0.11	14721	25200	K 157R97 DRS 71M4	1740	535
	0.13	13097	25200	KF 157R97 DRS 71M4	1920	535
159200	0.15	11368	25200	KA 157R97 DRS 71M4	1660	535
	0.17	10114	25200	KAF 157R97 DRS 71M4	1790	535
159200	0.19	8718	25200			
	0.22	7734	25200			
159200	0.25	6881	25200	K 157R97 DRE 80M4	1750	535
	0.29	5931	25200	KF 157R97 DRE 80M4	1930	535
159200				KA 157R97 DRE 80M4	1670	535
				KAF 157R97 DRE 80M4	1800	535
159200	0.34	5074	25200	K 157R97 DRE 90M4	1760	535
	0.39	4514	25200	KF 157R97 DRE 90M4	1930	535
159200	0.44	3979	25200	KA 157R97 DRE 90M4	1680	535
				KAF 157R97 DRE 90M4	1810	535
159200	0.49	3516	25200	K 157R97 DRE 90L4	1770	535
	0.57	3051	25200	KF 157R97 DRE 90L4	1940	535
159200	0.67	2610	25200	KA 157R97 DRE 90L4	1690	535
				KAF 157R97 DRE 90L4	1820	535

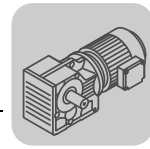


K..DRE/DRS

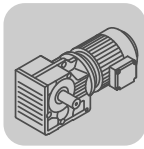
K..R..DRE/DRS [lb-in]

$T_{a \max}$ [lb-in]	n_a [rpm]	i	$F_{Ra}^{1)}$ [lb]		m [lbs]		
159200	0.75	2322	25200	K 157R97 DRE 100L4	1780	535	
	0.86	2029	25200	KF 157R97 DRE 100L4	1960	535	
	0.96	1805	25200	KA 157R97 DRE 100L4	1700	535	
				KAF 157R97 DRE 100L4	1830	535	
	1.0	1659	25200	K 157R97 DRE 100L4	1780	535	
				KF 157R97 DRE 100L4	1950	535	
				KA 157R97 DRE 100L4	1700	535	
				KAF 157R97 DRE 100L4	1830	535	
	1.3	1365	25200	K 157R97 DRE 100LC4	1780	535	
	1.4	1229	25200	KF 157R97 DRE 100LC4	1960	535	
	1.6	1093	25200	KA 157R97 DRE 100LC4	1700	535	
				KAF 157R97 DRE 100LC4	1830	535	
	1.9	942	25200	K 157R97 DRE 132S4	1810	535	
				KF 157R97 DRE 132S4	1990	535	
				KA 157R97 DRE 132S4	1730	535	
				KAF 157R97 DRE 132S4	1860	535	
	2.1	854	25200	K 157R97 DRE 132M4	1840	535	
	2.3	756	25200	KF 157R97 DRE 132M4	2010	535	
				KA 157R97 DRE 132M4	1760	535	
				KAF 157R97 DRE 132M4	1890	535	
	2.7	661	25200	K 157R97 DRE 132MC4	1850	535	
	3.1	567	25200	KF 157R97 DRE 132MC4	2020	535	
	3.5	504	25200	KA 157R97 DRE 132MC4	1770	535	
				KAF 157R97 DRE 132MC4	1890	535	
	4.1	434	25200	K 157R97 DRE 160M4	1890	535	
				KF 157R97 DRE 160M4	2070	535	
				KA 157R97 DRE 160M4	1810	535	
				KAF 157R97 DRE 160M4	1940	535	
	4.7	379	25200	K 157R97 DRE 160MC4	1900	535	
	5.4	333	25200	KF 157R97 DRE 160MC4	2080	535	
				KA 157R97 DRE 160MC4	1820	535	
				KAF 157R97 DRE 160MC4	1950	535	
	6.1	291	25200	K 157R97 DRE 180M4	2000	535	
				KF 157R97 DRE 180M4	2170	535	
				KA 157R97 DRE 180M4	1920	535	
				KAF 157R97 DRE 180M4	2050	535	
	4.6	385	25200	K 157R107 DRE 160MC4	2010	535	
				KF 157R107 DRE 160MC4	2180	535	
				KA 157R107 DRE 160MC4	1930	535	
				KAF 157R107 DRE 160MC4	2060	535	
5.4	325	25200	K 157R107 DRE 180M4	2110	535		
5.9	299	25200	KF 157R107 DRE 180M4	2280	535		
7.0	253	25200	KA 157R107 DRE 180M4	2030	535		
			KAF 157R107 DRE 180M4	2160	535		
7.7	230	25200	K 157R107 DRE 180L4	2150	535		
8.3	213	25200	KF 157R107 DRE 180L4	2320	535		
			KA 157R107 DRE 180L4	2070	535		
			KAF 157R107 DRE 180L4	2200	535		
9.5	187	25200	K 157R107 DRE 180LC4	2170	535		
			KF 157R107 DRE 180LC4	2350	535		
			KA 157R107 DRE 180LC4	2090	535		
			KAF 157R107 DRE 180LC4	2220	535		
11	157	24000	K 157R107 DRE 200L4	2370	535		
15	122	21700	KF 157R107 DRE 200L4	2540	535		
			KA 157R107 DRE 200L4	2290	535		
			KAF 157R107 DRE 200L4	2420	535		
17	107	20500	K 157R107 DRE 225S4	2430	535		
			KF 157R107 DRE 225S4	2610	535		
			KA 157R107 DRE 225S4	2350	535		
			KAF 157R107 DRE 225S4	2480	535		
283100	0.09	19723	33700	K 167R97 DRS 71M4	2610	535	
	0.10	17406	33700	KH 167R97 DRS 71M4	2530	535	
	0.11	15000	33700				
	0.13	13238	33700				
	0.15	11573	33700	K 167R97 DRE 80M4	2620	535	
	0.17	10264	33700	KF 167R97 DRE 80M4	2540	535	

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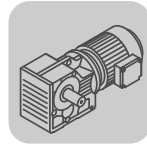
$T_a \text{ max}$ [lb-in]	n_a [rpm]	i	$F_{Ra}^{1)}$ [lb]				m [lbs]	
283100	0.20	8628	33700	K	167R97	DRE 90M4	2630	535
	0.27	6562	33700	KH	167R97	DRE 90M4	2540	535
	0.32	5355	33700	K	167R97	DRE 90L4	2630	535
	0.36	4788	33700	KH	167R97	DRE 90L4	2550	535
	0.43	4079	33700	K	167R97	DRE 100L4	2650	535
	0.51	3376	33700	KH	167R97	DRE 100L4	2570	535
	0.64	2755	33700	K	167R97	DRE 100LC4	2660	535
	0.77	2263	33700	KH	167R97	DRE 100LC4	2570	535
	0.80	2182	33700	K	167R97	DRE 100LC4	2650	535
				KH	167R97	DRE 100LC4	2570	535
	1.0	1704	33700	K	167R97	DRE 132S4	2680	535
				KH	167R97	DRE 132S4	2600	535
	1.2	1408	33700	K	167R97	DRE 132M4	2710	535
	1.4	1296	33700	KH	167R97	DRE 132M4	2620	535
	1.6	1101	33700	K	167R97	DRE 132MC4	2710	535
	1.9	944	33700	KH	167R97	DRE 132MC4	2630	535
	2.1	843	33700	K	167R97	DRE 160M4	2760	535
	2.3	757	33700	KH	167R97	DRE 160M4	2680	535
	2.8	632	33700	K	167R97	DRE 160MC4	2770	535
				KH	167R97	DRE 160MC4	2690	535
	3.2	561	33700	K	167R97	DRE 180M4	2870	535
	3.7	481	33700	KH	167R97	DRE 180M4	2780	535
	4.2	423	33700	K	167R97	DRE 180L4	2910	535
	4.8	369	33700	KH	167R97	DRE 180L4	2830	535
	5.6	318	33700	K	167R107	DRE 180LC4	3040	535
				KH	167R107	DRE 180LC4	2960	535
	6.4	278	33700	K	167R107	DRE 200L4	3240	535
	7.3	244	33700	KH	167R107	DRE 200L4	3150	535
	8.3	213	33700	K	167R107	DRE 225S4	3300	535
	8.6	206	33700	KH	167R107	DRE 225S4	3220	535
9.8	180	33700	K	167R107	DRE 225M4	3350	535	
11	160	33700	KH	167R107	DRE 225M4	3260	535	
442300	0.05	32625	42700	K	187R97	DRS 71M4	3890	535
	0.06	27165	42700	KH	187R97	DRS 71M4	3750	535
	0.07	24353	42700	K	187R97	DRE 80M4	3900	535
	0.09	19144	42700	KH	187R97	DRE 80M4	3760	535
	0.10	16978	42700	K	187R97	DRE 90M4	3910	535
	0.12	14272	42700	KH	187R97	DRE 90M4	3760	535
	0.13	13116	42700	K	187R97	DRE 90L4	3920	535
	0.15	11647	42700	KH	187R97	DRE 90L4	3770	535
	0.17	10413	42700	K	187R97	DRE 100L4	3930	535
	0.19	9363	42700	KH	187R97	DRE 100L4	3790	535
	0.21	8126	42700	K	187R97	DRE 100LC4	3940	535
	0.24	7343	42700	KH	187R97	DRE 100LC4	3790	535
	0.26	6747	42700	K	187R97	DRE 132S4	3970	535
	0.29	5991	42700	KH	187R97	DRE 132S4	3820	535
	0.32	5358	42700	K	187R97	DRE 100LC4	3930	535
	0.36	4817	42700	KH	187R97	DRE 100LC4	3780	535
	0.40	4370	42700	K	187R97	DRE 132M4	3990	535
	0.63	2818	42700	KH	187R97	DRE 132M4	3840	535
	0.48	3609	42700	K	187R97	DRE 132MC4	4000	535
	0.57	3062	42700	KH	187R97	DRE 132MC4	3850	535
	0.70	2519	42700	K	187R97	DRE 160M4	4040	535
	0.77	2268	42700	KH	187R97	DRE 160M4	3900	535
	0.85	2054	42700	K	187R97	DRE 160MC4	4050	535
	0.97	1821	42700	KH	187R97	DRE 160MC4	3910	535
	1.1	1605	42700	K	187R97	DRE 160MC4	4050	535
	1.3	1395	42700	KH	187R97	DRE 160MC4	3910	535
	1.5	1196	42700	K	187R97	DRE 160MC4	4050	535
	1.7	1046	42700	KH	187R97	DRE 160MC4	3910	535
	1.9	945	42700	K	187R97	DRE 160MC4	4050	535
				KH	187R97	DRE 160MC4	3910	535



K..DRE/DRS
K..R..DRE/DRS [lb-in]

$T_{a \max}$ [lb-in]	n_a [rpm]	i	$F_{Ra}^{1)}$ [lb]				m [lbs]		
442300	2.4	738	42700	K	187R97	DRE 180M4	4150	535	
				KH	187R97	DRE 180M4	4000	535	
	2.9	621	42700	K	187R97	DRE 180L4	4200	535	
				KH	187R97	DRE 180L4	4050	535	
	3.4	527	42700	K	187R97	DRE 180LC4	4220	535	
				KH	187R97	DRE 180LC4	4070	535	
	2.1	835	42700	K	187R107	DRE 180M4	4260	535	
	2.4	729	42700	KH	187R107	DRE 180M4	4110	535	
	2.9	622	42700	K	187R107	DRE 180L4	4300	535	
				KH	187R107	DRE 180L4	4150	535	
	3.4	520	42700	K	187R107	DRE 180LC4	4320	535	
				KH	187R107	DRE 180LC4	4180	535	
	3.9	454	42700	K	187R107	DRE 200L4	4520	535	
	5.0	355	42700	KH	187R107	DRE 200L4	4370	535	
	6.8	261	42700	K	187R107	DRE 225M4	4630	535	
	8.0	221	42700	KH	187R107	DRE 225M4	4480	535	

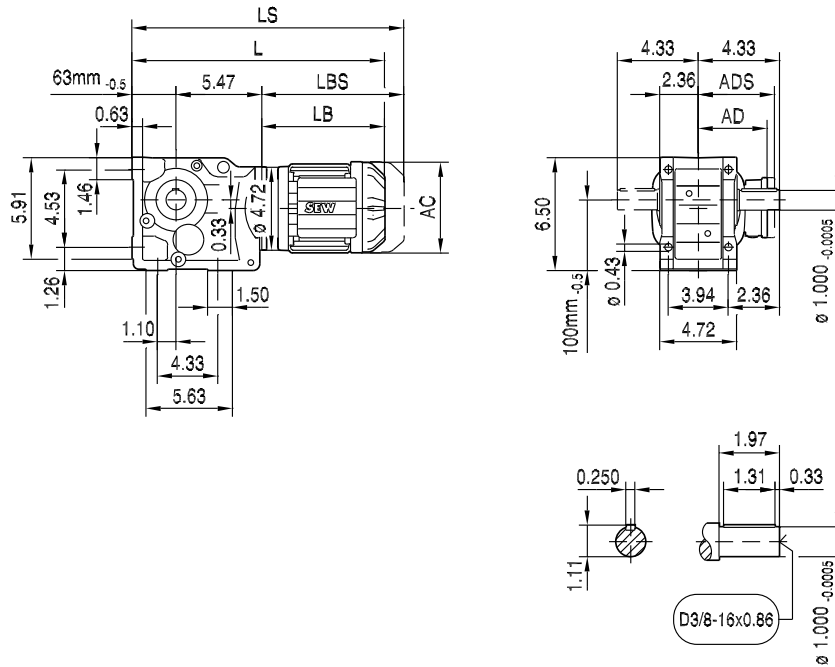
reducer.ir



11.5 K..[in]

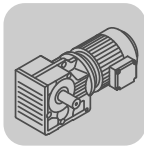
33 045 00 09

K37..



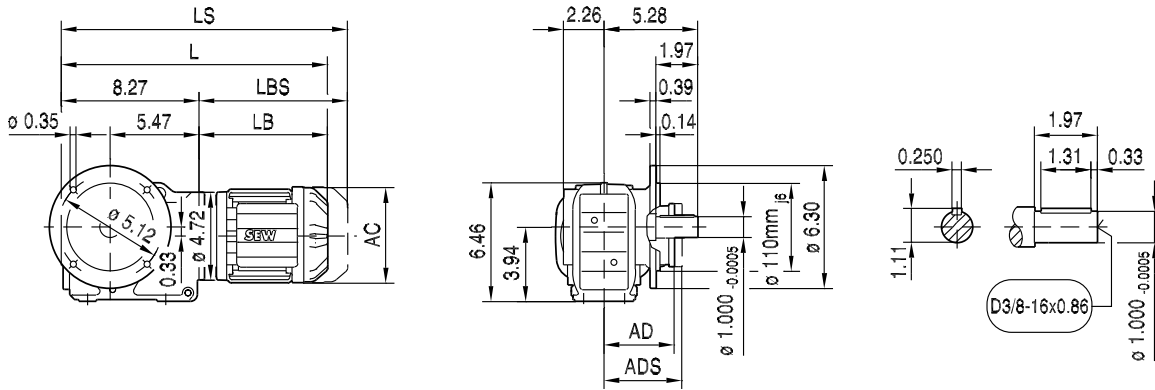
(→ 125)	DR63..	DR71S	DR71M	DR80S	DR80M	DR90M	DR90L	DR100M	DR100L/LC
AC	5.20	5.47	5.47	6.14	6.14	7.05	7.05	7.76	7.76
AD	4.13	4.69	4.69	5.04	5.04	5.51	5.51	6.18	6.18
ADS	4.13	5.08	5.08	5.47	5.47	5.91	5.91	6.22	6.22
L	15.47	15.94	16.93	17.28	18.50	18.66	19.45	20.63	21.81
LS	17.64	18.62	19.61	20.47	21.69	22.32	23.11	24.29	25.47
LB	7.52	7.99	8.98	9.33	10.55	10.71	11.50	12.68	13.86
LBS	9.69	10.67	11.65	12.52	12.74	14.37	15.16	16.34	17.52

reducer.ir

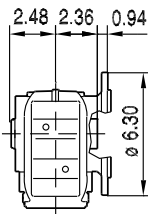


33 046 00 09

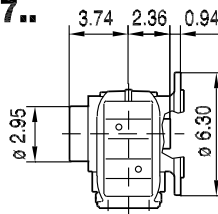
KF37..



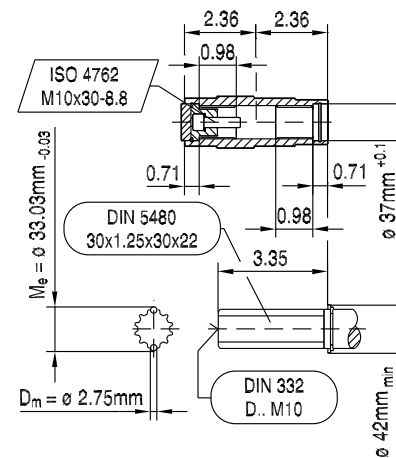
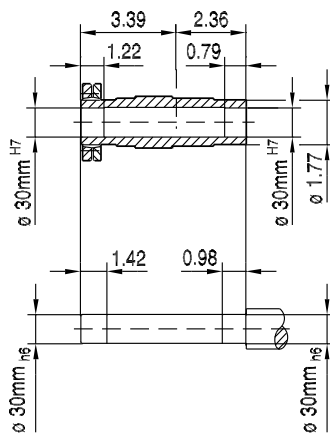
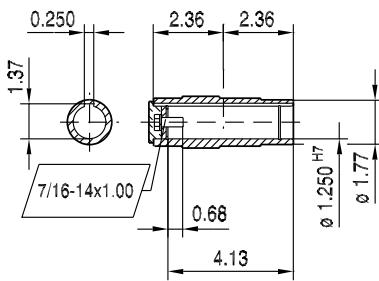
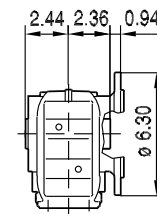
KAF37..



KHF37..



KVF37..



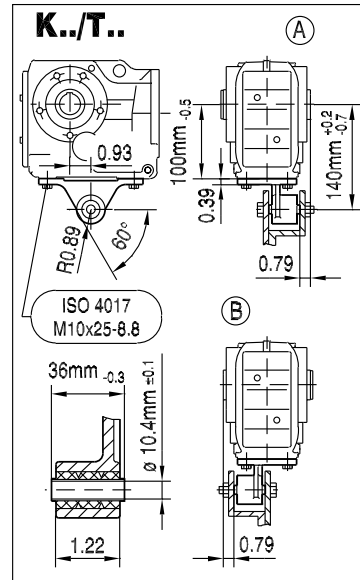
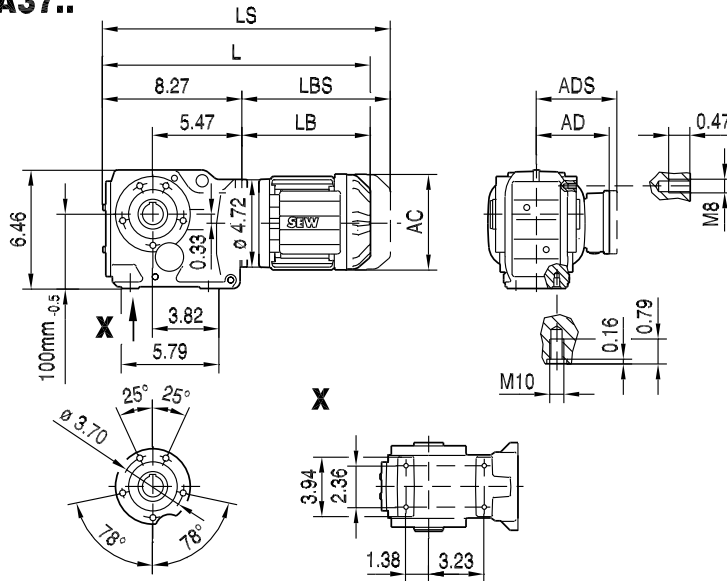
(→ 125)	DR63..	DR71S	DR71M	DR80S	DR80M	DR90M	DR90L	DR100M	DR100L/LC
AC	5.20	5.47	5.47	6.14	6.14	7.05	7.05	7.76	7.76
AD	4.13	4.69	4.69	5.04	5.04	5.51	5.51	6.18	6.18
ADS	4.13	5.08	5.08	5.47	5.47	5.91	5.91	6.22	6.22
L	15.79	16.26	17.24	17.60	18.82	18.98	19.76	20.94	22.13
LS	17.95	18.94	19.92	20.79	22.01	22.64	23.43	24.61	25.79
LB	7.52	7.99	8.98	9.33	10.55	10.71	11.50	12.68	13.86
LBS	9.69	10.67	11.65	12.52	13.74	14.37	15.16	16.34	17.52

reducer.ir

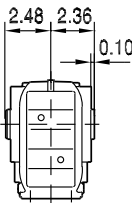


33 047 00 09

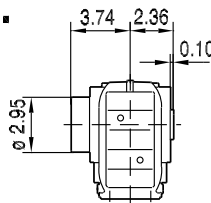
KA37..



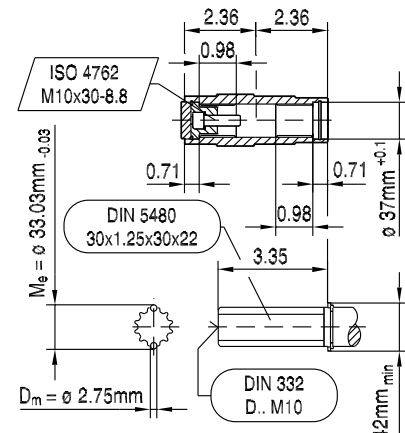
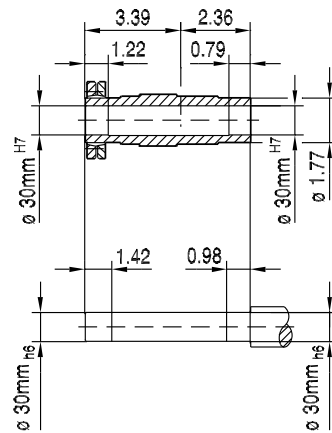
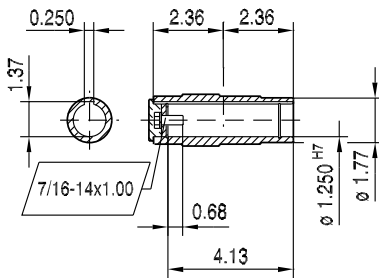
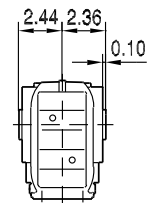
KA37..



KH37..

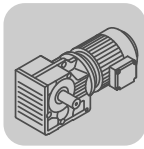


KV37..



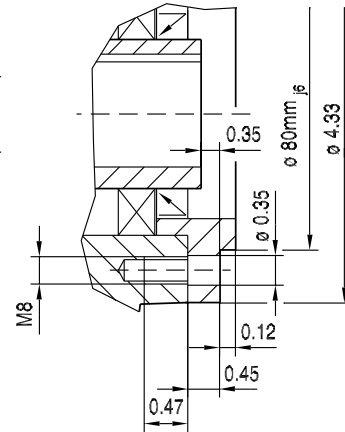
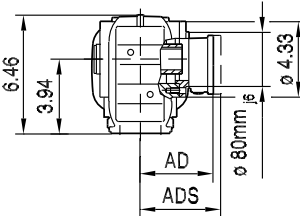
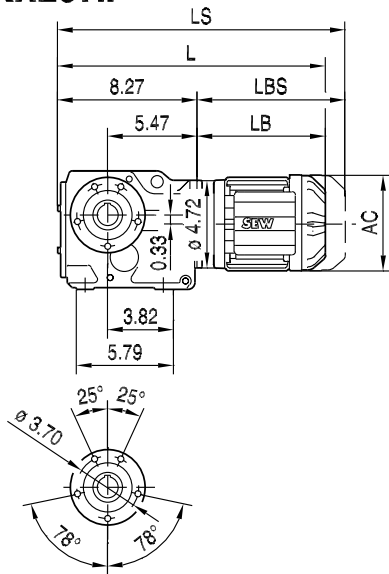
(→ 125)	DR63..	DR71S	DR71M	DR80S	DR80M	DR90M	DR90L	DR100M	DR100L/LC
AC	5.20	5.47	5.47	6.14	6.14	7.05	7.05	7.76	7.76
AD	4.13	4.69	4.69	5.04	5.04	5.51	5.51	6.18	6.18
ADS	4.13	5.08	5.08	5.47	5.47	5.91	5.91	6.22	6.22
L	15.79	16.26	17.24	17.60	18.82	18.98	19.76	20.94	22.13
LS	17.95	18.94	19.92	20.79	22.01	22.64	23.43	24.61	25.79
LB	7.52	7.99	8.98	9.33	10.55	10.71	11.50	12.68	13.86
LBS	9.69	10.67	11.65	12.52	13.74	14.37	15.16	16.34	17.52

reducer.ir

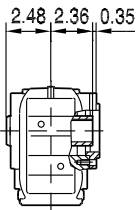


33 048 00 09

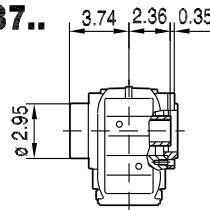
KAZ37..



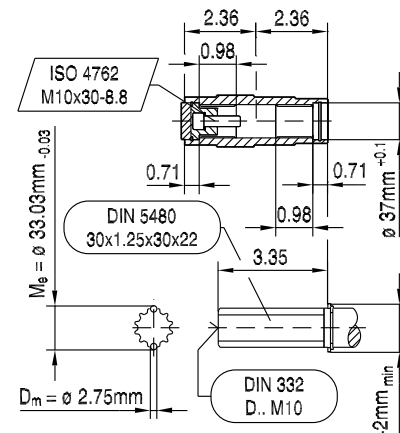
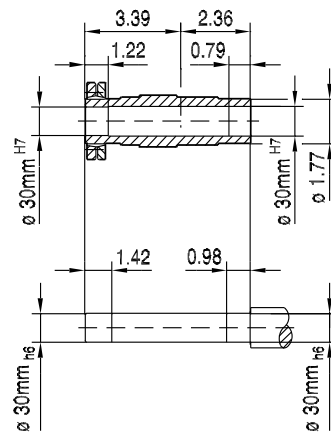
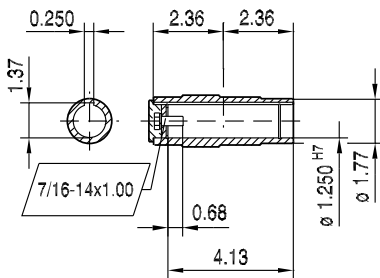
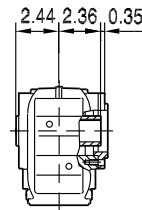
KAZ37..



KHZ37..



KVZ37..



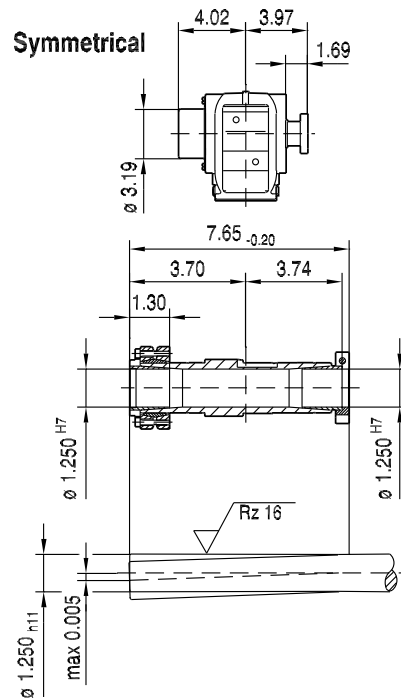
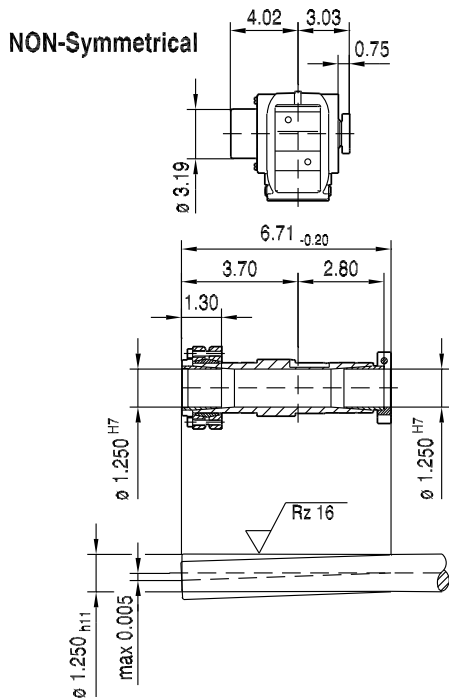
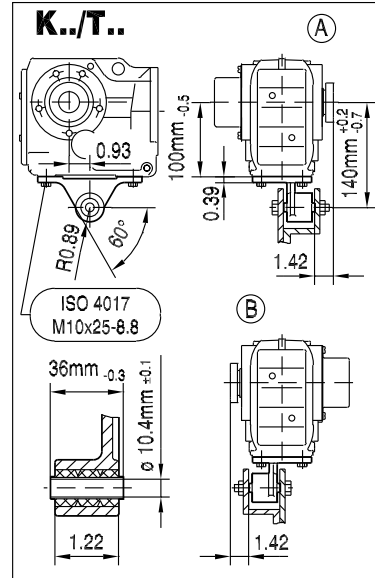
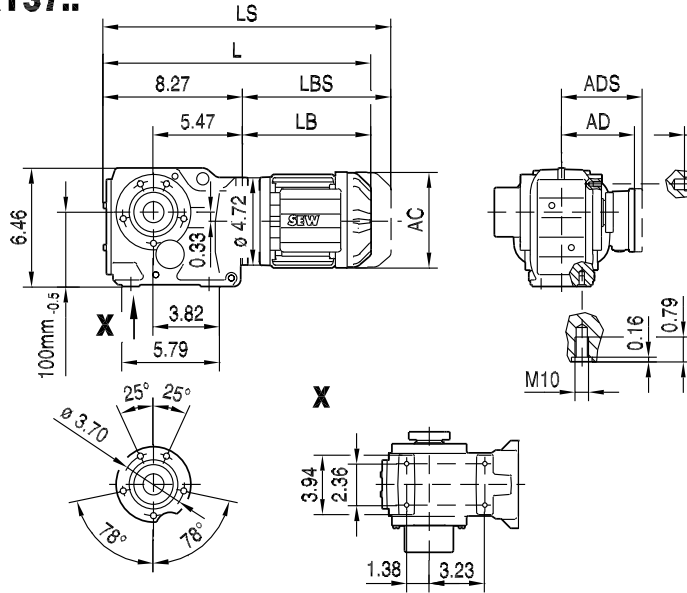
(→ 125)	DR63..	DR71S	DR71M	DR80S	DR80M	DR90M	DR90L	DR100M	DR100L/LC
AC	5.20	5.47	5.47	6.14	6.14	7.05	7.05	7.76	7.76
AD	4.13	4.69	4.69	5.04	5.04	5.51	5.51	6.18	6.18
ADS	4.13	5.08	5.08	5.47	5.47	5.91	5.91	6.22	6.22
L	15.79	16.26	17.24	17.60	18.82	18.98	19.76	20.94	22.13
LS	17.95	18.94	19.92	20.79	22.01	22.64	23.43	24.61	25.79
LB	7.52	7.99	8.98	9.33	10.55	10.71	11.50	12.68	13.86
LBS	9.69	10.67	11.65	12.52	13.74	14.37	15.16	16.34	17.52

reducer.ir



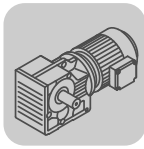
33 049 00 09

KT37..



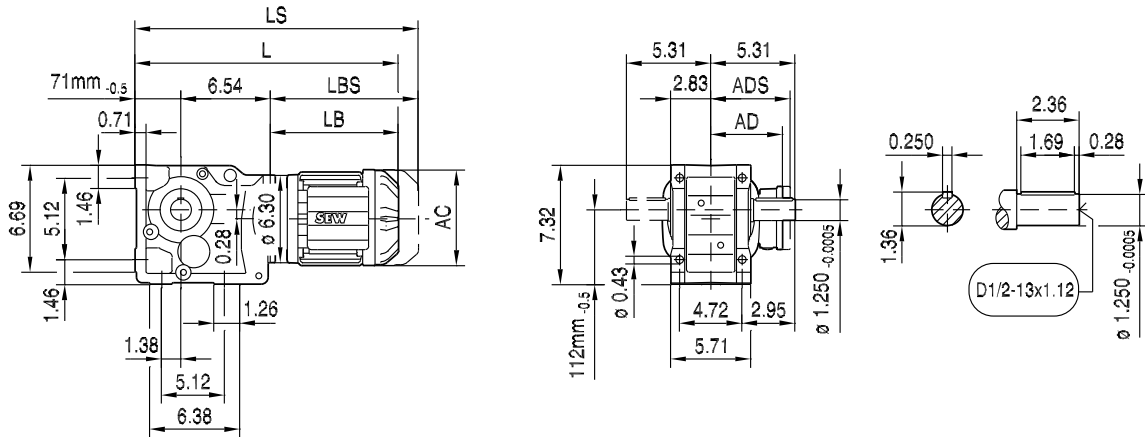
(→ 125)	DR63..	DR71S	DR71M	DR80S	DR80M	DR90M	DR90L	DR100M	DR100L/LC
AC	5.20	5.47	5.47	6.14	6.14	7.05	7.05	7.76	7.76
AD	4.13	4.69	4.69	5.04	5.04	5.51	5.51	6.18	6.18
ADS	4.13	5.08	5.08	5.47	5.47	5.91	5.91	6.22	6.22
L	15.79	16.26	17.24	17.60	18.82	18.98	19.76	20.94	22.13
LS	17.95	18.94	19.92	20.79	22.01	22.64	23.43	24.61	25.79
LB	7.52	7.99	8.98	9.33	10.55	10.71	11.50	12.68	13.86
LBS	9.69	10.67	11.65	12.52	13.74	14.37	15.16	16.34	17.52

reducer.ir

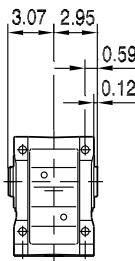


33 050 00 09

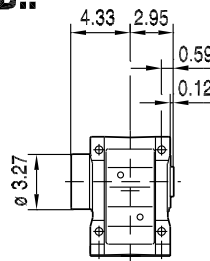
K47..



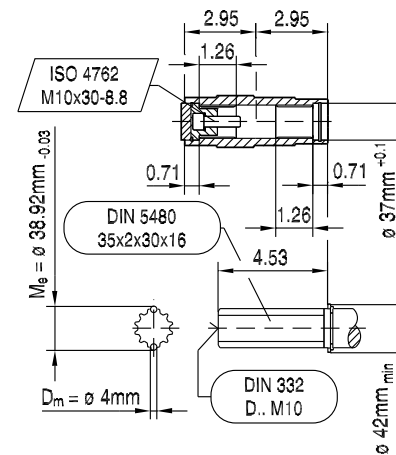
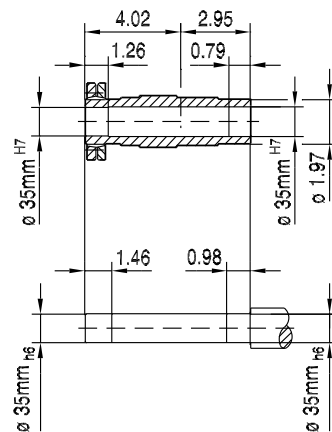
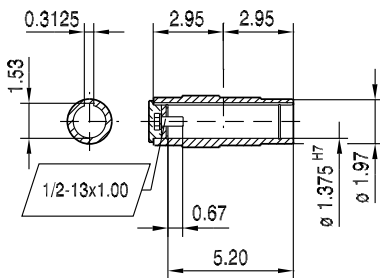
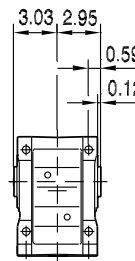
KA47B..



KH47B..



KV47B..



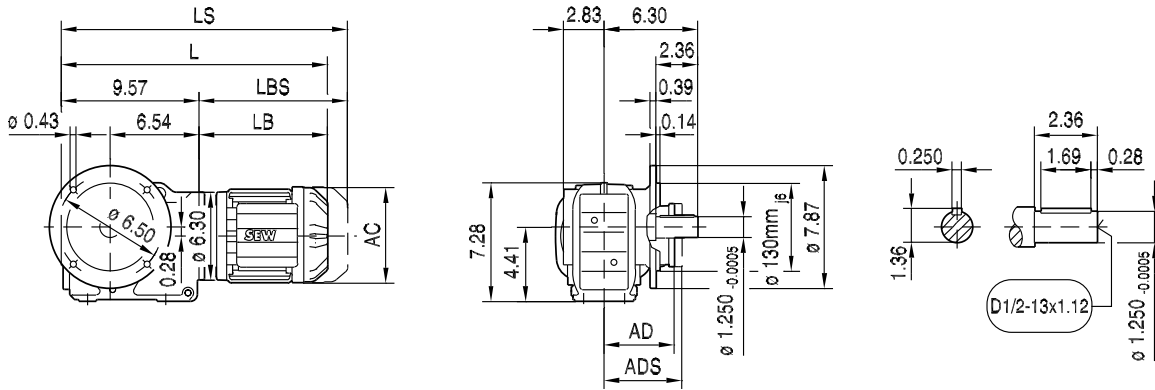
(→ 125)	DR63..	DR71S	DR71M	DR80S	DR80M	DR90M	DR90L	DR100M	DR100L/LC	DR132S
AC	5.20	5.47	5.47	6.14	6.14	7.05	7.05	7.76	7.76	8.70
AD	4.13	4.69	4.69	5.04	5.04	5.51	5.51	6.18	6.18	6.69
ADS	4.13	5.08	5.08	5.47	5.47	5.91	5.91	6.22	6.22	6.77
L	16.61	17.05	18.03	18.39	19.61	19.69	20.47	21.65	22.83	24.69
LS	18.78	19.72	20.71	21.57	22.80	23.35	24.13	25.31	26.50	29.09
LB	7.28	7.72	8.70	9.06	10.28	10.35	11.14	12.32	13.50	15.35
LBS	9.45	10.39	11.38	12.24	13.46	14.02	14.80	15.98	17.17	19.76

reducer.ir

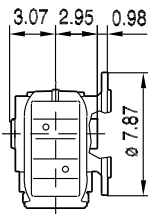


33 051 00 09

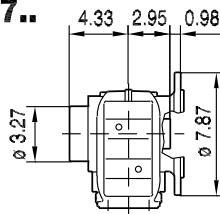
KF47..



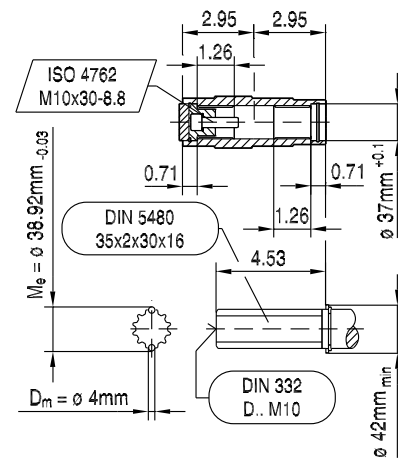
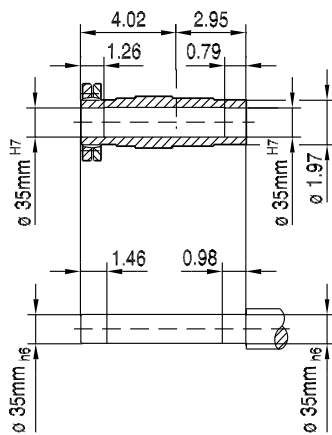
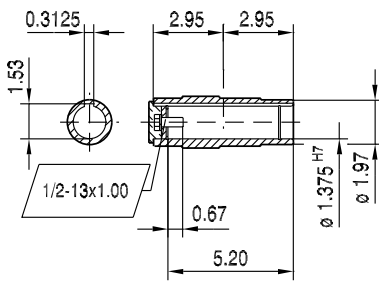
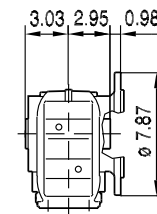
KAF47..



KHF47..

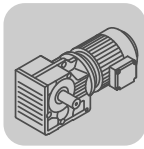


KVF47..



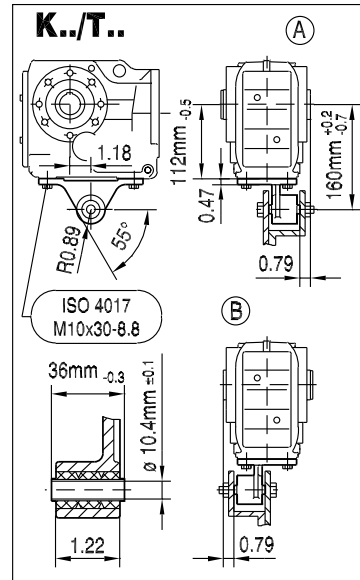
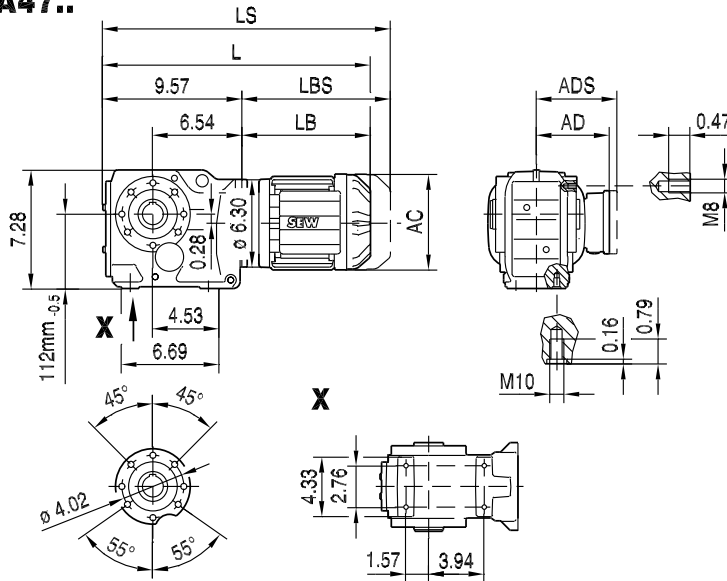
(→ 125)	DR63..	DR71S	DR71M	DR80S	DR80M	DR90M	DR90L	DR100M	DR100L/LC	DR132S
AC	5.20	5.47	5.47	6.14	6.14	7.05	7.05	7.76	7.76	8.70
AD	4.13	4.69	4.69	5.04	5.04	5.51	5.51	6.18	6.18	6.69
ADS	4.13	5.08	5.08	5.47	5.47	5.91	5.91	6.22	6.22	6.77
L	16.85	17.28	18.27	18.62	19.84	19.92	20.71	21.89	23.07	24.92
LS	19.02	19.96	20.94	21.81	23.03	23.58	24.37	25.55	26.73	29.33
LB	7.28	7.72	8.70	9.06	10.28	10.35	11.14	12.32	13.50	15.35
LBS	9.45	10.39	11.38	12.24	13.46	14.02	14.80	15.98	17.17	19.76

reducer.ir

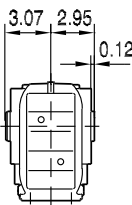


33 052 00 09

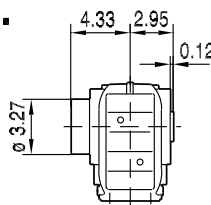
KA47..



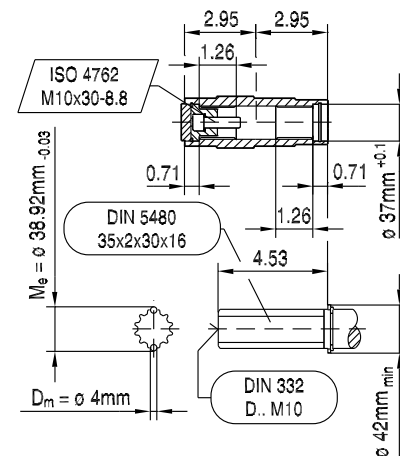
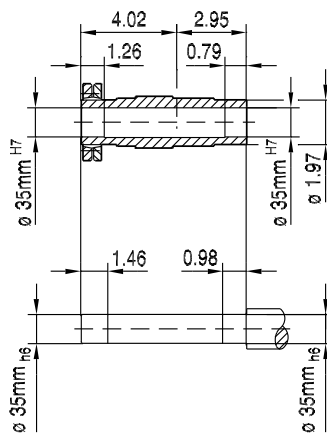
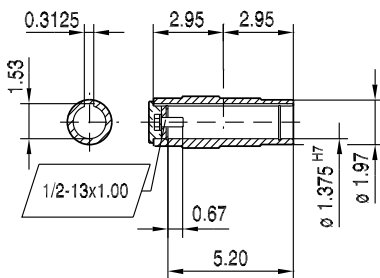
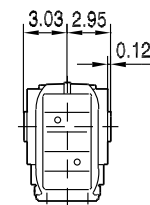
KA47..



KH47..



KV47..



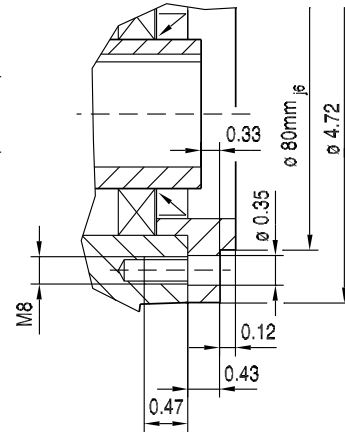
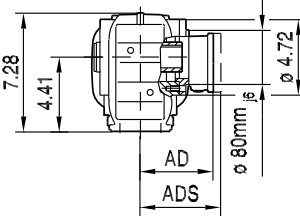
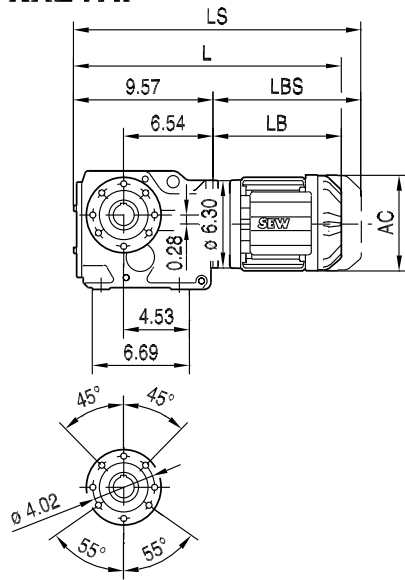
(→ 125)	DR63..	DR71S	DR71M	DR80S	DR80M	DR90M	DR90L	DR100M	DR100L/LC	DR132S
AC	5.20	5.47	5.47	6.14	6.14	7.05	7.05	7.76	7.76	8.70
AD	4.13	4.69	4.69	5.04	5.04	5.51	5.51	6.18	6.18	6.69
ADS	4.13	5.08	5.08	5.47	5.47	5.91	5.91	6.22	6.22	6.77
L	16.85	17.28	18.27	18.62	19.84	19.92	20.71	21.89	23.07	24.92
LS	19.02	19.96	20.94	21.81	23.03	23.58	24.37	25.55	26.73	29.33
LB	7.28	7.72	8.70	9.06	10.28	10.35	11.14	12.32	13.50	15.35
LBS	9.45	10.39	11.38	12.24	13.46	14.02	14.80	15.98	17.17	19.76

reducer.ir

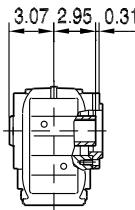


33 053 00 09

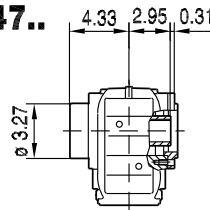
KAZ47..



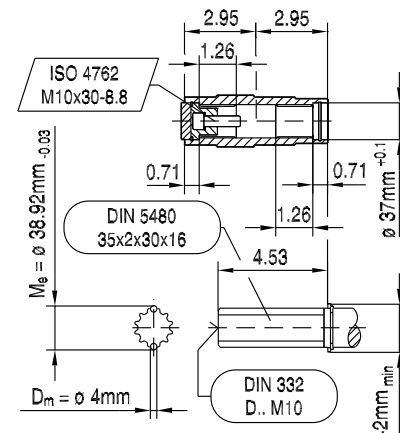
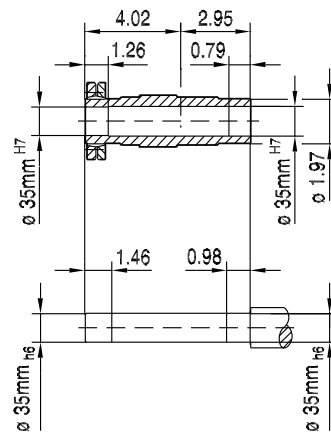
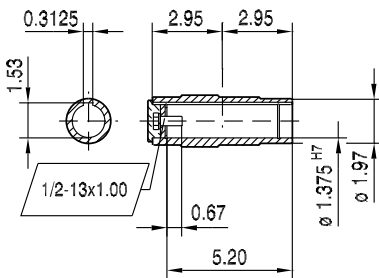
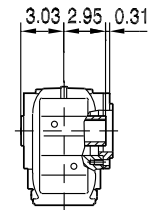
KAZ47..



KHZ47..

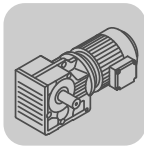


KVZ47..



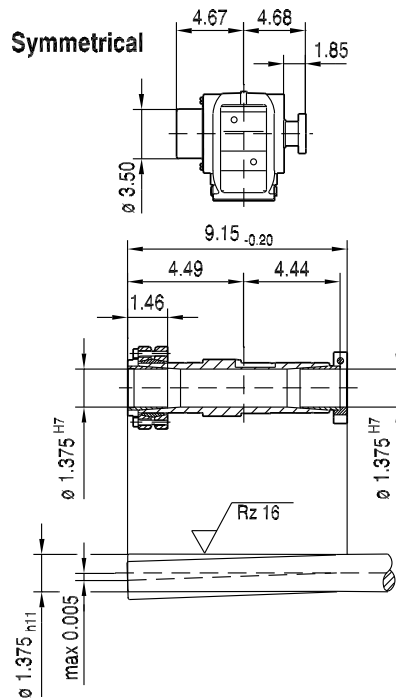
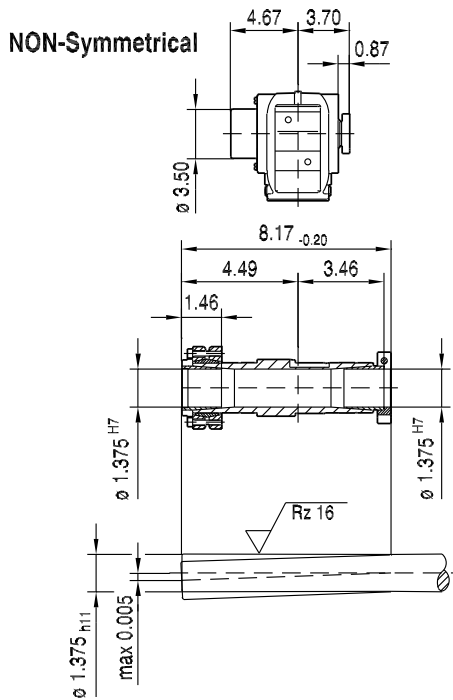
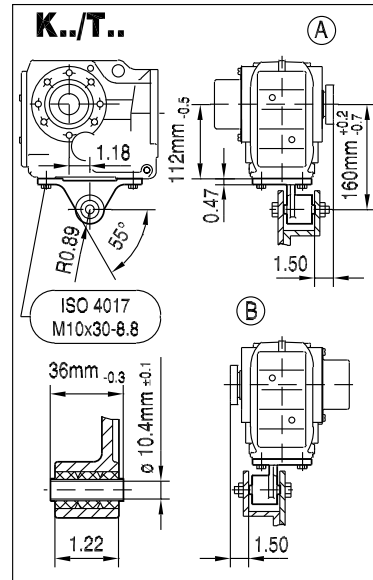
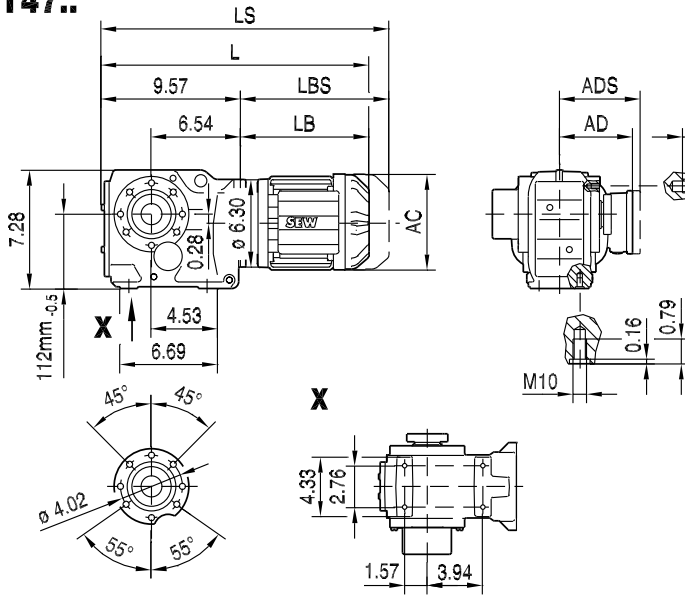
(→ 125)	DR63..	DR71S	DR71M	DR80S	DR80M	DR90M	DR90L	DR100M	DR100L/LC	DR132S
AC	5.20	5.47	5.47	6.14	6.14	7.05	7.05	7.76	7.76	8.70
AD	4.13	4.69	4.69	5.04	5.04	5.51	5.51	6.18	6.18	6.69
ADS	4.13	5.08	5.08	5.47	5.47	5.91	5.91	6.22	6.22	6.77
L	16.85	17.28	18.27	18.62	19.84	19.92	20.71	21.89	23.07	24.92
LS	19.02	19.96	20.94	21.81	23.03	23.58	24.37	25.55	26.73	29.33
LB	7.28	7.72	8.70	9.06	10.28	10.35	11.14	12.32	13.50	15.35
LBS	9.45	10.39	11.38	12.24	13.46	14.02	14.80	15.98	17.17	19.76

reducer.ir



33 054 00 09

KT47..



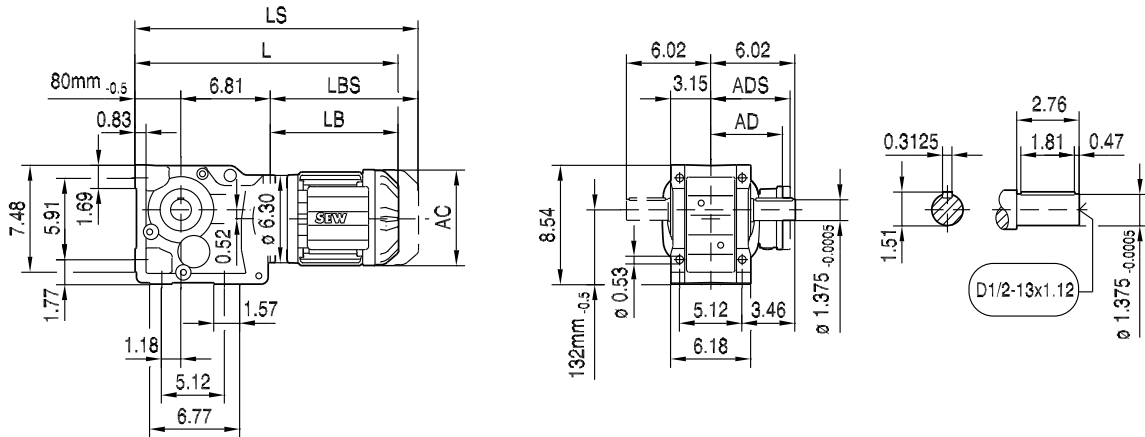
(→ 125)	DR63..	DR71S	DR71M	DR80S	DR80M	DR90M	DR90L	DR100M	DR100L/LC	DR132S
AC	5.20	5.47	5.47	6.14	6.14	7.05	7.05	7.76	7.76	8.70
AD	4.13	4.69	4.69	5.04	5.04	5.51	5.51	6.18	6.18	6.69
ADS	4.13	5.08	5.08	5.47	5.47	5.91	5.91	6.22	6.22	6.77
L	16.85	17.28	18.27	18.62	19.84	19.92	20.71	21.89	23.07	24.92
LS	19.02	19.96	20.94	21.81	23.03	23.58	24.37	25.55	26.73	29.33
LB	7.28	7.72	8.70	9.06	10.28	10.35	11.14	12.32	13.50	15.35
LBS	9.45	10.39	11.38	12.24	13.46	14.02	14.80	15.98	17.17	19.76

reducer.ir

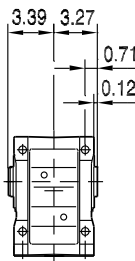


33 055 00 09

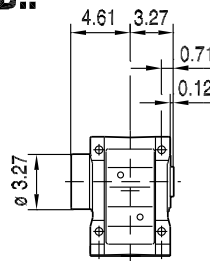
K57..



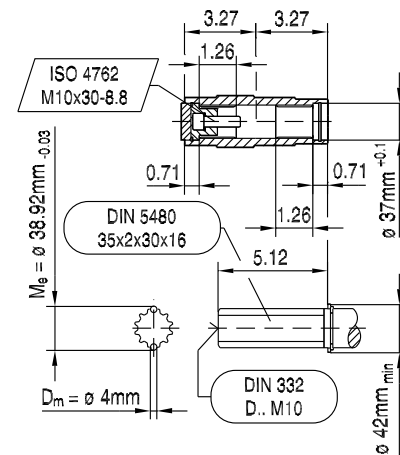
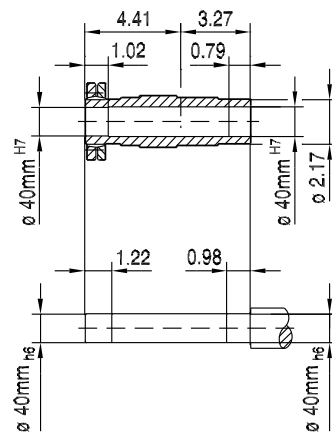
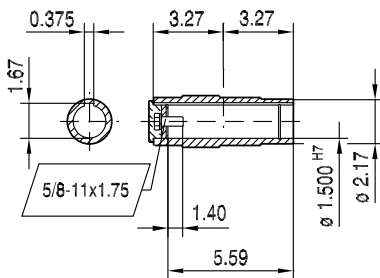
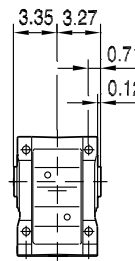
KA57B..



KH57B..

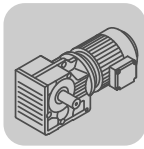


KV57B..



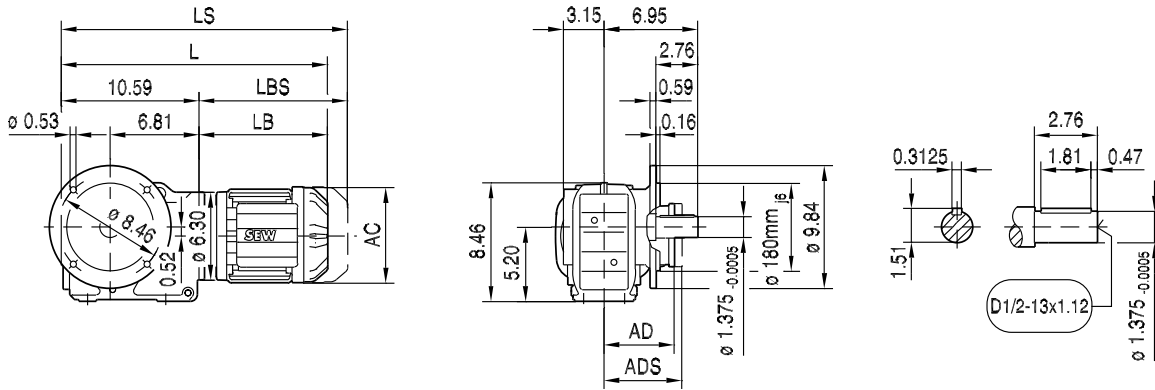
(→ 125)	DR63..	DR71S	DR71M	DR80S	DR80M	DR90M	DR90L	DR100M	DR100L/LC	DR132S	DR132M/MC
AC	5.20	5.47	5.47	6.14	6.14	7.05	7.05	7.76	7.76	8.70	8.70
AD	4.13	4.69	4.69	5.04	5.04	5.51	5.51	6.18	6.18	6.69	6.69
ADS	4.13	5.08	5.08	5.47	5.47	5.91	5.91	6.22	6.22	6.77	6.77
L	17.24	17.68	18.66	19.02	20.24	20.31	21.10	22.28	23.46	25.31	27.28
LS	19.41	20.35	21.34	22.20	23.43	23.98	24.76	25.94	27.13	29.72	31.69
LB	7.28	7.72	8.70	9.06	10.28	10.35	11.14	12.32	13.50	15.35	17.32
LBS	9.45	10.39	11.38	12.24	13.46	14.02	14.80	15.98	17.17	19.76	21.73

reducer.ir

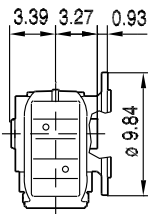


33 056 00 09

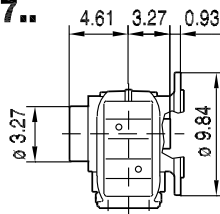
KF57..



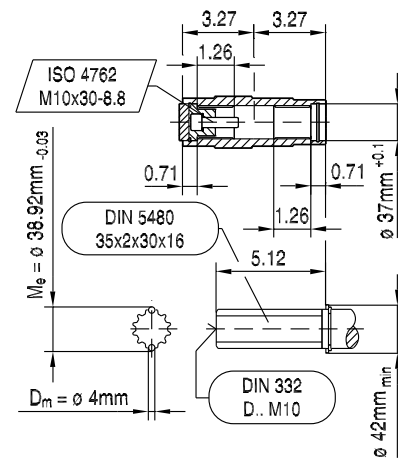
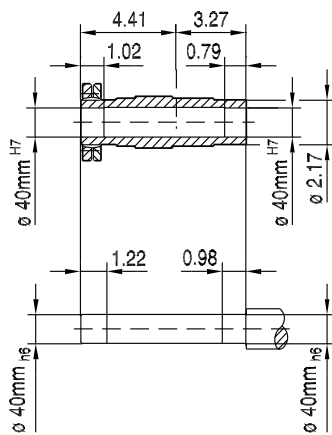
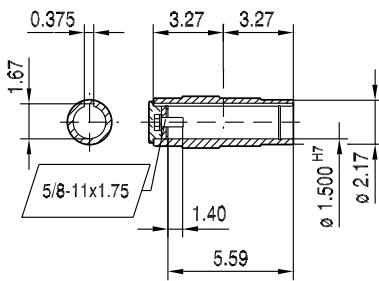
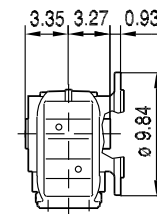
KAF57..



KHF57..



KVF57..



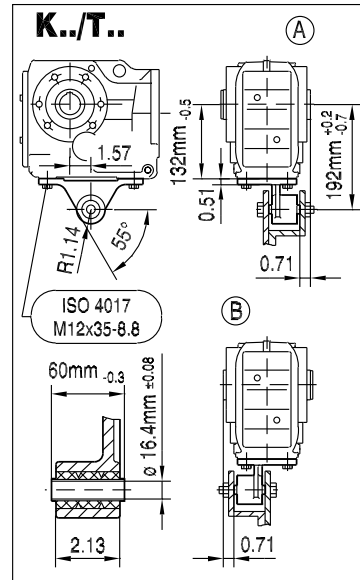
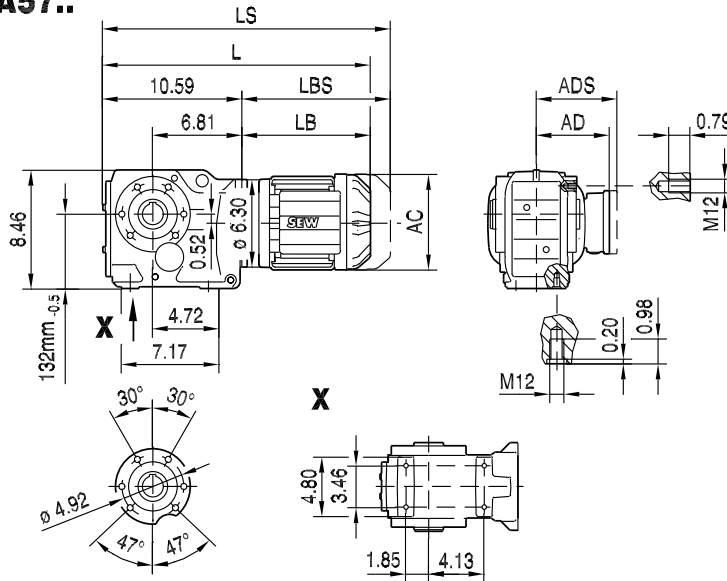
(→ 125)	DR63..	DR71S	DR71M	DR80S	DR80M	DR90M	DR90L	DR100M	DR100L/LC	DR132S	DR132M/MC
AC	5.20	5.47	5.47	6.14	6.14	7.05	7.05	7.76	7.76	8.70	8.70
AD	4.13	4.69	4.69	5.04	5.04	5.51	5.51	6.18	6.18	6.69	6.69
ADS	4.13	5.08	5.08	5.47	5.47	5.91	5.91	6.22	6.22	6.77	6.77
L	17.87	18.31	19.29	19.65	20.87	20.94	21.73	22.91	24.09	25.94	27.91
LS	20.04	20.98	21.97	22.83	24.06	24.61	25.39	26.57	27.76	30.35	32.32
LB	7.28	7.72	8.70	9.06	10.28	10.35	11.14	12.32	13.50	15.35	17.32
LBS	9.45	10.39	11.38	12.24	13.46	14.02	14.80	15.98	17.17	19.76	21.73

reducer.ir

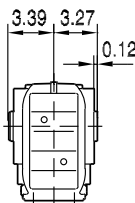


33 057 00 09

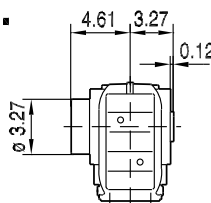
KA57..



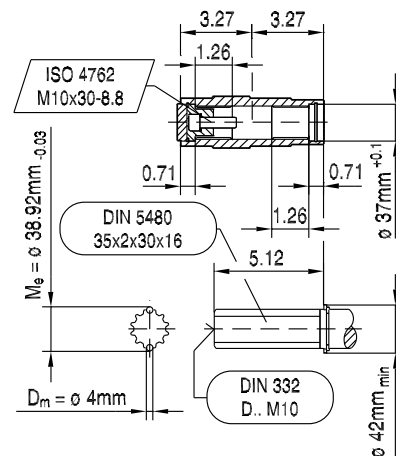
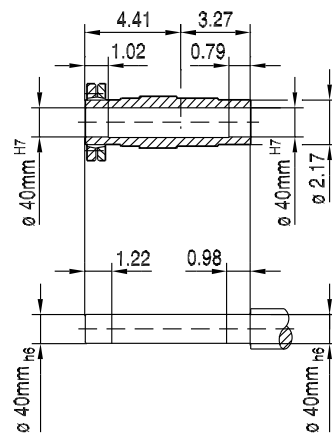
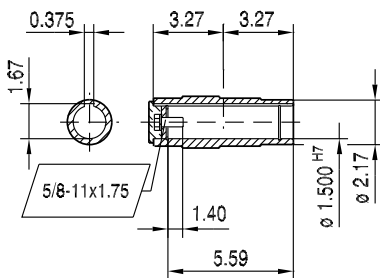
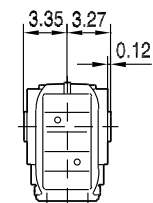
KA57..



KH57..

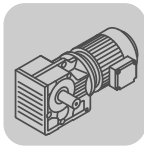


KV57..



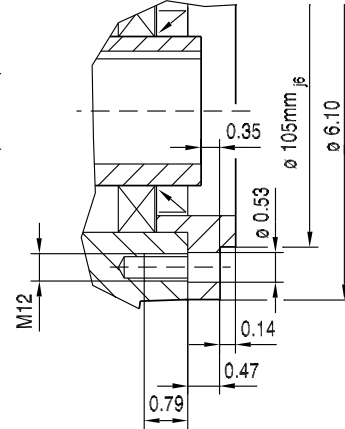
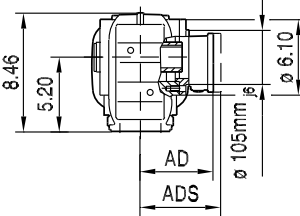
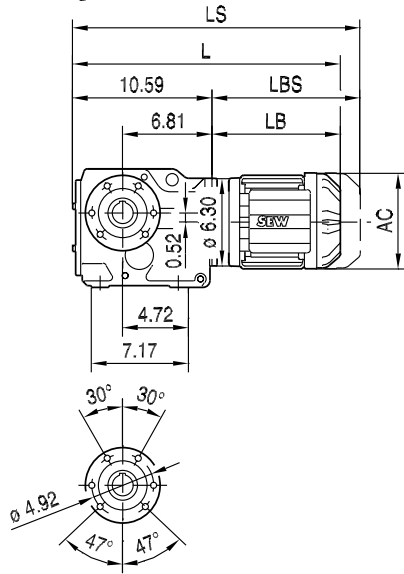
(→ 125)	DR63..	DR71S	DR71M	DR80S	DR80M	DR90M	DR90L	DR100M	DR100L/LC	DR132S	DR132M/MC
AC	5.20	5.47	5.47	6.14	6.14	7.05	7.05	7.76	7.76	8.70	8.70
AD	4.13	4.69	4.69	5.04	5.04	5.51	5.51	6.18	6.18	6.69	6.69
ADS	4.13	5.08	5.08	5.47	5.47	5.91	5.91	6.22	6.22	6.77	6.77
L	17.87	18.31	19.29	19.65	20.87	20.94	21.73	22.91	24.09	25.94	27.91
LS	20.04	20.98	21.97	22.83	24.06	24.61	25.39	26.57	27.76	30.35	32.32
LB	7.28	7.72	8.70	9.06	10.28	10.35	11.14	12.32	13.50	15.35	17.32
LBS	9.45	10.39	11.38	12.24	13.46	14.02	14.80	15.98	17.17	19.76	21.73

reducer.ir

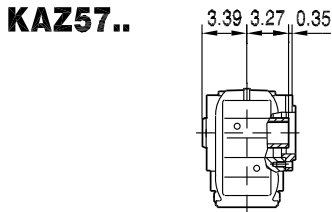


33 058 00 09

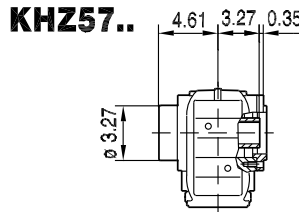
KAZ57..



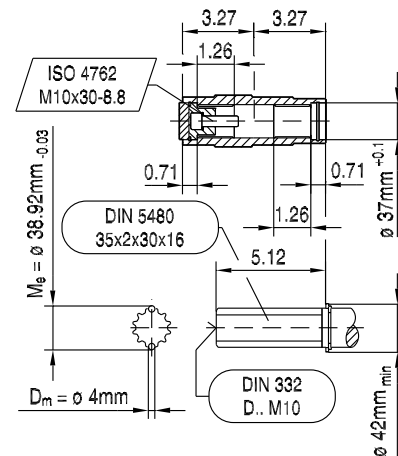
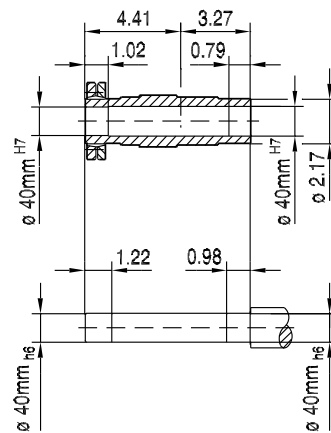
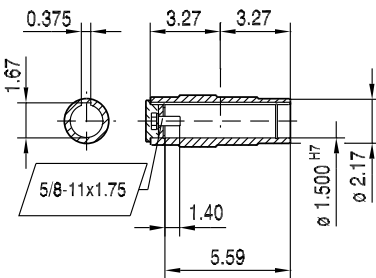
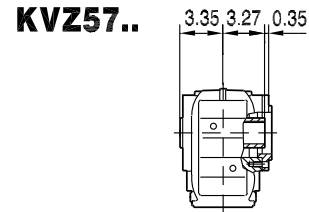
KAZ57..



KHZ57..



KVZ57..



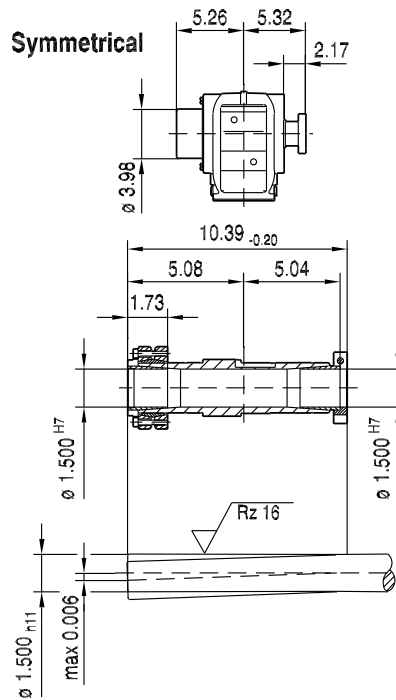
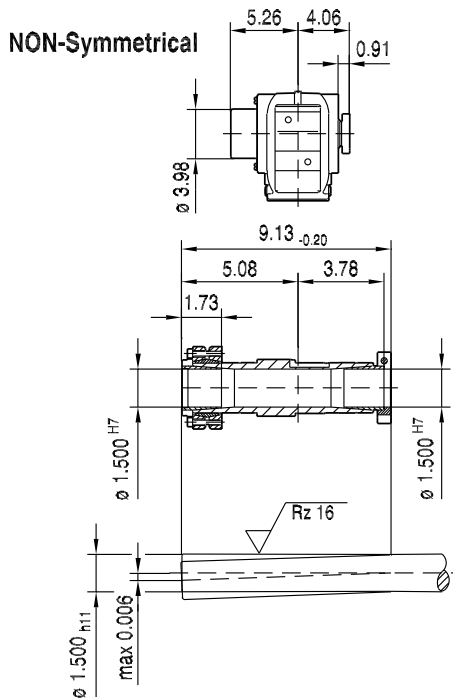
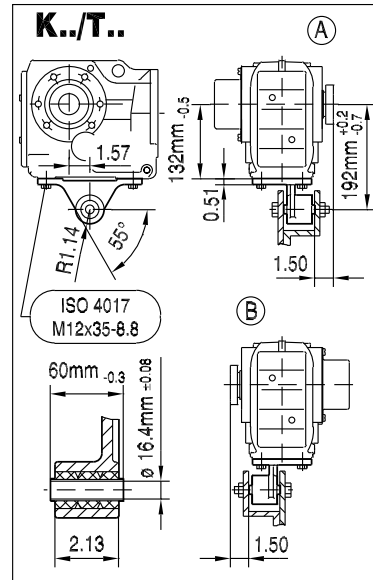
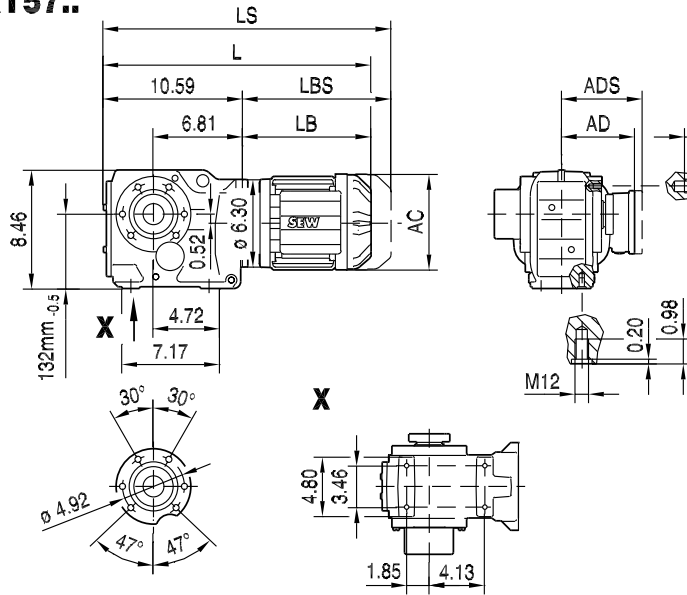
(→ 125)	DR63..	DR71S	DR71M	DR80S	DR80M	DR90M	DR90L	DR100M	DR100L/LC	DR132S	DR132M/MC
AC	5.20	5.47	5.47	6.14	6.14	7.05	7.05	7.76	7.76	8.70	8.70
AD	4.13	4.69	4.69	5.04	5.04	5.51	5.51	6.18	6.18	6.69	6.69
ADS	4.13	5.08	5.08	5.47	5.47	5.91	5.91	6.22	6.22	6.77	6.77
L	17.87	18.31	19.29	19.65	20.87	20.94	21.73	22.91	24.09	25.94	27.91
LS	20.04	20.98	21.97	22.83	24.06	24.61	25.39	26.57	27.76	30.35	32.32
LB	7.28	7.72	8.70	9.06	10.28	10.35	11.14	12.32	13.50	15.35	17.32
LBS	9.45	10.39	11.38	12.24	13.46	14.02	14.80	15.98	17.17	19.76	21.73

reducer.ir



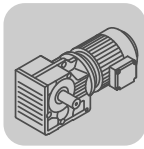
33 059 00 09

KT57..



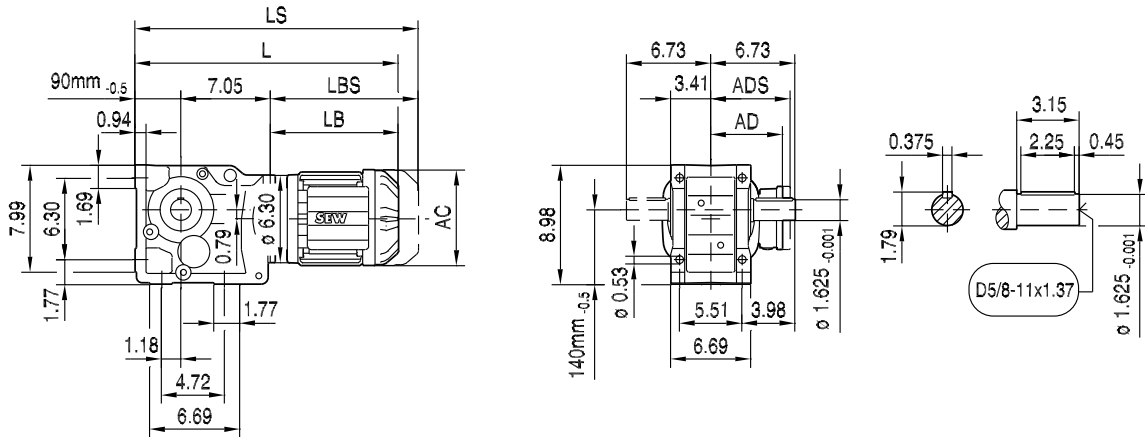
(→ 125)	DR63..	DR71S	DR71M	DR80S	DR80M	DR90M	DR90L	DR100M	DR100L/LC	DR132S	DR132M/MC
AC	5.20	5.47	5.47	6.14	6.14	7.05	7.05	7.76	7.76	8.70	8.70
AD	4.13	4.69	4.69	5.04	5.04	5.51	5.51	6.18	6.18	6.69	6.69
ADS	4.13	5.08	5.08	5.47	5.47	5.91	5.91	6.22	6.22	6.77	6.77
L	17.87	18.31	19.29	19.65	20.87	20.94	21.73	22.91	24.09	25.94	27.91
LS	20.04	20.98	21.97	22.83	24.06	24.61	25.39	26.57	27.76	30.35	32.32
LB	7.28	7.72	8.70	9.06	10.28	10.35	11.14	12.32	13.50	15.35	17.32
LBS	9.45	10.39	11.38	12.24	13.46	14.02	14.80	15.98	17.17	19.76	21.73

reducer.ir

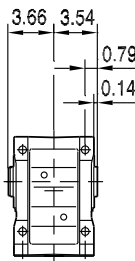


33 060 00 09

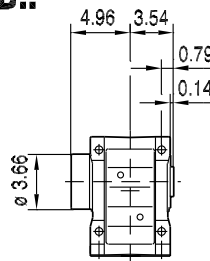
K67..



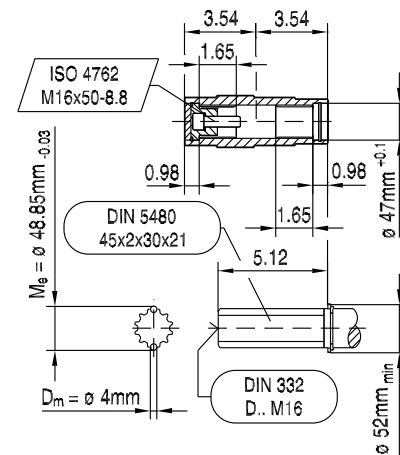
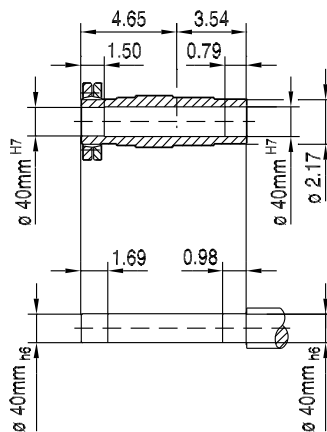
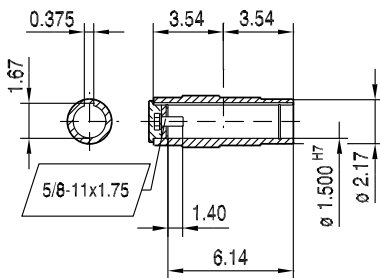
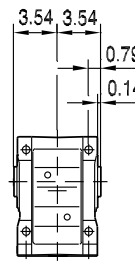
KA67B..



KH67B..



KV67B..



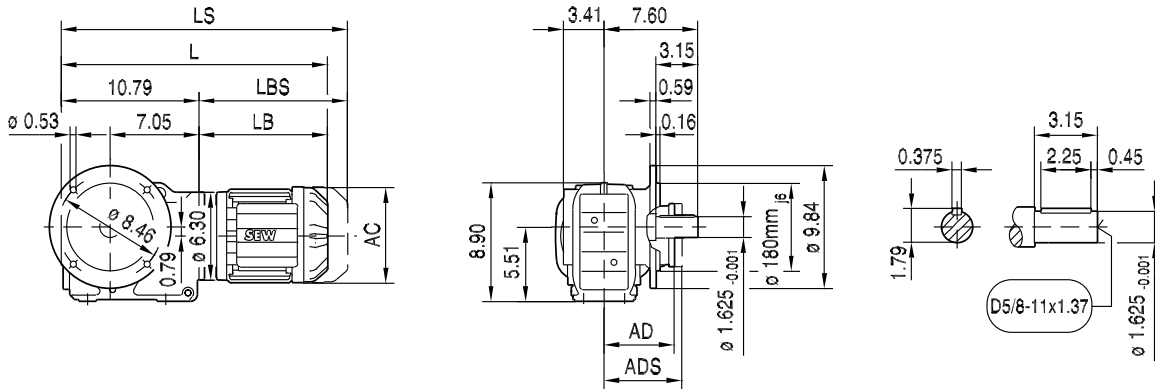
(→ 125)	DR71S	DR71M	DR80S	DR80M	DR90M	DR90L	DR100M	DR100L/LC	DR132S	DR132M/MC
AC	5.47	5.47	6.14	6.14	7.05	7.05	7.76	7.76	8.70	8.70
AD	4.69	4.69	5.04	5.04	5.51	5.51	6.18	6.18	6.69	6.69
ADS	5.08	5.08	5.47	5.47	5.91	5.91	6.22	6.22	6.77	6.77
L	18.31	19.29	19.65	20.87	20.94	21.73	22.91	24.09	25.94	27.91
LS	20.98	21.97	22.83	24.06	24.61	25.39	26.57	27.76	30.35	32.32
LB	7.72	8.70	9.06	10.28	10.35	11.14	12.32	13.50	15.35	17.32
LBS	10.39	11.38	12.24	13.46	14.02	14.80	15.98	17.17	19.76	21.73

reducer.ir

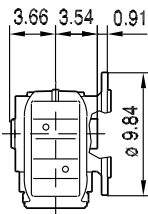


33 061 00 09

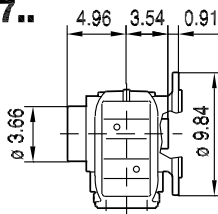
KF67..



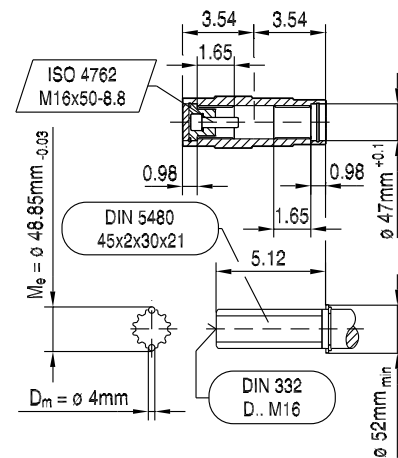
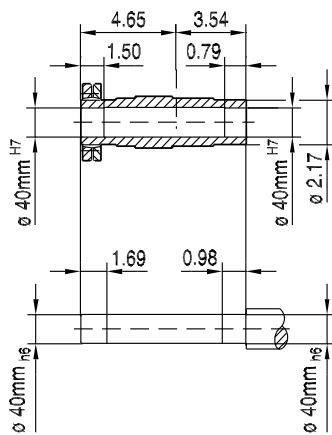
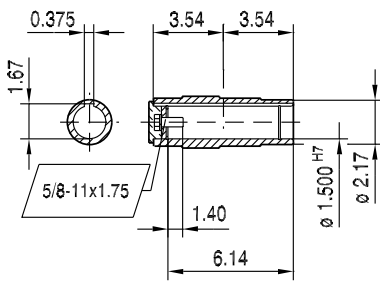
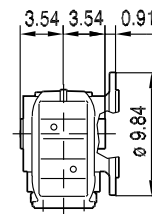
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KHF67..

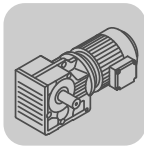


KVF67..

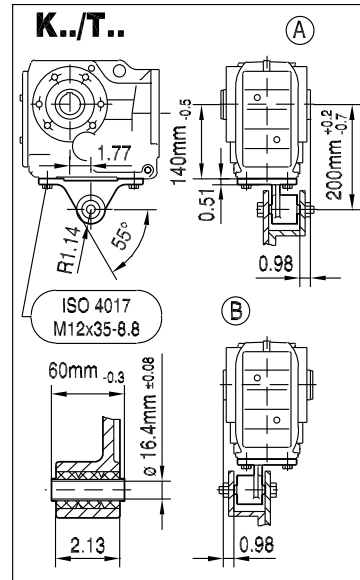
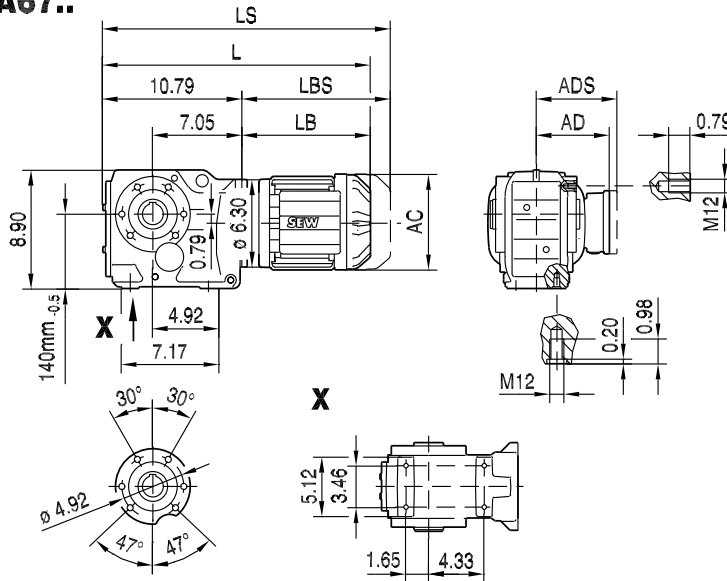


(→ 125)	DR71S	DR71M	DR80S	DR80M	DR90M	DR90L	DR100M	DR100L/LC	DR132S	DR132M/MC
AC	5.47	5.47	6.14	6.14	7.05	7.05	7.76	7.76	8.70	8.70
AD	4.69	4.69	5.04	5.04	5.51	5.51	6.18	6.18	6.69	6.69
ADS	5.08	5.08	5.47	5.47	5.91	5.91	6.22	6.22	6.77	6.77
L	18.50	19.49	19.84	21.06	21.14	21.93	23.11	24.29	26.14	28.11
LS	21.18	22.17	23.03	24.25	24.80	25.59	26.77	27.95	30.55	32.52
LB	7.72	8.70	9.06	10.28	10.35	11.14	12.32	13.50	15.35	17.32
LBS	10.39	11.38	12.24	13.46	14.02	14.80	15.98	17.17	19.76	21.73

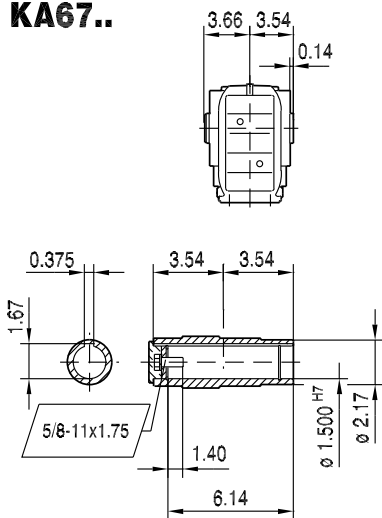
reducer.ir



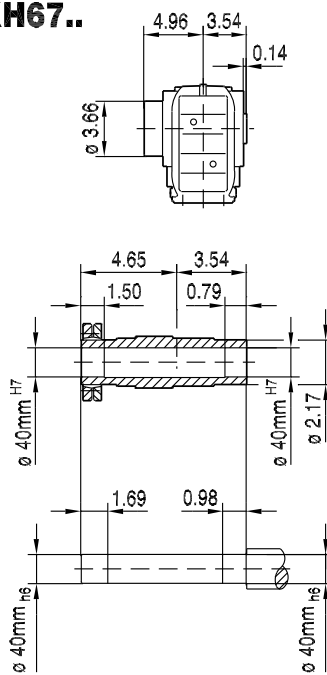
KA67..



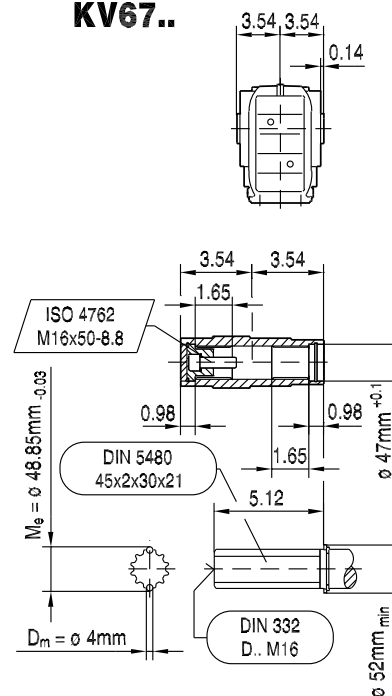
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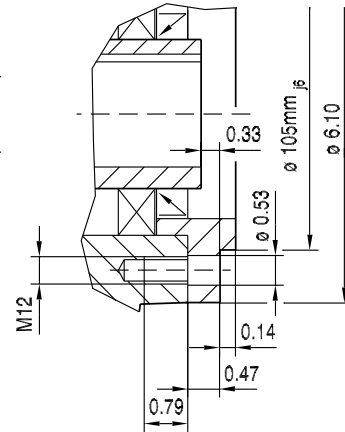
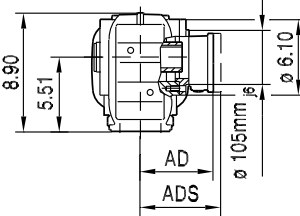
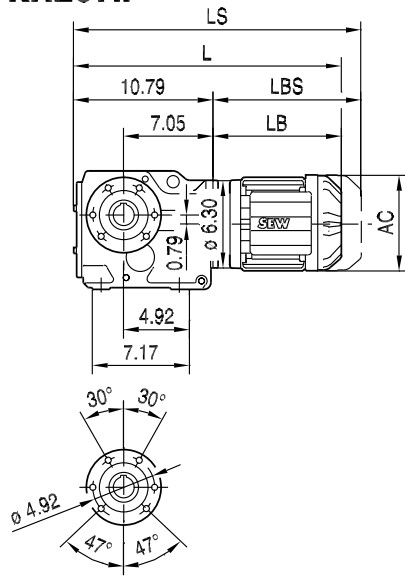
(→ 125)	DR71S	DR71M	DR80S	DR80M	DR90M	DR90L	DR100M	DR100L/LC	DR132S	DR132M/MC
AC	5.47	5.47	6.14	6.14	7.05	7.05	7.76	7.76	8.70	8.70
AD	4.69	4.69	5.04	5.04	5.51	5.51	6.18	6.18	6.69	6.69
ADS	5.08	5.08	5.47	5.47	5.91	5.91	6.22	6.22	6.77	6.77
L	18.50	19.49	19.84	21.06	21.14	21.93	23.11	24.29	26.14	28.11
LS	21.18	22.17	23.03	24.25	24.80	25.59	26.77	27.95	30.55	32.52
LB	7.72	8.70	9.06	10.28	10.35	11.14	12.32	13.50	15.35	17.32
LBS	10.39	11.38	12.24	13.46	14.02	14.80	15.98	17.17	19.76	21.73

reducer.ir

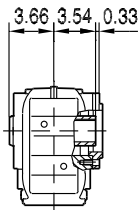


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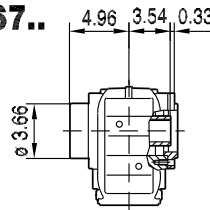
KAZ67..



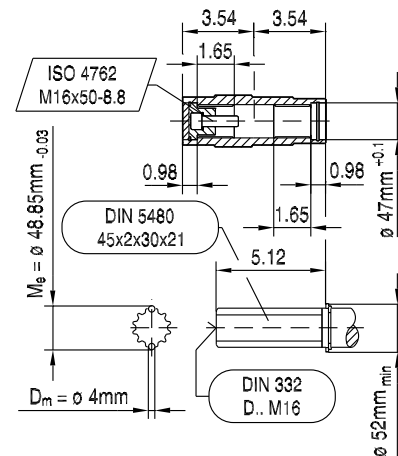
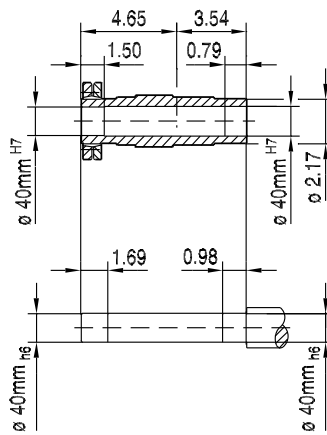
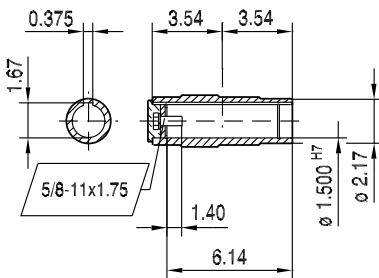
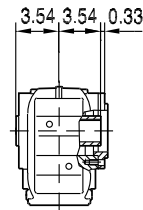
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KHZ67..

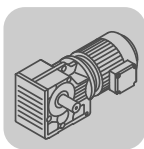


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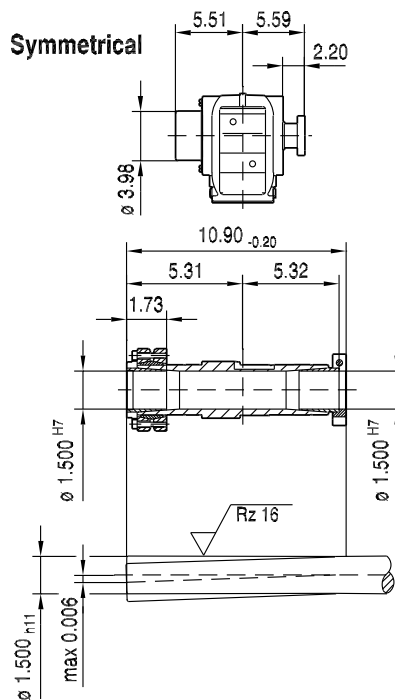
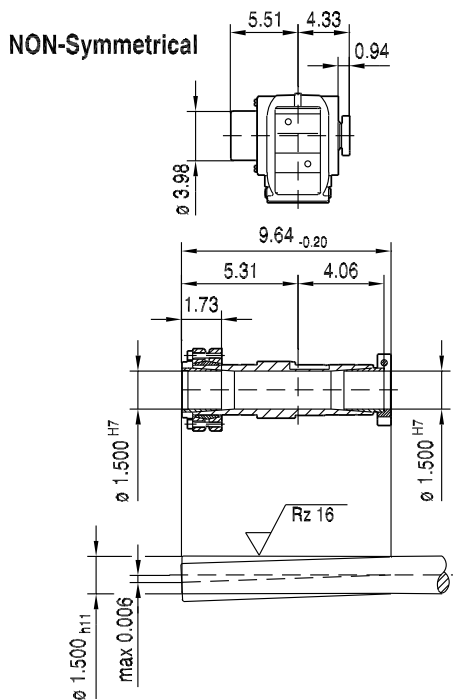
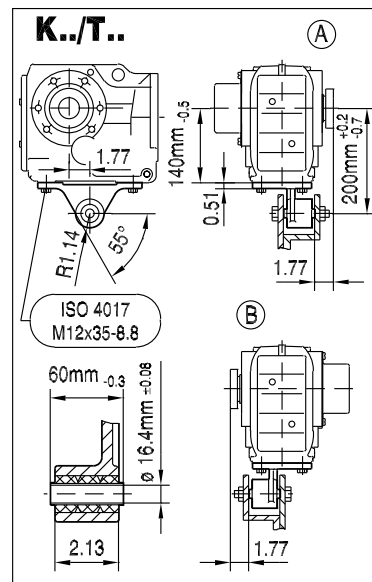
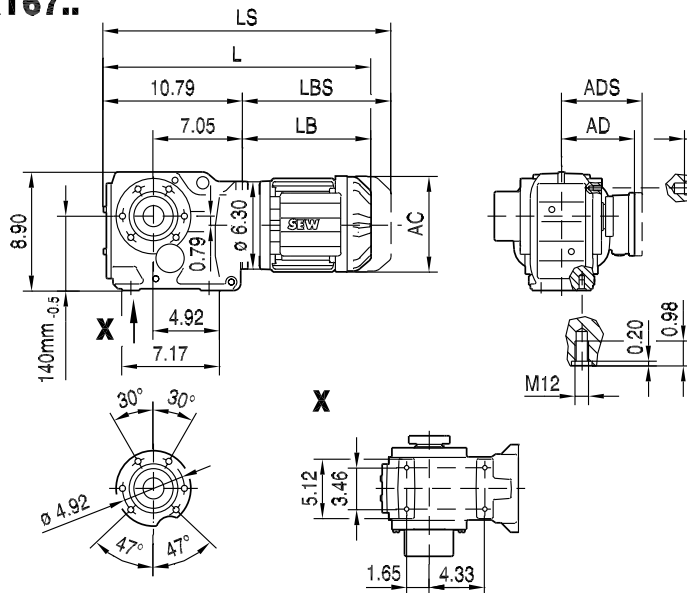
(→ 125)	DR71S	DR71M	DR80S	DR80M	DR90M	DR90L	DR100M	DR100L/LC	DR132S	DR132M/MC
AC	5.47	5.47	6.14	6.14	7.05	7.05	7.76	7.76	8.70	8.70
AD	4.69	4.69	5.04	5.04	5.51	5.51	6.18	6.18	6.69	6.69
ADS	5.08	5.08	5.47	5.47	5.91	5.91	6.22	6.22	6.77	6.77
L	18.50	19.49	19.84	21.06	21.14	21.93	23.11	24.29	26.14	28.11
LS	21.18	22.17	23.03	24.25	24.80	25.59	26.77	27.95	30.55	32.52
LB	7.72	8.70	9.06	10.28	10.35	11.14	12.32	13.50	15.35	17.32
LBS	10.39	11.38	12.24	13.46	14.02	14.80	15.98	17.17	19.76	21.73

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KT67..



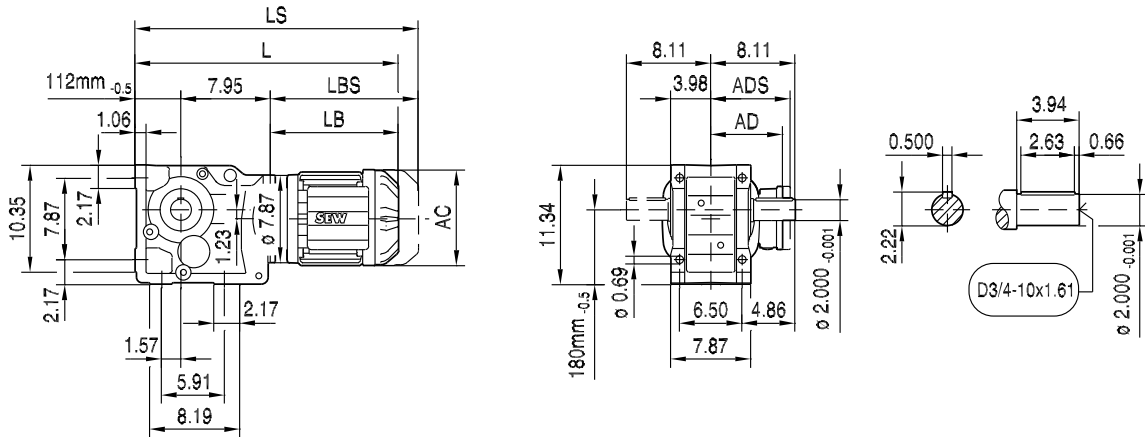
(→ 125)	DR71S	DR71M	DR80S	DR80M	DR90M	DR90L	DR100M	DR100L/LC	DR132S	DR132M/MC
AC	5.47	5.47	6.14	6.14	7.05	7.05	7.76	7.76	8.70	8.70
AD	4.69	4.69	5.04	5.04	5.51	5.51	6.18	6.18	6.69	6.69
ADS	5.08	5.08	5.47	5.47	5.91	5.91	6.22	6.22	6.77	6.77
L	18.50	19.49	19.84	21.06	21.14	21.93	23.11	24.29	26.14	28.11
LS	21.18	22.17	23.03	24.25	24.80	25.59	26.77	27.95	30.55	32.52
LB	7.72	8.70	9.06	10.28	10.35	11.14	12.32	13.50	15.35	17.32
LBS	10.39	11.38	12.24	13.46	14.02	14.80	15.98	17.17	19.76	21.73

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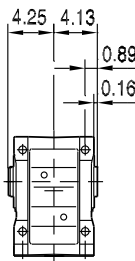


33 065 00 09

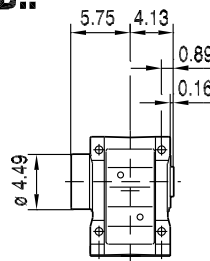
K77..



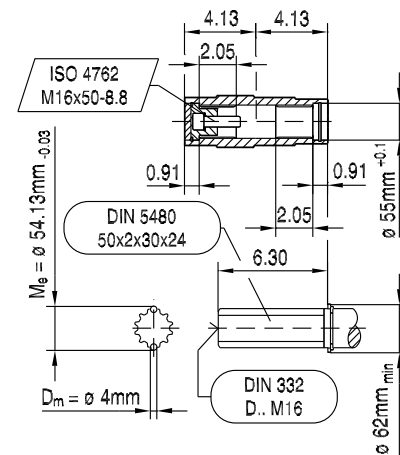
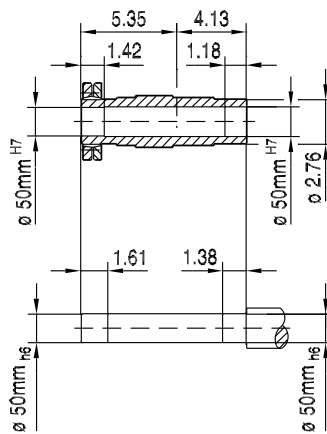
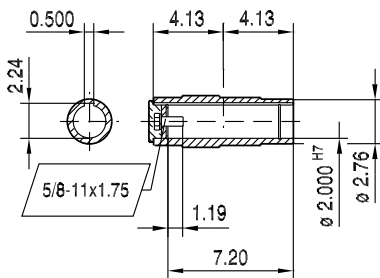
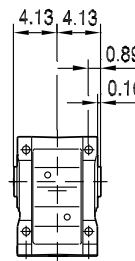
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KH77B..



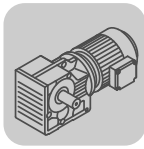
KV77B..



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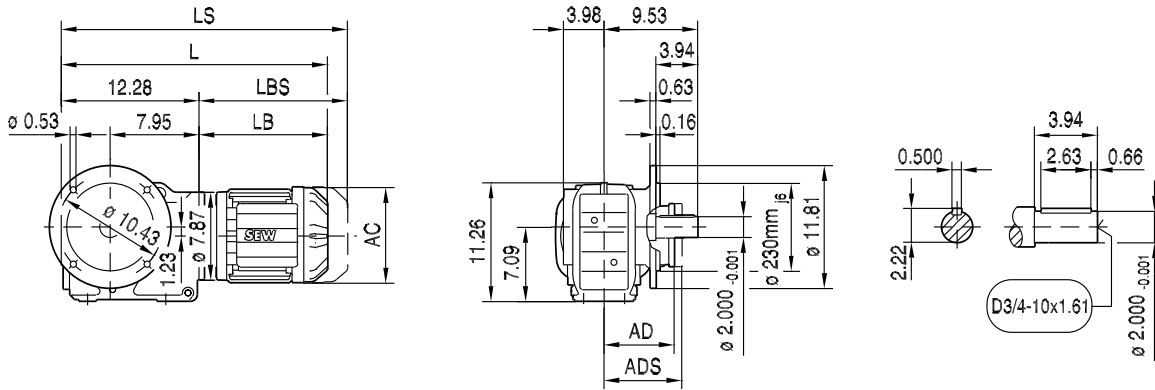
(→ 125)	DR71M	DR80S	DR80M	DR90M	DR90L	DR100M	DR100L/LC	DR132S	DR132M/MC	DR160..
AC	5.47	6.14	6.14	7.05	7.05	7.76	7.76	8.70	8.70	10.63
AD	4.69	5.04	5.04	5.51	5.51	6.18	6.18	6.69	6.69	8.98
ADS	5.08	5.47	5.47	5.91	5.91	6.22	6.22	6.77	6.77	8.98
L	20.79	21.14	22.36	22.44	23.23	24.41	25.59	27.28	29.25	30.87
LS	23.46	24.33	25.55	26.10	26.89	28.07	29.25	31.69	33.66	36.26
LB	8.43	8.78	10.00	10.08	10.87	12.05	13.23	14.92	16.89	18.50
LBS	11.10	11.97	13.19	13.74	14.63	15.71	16.89	19.33	21.30	23.90

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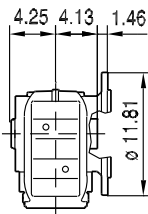


33 066 00 09

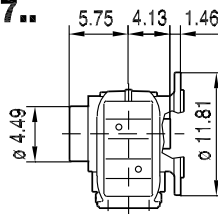
KF77..



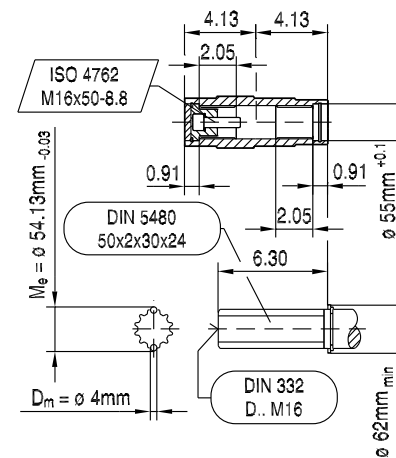
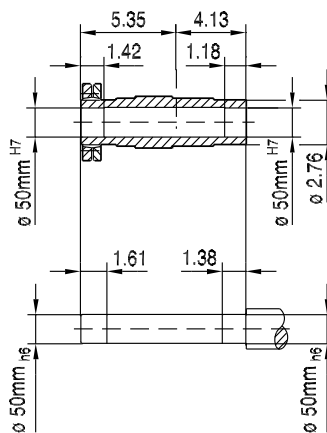
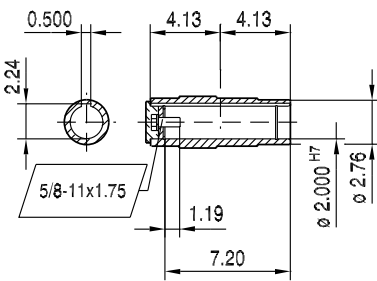
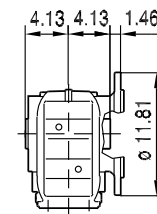
KAF77..



KHF77..



KVF77..



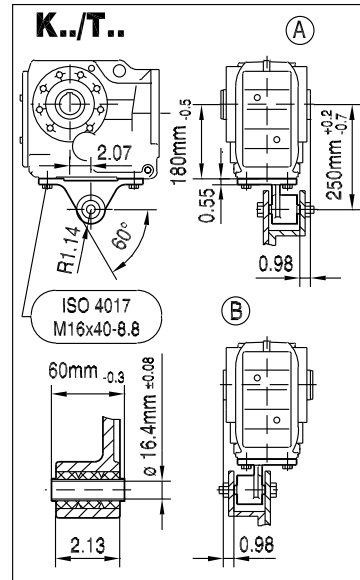
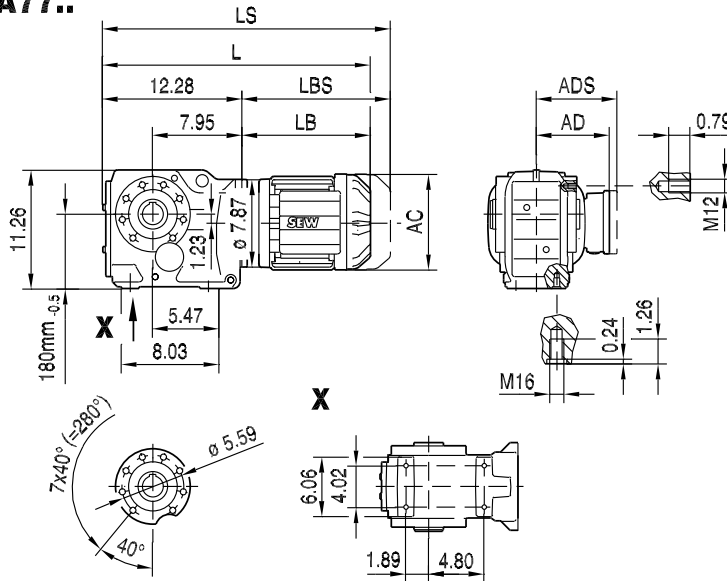
(→ 125)	DR71M	DR80S	DR80M	DR90M	DR90L	DR100M	DR100L/LC	DR132S	DR132M/MC	DR160..
AC	5.47	6.14	6.14	7.05	7.05	7.76	7.76	8.70	8.70	10.63
AD	4.69	5.04	5.04	5.51	5.51	6.18	6.18	6.69	6.69	8.98
ADS	5.08	5.47	5.47	5.91	5.91	6.22	6.22	6.77	6.77	8.98
L	20.71	21.06	22.28	22.36	23.15	24.33	25.51	27.20	29.17	30.79
LS	23.39	24.25	25.47	26.02	26.81	27.99	29.17	31.61	33.58	36.18
LB	8.43	8.78	10.00	10.08	10.87	12.05	13.23	14.92	16.89	18.50
LBS	11.10	11.97	13.19	13.74	14.63	15.71	16.89	19.33	21.30	23.90

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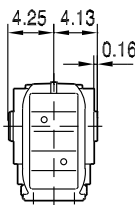


33 067 00 09

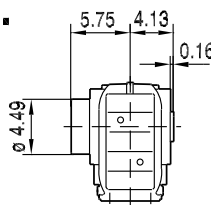
KA77..



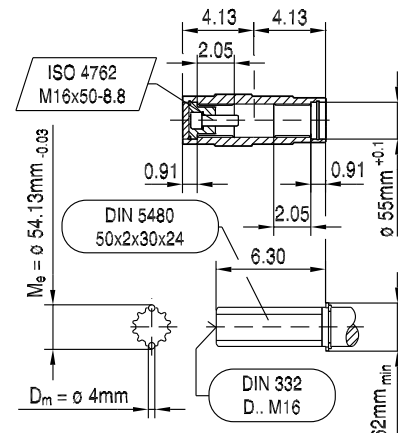
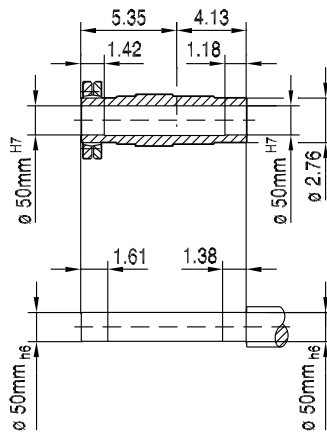
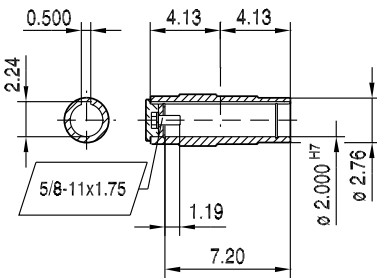
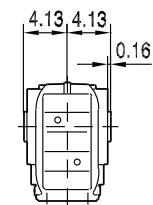
KA77..



KH77..

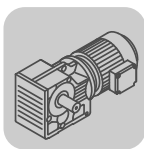


KV77..



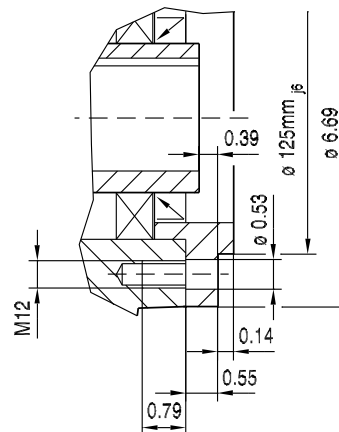
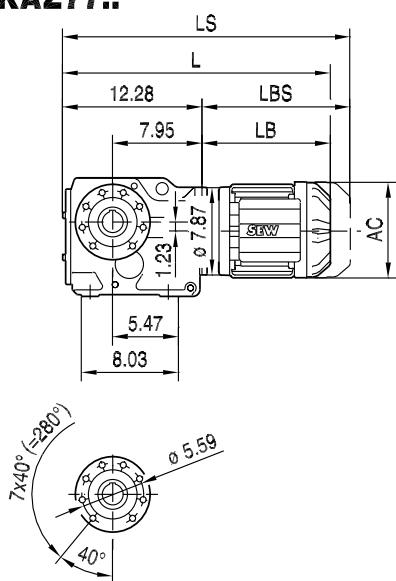
(→ 125)	DR71M	DR80S	DR80M	DR90M	DR90L	DR100M	DR100L/LC	DR132S	DR132M/MC	DR160..
AC	5.47	6.14	6.14	7.05	7.05	7.76	7.76	8.70	8.70	10.63
AD	4.69	5.04	5.04	5.51	5.51	6.18	6.18	6.69	6.69	8.98
ADS	5.08	5.47	5.47	5.91	5.91	6.22	6.22	6.77	6.77	8.98
L	20.71	21.06	22.28	22.36	23.15	24.33	25.51	27.20	29.17	30.79
LS	23.39	24.25	25.47	26.02	26.81	27.99	29.17	31.61	33.58	36.18
LB	8.43	8.78	10.00	10.08	10.87	12.05	13.23	14.92	16.89	18.50
LBS	11.10	11.97	13.19	13.74	14.63	15.71	16.89	19.33	21.30	23.90

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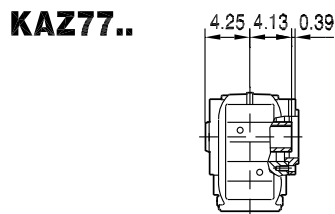


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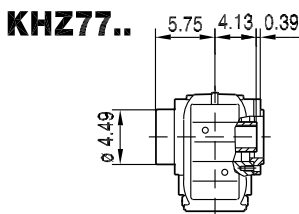
KAZ77..



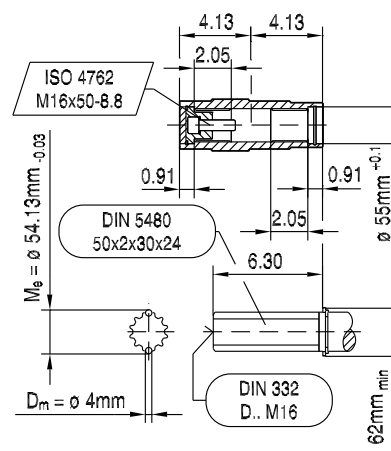
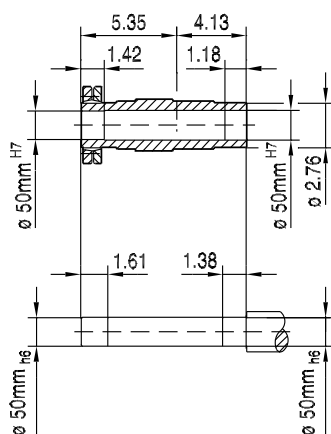
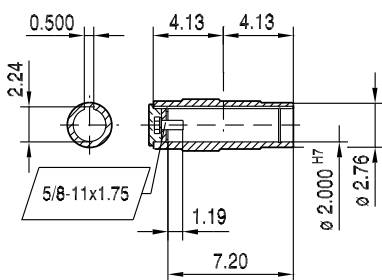
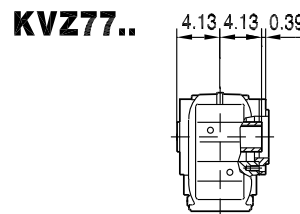
KAZ77..



KHZ77..



KVZ77..



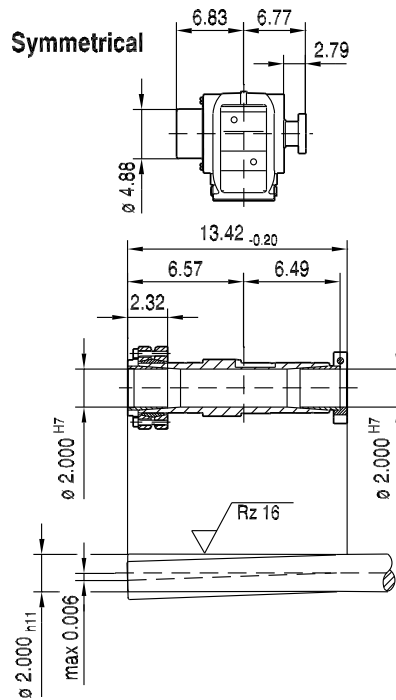
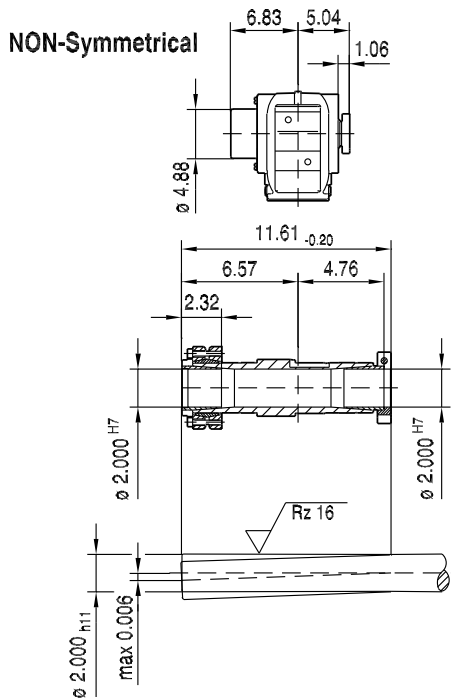
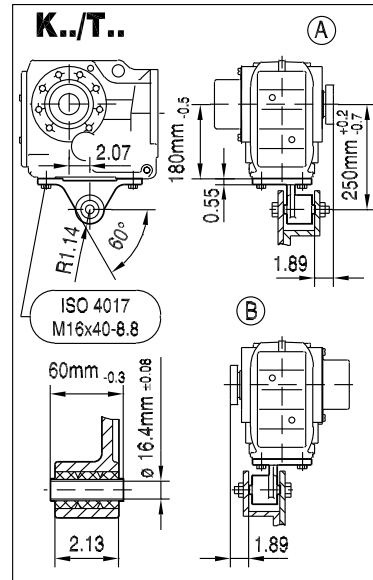
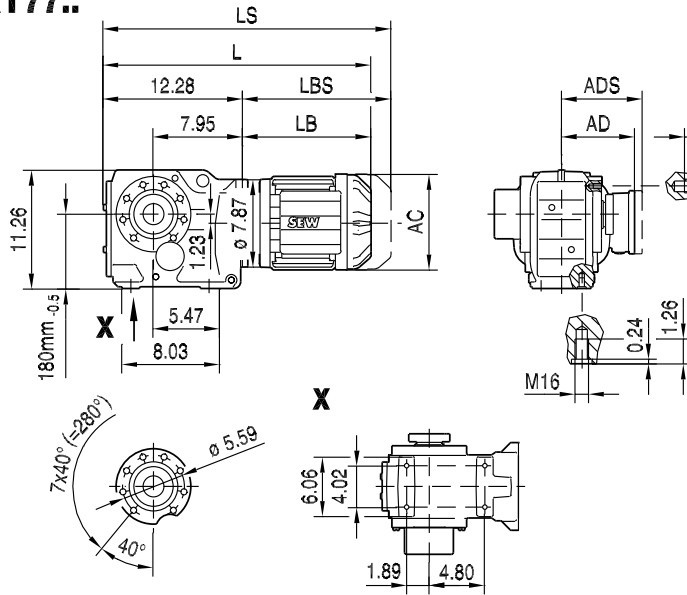
(→ 125)	DR71M	DR80S	DR80M	DR90M	DR90L	DR100M	DR100L/LC	DR132S	DR132M/MC	DR160..
AC	5.47	6.14	6.14	7.05	7.05	7.76	7.76	8.70	8.70	10.63
AD	4.69	5.04	5.04	5.51	5.51	6.18	6.18	6.69	6.69	8.98
ADS	5.08	5.47	5.47	5.91	5.91	6.22	6.22	6.77	6.77	8.98
L	20.71	21.06	22.28	22.36	23.15	24.33	25.51	27.20	29.17	30.79
LS	23.39	24.25	25.47	26.02	26.81	27.99	29.17	31.61	33.58	36.18
LB	8.43	8.78	10.00	10.08	10.87	12.05	13.23	14.92	16.89	18.50
LBS	11.10	11.97	13.19	13.74	14.63	15.71	16.89	19.33	21.30	23.90

reducer.ir



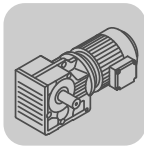
33 069 00 09

KT77..



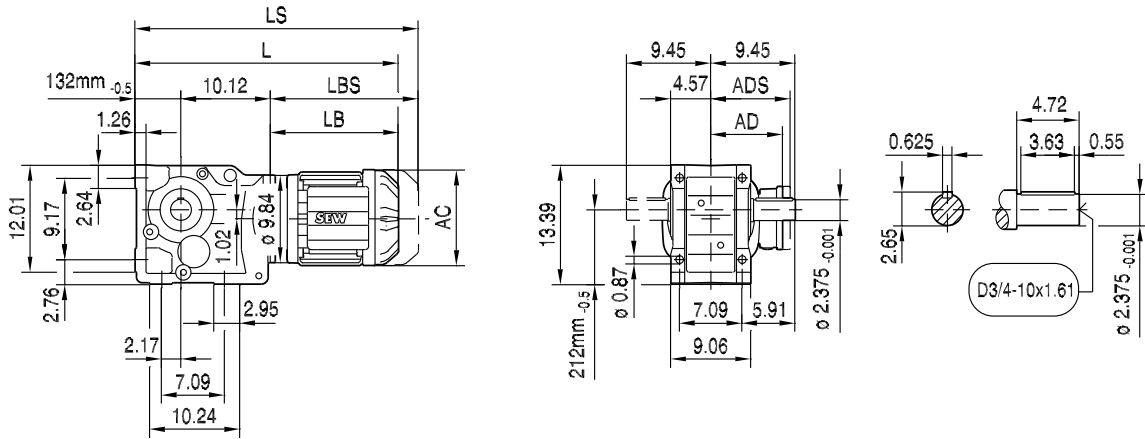
(→ 125)	DR71M	DR80S	DR80M	DR90M	DR90L	DR100M	DR100L/LC	DR132S	DR132M/MC	DR160..
AC	5.47	6.14	6.14	7.05	7.05	7.76	7.76	8.70	8.70	10.63
AD	4.69	5.04	5.04	5.51	5.51	6.18	6.18	6.69	6.69	8.98
ADS	5.08	5.47	5.47	5.91	5.91	6.22	6.22	6.77	6.77	8.98
L	20.71	21.06	22.28	22.36	23.15	24.33	25.51	27.20	29.17	30.79
LS	23.39	24.25	25.47	26.02	26.81	27.99	29.17	31.61	33.58	36.18
LB	8.43	8.78	10.00	10.08	10.87	12.05	13.23	14.92	16.89	18.50
LBS	11.10	11.97	13.19	13.74	14.63	15.71	16.89	19.33	21.30	23.90

reducer.ir

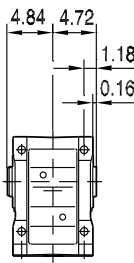


33 070 00 09

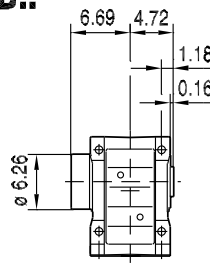
K87..



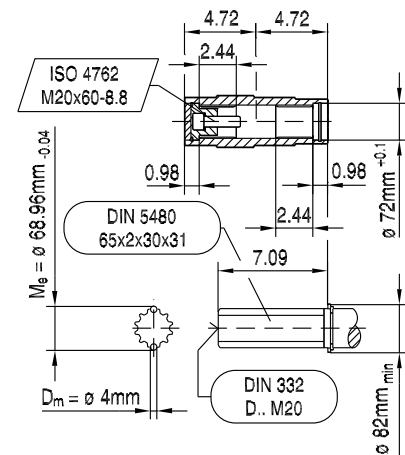
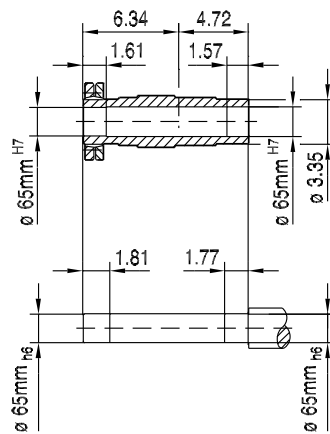
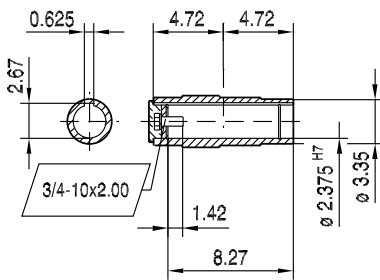
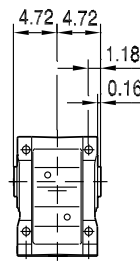
KA87B..



KH87B..



KV87B..



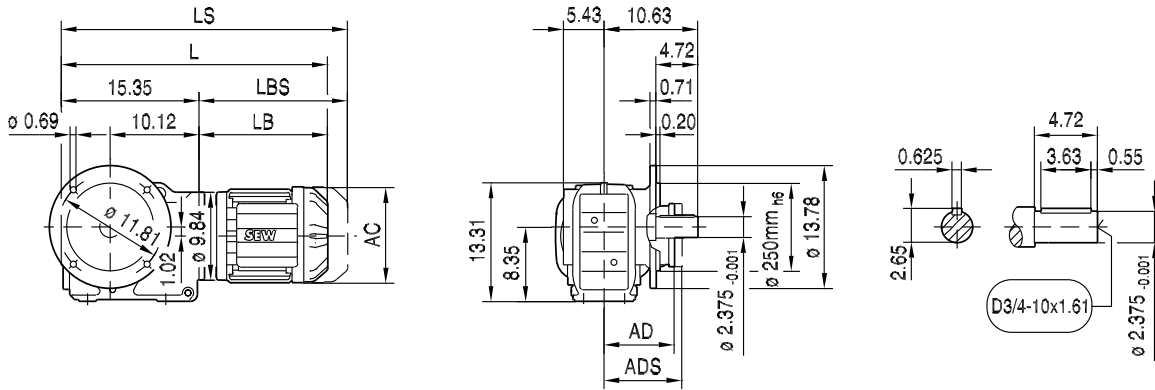
(→ 125)	DR80S	DR90M	DR90L	DR100L/LC	DR132S	DR132M/MC	DR160..	DR180S/M	DR180L/LC
AC	6.14	7.05	7.05	7.76	8.70	8.70	10.63	12.44	12.44
AD	5.04	5.51	5.51	6.18	6.69	6.69	8.98	9.96	9.96
ADS	5.47	5.91	5.91	6.22	6.77	6.77	8.98	9.96	9.96
L	23.90	25.20	25.98	28.35	30.04	32.01	33.62	36.34	38.70
LS	27.09	28.86	29.65	32.01	34.45	36.42	39.02	43.78	46.14
LB	8.58	9.88	10.67	13.03	14.72	16.69	18.31	21.02	23.39
LBS	11.77	13.54	14.33	16.69	19.13	21.10	23.70	28.46	30.83

reducer.ir

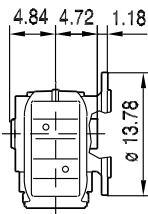


33 071 00 09

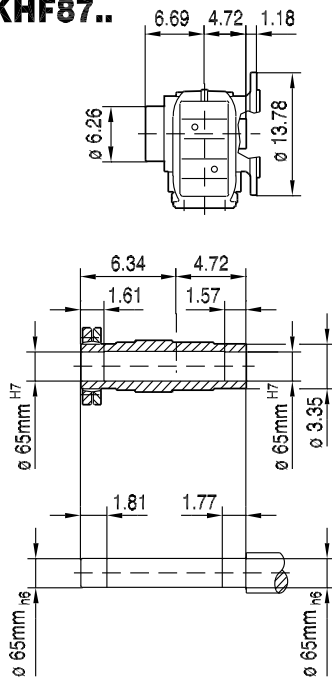
KF87..



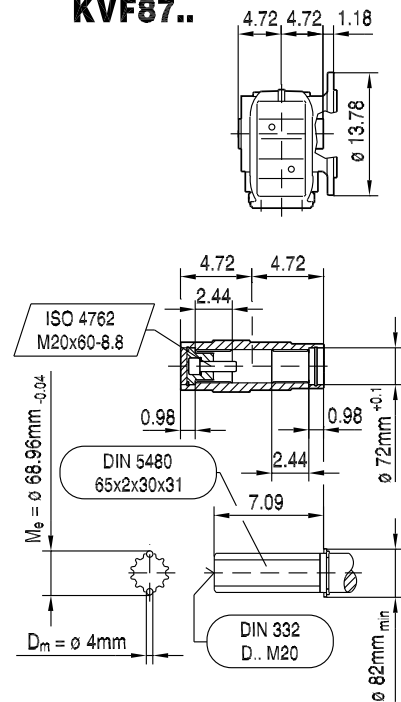
KAF87..



KHF87..

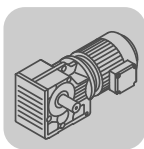


KVF87..



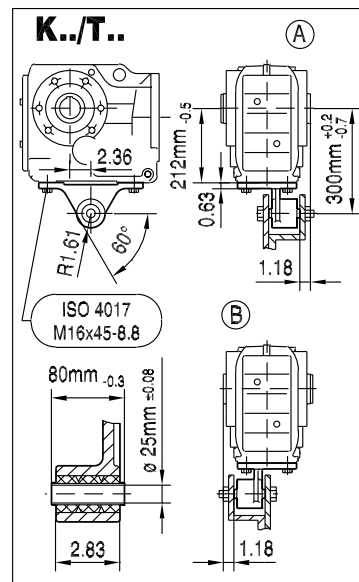
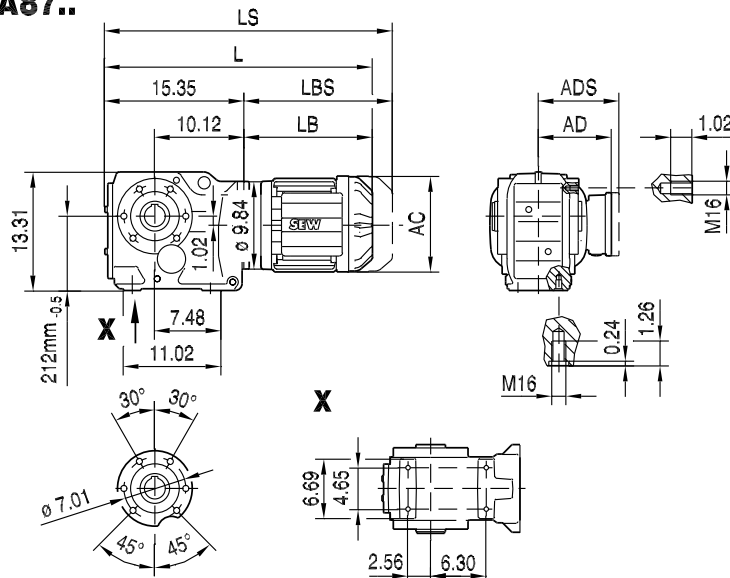
(→ 125)	DR80S	DR90M	DR90L	DR100L/LC	DR132S	DR132M/MC	DR160..	DR180S/M	DR180L/LC
AC	6.14	7.05	7.05	7.76	8.70	8.70	10.63	12.44	12.44
AD	5.04	5.51	5.51	6.18	6.69	6.69	8.98	9.96	9.96
ADS	5.47	5.91	5.91	6.22	6.77	6.77	8.98	9.96	9.96
L	23.94	25.24	26.02	28.39	30.08	32.05	33.66	36.38	38.74
LS	27.13	28.90	29.69	32.05	34.49	36.46	39.06	43.82	46.18
LB	8.58	9.88	10.67	13.03	14.72	16.69	18.31	21.02	23.39
LBS	11.77	13.54	14.33	16.69	19.13	21.10	23.70	28.46	30.83

reducer.ir

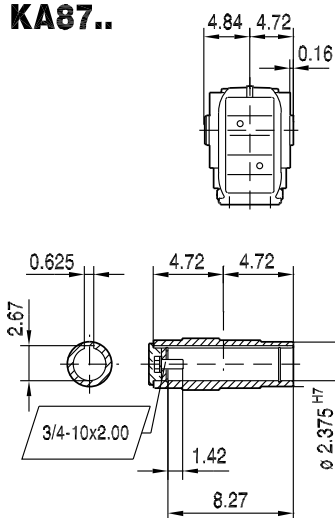


33 072 00 09

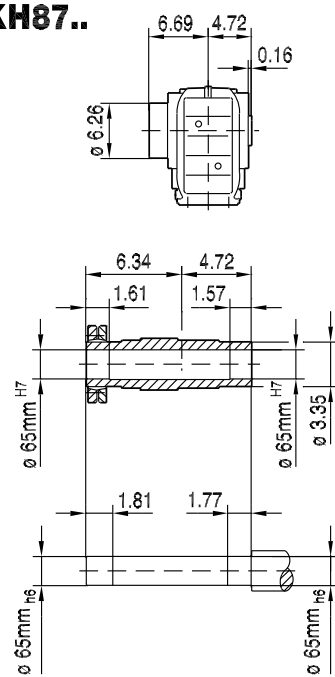
KA87..



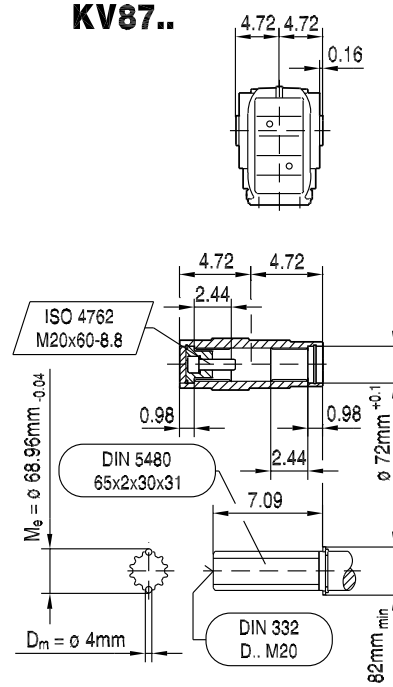
KA87..



KH87..



KV87..



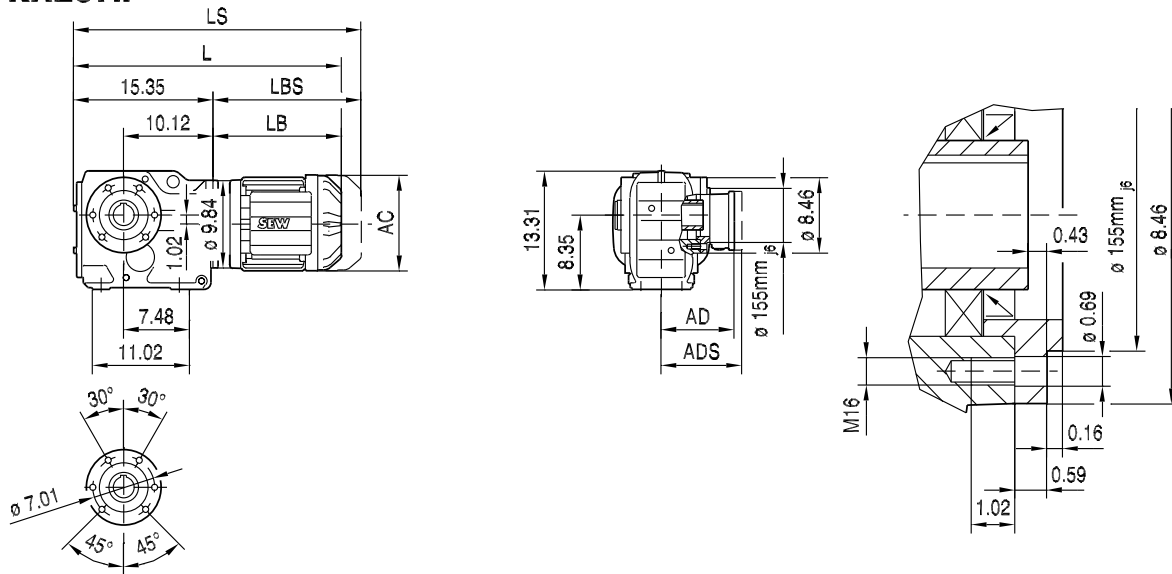
(→ 125)	DR80S	DR90M	DR90L	DR100/LC	DR132S	DR132M/MC	DR160..	DR180S/M	DR180L/LC
AC	6.14	7.05	7.05	7.76	8.70	8.70	10.63	12.44	12.44
AD	5.04	5.51	5.51	6.18	6.69	6.69	8.98	9.96	9.96
ADS	5.47	5.91	5.91	6.22	6.77	6.77	8.98	9.96	9.96
L	23.94	25.24	26.02	28.39	30.08	32.05	33.66	36.38	38.74
LS	27.13	28.90	29.69	32.05	34.49	36.46	39.06	43.82	46.18
LB	8.58	9.88	10.67	13.03	14.72	16.69	18.31	21.02	23.39
LBS	11.77	13.54	14.33	16.69	19.13	21.10	23.70	28.46	30.83

reducer.ir

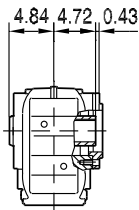


33 073 00 09

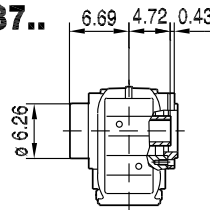
KAZ87..



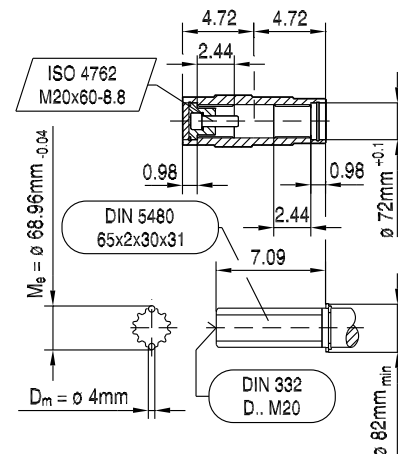
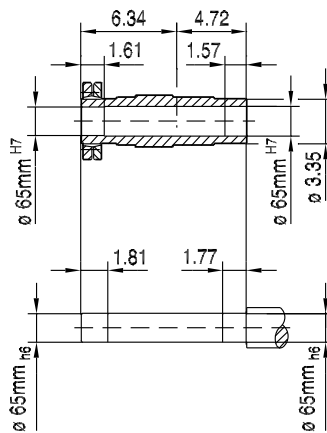
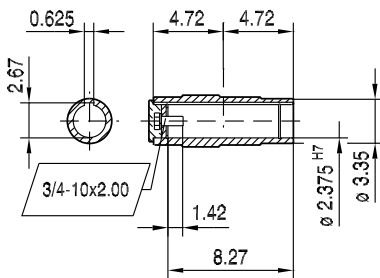
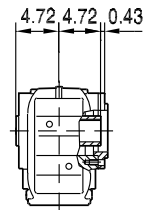
KAZ87..



KHZ87..

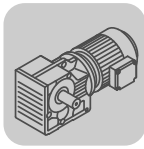


KVZ87..



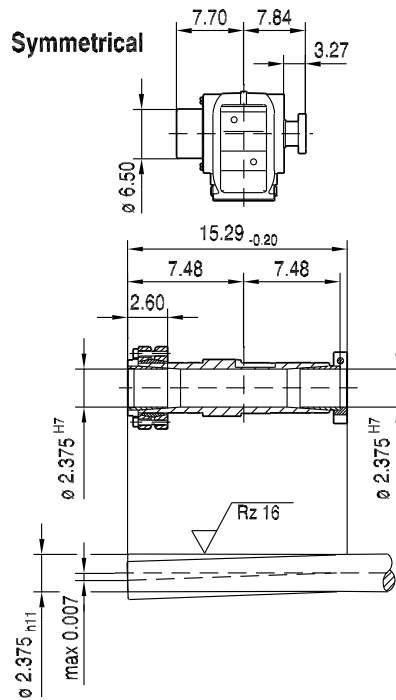
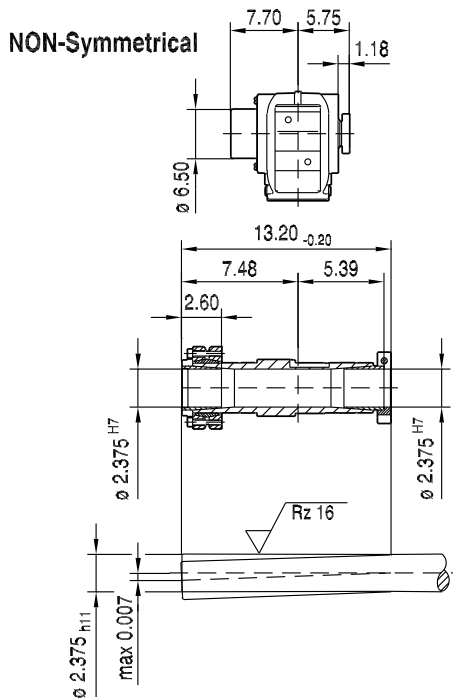
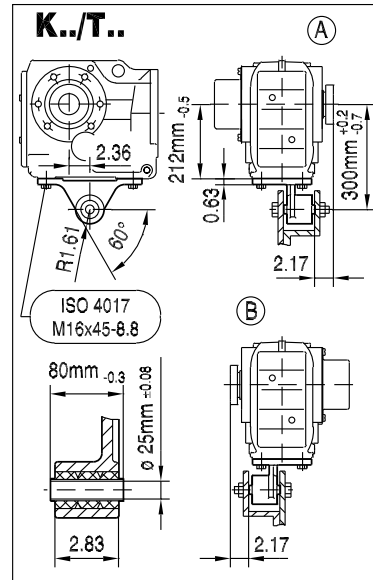
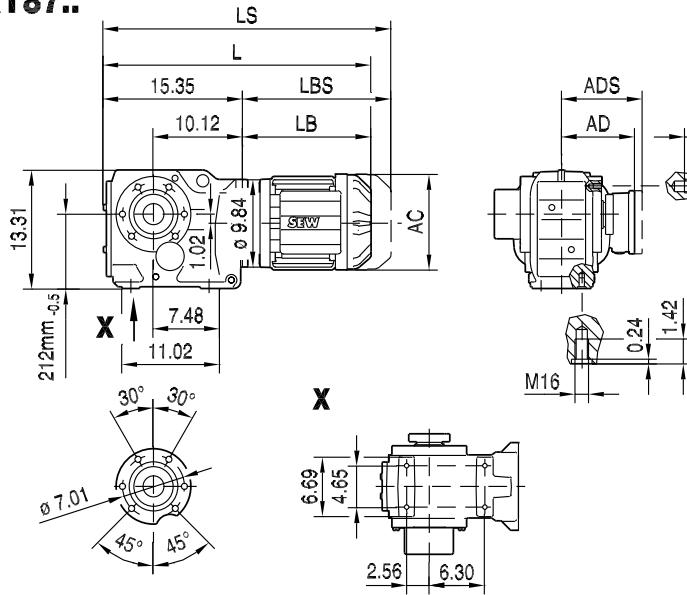
(→ 125)	DR80S	DR90M	DR90L	DR100L/LC	DR132S	DR132M/MC	DR160..	DR180S/M	DR180L/LC
AC	6.14	7.05	7.05	7.76	8.70	8.70	10.63	12.44	12.44
AD	5.04	5.51	5.51	6.18	6.69	6.69	8.98	9.96	9.96
ADS	5.47	5.91	5.91	6.22	6.77	6.77	8.98	9.96	9.96
L	23.94	25.24	26.02	28.39	30.08	32.05	33.66	36.38	38.74
LS	27.13	28.90	29.69	32.05	34.49	36.46	39.06	43.82	46.18
LB	8.58	9.88	10.67	13.03	14.72	16.69	18.31	21.02	23.39
LBS	11.77	13.54	14.33	16.69	19.13	21.10	23.70	28.46	30.83

reducer.ir



33 074 00 09

KT87..



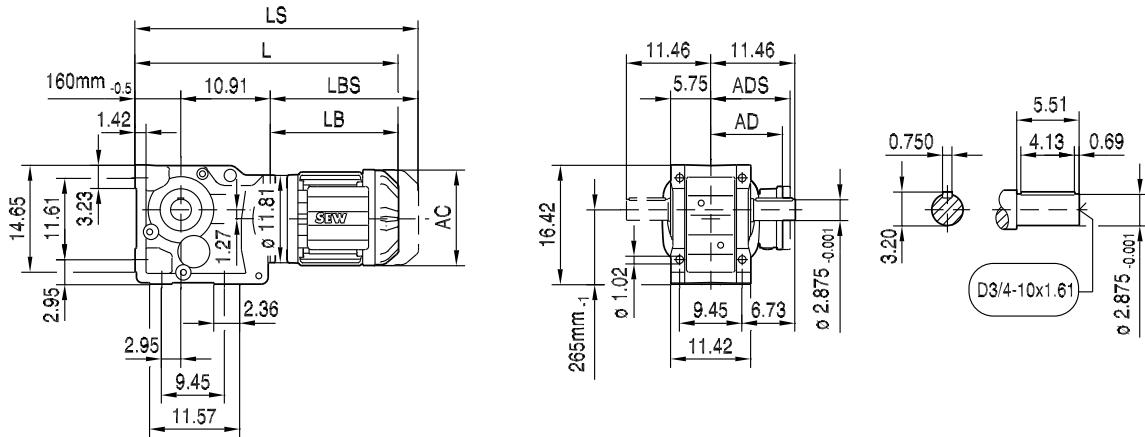
(→ 125)	DR80S	DR90M	DR90L	DR100L/LC	DR132S	DR132M/MC	DR160..	DR180S/M	DR180L/LC
AC	6.14	7.05	7.05	7.76	8.70	8.70	10.63	12.44	12.44
AD	5.04	5.51	5.51	6.18	6.69	6.69	8.98	9.96	9.96
ADS	5.47	5.91	5.91	6.22	6.77	6.77	8.98	9.96	9.96
L	23.94	25.24	26.02	28.39	30.08	32.05	33.66	36.38	38.74
LS	27.13	28.90	29.69	32.05	34.49	36.46	39.06	43.82	46.18
LB	8.58	9.88	10.67	13.03	14.72	16.69	18.31	21.02	23.39
LBS	11.77	13.54	14.33	16.69	19.13	21.10	23.70	28.46	30.83

reducer.ir

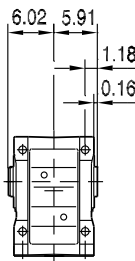


33 075 00 09

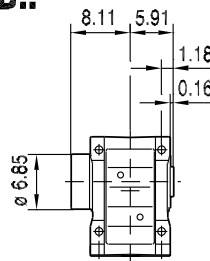
K97..



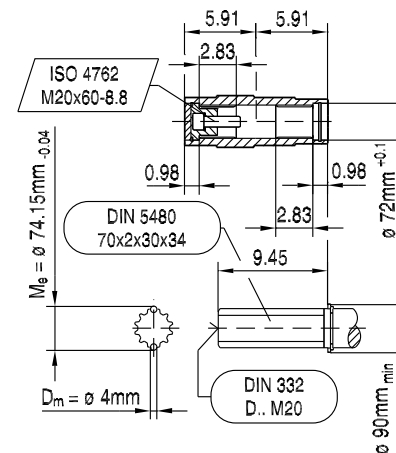
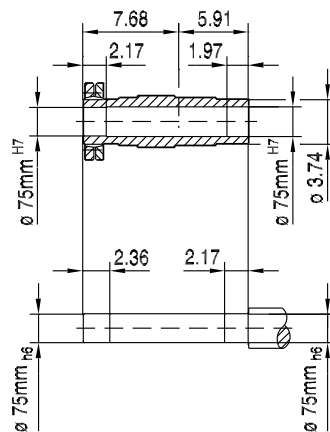
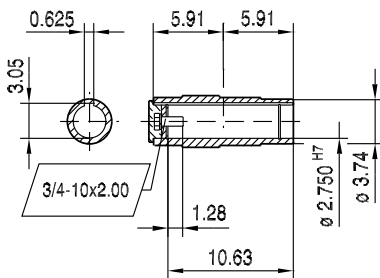
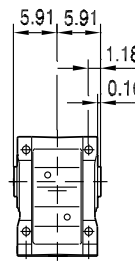
KA97B..



KH97B..

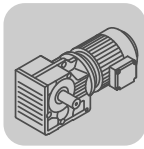


KV97B..



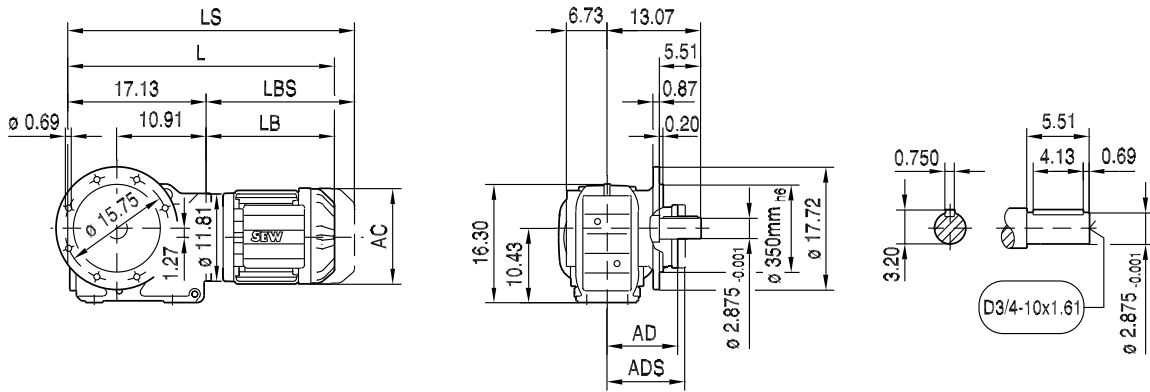
(→ 125)	DR90L	DR100L/LC	DR132S	DR132M/MC	DR160..	DR180S/M	DR180L/LC	DR200	DR225S	DR225M/MC
AC	7.05	7.76	8.70	8.70	10.63	12.44	12.44	15.51	15.51	15.51
AD	5.51	6.18	6.69	6.69	8.98	9.96	9.96	11.14	11.14	11.14
ADS	5.91	6.22	6.77	6.77	8.98	9.96	9.96	11.14	11.14	11.14
L	27.68	30.04	31.73	33.70	35.31	38.03	40.39	43.27	43.27	45.24
LS	31.34	33.70	36.14	38.11	40.71	45.47	47.83	51.34	51.34	53.31
LB	10.47	12.83	14.53	16.50	18.11	20.83	23.19	26.06	26.06	28.03
LBS	14.13	16.50	18.94	20.91	23.50	26.27	28.63	34.13	34.13	36.10

reducer.ir

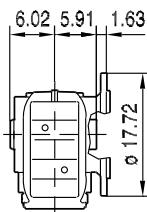


33 076 00 09

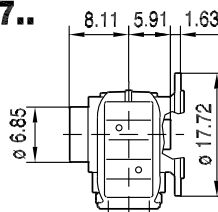
KF97..



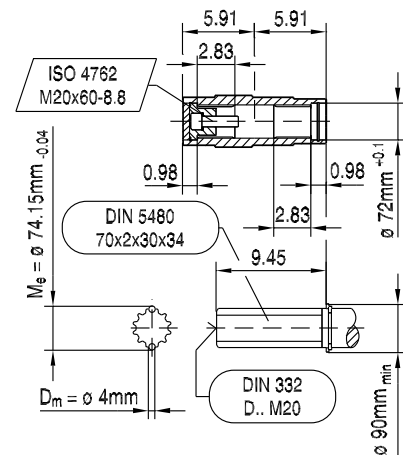
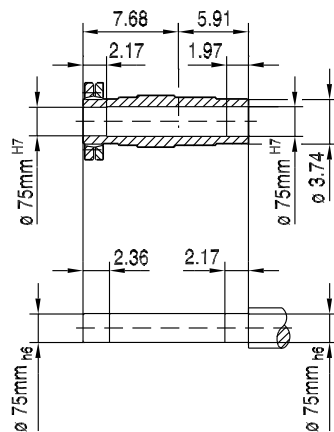
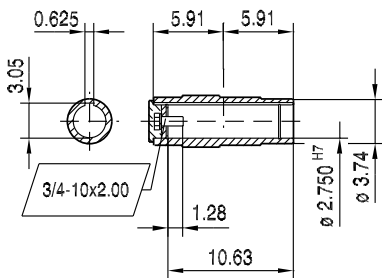
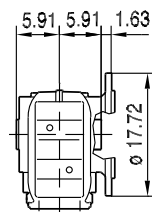
KAF97..



KHF97..

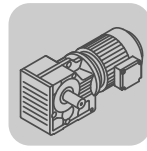


KVF97..



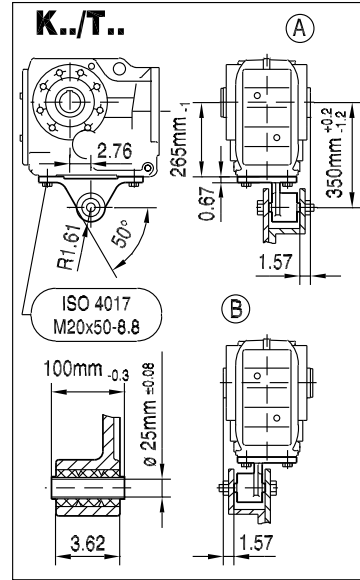
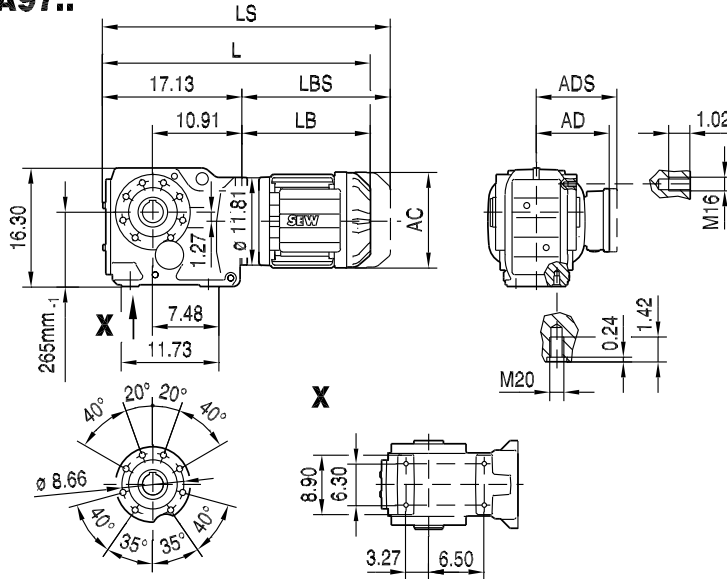
(→ 125)	DR90L	DR100L/LC	DR132S	DR132M/MC	DR160..	DR180S/M	DR180L/LC	DR200	DR225S	DR225M/MC
AC	7.05	7.76	8.70	8.70	10.63	12.44	12.44	15.51	15.51	15.51
AD	5.51	6.18	6.69	6.69	8.98	9.96	9.96	11.14	11.14	11.14
ADS	5.91	6.22	6.77	6.77	8.98	9.96	9.96	11.14	11.14	11.14
L	27.60	29.96	31.65	33.62	35.24	37.95	40.31	43.19	43.19	45.16
LS	31.26	33.62	36.06	38.03	40.63	45.39	47.76	51.26	51.26	53.23
LB	10.47	12.83	14.53	16.50	18.11	20.83	23.19	26.06	26.06	28.03
LBS	14.13	16.50	18.94	20.91	23.50	26.27	30.63	34.13	34.13	36.10

reducer.ir

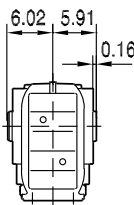


33 077 00 09

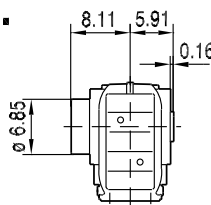
KA97..



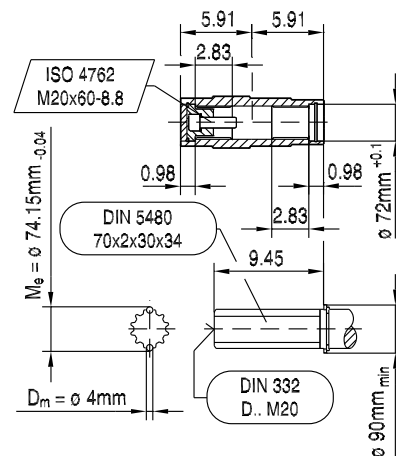
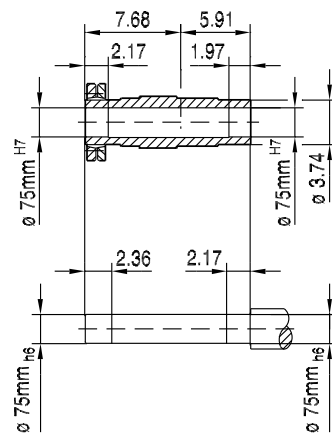
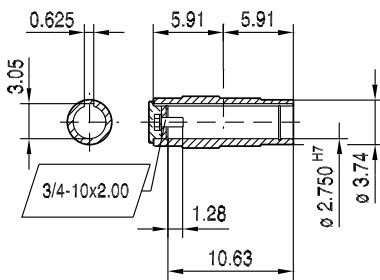
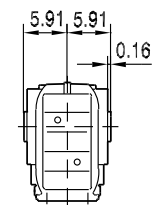
KA97..



KH97..

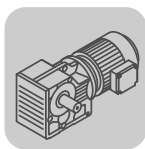


KV97..



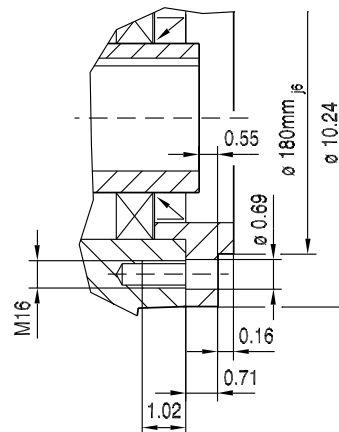
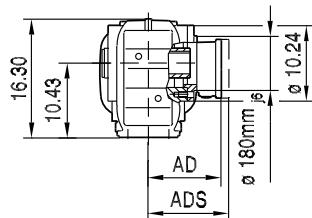
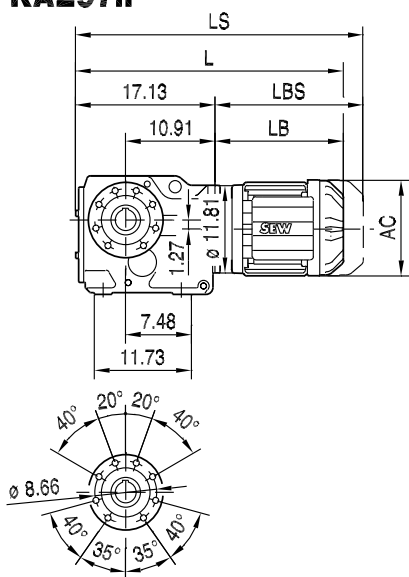
(→ 125)	DR90L	DR100L/LC	DR132S	DR132M/MC	DR160..	DR180S/M	DR180L/LC	DR200	DR225S	DR225M/MC
AC	7.05	7.76	8.70	8.70	10.63	12.44	12.44	15.51	15.51	15.51
AD	5.51	6.18	6.69	6.69	8.98	9.96	9.96	11.14	11.14	11.14
ADS	5.91	6.22	6.77	6.77	8.98	9.96	9.96	11.14	11.14	11.14
L	27.60	29.96	31.65	33.62	35.24	37.95	40.31	43.19	43.19	45.16
LS	31.26	33.62	36.06	38.03	40.63	45.39	47.76	51.26	51.26	53.23
LB	10.47	12.83	14.53	16.50	18.11	20.83	23.19	26.06	26.06	28.03
LBS	14.13	16.50	18.94	20.91	23.50	26.27	30.63	34.13	34.13	36.10

reducer.ir

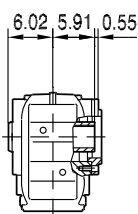


33 078 00 09

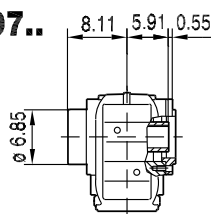
KAZ97..



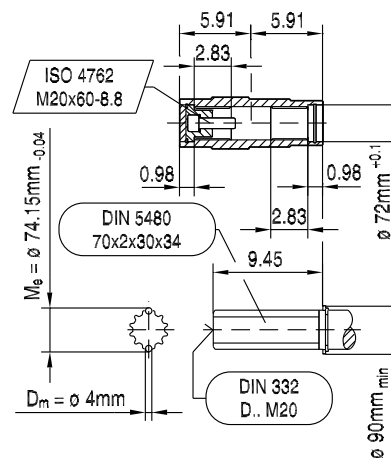
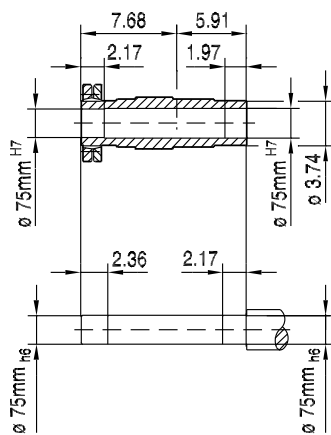
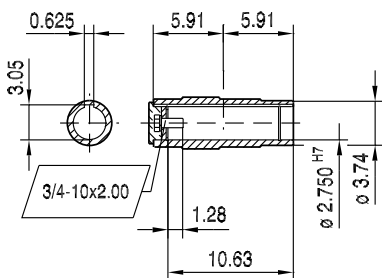
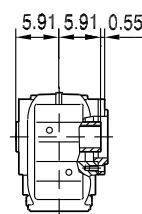
KAZ97..



KHZ97..



KVZ97..



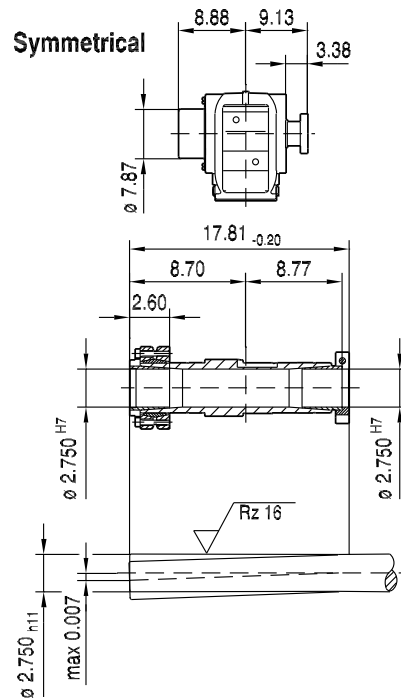
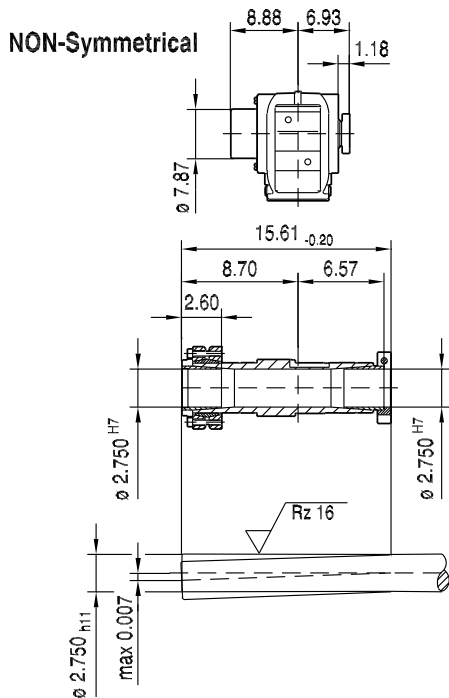
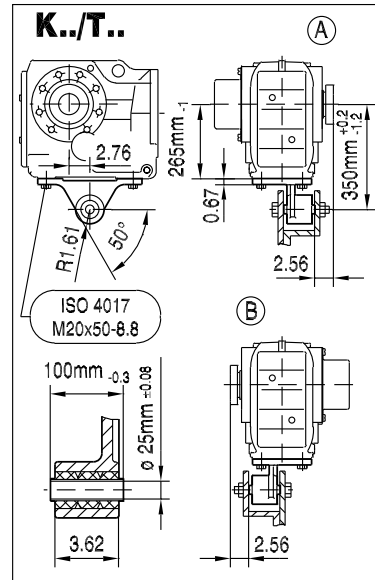
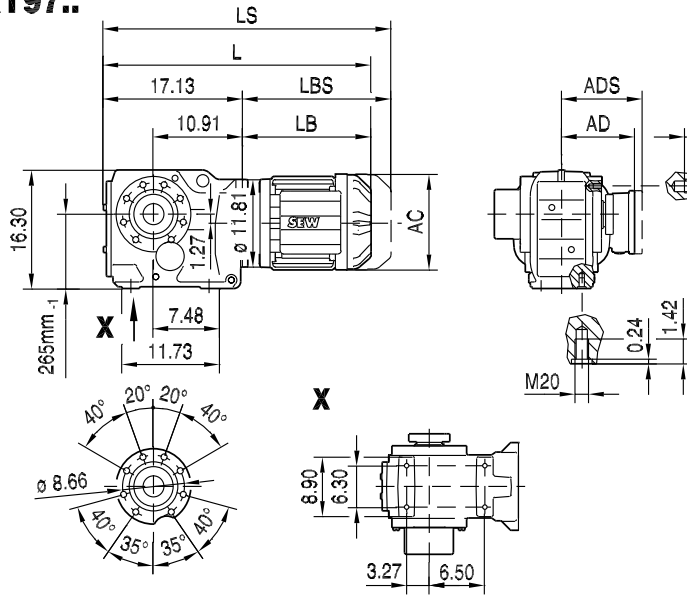
(→ 125)	DR90L	DR100L/LC	DR132S	DR132M/MC	DR160..	DR180S/M	DR180L/LC	DR200	DR225S	DR225M/MC
AC	7.05	7.76	8.70	8.70	10.63	12.44	12.44	15.51	15.51	15.51
AD	5.51	6.18	6.69	6.69	8.98	9.96	9.96	11.14	11.14	11.14
ADS	5.91	6.22	6.77	6.77	8.98	9.96	9.96	11.14	11.14	11.14
L	27.60	29.96	31.65	33.62	35.24	37.95	40.31	43.19	43.19	45.16
LS	31.26	33.62	36.06	38.03	40.63	45.39	47.76	51.26	51.26	53.23
LB	10.47	12.83	14.53	16.50	18.11	20.83	23.19	26.06	26.06	28.03
LBS	14.13	16.50	18.94	20.91	23.50	26.27	30.63	34.13	34.13	36.10

reducer.ir



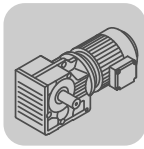
33 079 00 09

KT97..



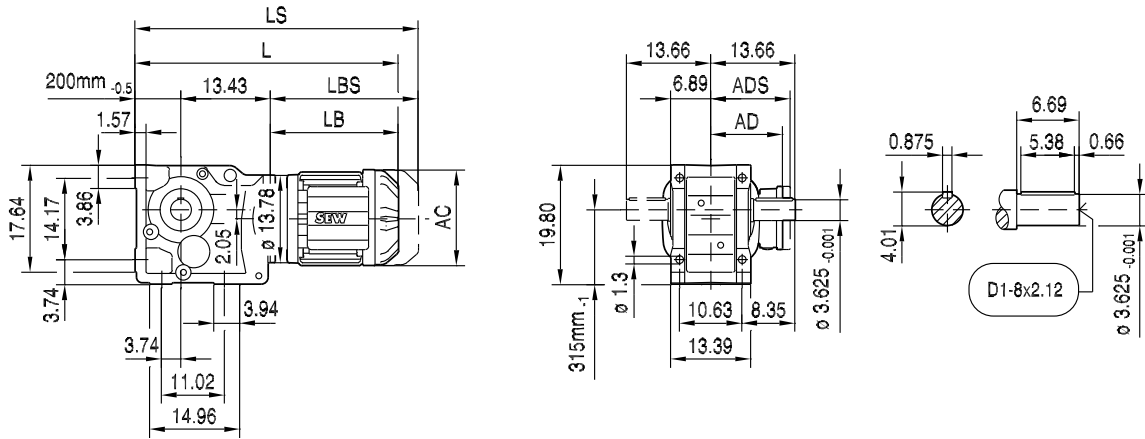
(→ 125)	DR90L	DR100L/LC	DR132S	DR132M/MC	DR160..	DR180S/M	DR180L/LC	DR200	DR225S	DR225M/MC
AC	7.05	7.76	8.70	8.70	10.63	12.44	12.44	15.51	15.51	15.51
AD	5.51	6.18	6.69	6.69	8.98	9.96	9.96	11.14	11.14	11.14
ADS	5.91	6.22	6.77	6.77	8.98	9.96	9.96	11.14	11.14	11.14
L	27.60	29.96	31.65	33.62	35.24	37.95	40.31	43.19	43.19	45.16
LS	31.26	33.62	36.06	38.03	40.63	45.39	47.76	51.26	51.26	53.23
LB	10.47	12.83	14.53	16.50	18.11	20.83	23.19	26.06	26.06	28.03
LBS	14.13	16.50	18.94	20.91	23.50	26.27	30.63	34.13	34.13	36.10

reducer.ir

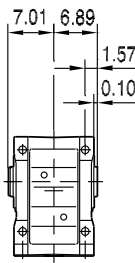


33 080 00 09

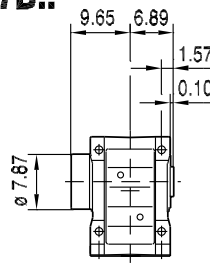
K107..



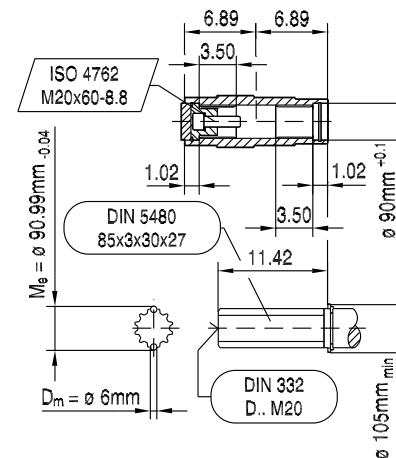
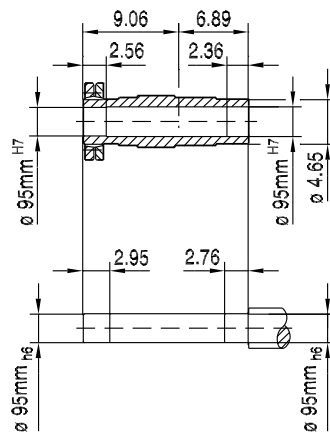
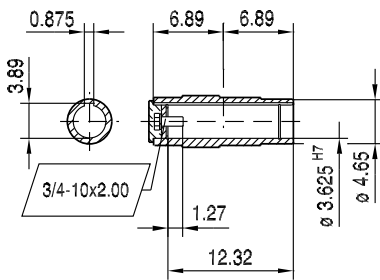
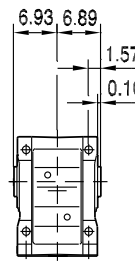
KA107B..



KH107B..



KV107B..



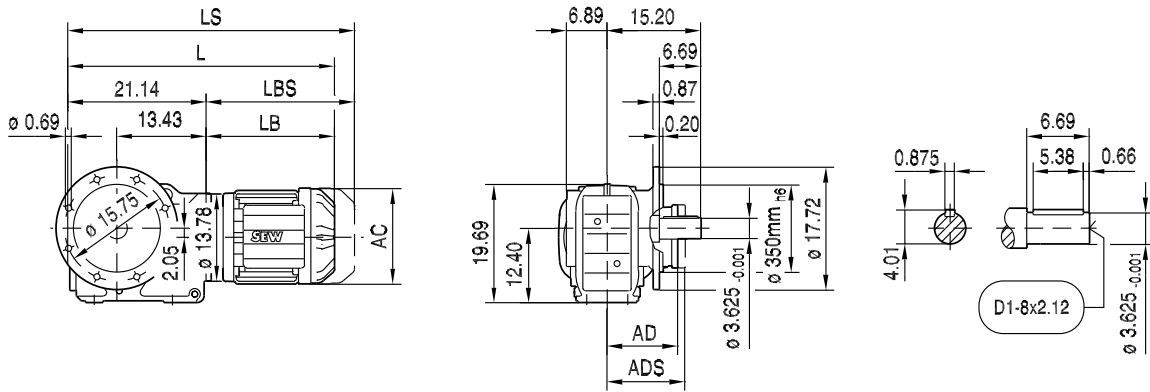
(→ 125)	DR100L/LC	DR132S	DR132M/MC	DR160..	DR180S/M	DR180L/LC	DR200	DR225S	DR225M/MC
AC	7.76	8.70	8.70	10.63	12.44	12.44	15.51	15.51	15.51
AD	6.18	6.69	6.69	8.98	9.96	9.96	11.14	11.14	11.14
ADS	6.22	6.77	6.77	8.98	9.96	9.96	11.14	11.14	11.14
L	33.90	35.59	37.56	39.17	41.89	44.25	47.13	47.13	49.09
LS	37.56	40.00	41.97	44.57	49.33	51.69	55.20	55.20	57.17
LB	12.60	14.29	16.26	17.87	20.59	22.95	25.83	25.83	27.80
LBS	16.26	18.70	20.67	23.27	26.03	30.39	33.90	33.90	35.87

reducer.ir

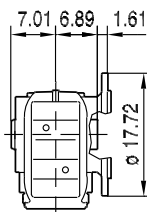


33 081 00 09

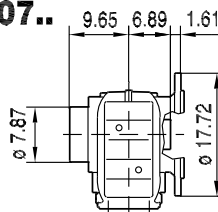
KF107..



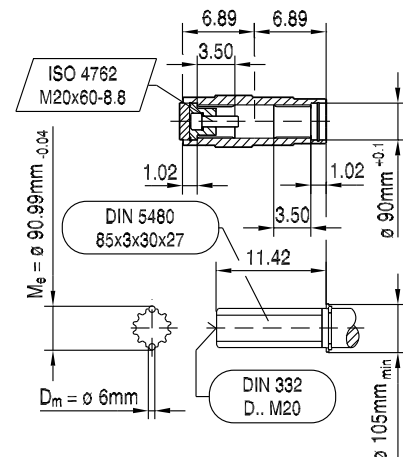
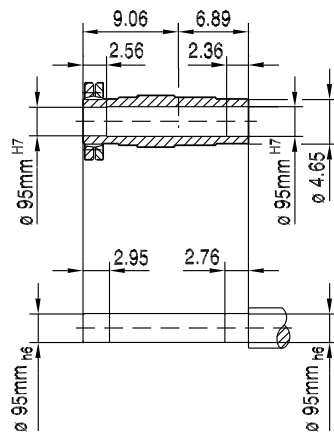
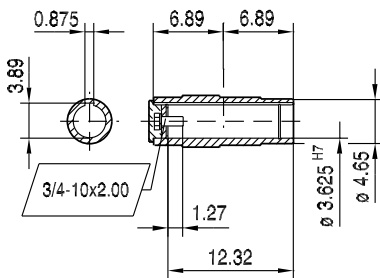
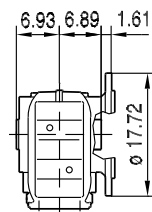
KAF107..



KHF107..

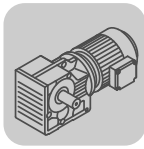


KVF107..



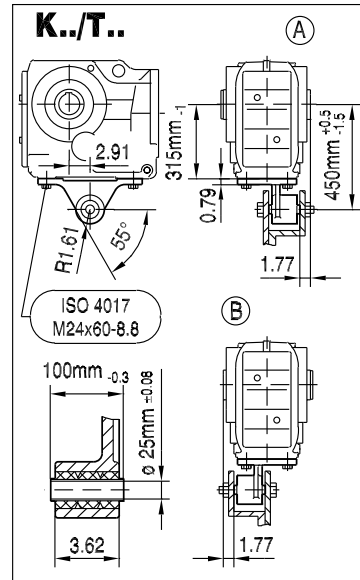
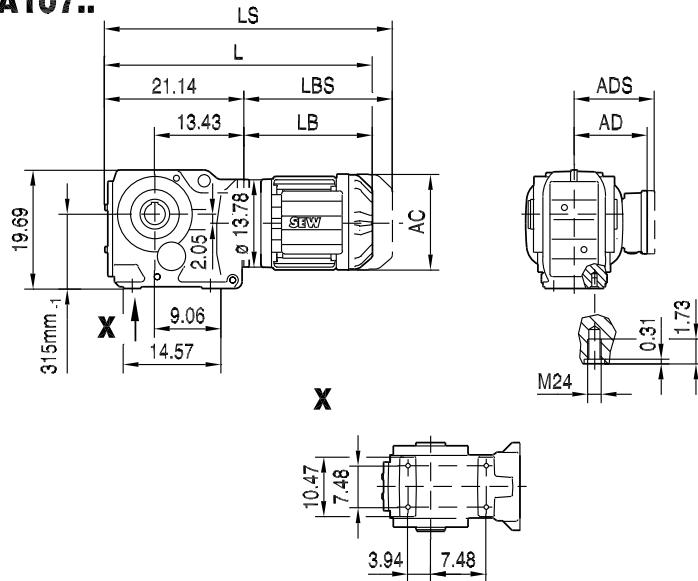
(→ 125)	DR100L/LC	DR132S	DR132M/MC	DR160..	DR180S/M	DR180L/LC	DR200	DR225S	DR225M/MC
AC	7.76	8.70	8.70	10.63	12.44	12.44	15.51	15.51	15.51
AD	6.18	6.69	6.69	8.98	9.96	9.96	11.14	11.14	11.14
ADS	6.22	6.77	6.77	8.98	9.96	9.96	11.14	11.14	11.14
L	33.74	35.43	37.40	39.02	41.73	44.09	46.97	46.97	48.94
LS	37.40	39.84	41.81	44.41	49.17	51.54	55.04	55.04	57.01
LB	12.60	14.29	16.26	17.87	20.59	22.95	25.83	25.83	27.80
LBS	16.26	18.70	20.67	23.27	26.03	30.39	33.90	33.90	35.87

reducer.ir

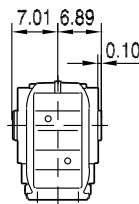


33 082 00 09

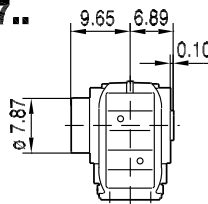
KA107..



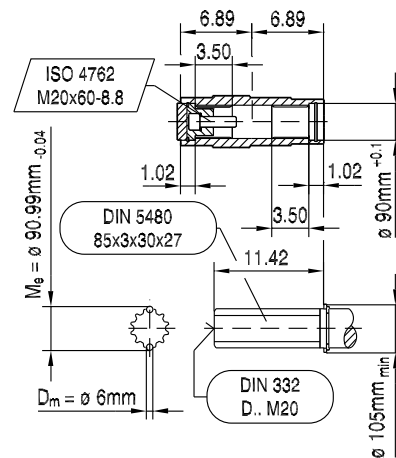
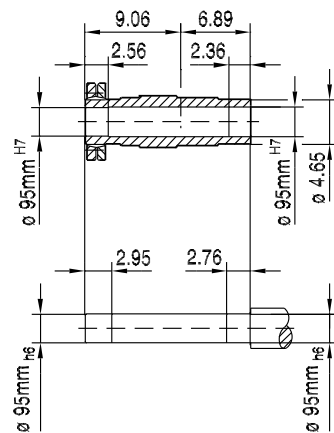
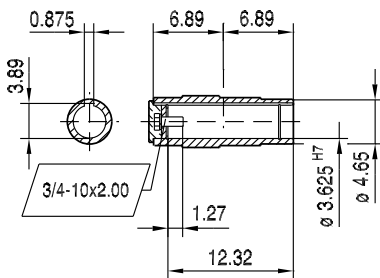
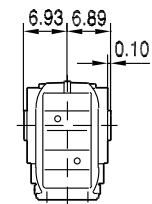
KA107..



KH107..



KV107..



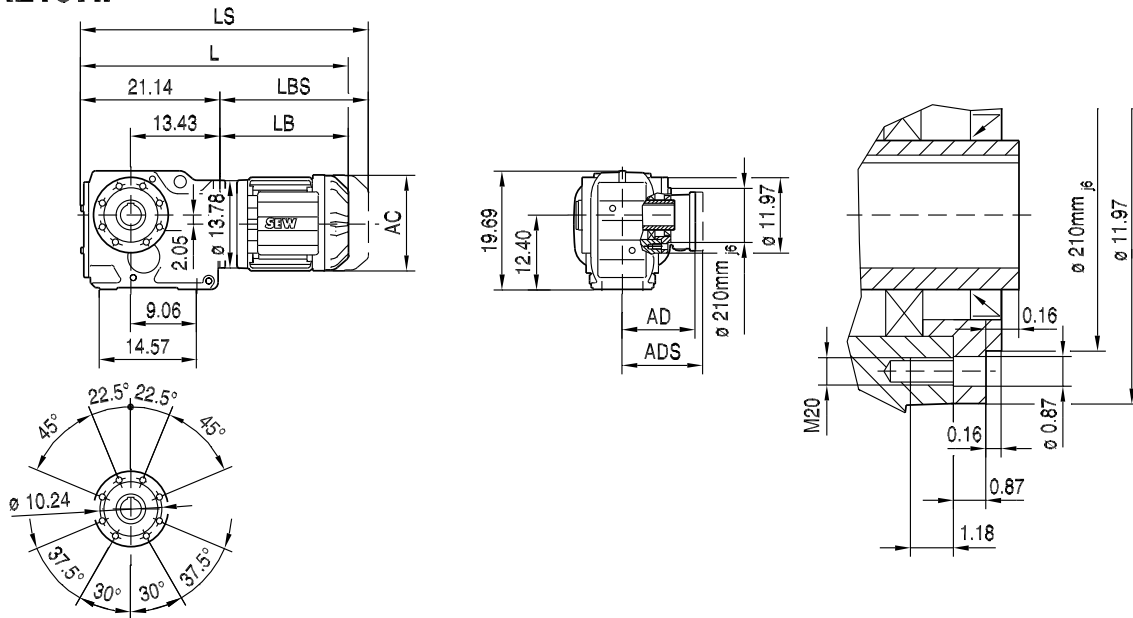
(→ 125)	DR100L/LC	DR132S	DR132M/MC	DR160..	DR180S/M	DR180L/LC	DR200	DR225S	DR225M/MC
AC	7.76	8.70	8.70	10.63	12.44	12.44	15.51	15.51	15.51
AD	6.18	6.69	6.69	8.98	9.96	9.96	11.14	11.14	11.14
ADS	6.22	6.77	6.77	8.98	9.96	9.96	11.14	11.14	11.14
L	33.74	35.43	37.40	39.02	41.73	44.09	46.97	46.97	48.94
LS	37.40	39.84	41.81	44.41	49.17	51.54	55.04	55.04	57.01
LB	12.60	14.29	16.26	17.87	20.59	22.95	25.83	25.83	27.80
LBS	16.26	18.70	20.67	23.27	26.03	30.39	33.90	33.90	35.87

reducer.ir

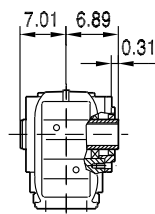


33 083 00 09

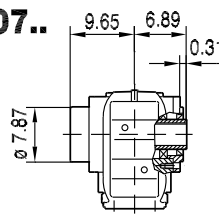
KAZ107..



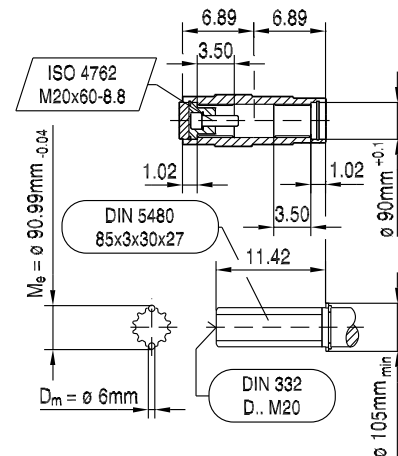
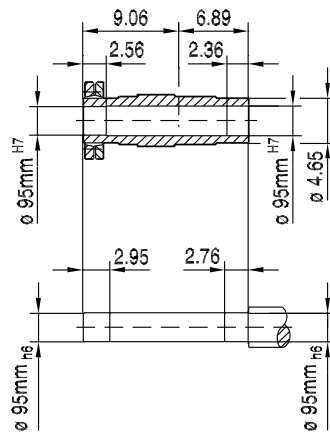
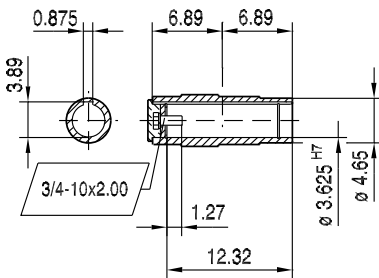
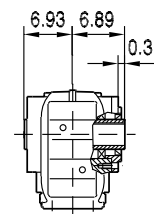
KAZ107..



KHZ107..

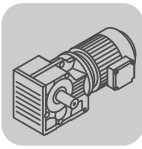


KVZ107..



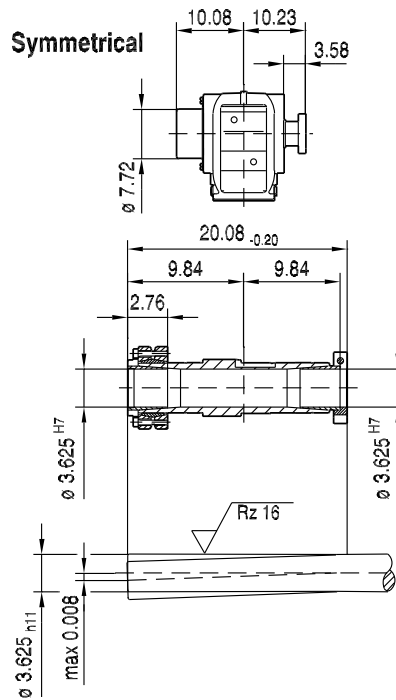
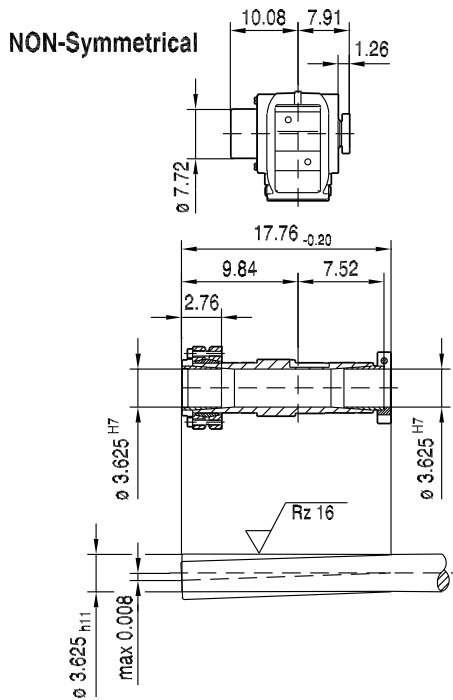
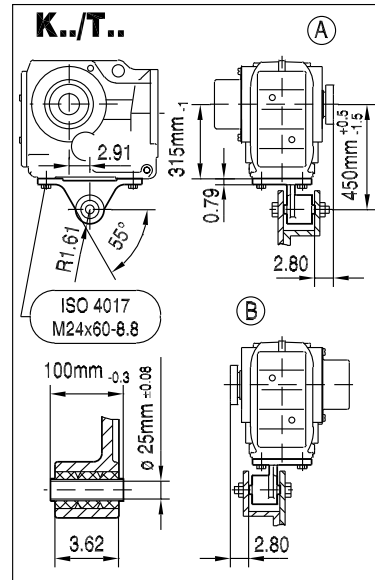
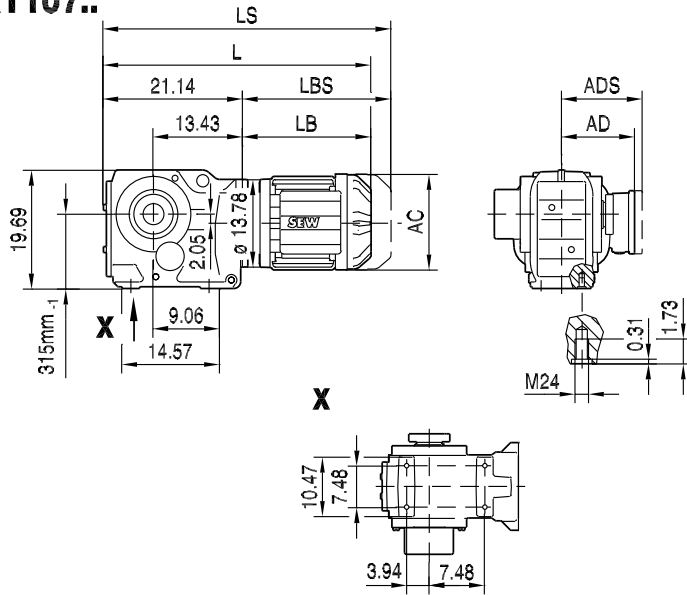
(→ 125)	DR100L/LC	DR132S	DR132M/MC	DR160..	DR180S/M	DR180L/LC	DR200	DR225S	DR225M/MC
AC	7.76	8.70	8.70	10.63	12.44	12.44	15.51	15.51	15.51
AD	6.18	6.69	6.69	8.98	9.96	9.96	11.14	11.14	11.14
ADS	6.22	6.77	6.77	8.98	9.96	9.96	11.14	11.14	11.14
L	33.74	35.43	37.40	39.02	41.73	44.09	46.97	46.97	48.94
LS	37.40	39.84	41.81	44.41	49.17	51.54	55.04	55.04	57.01
LB	12.60	14.29	16.26	17.87	20.59	22.95	25.83	25.83	27.80
LBS	16.26	18.70	20.67	23.27	26.03	30.39	33.90	33.90	35.87

reducer.ir



33 084 00 09

KT107..



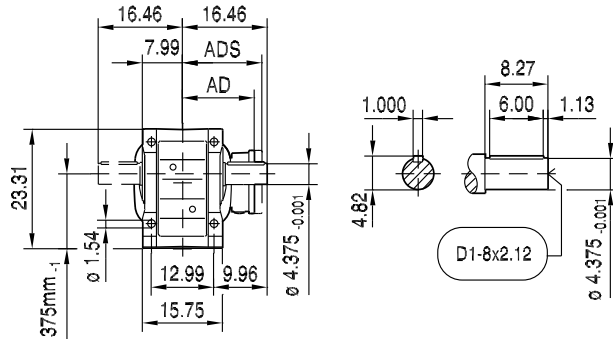
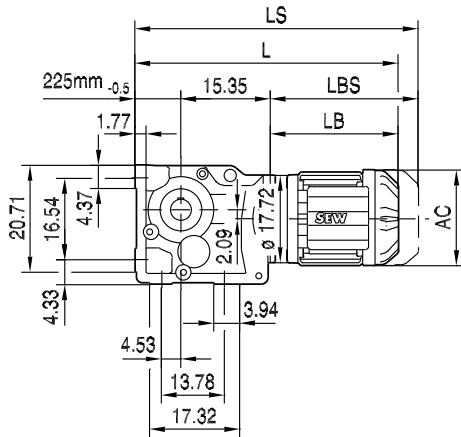
(→ 125)	DR100L/LC	DR132S	DR132M/MC	DR160..	DR180S/M	DR180L/LC	DR200	DR225S	DR225M/MC
AC	7.76	8.70	8.70	10.63	12.44	12.44	15.51	15.51	15.51
AD	6.18	6.69	6.69	8.98	9.96	9.96	11.14	11.14	11.14
ADS	6.22	6.77	6.77	8.98	9.96	9.96	11.14	11.14	11.14
L	33.74	35.43	37.40	39.02	41.73	44.09	46.97	46.97	48.94
LS	37.40	39.84	41.81	44.41	49.17	51.54	55.04	55.04	57.01
LB	12.60	14.29	16.26	17.87	20.59	22.95	25.83	25.83	27.80
LBS	16.26	18.70	20.67	23.27	26.03	30.39	33.90	33.90	35.87

reducer.ir

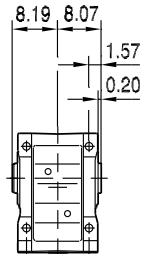


33 085 00 09

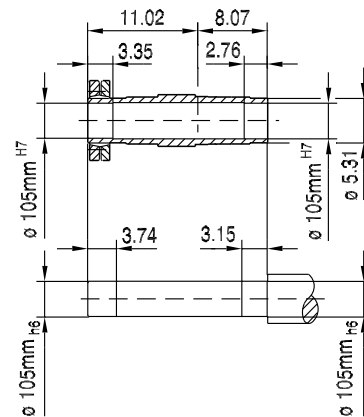
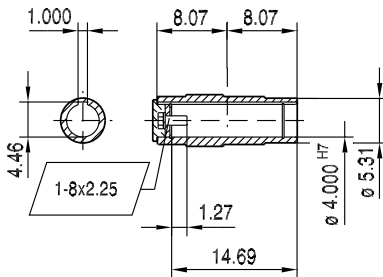
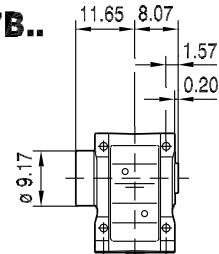
K127..



KA127B..

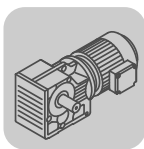


KH127B..



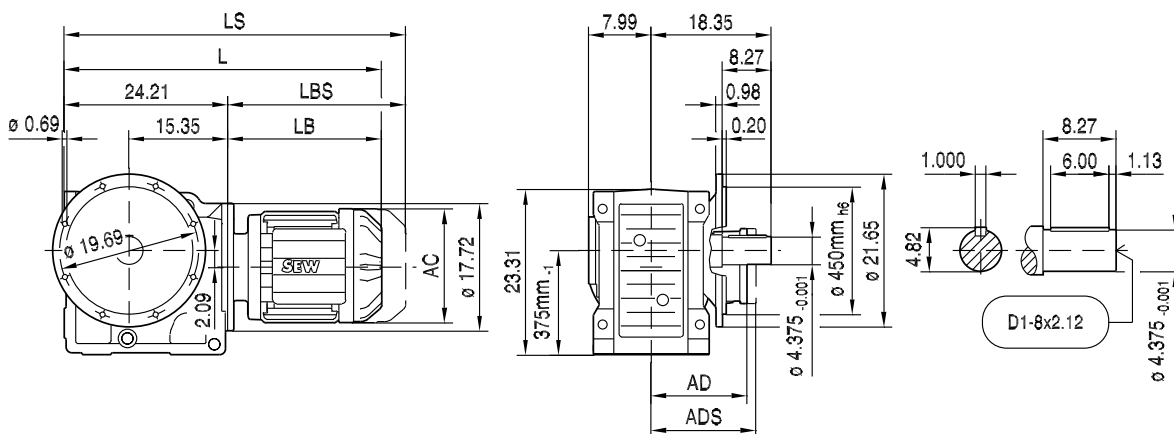
(→ 125)	DR132M/MC	DR160..	DR180S/M	DR180L/LC	DR200	DR225S	DR225M/MC	DVE250M	DVE280..
AC	8.70	10.63	12.44	12.44	15.51	15.51	15.51	20.08	20.08
AD	6.69	8.98	9.96	9.96	11.14	11.14	11.14	15.63	15.63
ADS	6.77	8.98	9.96	9.96	11.14	11.14	11.14	15.63	15.63
L	39.88	41.50	44.21	46.57	49.45	49.45	51.42	54.92	54.92
LS	44.29	46.89	51.65	54.02	57.52	57.52	59.49	62.20	62.20
LB	15.67	17.28	20.00	22.36	25.24	25.24	27.20	30.71	30.71
LBS	20.08	22.68	27.44	29.80	35.81	33.37	35.28	37.99	37.99

reducer.ir

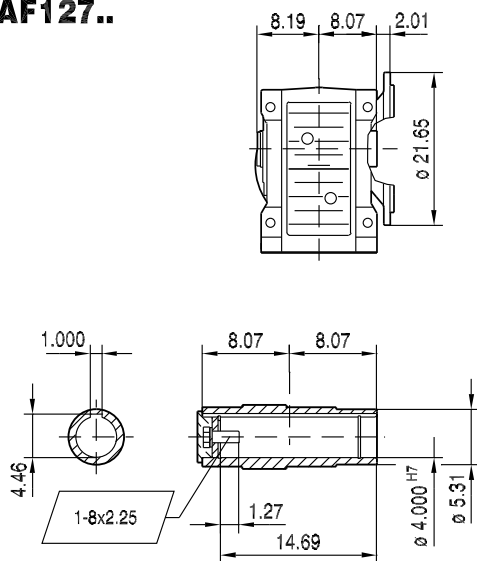


33 086 00 09

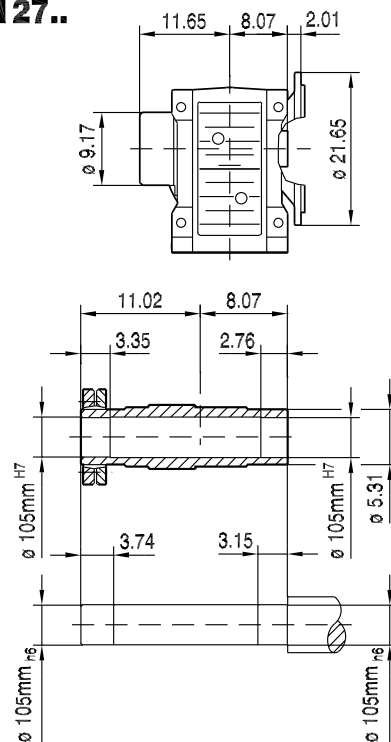
KF127..



KAF127..



KHF127..



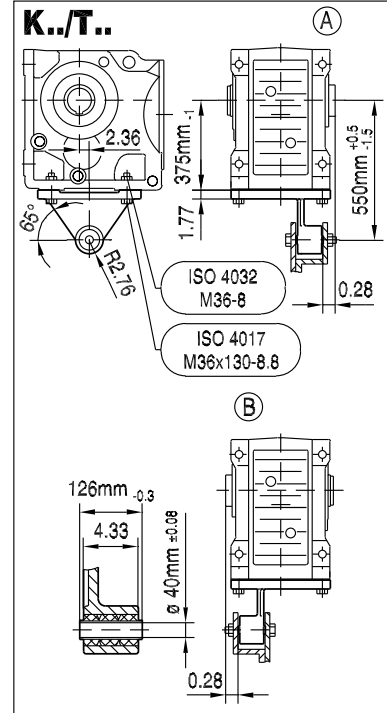
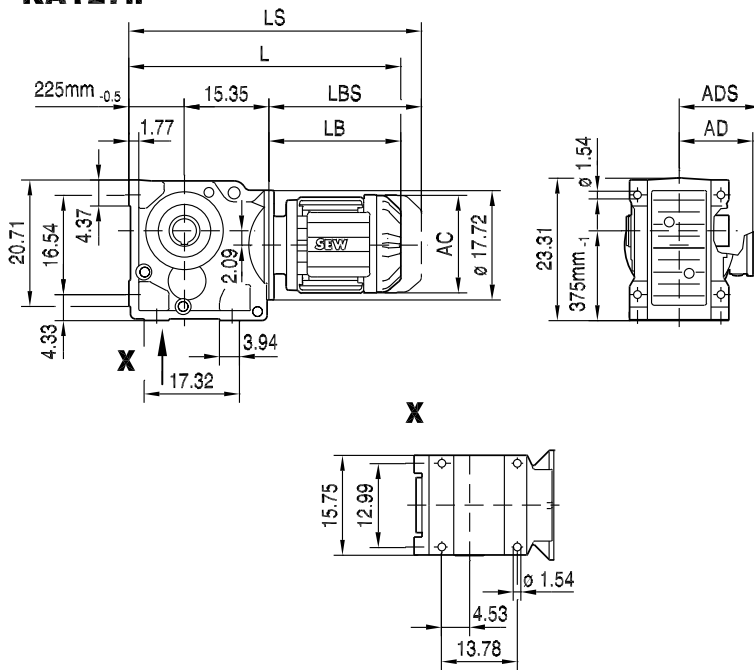
(→ 125)	DR132M/MC	DR160..	DR180S/M	DR180L/LC	DR200	DR225S	DR225M/MC	DVE250M	DVE280..
AC	8.70	10.63	12.44	12.44	15.51	15.51	15.51	20.08	20.08
AD	6.69	8.98	9.96	9.96	11.14	11.14	11.14	15.63	15.63
ADS	6.77	8.98	9.96	9.96	11.14	11.14	11.14	15.63	15.63
L	39.88	41.50	44.21	46.57	49.45	49.45	51.42	54.92	54.92
LS	44.29	46.89	51.65	54.02	57.52	57.52	59.49	62.20	62.20
LB	15.67	17.28	20.00	22.36	25.24	25.24	27.20	30.71	30.71
LBS	20.08	22.68	27.44	29.80	35.81	33.37	35.28	37.99	37.99

reducer.ir

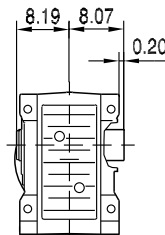


33 087 00 09

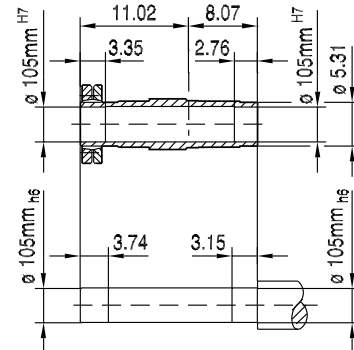
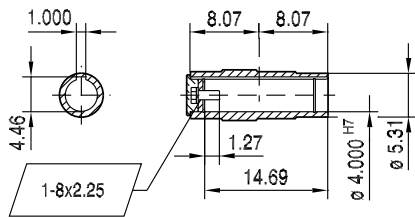
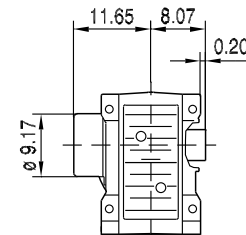
KA127..



KA127..

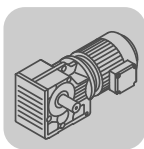


KH127..



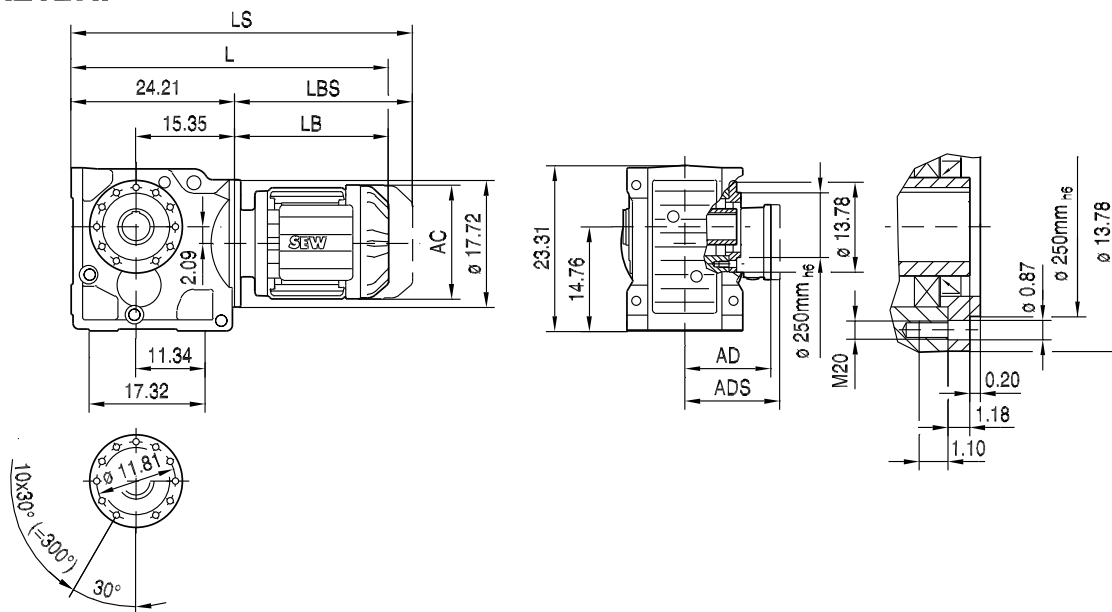
(→ 125)	DR132M/MC	DR160..	DR180S/M	DR180L/LC	DR200	DR225S	DR225M/MC	DVE250M	DVE280..
AC	8.70	10.63	12.44	12.44	15.51	15.51	15.51	20.08	20.08
AD	6.69	8.98	9.96	9.96	11.14	11.14	11.14	15.63	15.63
ADS	6.77	8.98	9.96	9.96	11.14	11.14	11.14	15.63	15.63
L	39.88	41.50	44.21	46.57	49.45	49.45	51.42	54.92	54.92
LS	44.29	46.89	51.65	54.02	57.52	57.52	59.49	62.20	62.20
LB	15.67	17.28	20.00	22.36	25.24	25.24	27.20	30.71	30.71
LBS	20.08	22.68	27.44	29.80	35.81	33.37	35.28	37.99	37.99

reducer.ir

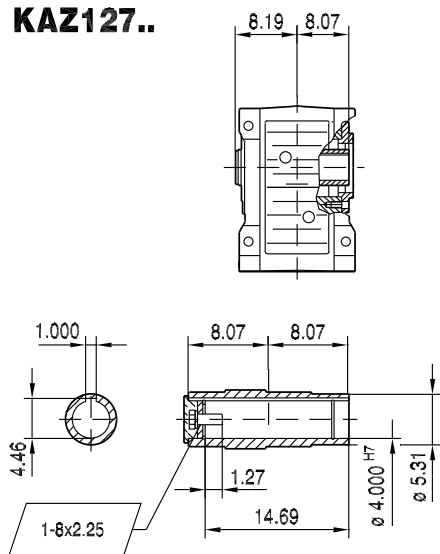


33 088 00 09

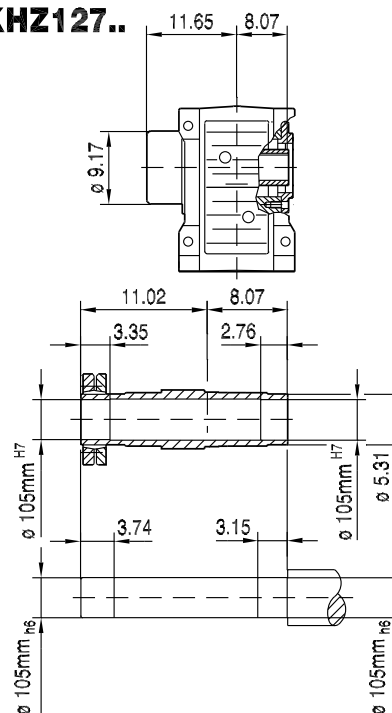
KAZ127..



KAZ127..



KHZ127..



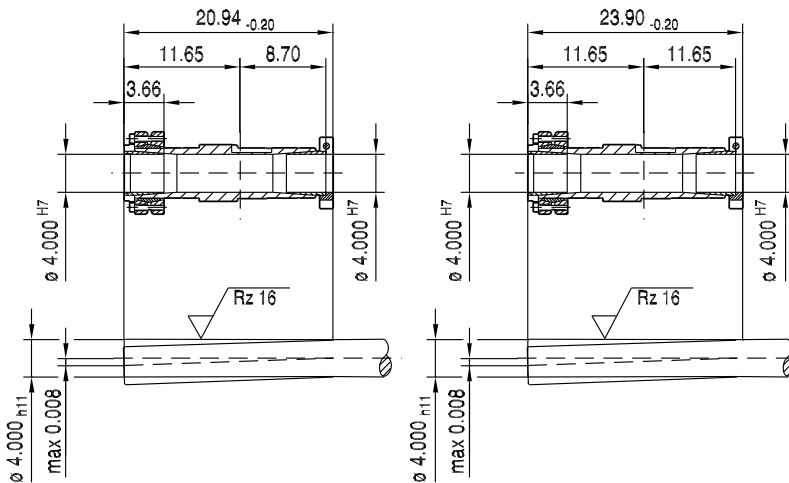
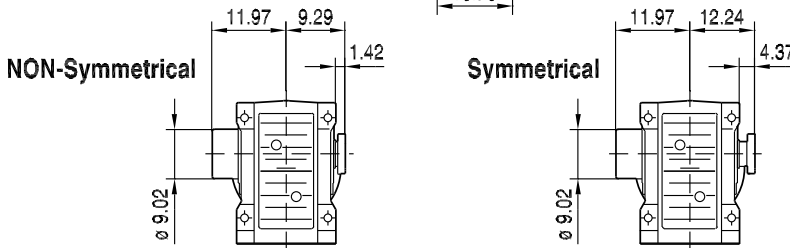
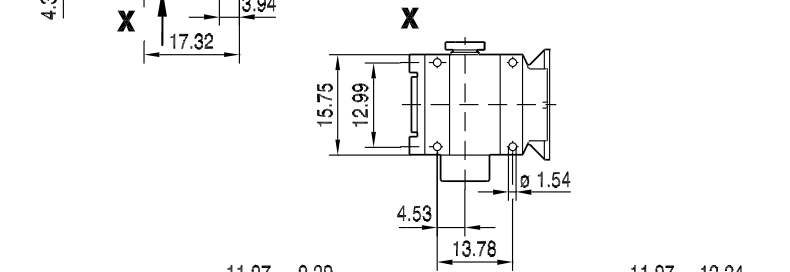
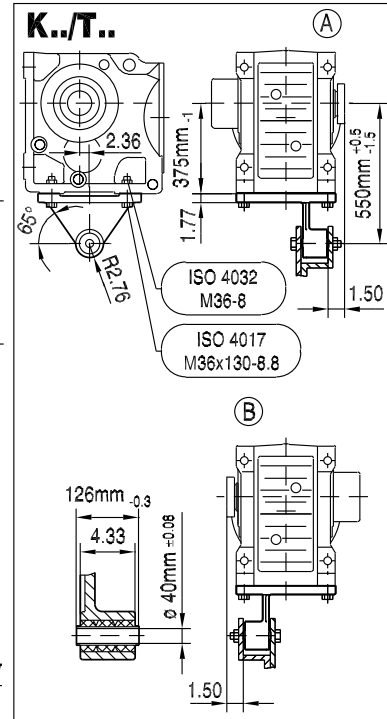
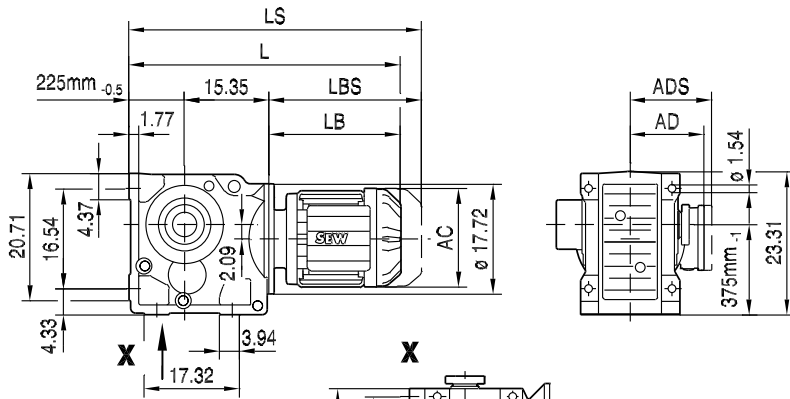
(→ 125)	DR132M/MC	DR160..	DR180S/M	DR180L/LC	DR200	DR225S	DR225M/MC	DVE250M	DVE280..
AC	8.70	10.63	12.44	12.44	15.51	15.51	15.51	20.08	20.08
AD	6.69	8.98	9.96	9.96	11.14	11.14	11.14	15.63	15.63
ADS	6.77	8.98	9.96	9.96	11.14	11.14	11.14	15.63	15.63
L	39.88	41.50	44.21	46.57	49.45	49.45	51.42	54.92	54.92
LS	44.29	46.89	51.65	54.02	57.52	57.52	59.49	62.20	62.20
LB	15.67	17.28	20.00	22.36	25.24	25.24	27.20	30.71	30.71
LBS	20.08	22.68	27.44	29.80	35.81	33.37	35.28	37.99	37.99

reducer.ir



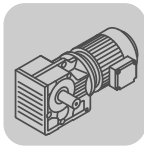
33 089 00 09

KT127..



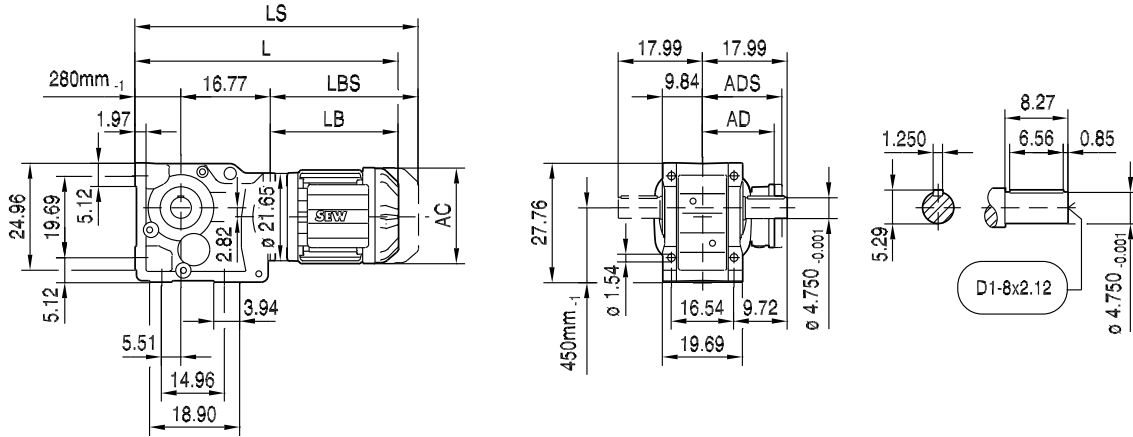
(→ 125)	DR132M/MC	DR160..	DR180S/M	DR180L/LC	DR200	DR225S	DR225M/MC	DVE250M	DVE280..
AC	8.70	10.63	12.44	12.44	15.51	15.51	15.51	20.08	20.08
AD	6.69	8.98	9.96	9.96	11.14	11.14	11.14	15.63	15.63
ADS	6.77	8.98	9.96	9.96	11.14	11.14	11.14	15.63	15.63
L	39.88	41.50	44.21	46.57	49.45	49.45	51.42	54.92	54.92
LS	44.29	46.89	51.65	54.02	57.52	57.52	59.49	62.20	62.20
LB	15.67	17.28	20.00	22.36	25.24	25.24	27.20	30.71	30.71
LBS	20.08	22.68	27.44	29.80	35.81	33.37	35.28	37.99	37.99

reducer.ir

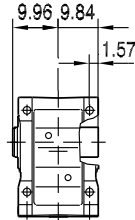


33 090 00 09

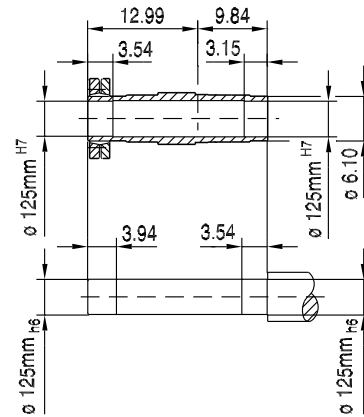
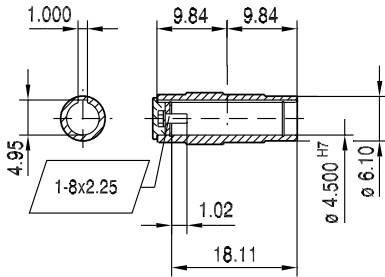
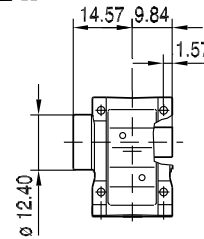
K157..



KA157B..

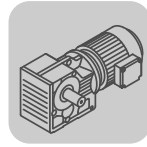


KH157B..



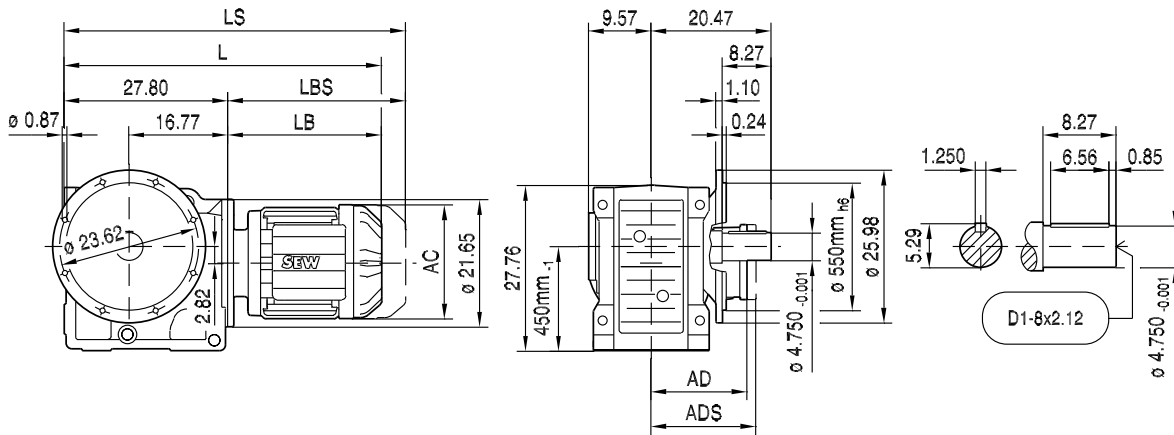
(→ 125)	DR160..	DR180S/M	DR180L/LC	DR200	DR225S	DR225M/MC	DVE250M	DVE280..	DR315K/S	DR315M/L
AC	10.63	12.44	12.44	15.51	15.51	15.51	20.08	20.08	24.57	24.57
AD	8.98	9.96	9.96	11.14	11.14	11.14	15.63	15.63	19.92	20.51
ADS	8.98	9.96	9.96	11.14	11.14	11.14	15.63	15.63	19.92	20.51
L	44.76	47.48	49.84	52.72	52.72	54.69	58.15	58.15	64.84	69.96
LS	50.16	54.92	57.28	60.79	60.79	62.76	65.43	65.43	74.72	79.84
LB	16.97	19.69	22.05	24.92	24.92	26.89	30.35	30.35	37.05	42.17
LBS	22.36	27.13	29.49	32.99	32.99	34.96	37.64	37.64	46.93	52.05

reducer.ir

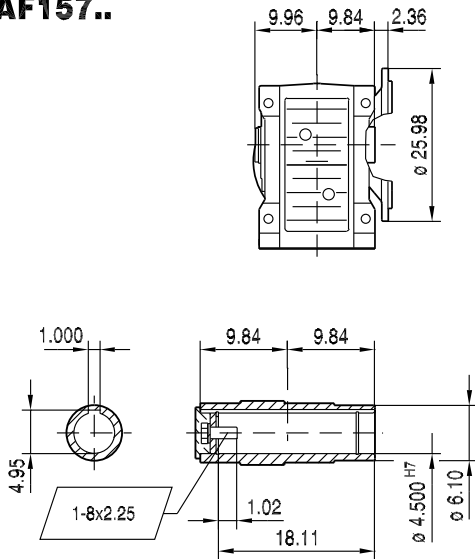


33 091 00 09

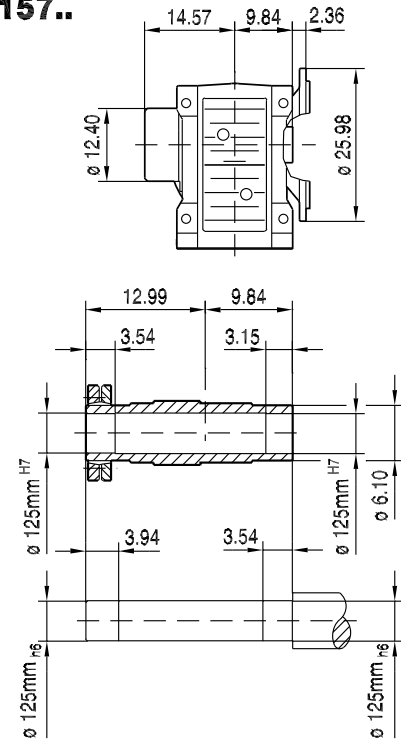
KF157..



KAF157..



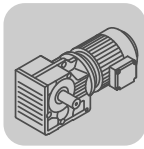
KHF157..



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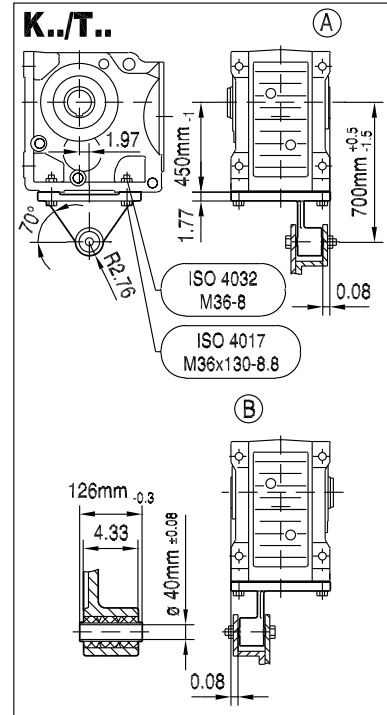
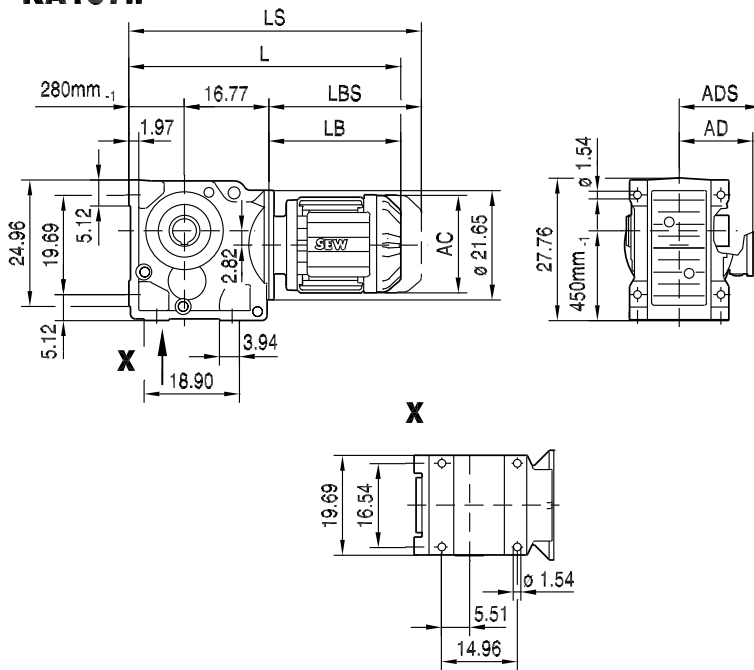
(→ 125)	DR160..	DR180S/M	DR180L/LC	DR200	DR225S	DR225M/MC	DVE250M	DVE280..	DR315K/S	DR315M/L
AC	10.63	12.44	12.44	15.51	15.51	15.51	20.08	20.08	24.57	24.57
AD	8.98	9.96	9.96	11.14	11.14	11.14	15.63	15.63	19.92	20.51
ADS	8.98	9.96	9.96	11.14	11.14	11.14	15.63	15.63	19.92	20.51
L	44.76	47.48	49.84	52.72	52.72	54.69	58.15	58.15	64.84	69.96
LS	50.16	54.92	57.28	60.79	60.79	62.76	65.43	65.43	74.72	79.84
LB	16.97	19.69	22.05	24.92	24.92	26.89	30.35	30.35	37.05	42.17
LBS	22.36	27.13	29.49	32.99	32.99	34.96	37.64	37.64	46.93	52.05

reducer.ir

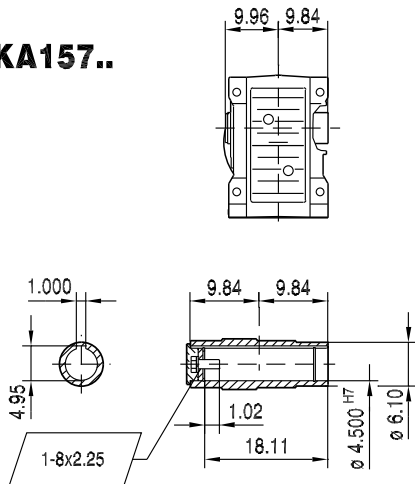


33 092 00 09

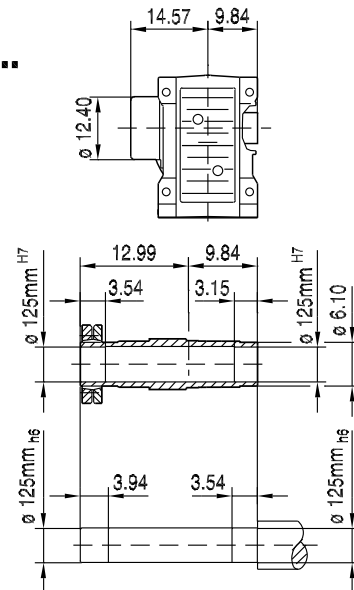
KA157..



KA157..



KH157..



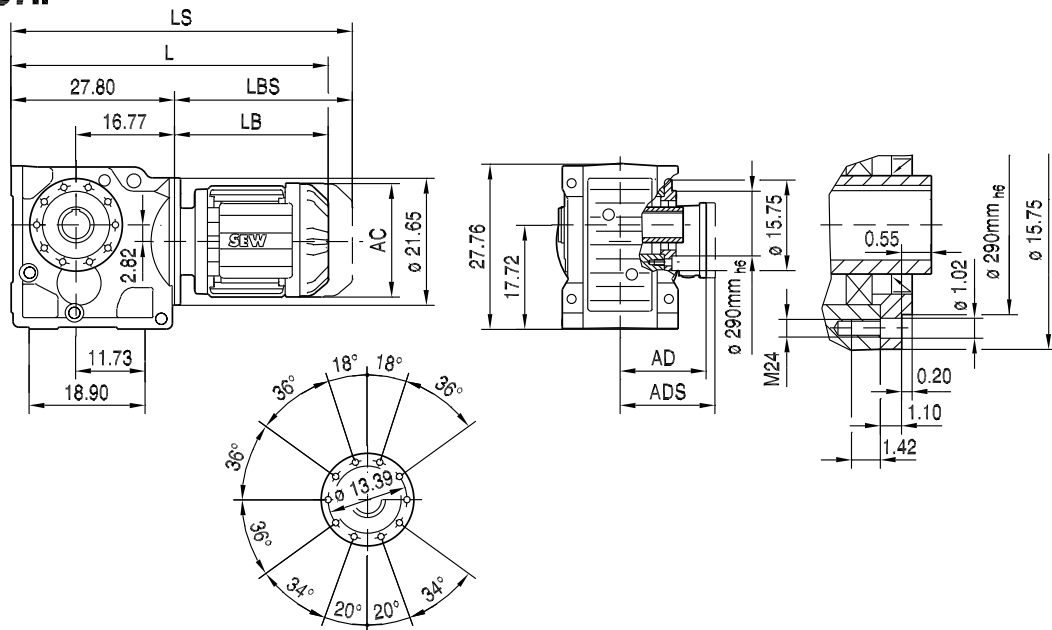
(→ 125)	DR160..	DR180S/M	DR180L/LC	DR200	DR225S	DR225M/MC	DVE250M	DVE280..	DR315K/S	DR315M/L
AC	10.63	12.44	12.44	15.51	15.51	15.51	20.08	20.08	24.57	24.57
AD	8.98	9.96	9.96	11.14	11.14	11.14	15.63	15.63	19.92	20.51
ADS	8.98	9.96	9.96	11.14	11.14	11.14	15.63	15.63	19.92	20.51
L	44.76	47.48	49.84	52.72	52.72	54.69	58.15	58.15	64.84	69.96
LS	50.16	54.92	57.28	60.79	60.79	62.76	65.43	65.43	74.72	79.84
LB	16.97	19.69	22.05	24.92	24.92	26.89	30.35	30.35	37.05	42.17
LBS	22.36	27.13	29.49	32.99	32.99	34.96	37.64	37.64	46.93	52.05

reducer.ir

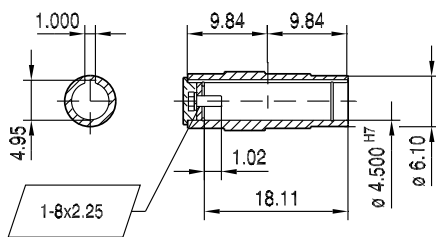
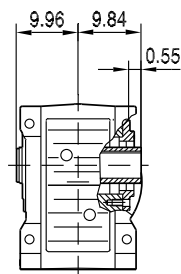


33 093 00 09

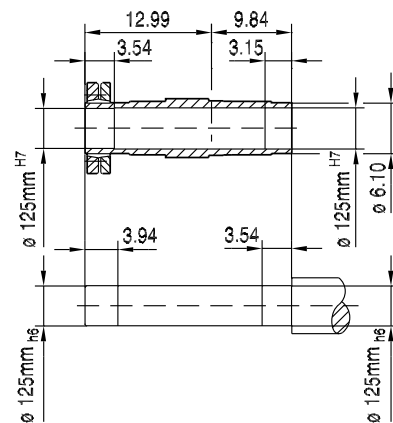
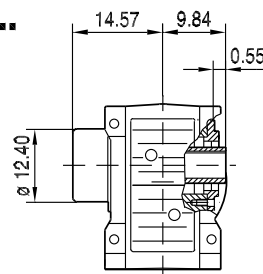
KAZ157..



KAZ157..



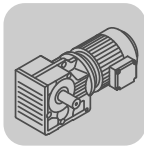
KHZ157..



11

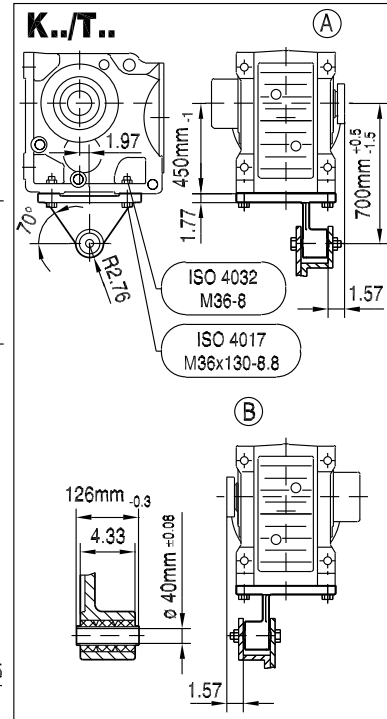
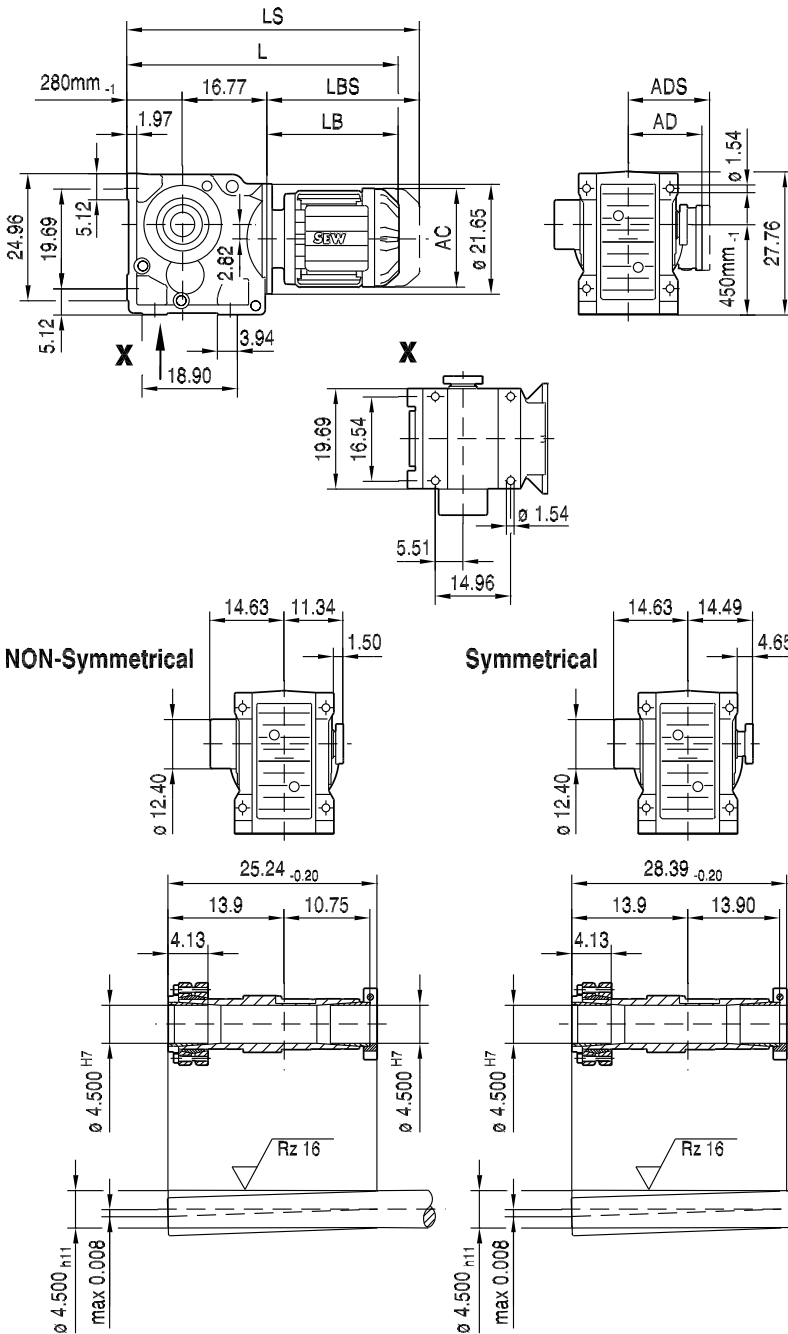
(→ 125)	DR160..	DR180S/M	DR180L/LC	DR200	DR225S	DR225M/MC	DVE250M	DVE280..	DR315K/S	DR315M/L
AC	10.63	12.44	12.44	15.51	15.51	15.51	20.08	20.08	24.57	24.57
AD	8.98	9.96	9.96	11.14	11.14	11.14	15.63	15.63	19.92	20.51
ADS	8.98	9.96	9.96	11.14	11.14	11.14	15.63	15.63	19.92	20.51
L	44.76	47.48	49.84	52.72	52.72	54.69	58.15	58.15	64.84	69.96
LS	50.16	54.92	57.28	60.79	60.79	62.76	65.43	65.43	74.72	79.84
LB	16.97	19.69	22.05	24.92	24.92	26.89	30.35	30.35	37.05	42.17
LBS	22.36	27.13	29.49	32.99	32.99	34.96	37.64	37.64	46.93	52.05

reducer.ir



33 094 00 09

KT157..



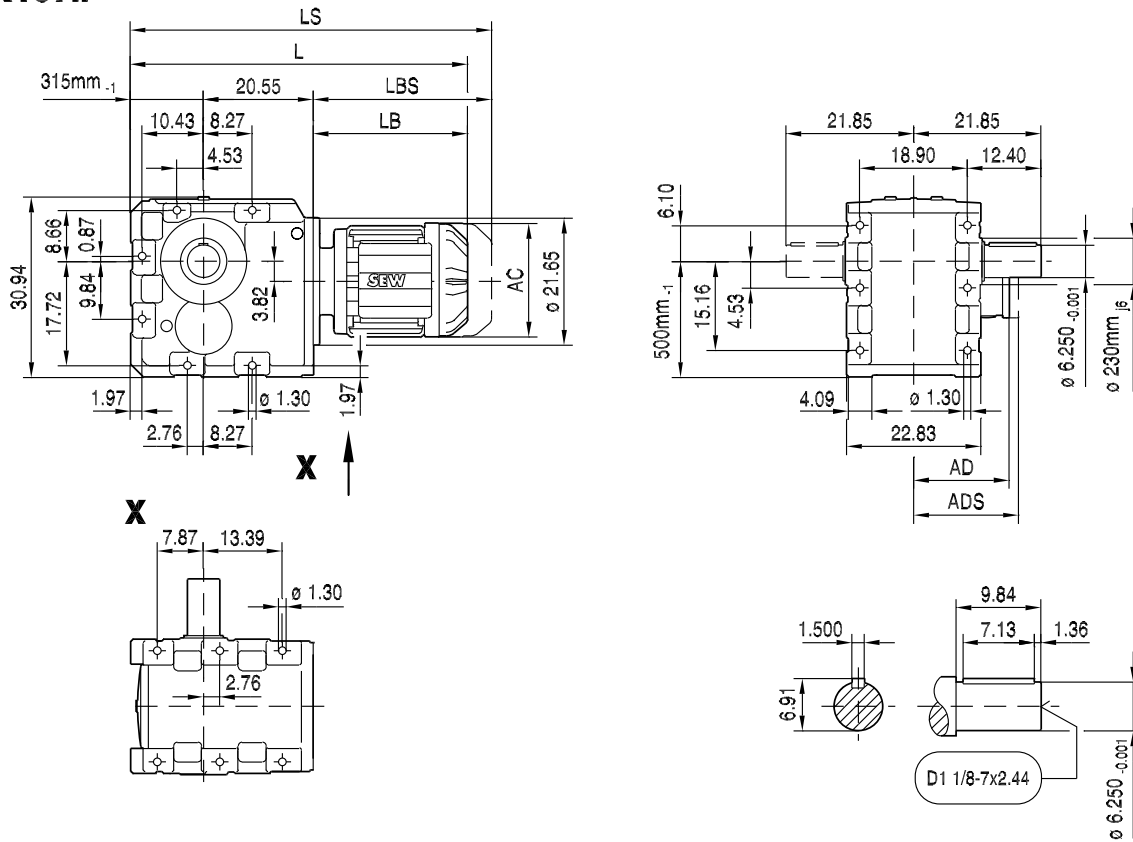
(→ 125)	DR160..	DR180S/M	DR180L/LC	DR200	DR225S	DR225M/MC	DVE250M	DVE280..	DR315K/S	DR315M/L
AC	10.63	12.44	12.44	15.51	15.51	15.51	20.08	20.08	24.57	24.57
AD	8.98	9.96	9.96	11.14	11.14	11.14	15.63	15.63	19.92	20.51
ADS	8.98	9.96	9.96	11.14	11.14	11.14	15.63	15.63	19.92	20.51
L	44.76	47.48	49.84	52.72	52.72	54.69	58.15	58.15	64.84	69.96
LS	50.16	54.92	57.28	60.79	60.79	62.76	65.43	65.43	74.72	79.84
LB	16.97	19.69	22.05	24.92	24.92	26.89	30.35	30.35	37.05	42.17
LBS	22.36	27.13	29.49	32.99	32.99	34.96	37.64	37.64	46.93	52.05

reducer.ir

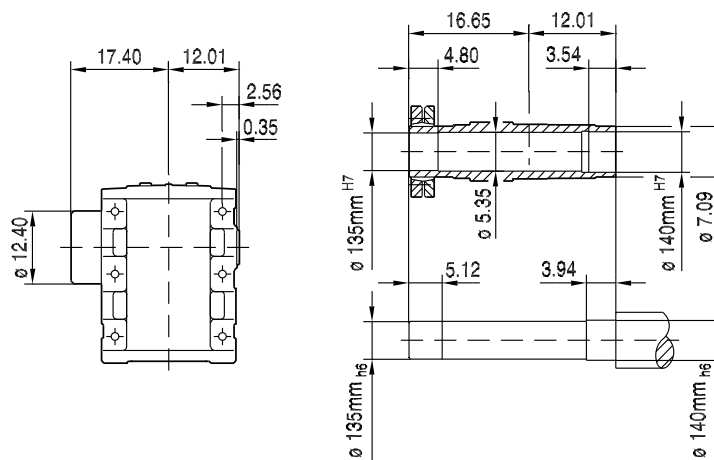


33 095 00 09

K167..

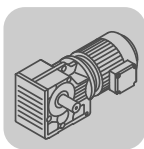


KH167B..



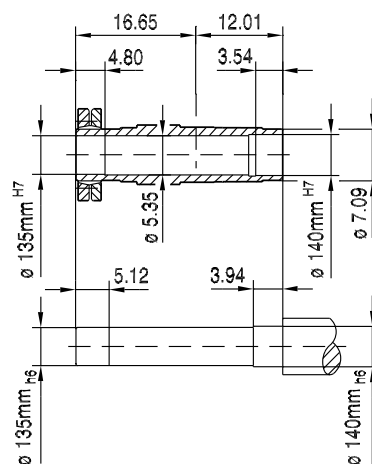
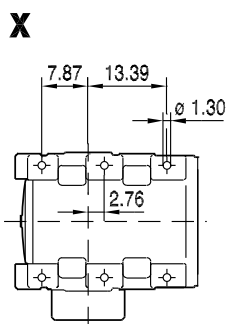
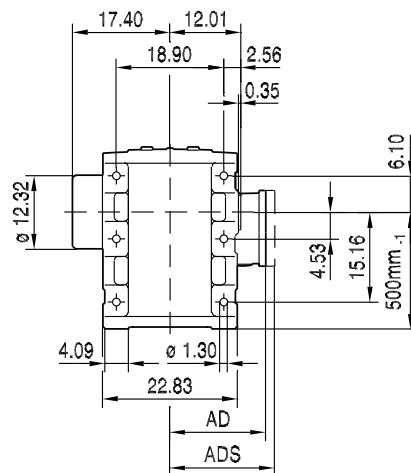
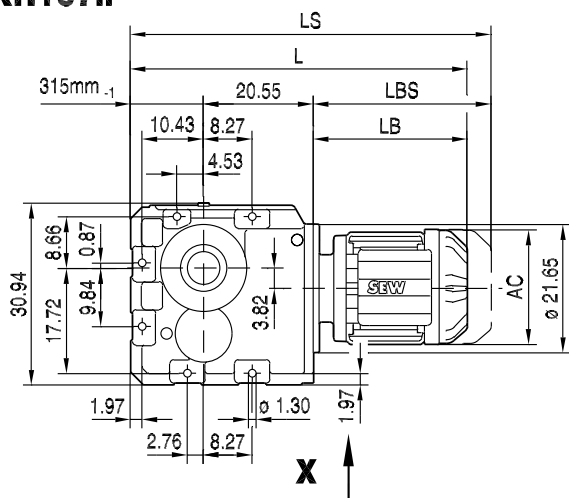
(→ 125)	DR180S/M	DR180L/LC	DR200	DR225S	DR225M/MC	DVE250M	DVE280..	DR315K/S	DR315M/L
AC	12.44	12.44	15.51	15.51	15.51	20.08	20.08	24.57	24.57
AD	9.96	9.96	11.14	11.14	11.14	15.63	15.63	19.92	20.51
ADS	9.96	9.96	11.14	11.14	11.14	15.63	15.63	19.92	20.51
L	52.64	55.00	57.87	57.87	59.84	63.31	63.31	70.00	75.12
LS	60.08	62.44	65.94	65.94	67.91	70.59	70.59	79.88	85.00
LB	19.69	22.05	24.92	24.92	26.89	30.35	30.35	37.05	42.17
LBS	27.13	29.49	32.99	32.99	34.96	37.64	37.64	46.93	52.05

reducer.ir



33 096 00 09

KH167..



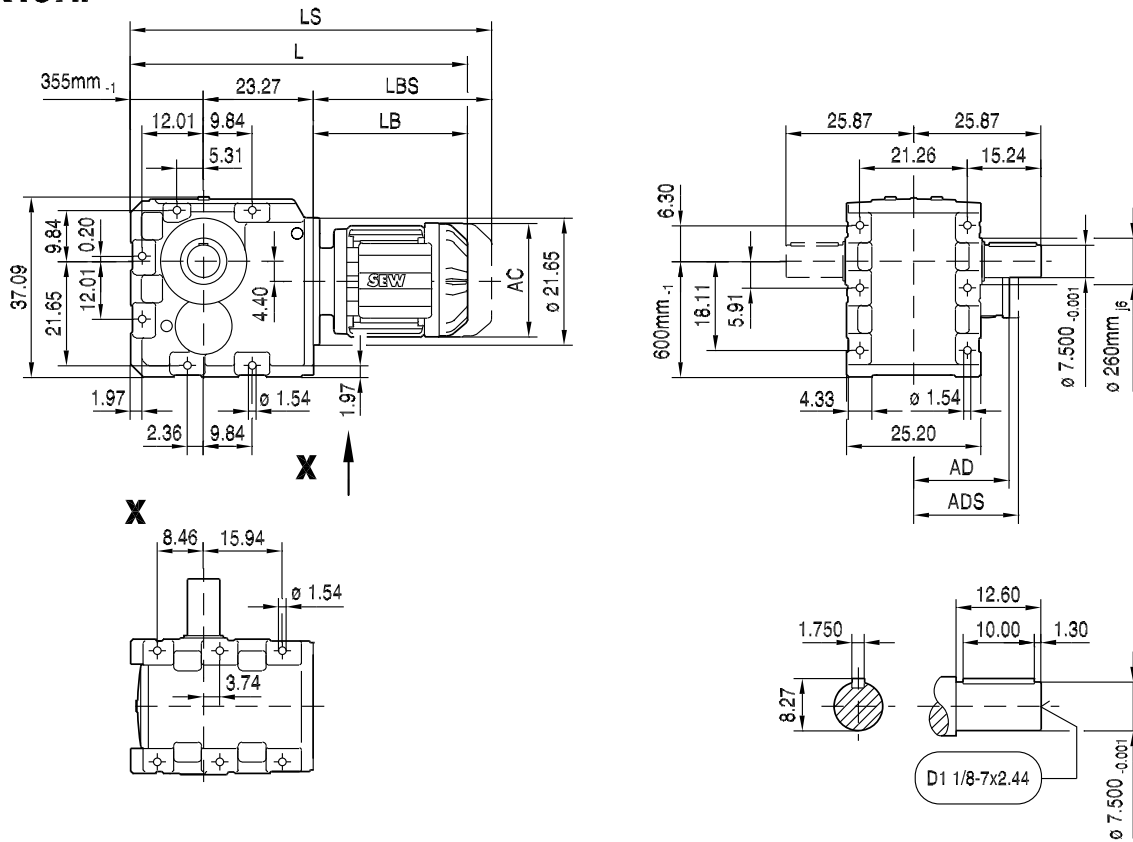
(→ 125)	DR180S/M	DR180L/LC	DR200	DR225S	DR225M/MC	DVE250M	DVE280..	DR315K/S	DR315M/L
AC	12.44	12.44	15.51	15.51	15.51	20.08	20.08	24.57	24.57
AD	9.96	9.96	11.14	11.14	11.14	15.63	15.63	19.92	20.51
ADS	9.96	9.96	11.14	11.14	11.14	15.63	15.63	19.92	20.51
L	52.64	55.00	57.87	57.87	59.84	63.31	63.31	70.00	75.12
LS	60.08	62.44	65.94	65.94	67.91	70.59	70.59	79.88	85.00
LB	19.69	22.05	24.92	24.92	26.89	30.35	30.35	37.05	42.17
LBS	27.13	29.49	32.99	32.99	34.96	37.64	37.64	46.93	52.05

reducer.ir

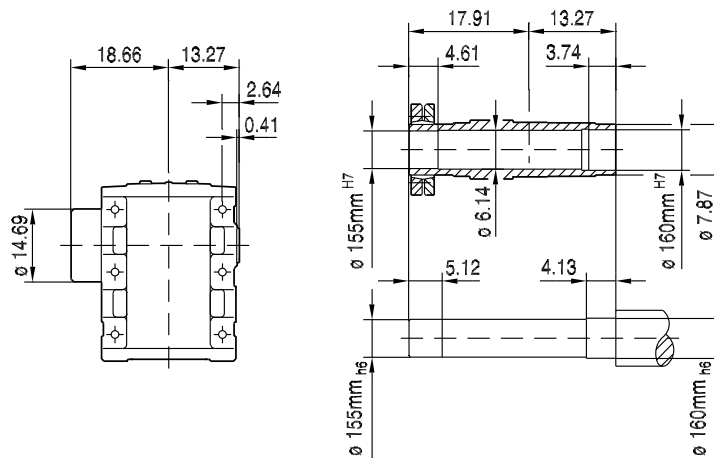


33 097 00 09

K187..

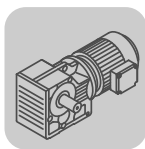


KH187B..



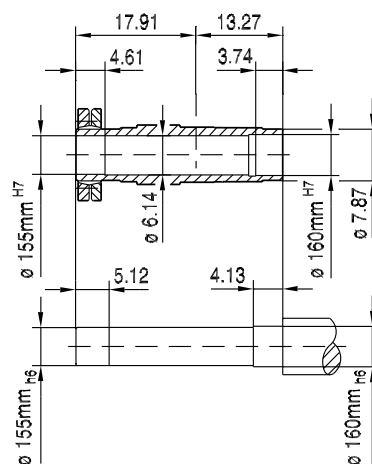
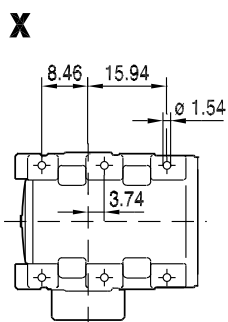
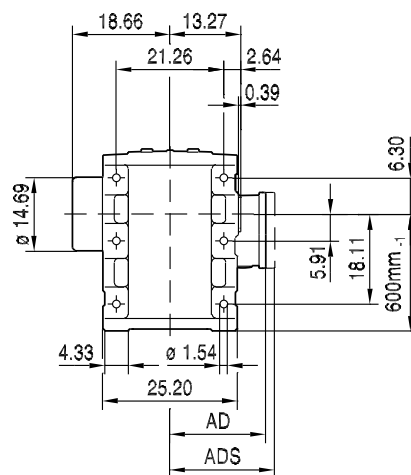
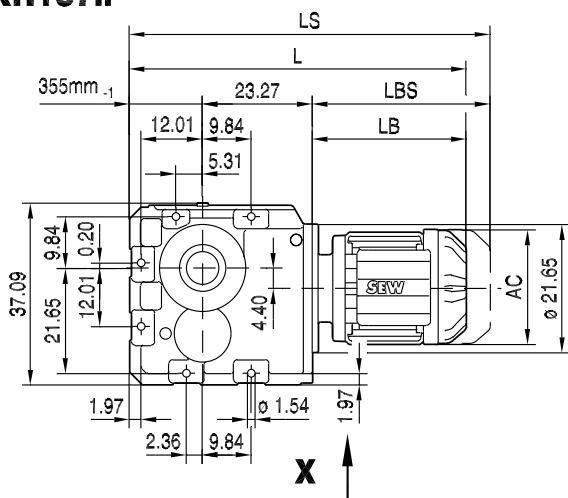
(→ 125)	DR180/LC	DR200	DR225S	DR225M/MC	DVE250M	DVE280..	DR315K/S	DR315M/L
AC	12.44	15.51	15.51	15.51	20.08	20.08	24.57	24.57
AD	9.96	11.14	11.14	11.14	15.63	15.63	19.92	20.51
ADS	9.96	11.14	11.14	11.14	15.63	15.63	19.92	20.51
L	59.29	62.17	62.17	64.13	67.60	67.60	74.29	79.41
LS	66.73	70.24	70.24	72.20	74.88	74.88	84.17	89.29
LB	22.05	24.92	24.92	26.89	30.35	30.35	37.05	42.17
LBS	29.49	32.99	32.99	34.96	37.64	37.64	46.93	52.05

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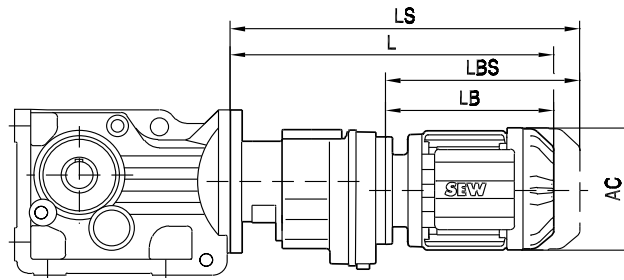
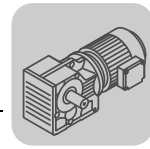
33 098 00 09

KH187..



(→ 125)	DR180L/LC	DR200	DR225S	DR225M/MC	DVE250M	DVE280..	DR315K/S	DR315M/L
AC	12.44	15.51	15.51	15.51	20.08	20.08	24.57	24.57
AD	9.96	11.14	11.14	11.14	15.63	15.63	19.92	20.51
ADS	9.96	11.14	11.14	11.14	15.63	15.63	19.92	20.51
L	59.29	62.17	62.17	64.13	67.60	67.60	74.29	79.41
LS	66.73	70.24	70.24	72.20	74.88	74.88	84.17	89.29
LB	22.05	24.92	24.92	26.89	30.35	30.35	37.05	42.17
LBS	29.49	32.99	32.99	34.96	37.64	37.64	46.93	52.05

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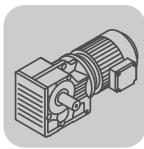
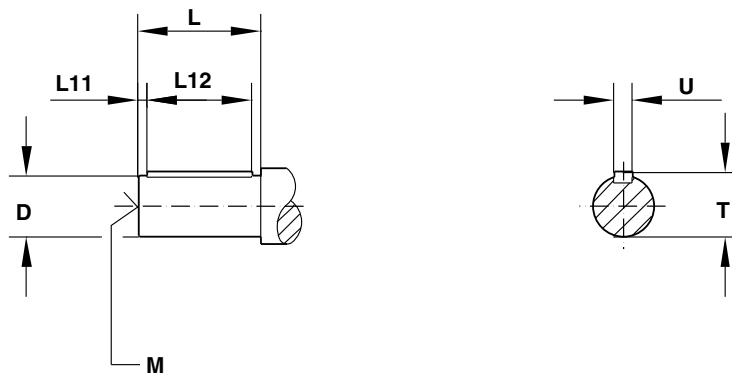


33 133 00 06

(→ 14)		AC	L	LS	LB	LBS	(→ 14)		AC	L	LS	LB	LBS	
K..37R17	DR63..	5.20	12.76	14.92	5.87	8.03	K..127R77	DR71S..	5.47	16.61	19.25	7.48	10.12	
	DR71S..	5.47	13.19	15.87	6.30	8.98		DR71M..	5.47	17.60	20.24	8.46	11.10	
K..47R37	DR63..	5.20	14.02	16.18	7.52	9.69	DR80S..	6.14	17.91	21.10	8.78	11.97		
	DR71S..	5.47	14.45	17.13	7.95	10.63	DR80M..	6.14	19.13	22.32	10.00	13.19		
	DR71M..	5.47	15.43	18.11	8.94	11.61	DR90M..	7.05	19.13	22.83	10.00	13.70		
	DR80S..	6.14	15.79	18.98	9.29	12.48	DR90L..	7.05	19.92	23.62	10.79	14.49		
K..57R37 K..67R37	DR63..	5.20	14.02	16.18	7.52	9.69	DR100M..	7.76	21.10	24.80	11.97	15.67		
	DR71S..	5.47	14.45	17.13	7.95	10.63	DR100LC..	7.76	22.28	25.98	13.15	16.85		
	DR71M..	5.47	15.43	18.11	8.94	11.61	DR132S..	8.70	24.06	28.46	14.92	19.33		
	DR80S..	6.14	15.79	18.98	9.29	12.48	K..127R87	DR90M..	7.05	20.87	24.57	9.84	13.54	
DR80M..	6.14	17.01	20.20	10.51	13.70	DR90L..		7.05	21.65	25.35	10.63	14.33		
K..77R37	DR63..	5.20	13.70	15.87	7.52	9.69		DR100M..	7.76	22.83	26.54	11.81	15.51	
	DR71S..	5.47	14.13	16.81	7.95	10.63		DR100LC..	7.76	24.02	27.72	12.99	16.69	
	DR71M..	5.47	15.12	17.80	8.94	11.61		DR132S..	8.70	25.75	30.16	14.72	19.13	
	DR80S..	6.14	15.47	18.66	9.29	12.48	DR132M/MC..	8.70	27.72	32.13	16.69	21.10		
	DR80M..	6.14	16.69	19.88	10.51	13.70	DR160..	10.71	29.33	34.72	18.31	23.70		
K..87R57	DR90M..	7.05	16.77	20.43	10.59	14.25	K..157R97 K..167R97	DR71M..	5.47	20.83	23.46	8.03	10.67	
	DR90L..	7.05	17.56	21.22	11.38	15.04		DR80S..	6.14	21.18	24.37	8.39	11.57	
	DR63..	5.20	15.79	17.95	7.28	9.45	DR80M..	6.14	22.40	25.59	9.61	12.80		
	DR71S..	5.47	16.22	18.86	7.72	10.35	DR90M..	7.05	22.40	26.10	9.61	13.31		
	DR71M..	5.47	17.20	19.84	8.70	11.34	DR90L..	7.05	23.19	26.89	10.39	14.09		
	DR80S..	6.14	17.56	20.75	9.06	12.24	DR100M..	7.76	24.37	28.07	11.57	15.28		
	DR80M..	6.14	18.78	21.97	10.28	13.46	DR100LC..	7.76	25.55	29.25	12.76	16.46		
K..97R57	DR90M..	7.05	18.82	22.52	10.31	14.02	DR132S..	8.70	27.32	31.73	14.53	18.94		
	DR90L..	7.05	19.61	23.31	11.10	14.80	DR132M/MC..	8.70	29.29	33.70	16.50	20.91		
	DR100M..	7.76	20.79	24.49	12.28	15.98	DR160..	10.71	30.91	36.30	18.11	23.50		
	K..107R77	DR63..	5.20	15.59	17.76	7.28	9.45	K..187R97	DR71M..	5.47	20.83	23.46	8.03	10.67
		DR71S..	5.47	16.02	18.66	7.72	10.35		DR80S..	6.14	21.18	24.37	8.39	11.57
		DR71M..	5.47	17.01	19.65	8.70	11.34		DR80M..	6.14	22.40	25.59	9.61	12.80
		DR80S..	6.14	17.36	20.55	9.06	12.24		DR90M..	7.05	22.40	26.10	9.61	13.31
		DR80M..	6.14	18.58	21.77	10.28	13.46		DR90L..	7.05	23.19	26.89	10.39	14.09
		DR90M..	7.05	18.62	22.32	10.31	14.02		DR100M..	7.76	24.37	28.07	11.57	15.28
DR90L..		7.05	19.41	23.11	11.10	14.80	DR100LC..		7.76	25.55	29.25	12.76	16.46	
DR100M..		7.76	20.59	24.29	12.28	15.98	DR132S..		8.70	27.32	31.73	14.53	18.94	
DR100LC..		7.76	21.77	25.47	13.46	17.17	DR132M/MC..		8.70	29.29	33.70	16.50	20.91	
K..127R77	DR63..	5.20	16.77	18.94	7.05	9.21	DR160..	10.71	30.91	36.30	18.11	23.50		
	DR71S..	5.47	17.20	19.84	7.48	10.12	DR180M..	12.48	34.29	42.13	21.50	29.33		
	DR71M..	5.47	18.19	20.83	8.46	11.10	K..157R107	DR132MC..	8.70	31.30	35.71	16.26	20.67	
	DR80S..	6.14	18.50	21.69	8.78	11.97		DR160..	10.71	32.91	38.31	17.87	23.27	
	DR80M..	6.14	19.72	22.91	10.00	13.19		DR180M	12.48	36.30	44.13	21.26	29.09	
	DR90M..	7.05	19.72	23.43	10.00	13.70		DR180L/HC..	12.48	38.66	46.50	23.62	31.46	
	DR90L..	7.05	20.51	24.21	10.79	14.49	K..167R107 K..187R107	DR132M/MC..	8.70	31.30	35.71	16.26	20.67	
	DR100M..	7.76	21.69	25.39	11.97	15.67		DR160..	10.71	32.91	38.31	17.87	23.27	
	DR100LC..	7.76	22.87	26.57	13.15	16.85		DR180M..	12.48	36.30	44.13	21.26	29.09	
	DR132S..	8.70	24.65	29.06	14.92	19.33		DR180L/HC..	12.48	38.66	46.50	23.62	31.46	
	DR132M/MC..	8.70	26.61	31.02	16.89	21.30		DR225S..	15.51	40.28	48.94	25.24	33.90	
K..127R77	DR63..	5.20	16.18	18.35	7.05	9.21	DR225M/MC..	15.51	42.83	51.50	27.80	36.46		

11

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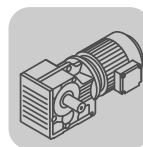

11.6 Available output shafts K series
11.6.8 K Series inch solid shafts


Model ¹	D	T	U	L	L11	L12	M	Change ²
K...37	1	1.11	1/4	1.97	0.32	1-5/16	3/8 - 16 x 0.87	0
K...47	1.25	1.36	1/4	2.36	0.26	1-11/16	1/2 - 13 x 1.12	0
K...57	1.375	1.51	5/16	2.76	0.43	1-13/16	1/2 - 13 x 1.12	0
K...67	1.375	1.51	5/16	2.76	0.47	1-13/16	1/2 - 13 x 1.12	-0.39
	1.625	1.79	3/8	3.15	0.38	2-3/8	5/8 - 11 x 1.38	0
K...77	1.75	1.92	3/8	3.54	0.4	2-3/4	5/8 - 11 x 1.38	-0.39
	2	2.22	1/2	3.94	0.64	2-5/8	3/4 - 10 x 1.61	0
K...87	2.375	2.65	5/8	4.72	0.51	3-5/8	3/4 - 10 x 1.61	0
K...97	2.875	3.2	3/4	5.51	0.67	4-1/8	3/4 - 10 x 1.61	0
K...107	3.625	4.01	7/8	6.69	0.63	5-3/8	1 - 8 x 2.13	0
K...127	4.375	4.82	1	8.27	1.09	6	1 - 8 x 2.13	0
K...157	4.75	5.29	1-1/4	8.27	0.82	6-9/16	1 - 8 x 2.13	0
K167	6.25	6.65	1-1/2	9.84	0.59	7-1/8	1-1/8 - 7 x 2.13	0
K187	7.5	8.27	1-3/4	12.6	0.39	10	1-1/8 - 7 x 2.13	0

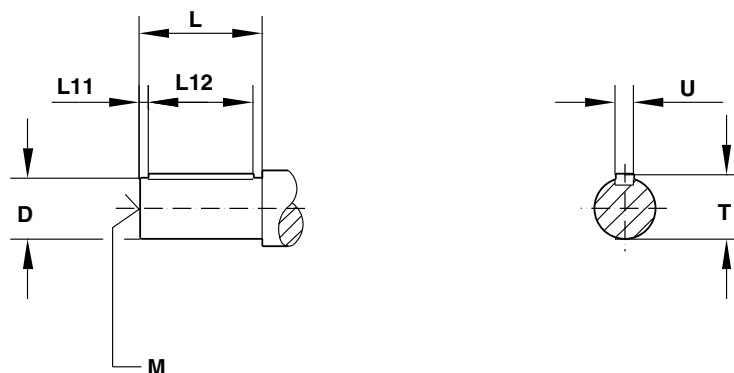
¹ Longer shafts to match older designs are available for flanged units.

² Compared to standard shaft as shown in dimension pages.

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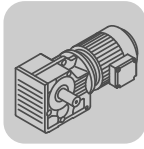
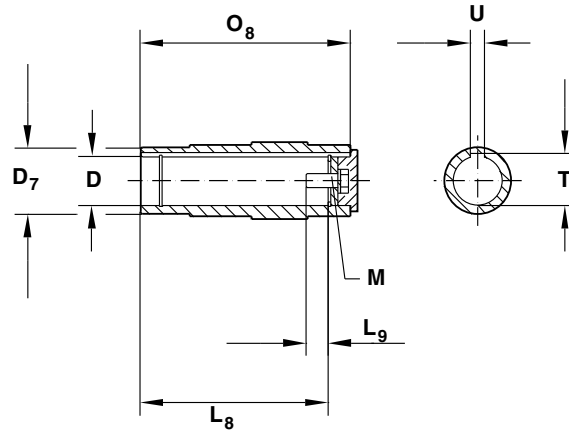
11.6.9 K Series metric solid shafts



Model ¹	D	T	U	L	L11	L12	M	Change ²
K...37	25	28	8	50	5	40	M10 x 22	0
K...47	30	33	8	60	3.5	50	M10 x 22	0
K...57	35	38	10	70	7	56	M12 x 28	0
K...67	35	38	10	70	7	56	M12 x 28	-10
	40	43	12	80	5	70	M16 x 36	0
K...77	45	48.5	14	90	5	80	M16 x 36	-10
	50	53.5	14	100	10	80	M16 x 36	0
K...87	60	64	18	120	5	110	M20 x 42	0
K...97	70	74.5	20	140	7.5	125	M20 x 42	0
K...107	90	95	25	170	5	160	M24 x 50	0
K...127	110	116	28	210	15	180	M24 x 50	0
K...157	120	127	32	210	5	200	M24 x 50	0
K167	160	169	40	250	15	220	M30 x 63	0
K187	190	200	45	320	10	300	M30 x 63	0

- 1 Longer shafts to match older designs are available for flanged units.
- 2 Compared to standard shaft as shown in dimension pages.

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11.6.10 K Series inch hollow shafts


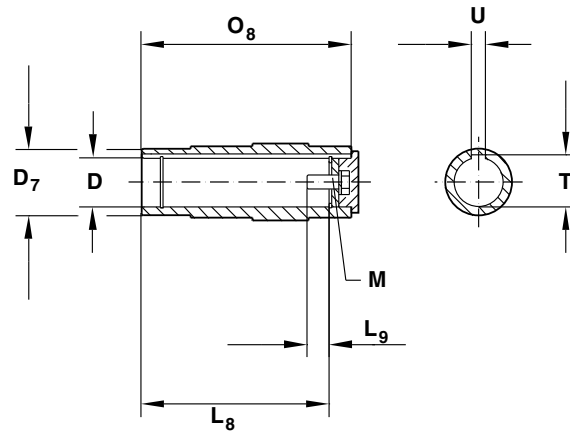
Model	O_8	D	D_7	T	U	L_8	L_9	M
KA...37	4.72	1.25	1.77	1.37	1/4	4.13	0.67	7/16 - 14 x 1
KA...47	5.91	1.25	1.97	1.37	1/4	5.2	0.67	7/16 - 14 x 1
	5.91	1.375	1.97	1.52	5/16	5.2	0.65	1/2 - 13 x 1
KA...57	6.54	1.5	2.17	1.67	3/8	5.59	1.36	5/8 - 11 x 1-3/4
	6.54	1.4375 ¹	2.17	1.61	3/8	5.59	1.36	5/8 - 11 x 1-3/4
KA...67	7.09	1.4375 ¹	2.17	1.61	3/8	6.14	1.36	5/8 - 11 x 1-3/4
	7.09	1.5	2.17	1.67	3/8	6.14	1.36	5/8 - 11 x 1-3/4
KA...77	8.27	1.9375 ¹	2.76	2.16	1/2	7.2	1.16	5/8 - 11 x 1-3/4
	8.27	2	2.76	2.22	1/2	7.2	1.16	5/8 - 11 x 1-3/4
KA...87	9.45	2.375	3.35	2.65	5/8	8.27	1.39	3/4 - 10 x 2
	9.45	2.4375 ¹	3.35	2.62	5/8	8.27	1.39	3/4 - 10 x 2
KA...97	11.81	2.75	3.74	3.03	5/8	10.63	1.24	3/4 - 10 x 2
	11.81	2.9375 ¹	3.74	3.14	3/4	10.63	1.24	3/4 - 10 x 2
KA...107	13.78	3.25	4.65	3.59	3/4	12.32	1.24	3/4 - 10 x 2
	13.78	3.4375 ¹	4.65	3.7	7/8	12.32	1.24	3/4 - 10 x 2
	13.78	3.625	4.65	3.89	7/8	12.32	1.24	3/4 - 10 x 2
KA...127	16.14	4	5.31	4.44	1	14.69	1.26	1 - 8 x 2-1/4
KA...157	19.69	4.5	6.1	4.95	1	18.11	1.26	1 - 8 x 2-1/4

¹ INX shaft options incur an additional charge.

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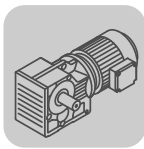
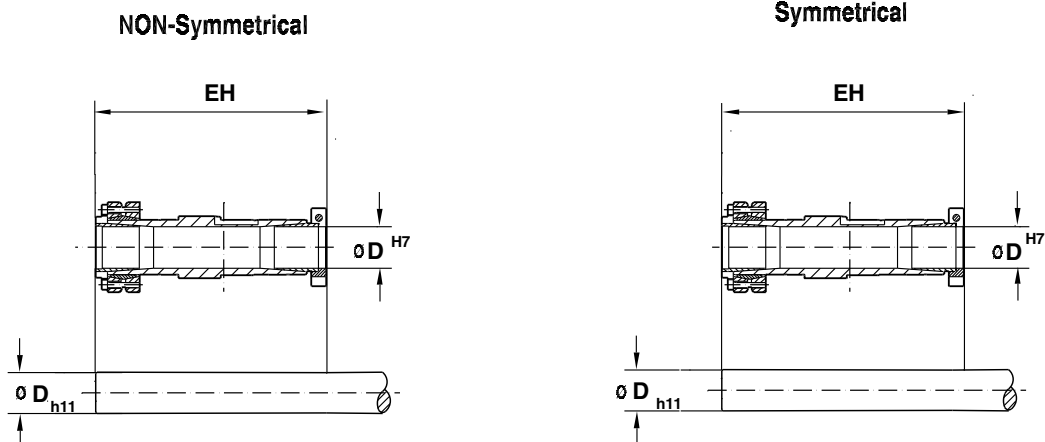


11.6.11 K Series metric hollow shafts



Model	O_8	D	D_7	T	U	L_8	L_9	M
KA...37	120	30	45	33.3	8	105	17	M10 x 25
KA...47	150	30	50	33.3	8	132	16	M10 x 25
	150	35	50	38.3	10	132	22	M12 x 30
KA...57	166	40	55	43.3	12	142	29	M16 x 40
KA...67	180	40	55	43.3	12	156	29	M16 x 40
KA...77	210	50	70	53.8	14	183	32	M16 x 45
KA...87	240	60	85	64.4	18	210	36	M20 x 50
KA...97	300	70	95	74.9	20	270	34	M20 x 50
KA...107	350	80	118	85.4	22	313	30	M20 x 50
	350	90	118	95.4	25	313	40	M24 x 60
KA...127	410	100	135	106.4	28	373	38	M24 x 60
KA...157	500	120	155	127.4	32	460	36	M24 x 60

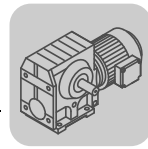
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11.6.12 K Series TorqLOC


Metric and inch bores are available as shown below.

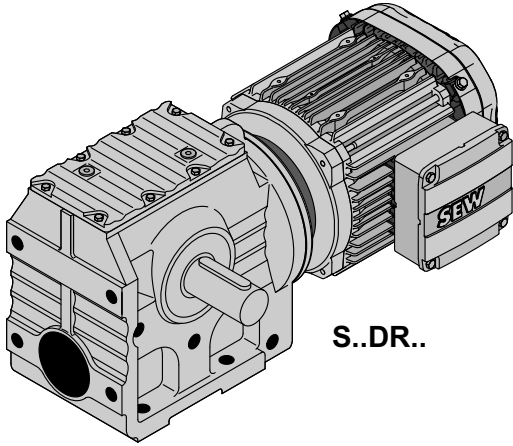
Model	Inch shafts					Metric shafts			NON-Symmetrical	Symmetrical
	D Dimension					D Dimension			EH	
KT37	1.00	1.1875	1.25	-	-	25	30	-	6.69	7.63
KT47	1.1875	1.25	1.375	1.4375	-	30	35	-	8.15	9.13
KT57	1.375	1.4375	1.50	1.625	-	35	38	40	9.13	10.39
KT67	1.375	1.4375	1.50	1.625	1.688	35	38	40	9.65	10.91
KT77	1.625	1.75	1.9375	2.00	-	50	-	-	11.61	13.34
KT87	1.9375	2.00	2.375	2.4375	-	51	62	65	13.19	15.28
KT97	2.4375	2.75	2.9375	-	-	62	70	75	15.59	17.79
KT107	3.250	3.4375	3.625	3.750	-	80	90	95	17.76	20.08
KT127	3.4375	3.750	4.00	4.1875	-	105	-	-	20.94	23.89
KT157	4.4375	4.50	4.9375	5.00	-	110	125	-	25.24	28.39

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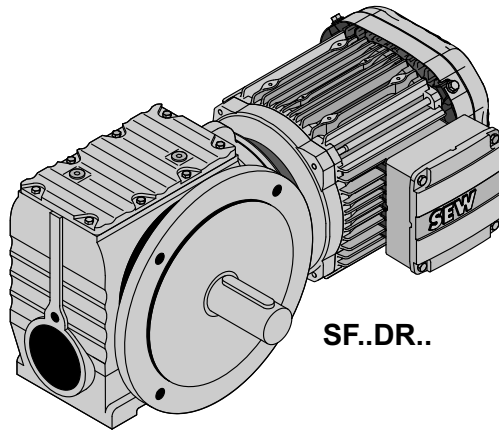


12 S..DRE/DRS

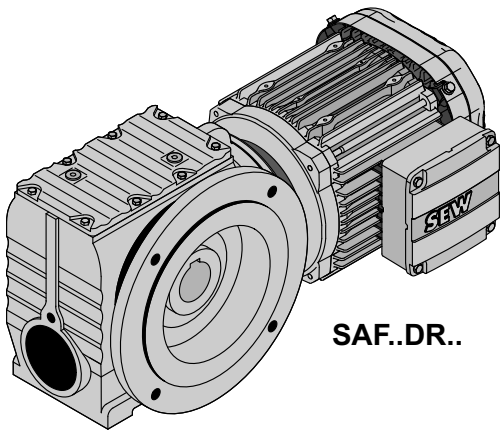
12.1 S, SF, SAF, SHF, SA, SH, ST, SAZ, SHZ..DR..



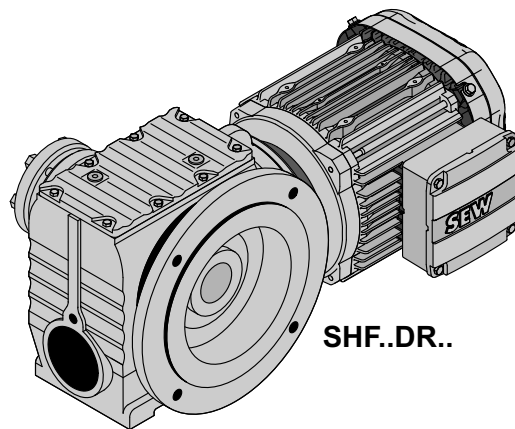
S..DR..



SF..DR..



SAF..DR..

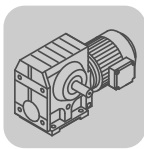


SHF..DR..

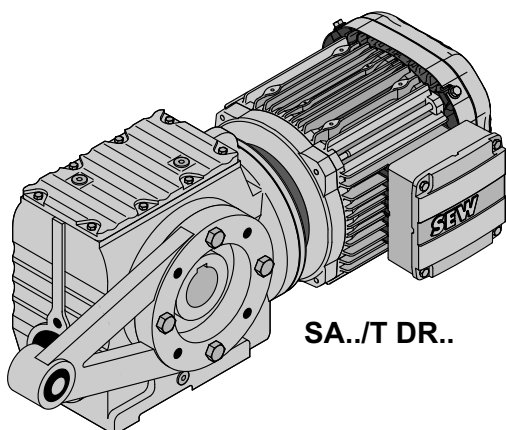
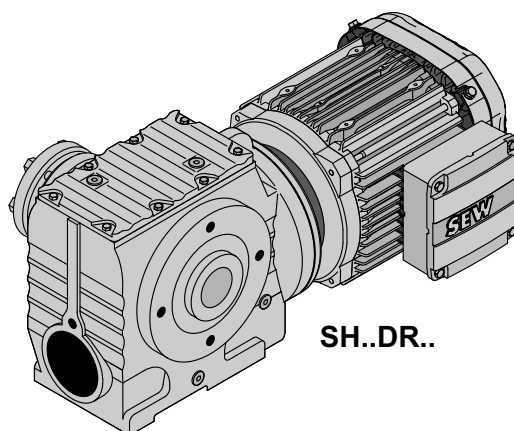
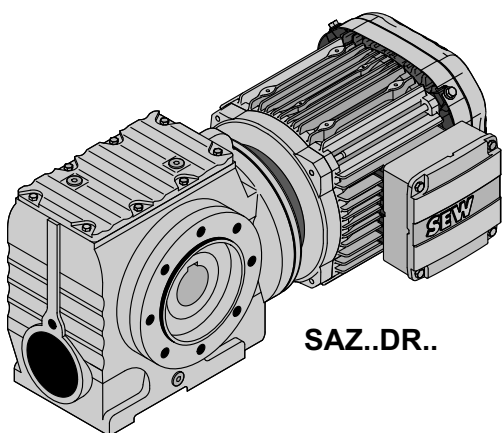
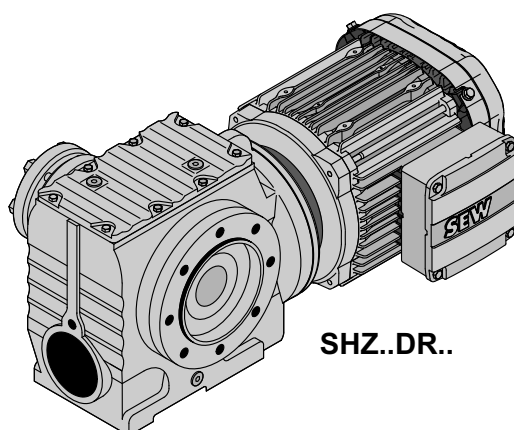
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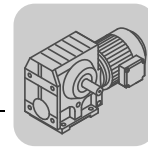
**S..DRE/DRS**

S, SF, SAF, SHF, SA, SH, ST, SAZ, SHZ..DR..

**SA..T DR..****SH..DR..****SAZ..DR..****SHZ..DR..**

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reducer.ir

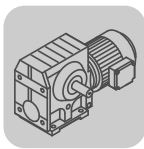


12.2 S.. → DRE/DRS

S37, $n_e = 1700$ rpm					810 lb-in		
n_a [rpm]	T_{amax} [lb-in]	F_{Ra} [lb]	$\varphi_{(R)}$ [']	i	DR63 DRS71S DRS71M	DRS80 DRE80M DRE90M	DRS90M DRE90L
11	800	675	-	157.43			
12	795	675	-	144.40*			
14	765	675	-	122.94			
16	760	675	-	106.00*			
17	750	675	-	98.80*			
20	725	675	-	86.36			
21	725	675	-	80.96			
24	705	675	-	71.44*			
27	695	675	-	63.33			
30	715	675	-	55.93			
32	670	675	-	53.83			
33	705	675	-	51.30*			
39	690	675	-	43.68			
45	670	645	-	37.66			
48	660	630	-	35.10*			
55	645	600	-	30.68			
59	645	580	-	28.76			
67	625	555	-	25.38*			
76	615	530	-	22.50*			
85	440	515	-	19.89			
89	600	495	-	19.13*			
93	430	500	-	18.24*			
109	420	470	-	15.53			
127	415	440	-	13.39			
136	405	430	-	12.48*			
156	395	410	-	10.91			
166	395	395	-	10.23			
188	380	380	-	9.02*			
212	380	360	-	8.00*			
250	360	340	-	6.80*			

S37R17, $n_e = 1700$ rpm					810 lb-in		
n_a [rpm]	T_{amax} [lb-in]	F_{Ra} [lb]	$\varphi_{(R)}$ [']	i	DR63 DRS71S DRS71M	DRS80	
2 3							
0.17	810	675	-	10037			
0.20	810	675	-	8654			
0.21	810	675	-	8066			
0.24	810	675	-	7051			
0.28	810	675	-	6079			
0.31	810	675	-	5431			
0.36	810	675	-	4747			
0.41	810	675	-	4155			
0.47	810	675	-	3632			
0.59	810	675	-	2866			
0.69	810	675	-	2471			
0.79	810	675	-	2160			
0.90	810	675	-	1887			
1.0	810	675	-	1665			
1.2	810	675	-	1456			
1.3	810	675	-	1271			
1.5	810	675	-	1121			
1.7	810	675	-	994			
2.0	810	675	-	869			

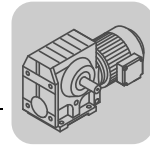
reducer.ir



S37R17, $n_e = 1700$ rpm					810 lb-in	
n_a [rpm]	T_{amax} [lb-in]	F_{Ra} [lb]	$\varphi_{(R)}$ [']	i	DR63 DRS71S DRS71M	DRS80
2.2	810	675	-	774		
2.6	810	675	-	666		
2.9	810	675	-	596		
3.3	810	675	-	521		
3.7	810	675	-	456		
4.3	810	675	-	398		
4.8	810	675	-	351		
5.6	810	675	-	303		
6.4	810	675	-	265		
7.3	810	675	-	232		
8.4	810	675	-	202		
9.5	810	675	-	179		
11	810	675	-	158		
12	810	675	-	144		
14	810	675	-	118		
15	810	675	-	110*		

S47, $n_e = 1700$ rpm					1500 lb-in			
n_a [rpm]	T_{amax} [lb-in]	F_{Ra} [lb]	$\varphi_{(R)}$ [']	i	DR63 DRS71S DRS71M	DRS80 DRE80M DRE90M	DRS90M DRE90L	DRS90L DRS100M DRE100M DRE100LC
8.5	1500	1200	-	201.00*				
9.2	1480	1200	-	184.80*				
11	1480	1200	-	158.12				
12	1470	1200	-	137.05				
13	1470	1200	-	128.10*				
15	1470	1200	-	110.73				
18	1470	1200	-	94.08*				
20	1470	1200	-	84.00*				
24	1470	1200	-	71.75*				
24	1370	1180	-	69.39				
25	1450	1190	-	67.20*				
27	1370	1140	-	63.80*				
30	1340	1120	-	56.61				
31	1370	1070	-	54.59				
36	1370	1000	-	47.32				
38	1370	970	-	44.22*				
44	1370	910	-	38.23				
52	1370	850	-	32.48*				
59	1360	810	-	29.00*				
69	1280	770	-	24.77				
73	1250	755	-	23.20*				
84	970	690	-	20.33				
87	1080	735	-	19.54				
96	960	650	-	17.62				
103	960	630	-	16.47*				
119	960	585	-	14.24				
140	960	540	-	12.10*				
157	950	510	-	10.80*				
184	920	480	-	9.23*				
197	880	475	-	8.64*				
234	760	475	-	7.28				

reducer.ir

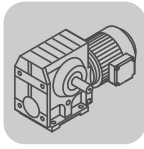


S47R17, $n_e = 1700$ rpm					1500 lb-in	
n_a [rpm]	T_{amax} [lb-in]	F_{Ra} [lb]	$\varphi_{(R)}$ [']	i	DR63 DRS71S DRS71M	DRS80
2 3						
0.13	1630	1180	-	12909		
0.15	1630	1180	-	11189		
0.16	1630	1180	-	10374		
0.19	1630	1180	-	8992		
0.22	1630	1180	-	7860		
0.25	1630	1180	-	6887		
0.28	1630	1180	-	6055		
0.32	1630	1180	-	5292		
0.37	1630	1180	-	4637		
0.42	1630	1180	-	4092		
0.47	1630	1170	-	3582		
0.54	1630	1170	-	3131		
0.63	1630	1170	-	2714		
0.70	1630	1170	-	2412		
0.80	1630	1170	-	2131		
0.91	1630	1170	-	1863		
1.0	1630	1170	-	1663		
1.2	1630	1170	-	1435		
1.4	1630	1170	-	1254		
1.5	1630	1170	-	1120		
1.6	1630	1170	-	1083		
1.8	1610	1170	-	956		
2 2						
1.8	1630	1170	-	965		
2.0	1630	1170	-	865		
2.3	1630	1170	-	750		
2.6	1630	1170	-	655		
3.0	1630	1170	-	574		
3.4	1630	1170	-	506		
3.9	1630	1170	-	438		
4.4	1630	1170	-	388		
5.1	1630	1170	-	336		
5.8	1630	1170	-	294		
6.6	1630	1180	-	257*		
7.4	1630	1170	-	229		
8.5	1630	1170	-	200		
9.1	1630	1170	-	187		
10	1630	1170	-	165		
11	1630	1170	-	148		
13	1630	1170	-	131		





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S57, $n_e = 1700$ rpm					2610 lb-in				
n_a [rpm]	T_{amax} [lb-in]	F_{Ra} [lb]	$\varphi_{(R)}$ [']	i	DR63 DRS71S DRS71M	DRS80 DRE80M DRE90M	DRS90M DRE90L	DRS90L DRS100M DRE100M DRE100LC	DRS100LC
8.5	2610	1600	-	201.00*					
9.2	2610	1600	-	184.80*					
11	2610	1600	-	158.12					
12	2610	1600	-	137.05					
13	2610	1600	-	128.10*					
15	2610	1600	-	110.73					
18	2650	1590	-	94.08*					
20	2520	1620	-	84.00*					
24	2430	1640	-	71.75*					
24	2160	1690	-	69.39					

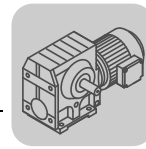
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S57, n_e = 1700 rpm					2610 lb-in				
n _a [rpm]	T _{amax} [lb-in]	F _{Ra} [lb]	φ _(/R) [']	i	DR63 DRS71S DRS71M	DRS80 DRE80M DRE90M	DRS90M DRE90L	DRS90L DRS100M DRE100M DRE100LC	DRS100LC
25	2300	1670	-	67.20*					
27	2160	1690	-	63.80*					
30	1990	1720	-	56.61					
31	2160	1690	-	54.59					
36	2160	1660	-	47.32					
38	2160	1610	-	44.22*					
44	2160	1520	-	38.23					
52	2160	1420	-	32.48*					
59	2160	1350	-	29.00*					
69	1940	1300	-	24.77					
73	1850	1280	-	23.20*					
84	1480	1180	-	20.33					
87	1610	1240	-	19.54					
96	1480	1100	-	17.62					
103	1480	1070	-	16.47*					
119	1490	1000	-	14.24					
140	1490	930	-	12.10*					
157	1490	880	-	10.80*					
184	1310	860	-	9.23*					
197	1240	850	-	8.64*					
234	1070	830	-	7.28					

S57R17, n_e = 1700 rpm					2610 lb-in				
n _a [rpm]	T _{amax} [lb-in]	F _{Ra} [lb]	φ _(/R) [']	i	DR63 DRS71S DRS71M	DRS80			
 2  3									
0.13	2910	1530	-	12909					
0.15	2910	1530	-	11189					
0.16	2910	1530	-	10374					
0.19	2910	1530	-	8992					
0.22	2910	1530	-	7860					
0.25	2910	1530	-	6887					
0.28	2910	1530	-	6055					
0.32	2910	1530	-	5292					
0.37	2910	1530	-	4637					
0.42	2910	1530	-	4092					
0.47	2910	1530	-	3628					
0.54	2650	1590	-	3131					
0.63	2650	1590	-	2714					
0.70	2650	1590	-	2412					
0.80	2650	1590	-	2131					
0.91	2650	1590	-	1863					
1.0	2650	1590	-	1663					
1.2	2650	1590	-	1435					
1.4	2650	1590	-	1254					
1.6	2650	1590	-	1083					
 2  2									
1.8	2650	1590	-	965					
2.0	2650	1590	-	865					
2.3	2650	1590	-	750					
2.6	2650	1590	-	655					
3.0	2650	1590	-	574					
3.4	2650	1590	-	506					
3.9	2650	1590	-	438					
4.4	2650	1590	-	388					

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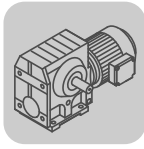
S57R17, n _e = 1700 rpm					2610 lb-in	
n _a [rpm]	T _{amax} [lb-in]	F _{Ra} [lb]	φ _(/R) [']	i	DR63 DRS71S DRS71M	DRS80
5.1	2650	1590	-	336		
5.8	2650	1590	-	294		
6.3	2650	1590	-	269		
7.4	2650	1590	-	229		
8.3	2650	1590	-	204		
9.1	2650	1590	-	187		
10	2650	1590	-	165		
13	2650	1590	-	131		

S67, n _e = 1700 rpm					4600 lb-in					
n _a [rpm]	T _{amax} [lb-in]	F _{Ra} [lb]	φ _(/R) [']	i	DR63 DRS71S DRS71M	DRS80 DRE80M DRE90M	DRS90M DRE90L	DRS90L DRS100M DRE100M DRE100LC DRE112M	DRS100LC DRS112M DRE132S	DRS132S DRS132M DRE132M DRE132MC DRE160S
7.8	4600	1950	-	217.41						
8.9	4600	1950	-	190.11						
9.4	4600	1950	-	180.60*						
11	4600	1950	-	158.45						
13	4600	1950	-	134.40*						
14	4600	1950	-	121.33						
16	4600	1950	-	106.75*						
17	4600	1950	-	100.80*						
20	4600	1950	-	85.83						
22	4510	1970	-	78.00*						
23	4240	2030	-	75.06						
25	4370	2000	-	67.57						
26	4240	1940	-	65.63						
27	4240	1890	-	62.35*						
29	4070	1950	-	58.80*						
31	4240	1790	-	54.70						
37	4240	1660	-	46.40*						
41	4240	1580	-	41.89						
46	4240	1490	-	36.85						
49	4240	1450	-	34.80*						
57	4240	1340	-	29.63						
63	4020	1310	-	26.93						
70	3000	1230	-	24.44						
73	3580	1290	-	23.33						
73	3000	1200	-	23.22*						
83	3000	1120	-	20.37						
84	3180	1270	-	20.30*						
98	3000	1030	-	17.28*						
109	3000	960	-	15.60*						
124	3000	840	-	13.73*						
131	3000	795	-	12.96*						
154	3000	655	-	11.03						
169	2780	700	-	10.03						
196	2470	755	-	8.69						
225	2210	795	-	7.56*						

S67R37, n _e = 1700 rpm					4600 lb-in				
n _a [rpm]	T _{amax} [lb-in]	F _{Ra} [lb]	φ _(/R) [']	i	DR63 DRS71S DRS71M	DRS80 DRE80M DRE90M	DRS90M DRE90L	DRS90L DRS100M DRE100M DRE100LC	DRS100LC
2 3									
0.08	5040	1840	-	21362*					
0.09	5040	1840	-	19594*					

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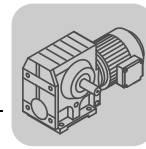
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S67R37, n_e = 1700 rpm					4600 lb-in				
n _a [rpm]	T _{amax} [lb-in]	F _{Ra} [lb]	φ _(/R) [']	i	DR63 DRS71S DRS71M	DRS80 DRE80M DRE90M	DRS90M DRE90L	DRS90L DRS100M DRE100M DRE100LC	DRS100LC
0.09	5040	1840	-	18120*					
0.10	5040	1840	-	16682					
0.12	5040	1840	-	14383					
0.13	5040	1840	-	12774					
0.15	5040	1840	-	11013					
0.18	5040	1840	-	9694*					
0.20	5040	1840	-	8529*					
0.23	5040	1840	-	7455*					
0.26	5040	1840	-	6531					
0.30	5040	1840	-	5759					
0.34	5040	1840	-	4965					
0.39	5040	1840	-	4410					
0.44	5040	1840	-	3880					
0.50	5040	1840	-	3432					
0.58	5040	1840	-	2944*					
0.65	5040	1840	-	2630					
0.75	5040	1840	-	2279					
0.84	5040	1840	-	2014					
0.96	5040	1840	-	1772					
1.1	5040	1840	-	1559					
1.2	5040	1840	-	1363					
1.4	5040	1840	-	1194					
1.6	5040	1840	-	1045					
1.9	5040	1840	-	914					
2 2									
2.1	5040	1840	-	809					
2.4	5040	1840	-	712					
2.8	5040	1840	-	615					
3.1	5040	1840	-	543					
3.6	5040	1840	-	469					
4.0	5040	1840	-	424					
4.7	5040	1840	-	365					
5.3	5040	1840	-	319					
6.0	5040	1840	-	281					
6.9	5040	1840	-	246					
7.7	5040	1840	-	221					
8.6	5040	1840	-	198					
10	5040	1840	-	168					
11	5040	1840	-	156					

S77, n_e = 1700 rpm					11200 lb-in						
n _a [rpm]	T _{amax} [lb-in]	F _{Ra} [lb]	φ _(/R) [']	i	DR63 DRS71S DRS71M	DRS80 DRE80M DRE90M	DRS90M DRE90L	DRS90L DRS100M DRE100M DRE100LC DRE112M	DRS100LC DRS112M DRE132S	DRS132S DRS132M DRE132M DRE132MC DRE160S	DRS132MC DRS160 DRE160M DRE160MC
6.6	11200	2630	-	256.47							
7.5	11200	2630	-	225.26							
7.9	11200	2630	-	214.00*							
9.0	10900	2690	-	189.09							
11	10700	2730	-	161.60*							
11	10600	2770	-	148.15							
13	10300	2830	-	130.00*							
14	10100	2860	-	123.20*							
16	9820	2930	-	107.83							
18	9640	2950	-	97.14							
20	9290	2820	-	85.22							

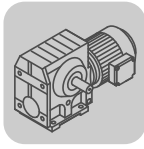
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S77, n _e = 1700 rpm					11200 lb-in						
n _a [rpm]	T _{amax} [lb-in]	F _{Ra} [lb]	φ _(/R) [']	i	DR63 DRS71S DRS71M	DRS80 DRE80M DRE90M	DRS90M DRE90L	DRS90L DRS100M DRE100M DRE100LC DRE112M	DRS100LC DRS112M DRE132S	DRS132S DRS132M DRE132M DRE132MC DRE160S	DRS132MC DRS160 DRE160M DRE160MC
23	8930	2700	-	75.20*							
23	9730	2430	-	75.09							
24	9730	2370	-	71.33							
25	8580	2590	-	66.67							
27	9730	2220	-	63.03							
30	8140	2460	-	56.92							
32	9730	2050	-	53.87							
34	9730	1960	-	49.38							
39	9730	1820	-	43.33							
41	9730	1770	-	41.07							
47	9370	1680	-	35.94							
53	9200	1610	-	32.38							
60	8750	1550	-	28.41							
68	8490	1470	-	25.07							
74	6230	1050	-	22.89							
77	8140	1420	-	22.22							
81	6230	930	-	20.99							
90	7600	1360	-	18.97							
92	6280	735	-	18.42							
97	6280	665	-	17.45							
111	6370	455	-	15.28							
124	6370	325	-	13.76							
141	6410	152	-	12.07							
160	6410	11	-	10.65							
180	5790	161	-	9.44							
211	5080	325	-	8.06							

S77R37, n _e = 1700 rpm					11200 lb-in				
n _a [rpm]	T _{amax} [lb-in]	F _{Ra} [lb]	φ _(/R) [']	i	DR63 DRS71S DRS71M	DRS80 DRE80M DRE90M	DRS90M DRE90L	DRS90L DRS100M DRE100M DRE100LC	DRS100LC
2 3									
0.07	11200	2630	-	25493					
0.08	11200	2630	-	21787					
0.09	11200	2630	-	19907					
0.10	11200	2630	-	17013					
0.12	11200	2630	-	14668					
0.13	11200	2630	-	13110					
0.15	11200	2630	-	11569					
0.17	11200	2630	-	9887					
0.19	11200	2630	-	8817					
0.22	11200	2630	-	7735					
0.25	11200	2630	-	6735					
0.29	11200	2630	-	5943					
0.33	11200	2630	-	5214					
0.37	11200	2630	-	4618					
0.43	11200	2630	-	3992					
0.48	11200	2630	-	3540					
0.55	11200	2630	-	3098					
0.62	10900	2690	-	2753					
0.72	10900	2690	-	2374					
0.82	10900	2690	-	2083					
0.94	10900	2690	-	1813					
0.97	10900	2690	-	1745					
1.1	10900	2690	-	1600					

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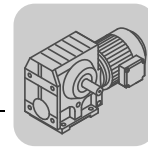


S..DRE/DRS
S.. → DRE/DRS

S77R37, n _e = 1700 rpm					11200 lb-in				
n _a [rpm]	T _{amax} [lb-in]	F _{Ra} [lb]	φ _(/R) [']	i	DR63 DRS71S DRS71M	DRS80 DRE80M DRE90M	DRS90M DRE90L	DRS90L DRS100M DRE100M DRE100LC	DRS100LC
1.2	10900	2690	-	1404					
1.4	10900	2690	-	1245					
1.5	10900	2690	-	1100					
1.8	10900	2690	-	954					
2.0	10900	2690	-	837					
2.4	10900	2690	-	714					
2.7	10900	2690	-	637					
3.0	10900	2690	-	574					
3.4	10900	2690	-	499					
3.9	10900	2690	-	438					
4.4	10900	2690	-	389					
5.2	10900	2690	-	327					
5.9	10900	2690	-	289					
6.8	10900	2690	-	250					
7.8	10900	2690	-	219					

S87, n _e = 1700 rpm					20100 lb-in								
n _a [rpm]	T _{amax} [lb-in]	F _{Ra} [lb]	φ _(/R) [']	i	DRS71M	DRS80 DRE80M DRE90M	DRS90M DRE90L	DRS90L DRS100M DRE100M DRE100LC DRE112M	DRS100LC DRS112M DRE132S	DRS132S DRS132M DRE132MC DRE160S	DRS132MC DRS160 DRE160M DRE160MC DRE180S DRE180M	DRS180M DRS180L DRE180LC	
5.9	20100	6280	-	288.00*									
6.6	19900	6290	-	258.18									
7.6	19500	6310	-	222.40*									
8.4	19300	6320	-	202.96									
9.4	18800	6340	-	180.00*									
11	18200	6370	-	151.30									
12	17800	6380	-	139.05									
14	17300	6410	-	123.48									
15	16800	6430	-	110.40*									
17	16200	6450	-	99.26									
19	13400	6540	-	91.20*									
20	15600	6470	-	86.15									
21	14100	6520	-	81.76									
22	15000	6500	-	77.14									
24	14100	6520	-	70.43									
26	14100	6520	-	64.27									
27	13900	6530	-	64.00*									
30	14100	6520	-	57.00*									
35	14100	6360	-	47.91									
39	14100	6160	-	44.03									
43	14100	5900	-	39.10									
49	14100	5660	-	34.96*									
54	14100	5440	-	31.43									
62	14100	5160	-	27.28									
67	10900	4870	-	25.50*									
70	14100	4950	-	24.43									
79	10900	4550	-	21.43									
84	12500	4760	-	20.27									
86	10900	4400	-	19.70									
97	10900	4190	-	17.49									
109	10900	4000	-	15.64*									
121	10900	3830	-	14.06									
139	10900	3480	-	12.21									
156	9990	3580	-	10.93									

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S87, $n_e = 1700$ rpm					20100 lb-in							
n_a [rpm]	T_{amax} [lb-in]	F_{Ra} [lb]	$\varphi_{(R)}$ [']	i	DRS71M	DRS80 DRE80M DRE90M	DRS90M DRE90L	DRS90L DRS100M DRE100M DRE100LC DRE112M	DRS100LC DRS112M DRE132S	DRS132S DRS132M DRE132M DRE132MC DRE160S	DRS132MC DRS160 DRE160M DRE160MC DRE180S DRE180M	DRS180M DRS180L DRE180L DRE180LC
187	8400	3530	-	9.07								
216	7340	3490	-	7.88								

S87R57, $n_e = 1700$ rpm					20100 lb-in						
n_a [rpm]	T_{amax} [lb-in]	F_{Ra} [lb]	$\varphi_{(R)}$ [']	i	DR63 DRS71S DRS71M	DRS80 DRE80M DRE90M	DRS90M DRE90L	DRS90L DRS100M DRE100M DRE100LC DRE112M	DRS100LC DRS112M DRE132S	DRS132S DRS132M DRE132M DRE132MC DRE160S	DRS132MC

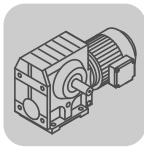
2 3

0.07	22100	6180	-	25987								
0.07	22100	6180	-	23940								
0.08	22100	6180	-	20568								
0.09	22100	6180	-	18265								
0.10	22100	6180	-	16774								
0.11	22100	6180	-	14820								
0.13	22100	6180	-	13160								
0.15	22100	6180	-	11200								
0.17	22100	6180	-	9904								
0.20	22100	6180	-	8549								
0.22	22100	6180	-	7643								
0.25	22100	6180	-	6706								
0.29	22100	6180	-	5875								
0.33	22100	6180	-	5187								
0.37	22100	6180	-	4606								
0.44	22100	6180	-	3872								

2 2

0.49	22100	6180	-	3475								
0.59	22100	6180	-	2905								
0.66	22100	6180	-	2586								
0.73	22100	6180	-	2335								
0.83	22100	6180	-	2054								
0.93	22100	6180	-	1824								
1.0	22100	6180	-	1631*								
1.3	22100	6180	-	1332								
1.4	22100	6180	-	1191								
1.6	22100	6180	-	1032*								
1.8	22100	6180	-	930								
2.0	22100	6180	-	831								
2.4	22100	6180	-	719								
2.7	22100	6180	-	624								
3.0	22100	6180	-	558								
3.5	22100	6180	-	485								
3.9	21600	6200	-	435								
4.5	21600	6200	-	378								
5.3	21200	6230	-	323								
6.0	21200	6230	-	281								
6.7	17500	6390	-	255								
7.7	17500	6390	-	222								
8.3	17500	6390	-	205								

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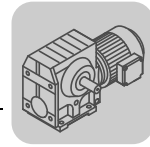




S..DRE/DRS
S.. → DRE/DRS

S97, n _e = 1700 rpm					35300 lb-in								
n _a [rpm]	T _{amax} [lb-in]	F _{Ra} [lb]	φ _(/R) [']	i	DRS71M	DRS80 DRE80M DRE90M	DRS90M DRE90L	DRS90L DRS100M DRE100M DRE100LC DRE112M	DRS100LC DRS112M DRE132S	DRS132S DRS132M DRE132M DRE132MC DRE160S	DRS132MC DRS160 DRE160M DRE160MC DRE180S DRE180M	DRS180M DRS180L DRE180L DRE180LC	DRS180LC DRS200L DRE200L DRS225S DRE225S DRS225M DRE225M DRE225MC
5.9	35300	7460	-	286.40*									
6.5	35300	7460	-	262.22									
7.3	35000	7480	-	231.67									
8.7	33900	7530	-	196.52									
9.4	33300	7560	-	180.95									
11	32200	7610	-	161.74									
12	31400	7650	-	145.60*									
13	30400	7700	-	131.85									
15	29500	7740	-	116.92									
16	28400	7780	-	105.71									
19	26700	7850	-	89.60*									
21	28900	7760	-	80.85									
22	25300	7900	-	78.26									
24	29100	7750	-	71.43									
26	23400	7960	-	65.45									
28	29100	7750	-	60.59									
30	29100	7740	-	55.79									
34	29100	7410	-	49.87									
38	29100	7110	-	44.89									
42	28500	6880	-	40.65									
47	27500	6650	-	36.05									
52	26300	6480	-	32.60									
62	24800	6180	-	27.63									
64	23000	5210	-	26.39									
70	23600	5960	-	24.13									
72	23000	4790	-	23.59									
80	22700	4510	-	21.23									
88	22100	4370	-	19.23									
100	21200	4260	-	17.05									
110	20300	4220	-	15.42									
130	19200	4080	-	13.07									
149	17600	4170	-	11.41									
178	14700	4230	-	9.55									
206	12700	4220	-	8.26									

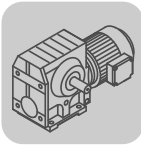
S97R57, n _e = 1700 rpm					35300 lb-in							
n _a [rpm]	T _{amax} [lb-in]	F _{Ra} [lb]	φ _(/R) [']	i	DR63 DRS71S DRS71M	DRS80 DRE80M DRE90M	DRS90M DRE90L	DRS90L DRS100M DRE100M DRE100LC DRE112M	DRS100LC DRS112M DRE132S	DRS132S DRS132M DRE132M DRE132MC DRE160S	DRS132MC	
2 3												
0.05	37100	7360	-	33818								
0.05	37100	7360	-	31154								
0.06	37100	7360	-	27847								
0.07	37100	7360	-	24641								
0.08	37100	7360	-	21537								
0.09	37100	7360	-	18749*								
0.10	37100	7360	-	16233								
0.12	37100	7360	-	14576								
0.13	37100	7360	-	12752								
0.15	37100	7360	-	11267								
0.17	37100	7360	-	10078								
0.20	37100	7360	-	8608								
0.23	37100	7360	-	7554								

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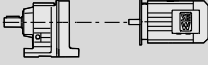
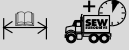


S97R57, n _e = 1700 rpm					35300 lb-in						
n _a [rpm]	T _{amax} [lb-in]	F _{Ra} [lb]	φ _(/R) [']	i	DR63 DRS71S DRS71M	DRS80 DRE80M DRE90M	DRS90M DRE90L	DRS90L DRS100M DRE100M DRE100LC DRE112M	DRS100LC DRS112M DRE132S	DRS132S DRS132M DRE132M DRE132MC DRE160S	DRS132MC
0.26	37100	7030	-	6640							
0.29	37100	7030	-	5780*							
0.34	37100	7030	-	4937							
0.38	37100	7030	-	4444							
0.42	37100	7030	-	4017							
0.49	37100	7030	-	3453							
0.55	37100	7030	-	3108							
0.64	37100	7030	-	2654							
0.73	37100	7030	-	2329							
0.82	37100	7030	-	2081							
0.91	37100	7030	-	1860							
1.1	37100	7030	-	1574*							
 2  2											
1.2	37100	7030	-	1394							
1.4	37100	7030	-	1223							
1.6	37100	7030	-	1070							
1.8	37100	7030	-	928							
2.1	37100	7030	-	824							
2.4	37100	7360	-	714							
2.7	37100	7050	-	626*							
3.2	37100	7050	-	538							
3.5	37100	7060	-	484*							
4.0	37100	7070	-	420							
4.5	37100	7070	-	376							
5.2	37100	7080	-	327							
5.9	37100	7090	-	287							
6.7	37100	7100	-	252							
7.8	37100	7100	-	219							
8.3	37100	7110	-	205							

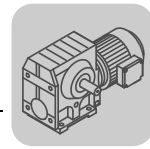
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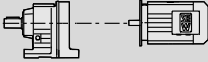




12.3 S..DRE/DRS [HP]

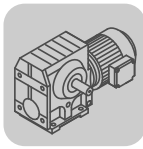
P_m [HP]	n_a [rpm]	T_a [lb-in]	i	$F_{Ra}^{1)}$ [lb]	SEW f_B		m [lbs]		
0.25	0.29	36400	5780	7280	1.00				
	0.34	30200	4937	7700	1.25				
	0.38	27200	4444	7830	1.35	S	97R57	DRS 71S4	375 617
	0.42	23900	4017	7950	1.55	SF	97R57	DRS 71S4	445 617
	0.49	21700	3453	8020	1.70	SA	97R57	DRS 71S4	365 617
	0.55	19600	3108	8080	1.90	SAF	97R57	DRS 71S4	420 617
	0.64	16200	2654	8160	2.3				
0.73	14300	2329	8200	2.6					
0.33	22100	5187	6180	1.00	S	87R57	DRS 71S4	245 617	
0.37	19600	4606	6300	1.10	SF	87R57	DRS 71S4	290 617	
0.44	16300	3872	6440	1.35	SA	87R57	DRS 71S4	240 617	
					SAF	87R57	DRS 71S4	275 617	
0.49	16100	3475	6450	1.35					
0.59	13600	2905	6540	1.60	S	87R57	DRS 71S4	240 617	
0.66	11600	2586	6600	1.90	SF	87R57	DRS 71S4	290 617	
0.73	10300	2335	6640	2.1	SA	87R57	DRS 71S4	235 617	
0.83	8880	2054	6670	2.5	SAF	87R57	DRS 71S4	270 617	
0.93	7890	1824	6690	2.8					
0.94	10800	1813	2720	1.00	S	77R37	DRS 71S4	135 617	
0.97	10300	1745	2830	1.05	SF	77R37	DRS 71S4	155 617	
1.1	9460	1600	3000	1.15	SA	77R37	DRS 71S4	135 617	
1.2	8300	1404	3190	1.30	SAF	77R37	DRS 71S4	150 617	
1.4	7270	1245	3330	1.50					
1.6	6870	1100	3370	1.60	S	77R37	DRS 71S4	135 617	
1.8	5890	954	3480	1.85	SF	77R37	DRS 71S4	155 617	
2.0	5170	837	3540	2.1	SA	77R37	DRS 71S4	135 617	
2.4	4270	714	3600	2.6	SAF	77R37	DRS 71S4	150 617	
2.7	3770	637	3600	2.9					
1.9	5030	914	1840	1.00	S	67R37	DRS 71S4	93 617	
					SF	67R37	DRS 71S4	105 617	
					SA	67R37	DRS 71S4	95 617	
					SAF	67R37	DRS 71S4	105 617	
2.1	4580	809	1950	1.10					
2.4	4030	712	2070	1.25					
2.8	3370	615	2180	1.50	S	67R37	DRS 71S4	92 617	
3.1	3020	543	2230	1.65	SF	67R37	DRS 71S4	105 617	
3.6	2510	469	2290	2.0	SA	67R37	DRS 71S4	94 617	
4.0	2280	424	2310	2.2	SAF	67R37	DRS 71S4	105 617	
4.7	2080	365	2330	2.4					
5.3	1780	319	2360	2.8					
3.9	2370	438	1650	1.10					
4.4	2090	388	1700	1.25					
5.1	1870	336	1740	1.40	S	57R17	DRS 71S4	50 617	
5.8	1610	294	1770	1.65	SF	57R17	DRS 71S4	59 617	
6.3	1530	269	1780	1.70	SA	57R17	DRS 71S4	50 617	
7.4	1320	229	1800	2.0	SAF	57R17	DRS 71S4	56 617	
8.3	1190	204	1820	2.2					
9.1	1080	187	1830	2.4					
10	950	165	1840	2.8					
5.8	1590	294	1170	1.05					
6.6	1100	257	1250	1.50					
7.4	1300	229	1210	1.25	S	47R17	DRS 71S4	42 617	
8.5	1130	200	1240	1.45	SF	47R17	DRS 71S4	50 617	
9.1	1060	187	1240	1.55	SA	47R17	DRS 71S4	44 617	
10	930	165	1260	1.75	SAF	47R17	DRS 71S4	48 617	
12	840	148	1270	1.95					
13	745	131	1280	2.2					
14	675	118	675	1.20	S	37R17	DRS 71S4	35 617	
15	635	110	675	1.30	SF	37R17	DRS 71S4	38 617	
					SA	37R17	DRS 71S4	35 617	
					SAF	37R17	DRS 71S4	38 617	
8.5	1090	201.00*	1830	2.4	S	57	DRS 71S4	44 592	
9.2	1010	184.80*	1830	2.6	SF	57	DRS 71S4	53 593	
11	880	158.12	1840	3.0	SA	57	DRS 71S4	44 594	
					SAF	57	DRS 71S4	50 593	

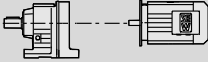


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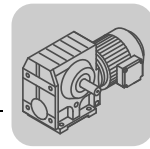
P_m [HP]	n_a [rpm]	T_a [lb-in]	i	$F_{Ra}^{1)}$ [lb]	SEW f_B		m [lbs]		
0.25	8.5	1050	201.00*	1250	1.40				
	9.2	980	184.80*	1260	1.50				
	11	850	158.12	1270	1.75	S 47	DRS 71S4	36	587
	12	755	137.05	1280	1.95	SF 47	DRS 71S4	44	588
	13	710	128.10*	1290	2.1	SA 47	DRS 71S4	38	589
	15	625	110.73	1300	2.4	SAF 47	DRS 71S4	42	588
	18	540	94.08*	1300	2.7				
	24	480	69.39	1300	2.8				
	12	755	144.40*	675	1.05				
	14	655	122.94	675	1.15				
	16	575	106.00*	675	1.30				
	17	540	98.80*	675	1.40				
	20	480	86.36	675	1.50				
	21	455	80.96	675	1.60				
	24	405	71.44*	675	1.75	S 37	DRS 71S4	29	583
	27	365	63.33	675	1.90	SF 37	DRS 71S4	32	584
	30	385	55.93	675	1.85	SA 37	DRS 71S4	29	585
	32	315	53.83	675	2.1	SAF 37	DRS 71S4	32	584
	33	355	51.30*	675	2.00				
	39	305	43.68	675	2.2				
45	265	37.66	675	2.5					
48	250	35.10*	675	2.6					
55	220	30.68	675	2.9					
85	156	19.89	630	2.8					
0.33	0.42	34800	4017	7490	1.05				
	0.49	31100	3453	7660	1.20				
	0.55	28000	3108	7800	1.35	S 97R57	DRS 71S4	375	617
	0.64	23400	2654	7960	1.60	SF 97R57	DRS 71S4	445	617
	0.73	20700	2329	8050	1.80	SA 97R57	DRS 71S4	365	617
	0.82	17700	2081	8130	2.1	SAF 97R57	DRS 71S4	420	617
	0.91	15800	1860	8170	2.3				
	1.1	13300	1574	8220	2.8				
	1.2	12600	1394	8230	2.9	S 97R57	DRS 71S4	375	617
						SF 97R57	DRS 71S4	445	617
						SA 97R57	DRS 71S4	360	617
						SAF 97R57	DRS 71S4	420	617
	0.59	19400	2905	6310	1.15				
	0.66	16800	2586	6430	1.30				
	0.73	15000	2335	6490	1.45	S 87R57	DRS 71S4	240	617
	0.83	13000	2054	6560	1.70	SF 87R57	DRS 71S4	290	617
	0.93	11500	1824	6600	1.90	SA 87R57	DRS 71S4	235	617
	1.0	10400	1631	6630	2.1	SAF 87R57	DRS 71S4	270	617
	1.3	8350	1332	6680	2.6				
	1.4	7540	1191	6700	2.9				
	1.4	10400	1245	2800	1.05	S 77R37	DRS 71S4	135	617
						SF 77R37	DRS 71S4	155	617
						SA 77R37	DRS 71S4	135	617
						SAF 77R37	DRS 71S4	150	617
	1.6	9740	1100	2950	1.15				
	1.8	8380	954	3170	1.30				
	2.0	7350	837	3320	1.50	S 77R37	DRS 71S4	135	617
	2.4	6130	714	3450	1.80	SF 77R37	DRS 71S4	155	617
	2.7	5430	637	3520	2.0	SA 77R37	DRS 71S4	135	617
	3.0	4930	574	3560	2.2	SAF 77R37	DRS 71S4	150	617
	3.4	4200	499	3600	2.6				
	3.9	3710	438	3600	3.0				
	2.8	4840	615	1890	1.05				
	3.1	4320	543	2010	1.15				
	3.6	3640	469	2140	1.40				
	4.0	3300	424	2190	1.50	S 67R37	DRS 71S4	92	617
	4.7	2970	365	2240	1.70	SF 67R37	DRS 71S4	105	617
	5.3	2560	319	2290	1.95	SA 67R37	DRS 71S4	94	617
	6.1	2230	281	2320	2.2	SAF 67R37	DRS 71S4	105	617
	6.9	2050	246	2330	2.4				
7.7	1790	221	2360	2.8					
8.6	1670	198	2360	3.0					

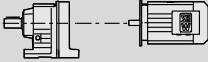


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S..DRE/DRS
S..DRE/DRS [HP]

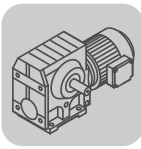
P_m [HP]	n_a [rpm]	T_a [lb-in]	i	$F_{Ra}^{1)}$ [lb]	SEW f_B		m [lbs]		
0.33	5.8	2310	294	1660	1.15				
	6.3	2180	269	1690	1.20	S 57R17	DRS 71S4	50	617
	7.4	1870	229	1740	1.40	SF 57R17	DRS 71S4	59	617
	8.3	1690	204	1760	1.55	SA 57R17	DRS 71S4	50	617
	9.1	1540	187	1780	1.70	SAF 57R17	DRS 71S4	56	617
	10	1360	165	1800	1.95				
	13	1090	131	1830	2.4				
	6.6	1600	257	1190	1.00				
	8.5	1620	200	1170	1.00	S 47R17	DRS 71S4	42	617
	9.1	1520	187	1190	1.10	SF 47R17	DRS 71S4	50	617
10	1340	165	1210	1.20	SA 47R17	DRS 71S4	44	617	
12	1210	148	1230	1.35	SAF 47R17	DRS 71S4	48	617	
13	1070	131	1240	1.50					
5.1	2520	217.41	2290	1.95	S 67	DRS 71S6	67	597	
5.8	2240	190.11	2320	2.2	SF 67	DRS 71S6	82	598	
6.1	2140	180.60*	2330	2.3	SA 67	DRS 71S6	70	599	
6.9	1910	158.45	2350	2.5	SAF 67	DRS 71S6	80	598	
8.2	1650	134.40*	2370	2.9					
7.8	1720	217.41	2360	2.7	S 67	DRS 71S4	67	597	
					SF 67	DRS 71S4	82	598	
					SA 67	DRS 71S4	70	599	
					SAF 67	DRS 71S4	80	598	
5.5	2210	201.00*	1680	1.20					
6.0	2060	184.80*	1710	1.25					
7.0	1790	158.12	1750	1.45					
8.0	1580	137.05	1780	1.65					
8.6	1490	128.10*	1790	1.75	S 57	DRS 71S6	44	592	
9.9	1310	110.73	1800	2.00	SF 57	DRS 71S6	53	593	
12	1140	94.08*	1820	2.3	SA 57	DRS 71S6	44	594	
13	1030	84.00*	1830	2.5	SAF 57	DRS 71S6	50	593	
15	890	71.75*	1840	2.9					
16	1020	69.39	1830	2.3					
17	940	63.80*	1840	2.5					
20	810	54.59	1840	2.9					
8.5	1510	201.00*	1780	1.70					
9.2	1400	184.80*	1800	1.85	S 57	DRS 71S4	44	592	
11	1220	158.12	1810	2.1	SF 57	DRS 71S4	53	593	
12	1080	137.05	1830	2.4	SA 57	DRS 71S4	44	594	
13	1020	128.10*	1830	2.6	SAF 57	DRS 71S4	50	593	
15	890	110.73	1840	2.9					
8.6	1440	128.10*	1210	1.05					
9.9	1270	110.73	1230	1.15					
12	1100	94.08*	1250	1.35					
13	990	84.00*	1260	1.50					
15	870	71.75*	1270	1.70					
16	1000	69.39	1250	1.50	S 47	DRS 71S6	36	587	
16	820	67.20*	1280	1.80	SF 47	DRS 71S6	44	588	
17	930	63.80*	1260	1.65	SA 47	DRS 71S6	38	589	
20	800	54.59	1270	1.90	SAF 47	DRS 71S6	42	588	
23	705	47.32	1280	2.2					
25	660	44.22*	1290	2.3					
29	575	38.23	1280	2.6					
54	335	20.33	1040	2.9					
8.5	1460	201.00*	1200	1.05					
9.2	1360	184.80*	1220	1.10					
11	1180	158.12	1240	1.25					
12	1040	137.05	1250	1.40					
13	980	128.10*	1260	1.50					
15	860	110.73	1270	1.70	S 47	DRS 71S4	36	587	
18	750	94.08*	1280	1.95	SF 47	DRS 71S4	44	588	
20	675	84.00*	1290	2.2	SA 47	DRS 71S4	38	589	
24	590	71.75*	1300	2.5	SAF 47	DRS 71S4	42	588	
24	670	69.39	1290	2.0					
25	555	67.20*	1300	2.6					
27	620	63.80*	1290	2.2					
31	535	54.59	1260	2.6					
36	465	47.32	1210	2.9					

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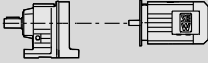




P_m [HP]	n_a [rpm]	T_a [lb-in]	i	$F_{Ra}^{1)}$ [lb]	SEW f_B		m [lbs]		
0.33	17	745	63.33	675	1.00				
	20	645	53.83	675	1.15				
	21	740	51.30*	675	1.05				
	25	640	43.68	675	1.15				
	29	555	37.66	675	1.30				
	31	520	35.10*	675	1.40				
	36	460	30.68	675	1.55				
	38	430	28.76	675	1.60				
	43	385	25.38*	675	1.80	S 37	DRS 71S6	29	583
	49	345	22.50*	675	1.95	SF 37	DRS 71S6	32	584
	55	325	19.89	670	1.50	SA 37	DRS 71S6	29	585
	58	295	19.13*	675	2.2	SAF 37	DRS 71S6	32	584
	60	300	18.24*	655	1.60				
	71	255	15.53	635	1.80				
	82	220	13.39	610	2.0				
	88	205	12.48*	600	2.2				
	101	184	10.91	580	2.4				
	108	173	10.23	575	2.5				
	122	154	9.02*	555	2.8				
	17	755	98.80*	675	1.00				
	20	670	86.36	675	1.10				
	21	630	80.96	675	1.15				
	24	565	71.44*	675	1.25				
	27	505	63.33	675	1.35				
30	535	55.93	675	1.35					
32	440	53.83	675	1.55					
33	495	51.30*	675	1.45					
39	425	43.68	675	1.60	S 37	DRS 71S4	29	583	
45	370	37.66	675	1.80	SF 37	DRS 71S4	32	584	
48	345	35.10*	675	1.90	SA 37	DRS 71S4	29	585	
55	305	30.68	675	2.1	SAF 37	DRS 71S4	32	584	
59	285	28.76	675	2.2					
67	255	25.38*	670	2.4					
76	225	22.50*	650	2.7					
85	215	19.89	605	2.0					
93	199	18.24*	595	2.2					
109	171	15.53	570	2.5					
127	148	13.39	550	2.8					
136	138	12.48*	540	3.0					
0.50	0.64	35800	2654	7430	1.05	S 97R57	DRS 71S4	375	617
	0.73	31500	2329	7650	1.20	SF 97R57	DRS 71S4	445	617
	0.82	27400	2081	7820	1.35	SA 97R57	DRS 71S4	365	617
	0.91	24500	1860	7930	1.50	SAF 97R57	DRS 71S4	420	617
	1.1	20600	1574	8050	1.80				
	1.2	19200	1394	8090	1.95	S 97R57	DRS 71S4	375	617
	1.4	16700	1223	8150	2.2	SF 97R57	DRS 71S4	445	617
	1.6	14800	1070	8190	2.5	SA 97R57	DRS 71S4	360	617
	1.8	12500	928	8230	3.0	SAF 97R57	DRS 71S4	420	617
	0.83	20100	2054	6280	1.10				
	0.93	17800	1824	6380	1.25				
	1.0	16100	1631	6450	1.35	S 87R57	DRS 71S4	240	617
	1.3	13000	1332	6560	1.70	SF 87R57	DRS 71S4	290	617
	1.4	11800	1191	6600	1.85	SA 87R57	DRS 71S4	235	617
	1.6	10200	1032	6640	2.2	SAF 87R57	DRS 71S4	270	617
	1.8	9620	930	6650	2.3				
	2.0	8700	831	6680	2.5				
	2.4	7480	719	6700	3.0				
	2.4	9320	714	3020	1.20				
	2.7	8280	637	3190	1.30				
	3.0	7500	574	3300	1.45	S 77R37	DRS 71S4	135	617
	3.4	6440	499	3420	1.70	SF 77R37	DRS 71S4	155	617
	3.9	5680	438	3500	1.95	SA 77R37	DRS 71S4	135	617
	4.4	5060	389	3550	2.2	SAF 77R37	DRS 71S4	150	617
5.2	4260	327	3600	2.6					
5.9	3910	289	3600	2.8					

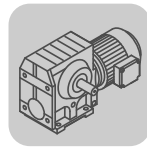
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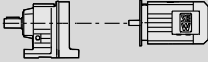



S..DRE/DRS
S..DRE/DRS [HP]

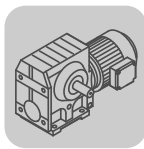
P_m [HP]	n_a [rpm]	T_a [lb-in]	i	$F_{Ra}^{1)}$ [lb]	SEW f_B		m [lbs]		
0.50	4.0	5060	424	1840	1.00				
	4.7	4490	365	1970	1.10				
	5.3	3910	319	2090	1.30				
	6.1	3430	281	2170	1.45	S 67R37	DRS 71S4	92	617
	6.9	3110	246	2220	1.60	SF 67R37	DRS 71S4	105	617
	7.7	2740	221	2260	1.85	SA 67R37	DRS 71S4	94	617
	8.6	2540	198	2290	2.00	SAF 67R37	DRS 71S4	105	617
	10	2160	168	2320	2.3				
	11	2030	156	2340	2.5				
	8.3	2540	204	1620	1.05	S 57R17	DRS 71S4	50	617
9.1	2330	187	1660	1.15	SF 57R17	DRS 71S4	59	617	
10	2070	165	1710	1.30	SA 57R17	DRS 71S4	50	617	
13	1660	131	1770	1.60	SAF 57R17	DRS 71S4	56	617	
13	1630	131	1170	1.00	S 47R17	DRS 71S4	42	617	
					SF 47R17	DRS 71S4	50	617	
					SA 47R17	DRS 71S4	44	617	
					SAF 47R17	DRS 71S4	48	617	
4.3	4750	256.47	3580	2.4	S 77	DRS 71M6	115	602	
4.9	4230	225.26	3600	2.6	SF 77	DRS 71M6	140	603	
5.1	4040	214.00*	3600	2.8	SA 77	DRS 71M6	115	604	
					SAF 77	DRS 71M6	130	603	
5.1	3740	217.41	2120	1.30					
5.8	3320	190.11	2190	1.50					
6.1	3180	180.60*	2210	1.55					
6.9	2830	158.45	2250	1.70	S 67	DRS 71M6	70	597	
8.2	2450	134.40*	2300	2.00	SF 67	DRS 71M6	85	598	
9.1	2230	121.33	2320	2.2	SA 67	DRS 71M6	73	599	
10	1990	106.75*	2340	2.4	SAF 67	DRS 71M6	82	598	
11	1890	100.80*	2350	2.6					
13	1640	85.83	2370	3.0					
15	1680	75.06	2360	2.8					
7.8	2550	217.41	2290	1.80	S 67	DRS 71S4	67	597	
8.9	2260	190.11	2320	2.0	SF 67	DRS 71S4	82	598	
9.4	2160	180.60*	2330	2.1	SA 67	DRS 71S4	70	599	
11	1920	158.45	2350	2.4	SAF 67	DRS 71S4	80	598	
13	1660	134.40*	2370	2.8					
8.0	2340	137.05	1660	1.10					
8.6	2210	128.10*	1680	1.20					
9.9	1940	110.73	1730	1.35					
12	1680	94.08*	1760	1.55					
13	1520	84.00*	1780	1.70					
15	1320	71.75*	1800	1.95	S 57	DRS 71M6	47	592	
16	1510	69.39	1780	1.60	SF 57	DRS 71M6	55	593	
16	1250	67.20*	1810	2.1	SA 57	DRS 71M6	46	594	
17	1390	63.80*	1800	1.70	SAF 57	DRS 71M6	52	593	
20	1210	54.59	1820	1.95					
23	1050	47.32	1830	2.2					
25	990	44.22*	1830	2.4					
29	860	38.23	1840	2.8					
54	500	20.33	1670	3.0					
8.5	2240	201.00*	1680	1.15					
9.2	2080	184.80*	1700	1.25					
11	1810	158.12	1740	1.45					
12	1600	137.05	1770	1.65					
13	1500	128.10*	1780	1.75					
15	1320	110.73	1800	1.95	S 57	DRS 71S4	44	592	
18	1140	94.08*	1820	2.3	SF 57	DRS 71S4	53	593	
20	1030	84.00*	1830	2.4	SA 57	DRS 71S4	44	594	
24	890	71.75*	1840	2.7	SAF 57	DRS 71S4	50	593	
24	1000	69.39	1830	2.2					
25	840	67.20*	1840	2.7					
27	930	63.80*	1840	2.3					
31	800	54.59	1850	2.7					

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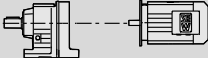




P_m [HP]	n_a [rpm]	T_a [lb-in]	i	$F_{Ra}^{1)}$ [lb]	SEW f_B		m [lbs]		
0.50	13	1480	84.00*	1200	1.00				
	15	1280	71.75*	1230	1.15				
	16	1480	69.39	1190	1.05				
	16	1210	67.20*	1240	1.25				
	17	1370	63.80*	1210	1.10				
	20	1190	54.59	1230	1.25				
	23	1040	47.32	1250	1.45				
	25	980	44.22*	1250	1.55	S 47	DRS 71M6	38	587
	29	850	38.23	1220	1.75	SF 47	DRS 71M6	46	588
	34	735	32.48*	1170	2.0	SA 47	DRS 71M6	41	589
	38	660	29.00*	1140	2.3	SAF 47	DRS 71M6	44	588
	44	570	24.77	1100	2.6				
	47	535	23.20*	1080	2.7				
	54	500	20.33	990	1.95				
	62	435	17.62	960	2.3				
	67	410	16.47*	940	2.4				
	77	355	14.24	910	2.8				
	13	1460	128.10*	1210	1.00				
	15	1280	110.73	1230	1.15				
	18	1110	94.08*	1250	1.35				
20	1000	84.00*	1260	1.45					
24	870	71.75*	1270	1.70					
24	990	69.39	1250	1.40	S 47	DRS 71S4	36	587	
25	820	67.20*	1280	1.75	SF 47	DRS 71S4	44	588	
27	920	63.80*	1240	1.50	SA 47	DRS 71S4	38	589	
31	795	54.59	1200	1.70	SAF 47	DRS 71S4	42	588	
36	695	47.32	1160	1.95					
38	650	44.22*	1140	2.1					
44	565	38.23	1100	2.4					
52	485	32.48*	1050	2.8					
84	330	20.33	890	2.9					
36	680	30.68	675	1.05					
38	640	28.76	675	1.10					
43	570	25.38*	675	1.20					
49	510	22.50*	675	1.35					
55	480	19.89	605	1.00					
58	435	19.13*	655	1.50					
60	445	18.24*	600	1.05					
71	380	15.53	585	1.20	S 37	DRS 71M6	32	583	
82	330	13.39	570	1.40	SF 37	DRS 71M6	35	584	
88	310	12.48*	560	1.45	SA 37	DRS 71M6	31	585	
101	270	10.91	545	1.60	SAF 37	DRS 71M6	34	584	
108	255	10.23	540	1.70					
122	225	9.02*	525	1.85					
138	200	8.00*	510	2.0					
162	173	6.80*	490	2.4					
174	162	6.33	480	2.5					
204	138	5.38	460	2.8					
226	126	4.86*	450	3.0					
32	650	53.83	675	1.05					
39	630	43.68	675	1.10					
45	550	37.66	675	1.20					
48	515	35.10*	675	1.30					
55	450	30.68	660	1.40					
59	425	28.76	650	1.50					
67	380	25.38*	635	1.65					
76	335	22.50*	615	1.85					
85	315	19.89	565	1.40	S 37	DRS 71S4	29	583	
89	290	19.13*	595	2.1	SF 37	DRS 71S4	32	584	
93	290	18.24*	555	1.45	SA 37	DRS 71S4	29	585	
109	250	15.53	540	1.70	SAF 37	DRS 71S4	32	584	
127	215	13.39	520	1.90					
136	200	12.48*	510	2.00					
156	180	10.91	495	2.2					
166	168	10.23	490	2.4					
188	150	9.02*	475	2.5					
212	133	8.00*	460	2.9					
268	106	6.33	430	2.9					

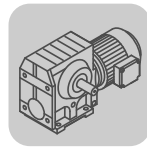
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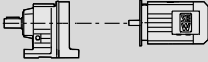




S..DRE/DRS
S..DRE/DRS [HP]

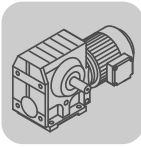
P_m [HP]	n_a [rpm]	T_a [lb-in]	i	$F_{Ra}^{1)}$ [lb]	SEW f_B		m [lbs]		
0.75	1.1	31800	1574	7630	1.15	S 97R57 DRS 71M4 SF 97R57 DRS 71M4 SA 97R57 DRS 71M4 SAF 97R57 DRS 71M4	380 617 450 617 365 617 425 617		
	1.2	29200	1394	7750	1.25				
	1.4	25500	1223	7890	1.45	S 97R57 DRS 71M4	375 617		
	1.6	22400	1070	7990	1.65	SF 97R57 DRS 71M4	450 617		
	1.8	19200	928	8090	1.95	SA 97R57 DRS 71M4	365 617		
	2.0	16900	824	8140	2.2	SAF 97R57 DRS 71M4	420 617		
	2.7	12900	626	8230	2.9				
	1.3	20300	1332	6270	1.10				
	1.4	18300	1191	6360	1.20				
	1.6	15900	1032	6460	1.40	S 87R57 DRS 71M4	245 617		
	1.8	14800	930	6500	1.50	SF 87R57 DRS 71M4	290 617		
	2.0	13400	831	6550	1.65	SA 87R57 DRS 71M4	240 617		
	2.4	11600	719	6600	1.90	SAF 87R57 DRS 71M4	275 617		
	2.7	10100	624	6640	2.2				
	3.0	9140	558	6670	2.4				
	3.9	7310	435	6700	3.0				
	3.4	9850	499	2930	1.10				
	3.9	8700	438	3130	1.25	S 77R37 DRS 71M4	135 617		
	4.4	7740	389	3270	1.40	SF 77R37 DRS 71M4	160 617		
	5.2	6540	327	3410	1.70	SA 77R37 DRS 71M4	135 617		
	5.8	5940	289	3470	1.85	SAF 77R37 DRS 71M4	150 617		
	6.8	5130	250	3550	2.1				
	7.7	4530	219	3590	2.4				
	6.9	4720	246	1920	1.05	S 67R37 DRS 71M4	95 617		
	7.6	4200	221	2030	1.20	SF 67R37 DRS 71M4	110 617		
	8.6	3850	198	2100	1.30	SA 67R37 DRS 71M4	97 617		
	10	3290	168	2190	1.55	SAF 67R37 DRS 71M4	105 617		
	11	3080	156	2220	1.65				
13	2520	131	1620	1.05	S 57R17 DRS 71M4 SF 57R17 DRS 71M4 SA 57R17 DRS 71M4 SAF 57R17 DRS 71M4	53 617 61 617 53 617 59 617			
3.9	8210	288.00*	6690	2.6	S 87 DRS 80S6	200 607			
4.3	7440	258.18	6700	2.8	SF 87 DRS 80S6 SA 87 DRS 80S6 SAF 87 DRS 80S6	250 608 195 609 230 608			
4.4	6950	256.47	3370	1.60					
5.0	6190	225.26	3450	1.80	S 77 DRS 80S6	120 602			
5.2	5910	214.00*	3480	1.90	SF 77 DRS 80S6	145 603			
5.9	5290	189.09	3530	2.1	SA 77 DRS 80S6	120 604			
6.9	4590	161.60*	3590	2.4	SAF 77 DRS 80S6	135 603			
7.6	4250	148.15	3600	2.6					
8.6	3770	130.00*	3600	3.0					
6.6	4810	256.47	3570	2.3	S 77 DRS 71M4	115 602			
7.5	4280	225.26	3600	2.6	SF 77 DRS 71M4	140 603			
7.9	4080	214.00*	3600	2.8	SA 77 DRS 71M4	115 604			
8.9	3650	189.09	3600	3.0	SAF 77 DRS 71M4	130 603			
5.9	4860	190.11	1890	1.00					
6.2	4650	180.60*	1940	1.05					
7.1	4140	158.45	2050	1.15					
8.3	3580	134.40*	2150	1.35					
9.2	3270	121.33	2200	1.50					
10	2920	106.75*	2240	1.65	S 67 DRS 80S6	75 597			
11	2770	100.80*	2260	1.75	SF 67 DRS 80S6	90 598			
13	2400	85.83	2300	2.0	SA 67 DRS 80S6	78 599			
14	2200	78.00*	2320	2.2	SAF 67 DRS 80S6	87 598			
15	2450	75.06	2300	1.90					
17	2160	65.63	2320	2.1					
18	2060	62.35*	2330	2.2					
20	1820	54.70	2350	2.5					
24	1560	46.40*	2370	3.0					

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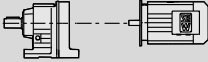




P_m [HP]	n_a [rpm]	T_a [lb-in]	i	$F_{Ra}^{1)}$ [lb]	SEW f_B		m [lbs]		
0.75	7.8	3810	217.41	2110	1.20				
	8.9	3380	190.11	2180	1.35				
	9.4	3230	180.60*	2200	1.40				
	11	2870	158.45	2250	1.60				
	13	2480	134.40*	2290	1.85	S 67	DRS 71M4	70	597
	14	2260	121.33	2320	2.0	SF 67	DRS 71M4	85	598
	16	2010	106.75*	2340	2.3	SA 67	DRS 71M4	73	599
	17	1910	100.80*	2350	2.4	SAF 67	DRS 71M4	82	598
	20	1650	85.83	2370	2.8				
	23	1670	75.06	2360	2.5				
	26	1470	65.63	2380	2.9				
	16	2020	217.41	2340	2.0	S 67	DRS 71M2	70	597
	18	1790	190.11	2360	2.3	SF 67	DRS 71M2	85	598
	19	1710	180.60*	2360	2.4	SA 67	DRS 71M2	73	599
	22	1510	158.45	2370	2.7	SAF 67	DRS 71M2	82	598
	12	2470	94.08*	1630	1.05				
	13	2230	84.00*	1680	1.15				
	16	1940	71.75*	1730	1.35				
	17	1830	67.20*	1740	1.45				
	20	1560	56.61	1780	1.65				
	21	1770	54.59	1750	1.35				
	24	1550	47.32	1780	1.55	S 57	DRS 80S6	52	592
	25	1450	44.22*	1790	1.65	SF 57	DRS 80S6	60	593
	29	1260	38.23	1810	1.90	SA 57	DRS 80S6	51	594
	34	1090	32.48*	1830	2.2	SAF 57	DRS 80S6	57	593
	39	970	29.00*	1830	2.4				
45	840	24.77	1750	2.8					
55	735	20.33	1600	2.0					
64	640	17.62	1540	2.3					
68	600	16.47*	1510	2.5					
79	520	14.24	1450	2.8					
12	2390	137.05	1650	1.10					
13	2250	128.10*	1670	1.15					
15	1980	110.73	1720	1.30					
18	1710	94.08*	1760	1.55					
20	1540	84.00*	1780	1.65					
24	1330	71.75*	1800	1.80					
24	1500	69.39	1780	1.45	S 57	DRS 71M4	47	592	
25	1260	67.20*	1810	1.80	SF 57	DRS 71M4	55	593	
26	1390	63.80*	1800	1.55	SA 57	DRS 71M4	46	594	
31	1200	54.59	1820	1.80	SAF 57	DRS 71M4	52	593	
36	1050	47.32	1830	2.1					
38	980	44.22*	1830	2.2					
44	860	38.23	1760	2.5					
52	735	32.48*	1690	2.9					
83	495	20.33	1430	3.0					
17	1790	201.00*	1750	1.35					
19	1660	184.80*	1770	1.45					
22	1440	158.12	1790	1.65					
25	1270	137.05	1810	1.75					
27	1190	128.10*	1820	1.80	S 57	DRS 71M2	47	592	
31	1040	110.73	1830	1.80	SF 57	DRS 71M2	55	593	
36	890	94.08*	1840	1.80	SA 57	DRS 71M2	46	594	
41	800	84.00*	1850	1.80	SAF 57	DRS 71M2	52	593	
48	695	71.75*	1760	1.75					
49	775	69.39	1710	2.5					
51	655	67.20*	1730	1.75					
54	715	63.80*	1670	2.7					

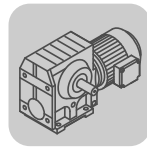
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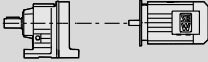
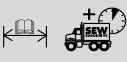


S..DRE/DRS
S..DRE/DRS [HP]

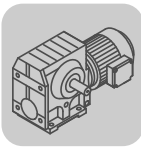
P_m [HP]	n_a [rpm]	T_a [lb-in]	i	$F_{Ra}^{1)}$ [lb]	SEW f_B		m [lbs]		
0.75	25	1430	44.22*	1150	1.05				
	29	1250	38.23	1120	1.20				
	34	1070	32.48*	1090	1.40				
	39	960	29.00*	1060	1.55				
	45	830	24.77	1030	1.80				
	48	780	23.20*	1010	1.85				
	55	730	20.33	910	1.35	S 47	DRS 80S6	43	587
	57	665	19.54	970	2.0	SF 47	DRS 80S6	51	588
	64	635	17.62	890	1.55	SA 47	DRS 80S6	46	589
	68	595	16.47*	880	1.65	SAF 47	DRS 80S6	49	588
	79	520	14.24	850	1.90				
	93	445	12.10*	820	2.2				
	104	395	10.80*	800	2.5				
121	340	9.23*	770	2.8					
130	320	8.64*	760	3.0					
24	1300	71.75*	1230	1.15					
25	1230	67.20*	1230	1.20					
26	1370	63.80*	1140	1.00					
31	1180	54.59	1110	1.15					
36	1040	47.32	1080	1.30					
38	970	44.22*	1070	1.40					
44	850	38.23	1030	1.60	S 47	DRS 71M4	38	587	
52	725	32.48*	1000	1.90	SF 47	DRS 71M4	46	588	
58	655	29.00*	970	2.1	SA 47	DRS 71M4	41	589	
68	560	24.77	930	2.3	SAF 47	DRS 71M4	44	588	
73	525	23.20*	920	2.4					
83	490	20.33	840	1.95					
96	430	17.62	820	2.2					
103	400	16.47*	800	2.4					
119	350	14.24	775	2.8					
25	1230	137.05	1230	1.05					
27	1160	128.10*	1220	1.15					
31	1020	110.73	1180	1.20					
36	870	94.08*	1130	1.15					
41	790	84.00*	1100	1.05					
49	765	69.39	1010	1.60					
54	705	63.80*	990	1.75					
63	610	54.59	950	2.0					
72	530	47.32	920	2.3	S 47	DRS 71M2	38	587	
77	500	44.22*	910	2.3	SF 47	DRS 71M2	46	588	
89	435	38.23	870	2.3	SA 47	DRS 71M2	41	589	
105	370	32.48*	830	2.2	SAF 47	DRS 71M2	44	588	
118	330	29.00*	810	2.0					
138	285	24.77	775	1.45					
147	265	23.20*	760	1.40					
371	115	9.23*	570	2.5					
396	108	8.64*	560	2.4					
470	91	7.28	530	2.1					
718	60	4.76	465	2.9					
855	51	4.00*	440	2.8					
59	640	19.13*	585	1.05					
103	395	10.91	495	1.10					
110	370	10.23	490	1.15					
124	330	9.02*	480	1.30	S 37	DRS 80S6	36	583	
140	295	8.00*	470	1.40	SF 37	DRS 80S6	39	584	
165	250	6.80*	455	1.60	SA 37	DRS 80S6	36	585	
177	235	6.33	445	1.70	SAF 37	DRS 80S6	39	584	
208	200	5.38	430	1.90					
230	183	4.86*	420	2.0					
282	150	3.97	405	2.4					

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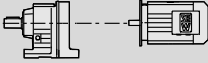


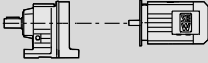




P_m [HP]	n_a [rpm]	T_a [lb-in]	i	$F_{Ra}^{1)}$ [lb]	SEW f_B		m [lbs]		
0.75	59	635	28.76	585	1.00				
	67	565	25.38*	575	1.10				
	75	505	22.50*	565	1.20				
	88	430	19.13*	550	1.40				
	109	375	15.53	490	1.15				
	126	325	13.39	480	1.25				
	135	305	12.48*	475	1.35	S 37	DRS 71M4	32	583
	155	265	10.91	460	1.50	SF 37	DRS 71M4	35	584
	165	250	10.23	455	1.60	SA 37	DRS 71M4	31	585
	187	220	9.02*	445	1.70	SAF 37	DRS 71M4	34	584
	211	198	8.00*	435	1.90				
	249	170	6.80*	420	2.1				
	267	158	6.33	410	1.95				
	314	135	5.38	395	2.2				
	347	123	4.86*	385	2.4				
	426	100	3.97	365	2.8				
		61	615	55.93	580	1.00			
		67	565	51.30*	575	1.05			
		78	485	43.68	560	1.20			
		91	420	37.66	545	1.35			
97		395	35.10*	540	1.40				
111		345	30.68	525	1.55				
119		325	28.76	520	1.55				
135		290	25.38*	505	1.45				
152		255	22.50*	490	1.05				
172		240	19.89	455	1.55	S 37	DRS 71M2	32	583
188		220	18.24*	445	1.65	SF 37	DRS 71M2	35	584
220		190	15.53	430	1.80	SA 37	DRS 71M2	31	585
255		165	13.39	415	2.00	SAF 37	DRS 71M2	34	584
274		154	12.48*	410	2.1				
314		135	10.91	395	2.3				
334		127	10.23	390	2.4				
379		112	9.02*	380	2.4				
428		100	8.00*	365	1.75				
503		85	6.80*	350	1.65				
540		80	6.33	340	2.7				
635	68	5.38	325	2.6					
703	61	4.86*	320	2.6					
862	50	3.97	300	2.5					
1.0	1.4	34100	1223	7520	1.10				
	1.6	30000	1070	7710	1.25				
	1.9	25700	928	7880	1.45	S 97R57	DRE 80M4	385	617
	2.1	22700	824	7990	1.65	SF 97R57	DRE 80M4	460	617
	2.4	16500	714	8150	2.2	SA 97R57	DRE 80M4	375	617
	2.8	17300	626	8130	2.1	SAF 97R57	DRE 80M4	435	617
	3.2	14900	538	8190	2.5				
	3.6	13400	484	8220	2.8				
		1.7	21600	1032	6210	1.00			
		1.9	19900	930	6290	1.10			
2.1		18000	831	6380	1.25				
2.4		15600	719	6470	1.40				
2.8		13700	624	6540	1.60	S 87R57	DRE 80M4	255	617
3.1		12300	558	6580	1.80	SF 87R57	DRE 80M4	305	617
3.6		10800	485	6620	2.0	SA 87R57	DRE 80M4	250	617
4.0		9910	435	6650	2.2	SAF 87R57	DRE 80M4	285	617
4.6		8680	378	6680	2.5				
5.4		7570	323	6700	2.8				
	6.8	7040	255	6700	2.5				
	7.8	6170	222	6720	2.8				
	4.5	10300	389	2820	1.05				
	5.3	8790	327	3110	1.25	S 77R37	DRE 80M4	150	617
	6.0	7940	289	3240	1.40	SF 77R37	DRE 80M4	170	617
	7.0	6870	250	3370	1.60	SA 77R37	DRE 80M4	145	617
	7.9	6070	219	3460	1.80	SAF 77R37	DRE 80M4	160	617
	10	4410	168	1990	1.15	S 67R37	DRE 80M4	105	617
	11	4120	156	2050	1.20	SF 67R37	DRE 80M4	120	617
						SA 67R37	DRE 80M4	110	617
					SAF 67R37	DRE 80M4	120	617	

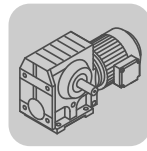
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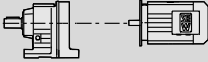




S..DRE/DRS
S..DRE/DRS [HP]

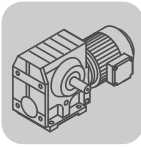
P_m [HP]	n_a [rpm]	T_a [lb-in]	i	$F_{Ra}^{1)}$ [lb]	SEW f_B		m [lbs]							
1.0	4.0	10900	288.00*	6620	1.95									
	4.4	9940	258.18	6650	2.1					S 87	DRE 90L6	220	607	
	5.2	8690	222.40*	6680	2.4					SF 87	DRE 90L6	270	608	
	5.6	7990	202.96	6690	2.6					SA 87	DRE 90L6	215	609	
	6.4	7170	180.00*	6710	2.8					SAF 87	DRE 90L6	250	608	
	6.0	7510	288.00*	6700	2.7					S 87	DRE 80M4	205	607	
	6.7	6800	258.18	6710	2.9					SF 87	DRE 80M4	255	608	
											SA 87	DRE 80M4	200	609
											SAF 87	DRE 80M4	235	608
	5.1	8280	225.26	3190	1.35									
	5.4	7910	214.00*	3240	1.40									
	6.1	7080	189.09	3350	1.60									
	7.1	6140	161.60*	3450	1.85									
	7.7	5680	148.15	3500	2.00					S 77	DRE 90L6	140	602	
	8.8	5050	130.00*	3550	2.2					SF 77	DRE 90L6	165	603	
	9.3	4800	123.20*	3570	2.3					SA 77	DRE 90L6	140	604	
	11	4250	107.83	3600	2.5					SAF 77	DRE 90L6	155	603	
	12	3870	97.14	3600	2.7									
	15	3490	75.09	3600	2.8									
	16	3330	71.33	3600	3.0									
	6.8	6390	256.47	3430	1.75									
	7.7	5680	225.26	3500	2.00					S 77	DRE 80M4	130	602	
	8.1	5420	214.00*	3520	2.1					SF 77	DRE 80M4	150	603	
	9.2	4850	189.09	3570	2.3					SA 77	DRE 80M4	125	604	
	11	4200	161.60*	3600	2.6					SAF 77	DRE 80M4	140	603	
	12	3880	148.15	3600	2.7									
	8.5	4790	134.40*	1900	1.00									
	9.4	4370	121.33	2000	1.10									
	11	3900	106.75*	2090	1.25									
	11	3700	100.80*	2130	1.30									
	13	3210	85.83	2200	1.50									
	15	2940	78.00*	2240	1.65									
	17	2890	65.63	2250	1.60					S 67	DRE 90L6	98	597	
	18	2760	62.35*	2260	1.70					SF 67	DRE 90L6	110	598	
	21	2440	54.70	2300	1.90					SA 67	DRE 90L6	100	599	
	25	2090	46.40*	2320	2.2					SAF 67	DRE 90L6	110	598	
	27	1890	41.89	2260	2.4									
	31	1680	36.85	2190	2.8									
	33	1590	34.80*	2150	2.9									
	47	1200	24.44	1880	2.6									
	49	1140	23.22*	1860	2.8									
	9.2	4490	190.11	1970	1.00									
	9.6	4290	180.60*	2020	1.05									
	11	3820	158.45	2110	1.20									
	13	3290	134.40*	2190	1.40									
	14	3000	121.33	2230	1.55									
	16	2670	106.75*	2270	1.70					S 67	DRE 80M4	81	597	
	17	2540	100.80*	2290	1.80					SF 67	DRE 80M4	96	598	
20	2190	85.83	2320	2.1	SA 67	DRE 80M4	84	599						
22	2000	78.00*	2340	2.2	SAF 67	DRE 80M4	93	598						
23	2210	75.06	2320	1.90										
27	1950	65.63	2280	2.2										
28	1860	62.35*	2250	2.3										
32	1640	54.70	2170	2.6										
16	2710	217.41	2270	1.50										
18	2400	190.11	2300	1.70										
19	2290	180.60*	2310	1.80										
22	2030	158.45	2340	2.0	S 67	DRE 80M2	81	597						
26	1740	134.40*	2360	2.4	SF 67	DRE 80M2	96	598						
29	1580	121.33	2290	2.5	SA 67	DRE 80M2	84	599						
33	1400	106.75*	2210	2.5	SAF 67	DRE 80M2	93	598						
35	1330	100.80*	2180	2.5										
41	1140	85.83	2080	2.5										
45	1040	78.00*	2020	2.4										

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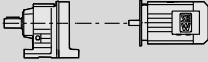




P_m [HP]	n_a [rpm]	T_a [lb-in]	i	$F_{Ra}^{1)}$ [lb]	SEW f_B		m [lbs]		
1.0	16	2590	71.75*	1610	1.00				
	17	2440	67.20*	1640	1.10				
	20	2090	56.61	1700	1.20				
	24	2070	47.32	1710	1.15				
	26	1940	44.22*	1730	1.25				
	30	1690	38.23	1760	1.40				
	35	1450	32.48*	1790	1.65	S 57	DRE 90L6	72	592
	39	1300	29.00*	1760	1.85	SF 57	DRE 90L6	81	593
	46	1120	24.77	1690	2.1	SA 57	DRE 90L6	72	594
	49	1050	23.20*	1660	2.3	SAF 57	DRE 90L6	78	593
59	890	19.54	1590	2.5					
65	850	17.62	1470	1.75					
70	800	16.47*	1450	1.85					
80	695	14.24	1400	2.1					
95	595	12.10*	1340	2.5					
106	535	10.80*	1300	2.8					
18	2270	94.08*	1670	1.15					
21	2050	84.00*	1710	1.25					
24	1770	71.75*	1750	1.35					
26	1670	67.20*	1760	1.35					
31	1430	56.61	1790	1.40					
32	1590	54.59	1770	1.35					
37	1390	47.32	1790	1.55					
39	1310	44.22*	1760	1.65	S 57	DRE 80M4	57	592	
46	1140	38.23	1690	1.90	SF 57	DRE 80M4	66	593	
54	970	32.48*	1620	2.2	SA 57	DRE 80M4	57	594	
60	870	29.00*	1580	2.5	SAF 57	DRE 80M4	63	593	
70	755	24.77	1510	2.6					
75	710	23.20*	1480	2.6					
86	655	20.33	1380	2.3					
89	600	19.54	1410	2.7					
99	570	17.62	1330	2.6					
106	535	16.47*	1300	2.8					
22	1930	158.12	1730	1.25					
25	1700	137.05	1760	1.35					
27	1590	128.10*	1770	1.35					
32	1390	110.73	1800	1.35					
37	1200	94.08*	1820	1.35					
42	1080	84.00*	1790	1.35					
49	930	71.75*	1710	1.30					
52	870	67.20*	1680	1.30	S 57	DRE 80M2	57	592	
62	745	56.61	1600	1.20	SF 57	DRE 80M2	66	593	
64	820	54.59	1550	2.4	SA 57	DRE 80M2	57	594	
74	720	47.32	1490	2.6	SAF 57	DRE 80M2	63	593	
79	675	44.22*	1460	2.6					
91	585	38.23	1400	2.6					
107	500	32.48*	1340	2.6					
120	450	29.00*	1300	2.6					
141	385	24.77	1240	2.5					
150	360	23.20*	1210	2.5					
179	305	19.54	1150	2.3					
35	1430	32.48*	1000	1.05					
39	1290	29.00*	980	1.15					
46	1110	24.77	960	1.35					
49	1040	23.20*	950	1.40					
59	890	19.54	920	1.55					
65	850	17.62	810	1.15					
70	800	16.47*	810	1.25	S 47	DRE 90L6	64	587	
80	695	14.24	790	1.40	SF 47	DRE 90L6	72	588	
95	590	12.10*	770	1.65	SA 47	DRE 90L6	67	589	
106	530	10.80*	755	1.85	SAF 47	DRE 90L6	70	588	
124	455	9.23*	730	2.1					
133	430	8.64*	720	2.2					
157	360	7.28	695	2.6					
168	345	6.83	680	2.4					
179	320	6.40*	665	2.5					
212	270	5.39	640	2.9					

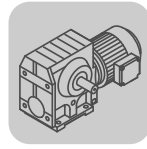
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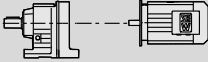




S..DRE/DRS
S..DRE/DRS [HP]

P_m [HP]	n_a [rpm]	T_a [lb-in]	i	$F_{Ra}^{1)}$ [lb]	SEW f_B		m [lbs]		
1.0	39	1290	44.22*	980	1.05				
	46	1120	38.23	960	1.20				
	54	960	32.48*	930	1.40				
	60	860	29.00*	910	1.55				
	70	745	24.77	880	1.70				
	75	700	23.20*	870	1.80	S 47	DRE 80M4	49	587
	86	655	20.33	780	1.50	SF 47	DRE 80M4	57	588
	89	595	19.54	840	1.80	SA 47	DRE 80M4	52	589
	99	570	17.62	765	1.70	SAF 47	DRE 80M4	55	588
	106	535	16.47*	755	1.80				
	122	460	14.24	730	2.1				
	144	395	12.10*	705	2.4				
	161	355	10.80*	690	2.7				
	64	810	54.59	900	1.50				
	74	710	47.32	870	1.70				
	79	665	44.22*	860	1.70				
91	580	38.23	830	1.70					
107	495	32.48*	800	1.60					
120	445	29.00*	780	1.50					
141	380	24.77	745	1.10					
150	360	23.20*	735	1.05					
172	330	20.33	680	2.6					
198	290	17.62	655	3.0	S 47	DRE 80M2	49	587	
212	270	16.47*	645	2.9	SF 47	DRE 80M2	57	588	
245	235	14.24	620	2.9	SA 47	DRE 80M2	52	589	
289	200	12.10*	595	2.8	SAF 47	DRE 80M2	55	588	
323	180	10.80*	580	2.6					
378	154	9.23*	555	1.85					
404	144	8.64*	545	1.80					
480	122	7.28	520	1.60					
511	116	6.83	505	2.6					
545	108	6.40*	495	2.5					
647	91	5.39	475	2.3					
733	81	4.76	455	2.2					
872	68	4.00*	435	2.1					
143	390	8.00*	425	1.05					
168	335	6.80*	420	1.20	S 37	DRE 90L6	57	583	
181	315	6.33	410	1.25	SF 37	DRE 90L6	60	584	
213	265	5.38	400	1.40	SA 37	DRE 90L6	57	585	
235	240	4.86*	390	1.50	SAF 37	DRE 90L6	60	584	
289	200	3.97	380	1.75					
91	575	19.13*	500	1.05					
139	405	12.48*	430	1.00					
160	355	10.91	420	1.10					
170	330	10.23	420	1.20					
193	295	9.02*	410	1.30	S 37	DRE 80M4	42	583	
218	260	8.00*	405	1.45	SF 37	DRE 80M4	45	584	
256	220	6.80*	390	1.60	SA 37	DRE 80M4	42	585	
275	210	6.33	380	1.45	SAF 37	DRE 80M4	45	584	
323	180	5.38	370	1.65					
358	163	4.86*	360	1.80					
439	133	3.97	345	2.1					
93	565	37.66	500	1.00					
99	525	35.10*	495	1.05					
114	465	30.68	485	1.15					
121	435	28.76	480	1.15					
138	385	25.38*	470	1.05					
225	250	15.53	400	1.35					
261	220	13.39	390	1.50					
280	205	12.48*	385	1.60	S 37	DRE 80M2	42	583	
320	180	10.91	375	1.70	SF 37	DRE 80M2	45	584	
341	170	10.23	370	1.80	SA 37	DRE 80M2	42	585	
387	150	9.02*	360	1.85	SAF 37	DRE 80M2	45	584	
436	134	8.00*	350	1.30					
513	113	6.80*	335	1.25					
551	106	6.33	330	2.0					
648	90	5.38	315	1.95					
718	82	4.86*	305	1.95					
880	67	3.97	290	1.85					

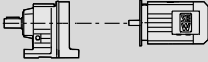


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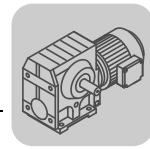
P_m [HP]	n_a [rpm]	T_a [lb-in]	i	$F_{Ra}^{1)}$ [lb]	SEW f_B		m [lbs]				
1.5	2.1	33700	824	7540	1.10						
	2.4	24500	714	7930	1.50						
	2.8	25800	626	7880	1.45	S	97R57	DRE	90M4	400	617
	3.2	22200	538	8000	1.65	SF	97R57	DRE	90M4	470	617
	3.6	20100	484	8060	1.85	SA	97R57	DRE	90M4	385	617
	4.2	17400	420	8130	2.1	SAF	97R57	DRE	90M4	445	617
	4.6	15800	376	8170	2.4						
	5.3	13900	327	8210	2.7						
	2.8	20400	624	6260	1.10						
	3.1	18500	558	6360	1.20						
	3.6	16200	485	6450	1.35						
	4.0	14800	435	6500	1.45	S	87R57	DRE	90M4	265	617
	4.6	13000	378	6560	1.65	SF	87R57	DRE	90M4	315	617
	5.4	11300	323	6610	1.85	SA	87R57	DRE	90M4	260	617
	6.2	9940	281	6650	2.1	SAF	87R57	DRE	90M4	295	617
	6.8	10500	255	6630	1.65						
	7.8	9230	222	6660	1.90						
	8.5	8660	205	6670	2.0						
	7.0	10100	250	2860	1.10	S	77R37	DRE	90M4	155	617
	7.9	8990	219	3080	1.20	SF	77R37	DRE	90M4	180	617
					SA	77R37	DRE	90M4	155	617	
					SAF	77R37	DRE	90M4	170	617	
6.0	11000	288.00*	6620	1.85							
6.7	9970	258.18	6650	2.0	S	87	DRE	90M4	215	607	
7.8	8700	222.40*	6680	2.2	SF	87	DRE	90M4	265	608	
8.6	8000	202.96	6690	2.4	SA	87	DRE	90M4	210	609	
9.7	7160	180.00*	6710	2.6	SAF	87	DRE	90M4	245	608	
12	6090	151.30	6720	3.0							
6.8	9370	256.47	3010	1.20							
7.7	8340	225.26	3180	1.35							
8.1	7960	214.00*	3240	1.40							
9.2	7110	189.09	3350	1.55							
11	6160	161.60*	3450	1.75	S	77	DRE	90M4	135	602	
12	5690	148.15	3500	1.85	SF	77	DRE	90M4	155	603	
13	5050	130.00*	3550	2.0	SA	77	DRE	90M4	135	604	
14	4800	123.20*	3570	2.1	SAF	77	DRE	90M4	150	603	
16	4240	107.83	3600	2.3							
18	3850	97.14	3560	2.5							
20	3410	85.22	3430	2.7							
23	3440	75.09	3210	2.8							
24	3270	71.33	3170	3.0							
14	5000	256.47	3560	2.0							
15	4430	225.26	3600	2.2	S	77	DRE	90M2	135	602	
16	4230	214.00*	3600	2.3	SF	77	DRE	90M2	155	603	
18	3770	189.09	3530	2.5	SA	77	DRE	90M2	135	604	
21	3250	161.60*	3390	2.8	SAF	77	DRE	90M2	150	603	
23	3000	148.15	3310	3.0							
14	4410	121.33	1990	1.05							
16	3920	106.75*	2090	1.15							
17	3720	100.80*	2120	1.25							
20	3210	85.83	2200	1.45							
22	2940	78.00*	2240	1.55							
23	3250	75.06	2190	1.30	S	67	DRE	90M4	92	597	
27	2860	65.63	2130	1.50	SF	67	DRE	90M4	105	598	
28	2730	62.35*	2110	1.55	SA	67	DRE	90M4	94	599	
32	2410	54.70	2050	1.75	SAF	67	DRE	90M4	105	598	
38	2060	46.40*	1980	2.1							
42	1870	41.89	1930	2.3							
47	1650	36.85	1870	2.6							
50	1560	34.80*	1850	2.7							
71	1170	24.44	1610	2.6							
75	1110	23.22*	1590	2.7							

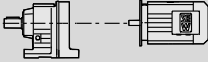

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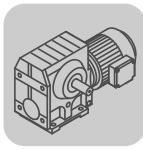

S..DRE/DRS
S..DRE/DRS [HP]

P_m [HP]	n_a [rpm]	T_a [lb-in]	i	$F_{Ra}^{1)}$ [lb]	SEW f_B		m [lbs]		
1.5	16	4000	217.41	2070	1.05				
	18	3540	190.11	2150	1.15				
	19	3370	180.60*	2180	1.20				
	22	2990	158.45	2230	1.35				
	26	2570	134.40*	2250	1.60				
	29	2340	121.33	2200	1.70	S 67	DRE 90M2	92	597
	33	2070	106.75*	2130	1.75	SF 67	DRE 90M2	105	598
	34	1960	100.80*	2100	1.70	SA 67	DRE 90M2	94	599
	40	1690	85.83	2010	1.65	SAF 67	DRE 90M2	105	598
	44	1540	78.00*	1960	1.65				
	46	1690	75.06	1880	2.3				
	53	1480	65.63	1820	2.6				
	56	1410	62.35*	1800	2.7				
	37	2050	47.32	1660	1.05				
	39	1920	44.22*	1640	1.15				
	46	1670	38.23	1590	1.30				
	54	1430	32.48*	1540	1.50				
	60	1290	29.00*	1500	1.70				
	70	1100	24.77	1440	1.75				
	75	1040	23.20*	1420	1.80				
	86	960	20.33	1300	1.55	S 57	DRE 90M4	67	592
	89	880	19.54	1360	1.85	SF 57	DRE 90M4	75	593
	99	840	17.62	1260	1.75	SA 57	DRE 90M4	66	594
	106	785	16.47*	1240	1.90	SAF 57	DRE 90M4	73	593
	122	680	14.24	1200	2.2				
	144	580	12.10*	1150	2.6				
	161	520	10.80*	1120	2.9				
	189	445	9.23*	1070	2.9				
	201	420	8.64*	1060	3.0				
	255	335	6.83	990	2.6				
	272	315	6.40*	970	2.8				
64	1220	54.59	1480	1.60					
73	1060	47.32	1430	1.75					
78	990	44.22*	1400	1.75					
91	860	38.23	1350	1.80					
107	740	32.48*	1300	1.75					
120	660	29.00*	1260	1.75					
140	565	24.77	1210	1.70					
150	530	23.20*	1180	1.70					
171	490	20.33	1100	2.9					
178	450	19.54	1130	1.60	S 57	DRE 90M2	67	592	
197	430	17.62	1060	2.9	SF 57	DRE 90M2	75	593	
211	400	16.47*	1040	2.9	SA 57	DRE 90M2	66	594	
244	345	14.24	1000	2.9	SAF 57	DRE 90M2	73	593	
287	295	12.10*	960	3.0					
321	265	10.80*	930	2.9					
376	225	9.23*	890	2.8					
402	210	8.64*	870	2.8					
477	180	7.28	830	2.6					
508	171	6.83	810	2.8					
542	160	6.40*	795	2.8					
644	134	5.39	755	2.7					
729	119	4.76	725	2.6					
868	100	4.00*	690	2.5					

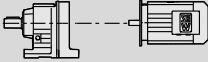


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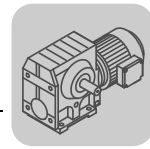
P_m [HP]	n_a [rpm]	T_a [lb-in]	i	$F_{Ra}^{1)}$ [lb]	SEW f_B		m [lbs]		
1.5	60	1270	29.00*	820	1.05				
	70	1090	24.77	800	1.15				
	75	1030	23.20*	795	1.20				
	86	960	20.33	690	1.00				
	89	870	19.54	775	1.25				
	99	830	17.62	680	1.15				
	106	780	16.47*	675	1.25				
	122	680	14.24	665	1.40	S 47	DRE 90M4	59	587
	144	580	12.10*	650	1.65	SF 47	DRE 90M4	67	588
	161	520	10.80*	640	1.85	SA 47	DRE 90M4	61	589
	189	445	9.23*	620	2.1	SAF 47	DRE 90M4	65	588
	201	415	8.64*	615	2.1				
	239	350	7.28	590	2.1				
	255	335	6.83	580	2.0				
	272	310	6.40*	570	2.1				
	323	265	5.39	550	2.2				
	365	235	4.76	535	2.2				
	435	198	4.00*	510	2.1				
	64	1200	54.59	810	1.05				
	73	1050	47.32	800	1.15				
	78	980	44.22*	790	1.15				
	91	850	38.23	770	1.15				
	107	735	32.48*	750	1.10				
	120	655	29.00*	730	1.00				
	171	490	20.33	630	1.80				
	197	425	17.62	615	2.0				
	211	400	16.47*	605	2.00	S 47	DRE 90M2	59	587
	244	345	14.24	590	2.00	SF 47	DRE 90M2	67	588
	287	295	12.10*	570	1.90	SA 47	DRE 90M2	61	589
	321	265	10.80*	555	1.75	SAF 47	DRE 90M2	65	588
	376	225	9.23*	530	1.25				
	402	210	8.64*	525	1.20				
	477	180	7.28	500	1.10				
	508	171	6.83	490	1.75				
	542	160	6.40*	480	1.70				
644	134	5.39	460	1.60					
729	119	4.76	445	1.50					
868	100	4.00*	425	1.40					
256	325	6.80*	350	1.10	S 37	DRE 90M4	52	583	
275	305	6.33	340	1.00	SF 37	DRE 90M4	55	584	
323	260	5.38	335	1.15	SA 37	DRE 90M4	51	585	
358	235	4.86*	330	1.25	SAF 37	DRE 90M4	55	584	
439	195	3.97	320	1.45					
259	325	13.39	350	1.00					
278	300	12.48*	350	1.10					
318	265	10.91	340	1.15	S 37	DRE 90M2	52	583	
339	250	10.23	340	1.25	SF 37	DRE 90M2	55	584	
385	220	9.02*	335	1.25	SA 37	DRE 90M2	51	585	
548	157	6.33	310	1.35	SAF 37	DRE 90M2	55	584	
645	134	5.38	300	1.30					
713	121	4.86*	290	1.30					
875	99	3.97	280	1.25					
2.0	2.4	33700	714	7540	1.10				
	2.8	35500	626	7450	1.05				
	3.2	30600	538	7690	1.20				
	3.6	27600	484	7810	1.35	S 97R57	DRE 90L4	405	617
	4.2	24000	420	7940	1.55	SF 97R57	DRE 90L4	475	617
	4.6	21700	376	8020	1.70	SA 97R57	DRE 90L4	390	617
	5.3	19100	327	8090	1.95	SAF 97R57	DRE 90L4	450	617
	6.0	16800	287	8150	2.2				
	6.9	14700	252	8190	2.5				
	8.0	12800	219	8230	2.9				
	4.0	20400	435	6270	1.05				
	4.6	17900	378	6380	1.20	S 87R57	DRE 90L4	270	617
	5.4	15600	323	6470	1.35	SF 87R57	DRE 90L4	320	617
	6.2	13700	281	6540	1.55	SA 87R57	DRE 90L4	265	617
	6.8	14500	255	6510	1.20	SAF 87R57	DRE 90L4	300	617
	7.8	12700	222	6570	1.40				
	8.5	11900	205	6590	1.45				

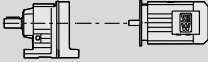




S..DRE/DRS
S..DRE/DRS [HP]

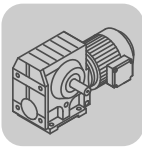
P_m [HP]	n_a [rpm]	T_a [lb-in]	i	$F_{Ra}^{1)}$ [lb]	SEW f_B		m [lbs]		
2.0	6.1	15500	286.40*	8180	2.3	S 97	DRE 90L4	350	612
	6.6	14300	262.22	8200	2.5	SF 97	DRE 90L4	420	613
	7.5	12700	231.67	8230	2.7	SA 97	DRE 90L4	340	614
						SAF 97	DRE 90L4	395	613
	6.0	15000	288.00*	6500	1.35				
	6.7	13600	258.18	6540	1.45				
	7.8	11800	222.40*	6600	1.65				
	8.6	10900	202.96	6620	1.80				
	9.7	9760	180.00*	6650	1.95	S 87	DRE 90L4	220	607
	12	8310	151.30	6680	2.2	SF 87	DRE 90L4	270	608
	13	7680	139.05	6700	2.3	SA 87	DRE 90L4	215	609
	14	6870	123.48	6710	2.5	SAF 87	DRE 90L4	250	608
	16	6190	110.40*	6720	2.7				
	18	5600	99.26	6730	2.9				
	19	5800	91.20*	6720	2.3				
	21	5230	81.76	6730	2.7				
	8.1	10800	214.00*	2720	1.05				
	9.2	9700	189.09	2950	1.15				
	11	8410	161.60*	3170	1.30				
	12	7760	148.15	3260	1.35				
	13	6880	130.00*	3370	1.50				
	14	6550	123.20*	3410	1.55				
	16	5790	107.83	3480	1.70	S 77	DRE 90L4	140	602
	18	5250	97.14	3400	1.85	SF 77	DRE 90L4	165	603
	20	4650	85.22	3300	2.0	SA 77	DRE 90L4	140	604
	23	4690	75.09	3050	2.1	SAF 77	DRE 90L4	155	603
	24	4470	71.33	3020	2.2				
	26	3690	66.67	3100	2.3				
	28	3970	63.03	2940	2.4				
	31	3180	56.92	2980	2.6				
	32	3410	53.87	2830	2.8				
	20	4380	85.83	2000	1.05				
	22	4010	78.00*	2070	1.10				
	27	3900	65.63	1970	1.10				
	28	3720	62.35*	1960	1.15				
	32	3290	54.70	1920	1.30				
	38	2810	46.40*	1860	1.50				
	42	2550	41.89	1830	1.65	S 67	DRE 90L4	98	597
	47	2250	36.85	1780	1.90	SF 67	DRE 90L4	110	598
	50	2130	34.80*	1760	2.00	SA 67	DRE 90L4	100	599
	59	1830	29.63	1700	2.3	SAF 67	DRE 90L4	110	598
	65	1670	26.93	1660	2.4				
	71	1600	24.44	1520	1.90				
	75	1520	23.22*	1500	1.95				
	85	1340	20.37	1460	2.2				
	101	1140	17.28*	1410	2.6				
	112	1030	15.60*	1380	2.9				
	54	1950	32.48*	1440	1.10				
	60	1750	29.00*	1410	1.25				
	70	1510	24.77	1370	1.30				
	75	1420	23.20*	1350	1.30				
	89	1200	19.54	1300	1.35				
	99	1140	17.62	1180	1.30				
	106	1070	16.47*	1170	1.40				
	122	930	14.24	1130	1.60	S 57	DRE 90L4	72	592
	144	795	12.10*	1100	1.90	SF 57	DRE 90L4	81	593
	161	710	10.80*	1070	2.1	SA 57	DRE 90L4	72	594
	189	610	9.23*	1030	2.2	SAF 57	DRE 90L4	78	593
	201	570	8.64*	1020	2.2				
	239	480	7.28	970	2.2				
	255	455	6.83	950	1.95				
	272	430	6.40*	940	2.0				
	323	360	5.39	900	2.3				
	365	320	4.76	870	2.3				
	435	270	4.00*	830	2.3				

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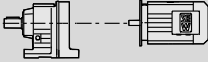




P_m [HP]	n_a [rpm]	T_a [lb-in]	i	$F_{Ra}^{1)}$ [lb]	SEW f_B		m [lbs]		
2.0	122	920	14.24	590	1.05				
	144	790	12.10*	585	1.20				
	161	710	10.80*	580	1.35				
	189	605	9.23*	570	1.50				
	201	570	8.64*	565	1.55	S 47	DRE 90L4	64	587
	239	480	7.28	550	1.55	SF 47	DRE 90L4	72	588
	255	455	6.83	540	1.50	SA 47	DRE 90L4	67	589
	272	430	6.40*	535	1.55	SAF 47	DRE 90L4	70	588
	323	360	5.39	520	1.60				
	365	320	4.76	505	1.60				
	435	270	4.00*	485	1.55				
	439	265	3.97	290	1.05	S 37	DRE 90L4	57	583
						SF 37	DRE 90L4	60	584
						SA 37	DRE 90L4	57	585
					SAF 37	DRE 90L4	60	584	
3.0	4.1	35700	420	7440	1.05				
	4.6	32200	376	7610	1.15				
	5.3	28300	327	7790	1.30	S 97R57	DRE 100L4	420	617
	6.0	25000	287	7910	1.50	SF 97R57	DRE 100L4	495	617
	6.9	21800	252	8010	1.70	SA 97R57	DRE 100L4	410	617
	7.9	19100	219	8090	1.95	SAF 97R57	DRE 100L4	465	617
	8.5	17900	205	8120	2.1				
	6.2	20300	281	6270	1.05	S 87R57	DRE 100L4	290	617
						SF 87R57	DRE 100L4	335	617
						SA 87R57	DRE 100L4	285	617
						SAF 87R57	DRE 100L4	320	617
	6.1	22800	286.40*	7980	1.55				
	6.6	21000	262.22	8040	1.70				
	7.5	18700	231.67	8100	1.85				
	8.8	16100	196.52	8160	2.1	S 97	DRE 100L4	370	612
	9.6	14900	180.95	8190	2.2	SF 97	DRE 100L4	440	613
	11	13400	161.74	8220	2.4	SA 97	DRE 100L4	355	614
	12	12100	145.60*	8240	2.6	SAF 97	DRE 100L4	415	613
	13	11000	131.85	8260	2.8				
	15	9890	116.92	8270	3.0				
	6.7	20000	258.18	6290	1.00				
	7.8	17400	222.40*	6400	1.10				
	8.6	16000	202.96	6460	1.20				
	9.6	14300	180.00*	6520	1.30				
	11	12200	151.30	6590	1.50				
	12	11300	139.05	6610	1.60				
	14	10100	123.48	6640	1.70	S 87	DRE 100L4	240	607
	16	9100	110.40*	6670	1.85	SF 87	DRE 100L4	285	608
	17	8240	99.26	6680	2.00	SA 87	DRE 100L4	235	609
	20	7200	86.15	6700	2.2	SAF 87	DRE 100L4	270	608
	21	7690	81.76	6690	1.85				
	22	6490	77.14	6720	2.3				
25	6660	70.43	6710	2.1					
27	6090	64.27	6720	2.3					
30	5430	57.00*	6730	2.6					
13	10100	130.00*	2870	1.00					
14	9640	123.20*	2970	1.05					
16	8520	107.83	3150	1.15					
18	7730	97.14	3130	1.25					
20	6840	85.22	3060	1.35					
23	6080	75.20*	2990	1.45					
26	5430	66.67	2920	1.60	S 77	DRE 100L4	160	602	
28	5840	63.03	2700	1.65	SF 77	DRE 100L4	180	603	
30	4670	56.92	2820	1.75	SA 77	DRE 100L4	160	604	
32	5020	53.87	2630	1.95	SAF 77	DRE 100L4	175	603	
35	4620	49.38	2590	2.1					
40	4070	43.33	2520	2.4					
42	3860	41.07	2500	2.5					
48	3400	35.94	2430	2.8					
54	3070	32.38	2370	3.0					
76	2250	22.89	2050	2.8					

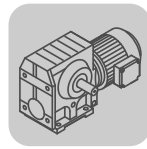
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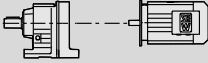




S..DRE/DRS
S..DRE/DRS [HP]

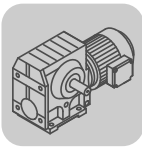
P_m [HP]	n_a [rpm]	T_a [lb-in]	i	$F_{Ra}^{1)}$ [lb]	SEW f_B		m [lbs]		
3.0	37	4140	46.40*	1660	1.05				
	41	3750	41.89	1640	1.15				
	47	3320	36.85	1620	1.30				
	50	3140	34.80*	1600	1.35				
	59	2690	29.63	1560	1.55				
	64	2450	26.93	1540	1.65				
	74	2140	23.33	1500	1.65				
	85	1970	20.37	1330	1.50				
	100	1680	17.28*	1300	1.80				
	111	1520	15.60*	1280	1.95				
	126	1340	13.73*	1250	2.2				
	134	1270	12.96*	1240	2.4				
	157	1080	11.03	1200	2.8				
	173	980	10.03	1170	2.8				
	200	850	8.69	1140	2.9				
	230	745	7.56*	1100	3.0				
	122	1370	14.24	1020	1.10				
	143	1170	12.10*	1000	1.30				
	161	1040	10.80*	990	1.45				
	188	890	9.23*	960	1.45				
	201	840	8.64*	950	1.50				
	238	710	7.28	920	1.50				
	254	675	6.83	900	1.30				
	271	630	6.40*	880	1.35				
	322	530	5.39	850	1.55				
	364	470	4.76	830	1.55				
	434	395	4.00*	795	1.60				
	188	890	9.23*	485	1.05				
	201	840	8.64*	485	1.05				
	238	710	7.28	485	1.05				
	254	670	6.83	470	1.00				
	271	630	6.40*	470	1.05				
	322	530	5.39	465	1.10				
364	470	4.76	460	1.10					
434	395	4.00*	450	1.05					
5.0	7.0	36700	252	7230	1.00	S 97R57	DRE 100LC4	425	617
	8.0	32100	219	7620	1.15	SF 97R57	DRE 100LC4	495	617
	8.5	30200	205	7700	1.25	SA 97R57	DRE 100LC4	415	617
						SAF 97R57	DRE 100LC4	470	617
	6.7	35100	262.22	7470	1.00				
	7.6	31300	231.67	7660	1.10				
	8.9	26900	196.52	7840	1.25				
	9.7	24900	180.95	7920	1.35				
	11	22400	161.74	8000	1.45				
	12	20300	145.60*	8060	1.55				
	13	18400	131.85	8110	1.65				
	15	16500	116.92	8160	1.80				
	17	14900	105.71	8190	1.90				
	20	12800	89.60*	8230	2.1				
	22	12900	80.85	8230	2.2				
	24	11400	71.43	8250	2.5				
	29	9790	60.59	8280	3.0				
	14	16800	123.48	6430	1.05				
	16	15100	110.40*	6490	1.10				
	18	13700	99.26	6540	1.20				
	20	12000	86.15	6590	1.30				
	21	12800	81.76	6560	1.10				
	23	10800	77.14	6630	1.40				
	25	11100	70.43	6610	1.25				
	27	10100	64.27	6640	1.40				
	31	9050	57.00*	6660	1.55				
	37	7650	47.91	6690	1.85				
	40	7050	44.03	6700	2.0				
	45	6280	39.10	6610	2.2				
	50	5630	34.96*	6430	2.5				
	56	5070	31.43	6270	2.8				
	69	4230	25.50*	5760	2.6				
							S 87	DRE 100LC4	245
						SF 87	DRE 100LC4	290	608
						SA 87	DRE 100LC4	240	609
						SAF 87	DRE 100LC4	275	608

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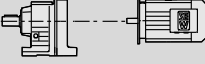




P_m [HP]	n_a [rpm]	T_a [lb-in]	i	$F_{Ra}^{1)}$ [lb]	SEW f_B		m [lbs]		
5.0	28	9740	63.03	2190	1.00				
	31	7800	56.92	2470	1.05				
	32	8370	53.87	2190	1.15				
	35	7700	49.38	2180	1.25				
	40	6790	43.33	2170	1.45				
	43	6450	41.07	2160	1.50				
	49	5670	35.94	2130	1.65	S 77	DRE 100LC4	165	602
	54	5120	32.38	2100	1.80	SF 77	DRE 100LC4	185	603
	62	4510	28.41	2060	1.95	SA 77	DRE 100LC4	160	604
	70	3990	25.07	2020	2.1	SAF 77	DRE 100LC4	175	603
	76	3760	22.89	1770	1.65				
	83	3450	20.99	1750	1.80				
	95	3040	18.42	1730	2.1				
	100	2880	17.45	1720	2.2				
	115	2530	15.28	1680	2.5				
	127	2280	13.76	1660	2.8				
	75	3570	23.33	1270	1.00				
	101	2800	17.28*	1060	1.05				
	112	2540	15.60*	1060	1.20	S 67	DRE 100LC4	120	597
	128	2240	13.73*	1060	1.35	SF 67	DRE 100LC4	135	598
	135	2120	12.96*	1050	1.40	SA 67	DRE 100LC4	120	599
	159	1810	11.03	1040	1.65	SAF 67	DRE 100LC4	130	598
	174	1650	10.03	1030	1.70				
201	1430	8.69	1010	1.75					
231	1250	7.56*	990	1.75					
5.4	8.1	34500	219	7500	1.10	S 97R57	DRE 132S4	455	617
	8.6	32400	205	7600	1.15	SF 97R57	DRE 132S4	530	617
						SA 97R57	DRE 132S4	445	617
						SAF 97R57	DRE 132S4	500	617
	7.6	33600	231.67	7550	1.05				
	9.0	28800	196.52	7760	1.20				
	9.8	26700	180.95	7850	1.25				
	11	24000	161.74	7940	1.35				
	12	21700	145.60*	8020	1.45	S 97	DRE 132S4	405	612
	13	19800	131.85	8070	1.55	SF 97	DRE 132S4	475	613
	15	17600	116.92	8130	1.65	SA 97	DRE 132S4	390	614
	17	16000	105.71	8160	1.75	SAF 97	DRE 132S4	450	613
	20	13700	89.60*	8210	1.95				
	22	13800	80.85	8210	2.1				
	25	12300	71.43	8240	2.4				
	29	10400	60.59	8270	2.8				
	16	16200	110.40*	6450	1.05				
	18	14700	99.26	6510	1.10				
	20	12800	86.15	6570	1.20				
	23	11600	77.14	6600	1.30				
	25	11900	70.43	6590	1.20				
	27	10900	64.27	6620	1.30				
	31	9710	57.00*	6650	1.45	S 87	DRE 132S4	275	607
	37	8200	47.91	6680	1.70	SF 87	DRE 132S4	320	608
	40	7560	44.03	6700	1.85	SA 87	DRE 132S4	270	609
	45	6730	39.10	6550	2.1	SAF 87	DRE 132S4	305	608
	50	6040	34.96*	6380	2.3				
	56	5440	31.43	6220	2.6				
	65	4740	27.28	6000	3.0				
	69	4540	25.50*	5700	2.4				
	82	3820	21.43	5480	2.9				

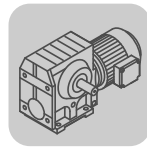
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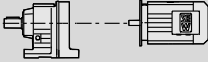




S..DRE/DRS
S..DRE/DRS [HP]

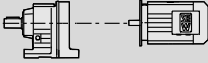

P_m [HP]	n_a [rpm]	T_a [lb-in]	i	$F_{Ra}^{1)}$ [lb]	SEW f_B		m [lbs]		
5.4	33	8980	53.87	2100	1.10				
	36	8260	49.38	2100	1.20				
	41	7280	43.33	2100	1.35				
	43	6910	41.07	2090	1.40				
	49	6080	35.94	2070	1.55				
	55	5490	32.38	2050	1.65				
	62	4840	28.41	2010	1.80	S 77	DRE 132S4	195	602
	70	4280	25.07	1980	2.00	SF 77	DRE 132S4	215	603
	77	4030	22.89	1710	1.55	SA 77	DRE 132S4	195	604
	84	3700	20.99	1700	1.70	SAF 77	DRE 132S4	210	603
	96	3260	18.42	1680	1.95				
	101	3090	17.45	1670	2.0				
	116	2710	15.28	1650	2.4				
	128	2450	13.76	1620	2.6				
	146	2150	12.07	1590	3.0				
	102	3010	17.28*	1010	1.00				
	113	2720	15.60*	1020	1.10				
	129	2400	13.73*	1020	1.25	S 67	DRE 132S4	150	597
	136	2270	12.96*	1020	1.30	SF 67	DRE 132S4	165	598
160	1940	11.03	1010	1.55	SA 67	DRE 132S4	155	599	
176	1760	10.03	1000	1.60	SAF 67	DRE 132S4	165	598	
203	1530	8.69	990	1.60					
233	1340	7.56*	970	1.65					
7.5	12	30100	145.60*	7710	1.05				
	13	27400	131.85	7820	1.10				
	15	24400	116.92	7930	1.20				
	17	22200	105.71	8000	1.30				
	20	18900	89.60*	8100	1.40				
	22	16600	78.26	8150	1.50	S 97	DRE 132M4	430	612
	25	17000	71.43	8140	1.70	SF 97	DRE 132M4	500	613
	27	14000	65.45	8210	1.65	SA 97	DRE 132M4	420	614
	29	14500	60.59	8200	2.0	SAF 97	DRE 132M4	475	613
	31	13300	55.79	8220	2.2				
	35	12000	49.87	8240	2.4				
	39	10800	44.89	8260	2.7				
	43	9830	40.65	8270	2.9				
	27	13400	64.00*	6550	1.05				
	31	13400	57.00*	6540	1.05				
	37	11300	47.91	6560	1.25				
	40	10400	44.03	6460	1.35				
	45	9310	39.10	6310	1.50				
	50	8350	34.96*	6160	1.70	S 87	DRE 132M4	300	607
	56	7520	31.43	6020	1.90	SF 87	DRE 132M4	350	608
	64	6550	27.28	5840	2.2	SA 87	DRE 132M4	295	609
	69	6270	25.50*	5470	1.75	SAF 87	DRE 132M4	330	608
	82	5290	21.43	5290	2.1				
	89	4870	19.70	5190	2.2				
	100	4330	17.49	5060	2.5				
	112	3880	15.64*	4940	2.8				
	43	9560	41.07	1760	1.00				
	49	8400	35.94	1780	1.10				
	54	7600	32.38	1780	1.20				
	62	6690	28.41	1780	1.30				
	70	5920	25.07	1770	1.45				
	79	5260	22.22	1760	1.55				
	92	4510	18.97	1730	1.70	S 77	DRE 132M4	220	602
95	4500	18.42	1460	1.40	SF 77	DRE 132M4	245	603	
101	4270	17.45	1460	1.45	SA 77	DRE 132M4	220	604	
115	3750	15.28	1460	1.70	SAF 77	DRE 132M4	235	603	
128	3380	13.76	1450	1.90					
145	2970	12.07	1440	2.2					
165	2630	10.65	1420	2.4					
186	2330	9.44	1400	2.5					
218	2000	8.06	1370	2.5					
159	2680	11.03	800	1.10	S 67	DRE 132M4	180	597	
175	2440	10.03	860	1.15	SF 67	DRE 132M4	190	598	
202	2120	8.69	870	1.15	SA 67	DRE 132M4	180	599	
232	1850	7.56*	860	1.20	SAF 67	DRE 132M4	190	598	

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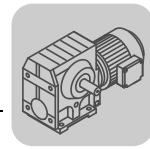


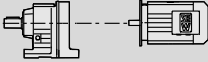


P_m [HP]	n_a [rpm]	T_a [lb-in]	i	$F_{Ra}^{1)}$ [lb]	SEW f_B		m [lbs]		
10	20	25600	89.60*	7890	1.05				
	23	22400	78.26	8000	1.15				
	25	22900	71.43	7980	1.25				
	27	18900	65.45	8100	1.25				
	29	19500	60.59	8080	1.50				
	32	18000	55.79	8120	1.60	S 97	DRE 132MC4	435	612
	36	16100	49.87	8160	1.80	SF 97	DRE 132MC4	510	613
	40	14600	44.89	8140	2.0	SA 97	DRE 132MC4	425	614
	44	13200	40.65	7980	2.2	SAF 97	DRE 132MC4	480	613
	49	11700	36.05	7770	2.3				
	54	10600	32.60	7600	2.5				
	67	8880	26.39	6910	2.6				
	75	7950	23.59	6750	2.9				
	40	14100	44.03	6070	1.00				
	45	12500	39.10	5960	1.15				
	51	11200	34.96*	5850	1.25				
	56	10100	31.43	5740	1.40				
	65	8840	27.28	5590	1.60				
	70	8460	25.50*	5140	1.30				
	83	7140	21.43	5010	1.55	S 87	DRE 132MC4	310	607
	90	6570	19.70	4940	1.65	SF 87	DRE 132MC4	355	608
	101	5840	17.49	4830	1.90	SA 87	DRE 132MC4	305	609
	113	5230	15.64*	4730	2.1	SAF 87	DRE 132MC4	340	608
	126	4710	14.06	4630	2.3				
	145	4100	12.21	4500	2.7				
162	3670	10.93	4400	2.7					
196	3050	9.07	4210	2.8					
225	2660	7.88	4080	2.8					
71	7990	25.07	1500	1.05					
80	7100	22.22	1520	1.15					
94	6090	18.97	1520	1.25					
96	6080	18.42	770	1.05					
102	5760	17.45	840	1.10	S 77	DRE 132MC4	230	602	
116	5060	15.28	1010	1.25	SF 77	DRE 132MC4	250	603	
129	4560	13.76	1110	1.40	SA 77	DRE 132MC4	225	604	
147	4010	12.07	1220	1.60	SAF 77	DRE 132MC4	240	603	
167	3550	10.65	1250	1.80					
188	3150	9.44	1250	1.85					
220	2690	8.06	1240	1.90					
12.5	27	23200	65.45	7970	1.00				
	32	22200	55.79	8000	1.30				
	35	19900	49.87	8030	1.45				
	39	17900	44.89	7880	1.60				
	44	16300	40.65	7740	1.75				
	49	14500	36.05	7570	1.90	S 97	DRE 160M4	485	612
	54	13100	32.60	7420	2.0	SF 97	DRE 160M4	550	613
	67	10900	26.39	6680	2.1	SA 97	DRE 160M4	470	614
	75	9780	23.59	6550	2.4	SAF 97	DRE 160M4	530	613
	83	8820	21.23	6420	2.6				
	92	7990	19.23	6300	2.8				
	104	7100	17.05	6150	3.0				
	51	13800	34.96*	5610	1.00				
	56	12400	31.43	5520	1.15				
	65	10800	27.28	5400	1.30				
	72	9760	24.43	5300	1.45				
	87	8120	20.27	5120	1.55				
	90	8080	19.70	4730	1.35	S 87	DRE 160M4	355	607
	101	7190	17.49	4650	1.55	SF 87	DRE 160M4	400	608
	113	6440	15.64*	4570	1.70	SA 87	DRE 160M4	350	609
	126	5800	14.06	4490	1.90	SAF 87	DRE 160M4	385	608
	145	5040	12.21	4370	2.2				
	162	4520	10.93	4280	2.2				
	195	3760	9.07	4120	2.2				
	224	3270	7.88	4000	2.2				
93	7490	18.97	1350	1.00					
129	5620	13.76	620	1.15	S 77	DRE 160M4	275	602	
147	4940	12.07	785	1.30	SF 77	DRE 160M4	295	603	
166	4360	10.65	910	1.45	SA 77	DRE 160M4	275	604	
187	3870	9.44	1020	1.55	SAF 77	DRE 160M4	290	603	
219	3310	8.06	1130	1.55					


S..DRE/DRS
S..DRE/DRS [HP]

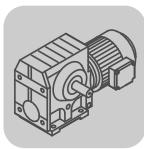
P_m [HP]	n_a [rpm]	T_a [lb-in]	i	$F_{Ra}^{1)}$ [lb]	SEW f_B		m [lbs]		
15	32	26400	55.79	7820	1.10				
	36	23600	49.87	7710	1.25				
	40	21300	44.89	7600	1.35				
	44	19300	40.65	7480	1.45				
	49	17200	36.05	7340	1.60				
	55	15600	32.60	7210	1.70	S 97	DRE 160MC4	495	612
	67	12900	26.39	6430	1.75	SF 97	DRE 160MC4	570	613
	75	11600	23.59	6320	2.00	SA 97	DRE 160MC4	480	614
	84	10400	21.23	6220	2.2	SAF 97	DRE 160MC4	540	613
	93	9500	19.23	6120	2.3				
	104	8440	17.05	5980	2.5				
	115	7640	15.42	5870	2.7				
	136	6490	13.07	5670	3.0				
	65	12900	27.28	5190	1.10				
	73	11600	24.43	5110	1.20				
	88	9660	20.27	4960	1.30				
	90	9610	19.70	4510	1.15				
	102	8550	17.49	4450	1.30	S 87	DRE 160MC4	365	607
	114	7660	15.64*	4390	1.45	SF 87	DRE 160MC4	415	608
	127	6890	14.06	4330	1.60	SA 87	DRE 160MC4	360	609
146	5990	12.21	4230	1.85	SAF 87	DRE 160MC4	395	608	
163	5370	10.93	4150	1.85					
196	4470	9.07	4010	1.90					
226	3890	7.88	3900	1.90					
147	5870	12.07	345	1.10	S 77	DRE 160MC4	285	602	
167	5190	10.65	520	1.25	SF 77	DRE 160MC4	305	603	
188	4610	9.44	660	1.25	SA 77	DRE 160MC4	285	604	
221	3940	8.06	820	1.30	SAF 77	DRE 160MC4	300	603	
20	40	29200	44.89	6990	1.00				
	44	26500	40.65	6930	1.10				
	49	23500	36.05	6840	1.15				
	54	21300	32.60	6760	1.25				
	67	17700	26.39	5890	1.30				
	75	15900	23.59	5840	1.45	S 97	DRE 180M4	590	612
	84	14300	21.23	5780	1.60	SF 97	DRE 180M4	660	613
	92	13000	19.23	5720	1.70	SA 97	DRE 180M4	580	614
	104	11500	17.05	5630	1.85	SAF 97	DRE 180M4	640	613
	115	10400	15.42	5550	1.95				
	136	8870	13.07	5410	2.2				
	156	7760	11.41	5280	2.3				
	186	6500	9.55	5100	2.3				
	215	5630	8.26	4950	2.3				
	113	10400	15.64*	4000	1.05				
	126	9430	14.06	3980	1.15	S 87	DRE 180M4	465	607
	145	8200	12.21	3930	1.35	SF 87	DRE 180M4	510	608
	162	7350	10.93	3880	1.35	SA 87	DRE 180M4	460	609
	196	6110	9.07	3790	1.35	SAF 87	DRE 180M4	495	608
	225	5320	7.88	3710	1.40				
25	54	26300	32.60	6370	1.00				
	64	22300	27.63	6270	1.10				
	74	19600	24.13	6170	1.20				
	84	17600	21.23	5400	1.30				
	92	16000	19.23	5370	1.40	S 97	DRE 180L4	640	612
	104	14200	17.05	5330	1.50	SF 97	DRE 180L4	710	613
	115	12800	15.42	5270	1.60	SA 97	DRE 180L4	620	614
	136	10900	13.07	5170	1.75	SAF 97	DRE 180L4	680	613
	156	9570	11.41	5070	1.85				
	186	8010	9.55	4930	1.85				
	215	6940	8.26	4800	1.85				
	145	10100	12.21	3660	1.10	S 87	DRE 180L4	500	607
	162	9070	10.93	3640	1.10	SF 87	DRE 180L4	550	608
	196	7540	9.07	3590	1.10	SA 87	DRE 180L4	500	609
	225	6560	7.88	3540	1.10	SAF 87	DRE 180L4	540	608

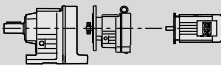

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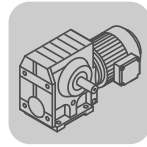
P_m [HP]	n_a [rpm]	T_a [lb-in]	i	$F_{Ra}^{1)}$ [lb]	SEW f_B		m [lbs]		
30	74	23200	24.13	5880	1.00				
	84	20900	21.23	4930	1.10				
	93	19000	19.23	5030	1.15	S 97	DRE 180LC4	660	612
	104	16800	17.05	5020	1.25	SF 97	DRE 180LC4	730	613
	115	15200	15.42	4990	1.35	SA 97	DRE 180LC4	650	614
	136	12900	13.07	4930	1.50	SAF 97	DRE 180LC4	700	613
	156	11300	11.41	4860	1.55				
	186	9500	9.55	4750	1.55				
	215	8240	8.26	4650	1.55				
40	136	17700	13.07	4390	1.10	S 97	DRE 200L4	850	612
	156	15400	11.41	4390	1.15	SF 97	DRE 200L4	930	613
	186	12900	9.55	4360	1.15	SA 97	DRE 200L4	840	614
	215	11200	8.26	4310	1.15	SAF 97	DRE 200L4	900	613

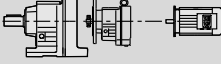


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12.4 S..R..DRE/DRS [lb-in]

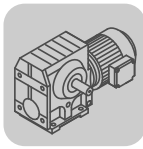
$T_{a \max}$ [lb-in]	n_a [rpm]	i	$F_{Ra}^{1)}$ [lb]		m [lbs]				
810	0.17	10037	675						
	0.20	8654	675						
	0.21	8066	675						
	0.24	7051	675						
	0.28	6079	675						
	0.31	5431	675						
	0.36	4747	675						
	0.41	4155	675						
	0.47	3632	675	S	37R17	DRS	71S4	36	617
	0.59	2866	675	SF	37R17	DRS	71S4	39	617
	0.69	2471	675	SA	37R17	DRS	71S4	35	617
	0.79	2160	675	SAF	37R17	DRS	71S4	39	617
	0.90	1887	675						
	1.0	1665	675						
	1.2	1456	675						
	1.3	1271	675						
	1.5	1121	675						
	1.7	994	675						
	2.0	869	675						
	2.2	774	675						
	2.6	666	675						
	2.8	596	675						
	3.3	521	675						
	3.7	456	675						
	4.3	398	675						
	4.8	351	675	S	37R17	DRS	71S4	35	617
	5.6	303	675	SF	37R17	DRS	71S4	38	617
	6.4	265	675	SA	37R17	DRS	71S4	35	617
7.3	232	675	SAF	37R17	DRS	71S4	38	617	
8.4	202	675							
9.5	179	675							
11	158	675							
12	144	675							
14	118	675							
15	110	675							
1630	0.13	12909	1180						
	0.15	11189	1180						
	0.16	10374	1180						
	0.19	8992	1180						
	0.22	7860	1180						
	0.25	6887	1180						
	0.28	6055	1180						
	0.32	5292	1180						
	0.37	4637	1180						
	0.42	4092	1180	S	47R17	DRS	71S4	43	617
	0.47	3582	1170	SF	47R17	DRS	71S4	51	617
	0.54	3131	1170	SA	47R17	DRS	71S4	45	617
	0.63	2714	1170	SAF	47R17	DRS	71S4	49	617
	0.70	2412	1170						
	0.80	2131	1170						
	0.91	1863	1170						
	1.0	1663	1170						
1.2	1435	1170							
1.4	1254	1170							
1.5	1120	1170							
1.6	1083	1170							
1610	1.8	956	1170	S	47R17	DRS	71S4	43	617
				SF	47R17	DRS	71S4	51	617
				SA	47R17	DRS	71S4	45	617
				SAF	47R17	DRS	71S4	49	617

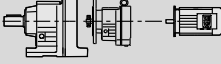


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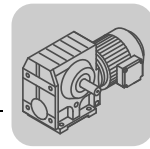


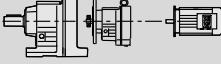

$T_a \text{ max}$ [lb-in]	n_a [rpm]	i	$F_{Ra}^{1)}$ [lb]		m [lbs]		
1630	1.8	965	1170				
	2.0	865	1170				
	2.3	750	1170				
	2.6	655	1170				
	3.0	574	1170				
	3.4	506	1170				
	3.9	438	1170				
	4.4	388	1170				
	5.1	336	1170				
	5.8	294	1170				
	6.6	257	1180				
	7.4	229	1170				
	8.5	200	1170				
	9.1	187	1170				
	10	165	1170				
12	148	1170					
	13	131	1170				
				S 47R17	DRS 71S4	42	617
				SF 47R17	DRS 71S4	50	617
				SA 47R17	DRS 71S4	44	617
				SAF 47R17	DRS 71S4	48	617
				S 47R17	DRS 71M4	45	617
				SF 47R17	DRS 71M4	53	617
				SA 47R17	DRS 71M4	47	617
				SAF 47R17	DRS 71M4	51	617
2910	0.13	12909	1530				
	0.15	11189	1530				
	0.16	10374	1530				
	0.19	8992	1530				
	0.22	7860	1530				
	0.25	6887	1530				
	0.28	6055	1530				
	0.32	5292	1530				
	0.37	4637	1530				
	0.42	4092	1530				
0.47	3628	1530					
				S 57R17	DRS 71S4	51	617
				SF 57R17	DRS 71S4	59	617
				SA 57R17	DRS 71S4	50	617
				SAF 57R17	DRS 71S4	57	617
2650	0.54	3131	1590				
	0.63	2714	1590				
	0.70	2412	1590				
	0.80	2131	1590				
	0.91	1863	1590				
	1.0	1663	1590				
	1.2	1435	1590				
	1.4	1254	1590				
	1.6	1083	1590				
	1.8	965	1590				
	2.0	865	1590				
	2.3	750	1590				
	2.6	655	1590				
	3.0	574	1590				
	3.4	506	1590				
	3.9	438	1590				
	4.4	388	1590				
	5.1	336	1590				
	5.8	294	1590				
	6.3	269	1590				
7.4	229	1590					
	8.3	204	1590				
	9.0	187	1590				
	10	165	1590				
	13	131	1590				
				S 57R17	DRS 71S4	50	617
				SF 57R17	DRS 71S4	59	617
				SA 57R17	DRS 71S4	50	617
				SAF 57R17	DRS 71S4	56	617
				S 57R17	DRS 71M4	53	617
				SF 57R17	DRS 71M4	61	617
				SA 57R17	DRS 71M4	53	617
				SAF 57R17	DRS 71M4	59	617
				S 57R17	DRE 80M4	64	617
				SF 57R17	DRE 80M4	72	617
				SA 57R17	DRE 80M4	63	617
				SAF 57R17	DRE 80M4	69	617

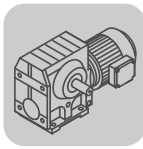
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S..DRE/DRS
S..R..DRE/DRS [lb-in]

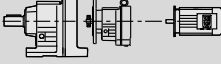
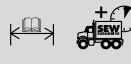
$T_a \text{ max}$ [lb-in]	n_a [rpm]	i	$F_{Ra}^{1)}$ [lb]		m [lbs]	 	
5040	0.08	21362	1840				
	0.09	19594	1840				
	0.09	18120	1840				
	0.10	16682	1840				
	0.12	14383	1840				
	0.13	12774	1840				
	0.15	11013	1840				
	0.18	9694	1840				
	0.20	8529	1840				
	0.23	7455	1840				
	0.26	6531	1840				
	0.30	5759	1840				
	0.34	4965	1840		S 67R37	DRS 71S4	93 617
	0.39	4410	1840		SF 67R37	DRS 71S4	105 617
	0.44	3880	1840		SA 67R37	DRS 71S4	95 617
	0.50	3432	1840		SAF 67R37	DRS 71S4	105 617
	0.58	2944	1840				
	0.65	2630	1840				
	0.75	2279	1840				
	0.84	2014	1840				
	0.96	1772	1840				
	1.1	1559	1840				
	1.2	1363	1840				
	1.4	1194	1840				
	1.6	1045	1840				
	1.9	914	1840				
	2.1	809	1840				
	2.4	712	1840		S 67R37	DRS 71S4	92 617
	2.8	615	1840		SF 67R37	DRS 71S4	105 617
	3.1	543	1840		SA 67R37	DRS 71S4	94 617
	3.6	469	1840		SAF 67R37	DRS 71S4	105 617
	4.0	424	1840				
4.6	365	1840		S 67R37	DRS 71M4	95 617	
5.3	319	1840		SF 67R37	DRS 71M4	110 617	
6.0	281	1840		SA 67R37	DRS 71M4	97 617	
				SAF 67R37	DRS 71M4	105 617	
7.1	246	1840		S 67R37	DRE 80M4	105 617	
7.9	221	1840		SF 67R37	DRE 80M4	120 617	
8.8	198	1840		SA 67R37	DRE 80M4	110 617	
				SAF 67R37	DRE 80M4	120 617	
10	168	1840		S 67R37	DRE 90M4	115 617	
11	156	1840		SF 67R37	DRE 90M4	130 617	
				SA 67R37	DRE 90M4	115 617	
				SAF 67R37	DRE 90M4	125 617	
11200	0.07	25493	2630				
	0.08	21787	2630				
	0.09	19907	2630				
	0.10	17013	2630				
	0.12	14668	2630				
	0.13	13110	2630				
	0.15	11569	2630				
	0.17	9887	2630				
	0.19	8817	2630		S 77R37	DRS 71S4	135 617
	0.22	7735	2630		SF 77R37	DRS 71S4	155 617
	0.25	6735	2630		SA 77R37	DRS 71S4	135 617
	0.29	5943	2630		SAF 77R37	DRS 71S4	150 617
	0.33	5214	2630				
	0.37	4618	2630				
	0.43	3992	2630				
	0.48	3540	2630				
	0.55	3098	2630				
	10900	0.62	2753	2690			
0.72		2374	2690				
0.82		2083	2690		S 77R37	DRS 71S4	135 617
0.94		1813	2690		SF 77R37	DRS 71S4	155 617
0.97		1745	2690		SA 77R37	DRS 71S4	135 617
1.1		1600	2690		SAF 77R37	DRS 71S4	150 617
1.2		1404	2690				
1.4		1245	2690				



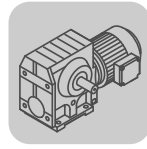
$T_{a \max}$ [lb-in]	n_a [rpm]	i	$F_{Ra}^{1)}$ [lb]		m [lbs]	
10900	1.6	1100	2690	S 77R37 DRS 71S4	135	617
	1.8	954	2690	SF 77R37 DRS 71S4	155	617
	2.0	837	2690	SA 77R37 DRS 71S4	135	617
				SAF 77R37 DRS 71S4	150	617
	2.4	714	2690	S 77R37 DRS 71M4	135	617
	2.6	637	2690	SF 77R37 DRS 71M4	160	617
	2.9	574	2690	SA 77R37 DRS 71M4	135	617
				SAF 77R37 DRS 71M4	150	617
	3.5	499	2690	S 77R37 DRE 80M4	150	617
	4.0	438	2690	SF 77R37 DRE 80M4	170	617
				SA 77R37 DRE 80M4	145	617
				SAF 77R37 DRE 80M4	160	617
	4.5	389	2690	S 77R37 DRE 90M4	155	617
	5.3	327	2690	SF 77R37 DRE 90M4	180	617
	6.0	289	2690	SA 77R37 DRE 90M4	155	617
				SAF 77R37 DRE 90M4	170	617
	7.0	250	2690	S 77R37 DRE 90L4	165	617
	7.9	219	2690	SF 77R37 DRE 90L4	185	617
				SA 77R37 DRE 90L4	160	617
				SAF 77R37 DRE 90L4	175	617
22100	0.07	25987	6180			
	0.07	23940	6180			
	0.08	20568	6180			
	0.09	18265	6180			
	0.10	16774	6180			
	0.11	14820	6180			
	0.13	13160	6180	S 87R57 DRS 71S4	245	617
	0.15	11200	6180	SF 87R57 DRS 71S4	290	617
	0.17	9904	6180	SA 87R57 DRS 71S4	240	617
	0.20	8549	6180	SAF 87R57 DRS 71S4	275	617
	0.22	7643	6180			
	0.25	6706	6180			
	0.29	5875	6180			
	0.33	5187	6180			
	0.37	4606	6180			
	0.44	3872	6180			
	0.49	3475	6180	S 87R57 DRS 71S4	240	617
	0.59	2905	6180	SF 87R57 DRS 71S4	290	617
	0.66	2586	6180	SA 87R57 DRS 71S4	235	617
	0.73	2335	6180	SAF 87R57 DRS 71S4	270	617
	0.82	2054	6180	S 87R57 DRS 71M4	245	617
	0.93	1824	6180	SF 87R57 DRS 71M4	290	617
	1.0	1631	6180	SA 87R57 DRS 71M4	240	617
				SAF 87R57 DRS 71M4	275	617
	1.3	1332	6180	S 87R57 DRE 80M4	255	617
	1.5	1191	6180	SF 87R57 DRE 80M4	305	617
				SA 87R57 DRE 80M4	250	617
				SAF 87R57 DRE 80M4	285	617
	1.7	1032	6180	S 87R57 DRE 90M4	265	617
	1.9	930	6180	SF 87R57 DRE 90M4	315	617
2.1	831	6180	SA 87R57 DRE 90M4	260	617	
2.4	719	6180	SAF 87R57 DRE 90M4	295	617	
2.8	624	6180	S 87R57 DRE 90L4	270	617	
3.1	558	6180	SF 87R57 DRE 90L4	320	617	
3.6	485	6180	SA 87R57 DRE 90L4	265	617	
			SAF 87R57 DRE 90L4	300	617	
21600	4.0	435	6200	S 87R57 DRE 100L4	290	617
	4.6	378	6200	SF 87R57 DRE 100L4	335	617
				SA 87R57 DRE 100L4	285	617
				SAF 87R57 DRE 100L4	320	617
21200	5.4	323	6230	S 87R57 DRE 100L4	290	617
				SF 87R57 DRE 100L4	335	617
				SA 87R57 DRE 100L4	285	617
				SAF 87R57 DRE 100L4	320	617
	6.2	281	6230	S 87R57 DRE 100LC4	295	617
				SF 87R57 DRE 100LC4	340	617
				SA 87R57 DRE 100LC4	290	617
				SAF 87R57 DRE 100LC4	325	617



S..DRE/DRS
S..R..DRE/DRS [lb-in]

$T_a \text{ max}$ [lb-in]	n_a [rpm]	i	$F_{Ra}^{1)}$ [lb]		m [lbs]	
17500	6.8	255	6390	S 87R57 DRE 100L4	290	617
	7.8	222	6390	SF 87R57 DRE 100L4	335	617
	8.4	205	6390	SA 87R57 DRE 100L4	285	617
				SAF 87R57 DRE 100L4	320	617
37100	0.05	33818	7360			
	0.05	31154	7360			
	0.06	27847	7360			
	0.07	24641	7360			
	0.08	21537	7360			
	0.09	18749	7360			
	0.10	16233	7360			
	0.12	14576	7360			
	0.13	12752	7360			
	0.15	11267	7360			
	0.17	10078	7360			
	0.20	8608	7360			
	0.23	7554	7360			
	0.26	6640	7030			
	0.29	5780	7030			
	0.34	4937	7030			
	0.38	4444	7030			
	0.42	4017	7030			
	0.49	3453	7030			
	0.55	3108	7030			
	0.64	2654	7030			
	0.73	2329	7030			
	0.81	2081	7030			
	0.91	1860	7030			
	1.1	1574	7030			
				S 97R57 DRS 71M4	375	617
				SF 97R57 DRS 71S4	445	617
				SA 97R57 DRS 71S4	365	617
				SAF 97R57 DRS 71S4	420	617
				S 97R57 DRE 80M4	390	617
				SF 97R57 DRE 80M4	460	617
				SA 97R57 DRE 80M4	375	617
				SAF 97R57 DRE 80M4	435	617
	1.2	1394	7030			
				S 97R57 DRE 80M4	385	617
				SF 97R57 DRE 80M4	460	617
				SA 97R57 DRE 80M4	375	617
				SAF 97R57 DRE 80M4	435	617
	1.4	1223	7030			
	1.6	1070	7030			
	1.9	928	7030			
				S 97R57 DRE 90M4	400	617
			SF 97R57 DRE 90M4	470	617	
			SA 97R57 DRE 90M4	385	617	
			SAF 97R57 DRE 90M4	445	617	
2.1	824	7030				
			S 97R57 DRE 90L4	405	617	
			SF 97R57 DRE 90L4	475	617	
			SA 97R57 DRE 90L4	390	617	
			SAF 97R57 DRE 90L4	450	617	
2.4	714	7360				
2.8	626	7050				
3.2	538	7050				
3.6	484	7060				
			S 97R57 DRE 100L4	420	617	
			SF 97R57 DRE 100L4	495	617	
			SA 97R57 DRE 100L4	410	617	
			SAF 97R57 DRE 100L4	465	617	
4.2	420	7070				
4.7	376	7070				
5.4	327	7080				
6.1	287	7090				
			S 97R57 DRE 100LC4	425	617	
			SF 97R57 DRE 100LC4	495	617	
			SA 97R57 DRE 100LC4	415	617	
			SAF 97R57 DRE 100LC4	470	617	
7.0	252	7100				
			S 97R57 DRE 132S4	455	617	
			SF 97R57 DRE 132S4	530	617	
			SA 97R57 DRE 132S4	445	617	
			SAF 97R57 DRE 132S4	500	617	
8.0	219	7110				
8.6	205	7110				
			S 97R57 DRE 132M4	485	617	
			SF 97R57 DRE 132M4	560	617	
			SA 97R57 DRE 132M4	470	617	
			SAF 97R57 DRE 132M4	530	617	

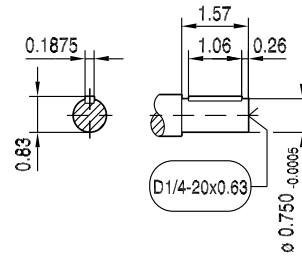
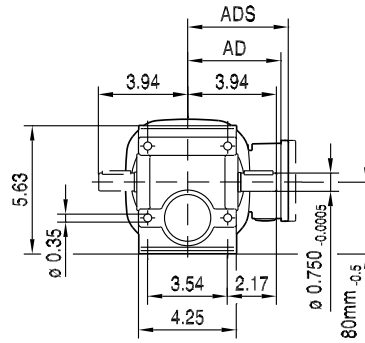
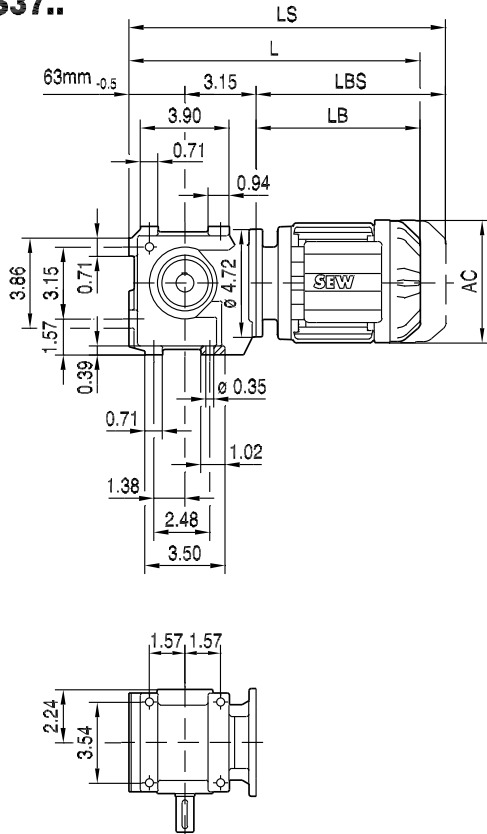
reducer.ir



12.5 S..[in]

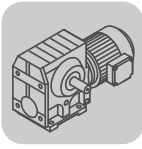
02 015 00 09

S37..



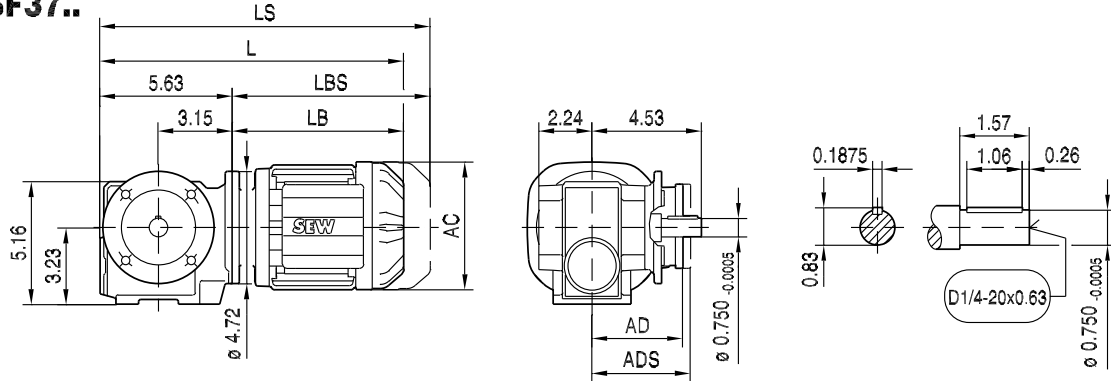
(→ 125)	DR63..	DR71S	DR71M	DR80S	DR80M	DR90M	DR90L	
AC	5.20	5.47	5.47	6.14	6.14	7.05	7.05	
AD	4.13	4.69	4.69	5.04	5.04	5.51	5.51	
ADS	4.13	5.08	5.08	5.47	5.47	5.91	5.91	
L	13.15	13.62	14.61	14.96	16.18	16.34	17.13	
LS	15.31	16.30	17.28	18.15	19.37	20.00	20.79	
LB	7.52	7.99	8.98	9.33	10.55	10.71	11.50	
LBS	9.69	10.67	11.65	12.62	13.74	14.37	15.16	

reducer.ir

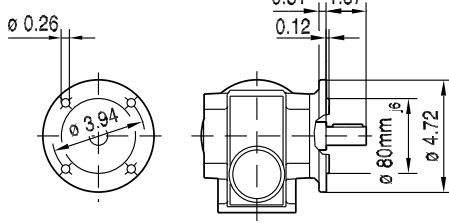


02 016 00 09

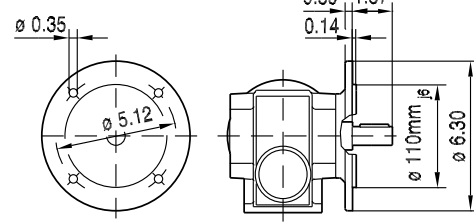
SF37..



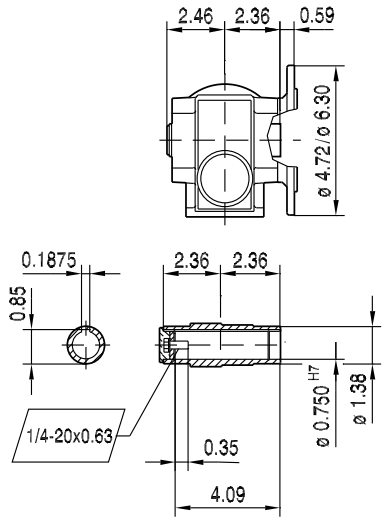
ø 4.72



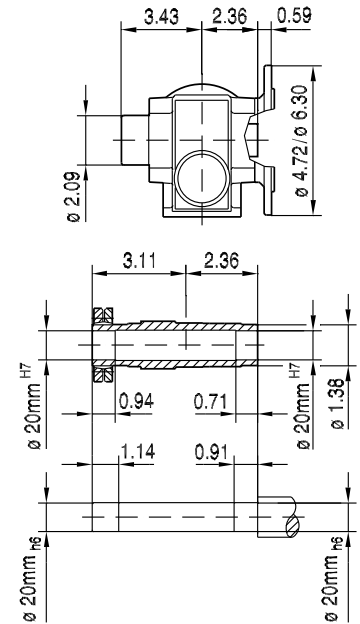
ø 6.30



SAF37..

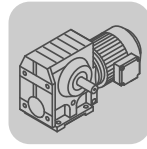


SHF37..



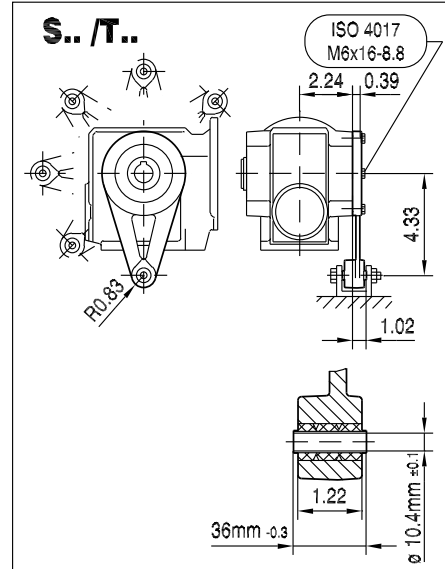
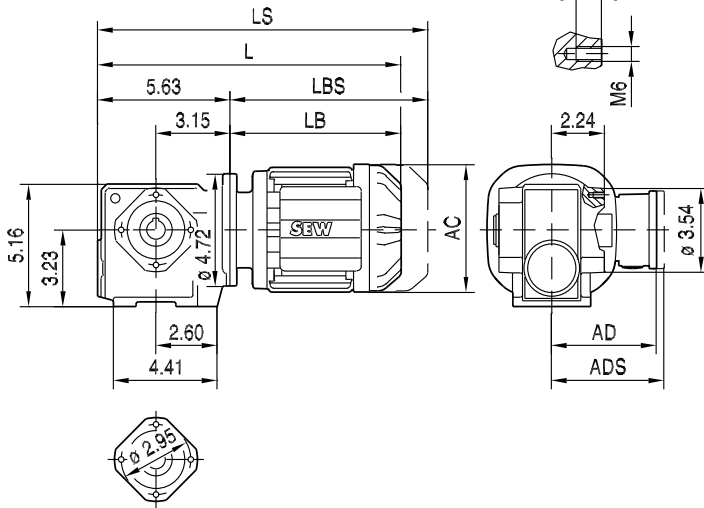
(→ 125)	DR63..	DR71S	DR71M	DR80S	DR80M	DR90M	DR90L	
AC	5.20	5.47	5.47	6.14	6.14	7.05	7.05	
AD	4.13	4.69	4.69	5.04	5.04	5.51	5.51	
ADS	4.13	5.08	5.08	5.47	5.47	5.91	5.91	
L	13.15	13.62	14.61	14.96	16.18	16.34	17.13	
LS	15.31	16.30	17.28	18.15	19.37	20.00	20.79	
LB	7.52	7.99	8.98	9.33	10.55	10.71	11.50	
LBS	9.69	10.67	11.65	12.52	13.74	14.37	15.16	

reducer.ir

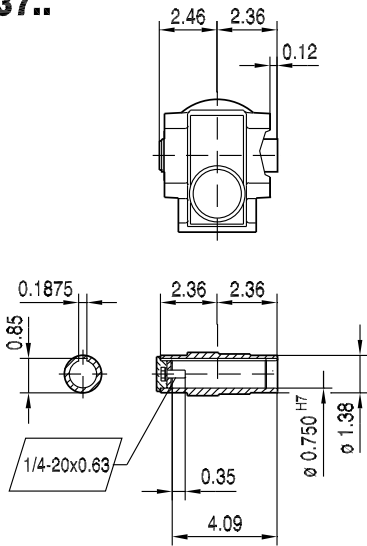


02 017 00 09

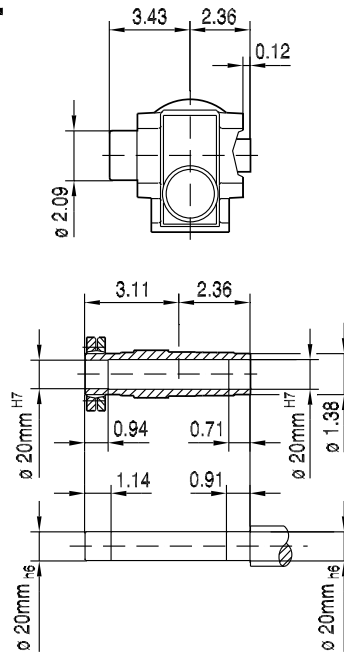
SA37..



SA37..



SH37..



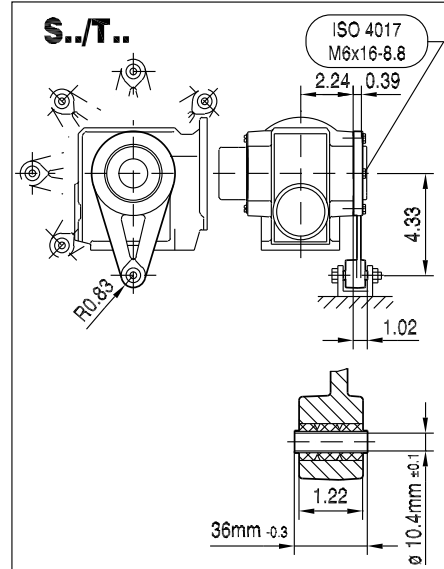
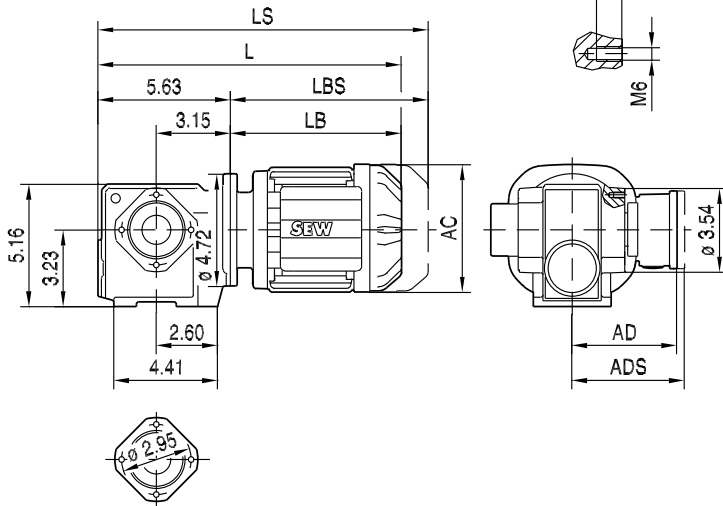
(→ 125)	DR63..	DR71S	DR71M	DR80S	DR80M	DR90M	DR90L
AC	5.20	5.47	5.47	6.14	6.14	7.05	7.05
AD	4.13	4.69	4.69	5.04	5.04	5.51	5.51
ADS	4.13	5.08	5.08	5.47	5.47	5.91	5.91
L	13.15	13.62	14.61	14.96	16.18	16.34	17.13
LS	15.31	16.30	17.28	18.15	19.37	20.00	20.79
LB	7.52	7.99	8.98	9.33	10.55	10.71	11.50
LBS	9.69	10.67	11.65	12.52	13.74	14.37	15.16

reducer.ir

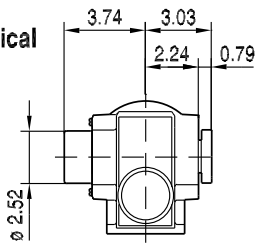


02 018 00 09

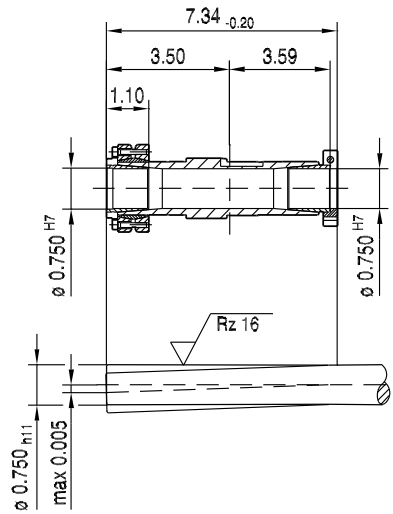
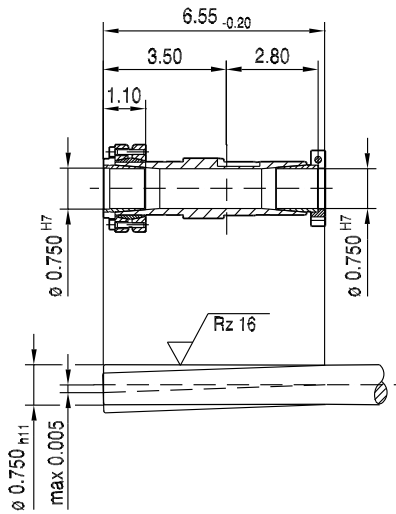
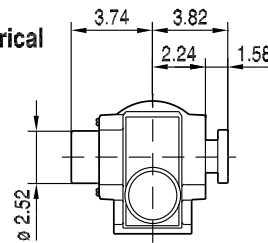
ST37..



NON-Symmetrical

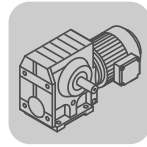


Symmetrical



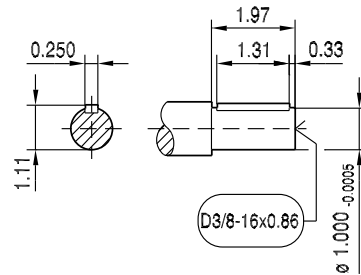
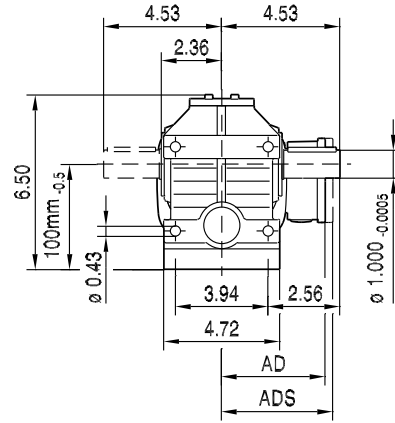
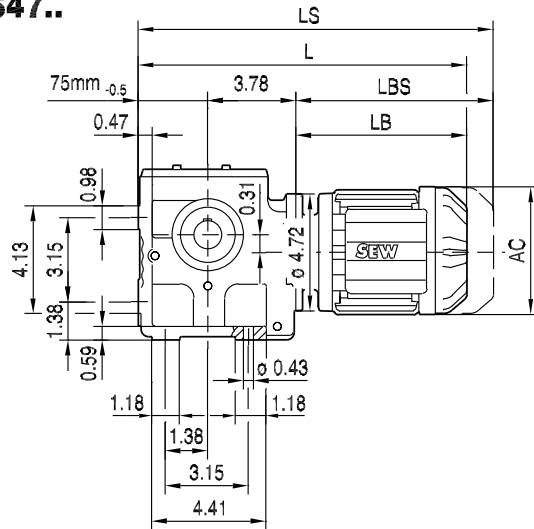
(→ 125)	DR63..	DR71S	DR71M	DR80S	DR80M	DR90M	DR90L
AC	5.20	5.47	5.47	6.14	6.14	7.05	7.05
AD	4.13	4.69	4.69	5.04	5.04	5.51	5.51
ADS	4.13	5.08	5.08	5.47	5.47	5.91	5.91
L	13.15	13.62	14.61	14.96	16.18	16.34	17.13
LS	15.31	16.30	17.28	18.15	19.37	20.00	20.79
LB	7.52	7.99	8.98	9.33	10.55	10.71	11.50
LBS	9.69	10.67	11.65	12.62	13.74	14.37	15.16

reducer.ir



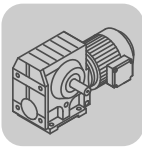
02 019 00 09

S47..



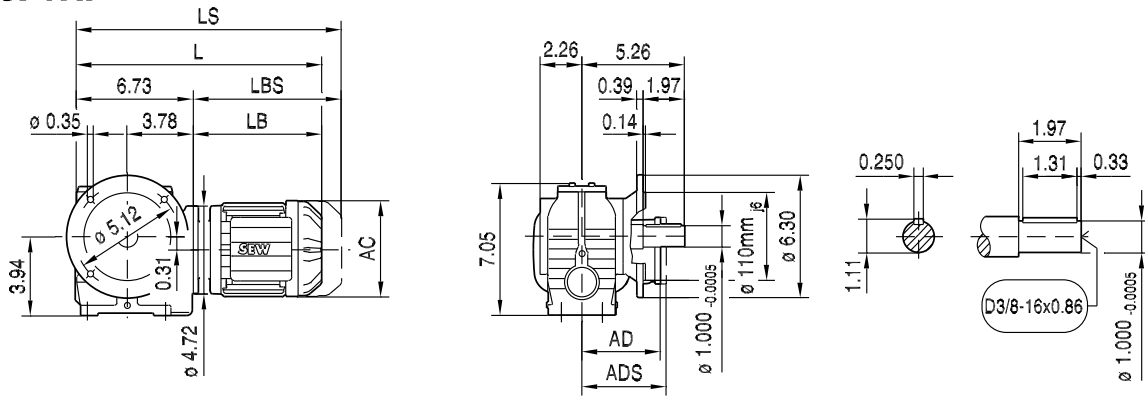
(→ 125)	DR63..	DR71S	DR71M	DR80S	DR80M	DR90M	DR90L	DR100L/LC
AC	5.20	5.47	5.47	6.14	6.14	7.05	7.05	7.76
AD	4.13	4.69	4.69	5.04	5.04	5.51	5.51	6.18
ADS	4.13	5.08	5.08	5.47	5.47	5.91	5.91	6.22
L	14.25	14.72	15.71	16.06	17.28	17.44	18.23	20.59
LS	16.42	17.40	18.39	19.25	20.47	21.10	21.89	24.25
LB	7.52	7.99	8.98	9.33	10.55	10.71	11.50	13.86
LBS	9.69	10.67	11.65	12.52	13.74	14.37	15.16	17.52

reducer.ir

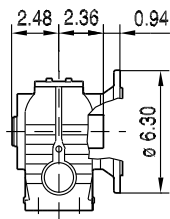


02 020 00 09

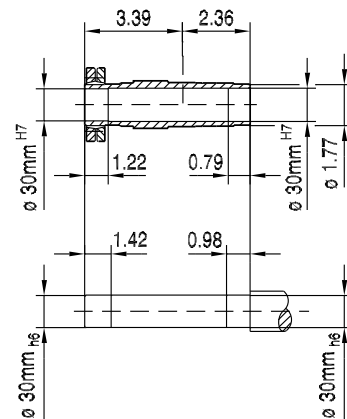
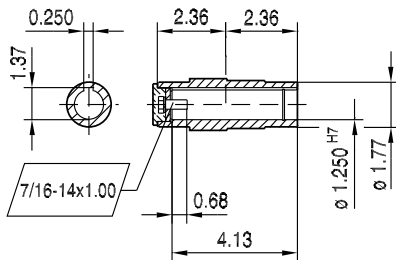
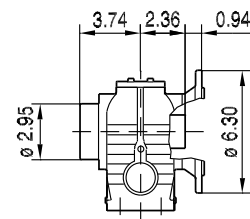
SF47..



SAF47..

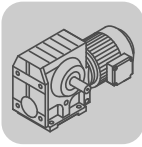


SHF47..



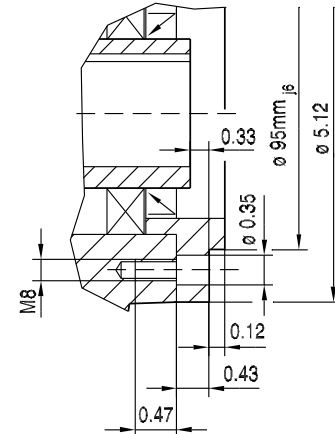
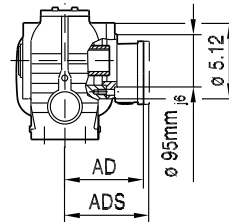
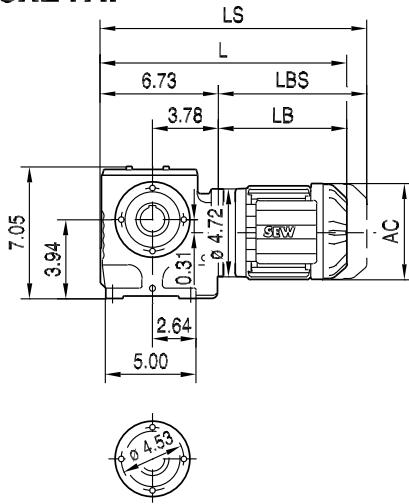
(→ 125)	DR63..	DR71S	DR71M	DR80S	DR80M	DR90M	DR90L	DR100L/LC
AC	5.20	5.47	5.47	6.14	6.14	7.05	7.05	7.76
AD	4.13	4.69	4.69	5.04	5.04	5.51	5.51	6.18
ADS	4.13	5.08	5.08	5.47	5.47	5.91	5.91	6.22
L	14.25	14.72	15.71	16.06	17.28	17.44	18.23	20.59
LS	16.42	17.40	18.39	19.25	20.47	21.10	21.89	24.25
LB	7.52	7.99	8.98	9.33	10.55	10.71	11.50	13.86
LBS	9.69	10.67	11.65	12.52	13.74	14.37	15.16	17.52

reducer.ir

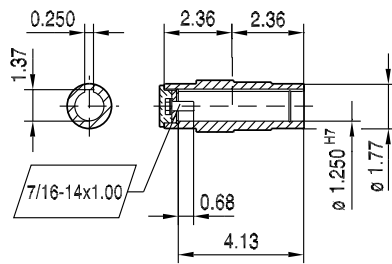
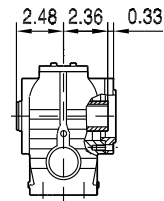


02 022 00 09

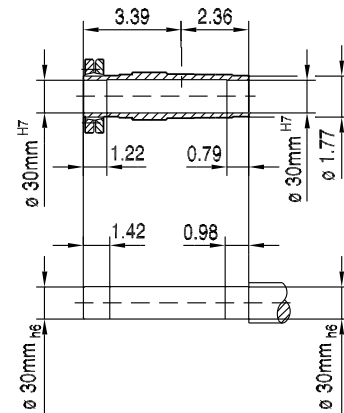
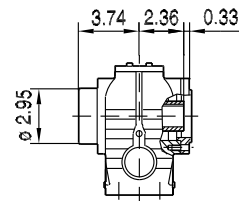
SAZ47..



SAZ47..

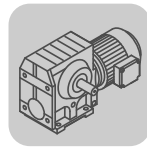


SHZ47..

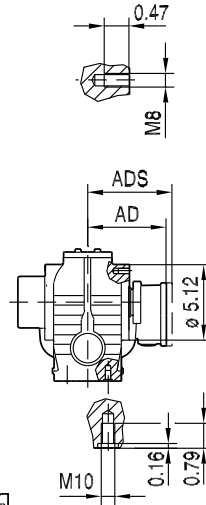
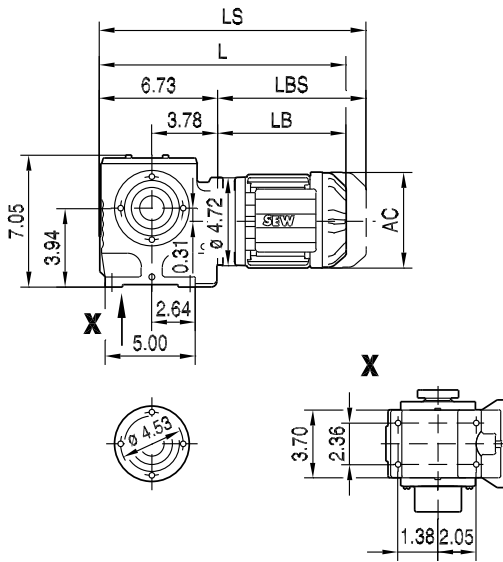


(→ 125)	DR63..	DR71S	DR71M	DR80S	DR80M	DR90M	DR90L	DR100L/LC
AC	5.20	5.47	5.47	6.14	6.14	7.05	7.05	7.76
AD	4.13	4.69	4.69	5.04	5.04	5.51	5.51	6.18
ADS	4.13	5.08	5.08	5.47	5.47	5.91	5.91	6.22
L	14.25	14.72	15.71	16.06	17.28	17.44	18.23	20.59
LS	16.42	17.40	18.39	19.25	20.47	21.10	21.89	24.25
LB	7.52	7.99	8.98	9.33	10.55	10.71	11.50	13.86
LBS	9.69	10.67	11.65	12.52	13.74	14.37	15.16	17.52

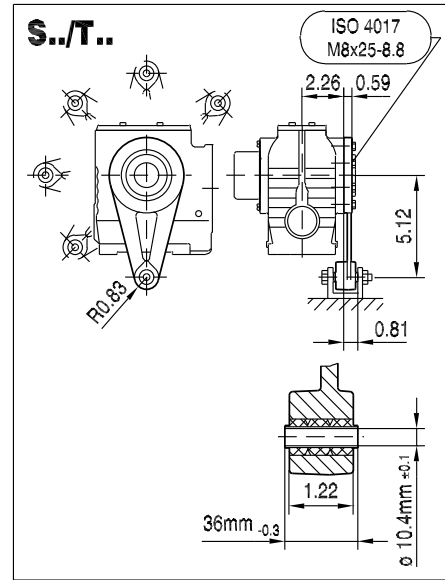
reducer.ir



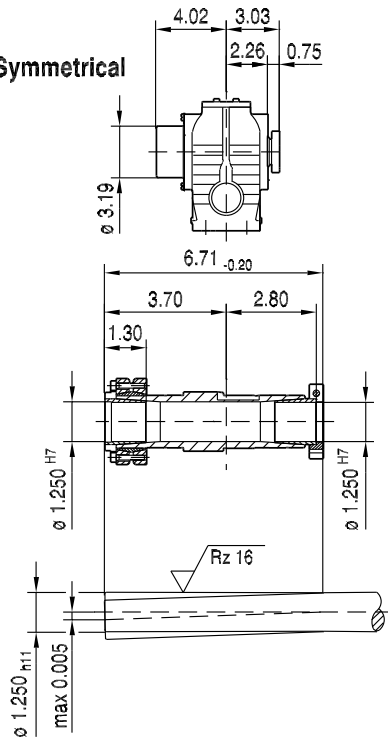
ST47..



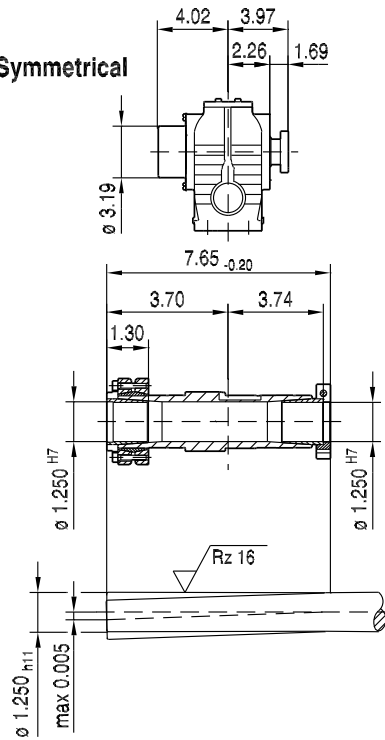
02 023 00 09



NON-Symmetrical

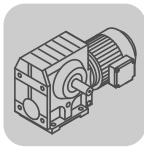


Symmetrical



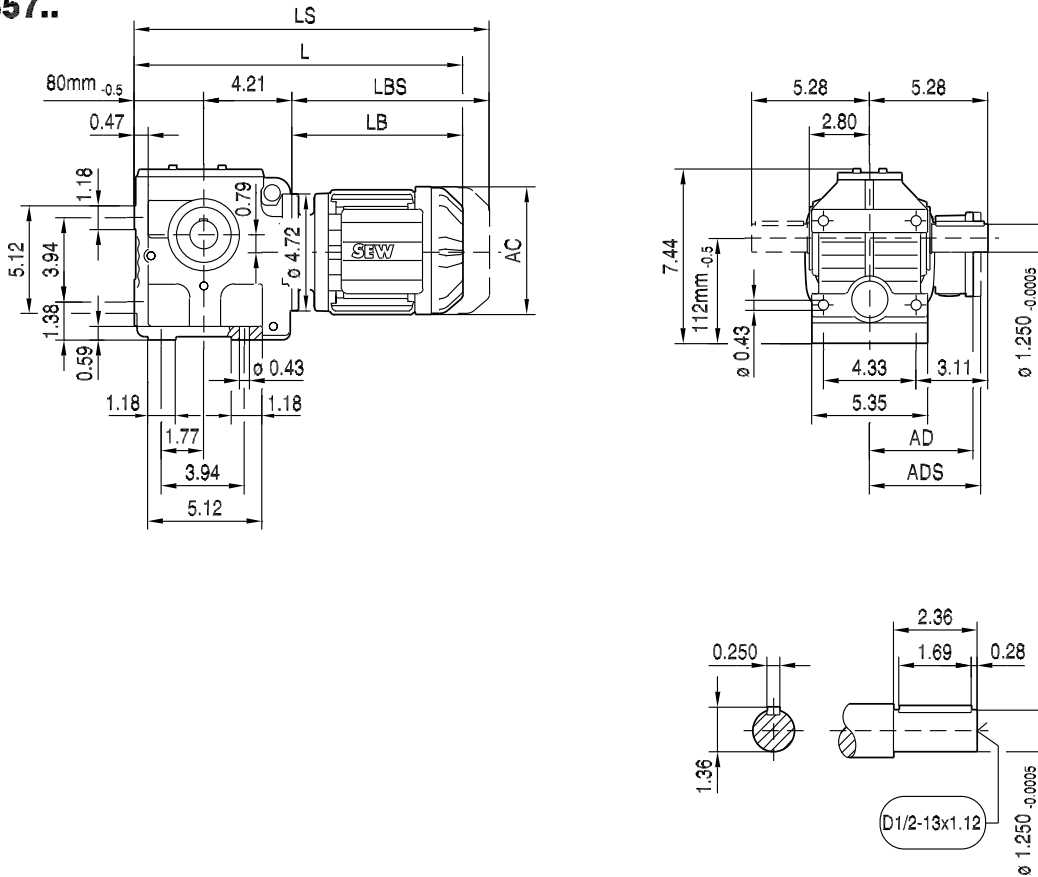
(→ 125)	DR63..	DR71S	DR71M	DR80S	DR80M	DR90M	DR90L	DR100L/LC
AC	5.20	5.47	5.47	6.14	6.14	7.05	7.05	7.76
AD	4.13	4.69	4.69	5.04	5.04	5.51	5.51	6.18
ADS	4.13	5.08	5.08	5.47	5.47	5.91	5.91	6.22
L	14.25	14.72	15.71	16.06	17.28	17.44	18.23	20.59
LS	16.42	17.40	18.39	19.25	20.47	21.10	21.89	24.25
LB	7.52	7.99	8.98	9.33	10.55	10.71	11.50	13.86
LBS	9.69	10.67	11.65	12.52	13.74	14.37	15.16	17.52

reducer.ir



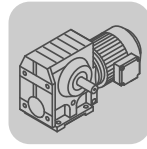
02 024 00 09

S57..



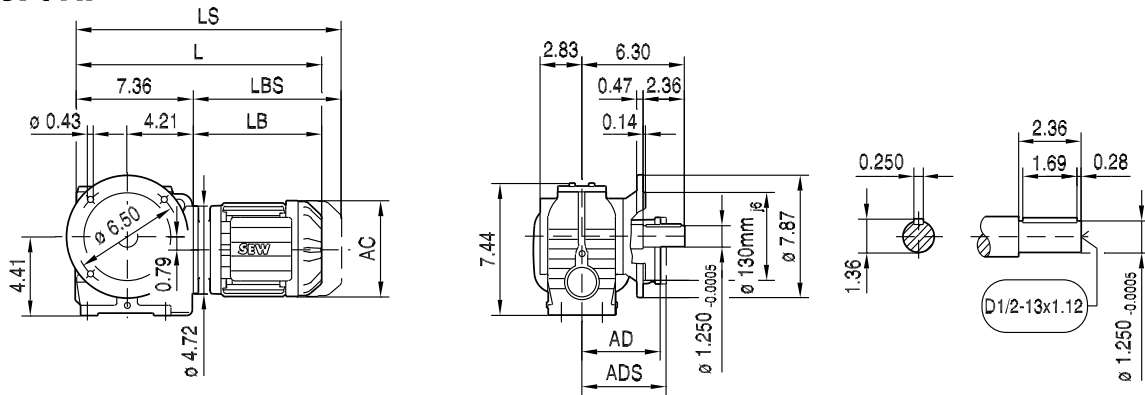
(→ 125)	DR63..	DR71S	DR71M	DR80S	DR80M	DR90M	DR90L	DR100M	DR100L/LC
AC	5.20	5.47	5.47	6.14	6.14	7.05	7.05	7.76	7.76
AD	4.13	4.69	4.69	5.04	5.04	5.51	5.51	6.18	6.18
ADS	4.13	5.08	5.08	5.47	5.47	5.91	5.91	6.22	6.22
L	14.88	15.35	16.34	16.69	17.91	18.07	18.86	20.04	21.22
LS	17.05	18.03	19.02	19.88	21.10	21.73	22.52	23.70	24.88
LB	7.52	7.99	8.98	9.33	10.55	10.71	11.50	12.68	13.86
LBS	9.69	10.67	11.65	12.52	13.74	14.37	15.16	16.34	17.52

reducer.ir

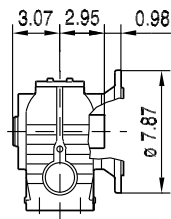


02 025 00 09

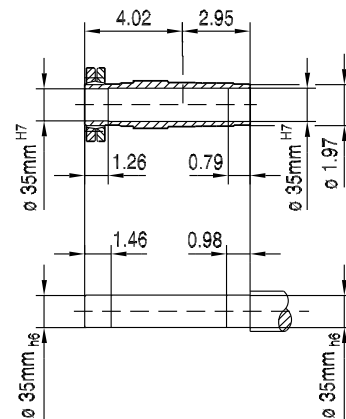
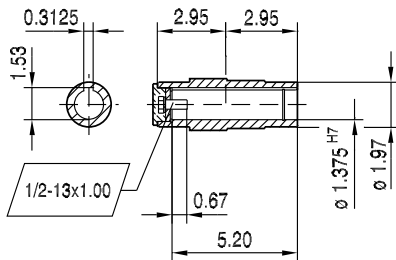
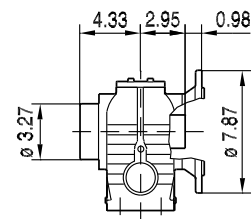
SF57..



SAF57..

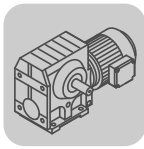


SHF57..



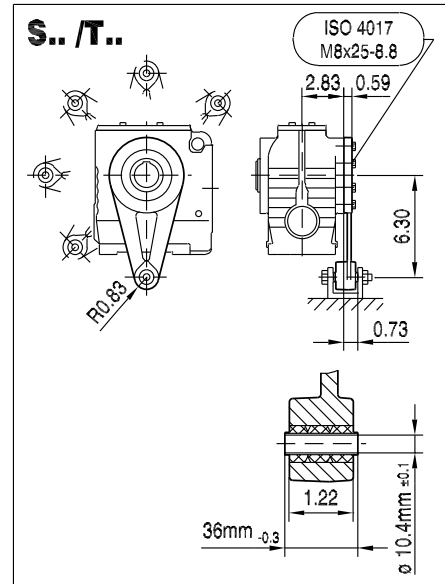
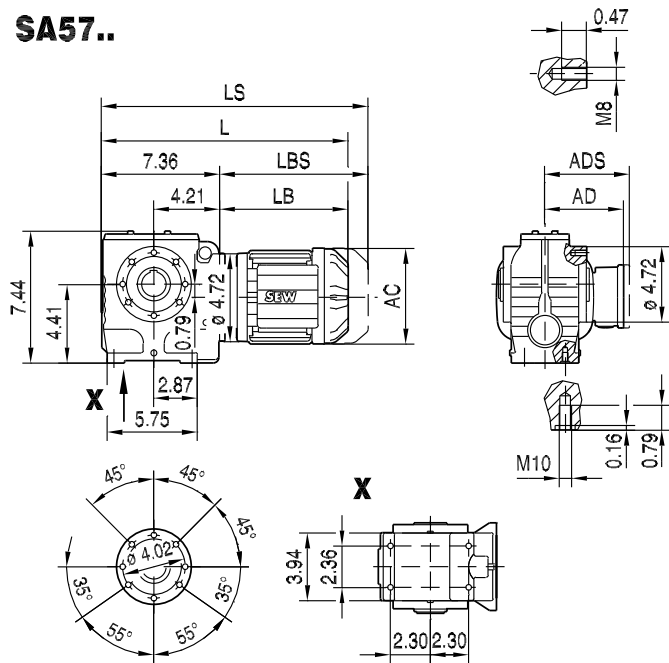
(→ 125)	DR63..	DR71S	DR71M	DR80S	DR80M	DR90M	DR90L	DR100M	DR100L/LC
AC	5.20	5.47	5.47	6.14	6.14	7.05	7.05	7.76	7.76
AD	4.13	4.69	4.69	5.04	5.04	5.51	5.51	6.18	6.18
ADS	4.13	5.08	5.08	5.47	5.47	5.91	5.91	6.22	6.22
L	14.88	15.35	16.34	16.69	17.91	18.07	18.86	20.04	21.22
LS	17.05	18.03	19.02	19.88	21.10	21.73	22.52	23.70	24.88
LB	7.52	7.99	8.98	9.33	10.55	10.71	11.50	12.68	13.86
LBS	9.69	10.67	11.65	12.52	13.74	14.37	15.16	16.34	17.52

reducer.ir

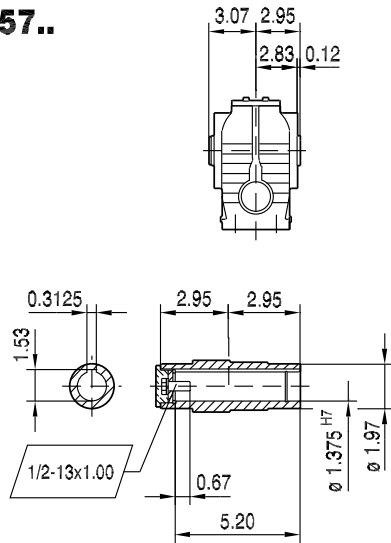


02 026 00 09

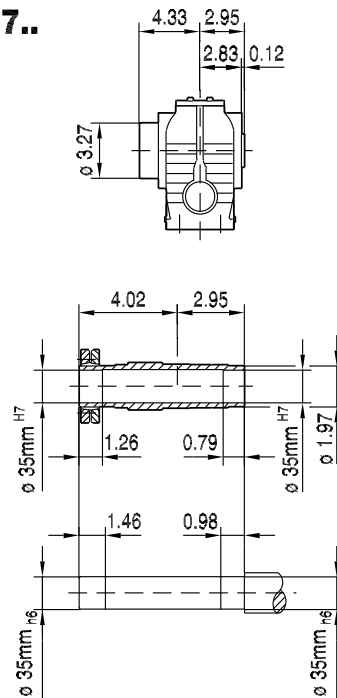
SA57..



SA57..

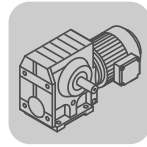


SH57..



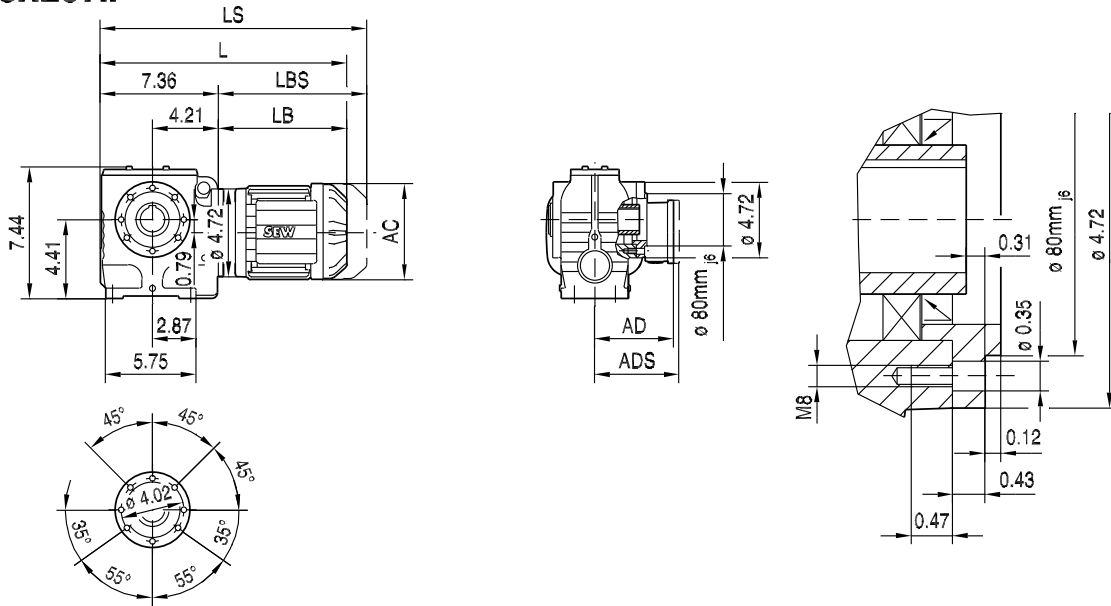
(→ 125)	DR63..	DR71S	DR71M	DR80S	DR80M	DR90M	DR90L	DR100M	DR100L/LC
AC	5.20	5.47	5.47	6.14	6.14	7.05	7.05	7.76	7.76
AD	4.13	4.69	4.69	5.04	5.04	5.51	5.51	6.18	6.18
ADS	4.13	5.08	5.08	5.47	5.47	5.91	5.91	6.22	6.22
L	14.88	15.35	16.34	16.69	17.91	18.07	18.86	20.04	21.22
LS	17.05	18.03	19.02	19.88	21.10	21.73	22.52	23.70	24.88
LB	7.52	7.99	8.98	9.33	10.55	10.71	11.50	12.68	13.86
LBS	9.69	10.67	11.65	12.52	13.74	14.37	15.16	16.34	17.52

reducer.ir

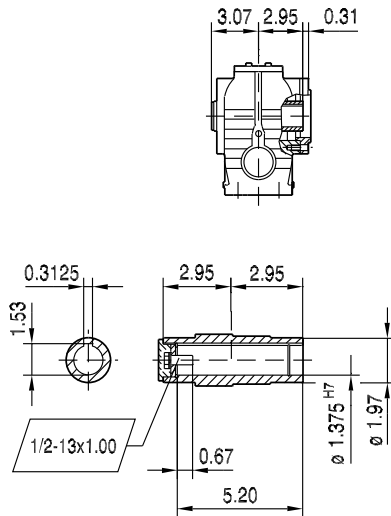


02 027 00 09

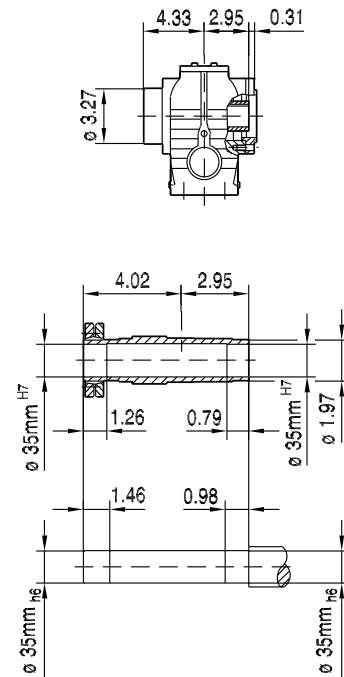
SAZ57..



SAZ57..



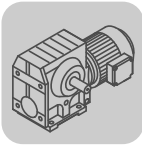
SHZ57..



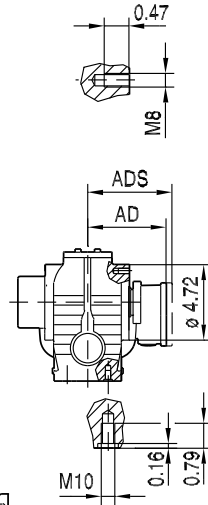
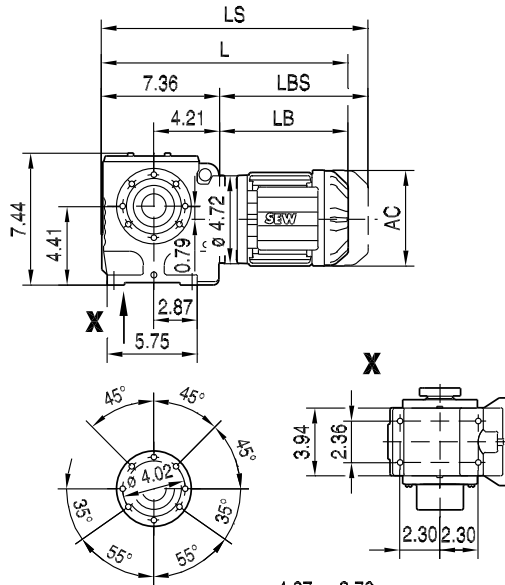
12

(→ 125)	DR63..	DR71S	DR71M	DR80S	DR80M	DR90M	DR90L	DR100M	DR100L/LC
AC	5.20	5.47	5.47	6.14	6.14	7.05	7.05	7.76	7.76
AD	4.13	4.69	4.69	5.04	5.04	5.51	5.51	6.18	6.18
ADS	4.13	5.08	5.08	5.47	5.47	5.91	5.91	6.22	6.22
L	14.88	15.35	16.34	16.69	17.91	18.07	18.86	20.04	21.22
LS	17.05	18.03	19.02	19.88	21.10	21.73	22.52	23.70	24.88
LB	7.52	7.99	8.98	9.33	10.55	10.71	11.50	12.68	13.86
LBS	9.69	10.67	11.65	12.52	13.74	14.37	15.16	16.34	17.52

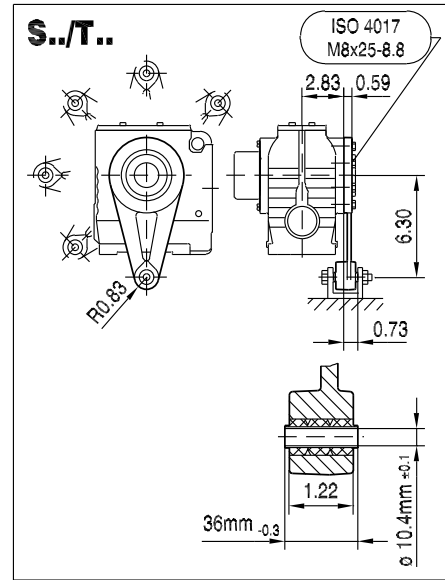
reducer.ir



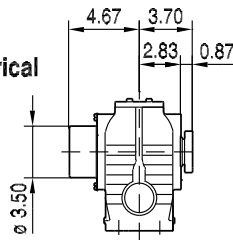
ST57..



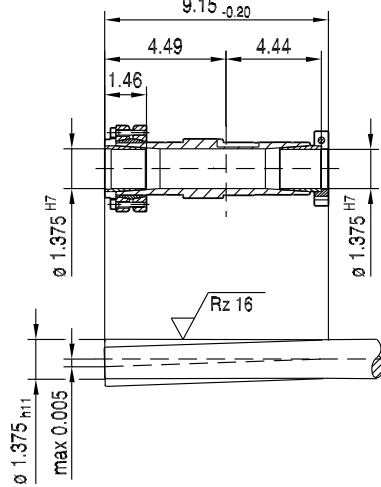
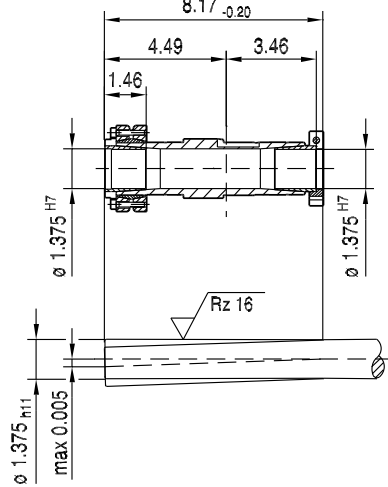
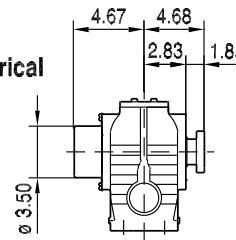
02 028 00 09



NON-Symmetrical

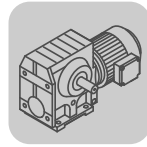


Symmetrical



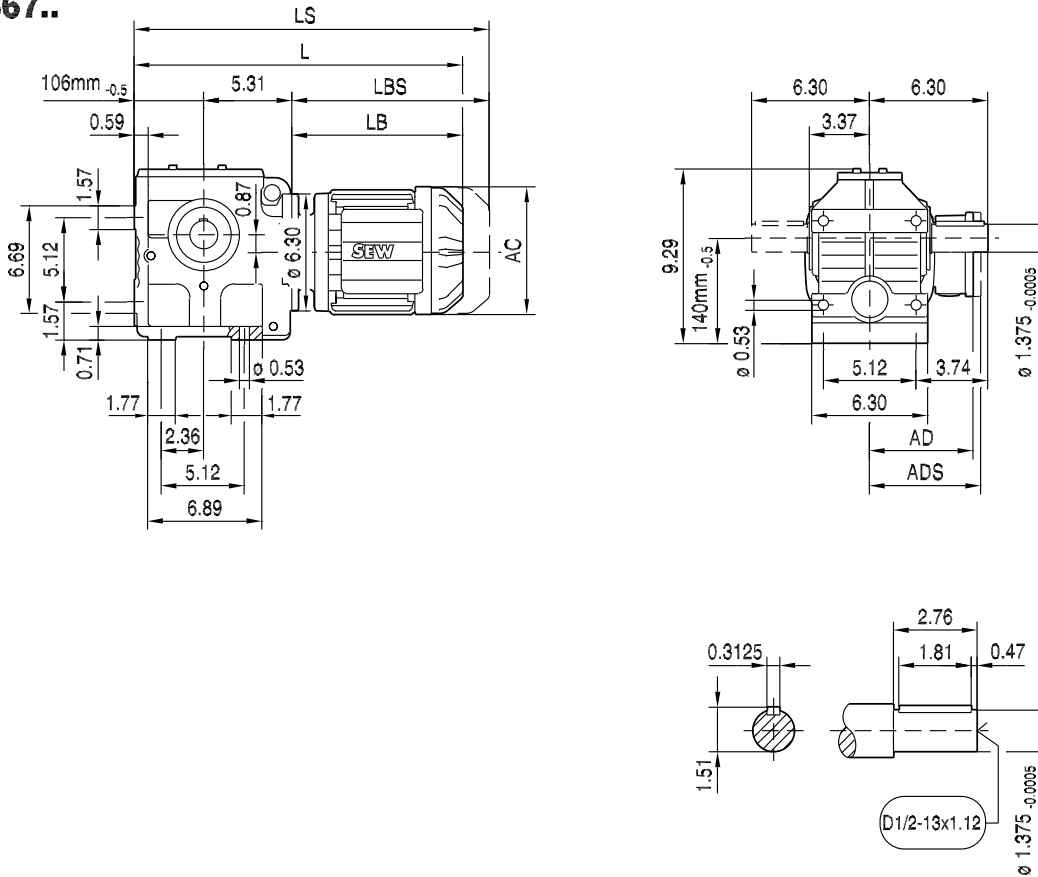
(→ 125)	DR63..	DR71S	DR71M	DR80S	DR80M	DR90M	DR90L	DR100M	DR100L/LC
AC	5.20	5.47	5.47	6.14	6.14	7.05	7.05	7.76	7.76
AD	4.13	4.69	4.69	5.04	5.04	5.51	5.51	6.18	6.18
ADS	4.13	5.08	5.08	5.47	5.47	5.91	5.91	6.22	6.22
L	14.88	15.35	16.34	16.69	17.91	18.07	18.86	20.04	21.22
LS	17.05	18.03	19.02	19.88	21.10	21.73	22.52	23.70	24.88
LB	7.52	7.99	8.98	9.33	10.55	10.71	11.50	12.68	13.86
LBS	9.69	10.67	11.65	12.52	13.74	14.37	15.16	16.34	17.52

reducer.ir



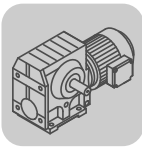
02 029 00 09

S67..



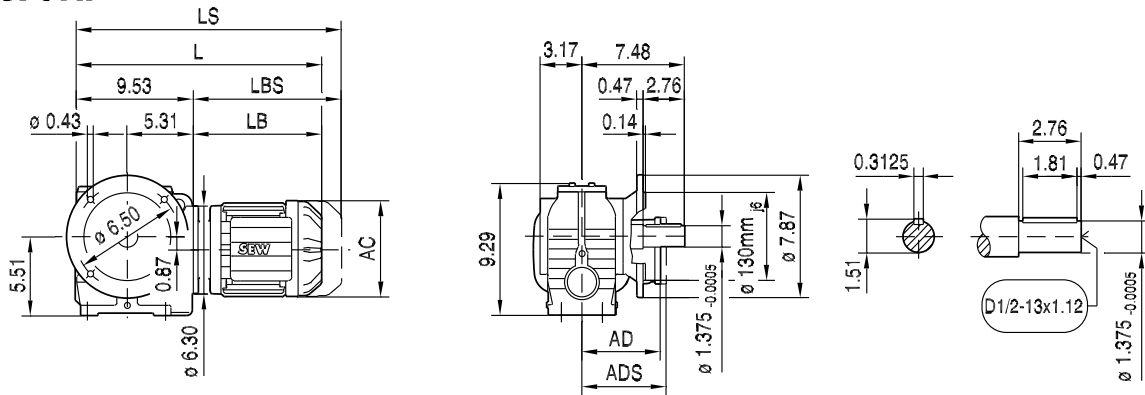
(→ 125)	DR63..	DR71S	DR71M	DR80S	DR80M	DR90M	DR90L	DR100M	DR100L/LC	DR132S	DR132M/MC
AC	5.20	5.47	5.47	6.14	6.14	7.05	7.05	7.76	7.76	8.70	8.70
AD	4.13	4.69	4.69	5.04	5.04	5.51	5.51	6.18	6.18	6.69	6.69
ADS	4.13	5.08	5.08	5.47	5.47	5.91	5.91	6.22	6.22	6.77	6.77
L	16.77	17.20	18.19	18.54	19.76	19.84	20.63	21.81	22.99	24.84	26.81
LS	18.94	19.88	20.87	21.73	22.95	23.50	24.29	25.47	26.65	29.25	31.22
LB	7.28	7.72	8.70	9.06	10.28	10.35	11.14	12.32	13.50	15.35	17.32
LBS	9.45	10.39	11.38	12.24	13.46	14.02	14.80	15.98	17.17	19.76	21.73

reducer.ir

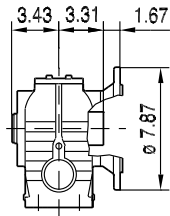


02 030 00 09

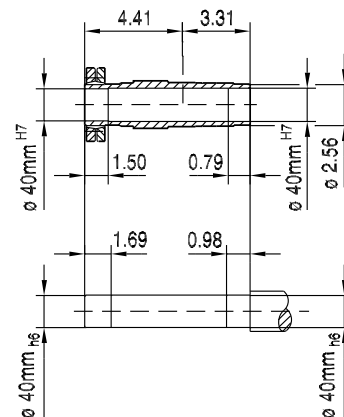
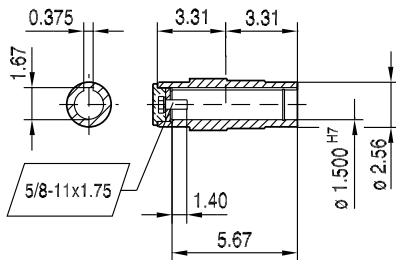
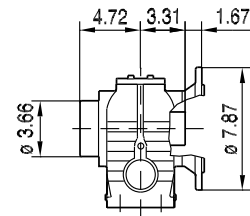
SF67..



SAF67..

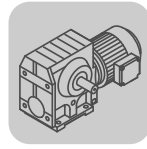


SHF67..

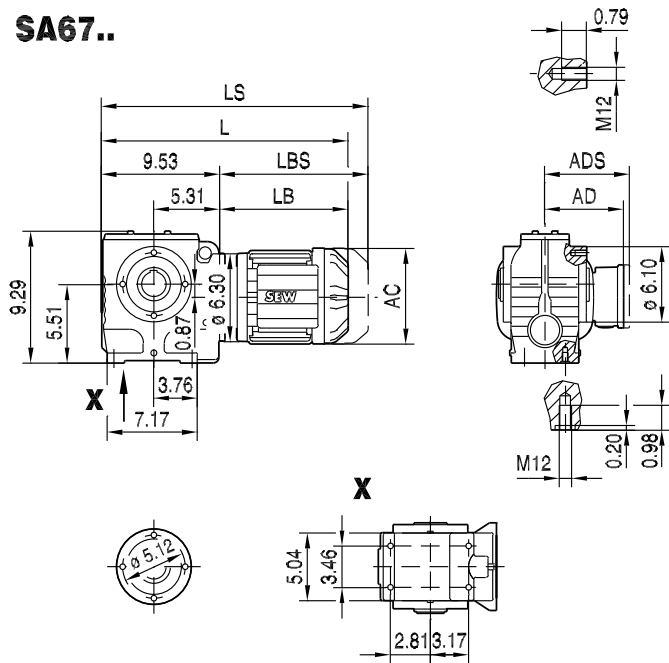


(→ 125)	DR63..	DR71S	DR71M	DR80S	DR80M	DR90M	DR90L	DR100M	DR100L/LC	DR132S	DR132M/MC
AC	5.20	5.47	5.47	6.14	6.14	7.05	7.05	7.76	7.76	8.70	8.70
AD	4.13	4.69	4.69	5.04	5.04	5.51	5.51	6.18	6.18	6.69	6.69
ADS	4.13	5.08	5.08	5.47	5.47	5.91	5.91	6.22	6.22	6.77	6.77
L	16.81	17.24	18.23	18.58	19.80	19.88	20.67	21.85	23.03	24.88	26.85
LS	18.98	19.92	20.91	21.77	22.99	23.54	24.33	25.51	26.69	29.29	31.26
LB	7.28	7.72	8.70	9.06	10.28	10.35	11.14	12.32	13.50	15.35	17.32
LBS	9.45	10.39	11.38	12.24	13.46	14.02	14.80	15.98	17.17	19.76	21.73

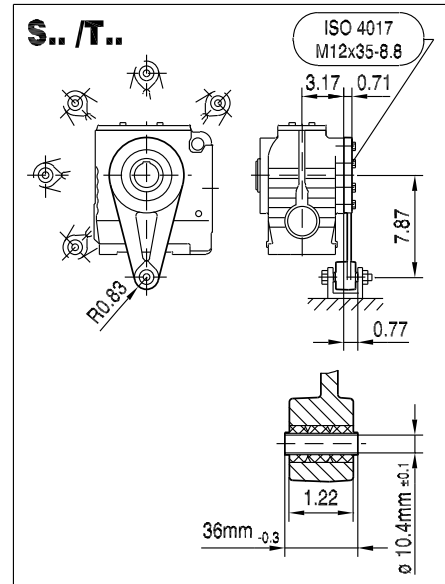
reducer.ir



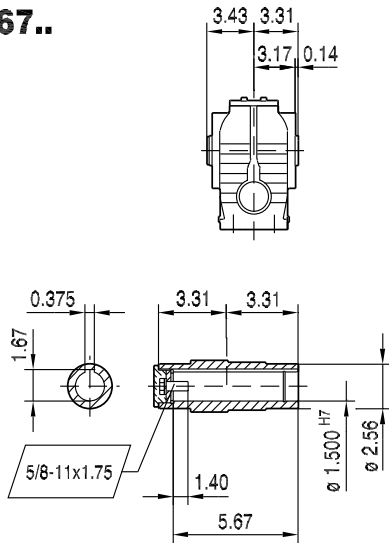
SA67..



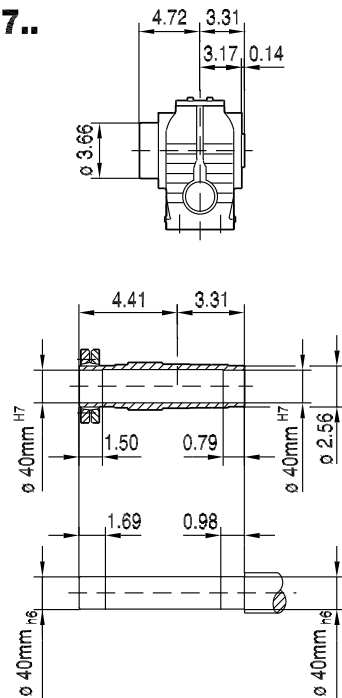
02 031 00 09



SA67..



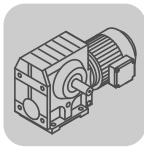
SH67..



12

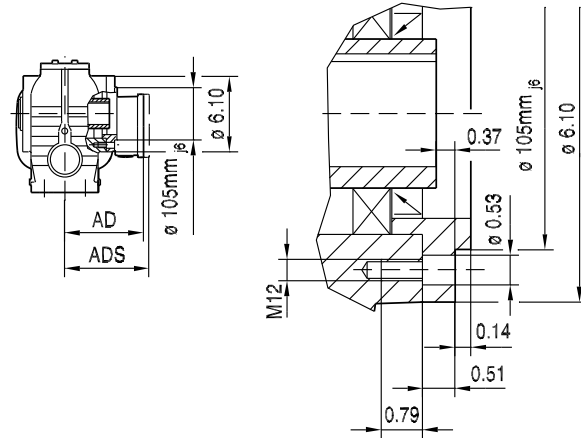
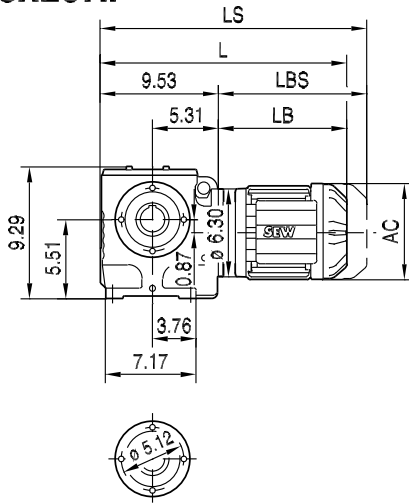
(→ 125)	DR63..	DR71S	DR71M	DR80S	DR80M	DR90M	DR90L	DR100M	DR100L/LC	DR132S	DR132M/MC
AC	5.20	5.47	5.47	6.14	6.14	7.05	7.05	7.76	7.76	8.70	8.70
AD	4.13	4.69	4.69	5.04	5.04	5.51	5.51	6.18	6.18	6.69	6.69
ADS	4.13	5.08	5.08	5.47	5.47	5.91	5.91	6.22	6.22	6.77	6.77
L	16.81	17.24	18.23	18.58	19.80	19.88	20.67	21.85	23.03	24.88	26.85
LS	18.98	19.92	20.91	21.77	22.99	23.54	24.33	25.51	26.69	29.29	31.26
LB	7.28	7.72	8.70	9.06	10.28	10.35	11.14	12.32	13.50	15.35	17.32
LBS	9.45	10.39	11.38	12.24	13.46	14.02	14.80	15.98	17.17	19.76	21.73

reducer.ir

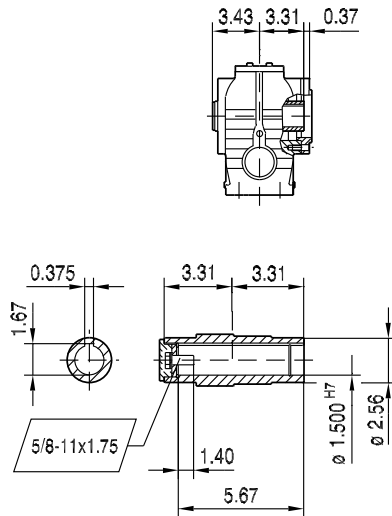


02 032 00 09

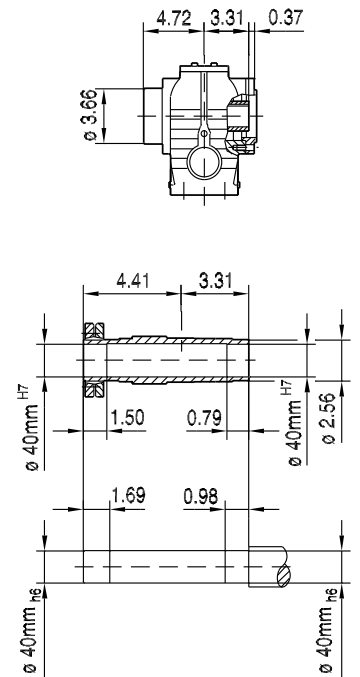
SAZ67..



SAZ67..

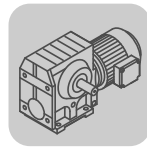


SHZ67..

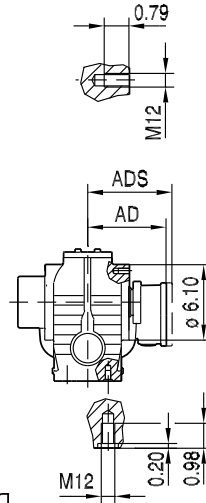
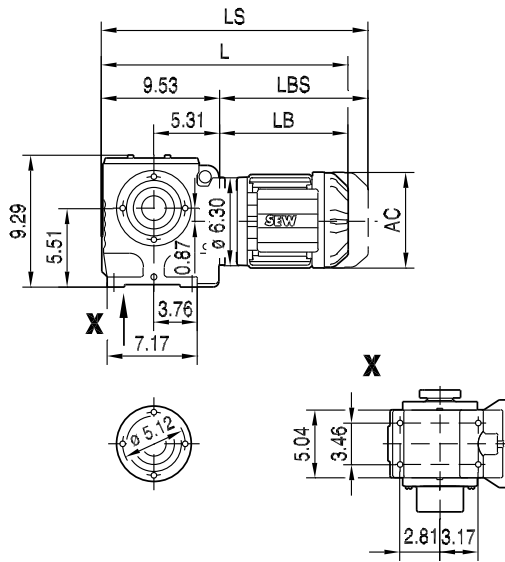


(→ 125)	DR63..	DR71S	DR71M	DR80S	DR80M	DR90M	DR90L	DR100M	DR100L/LC	DR132S	DR132M/MC
AC	5.20	5.47	5.47	6.14	6.14	7.05	7.05	7.76	7.76	8.70	8.70
AD	4.13	4.69	4.69	5.04	5.04	5.51	5.51	6.18	6.18	6.69	6.69
ADS	4.13	5.08	5.08	5.47	5.47	5.91	5.91	6.22	6.22	6.77	6.77
L	16.81	17.24	18.23	18.58	19.80	19.88	20.67	21.85	23.03	24.88	26.85
LS	18.98	19.92	20.91	21.77	22.99	23.54	24.33	25.51	26.69	29.29	31.26
LB	7.28	7.72	8.70	9.06	10.28	10.35	11.14	12.32	13.50	15.35	17.32
LBS	9.45	10.39	11.38	12.24	13.46	14.02	14.80	15.98	17.17	19.76	21.73

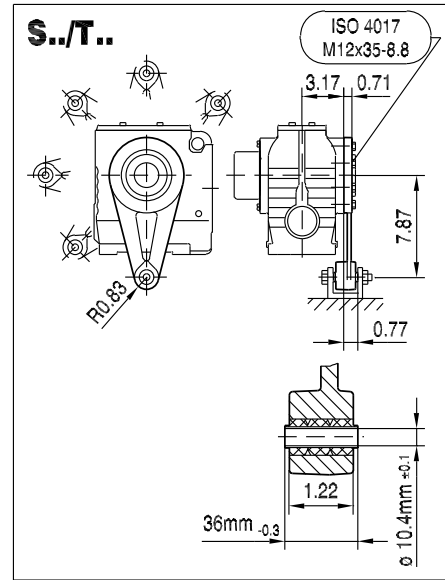
reducer.ir



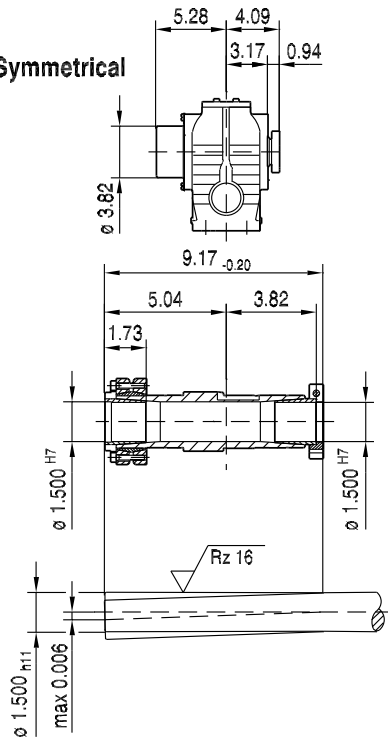
ST67..



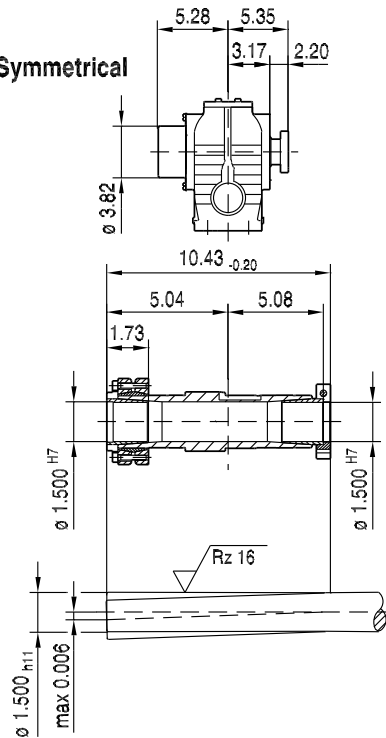
02 033 00 09



NON-Symmetrical

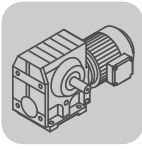


Symmetrical



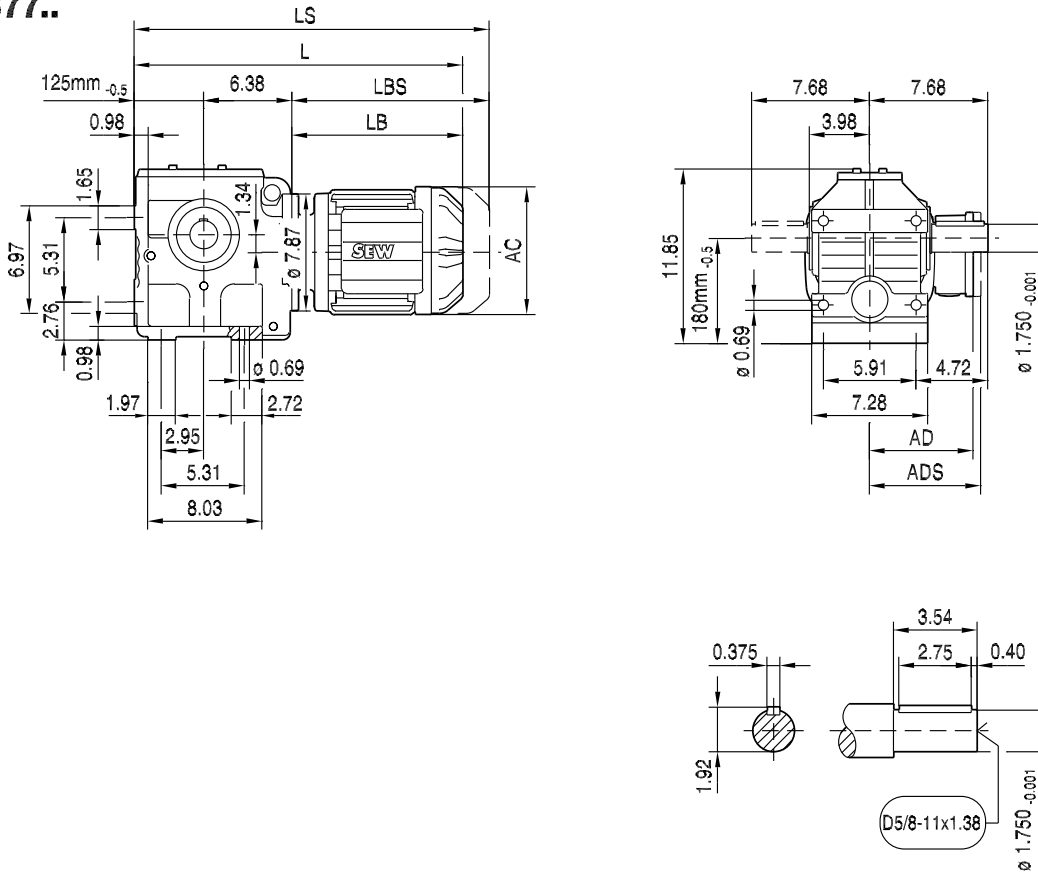
(→ 125)	DR63..	DR71S	DR71M	DR80S	DR80M	DR90M	DR90L	DR100M	DR100L/LC	DR132S	DR132M/MC
AC	5.20	5.47	5.47	6.14	6.14	7.05	7.05	7.76	7.76	8.70	8.70
AD	4.13	4.69	4.69	5.04	5.04	5.51	5.51	6.18	6.18	6.69	6.69
ADS	4.13	5.08	5.08	5.47	5.47	5.91	5.91	6.22	6.22	6.77	6.77
L	16.81	17.24	18.23	18.58	19.80	19.88	20.67	21.85	23.03	24.88	26.85
LS	18.98	19.92	20.91	21.77	22.99	23.54	24.33	25.51	26.69	29.29	31.26
LB	7.28	7.72	8.70	9.06	10.28	10.35	11.14	12.32	13.50	15.35	17.32
LBS	9.45	10.39	11.38	12.24	13.46	14.02	14.80	15.98	17.17	19.76	21.73

reducer.ir



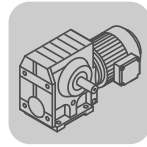
02 034 00 09

S77..



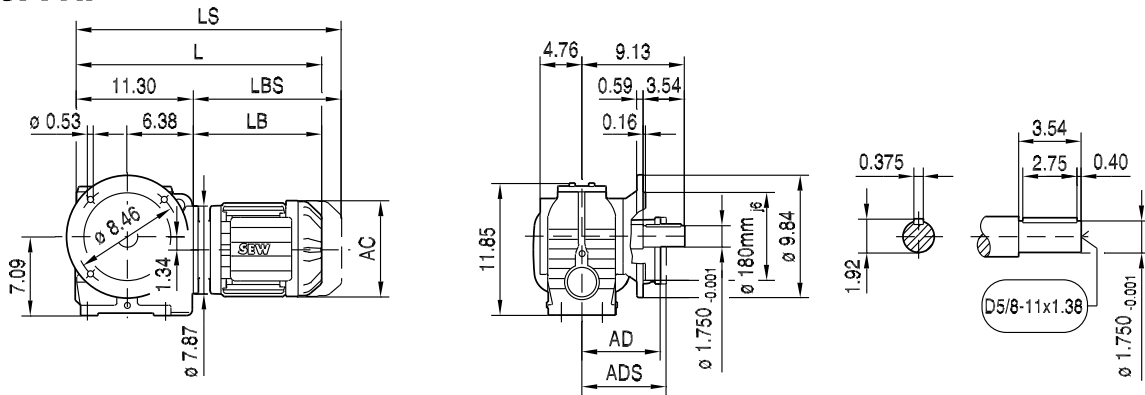
(→ 125)	DR71M	DR80S	DR80M	DR90M	DR90L	DR100M	DR100L/LC	DR132S	DR132M/MC	DR160..
AC	5.47	6.14	6.14	7.05	7.05	7.76	7.76	8.70	8.70	10.63
AD	4.69	5.04	5.04	5.51	5.51	6.18	6.18	6.69	6.69	8.98
ADS	5.08	5.47	5.47	5.91	5.91	6.22	6.22	6.77	6.77	8.98
L	19.72	20.08	21.30	21.38	22.17	23.35	24.53	26.22	28.19	29.80
LS	22.40	23.27	24.49	25.04	25.83	27.01	28.19	30.63	32.60	35.20
LB	8.43	8.78	10.00	10.08	10.87	12.05	13.23	14.92	16.89	18.50
LBS	11.10	11.97	13.19	13.74	14.63	15.71	16.89	19.33	21.30	23.90

reducer.ir

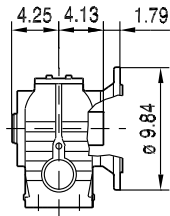


02 035 00 09

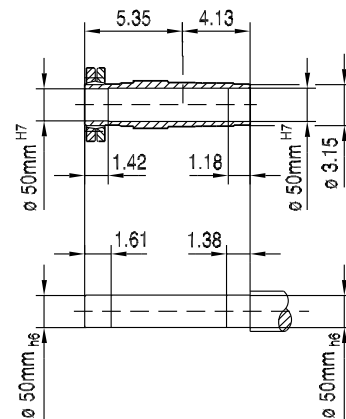
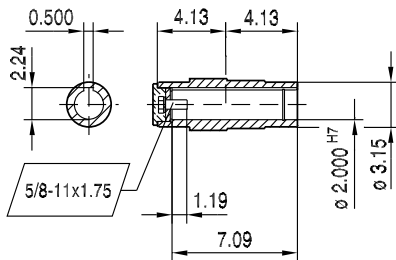
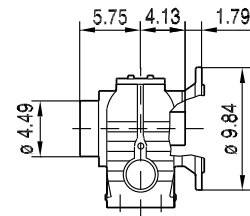
SF77..



SAF77..

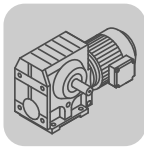


SHF77..



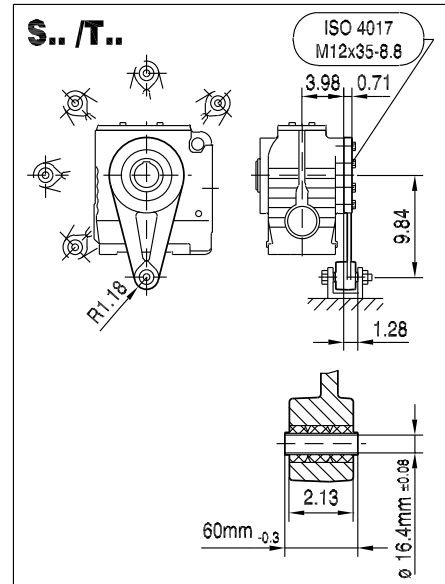
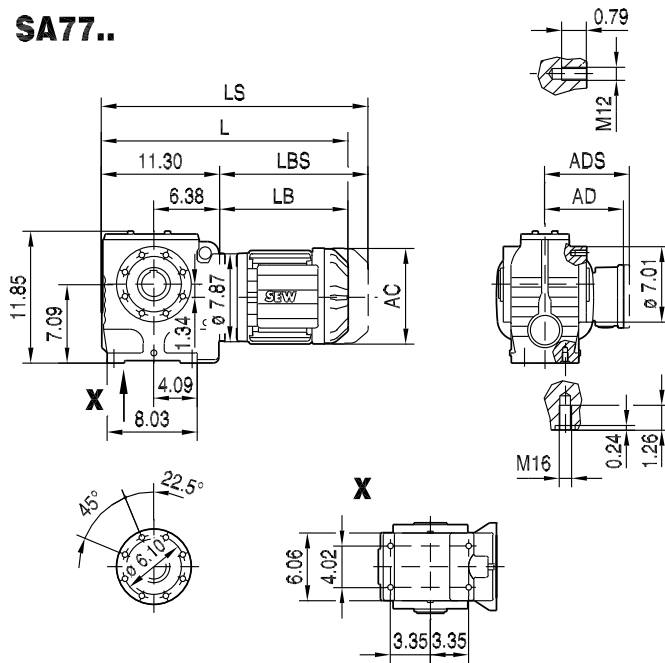
(→ 125)	DR71M	DR80S	DR80M	DR90M	DR90L	DR100M	DR100L/LC	DR132S	DR132M/MC	DR160..
AC	5.47	6.14	6.14	7.05	7.05	7.76	7.76	8.70	8.70	10.63
AD	4.69	5.04	5.04	5.51	5.51	6.18	6.18	6.69	6.69	8.98
ADS	5.08	5.47	5.47	5.91	5.91	6.22	6.22	6.77	6.77	8.98
L	19.72	20.08	21.30	21.38	22.17	23.35	24.53	26.22	28.19	29.80
LS	22.40	23.27	24.49	25.04	25.83	27.01	28.19	30.63	32.60	35.20
LB	8.43	8.78	10.00	10.08	10.87	12.05	13.23	14.92	16.89	18.50
LBS	11.10	11.97	13.19	13.74	14.63	15.71	16.89	19.33	21.30	23.90

reducer.ir

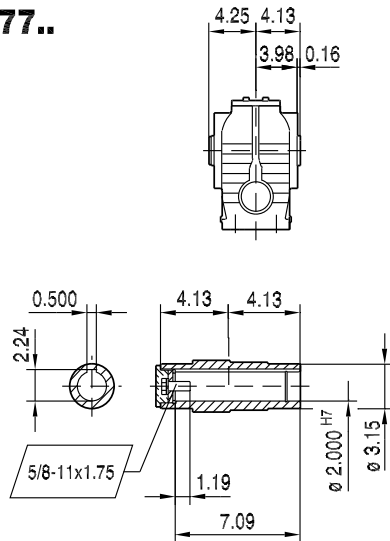


02 036 00 09

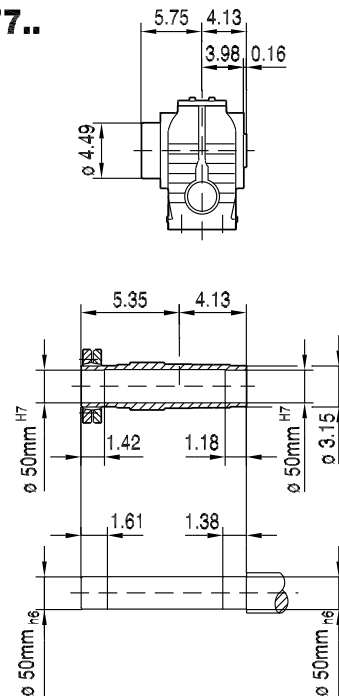
SA77..



SA77..

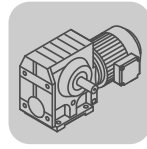


SH77..



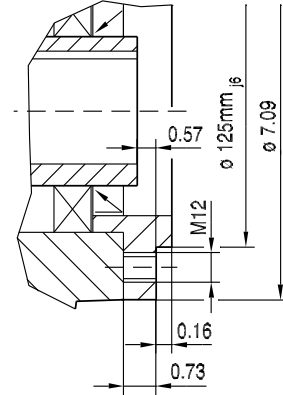
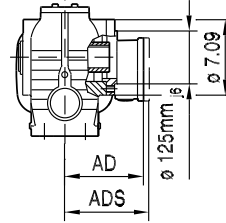
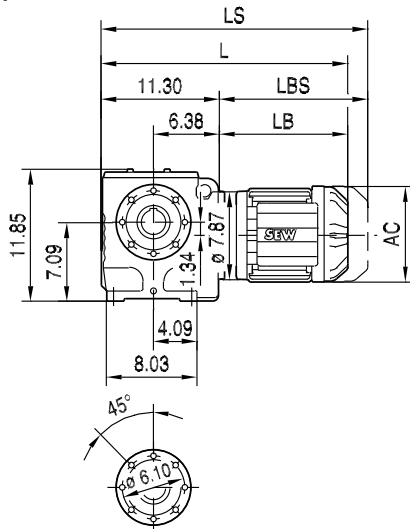
(→ 125)	DR71M	DR80S	DR80M	DR90M	DR90L	DR100M	DR100L/LC	DR132S	DR132M/MC	DR160..
AC	5.47	6.14	6.14	7.05	7.05	7.76	7.76	8.70	8.70	10.63
AD	4.69	5.04	5.04	5.51	5.51	6.18	6.18	6.69	6.69	8.98
ADS	5.08	5.47	5.47	5.91	5.91	6.22	6.22	6.77	6.77	8.98
L	19.72	20.08	21.30	21.38	22.17	23.35	24.53	26.22	28.19	29.80
LS	22.40	23.27	24.49	25.04	25.83	27.01	28.19	30.63	32.60	35.20
LB	8.43	8.78	10.00	10.08	10.87	12.05	13.23	14.92	16.89	18.50
LBS	11.10	11.97	13.19	13.74	14.63	15.71	16.89	19.33	21.30	23.90

reducer.ir

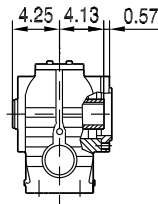


02 037 00 09

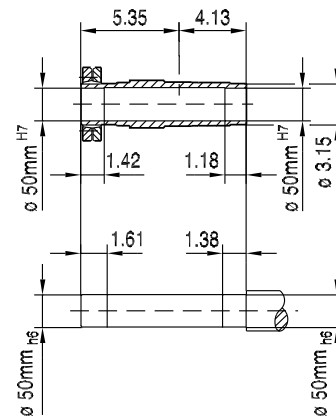
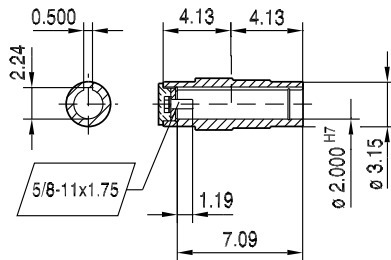
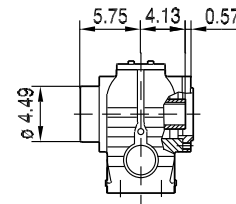
SAZ77..



SAZ77..

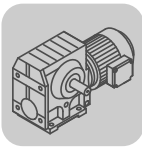


SHZ77..

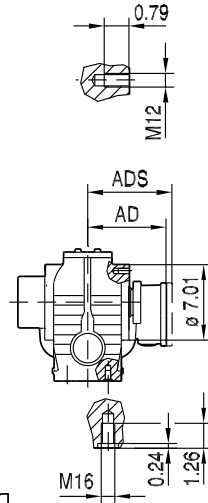
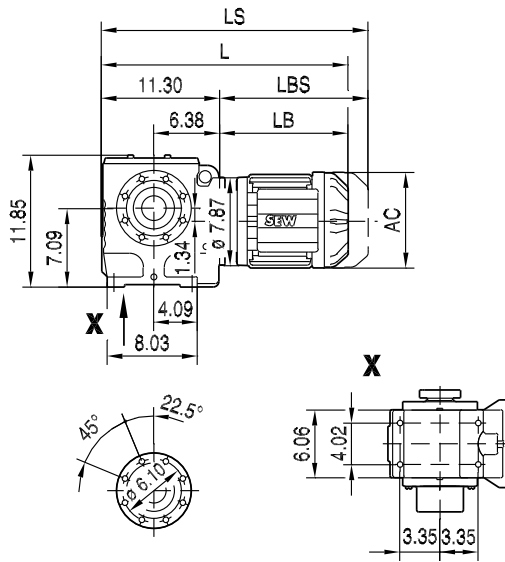


(→ 125)	DR71M	DR80S	DR80M	DR90M	DR90L	DR100M	DR100L/LC	DR132S	DR132M/MC	DR160..
AC	5.47	6.14	6.14	7.05	7.05	7.76	7.76	8.70	8.70	10.63
AD	4.69	5.04	5.04	5.51	5.51	6.18	6.18	6.69	6.69	8.98
ADS	5.08	5.47	5.47	5.91	5.91	6.22	6.22	6.77	6.77	8.98
L	19.72	20.08	21.30	21.38	22.17	23.35	24.53	26.22	28.19	29.80
LS	22.40	23.27	24.49	25.04	25.83	27.01	28.19	30.63	32.60	35.20
LB	8.43	8.78	10.00	10.08	10.87	12.05	13.23	14.92	16.89	18.50
LBS	11.10	11.97	13.19	13.74	14.63	15.71	16.89	19.33	21.30	23.90

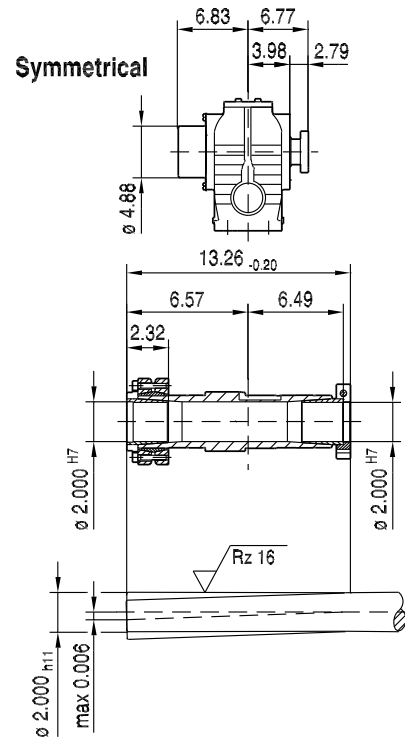
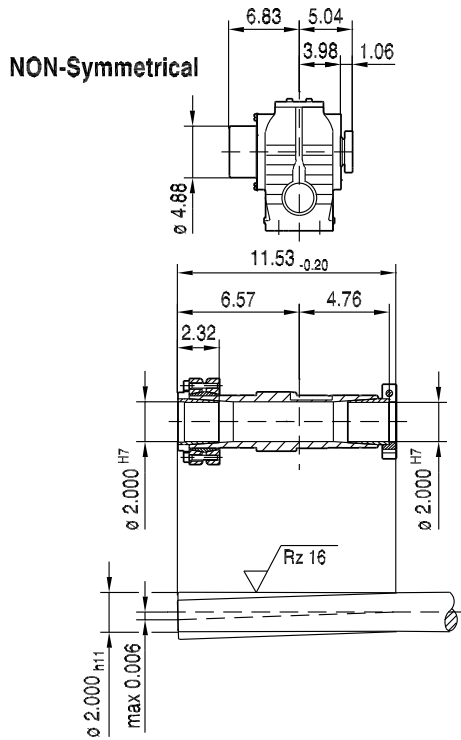
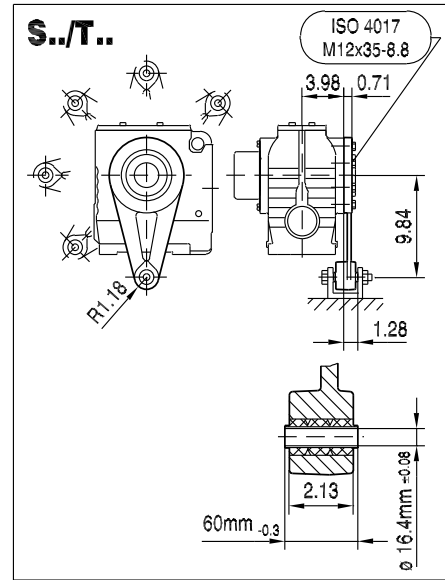
reducer.ir



ST77..

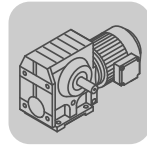


02 038 00 09



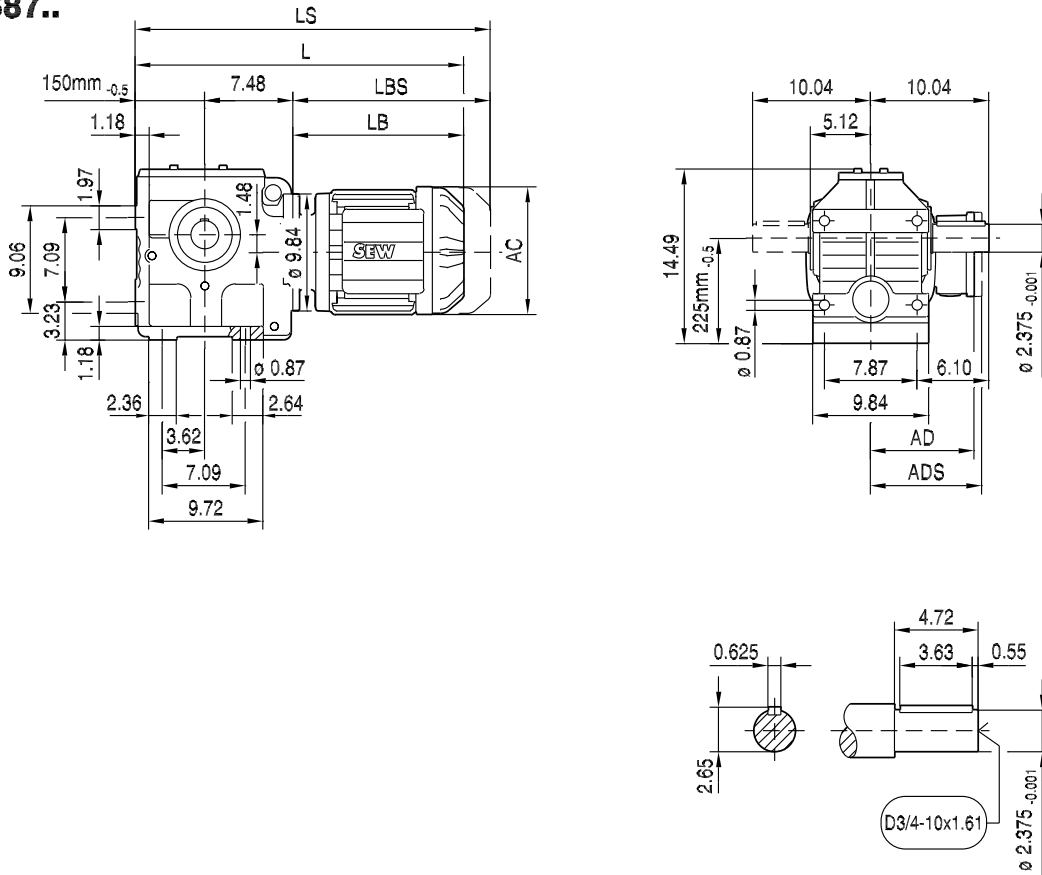
(→ 125)	DR71M	DR80S	DR80M	DR90M	DR90L	DR100M	DR100L/LC	DR132S	DR132M/MC	DR160..
AC	5.47	6.14	6.14	7.05	7.05	7.76	7.76	8.70	8.70	10.63
AD	4.69	5.04	5.04	5.51	5.51	6.18	6.18	6.69	6.69	8.98
ADS	5.08	5.47	5.47	5.91	5.91	6.22	6.22	6.77	6.77	8.98
L	19.72	20.08	21.30	21.38	22.17	23.35	24.53	26.22	28.19	29.80
LS	22.40	23.27	24.49	25.04	25.83	27.01	28.19	30.63	32.60	35.20
LB	8.43	8.78	10.00	10.08	10.87	12.05	13.23	14.92	16.89	18.50
LBS	11.10	11.97	13.19	13.74	14.63	15.71	16.89	19.33	21.30	23.90

reducer.ir



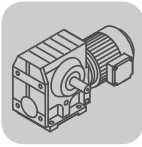
02 039 00 09

S87..



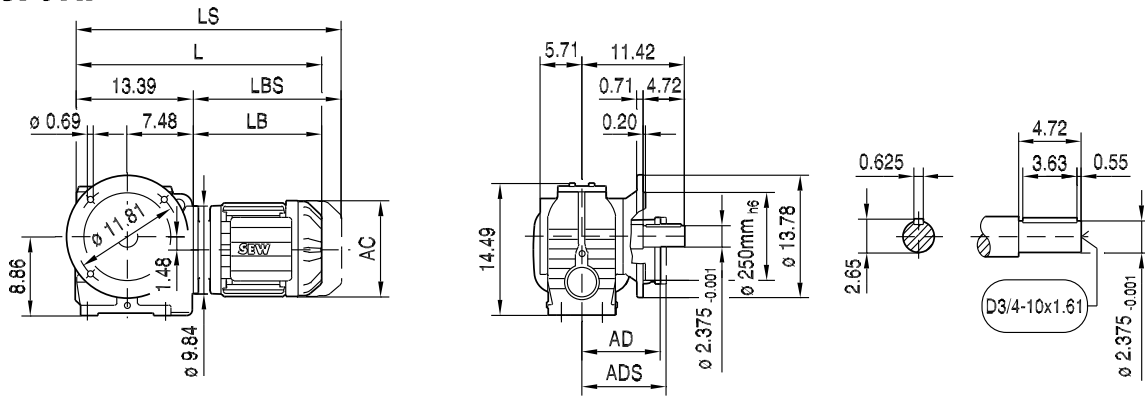
(→ 125)	DR80S	DR80M	DR90M	DR90L	DR100M	DR100L/LC	DR132S	DR132M/MC	DR160..	DR180S/M	DR180L/LC
AC	6.14	6.14	7.05	7.05	7.76	7.76	8.70	8.70	10.63	12.44	12.44
AD	5.04	5.04	5.51	5.51	6.18	6.18	6.69	6.69	8.98	9.96	9.96
ADS	5.47	5.47	5.91	5.91	6.22	6.22	6.77	6.77	8.98	9.96	9.96
L	21.97	23.19	23.27	24.06	25.24	26.42	28.11	30.08	31.69	34.41	36.77
LS	25.16	26.38	26.93	27.72	28.90	30.08	32.52	34.49	37.09	41.85	44.21
LB	8.58	9.80	9.88	10.67	11.85	13.03	14.72	16.69	18.31	21.02	23.39
LBS	11.77	12.99	13.54	14.33	15.51	16.69	19.13	21.10	23.70	28.46	30.83

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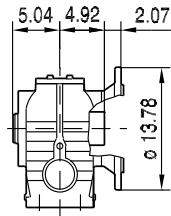


02 040 00 09

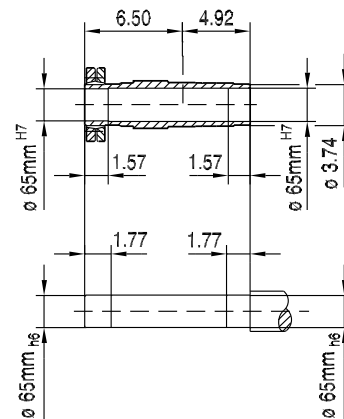
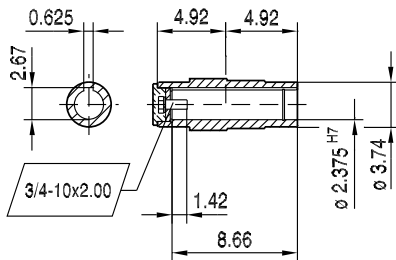
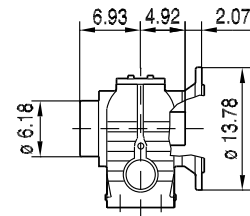
SF87..



SAF87..

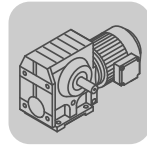


SHF87..



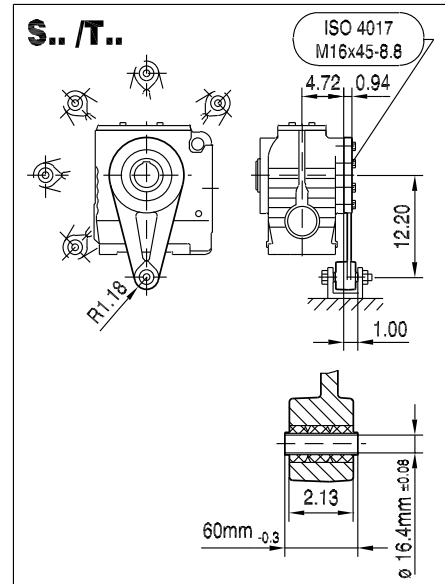
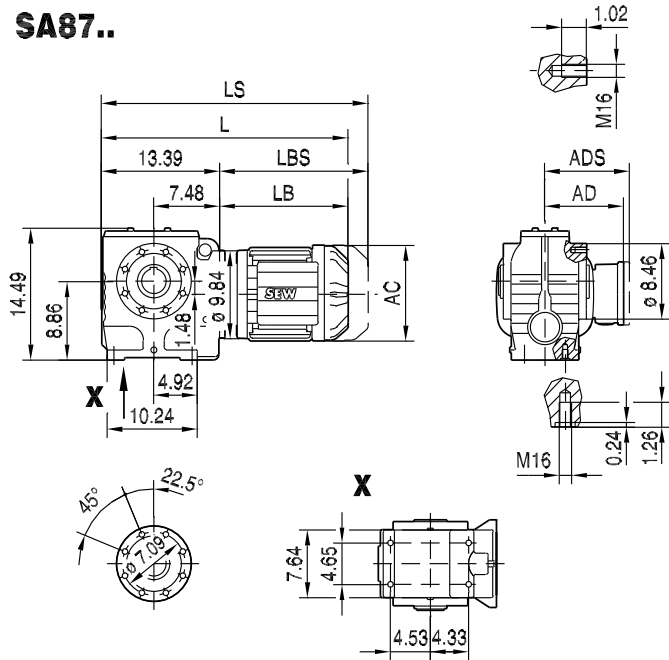
(→ 125)	DR80S	DR80M	DR90M	DR90L	DR100M	DR100L/LC	DR132S	DR132M/MC	DR160..	DR180S/M	DR180L/LC
AC	6.14	6.14	7.05	7.05	7.76	7.76	8.70	8.70	10.63	12.44	12.44
AD	5.04	5.04	5.51	5.51	6.18	6.18	6.69	6.69	8.98	9.96	9.96
ADS	5.47	5.47	5.91	5.91	6.22	6.22	6.77	6.77	8.98	9.96	9.96
L	21.97	23.19	23.27	24.06	25.24	26.42	28.11	30.08	31.69	34.41	36.77
LS	25.16	26.38	26.93	27.72	28.90	30.08	32.52	34.49	37.09	41.85	44.21
LB	8.58	9.80	9.88	10.67	11.85	13.03	14.72	16.69	18.31	21.02	23.39
LBS	11.77	12.99	13.54	14.33	15.51	16.69	19.13	21.10	23.70	28.46	30.83

reducer.ir

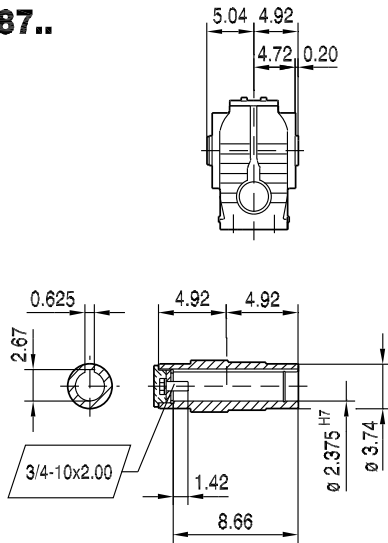


02 041 00 09

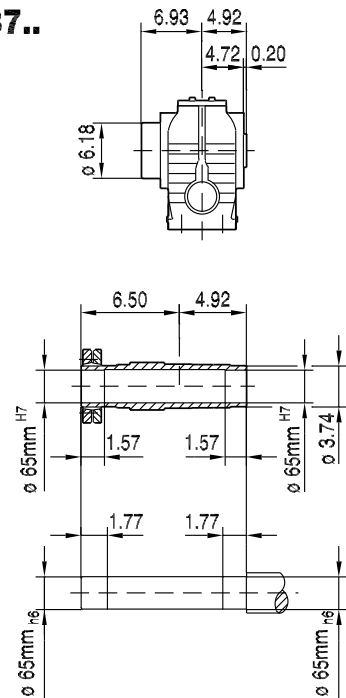
SA87..



SA87..



SH87..



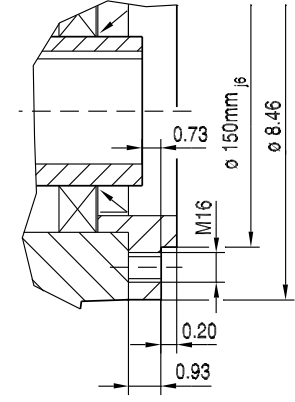
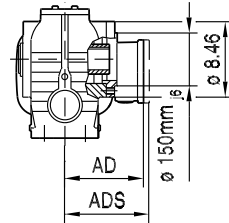
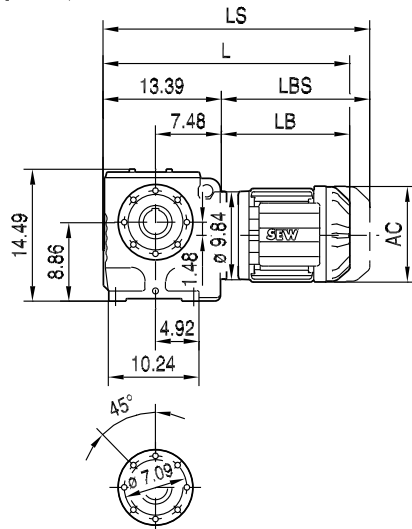
(→ 125)	DR80S	DR80M	DR90M	DR90L	DR100M	DR100L/LC	DR132S	DR132M/MC	DR160..	DR180S/M	DR180L/LC
AC	6.14	6.14	7.05	7.05	7.76	7.76	8.70	8.70	10.63	12.44	12.44
AD	5.04	5.04	5.51	5.51	6.18	6.18	6.69	6.69	8.98	9.96	9.96
ADS	5.47	5.47	5.91	5.91	6.22	6.22	6.77	6.77	8.98	9.96	9.96
L	21.97	23.19	23.27	24.06	25.24	26.42	28.11	30.08	31.69	34.41	36.77
LS	25.16	26.38	26.93	27.72	28.90	30.08	32.52	34.49	37.09	41.85	44.21
LB	8.58	9.80	9.88	10.67	11.85	13.03	14.72	16.69	18.31	21.02	23.39
LBS	11.77	12.99	13.54	14.33	15.51	16.69	19.13	21.10	23.70	28.46	30.83

reducer.ir

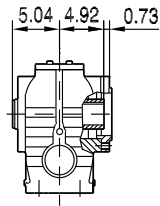


02 042 00 09

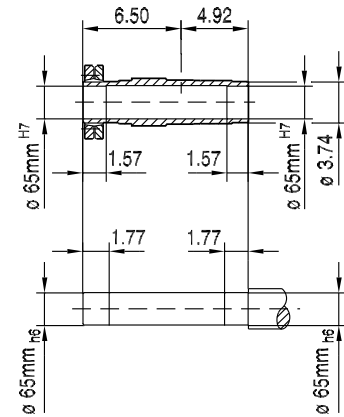
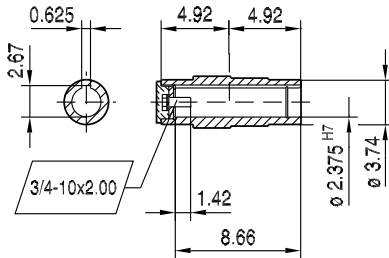
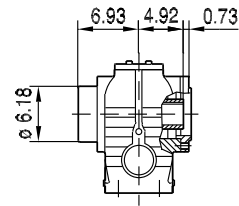
SAZ87..



SAZ87..

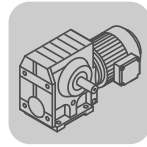


SHZ87..

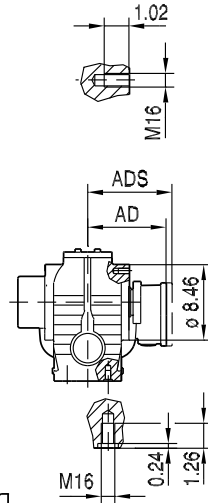
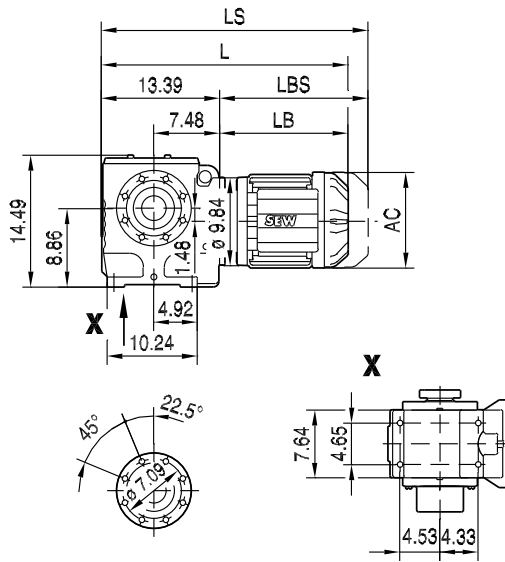


(→ 125)	DR80S	DR80M	DR90M	DR90L	DR100M	DR100L/LC	DR132S	DR132M/MC	DR160..	DR180S/M	DR180L/LC
AC	6.14	6.14	7.05	7.05	7.76	7.76	8.70	8.70	10.63	12.44	12.44
AD	5.04	5.04	5.51	5.51	6.18	6.18	6.69	6.69	8.98	9.96	9.96
ADS	5.47	5.47	5.91	5.91	6.22	6.22	6.77	6.77	8.98	9.96	9.96
L	21.97	23.19	23.27	24.06	25.24	26.42	28.11	30.08	31.69	34.41	36.77
LS	25.16	26.38	26.93	27.72	28.90	30.08	32.52	34.49	37.09	41.85	44.21
LB	8.58	9.80	9.88	10.67	11.85	13.03	14.72	16.69	18.31	21.02	23.39
LBS	11.77	12.99	13.54	14.33	15.51	16.69	19.13	21.10	23.70	28.46	30.83

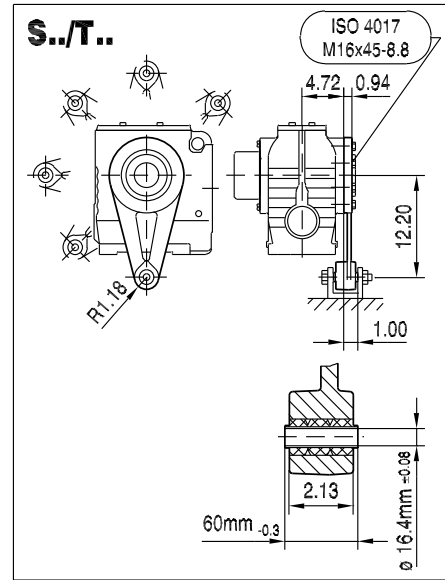
reducer.ir



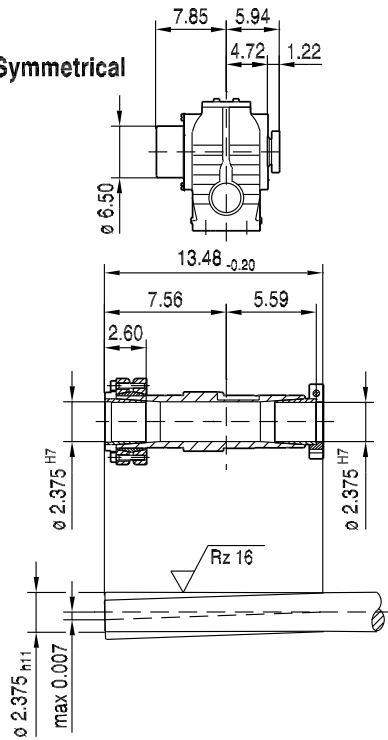
ST87..



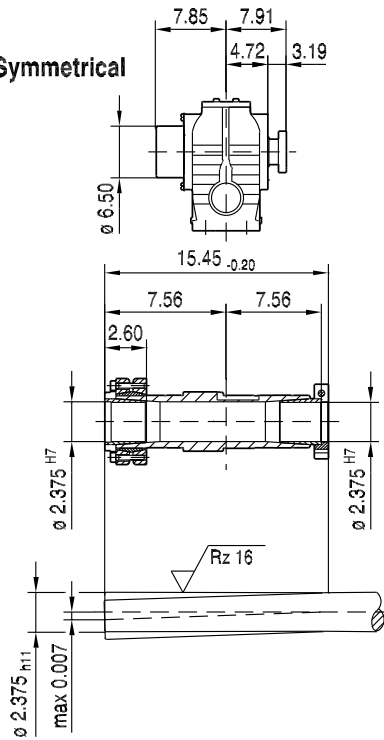
02 043 00 09



NON-Symmetrical

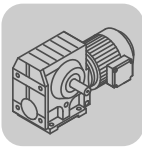


Symmetrical



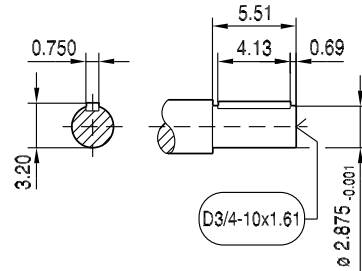
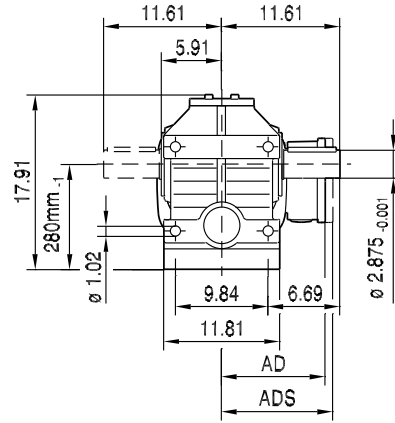
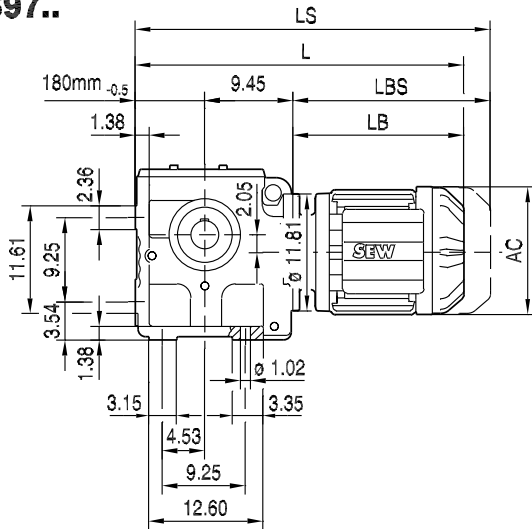
(→ 125)	DR80S	DR80M	DR90M	DR90L	DR100M	DR100L/LC	DR132S	DR132M/MC	DR160..	DR180S/M	DR180L/LC
AC	6.14	6.14	7.05	7.05	7.76	7.76	8.70	8.70	10.63	12.44	12.44
AD	5.04	5.04	5.51	5.51	6.18	6.18	6.69	6.69	8.98	9.96	9.96
ADS	5.47	5.47	5.91	5.91	6.22	6.22	6.77	6.77	8.98	9.96	9.96
L	21.97	23.19	23.27	24.06	25.24	26.42	28.11	30.08	31.69	34.41	36.77
LS	25.16	26.38	26.93	27.72	28.90	30.08	32.52	34.49	37.09	41.85	44.21
LB	8.58	9.80	9.88	10.67	11.85	13.03	14.72	16.69	18.31	21.02	23.39
LBS	11.77	12.99	13.54	14.33	15.51	16.69	19.13	21.10	23.70	28.46	30.83

reducer.ir



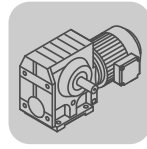
02 044 00 09

S97..



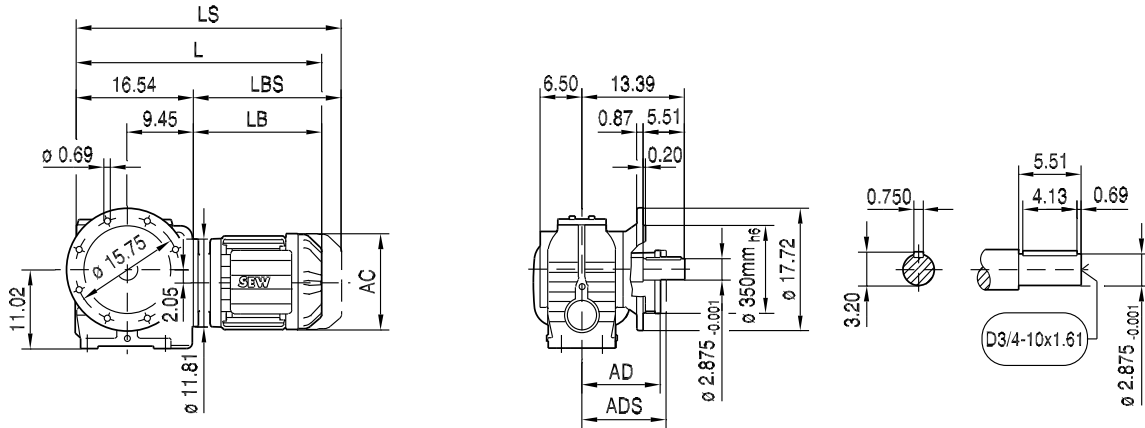
(→ 125)	DR90L	DR100M	DR100L/LC	DR132S	DR132M/MC	DR160..	DR180S/M	DR180L/LC	DR200
AC	7.05	7.76	7.76	8.70	8.70	10.63	12.44	12.44	15.51
AD	5.51	6.18	6.18	6.69	6.69	8.98	9.96	9.96	11.14
ADS	5.91	6.22	6.22	6.77	6.77	8.98	9.96	9.96	11.14
L	27.01	28.19	29.37	31.06	33.03	34.65	37.36	39.72	42.60
LS	30.67	31.85	33.03	35.47	37.44	40.04	44.80	47.17	50.67
LB	10.47	11.65	12.83	14.53	16.50	18.11	20.83	23.19	26.06
LBS	14.13	15.31	16.50	18.94	20.91	23.50	28.27	30.63	34.13

reducer.ir



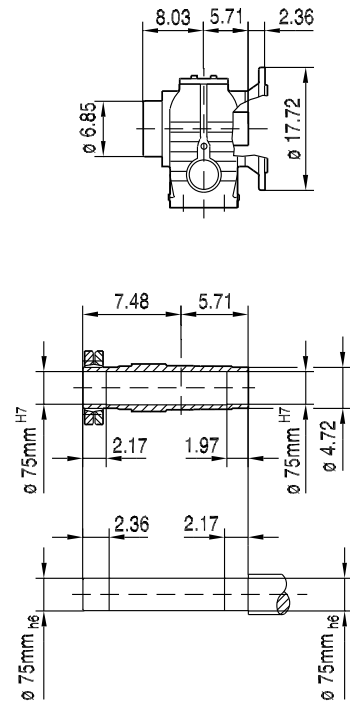
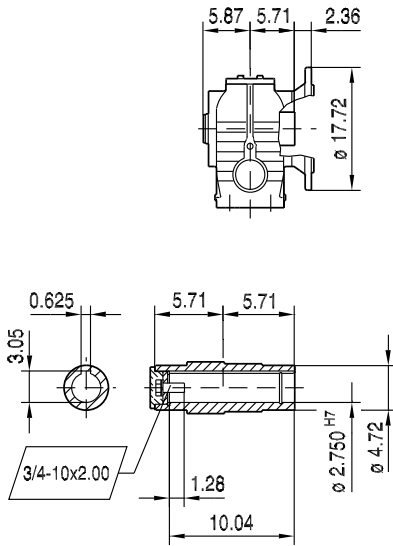
SF97..

02 045 00 09



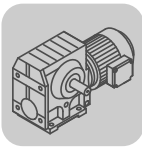
SAF97..

SHF97..



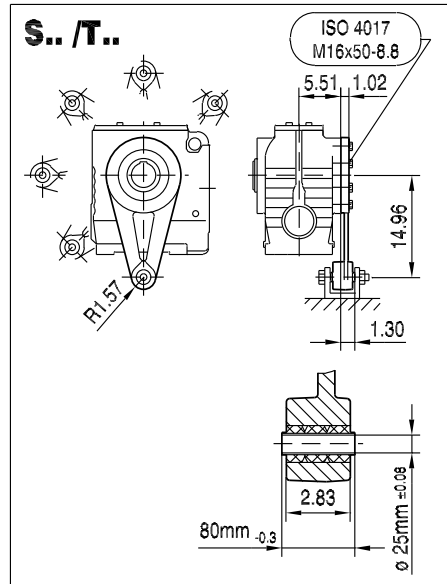
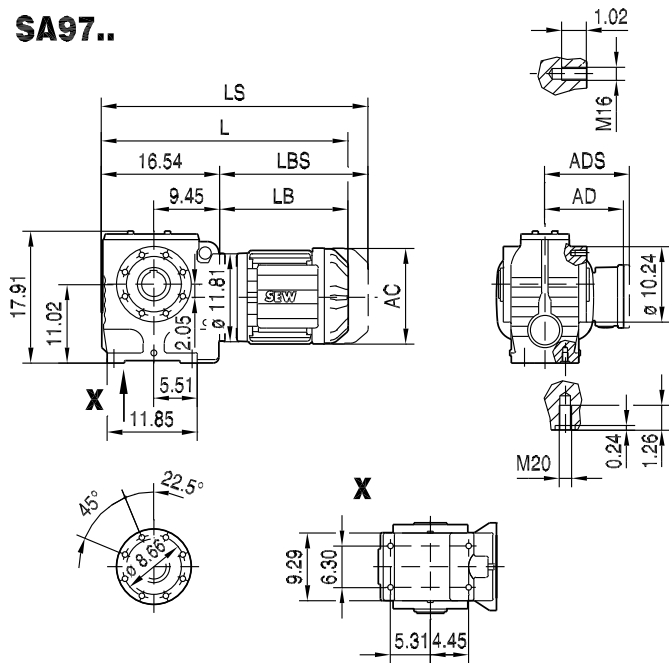
(→ 125)	DR90L	DR100M	DR100L/LC	DR132S	DR132M/MC	DR160..	DR180S/M	DR180L/LC	DR200
AC	7.05	7.76	7.76	8.70	8.70	10.63	12.44	12.44	15.51
AD	5.51	6.18	6.18	6.69	6.69	8.98	9.96	9.96	11.14
ADS	5.91	6.22	6.22	6.77	6.77	8.98	9.96	9.96	11.14
L	27.01	28.19	29.37	31.06	33.03	34.65	37.36	39.72	42.60
LS	30.67	31.85	33.03	35.47	37.44	40.04	44.80	47.17	50.67
LB	10.47	11.65	12.83	14.53	16.50	18.11	20.83	23.19	26.06
LBS	14.13	15.31	16.50	18.94	20.91	23.50	28.27	30.63	34.13

reducer.it

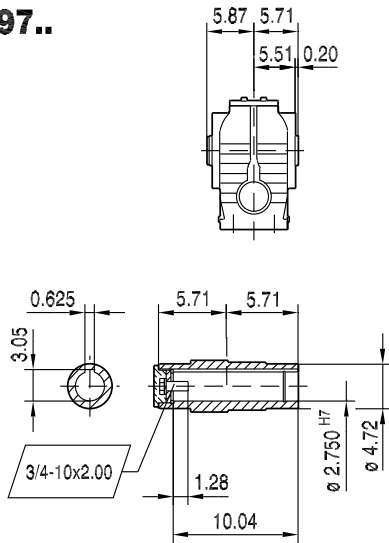


02 046 00 09

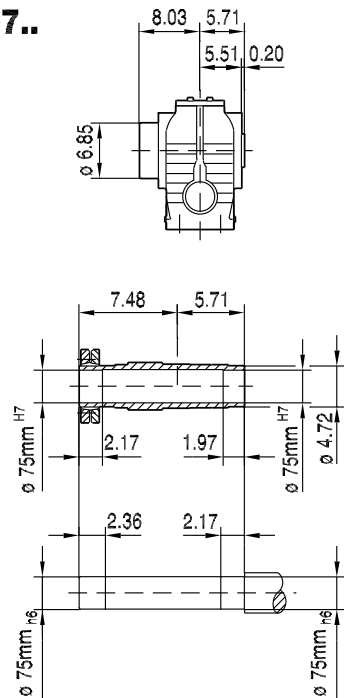
SA97..



SA97..

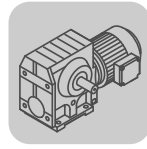


SH97..



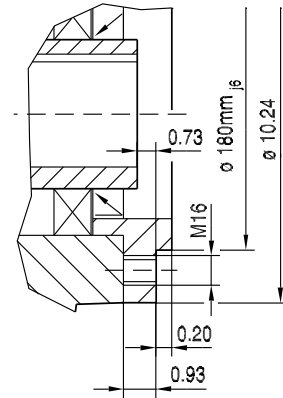
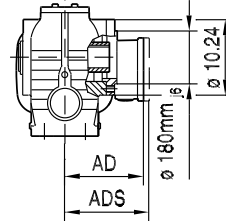
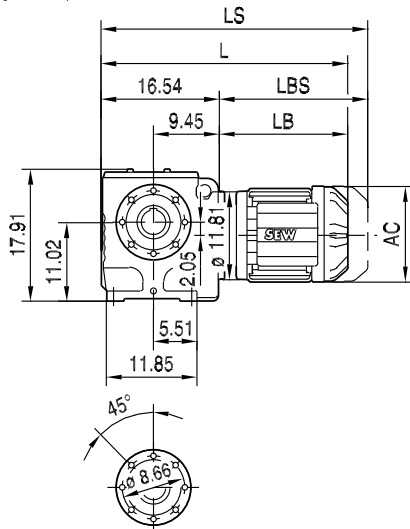
(→ 125)	DR90L	DR100M	DR100L/LC	DR132S	DR132M/MC	DR160..	DR180S/M	DR180L/LC	DR200
AC	7.05	7.76	7.76	8.70	8.70	10.63	12.44	12.44	15.51
AD	5.51	6.18	6.18	6.69	6.69	8.98	9.96	9.96	11.14
ADS	5.91	6.22	6.22	6.77	6.77	8.98	9.96	9.96	11.14
L	27.01	28.19	29.37	31.06	33.03	34.65	37.36	39.72	42.60
LS	30.67	31.85	33.03	35.47	37.44	40.04	44.80	47.17	50.67
LB	10.47	11.65	12.83	14.53	16.50	18.11	20.83	23.19	26.06
LBS	14.13	15.31	16.50	18.94	20.91	23.50	28.27	30.63	34.13

reducer.ir

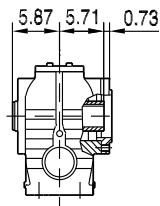


02 047 00 09

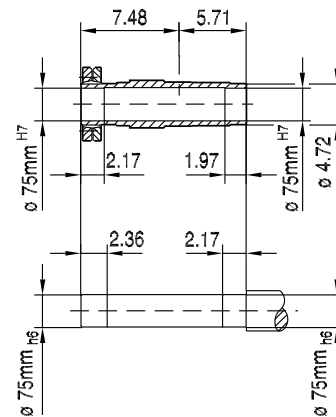
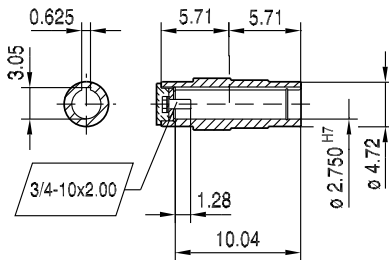
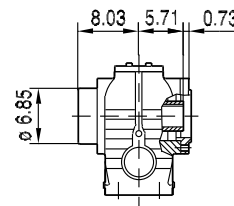
SAZ97..



SAZ97..

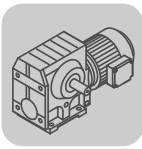


SHZ97..

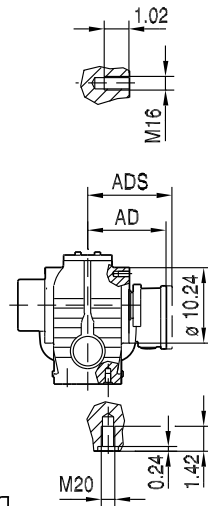
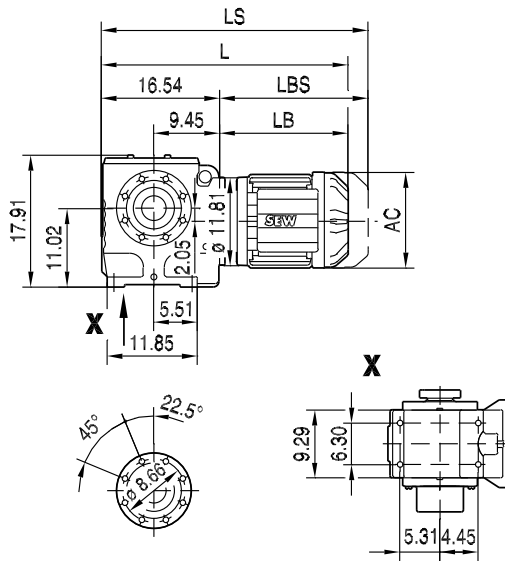


(→ 125)	DR90L	DR100M	DR100L/LC	DR132S	DR132M/MC	DR160..	DR180S/M	DR180L/LC	DR200
AC	7.05	7.76	7.76	8.70	8.70	10.63	12.44	12.44	15.51
AD	5.51	6.18	6.18	6.69	6.69	8.98	9.96	9.96	11.14
ADS	5.91	6.22	6.22	6.77	6.77	8.98	9.96	9.96	11.14
L	27.01	28.19	29.37	31.06	33.03	34.65	37.36	39.72	42.60
LS	30.67	31.85	33.03	35.47	37.44	40.04	44.80	47.17	50.67
LB	10.47	11.65	12.83	14.53	16.50	18.11	20.83	23.19	26.06
LBS	14.13	15.31	16.50	18.94	20.91	23.50	28.27	30.63	34.13

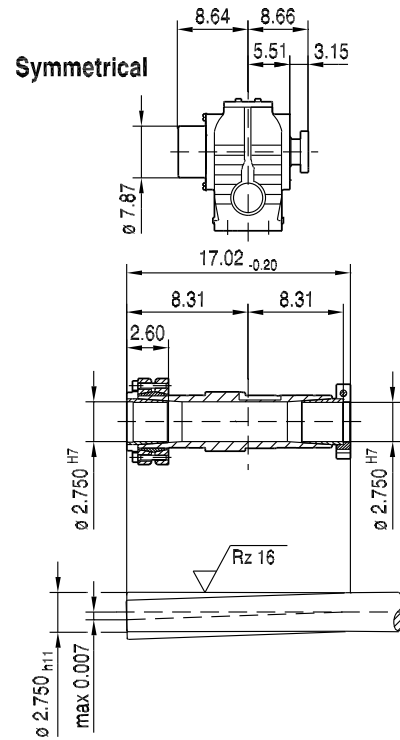
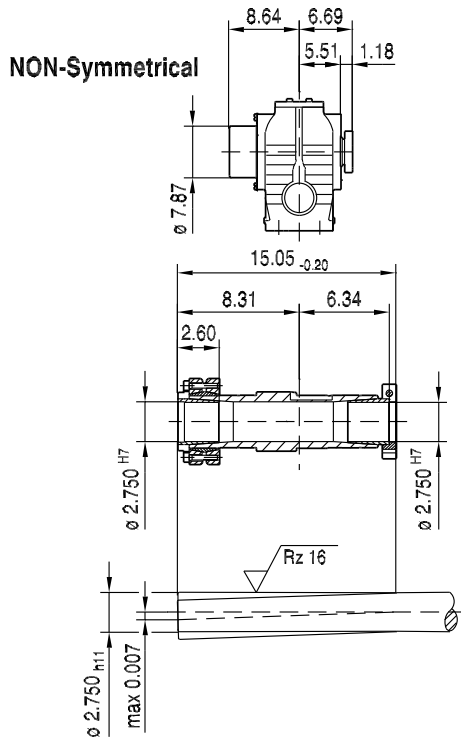
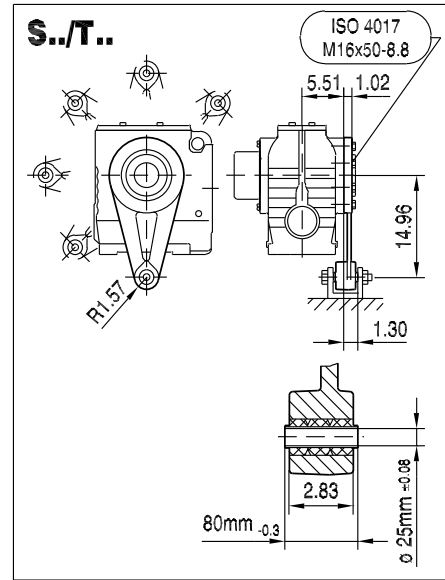
reducer.it



ST97..

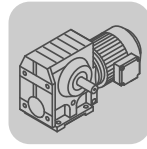


02 048 00 09

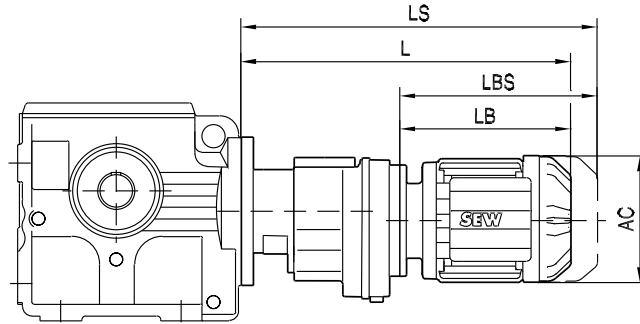


(→ 125)	DR90L	DR100M	DR100L/LC	DR132S	DR132M/MC	DR160..	DR180S/M	DR180L/LC	DR200
AC	7.05	7.76	7.76	8.70	8.70	10.63	12.44	12.44	15.51
AD	5.51	6.18	6.18	6.69	6.69	8.98	9.96	9.96	11.14
ADS	5.91	6.22	6.22	6.77	6.77	8.98	9.96	9.96	11.14
L	27.01	28.19	29.37	31.06	33.03	34.65	37.36	39.72	42.60
LS	30.67	31.85	33.03	35.47	37.44	40.04	44.80	47.17	50.67
LB	10.47	11.65	12.83	14.53	16.50	18.11	20.83	23.19	26.06
LBS	14.13	15.31	16.50	18.94	20.91	23.50	28.27	30.63	34.13

reducer.it

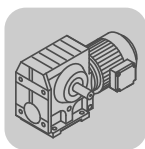


02 080 00 06



(→ 14)		AC	L	LS	LB	LBS
S..37R17	DR63..	5.20	12.76	14.92	5.87	8.03
S..47R17	DR63..	5.20	12.76	14.92	5.87	8.03
	DR71S..	5.47	13.19	15.87	6.30	8.98
S..57R17	DR63..	5.20	12.76	14.92	5.87	8.03
	DR71S..	5.47	13.19	15.87	6.30	8.98
	DR71M..	5.47	14.17	16.85	7.28	9.96
S..67R37	DR63..	5.20	14.02	16.18	7.52	9.69
	DR71S..	5.47	14.45	17.13	7.95	10.63
	DR71M..	5.47	15.43	18.11	8.94	11.61
	DR80S..	6.14	15.79	18.98	9.29	12.48
S..77R37	DR63..	5.20	13.70	15.87	7.52	9.69
	DR71S..	5.47	14.13	16.81	7.95	10.63
	DR71M..	5.47	15.12	17.80	8.94	11.61
	DR80S..	6.14	15.47	18.66	9.29	12.48
	DR80M..	6.14	16.69	19.88	10.51	13.70
S..87R57	DR63	5.20	15.79	17.95	7.28	9.45
	DR71S..	5.47	16.22	18.86	7.72	10.35
	DR71M..	5.47	17.20	19.84	8.70	11.34
	DR80S..	6.14	17.56	20.75	9.06	12.24
	DR80M..	6.14	18.78	21.97	10.28	13.46
	DR90M..	7.05	18.82	22.52	10.31	14.02
	DR90L..	7.05	19.61	23.31	11.10	14.80
S..97R57	DR63	5.20	15.59	17.76	7.28	9.45
	DR71S..	5.47	16.02	18.66	7.72	10.35
	DR71M..	5.47	17.01	19.65	8.70	11.34
	DR80S..	6.14	17.36	20.55	9.06	12.24
	DR80M..	6.14	18.58	21.77	10.28	13.46
	DR90M..	7.05	18.62	22.32	10.31	14.02
	DR90L..	7.05	19.41	23.11	11.10	14.80
	DR100M..	7.76	20.59	24.29	12.28	15.98
	DR100LC..	7.76	21.77	25.47	13.46	17.17

reducer.ir

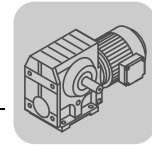

12.6 S, SF, SA, SAF 37
3400 - 2800 rpm

02 955 097

i_{ges}	i_{sch}	$n_e = 3400 \text{ rpm}$				$n_e = 3200 \text{ rpm}$				$n_e = 2800 \text{ rpm}$			
		n_a [rpm]	M_{amax} [Nm]	P_e [kW]	η [%]	n_a [rpm]	M_{amax} [Nm]	P_e [kW]	η [%]	n_a [rpm]	M_{amax} [Nm]	P_e [kW]	η [%]
157.43	38/1	22	78	0.31	57	20	80	0.30	57	18	82	0.27	57
144.40		24	76	0.33	58	22	78	0.31	58	19	80	0.28	57
122.94		28	74	0.37	58	26	75	0.35	58	23	78	0.32	58
106.00		32	71	0.41	59	30	72	0.39	59	26	76	0.36	59
98.80		34	70	0.43	59	32	72	0.41	59	28	75	0.38	59
86.36		39	68	0.47	60	37	69	0.45	60	32	72	0.41	60
80.96		42	66	0.49	60	40	68	0.47	60	35	72	0.43	60
71.44		48	55	0.47	58	45	64	0.50	60	39	70	0.47	61
63.33		54	37	0.41	51	51	51	0.47	57	44	67	0.51	61
53.83		63	29	0.39	49	59	32	0.40	50	52	53	0.49	59
55.93	61	70	0.58	77	57	71	0.56	76	50	72	0.50	76	
51.30	66	68	0.61	77	62	70	0.60	77	55	72	0.54	76	
43.68	78	66	0.70	77	73	67	0.67	77	64	70	0.61	77	
37.66	90	64	0.78	78	85	65	0.74	78	74	68	0.68	78	
35.10	27/2	97	62	0.81	78	91	64	0.78	78	80	66	0.71	78
30.68		111	61	0.90	78	104	62	0.87	78	91	64	0.78	78
28.76		118	58	0.92	78	111	61	0.91	78	97	64	0.83	78
25.38		134	47	0.86	77	126	53	0.90	78	110	62	0.91	79
22.50		151	31	0.69	71	142	43	0.84	76	124	57	0.94	79
19.13		178	24	0.65	69	167	27	0.67	70	146	44	0.87	77
19.89		171	42	0.88	86	161	43	0.85	86	141	44	0.76	86
18.24		186	41	0.93	86	175	42	0.90	86	154	44	0.83	86
15.53		219	39	1.0	86	206	40	1.0	86	180	42	0.92	86
13.39		254	37	1.1	86	239	39	1.1	86	209	41	1.0	86
12.48	24/5	272	37	1.2 *	86	256	38	1.2 *	86	224	40	1.1	86
10.91		312	35	1.3 *	86	293	36	1.3 *	86	257	39	1.2 *	87
10.23		332	35	1.4 *	87	313	36	1.4 *	87	274	38	1.3 *	87
9.02		377	31	1.4 *	86	355	34	1.5 *	87	310	36	1.3 *	87
8.00		425	20	1.1	82	400	29	1.4 *	86	350	35	1.5 *	87
6.80		500	16	1.0	81	471	18	1.1	82	412	29	1.4 *	86

 * $P_{emax} = 1.1 \text{ kW}$

reducer.ir



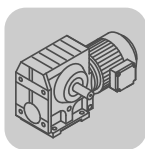
2200 - 1400 rpm

02 955 097

i _{ges}	i _{sch}	n _e = 2200 rpm				n _e = 1700 rpm				n _e = 1400 rpm			
		n _a [rpm]	M _{amax} [Nm]	P _e [kW]	η [%]	n _a [rpm]	M _{amax} [Nm]	P _e [kW]	η [%]	n _a [rpm]	M _{amax} [Nm]	P _e [kW]	η [%]
157.43	38/1	14	87	0.23	56	11	91	0.19	54	8.9	92	0.16	53
144.40		15	86	0.24	56	12	90	0.20	55	9.7	92	0.17	54
122.94		18	83	0.27	57	14	87	0.22	56	11	91	0.20	55
106.00		21	81	0.30	58	16	86	0.25	57	13	88	0.22	56
98.80		22	80	0.32	58	17	85	0.27	57	14	87	0.23	56
86.36		25	78	0.35	59	20	82	0.29	58	16	86	0.25	57
80.96		27	77	0.37	60	21	82	0.31	59	17	85	0.27	58
71.44		31	75	0.40	60	24	80	0.33	60	20	84	0.29	59
63.33		35	73	0.44	61	27	79	0.37	60	22	82	0.32	60
53.83		41	69	0.48	62	32	76	0.41	61	26	80	0.36	61
55.93	27/2	39	77	0.42	75	30	81	0.35	74	25	81	0.29	73
51.30		43	76	0.45	76	33	80	0.37	75	27	81	0.31	74
43.68		50	74	0.51	76	39	78	0.42	76	32	81	0.36	75
37.66		58	72	0.57	77	45	76	0.47	76	37	79	0.41	76
35.10		63	71	0.60	77	48	75	0.50	77	40	78	0.43	76
30.68		72	70	0.67	78	55	73	0.55	77	46	76	0.47	76
28.76		76	68	0.70	78	59	73	0.58	77	49	75	0.50	77
25.38		87	67	0.77	79	67	71	0.64	78	55	74	0.55	77
22.50		98	66	0.85	79	76	70	0.70	79	62	73	0.61	78
19.13		115	63	0.95	80	89	68	0.80	79	73	71	0.69	79
19.89	24/5	111	48	0.65	85	85	50	0.53	85	70	52	0.46	84
18.24		121	47	0.70	85	93	49	0.56	85	77	52	0.50	84
15.53		142	45	0.78	86	109	48	0.64	85	90	50	0.56	85
13.39		164	44	0.88	86	127	47	0.73	86	105	49	0.63	85
12.48		176	43	0.92	86	136	46	0.76	86	112	48	0.66	86
10.91		202	42	1.0	87	156	45	0.85	86	128	48	0.75	86
10.23		215	41	1.1	87	166	45	0.90	87	137	47	0.78	86
9.02		244	40	1.2 *	87	188	43	0.98	87	155	46	0.86	87
8.00		275	39	1.3 *	87	213	43	1.1	87	175	45	0.95	87
6.80		324	37	1.4 *	88	250	41	1.2 *	88	206	43	1.1	87

* P_{emax} = 1.1 kW

reducer.ir



1100 - 700 rpm

02 956 097

i_{ges}	i_{sch}	$n_e = 1100 \text{ rpm}$				$n_e = 900 \text{ rpm}$				$n_e = 700 \text{ rpm}$			
		n_a [rpm]	M_{amax} [Nm]	P_e [kW]	η [%]	n_a [rpm]	M_{amax} [Nm]	P_e [kW]	η [%]	n_a [rpm]	M_{amax} [Nm]	P_e [kW]	η [%]
157.43	38/1	7.0	92	0.13	52	5.7	92	0.11	50	4.4	92	0.09	49
144.40		7.6	92	0.14	52	6.2	92	0.12	51	4.8	92	0.09	50
122.94		8.9	92	0.16	54	7.3	92	0.14	52	5.7	92	0.11	51
106.00		10	92	0.18	55	8.5	92	0.15	53	6.6	92	0.12	52
98.80		11	92	0.19	55	9.1	92	0.16	54	7.1	92	0.13	52
86.36		13	90	0.21	56	10	92	0.18	55	8.1	92	0.15	53
80.96		14	89	0.22	57	11	92	0.19	55	8.6	92	0.16	54
71.44		15	87	0.24	57	13	91	0.21	56	9.8	92	0.17	55
63.33		17	86	0.27	58	14	89	0.23	57	11	92	0.19	56
53.83		20	84	0.30	60	17	87	0.26	58	13	91	0.22	57
55.93	27/2	20	87	0.25	72	16	91	0.21	71	13	92	0.17	70
51.30		21	87	0.27	73	18	90	0.23	72	14	92	0.19	71
43.68		25	84	0.30	74	21	87	0.26	73	16	92	0.22	71
37.66		29	82	0.34	75	24	86	0.29	74	19	89	0.24	72
35.10		31	82	0.36	75	26	84	0.31	74	20	88	0.25	73
30.68		36	80	0.40	76	29	82	0.34	75	23	87	0.28	74
28.76		38	79	0.42	76	31	82	0.36	75	24	86	0.30	74
25.38		43	78	0.46	77	35	81	0.40	76	28	84	0.33	75
22.50		49	77	0.51	77	40	79	0.43	76	31	82	0.36	75
19.13		58	75	0.58	78	47	78	0.50	77	37	81	0.41	76
19.89	24/5	55	55	0.38	83	45	58	0.33	83	35	60	0.27	82
18.24		60	54	0.41	84	49	56	0.35	83	38	60	0.29	82
15.53		71	53	0.47	84	58	55	0.40	84	45	58	0.33	83
13.39		82	52	0.53	85	67	54	0.45	84	52	56	0.37	83
12.48		88	51	0.55	85	72	53	0.47	84	56	55	0.39	84
10.91		101	50	0.62	86	82	52	0.53	85	64	54	0.43	84
10.23		108	49	0.64	86	88	51	0.55	85	68	54	0.46	84
9.02		122	48	0.71	86	100	50	0.61	86	78	53	0.51	85
8.00		138	47	0.78	87	113	49	0.67	86	88	52	0.56	85
6.80		162	46	0.90	87	132	48	0.77	87	103	51	0.64	86

reducer.ir

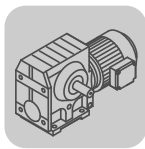


500 - 10 rpm

02 956 097

i _{ges}	i _{sch}	n _e = 500 rpm				n _e = 250 rpm				n _e = 10 rpm			
		n _a [rpm]	M _{amax} [Nm]	P _e [kW]	η [%]	n _a [rpm]	M _{amax} [Nm]	P _e [kW]	η [%]	n _a [rpm]	M _{amax} [Nm]	P _e [kW]	η [%]
157.43	38/1	3.2	92	0.06	47	1.6	92	0.033	46	0.06	92	< 0.05	26
144.40		3.5	92	0.07	48	1.7	92	0.036	46	0.07	92	< 0.05	27
122.94		4.1	92	0.08	49	2.0	92	0.042	46	0.08	92	< 0.05	29
106.00		4.7	92	0.09	50	2.4	92	0.049	47	0.09	92	< 0.05	30
98.80		5.1	92	0.10	50	2.5	92	0.05	47	0.10	92	< 0.05	31
86.36		5.8	92	0.11	51	2.9	92	0.06	47	0.12	92	< 0.05	32
80.96		6.2	92	0.12	51	3.1	92	0.06	47	0.12	92	< 0.05	33
71.44		7.0	92	0.13	52	3.5	92	0.07	48	0.14	92	< 0.05	35
63.33		7.9	92	0.14	53	3.9	92	0.08	49	0.16	92	< 0.05	37
53.83		9.3	92	0.16	55	4.6	92	0.09	50	0.19	92	< 0.05	39
55.93	27/2	8.9	92	0.13	69	4.5	92	0.06	67	0.18	92	< 0.05	48
51.30		9.7	92	0.14	69	4.9	92	0.07	67	0.19	92	< 0.05	49
43.68		11	92	0.16	70	5.7	92	0.08	67	0.23	92	< 0.05	51
37.66		13	92	0.18	71	6.6	92	0.10	67	0.27	92	< 0.05	53
35.10		14	92	0.19	71	7.1	92	0.10	68	0.28	92	< 0.05	54
30.68		16	92	0.22	72	8.1	92	0.11	68	0.33	92	< 0.05	56
28.76		17	91	0.23	72	8.7	92	0.12	69	0.35	92	< 0.05	57
25.38		20	89	0.25	73	9.9	92	0.14	69	0.39	92	< 0.05	59
22.50		22	87	0.28	74	11	92	0.15	70	0.44	92	< 0.05	61
19.13		26	85	0.31	75	13	92	0.18	71	0.52	92	< 0.05	62
19.89	24/5	25	68	0.22	81	13	72	0.12	79	0.50	72	< 0.05	65
18.24		27	66	0.23	81	14	72	0.13	79	0.55	72	< 0.05	66
15.53		32	63	0.26	82	16	72	0.15	79	0.64	72	< 0.05	68
13.39		37	61	0.29	82	19	72	0.18	80	0.75	72	< 0.05	71
12.48		40	59	0.30	82	20	72	0.19	80	0.80	72	< 0.05	72
10.91		46	58	0.34	83	23	71	0.21	81	0.92	71	< 0.05	73
10.23		49	57	0.35	83	24	70	0.22	81	0.98	70	< 0.05	73
9.02		55	56	0.39	84	28	66	0.24	81	1.1	66	< 0.05	74
8.00		63	55	0.43	84	31	63	0.25	82	1.2	63	< 0.05	74
6.80		74	54	0.49	85	37	61	0.29	82	1.5	61	< 0.05	75

reducer.ir


12.7 S, SF, SA, SAF 47
3400 - 2800 rpm

02 957 097

i_{ges}	i_{sch}	$n_e = 3400 \text{ rpm}$				$n_e = 3200 \text{ rpm}$				$n_e = 2800 \text{ rpm}$			
		n_a [rpm]	M_{amax} [Nm]	P_e [kW]	η [%]	n_a [rpm]	M_{amax} [Nm]	P_e [kW]	η [%]	n_a [rpm]	M_{amax} [Nm]	P_e [kW]	η [%]
201.00		17	150	0.44	60	16	150	0.42	60	14	150	0.37	59
184.80		18	150	0.48	60	17	150	0.45	60	15	150	0.40	59
158.12		22	150	0.55	61	20	150	0.52	61	18	150	0.46	60
137.05		25	150	0.63	62	23	150	0.59	62	20	150	0.52	61
128.10		27	150	0.67	63	25	150	0.63	62	22	150	0.56	62
110.73	42/1	31	138	0.70	63	29	148	0.71	63	25	150	0.63	63
94.08		36	113	0.69	62	34	123	0.70	63	30	146	0.72	63
84.00		40	95	0.66	61	38	107	0.69	62	33	130	0.71	63
71.75		47	58	0.55	53	45	82	0.64	60	39	107	0.70	63
67.20		51	53	0.54	52	48	68	0.60	57	42	99	0.69	62
56.61		60	40	0.51	49	57	46	0.53	51	49	75	0.65	60
69.39		49	140	0.91	79	46	140	0.86	78	40	140	0.76	78
63.80		53	140	0.99	79	50	140	0.93	79	44	140	0.82	78
54.59		62	140	1.1	80	59	140	1.1	79	51	140	0.95	79
47.32		72	139	1.3	80	68	140	1.2	80	59	140	1.1	80
44.22		77	129	1.3	80	72	139	1.3	80	63	140	1.2	80
38.23	29/2	89	112	1.3	80	84	120	1.3	80	73	139	1.3	80
32.48		105	91	1.3	79	99	100	1.3	80	86	117	1.3	80
29.00		117	76	1.2	78	110	86	1.3	79	97	104	1.3	80
24.77		137	47	0.94	72	129	66	1.2	77	113	87	1.3	80
23.20		147	42	0.90	71	138	54	1.0	75	121	79	1.3	79
19.54		174	32	0.84	69	164	37	0.89	71	143	59	1.1	77
20.33		167	100	2.0 *	88	157	100	1.9 *	88	138	100	1.6 *	88
17.62		193	97	2.2 *	88	182	100	2.2 *	88	159	100	1.9 *	88
16.47		206	90	2.2 *	88	194	97	2.2 *	88	170	100	2.0 *	88
14.24		239	78	2.2 *	88	225	83	2.2 *	88	197	97	2.3 *	88
12.10	27/5	281	63	2.1 *	88	264	69	2.2 *	88	231	82	2.2 *	88
10.80		315	53	2.0 *	87	296	60	2.1 *	88	259	72	2.2 *	88
9.23		368	32	1.5	83	347	45	1.9 *	86	303	60	2.2 *	88
8.64		394	29	1.5	82	370	37	1.7 *	85	324	55	2.1 *	88
7.28		467	22	1.3	81	440	25	1.4	82	385	41	1.9 *	86

 * $P_{emax} = 1.5 \text{ kW}$

reducer.ir



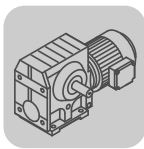
2200 - 1400 rpm

02 957 097

i _{ges}	i _{sch}	n _e = 2200 rpm				n _e = 1700 rpm				n _e = 1400 rpm			
		n _a [rpm]	M _{amax} [Nm]	P _e [kW]	η [%]	n _a [rpm]	M _{amax} [Nm]	P _e [kW]	η [%]	n _a [rpm]	M _{amax} [Nm]	P _e [kW]	η [%]
201.00		11	167	0.33	58	8.5	170	0.27	56	7.0	170	0.23	55
184.80		12	167	0.36	58	9.2	168	0.29	57	7.6	170	0.24	56
158.12		14	167	0.41	60	11	168	0.33	58	8.9	170	0.28	57
137.05		16	165	0.46	60	12	167	0.37	59	10	168	0.31	58
128.10		17	165	0.49	61	13	167	0.39	59	11	168	0.33	58
110.73	42/1	20	165	0.55	62	15	167	0.44	61	13	168	0.38	59
94.08		23	165	0.64	63	18	167	0.51	62	15	168	0.43	60
84.00		26	162	0.70	64	20	167	0.57	62	17	167	0.48	61
71.75		31	145	0.73	64	24	167	0.65	63	20	167	0.55	62
67.20		33	137	0.73	64	25	164	0.68	64	21	167	0.58	63
56.61		39	115	0.73	64	30	152	0.74	65	25	165	0.67	64
69.39		32	155	0.67	77	24	155	0.52	76	20	155	0.44	75
63.80		34	155	0.72	77	27	155	0.57	76	22	155	0.47	75
54.59		40	155	0.84	78	31	155	0.66	77	26	155	0.55	76
47.32		46	155	0.96	79	36	155	0.75	78	30	155	0.63	77
44.22		50	155	1.0	79	38	155	0.80	78	32	155	0.67	77
38.23	29/2	58	154	1.2	80	44	155	0.92	79	37	155	0.76	78
32.48		68	146	1.3	80	52	155	1.1	80	43	155	0.89	79
29.00		76	137	1.3	81	59	154	1.2	80	48	155	0.99	79
24.77		89	117	1.3	81	69	145	1.3	81	57	155	1.1	80
23.20		95	111	1.4	81	73	142	1.3	81	60	152	1.2	80
19.54		113	92	1.3	81	87	123	1.4	81	72	144	1.3	81
20.33		108	109	1.4	87	84	110	1.1	87	69	110	0.92	86
17.62		125	108	1.6 *	88	96	109	1.3	87	79	110	1.1	86
16.47		134	108	1.7 *	88	103	109	1.4	87	85	110	1.1	87
14.24		154	108	2.0 *	88	119	109	1.6 *	88	98	110	1.3	87
12.10	27/5	182	105	2.3 *	89	140	109	1.8 *	88	116	109	1.5	88
10.80		204	95	2.3 *	89	157	108	2.0 *	88	130	109	1.7 *	88
9.23		238	82	2.3 *	89	184	105	2.3 *	89	152	109	2.0 *	88
8.64		255	77	2.3 *	89	197	100	2.3 *	89	162	109	2.1 *	88
7.28		302	64	2.3 *	89	234	86	2.4 *	89	192	103	2.3 *	89

* P_{emax} = 1.5 kW

reducer.ir



1100 - 700 rpm

02 958 097

i_{ges}	i_{sch}	$n_e = 1100 \text{ rpm}$				$n_e = 900 \text{ rpm}$				$n_e = 700 \text{ rpm}$			
		n_a [rpm]	M_{amax} [Nm]	P_e [kW]	η [%]	n_a [rpm]	M_{amax} [Nm]	P_e [kW]	η [%]	n_a [rpm]	M_{amax} [Nm]	P_e [kW]	η [%]
201.00		5.5	176	0.19	53	4.5	180	0.16	52	3.5	185	0.13	51
184.80		6.0	174	0.20	54	4.9	178	0.17	53	3.8	183	0.14	51
158.12		7.0	172	0.23	55	5.7	176	0.20	54	4.4	180	0.16	52
137.05		8.0	171	0.26	56	6.6	172	0.22	55	5.1	178	0.18	53
128.10		8.6	171	0.27	57	7.0	172	0.23	55	5.5	176	0.19	54
110.73	42/1	9.9	169	0.30	58	8.1	171	0.26	56	6.3	174	0.21	55
94.08		12	169	0.35	59	9.6	171	0.30	57	7.4	172	0.24	56
84.00		13	169	0.39	60	11	169	0.32	58	8.3	171	0.26	57
71.75		15	169	0.45	61	13	169	0.37	60	9.8	171	0.30	58
67.20		16	169	0.47	61	13	169	0.40	60	10	171	0.32	58
56.61		19	169	0.55	63	16	169	0.46	61	12	171	0.37	60
69.39		16	173	0.39	74	13	176	0.33	73	10	180	0.27	71
63.80		17	173	0.42	74	14	175	0.35	73	11	180	0.29	72
54.59		20	171	0.48	75	16	173	0.40	74	13	176	0.33	73
47.32		23	171	0.55	76	19	173	0.46	75	15	175	0.37	73
44.22		25	171	0.58	76	20	171	0.49	75	16	175	0.39	74
38.23	29/2	29	169	0.66	77	24	171	0.56	76	18	173	0.44	75
32.48		34	169	0.77	78	28	171	0.65	77	22	171	0.51	75
29.00		38	170	0.86	78	31	171	0.72	77	24	171	0.57	76
24.77		44	169	0.99	79	36	170	0.83	78	28	171	0.66	77
23.20		47	164	1.0	79	39	170	0.88	79	30	171	0.70	77
19.54		56	154	1.1	80	46	165	1.0	79	36	170	0.81	78
20.33		54	112	0.75	85	44	114	0.63	84	34	116	0.50	83
17.62		62	112	0.86	86	51	113	0.71	85	40	115	0.57	84
16.47		67	112	0.91	86	55	113	0.76	85	43	114	0.60	84
14.24		77	111	1.0	86	63	112	0.86	86	49	113	0.69	85
12.10	27/5	91	111	1.2	87	74	111	1.0	86	58	113	0.80	85
10.80		102	111	1.4	87	83	111	1.1	87	65	112	0.88	86
9.23		119	110	1.6 *	88	98	111	1.3	87	76	112	1.0	86
8.64		127	109	1.7 *	88	104	111	1.4	87	81	112	1.1	87
7.28		151	109	2.0 *	88	124	111	1.6 *	88	96	111	1.3	87

* $P_{emax} = 1.5 \text{ kW}$

reducer.ir

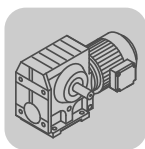


500 - 10 rpm

02 958 097

i _{ges}	i _{sch}	n _e = 500 rpm				n _e = 250 rpm				n _e = 10 rpm			
		n _a [rpm]	M _{amax} [Nm]	P _e [kW]	η [%]	n _a [rpm]	M _{amax} [Nm]	P _e [kW]	η [%]	n _a [rpm]	M _{amax} [Nm]	P _e [kW]	η [%]
201.00		2.5	185	0.10	49	1.2	185	0.05	48	0.05	185	< 0.05	32
184.80		2.7	185	0.11	49	1.4	185	0.05	48	0.05	185	< 0.05	32
158.12		3.2	185	0.12	50	1.6	185	0.06	48	0.06	185	< 0.05	35
137.05		3.6	185	0.14	51	1.8	185	0.07	48	0.07	185	< 0.05	37
128.10		3.9	183	0.15	51	2.0	185	0.08	48	0.08	185	< 0.05	38
110.73	42/1	4.5	181	0.16	52	2.3	185	0.09	49	0.09	185	< 0.05	40
94.08		5.3	178	0.19	54	2.7	185	0.10	49	0.11	185	< 0.05	42
84.00		6.0	176	0.20	54	3.0	185	0.12	50	0.12	185	< 0.05	43
71.75		7.0	174	0.23	56	3.5	185	0.13	51	0.14	185	< 0.05	44
67.20		7.4	172	0.24	56	3.7	185	0.14	51	0.15	185	< 0.05	44
56.61		8.8	172	0.28	57	4.4	181	0.16	53	0.18	181	< 0.05	45
69.39		7.2	185	0.20	70	3.6	185	0.10	68	0.14	185	< 0.05	56
63.80		7.8	185	0.22	70	3.9	185	0.11	68	0.16	185	< 0.05	57
54.59		9.2	185	0.25	71	4.6	185	0.13	68	0.18	185	< 0.05	60
47.32		11	181	0.28	72	5.3	185	0.15	68	0.21	185	< 0.05	61
44.22		11	180	0.30	72	5.7	185	0.16	69	0.23	185	< 0.05	62
38.23	29/2	13	178	0.33	73	6.5	185	0.18	69	0.26	185	< 0.05	63
32.48		15	174	0.38	74	7.7	185	0.21	70	0.31	185	< 0.05	64
29.00		17	174	0.42	74	8.6	185	0.24	71	0.34	185	< 0.05	65
24.77		20	172	0.48	75	10	183	0.27	71	0.40	183	< 0.05	66
23.20		22	172	0.51	76	11	181	0.28	72	0.43	181	< 0.05	66
19.54		26	172	0.60	77	13	178	0.33	73	0.51	178	< 0.05	67
20.33		25	124	0.39	82	12	157	0.25	80	0.49	157	< 0.05	75
17.62		28	120	0.43	83	14	149	0.28	80	0.57	149	< 0.05	76
16.47		30	118	0.45	83	15	145	0.29	81	0.61	145	< 0.05	76
14.24		35	116	0.51	84	18	138	0.31	81	0.70	138	< 0.05	77
12.10	27/5	41	115	0.59	84	21	131	0.35	82	0.83	131	< 0.05	77
10.80		46	114	0.65	85	23	127	0.37	82	0.93	127	< 0.05	77
9.23		54	113	0.75	85	27	121	0.41	83	1.1	121	< 0.05	78
8.64		58	113	0.80	86	29	120	0.44	83	1.2	120	< 0.05	78
7.28		69	112	0.93	86	34	117	0.50	84	1.4	117	< 0.05	78

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12.8 S, SF, SA, SAF 57

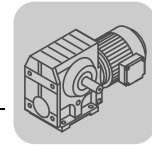
3400 - 2800 rpm

02 959 097

i_{ges}	i_{sch}	$n_e = 3400 \text{ rpm}$				$n_e = 3200 \text{ rpm}$				$n_e = 2800 \text{ rpm}$			
		n_a [rpm]	M_{amax} [Nm]	P_e [kW]	η [%]	n_a [rpm]	M_{amax} [Nm]	P_e [kW]	η [%]	n_a [rpm]	M_{amax} [Nm]	P_e [kW]	η [%]
201.00		17	270	0.75	64	16	270	0.71	63	14	270	0.63	62
184.80		18	270	0.81	64	17	270	0.77	64	15	270	0.68	63
158.12		22	270	0.93	65	20	270	0.88	65	18	270	0.78	64
137.05		25	255	1.0	66	23	270	1.0	66	20	270	0.89	65
128.10		27	245	1.0	66	25	255	1.0	66	22	270	0.94	65
110.73	42/1	31	215	1.0	67	29	230	1.0	67	25	255	1.0	66
94.08		36	184	1.0	67	34	196	1.0	67	30	225	1.1	67
84.00		40	165	1.0	67	38	175	1.0	67	33	200	1.0	67
71.75		47	139	1.0	67	45	149	1.0	67	39	174	1.1	67
67.20		51	128	1.0	66	48	139	1.0	67	42	164	1.1	67
56.61		60	103	1.0	65	57	114	1.0	66	49	138	1.1	67
69.39		49	220	1.4	81	46	220	1.3	80	40	220	1.2	80
63.80		53	220	1.5	81	50	220	1.4	81	44	220	1.3	80
54.59		62	220	1.8	81	59	220	1.7	81	51	220	1.5	81
47.32		72	210	1.9	82	68	220	1.9	82	59	220	1.7	81
44.22		77	197	1.9	82	72	205	1.9	82	63	220	1.8	81
38.23	29/2	89	174	2.0	82	84	184	2.0	82	73	205	1.9	82
32.48		105	148	2.0	82	99	157	2.0	82	86	180	2.0	82
29.00		117	131	2.0	82	110	141	2.0	82	97	162	2.0	82
24.77		137	111	1.9	82	129	120	2.0	82	113	139	2.0	82
23.20		147	102	1.9	82	138	111	2.0	82	121	131	2.0	82
19.54		174	81	1.8	81	164	90	1.9	82	143	109	2.0	82
20.33		167	160	3.2 *	89	157	160	3.0	89	138	160	2.6	88
17.62		193	140	3.2 *	89	182	149	3.2 *	89	159	160	3.0	89
16.47		206	132	3.2 *	89	194	140	3.2 *	89	170	158	3.2 *	89
14.24		239	116	3.2 *	89	225	123	3.2 *	89	197	139	3.2 *	89
12.10	27/5	281	99	3.3 *	89	264	105	3.3 *	89	231	121	3.3 *	89
10.80		315	88	3.3 *	89	296	94	3.3 *	89	259	108	3.3 *	89
9.23		368	73	3.2 *	89	347	79	3.2 *	89	303	93	3.3 *	89
8.64		394	68	3.2 *	89	370	74	3.2 *	89	324	87	3.3 *	89
7.28		467	54	3.0	88	440	60	3.1 *	89	385	72	3.2 *	89

* $P_{emax} = 3.0 \text{ kW}$

reducer.ir



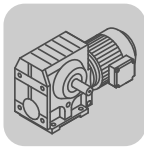
2200 - 1400 rpm

02 959 097

i _{ges}	i _{sch}	n _e = 2200 rpm				n _e = 1700 rpm				n _e = 1400 rpm			
		n _a [rpm]	M _{amax} [Nm]	P _e [kW]	η [%]	n _a [rpm]	M _{amax} [Nm]	P _e [kW]	η [%]	n _a [rpm]	M _{amax} [Nm]	P _e [kW]	η [%]
201.00		11	295	0.55	61	8.5	295	0.44	59	7.0	295	0.37	58
184.80		12	295	0.60	62	9.2	295	0.48	60	7.6	295	0.40	58
158.12		14	295	0.69	63	11	295	0.55	61	8.9	295	0.46	60
137.05		16	295	0.78	64	12	295	0.62	62	10	295	0.52	61
128.10		17	295	0.83	64	13	295	0.66	62	11	295	0.55	61
110.73	42/1	20	290	0.93	65	15	295	0.75	63	13	295	0.63	62
94.08		23	275	1.0	66	18	300	0.88	65	15	295	0.73	63
84.00		26	250	1.0	67	20	285	0.93	65	17	295	0.80	64
71.75		31	220	1.1	67	24	275	1.0	66	20	290	0.91	65
67.20		33	210	1.1	67	25	260	1.0	67	21	285	0.95	65
56.61		39	179	1.1	68	30	225	1.1	67	25	265	1.0	67
69.39		32	245	1.0	79	24	245	0.81	77	20	245	0.68	76
63.80		34	245	1.1	79	27	245	0.88	78	22	245	0.73	77
54.59		40	245	1.3	80	31	245	1.0	79	26	245	0.85	78
47.32		46	245	1.5	81	36	245	1.2	79	30	245	0.97	79
44.22		50	245	1.6	81	38	245	1.2	80	32	245	1.0	79
38.23	29/2	58	245	1.8	81	44	245	1.4	80	37	245	1.2	80
32.48		68	225	1.9	82	52	245	1.7	81	43	245	1.4	80
29.00		76	200	1.9	82	59	245	1.8	81	48	245	1.5	81
24.77		89	177	2.0	82	69	220	1.9	82	57	245	1.8	81
23.20		95	167	2.0	83	73	210	2.0	82	60	245	1.9	82
19.54		113	143	2.0	83	87	183	2.0	83	72	215	2.0	82
20.33		108	168	2.2	88	84	168	1.7	87	69	168	1.4	87
17.62		125	168	2.5	88	96	168	1.9	88	79	168	1.6	87
16.47		134	169	2.7	88	103	168	2.1	88	85	168	1.7	87
14.24		154	169	3.1 *	89	119	169	2.4	88	98	169	2.0	88
12.10	27/5	182	150	3.2 *	89	140	169	2.8	89	116	169	2.3	88
10.80		204	136	3.2 *	89	157	169	3.1 *	89	130	169	2.6	88
9.23		238	119	3.3 *	89	184	149	3.2 *	89	152	169	3.0	89
8.64		255	112	3.3 *	89	197	141	3.3 *	89	162	166	3.2 *	89
7.28		302	96	3.4 *	90	234	122	3.3 *	90	192	146	3.3 *	89

* P_{emax} = 3.0 kW

reducer.ir

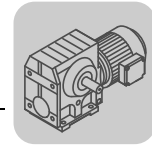


1100 - 700 rpm

02 960 097

i_{ges}	i_{sch}	$n_e = 1100 \text{ rpm}$				$n_e = 900 \text{ rpm}$				$n_e = 700 \text{ rpm}$			
		n_a [rpm]	M_{amax} [Nm]	P_e [kW]	η [%]	n_a [rpm]	M_{amax} [Nm]	P_e [kW]	η [%]	n_a [rpm]	M_{amax} [Nm]	P_e [kW]	η [%]
201.00		5.5	295	0.30	56	4.5	300	0.26	55	3.5	310	0.21	53
184.80		6.0	295	0.32	57	4.9	300	0.28	55	3.8	305	0.23	54
158.12		7.0	295	0.37	58	5.7	295	0.31	56	4.4	300	0.25	55
137.05		8.0	295	0.42	59	6.6	295	0.35	57	5.1	300	0.29	56
128.10		8.6	295	0.45	59	7.0	295	0.37	58	5.5	295	0.30	56
110.73	42/1	9.9	295	0.51	61	8.1	295	0.43	59	6.3	295	0.34	57
94.08		12	295	0.59	62	9.6	295	0.49	60	7.4	295	0.39	58
84.00		13	295	0.65	63	11	295	0.54	61	8.3	295	0.43	59
71.75		15	295	0.74	64	13	295	0.62	62	9.8	295	0.50	61
67.20		16	300	0.80	64	13	295	0.66	63	10	295	0.53	61
56.61		19	290	0.91	65	16	300	0.78	64	12	295	0.61	62
69.39		16	270	0.60	75	13	270	0.49	74	10	270	0.39	73
63.80		17	270	0.64	76	14	270	0.53	75	11	270	0.42	73
54.59		20	270	0.74	77	16	270	0.62	75	13	270	0.49	74
47.32		23	270	0.85	77	19	270	0.70	76	15	270	0.56	75
44.22		25	270	0.91	78	20	270	0.75	77	16	270	0.59	75
38.23	29/2	29	270	1.0	79	24	270	0.86	77	18	270	0.68	76
32.48		34	270	1.2	79	28	270	1.0	78	22	270	0.79	77
29.00		38	270	1.3	80	31	270	1.1	79	24	270	0.88	78
24.77		44	270	1.6	81	36	270	1.3	80	28	270	1.0	78
23.20		47	270	1.7	81	39	270	1.4	80	30	270	1.1	79
19.54		56	250	1.8	81	46	270	1.6	81	36	270	1.3	80
20.33		54	168	1.1	86	44	170	0.93	85	34	172	0.74	84
17.62		62	169	1.3	86	51	169	1.1	86	40	170	0.83	85
16.47		67	168	1.4	87	55	168	1.1	86	43	170	0.89	85
14.24		77	168	1.6	87	63	168	1.3	86	49	170	1.0	86
12.10	27/5	91	169	1.8	88	74	169	1.5	87	58	169	1.2	86
10.80		102	169	2.1	88	83	169	1.7	87	65	169	1.3	87
9.23		119	170	2.4	88	98	168	2.0	88	76	168	1.5	87
8.64		127	170	2.6	88	104	169	2.1	88	81	168	1.6	87
7.28		151	170	3.0	89	124	170	2.5	88	96	170	1.9	88

reducer.ir

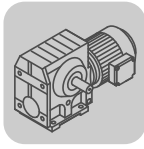


500 - 10 rpm

02 960 097

i _{ges}	i _{sch}	n _e = 500 rpm				n _e = 250 rpm				n _e = 10 rpm			
		n _a [rpm]	M _{amax} [Nm]	P _e [kW]	η [%]	n _a [rpm]	M _{amax} [Nm]	P _e [kW]	η [%]	n _a [rpm]	M _{amax} [Nm]	P _e [kW]	η [%]
201.00		2.5	330	0.17	51	1.2	330	0.09	49	0.05	330	< 0.05	42
184.80		2.7	330	0.18	51	1.4	330	0.10	49	0.05	330	< 0.05	43
158.12		3.2	315	0.20	52	1.6	330	0.11	49	0.06	330	< 0.05	44
137.05		3.6	310	0.22	53	1.8	330	0.13	50	0.07	330	< 0.05	45
128.10		3.9	305	0.23	54	2.0	330	0.14	50	0.08	330	< 0.05	46
110.73	42/1	4.5	300	0.26	55	2.3	330	0.15	51	0.09	330	< 0.05	46
94.08		5.3	300	0.30	56	2.7	330	0.18	51	0.11	330	< 0.05	47
84.00		6.0	295	0.32	57	3.0	325	0.19	52	0.12	325	< 0.05	47
71.75		7.0	295	0.37	58	3.5	310	0.21	53	0.14	310	< 0.05	48
67.20		7.4	295	0.39	58	3.7	310	0.23	54	0.15	310	< 0.05	48
56.61		8.8	295	0.46	60	4.4	300	0.25	55	0.18	300	< 0.05	48
69.39		7.2	300	0.32	71	3.6	300	0.17	68	0.14	300	< 0.05	63
63.80		7.8	300	0.34	71	3.9	300	0.18	68	0.16	300	< 0.05	64
54.59		9.2	300	0.40	72	4.6	300	0.21	69	0.18	300	< 0.05	65
47.32		11	300	0.45	73	5.3	300	0.24	70	0.21	300	< 0.05	66
44.22		11	300	0.48	74	5.7	300	0.25	70	0.23	300	< 0.05	66
38.23	29/2	13	295	0.54	74	6.5	300	0.29	71	0.26	300	< 0.05	67
32.48		15	295	0.63	75	7.7	300	0.34	71	0.31	300	< 0.05	67
29.00		17	295	0.70	76	8.6	300	0.38	72	0.34	300	< 0.05	67
24.77		20	295	0.81	77	10	300	0.43	73	0.40	300	< 0.05	68
23.20		22	295	0.86	77	11	300	0.46	73	0.43	300	< 0.05	68
19.54		26	295	1.0	78	13	295	0.53	74	0.51	295	< 0.05	68
20.33		25	181	0.56	83	12	215	0.35	80	0.49	215	< 0.05	77
17.62		28	175	0.62	83	14	210	0.39	81	0.57	210	< 0.05	77
16.47		30	174	0.66	84	15	205	0.40	81	0.61	205	< 0.05	78
14.24		35	172	0.75	84	18	198	0.45	81	0.70	198	< 0.05	78
12.10	27/5	41	170	0.87	85	21	188	0.49	82	0.83	188	< 0.05	78
10.80		46	170	0.97	85	23	184	0.54	83	0.93	184	< 0.05	78
9.23		54	170	1.1	86	27	177	0.60	83	1.1	177	< 0.05	79
8.64		58	170	1.2	86	29	175	0.64	83	1.2	175	< 0.05	79
7.28		69	170	1.4	87	34	172	0.73	84	1.4	172	< 0.05	79

reducer.ir

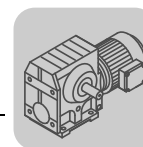

12.9 S, SF, SA, SAF 67
3400 - 2800 rpm

02 961 097

i_{ges}	i_{sch}	$n_e = 3400 \text{ rpm}$				$n_e = 3200 \text{ rpm}$				$n_e = 2800 \text{ rpm}$				
		n_a [rpm]	M_{amax} [Nm]	P_e [kW]	η [%]	n_a [rpm]	M_{amax} [Nm]	P_e [kW]	η [%]	n_a [rpm]	M_{amax} [Nm]	P_e [kW]	η [%]	
217.41	42/1	16	465	1.2	66	15	465	1.1	66	13	465	0.96	65	
190.11		18	465	1.3	67	17	465	1.2	67	15	465	1.1	66	
180.60		19	465	1.4	67	18	465	1.3	67	16	465	1.1	66	
158.45		21	465	1.5	68	20	465	1.5	68	18	465	1.3	67	
134.40		25	465	1.8	69	24	465	1.7	68	21	465	1.5	68	
121.33		28	455	1.9	69	26	465	1.9	69	23	465	1.6	68	
106.75		32	405	2.0	69	30	430	2.0	69	26	465	1.9	69	
100.80		34	380	1.9	69	32	410	2.0	69	28	465	2.0	69	
85.83		40	320	1.9	69	37	345	1.9	69	33	400	2.0	70	
78.00		44	285	1.9	69	41	310	1.9	69	36	365	2.0	70	
67.57		50	235	1.8	67	47	260	1.9	68	41	315	2.0	69	
58.80		58	184	1.7	65	54	215	1.8	67	48	270	1.9	69	
75.06		29/2	45	435	2.5	82	43	435	2.4	82	37	435	2.1	81
65.63			52	435	2.9	82	49	435	2.7	82	43	435	2.4	82
62.35			55	435	3.0	83	51	435	2.8	82	45	435	2.5	82
54.70			62	435	3.4	83	59	435	3.2	83	51	435	2.8	83
46.40	73		395	3.6	83	69	415	3.6	83	60	435	3.3	83	
41.89	81		355	3.6	83	76	380	3.6	83	67	430	3.6	83	
36.85	92		310	3.6	83	87	335	3.6	84	76	380	3.6	84	
34.80	98		295	3.6	83	92	315	3.6	84	80	365	3.7	84	
29.63	115		250	3.6	83	108	270	3.7	83	94	310	3.7	84	
26.93	126		220	3.5	83	119	240	3.6	83	104	280	3.6	84	
23.33	146		182	3.4	82	137	200	3.5	83	120	245	3.7	84	
20.30	167		141	3.1	81	158	164	3.3	82	138	205	3.6	83	
24.44	139		315	5.1	90	131	315	4.8	90	115	315	4.2	89	
23.22	146		315	5.4	90	138	315	5.1	90	121	315	4.4	90	
20.37	167		315	6.1 *	90	157	315	5.8 *	90	137	315	5.0	90	
17.28	197		270	6.2 *	90	185	290	6.2 *	90	162	315	5.9 *	90	
15.60	218	245	6.2 *	90	205	260	6.2 *	90	179	295	6.1 *	90		
13.73	27/5	248	215	6.2 *	90	233	230	6.2 *	90	204	265	6.3 *	90	
12.96		262	200	6.1 *	90	247	215	6.1 *	90	216	250	6.3 *	90	
11.03		308	169	6.1 *	90	290	183	6.2 *	90	254	215	6.3 *	90	
10.03		339	151	6.0 *	90	319	164	6.1 *	90	279	194	6.3 *	90	
8.69		391	124	5.7 *	89	368	137	5.9 *	90	322	166	6.2 *	90	
7.56		450	95	5.1 *	88	423	112	5.6 *	89	370	141	6.1 *	90	

 * $P_{emax} = 5.5 \text{ kW}$

reducer.ir



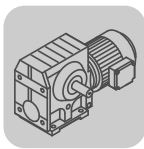
2200 - 1400 rpm

02 961 097

i _{ges}	i _{sch}	n _e = 2200 rpm				n _e = 1700 rpm				n _e = 1400 rpm			
		n _a [rpm]	M _{amax} [Nm]	P _e [kW]	η [%]	n _a [rpm]	M _{amax} [Nm]	P _e [kW]	η [%]	n _a [rpm]	M _{amax} [Nm]	P _e [kW]	η [%]
217.41	42/1	10	520	0.86	64	7.8	520	0.69	62	6.4	520	0.58	61
190.11		12	520	0.97	65	8.9	520	0.77	63	7.4	520	0.65	62
180.60		12	520	1.0	65	9.4	520	0.81	63	7.8	520	0.68	62
158.45		14	520	1.1	66	11	520	0.91	64	8.8	520	0.76	63
134.40		16	520	1.3	67	13	520	1.1	65	10	520	0.88	64
121.33		18	520	1.5	68	14	520	1.2	66	12	520	0.97	65
106.75		21	520	1.6	68	16	520	1.3	67	13	520	1.1	66
100.80		22	510	1.7	69	17	520	1.4	67	14	520	1.1	66
85.83		26	490	1.9	69	20	520	1.6	68	16	520	1.3	67
78.00		28	465	2.0	70	22	510	1.7	69	18	520	1.4	68
67.57		33	410	2.0	70	25	495	1.9	69	21	520	1.6	69
58.80		37	360	2.0	70	29	460	2.0	70	24	500	1.8	69
75.06	29/2	29	480	1.8	81	23	480	1.4	79	19	480	1.2	79
65.63		34	480	2.1	81	26	480	1.6	80	21	480	1.4	79
62.35		35	480	2.2	81	27	480	1.7	80	22	480	1.4	79
54.70		40	480	2.5	82	31	480	1.9	81	26	480	1.6	80
46.40		47	480	2.9	82	37	480	2.3	82	30	480	1.9	81
41.89		53	480	3.2	83	41	480	2.5	82	33	480	2.1	81
36.85		60	475	3.6	83	46	480	2.8	82	38	480	2.3	82
34.80		63	450	3.6	83	49	480	3.0	83	40	480	2.5	82
29.63		74	395	3.7	84	57	480	3.5	83	47	480	2.9	83
26.93		82	360	3.7	84	63	455	3.6	83	52	480	3.2	83
23.33		94	320	3.8	84	73	405	3.7	84	60	480	3.6	83
20.30		108	280	3.8	84	84	360	3.8	84	69	425	3.7	84
24.44	27/5	90	340	3.6	89	70	340	2.8	88	57	340	2.3	88
23.22		95	340	3.8	89	73	340	2.9	89	60	340	2.4	88
20.37		108	340	4.3	89	83	340	3.3	89	69	340	2.8	88
17.28		127	340	5.0	90	98	340	3.9	89	81	340	3.2	89
15.60		141	340	5.6 *	90	109	340	4.3	89	90	340	3.6	89
13.73		160	330	6.1 *	90	124	340	4.9	90	102	340	4.1	89
12.96		170	315	6.2 *	90	131	340	5.2	90	108	340	4.3	89
11.03		199	275	6.3 *	90	154	340	6.1 *	90	127	340	5.0	90
10.03		219	250	6.3 *	91	169	315	6.2 *	90	140	340	5.5	90
8.69		253	220	6.4 *	91	196	280	6.3 *	91	161	335	6.3 *	90
7.56		291	192	6.5 *	91	225	250	6.5 *	91	185	295	6.3 *	91

* P_{emax} = 5.5 kW

reducer.ir



1100 - 700 rpm

02 962 097

i_{ges}	i_{sch}	$n_e = 1100 \text{ rpm}$				$n_e = 900 \text{ rpm}$				$n_e = 700 \text{ rpm}$			
		n_a [rpm]	M_{amax} [Nm]	P_e [kW]	η [%]	n_a [rpm]	M_{amax} [Nm]	P_e [kW]	η [%]	n_a [rpm]	M_{amax} [Nm]	P_e [kW]	η [%]
217.41	42/1	5.1	555	0.50	59	4.1	560	0.42	58	3.2	570	0.34	56
190.11		5.8	555	0.56	60	4.7	560	0.47	59	3.7	565	0.38	57
180.60		6.1	555	0.59	61	5.0	555	0.49	59	3.9	565	0.40	57
158.45		6.9	550	0.65	62	5.7	555	0.55	60	4.4	560	0.44	58
134.40		8.2	550	0.75	63	6.7	550	0.63	61	5.2	555	0.51	60
121.33		9.1	550	0.82	63	7.4	550	0.69	62	5.8	555	0.56	60
106.75		10	550	0.92	64	8.4	550	0.77	63	6.6	555	0.62	61
100.80		11	550	0.97	65	8.9	550	0.81	63	6.9	555	0.66	62
85.83		13	550	1.1	66	10	550	0.94	64	8.2	550	0.75	63
78.00		14	550	1.2	66	12	550	1.0	65	9.0	550	0.82	63
67.57		16	550	1.4	67	13	550	1.2	66	10	550	0.93	64
58.80		19	530	1.5	68	15	550	1.3	67	12	550	1.0	65
75.06	29/2	15	525	1.0	77	12	525	0.86	76	9.3	525	0.68	75
65.63		17	525	1.2	78	14	525	0.98	77	11	525	0.77	76
62.35		18	525	1.2	78	14	525	1.0	77	11	525	0.81	76
54.70		20	525	1.4	79	16	525	1.2	78	13	525	0.92	77
46.40		24	525	1.6	80	19	525	1.4	79	15	525	1.1	78
41.89		26	525	1.8	80	21	525	1.5	79	17	525	1.2	78
36.85		30	525	2.0	81	24	525	1.7	80	19	525	1.3	79
34.80		32	525	2.1	81	26	525	1.8	80	20	525	1.4	79
29.63		37	525	2.5	82	30	525	2.1	81	24	525	1.6	80
26.93		41	525	2.7	82	33	525	2.3	81	26	525	1.8	80
23.33		47	525	3.1	83	39	525	2.6	82	30	525	2.0	81
20.30		54	520	3.5	83	44	525	3.0	82	34	525	2.3	81
24.44	27/5	45	355	1.9	87	37	360	1.6	87	29	365	1.3	86
23.22		47	355	2.0	87	39	360	1.7	87	30	365	1.3	86
20.37		54	355	2.3	88	44	355	1.9	87	34	365	1.5	86
17.28		64	355	2.7	88	52	355	2.2	88	41	360	1.8	87
15.60		71	350	2.9	88	58	355	2.4	88	45	355	1.9	87
13.73		80	350	3.3	89	66	355	2.8	88	51	355	2.2	88
12.96		85	350	3.5	89	69	350	2.9	88	54	355	2.3	88
11.03		100	350	4.1	89	82	350	3.4	89	63	355	2.7	88
10.03		110	345	4.4	90	90	350	3.7	89	70	355	2.9	88
8.69		127	345	5.1	90	104	350	4.2	89	81	350	3.3	89
7.56		146	345	5.8 *	90	119	345	4.8	90	93	350	3.8	89

* $P_{emax} = 5.5 \text{ kW}$

reducer.ir

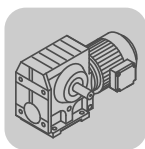


500 - 10 rpm

02 962 097

i _{ges}	i _{sch}	n _e = 500 rpm				n _e = 250 rpm				n _e = 10 rpm			
		n _a [rpm]	M _{amax} [Nm]	P _e [kW]	η [%]	n _a [rpm]	M _{amax} [Nm]	P _e [kW]	η [%]	n _a [rpm]	M _{amax} [Nm]	P _e [kW]	η [%]
217.41	42/1	2.3	570	0.25	54	1.1	570	0.13	51	0.05	570	< 0.05	47
190.11		2.6	570	0.29	55	1.3	570	0.15	51	0.05	570	< 0.05	48
180.60		2.8	570	0.30	55	1.4	570	0.16	51	0.06	570	< 0.05	48
158.45		3.2	570	0.34	56	1.6	570	0.18	52	0.06	570	< 0.05	49
134.40		3.7	565	0.38	57	1.9	570	0.21	53	0.07	570	< 0.05	50
121.33		4.1	560	0.42	58	2.1	570	0.23	53	0.08	570	< 0.05	50
106.75		4.7	560	0.47	59	2.3	570	0.26	54	0.09	570	< 0.05	50
100.80		5.0	560	0.49	59	2.5	570	0.27	55	0.10	570	< 0.05	50
85.83		5.8	555	0.56	60	2.9	570	0.31	56	0.12	570	< 0.05	51
78.00		6.4	555	0.61	61	3.2	570	0.34	56	0.13	570	< 0.05	51
67.57		7.4	555	0.69	62	3.7	565	0.38	57	0.15	565	< 0.05	51
58.80		8.5	550	0.78	63	4.3	560	0.43	58	0.17	560	< 0.05	51
75.06	29/2	6.7	570	0.54	73	3.3	570	0.28	70	0.13	570	< 0.05	68
65.63		7.6	570	0.61	74	3.8	570	0.32	71	0.15	570	< 0.05	68
62.35		8.0	570	0.64	74	4.0	570	0.34	71	0.16	570	< 0.05	69
54.70		9.1	570	0.73	75	4.6	570	0.38	71	0.18	570	< 0.05	69
46.40		11	570	0.85	76	5.4	570	0.44	72	0.22	570	< 0.05	69
41.89		12	570	0.93	76	6.0	570	0.49	73	0.24	570	< 0.05	69
36.85		14	570	1.1	77	6.8	570	0.55	73	0.27	570	< 0.05	69
34.80		14	570	1.1	77	7.2	570	0.58	74	0.29	570	< 0.05	69
29.63		17	565	1.3	78	8.4	570	0.68	75	0.34	570	< 0.05	70
26.93		19	565	1.4	79	9.3	570	0.74	75	0.37	570	< 0.05	70
23.33		21	565	1.6	79	11	570	0.84	76	0.43	570	< 0.05	70
20.30		25	565	1.8	80	12	570	0.96	77	0.49	570	< 0.05	70
24.44	27/5	20	365	0.93	85	10	355	0.46	82	0.41	355	0.019	80
23.22		22	365	0.97	85	11	355	0.49	82	0.43	355	< 0.05	80
20.37		25	380	1.1	85	12	365	0.57	83	0.49	365	< 0.05	80
17.28		29	365	1.3	86	14	435	0.79	83	0.58	435	< 0.05	81
15.60		32	365	1.4	86	16	430	0.86	84	0.64	430	< 0.05	81
13.73		36	365	1.6	87	18	415	0.94	84	0.73	415	< 0.05	81
12.96		39	360	1.7	87	19	410	0.98	84	0.77	410	< 0.05	81
11.03		45	355	1.9	87	23	390	1.1	85	0.91	390	< 0.05	81
10.03		50	355	2.1	88	25	380	1.2	85	1.0	380	< 0.05	81
8.69		58	355	2.4	88	29	370	1.3	86	1.2	370	0.06	81
7.56		66	355	2.8	88	33	365	1.5	86	1.3	365	0.06	81

reducer.ir

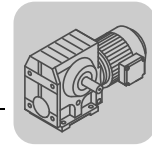

12.10 S, SF, SA, SAF 77
3400 - 2800 rpm

02 963 097

i_{ges}	i_{sch}	$n_e = 3400 \text{ rpm}$				$n_e = 3200 \text{ rpm}$				$n_e = 2800 \text{ rpm}$			
		n_a [rpm]	M_{amax} [Nm]	P_e [kW]	η [%]	n_a [rpm]	M_{amax} [Nm]	P_e [kW]	η [%]	n_a [rpm]	M_{amax} [Nm]	P_e [kW]	η [%]
256.47		13	1160	2.3	71	12	1160	2.1	71	11	1160	1.9	70
225.26		15	1130	2.5	72	14	1150	2.4	71	12	1160	2.1	71
214.00		16	1110	2.6	72	15	1140	2.5	71	13	1160	2.2	71
189.09		18	1080	2.8	72	17	1100	2.7	72	15	1140	2.5	71
161.60		21	1040	3.1	73	20	1050	3.0	73	17	1090	2.7	72
148.15		23	1010	3.3	73	22	1030	3.2	73	19	1070	2.9	73
130.00	40/1	26	970	3.6	74	25	990	3.5	74	22	1030	3.2	73
123.20		28	950	3.7	74	26	970	3.6	74	23	1010	3.3	73
107.83		32	900	4.0	74	30	920	3.9	74	26	970	3.6	74
97.14		35	860	4.2	75	33	880	4.1	74	29	930	3.8	74
85.22		40	770	4.3	75	38	820	4.3	75	33	880	4.1	75
75.20		45	675	4.3	74	43	725	4.3	75	37	830	4.3	75
66.67		51	585	4.2	74	48	635	4.3	75	42	745	4.4	75
56.92		60	485	4.1	73	56	530	4.2	74	49	635	4.4	75
75.09		45	1020	5.6	86	43	1020	5.3	86	37	1020	4.6	86
71.33		48	1020	5.9	87	45	1020	5.5	86	39	1020	4.9	86
63.03		54	1020	6.6	87	51	1020	6.2	87	44	1020	5.5	86
53.87		63	980	7.4	87	59	1000	7.1	87	52	1020	6.4	87
49.38		69	950	7.8	87	65	970	7.5	87	57	1010	6.9	87
43.33		78	910	8.5	88	74	930	8.2	88	65	970	7.5	87
41.07	40/3	83	900	8.9	88	78	910	8.5	88	68	950	7.8	87
35.94		95	800	9.0	88	89	850	9.0	88	78	910	8.5	88
32.38		105	725	9.1	88	99	770	9.1	88	86	880	9.1	88
28.41		120	635	9.1	88	113	680	9.1	88	99	780	9.1	88
25.07		136	560	9.1	88	128	600	9.1	88	112	695	9.2	88
22.22		153	485	8.9	88	144	525	9.0	88	126	615	9.2	88
18.97		179	395	8.5	87	169	440	8.9	88	148	520	9.1	88
22.89		149	590	10.0 *	91	140	590	9.5	91	122	590	8.3	91
20.99		162	590	10.9 *	92	152	590	10.3 *	92	133	590	9.0	91
18.42		185	590	12.4 *	92	174	590	11.7 *	92	152	590	10.3 *	92
17.45		195	590	13.1 *	92	183	590	12.4 *	92	160	590	10.8 *	92
15.28	34/6	223	530	13.5 *	92	209	560	13.4 *	92	183	590	12.3 *	92
13.76		247	480	13.5 *	92	233	505	13.4 *	92	203	585	13.6 *	92
12.07		282	415	13.3 *	92	265	445	13.4 *	92	232	515	13.6 *	92
10.65		319	365	13.3 *	92	300	390	13.4 *	92	263	455	13.6 *	92
9.44		360	315	13.0 *	92	339	345	13.3 *	92	297	405	13.7 *	92
8.06		422	260	12.6 *	91	397	285	12.9 *	92	347	340	13.5 *	92

 * $P_{emax} = 9.2 \text{ kW}$

reducer.ir



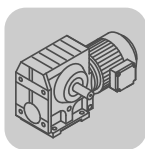
2200 - 1400 rpm

02 963 097

i _{ges}	i _{sch}	n _e = 2200 rpm				n _e = 1700 rpm				n _e = 1400 rpm			
		n _a [rpm]	M _{amax} [Nm]	P _e [kW]	η [%]	n _a [rpm]	M _{amax} [Nm]	P _e [kW]	η [%]	n _a [rpm]	M _{amax} [Nm]	P _e [kW]	η [%]
256.47	40/1	8.6	1260	1.6	69	6.6	1270	1.3	67	5.5	1270	1.1	66
225.26		9.8	1230	1.8	69	7.5	1270	1.5	68	6.2	1270	1.2	67
214.00		10	1220	1.9	70	7.9	1270	1.6	68	6.5	1270	1.3	67
189.09		12	1200	2.1	70	9.0	1240	1.7	69	7.4	1270	1.5	68
161.60		14	1160	2.3	71	11	1220	1.9	70	8.7	1260	1.7	69
148.15		15	1140	2.5	72	11	1200	2.1	70	9.4	1240	1.8	69
130.00		17	1100	2.7	72	13	1170	2.3	71	11	1210	1.9	70
123.20		18	1080	2.8	73	14	1150	2.3	71	11	1200	2.0	70
107.83		20	1040	3.0	73	16	1110	2.5	72	13	1170	2.2	71
97.14		23	1010	3.3	74	18	1090	2.8	73	14	1140	2.4	72
85.22		26	970	3.5	74	20	1050	3.0	73	16	1100	2.6	72
75.20		29	920	3.8	74	23	1010	3.2	74	19	1070	2.9	73
66.67		33	880	4.1	75	25	970	3.5	74	21	1040	3.1	73
56.92		39	830	4.5	75	30	920	3.9	75	25	990	3.4	74
75.09		29	1100	4.0	85	23	1100	3.1	84	19	1100	2.6	83
71.33		31	1100	4.2	85	24	1100	3.2	85	20	1100	2.7	84
63.03		35	1100	4.7	86	27	1100	3.7	85	22	1100	3.0	84
53.87		41	1100	5.5	86	32	1100	4.3	86	26	1100	3.5	85
49.38		45	1080	5.8	87	34	1100	4.6	86	28	1100	3.8	85
43.33	51	1050	6.4	87	39	1100	5.2	86	32	1100	4.3	86	
41.07	40/3	54	1030	6.6	87	41	1100	5.5	86	34	1100	4.6	86
35.94	61	980	7.2	87	47	1060	6.1	87	39	1100	5.2	86	
32.38	68	960	7.8	88	53	1040	6.6	87	43	1090	5.7	87	
28.41	77	920	8.5	88	60	990	7.1	87	49	1050	6.2	87	
25.07	88	870	9.1	88	68	960	7.8	88	56	1020	6.8	87	
22.22	99	790	9.3	88	77	920	8.4	88	63	980	7.4	87	
18.97	116	680	9.4	88	90	860	9.2	88	74	930	8.2	88	
22.89	96	710	7.9	91	74	705	6.1	90	61	705	5.0	90	
20.99	105	710	8.6	91	81	705	6.6	91	67	705	5.5	90	
18.42	119	720	9.9	91	92	710	7.6	91	76	705	6.2	90	
17.45	126	720	10.4 *	91	97	710	8.0	91	80	710	6.6	91	
15.28	34/6	144	720	11.9 *	92	111	720	9.2	91	92	710	7.5	91
13.76	160	725	13.2 *	92	124	720	10.2 *	91	102	710	8.3	91	
12.07	182	650	13.5 *	92	141	725	11.7 *	92	116	720	9.6 *	91	
10.65	207	580	13.6 *	92	160	725	13.2 *	92	131	720	10.8 *	92	
9.44	233	520	13.8 *	92	180	655	13.4 *	92	148	725	12.3 *	92	
8.06	273	445	13.8 *	92	211	575	13.8 *	92	174	680	13.5 *	92	

* P_{emax} = 9.2 kW

reducer.ir



1100 - 700 rpm

02 964 097

i_{ges}	i_{sch}	$n_e = 1100 \text{ rpm}$				$n_e = 900 \text{ rpm}$				$n_e = 700 \text{ rpm}$			
		n_a [rpm]	M_{amax} [Nm]	P_e [kW]	η [%]	n_a [rpm]	M_{amax} [Nm]	P_e [kW]	η [%]	n_a [rpm]	M_{amax} [Nm]	P_e [kW]	η [%]
256.47	40/1	4.3	1270	0.89	64	3.5	1270	0.75	63	2.7	1270	0.60	61
225.26		4.9	1270	1.0	65	4.0	1270	0.84	63	3.1	1270	0.67	62
214.00		5.1	1270	1.0	65	4.2	1270	0.88	64	3.3	1270	0.70	62
189.09		5.8	1270	1.2	66	4.8	1270	0.98	65	3.7	1270	0.78	63
161.60		6.8	1270	1.3	67	5.6	1270	1.1	66	4.3	1270	0.90	64
148.15		7.4	1270	1.5	68	6.1	1270	1.2	66	4.7	1270	0.97	65
130.00		8.5	1260	1.6	69	6.9	1270	1.4	67	5.4	1270	1.1	66
123.20		8.9	1250	1.7	69	7.3	1270	1.4	68	5.7	1270	1.1	66
107.83		10	1220	1.9	70	8.3	1260	1.6	69	6.5	1270	1.3	67
97.14		11	1200	2.0	70	9.3	1250	1.8	69	7.2	1270	1.4	68
85.22		13	1170	2.2	71	11	1220	1.9	70	8.2	1270	1.6	69
75.20		15	1140	2.4	72	12	1190	2.1	71	9.3	1250	1.8	69
66.67		16	1110	2.6	72	13	1160	2.3	71	10	1220	1.9	70
56.92		19	1060	2.9	73	16	1120	2.6	72	12	1190	2.2	71
75.09		15	1120	2.1	83	12	1130	1.7	82	9.3	1170	1.4	81
71.33		15	1120	2.2	83	13	1130	1.8	82	9.8	1120	1.4	81
63.03		17	1120	2.5	83	14	1120	2.0	82	11	1130	1.6	81
53.87		20	1120	2.9	84	17	1120	2.4	83	13	1120	1.9	82
49.38		22	1120	3.1	84	18	1120	2.6	83	14	1120	2.0	82
43.33		25	1130	3.5	85	21	1120	2.9	84	16	1120	2.3	83
41.07	40/3	27	1130	3.7	85	22	1120	3.1	84	17	1120	2.4	83
35.94		31	1150	4.3	85	25	1130	3.5	85	19	1120	2.7	84
32.38	34	1130	4.7	86	28	1130	3.9	85	22	1120	3.0	84	
28.41	39	1110	5.2	86	32	1150	4.5	86	25	1130	3.4	85	
25.07	44	1080	5.7	87	36	1120	4.9	86	28	1130	3.9	85	
22.22	50	1050	6.3	87	41	1100	5.4	86	32	1150	4.4	86	
18.97	58	1010	7.0	87	47	1060	6.1	87	37	1120	5.0	86	
22.89	48	695	3.9	89	39	695	3.2	89	31	705	2.6	88	
20.99	52	705	4.3	90	43	695	3.5	89	33	705	2.8	88	
18.42	60	700	4.9	90	49	700	4.0	89	38	700	3.1	89	
17.45	63	700	5.1	90	52	700	4.2	90	40	700	3.3	89	
15.28	34/6	72	710	5.9	90	59	700	4.8	90	46	700	3.8	89
13.76		80	710	6.6	91	65	700	5.3	90	51	700	4.2	90
12.07		91	710	7.5	91	75	710	6.1	90	58	700	4.7	90
10.65		103	715	8.5	91	85	710	6.9	91	66	710	5.4	90
9.44	117	720	9.6 *	91	95	715	7.8	91	74	710	6.1	90	
8.06	136	725	11.3 *	92	112	720	9.2	91	87	710	7.1	91	

* $P_{emax} = 9.2 \text{ kW}$

reducer.ir

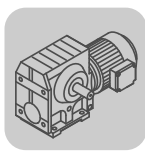


500 - 10 rpm

02 964 097

i _{ges}	i _{sch}	n _e = 500 rpm				n _e = 250 rpm				n _e = 10 rpm			
		n _a [rpm]	M _{amax} [Nm]	P _e [kW]	η [%]	n _a [rpm]	M _{amax} [Nm]	P _e [kW]	η [%]	n _a [rpm]	M _{amax} [Nm]	P _e [kW]	η [%]
256.47	40/1	1.9	1270	0.44	59	0.97	1270	0.23	56	0.04	1270	< 0.05	54
225.26		2.2	1270	0.49	60	1.1	1270	0.26	56	0.04	1270	< 0.05	55
214.00		2.3	1270	0.52	60	1.2	1270	0.28	56	0.05	1270	< 0.05	55
189.09		2.6	1270	0.58	61	1.3	1270	0.31	57	0.05	1270	< 0.05	55
161.60		3.1	1270	0.67	62	1.5	1270	0.36	58	0.06	1270	< 0.05	55
148.15		3.4	1270	0.72	62	1.7	1270	0.39	58	0.07	1270	< 0.05	55
130.00		3.8	1270	0.81	63	1.9	1270	0.43	59	0.08	1270	< 0.05	55
123.20		4.1	1270	0.85	64	2.0	1270	0.46	59	0.08	1270	< 0.05	55
107.83		4.6	1270	0.95	65	2.3	1270	0.51	60	0.09	1270	< 0.05	56
97.14		5.1	1270	1.0	65	2.6	1270	0.56	61	0.10	1270	< 0.05	56
85.22		5.9	1270	1.2	66	2.9	1270	0.63	62	0.12	1270	< 0.05	56
75.20		6.6	1270	1.3	67	3.3	1270	0.71	62	0.13	1270	< 0.05	56
66.67		7.5	1270	1.5	68	3.7	1270	0.79	63	0.15	1270	< 0.05	56
56.92		8.8	1260	1.7	69	4.4	1270	0.91	64	0.18	1270	< 0.05	56
75.09		6.7	1160	1.0	79	3.3	1120	0.51	76	0.13	1120	< 0.05	75
71.33		7.0	1110	1.0	79	3.5	1060	0.51	77	0.14	1060	< 0.05	75
63.03	7.9	1230	1.3	80	4.0	1200	0.65	77	0.16	1200	< 0.05	76	
53.87	9.3	1180	1.4	81	4.6	1240	0.77	78	0.19	1240	< 0.05	76	
49.38	10	1160	1.5	81	5.1	1240	0.84	78	0.20	1240	< 0.05	76	
43.33	12	1120	1.7	82	5.8	1240	0.95	79	0.23	1240	< 0.05	76	
41.07	40/3	12	1120	1.7	82	6.1	1240	1.0	79	0.24	1240	< 0.05	76
35.94		14	1120	2.0	82	7.0	1240	1.1	79	0.28	1240	< 0.05	76
32.38		15	1120	2.2	83	7.7	1240	1.3	80	0.31	1240	0.05	76
28.41		18	1120	2.5	83	8.8	1190	1.4	80	0.35	1190	0.06	76
25.07	20	1120	2.8	84	10	1170	1.5	81	0.40	1170	0.06	76	
22.22	23	1130	3.2	84	11	1130	1.6	81	0.45	1130	0.07	76	
18.97	26	1130	3.7	85	13	1120	1.9	82	0.53	1120	0.08	76	
22.89	22	690	1.8	87	11	675	0.91	85	0.44	675	< 0.05	83	
20.99	24	725	2.1	87	12	740	1.1	85	0.48	740	< 0.05	83	
18.42	27	705	2.3	88	14	830	1.4	86	0.54	830	0.06	83	
17.45	29	705	2.4	88	14	810	1.4	86	0.57	810	0.06	83	
15.28	34/6	33	705	2.7	88	16	785	1.6	86	0.65	785	0.06	83
13.76		36	695	3.0	89	18	770	1.7	87	0.73	770	0.07	83
12.07		41	695	3.4	89	21	750	1.9	87	0.83	750	0.08	83
10.65		47	695	3.8	89	23	725	2.0	87	0.94	725	0.09	83
9.44	53	705	4.4	90	26	705	2.2	88	1.1	705	0.09	83	
8.06	62	705	5.1	90	31	705	2.6	88	1.2	705	0.11	83	

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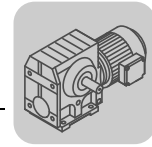

12.11 S, SF, SA, SAF 87
3400 - 2800 rpm

02 965 097

i_{ges}	i_{sch}	$n_e = 3400 \text{ rpm}$				$n_e = 3200 \text{ rpm}$				$n_e = 2800 \text{ rpm}$			
		n_a [rpm]	M_{amax} [Nm]	P_e [kW]	η [%]	n_a [rpm]	M_{amax} [Nm]	P_e [kW]	η [%]	n_a [rpm]	M_{amax} [Nm]	P_e [kW]	η [%]
288.00		12	2030	3.4	74	11	2070	3.3	73	9.7	2070	2.9	73
258.18		13	1990	3.7	74	12	2010	3.5	74	11	2070	3.2	73
222.40		15	1910	4.1	75	14	1950	4.0	74	13	2010	3.6	74
202.96		17	1850	4.3	75	16	1890	4.2	75	14	1970	3.8	74
180.00		19	1800	4.7	75	18	1830	4.5	75	16	1910	4.2	75
151.30		22	1690	5.3	75	21	1730	5.1	75	19	1800	4.6	75
139.05	40/1	24	1630	5.5	76	23	1680	5.4	76	20	1760	4.9	75
123.48		28	1570	6.0	76	26	1600	5.7	76	23	1690	5.3	76
110.40		31	1430	6.1	76	29	1540	6.2	76	25	1620	5.7	76
99.26		34	1260	6.0	75	32	1380	6.2	76	28	1550	6.0	76
86.15		39	1030	5.8	74	37	1150	6.0	75	33	1390	6.2	76
77.14		44	830	5.3	72	41	970	5.7	74	36	1220	6.1	76
64.00		53	500	4.3	65	50	620	4.7	68	44	960	5.9	75
91.20		37	1470	6.6	88	35	1470	6.2	87	31	1470	5.4	87
81.76		42	1470	7.3	88	39	1470	6.9	88	34	1470	6.0	87
70.43		48	1470	8.4	88	45	1470	7.9	88	40	1470	7.0	88
64.27		53	1470	9.2	88	50	1470	8.7	88	44	1470	7.6	88
57.00		60	1470	10.4	88	56	1470	9.8	88	49	1470	8.6	88
47.91		71	1470	12.3	89	67	1470	11.6	89	58	1470	10.2	88
44.03	38/3	77	1470	13.4	89	73	1470	12.6	89	64	1470	11.0	89
39.10		87	1300	13.3	89	82	1400	13.5	89	72	1470	12.4	89
34.96		97	1140	13.1	89	92	1240	13.4	89	80	1440	13.6	89
31.43		108	1000	12.8	88	102	1090	13.1	89	89	1290	13.5	89
27.28		125	810	12.1	88	117	910	12.7	88	103	1110	13.4	89
24.43		139	660	11.1	87	131	775	12.1	88	115	960	13.0	89
20.27		168	395	8.4	82	158	490	9.6	84	138	755	12.4	88
25.50		133	990	15.0	92	125	990	14.1	92	110	990	12.4	92
21.43		159	990	17.8 *	92	149	990	16.8 *	92	131	990	14.7	92
19.70		173	990	19 *	92	162	990	18.3 *	92	142	990	16.0 *	92
17.49		194	870	19 *	92	183	930	19 *	92	160	990	18.0 *	92
15.64		217	760	19 *	92	205	830	19 *	92	179	960	19 *	92
14.06	34/6	242	660	18.2 *	92	228	725	19 *	92	199	860	19 *	92
12.21		278	540	17.2 *	91	262	605	18.1 *	92	229	730	19 *	92
10.93		311	440	15. *8	90	293	510	17.1 *	91	256	645	19 *	92
9.07		375	255	11.5	87	353	325	13.5	89	309	500	17.7 *	92
7.88		431	200	10.5	86	406	230	11.3	87	355	375	15.5 *	90

 * $P_{emax} = 15 \text{ kW}$

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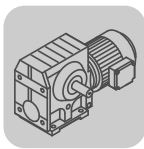
2200 - 1400 rpm

02 965 097

i _{ges}	i _{sch}	n _e = 2200 rpm				n _e = 1700 rpm				n _e = 1400 rpm			
		n _a [rpm]	M _{amax} [Nm]	P _e [kW]	η [%]	n _a [rpm]	M _{amax} [Nm]	P _e [kW]	η [%]	n _a [rpm]	M _{amax} [Nm]	P _e [kW]	η [%]
288.00		7.6	2210	2.5	71	5.9	2280	2.0	70	4.9	2280	1.7	69
258.18		8.5	2170	2.7	72	6.6	2260	2.2	71	5.4	2280	1.9	69
222.40		9.9	2130	3.0	73	7.6	2210	2.5	71	6.3	2280	2.1	70
202.96		11	2080	3.2	73	8.4	2190	2.7	72	6.9	2260	2.3	71
180.00		12	2020	3.5	74	9.4	2130	2.9	73	7.8	2210	2.5	72
151.30		15	1940	4.0	75	11	2060	3.3	74	9.3	2150	2.9	73
139.05	40/1	16	1880	4.2	75	12	2020	3.5	74	10	2100	3.0	73
123.48		18	1820	4.5	75	14	1960	3.8	74	11	2060	3.3	74
110.40		20	1770	4.9	76	15	1900	4.1	75	13	2000	3.6	74
99.26		22	1700	5.2	76	17	1840	4.4	75	14	1960	3.9	75
86.15		26	1620	5.7	76	20	1770	4.8	76	16	1880	4.3	75
77.14		29	1540	6.0	76	22	1700	5.2	76	18	1820	4.6	76
64.00		34	1360	6.4	77	27	1580	5.7	77	22	1700	5.1	76
91.20		24	1540	4.5	87	19	1520	3.5	86	15	1510	2.9	85
81.76		27	1600	5.2	87	21	1600	4.0	86	17	1600	3.4	86
70.43		31	1600	6.0	87	24	1600	4.7	87	20	1600	3.9	86
64.27		34	1600	6.6	88	26	1600	5.1	87	22	1600	4.2	86
57.00		39	1600	7.4	88	30	1600	5.7	87	25	1600	4.8	87
47.91		46	1600	8.7	88	35	1600	6.8	88	29	1600	5.6	87
44.03	38/3	50	1600	9.5	88	39	1600	7.4	88	32	1600	6.1	87
39.10		56	1600	10.6	89	43	1600	8.3	88	36	1600	6.8	88
34.96		63	1600	11.9	89	49	1600	9.2	88	40	1600	7.6	88
31.43		70	1600	13.2	89	54	1600	10.2	89	45	1600	8.5	88
27.28		81	1450	13.7	89	62	1600	11.7	89	51	1600	9.7	89
24.43		90	1310	13.8	89	70	1600	13.1	89	57	1600	10.8	89
20.27		109	1080	13.8	89	84	1420	14.0	89	69	1600	13.0	89
25.50		86	1240	12.2	92	67	1240	9.5	91	55	1240	7.8	91
21.43		103	1240	14.5	92	79	1240	11.2	92	65	1240	9.3	91
19.70		112	1240	15.7 *	92	86	1240	12.2	92	71	1240	10.1	91
17.49		126	1240	17.7 *	92	97	1240	13.7	92	80	1240	11.3	92
15.64	34/6	141	1230	20 *	92	109	1240	15.3 *	92	90	1240	12.7	92
14.06		156	1110	20 *	92	121	1240	17.0 *	92	100	1240	14.1	92
12.21		180	970	20 *	93	139	1240	20 *	92	115	1240	16.1 *	92
10.93		201	870	20 *	93	156	1130	20 *	93	128	1240	18.0 *	92
9.07		243	720	20 *	92	187	950	20 *	93	154	1140	20 *	93
7.88		279	605	19 *	92	216	830	20 *	93	178	1010	20 *	93

* P_{emax} = 15 kW

reducer.ir



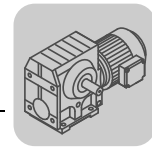
1100 - 700 rpm

02 966 097

i_{ges}	i_{sch}	$n_e = 1100 \text{ rpm}$				$n_e = 900 \text{ rpm}$				$n_e = 700 \text{ rpm}$				
		n_a [rpm]	M_{amax} [Nm]	P_e [kW]	η [%]	n_a [rpm]	M_{amax} [Nm]	P_e [kW]	η [%]	n_a [rpm]	M_{amax} [Nm]	P_e [kW]	η [%]	
288.00	40/1	3.8	2400	1.4	67	3.1	2450	1.2	66	2.4	2480	0.98	64	
258.18		4.3	2380	1.6	68	3.5	2430	1.3	67	2.7	2470	1.1	65	
222.40		4.9	2350	1.8	69	4.0	2400	1.5	68	3.1	2450	1.2	66	
202.96		5.4	2330	1.9	70	4.4	2380	1.6	68	3.4	2430	1.3	67	
180.00		6.1	2280	2.1	70	5.0	2350	1.8	69	3.9	2400	1.4	68	
151.30		7.3	2240	2.4	71	5.9	2310	2.0	70	4.6	2350	1.7	69	
139.05		7.9	2190	2.5	72	6.5	2260	2.2	71	5.0	2330	1.8	69	
123.48		8.9	2150	2.8	73	7.3	2240	2.4	71	5.7	2310	2.0	70	
110.40		10	2110	3.0	73	8.2	2190	2.6	72	6.3	2280	2.1	71	
99.26		11	2070	3.3	74	9.1	2150	2.8	73	7.1	2240	2.3	71	
86.15		13	2000	3.6	74	10	2090	3.1	73	8.1	2190	2.6	72	
77.14		14	1940	3.9	75	12	2040	3.4	74	9.1	2150	2.8	73	
64.00		17	1840	4.4	76	14	1960	3.9	75	11	2070	3.2	74	
91.20		38/3	12	1490	2.2	84	9.9	1480	1.8	83	7.7	1460	1.4	82
81.76			13	1760	2.9	85	11	1760	2.4	84	8.6	1760	1.9	83
70.43			16	1760	3.4	85	13	1760	2.8	85	9.9	1760	2.2	83
64.27	17		1760	3.7	86	14	1760	3.0	85	11	1760	2.4	84	
57.00	19		1760	4.1	86	16	1760	3.4	85	12	1760	2.7	84	
47.91	23		1760	4.9	87	19	1760	4.0	86	15	1760	3.2	85	
44.03	25		1760	5.3	87	20	1760	4.4	86	16	1760	3.4	85	
39.10	28		1760	6.0	87	23	1760	4.9	87	18	1760	3.9	86	
34.96	31		1760	6.6	88	26	1760	5.5	87	20	1760	4.3	86	
31.43	35		1760	7.4	88	29	1760	6.1	87	22	1760	4.7	87	
27.28	40		1760	8.4	88	33	1760	6.9	88	26	1760	5.4	87	
24.43	45		1760	9.4	88	37	1760	7.7	88	29	1760	6.0	87	
20.27	54		1760	11.3	89	44	1760	9.3	88	35	1760	7.2	88	
25.50	34/6		43	1340	6.7	90	35	1340	5.5	90	27	1340	4.3	89
21.43			51	1340	7.9	91	42	1340	6.5	90	33	1340	5.1	90
19.70			56	1340	8.6	91	46	1340	7.1	91	36	1340	5.5	90
17.49		63	1340	9.7	91	51	1340	7.9	91	40	1340	6.2	90	
15.64		70	1340	10.8	92	58	1340	8.9	91	45	1340	6.9	91	
14.06		78	1340	12.0	92	64	1340	9.8	91	50	1340	7.7	91	
12.21		90	1340	13.8	92	74	1340	11.3	92	57	1340	8.8	91	
10.93		101	1340	15.3 *	92	82	1340	12.6	92	64	1340	9.8	91	
9.07		121	1340	18.4 *	92	99	1340	15.1 *	92	77	1340	11.8	92	
7.88		140	1260	20 *	93	114	1340	17.4 *	92	89	1340	13.6	92	

* $P_{emax} = 15 \text{ kW}$

reducer.ir



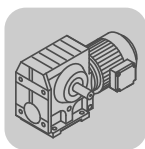
500 - 10 rpm

02 966 097

i _{ges}	i _{sch}	n _e = 500 rpm				n _e = 250 rpm				n _e = 10 rpm			
		n _a [rpm]	M _{amax} [Nm]	P _e [kW]	η [%]	n _a [rpm]	M _{amax} [Nm]	P _e [kW]	η [%]	n _a [rpm]	M _{amax} [Nm]	P _e [kW]	η [%]
288.00	40/1	1.7	2500	0.73	62	0.87	2500	0.38	59	0.03	2500	< 0.05	58
258.18		1.9	2500	0.80	63	0.97	2500	0.43	59	0.04	2500	< 0.05	58
222.40		2.2	2500	0.92	64	1.1	2500	0.49	60	0.04	2500	< 0.05	59
202.96		2.5	2480	0.99	64	1.2	2500	0.53	61	0.05	2500	< 0.05	59
180.00		2.8	2480	1.1	65	1.4	2500	0.60	61	0.06	2500	< 0.05	59
151.30		3.3	2430	1.3	67	1.7	2500	0.70	62	0.07	2500	< 0.05	59
139.05		3.6	2430	1.4	67	1.8	2500	0.75	63	0.07	2500	< 0.05	59
123.48		4.0	2400	1.5	68	2.0	2500	0.84	63	0.08	2500	< 0.05	59
110.40		4.5	2380	1.6	69	2.3	2500	0.93	64	0.09	2500	< 0.05	59
99.26		5.0	2330	1.8	69	2.5	2470	1.0	65	0.10	2470	< 0.05	59
86.15		5.8	2310	2.0	70	2.9	2450	1.1	66	0.12	2450	0.05	59
77.14		6.5	2260	2.2	71	3.2	2430	1.2	66	0.13	2430	0.06	59
64.00		7.8	2220	2.5	72	3.9	2400	1.5	68	0.16	2400	0.07	59
91.20		38/3	5.5	1450	1.0	81	2.7	1390	0.51	79	0.11	1390	< 0.05
81.76	6.1		1960	1.5	82	3.1	1880	0.76	79	0.12	1880	< 0.05	78
70.43	7.1		1980	1.8	82	3.5	1980	0.92	80	0.14	1980	< 0.05	79
64.27	7.8		1980	2.0	83	3.9	1980	1.0	80	0.16	1980	< 0.05	79
57.00	8.8		1980	2.2	83	4.4	1980	1.1	80	0.18	1980	< 0.05	79
47.91	10		1980	2.6	84	5.2	1980	1.3	81	0.21	1980	0.06	79
44.03	11		1980	2.8	84	5.7	1980	1.4	81	0.23	1980	0.06	79
39.10	13		1980	3.1	85	6.4	1980	1.6	82	0.26	1980	0.07	79
34.96	14		1980	3.5	85	7.2	1980	1.8	82	0.29	1980	0.08	79
31.43	16		1980	3.9	85	8.0	1980	2.0	83	0.32	1980	0.08	79
27.28	18		1980	4.4	86	9.2	1980	2.3	83	0.37	1980	0.10	79
24.43	20		1980	4.9	86	10	1980	2.5	84	0.41	1980	0.11	79
20.27	25		1980	5.9	87	12	1980	3.0	85	0.49	1980	0.13	79
25.50	34/6		20	1430	3.3	88	9.8	1390	1.6	87	0.39	1390	0.07
21.43		23	1420	3.9	89	12	1510	2.1	87	0.47	1510	0.09	85
19.70		25	1410	4.2	89	13	1570	2.4	87	0.51	1570	0.10	85
17.49		29	1390	4.6	89	14	1570	2.7	88	0.57	1570	0.11	85
15.64		32	1390	5.2	90	16	1540	2.9	88	0.64	1540	0.12	85
14.06		36	1390	5.7	90	18	1510	3.2	88	0.71	1510	0.13	85
12.21		41	1390	6.6	90	20	1460	3.5	89	0.82	1460	0.15	85
10.93		46	1390	7.3	91	23	1430	3.9	89	0.91	1430	0.16	85
9.07		55	1410	8.9	91	28	1390	4.5	89	1.1	1390	0.19	85
7.88		63	1410	10.3	91	32	1390	5.1	90	1.3	1390	0.22	85

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reducer.ir

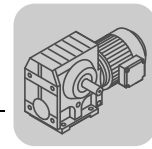

12.12 S, SF, SA, SAF 97
3400 - 2800 rpm

02 967 097

i_{ges}	i_{sch}	$n_e = 3400 \text{ rpm}$				$n_e = 3200 \text{ rpm}$				$n_e = 2800 \text{ rpm}$			
		n_a [rpm]	M_{amax} [Nm]	P_e [kW]	η [%]	n_a [rpm]	M_{amax} [Nm]	P_e [kW]	η [%]	n_a [rpm]	M_{amax} [Nm]	P_e [kW]	η [%]
286.40	40/1	12	3520	5.8	76	11	3590	5.6	76	9.8	3700	5.0	75
262.22		13	3450	6.2	76	12	3520	5.9	76	11	3630	5.4	75
231.67		15	3310	6.7	76	14	3380	6.4	76	12	3520	5.9	76
196.52		17	3120	7.4	77	16	3210	7.2	76	14	3350	6.6	76
180.95		19	3030	7.8	77	18	3120	7.5	77	15	3250	6.9	76
161.74		21	2910	8.3	77	20	2970	8.0	77	17	3120	7.4	77
145.60		23	2760	8.8	77	22	2850	8.5	77	19	3000	7.9	77
131.85		26	2660	9.4	77	24	2740	9.1	77	21	2880	8.3	77
116.92		29	2320	9.3	76	27	2550	9.5	77	24	2740	8.9	77
105.71		32	1980	8.9	75	30	2210	9.2	76	26	2630	9.5	77
89.60		38	1280	7.3	70	36	1670	8.5	74	31	2210	9.4	77
78.26		43	920	6.4	65	41	1040	6.7	67	36	1770	8.8	75
65.45		52	675	5.9	63	49	775	6.2	64	43	1030	6.8	68
80.85		42	3150	15.5	89	40	3150	14.6	89	35	3150	12.8	89
71.43		48	3090	17.2	90	45	3150	16.5	89	39	3150	14.5	89
60.59		56	2910	19	90	53	2970	18.3	90	46	3120	16.9	90
55.79	61	2820	20	90	57	2880	19	90	50	3030	17.8	90	
49.87	68	2710	22	90	64	2760	21	90	56	2910	19	90	
44.89	37/3	76	2430	21	90	71	2630	22	90	62	2790	20	90
40.65		84	2170	21	90	79	2350	22	90	69	2680	21	90
36.05		94	1830	20	89	89	2020	21	89	78	2400	22	90
32.60		104	1560	19	89	98	1760	20	89	86	2150	22	90
27.63	123	1010	15.2	86	116	1320	18.2	88	101	1740	21	89	
24.13	141	725	12.9	83	133	820	13.6	84	116	1390	19	88	
26.39	129	1750	25 *	93	121	1750	24 *	93	106	1750	21	93	
23.59	144	1750	28 *	93	136	1750	27 *	93	119	1750	23 *	93	
21.23	160	1750	32 *	93	151	1750	30 *	93	132	1750	26 *	93	
19.23	177	1550	31 *	93	166	1680	31 *	93	146	1750	29 *	93	
17.05	35/6	199	1320	30 *	93	188	1450	31 *	93	164	1730	32 *	93
15.42		220	1110	28 *	92	208	1260	30 *	93	182	1540	31 *	93
13.07		260	725	22	90	245	940	26 *	92	214	1240	30 *	93
11.41		298	515	18.3	88	280	585	19	89	245	1000	28 *	92
9.55		356	375	16.2	87	335	435	17.5	87	293	580	20	89
8.26		412	290	14.7	85	387	335	15.8	86	339	455	18.4	88

 * $P_{emax} = 22 \text{ kW}$

reducer.ir



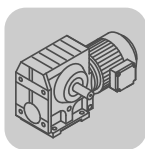
2200 - 1400 rpm

02 967 097

i _{ges}	i _{sch}	n _e = 2200 rpm				n _e = 1700 rpm				n _e = 1400 rpm			
		n _a [rpm]	M _{amax} [Nm]	P _e [kW]	η [%]	n _a [rpm]	M _{amax} [Nm]	P _e [kW]	η [%]	n _a [rpm]	M _{amax} [Nm]	P _e [kW]	η [%]
286.40	40/1	7.7	3920	4.2	74	5.9	4000	3.4	73	4.9	4000	2.9	72
262.22		8.4	3840	4.5	75	6.5	4000	3.7	73	5.3	4000	3.1	72
231.67		9.5	3770	5.0	75	7.3	3960	4.1	74	6.0	4000	3.5	73
196.52		11	3580	5.5	76	8.7	3840	4.7	75	7.1	4000	4.0	74
180.95		12	3510	5.9	76	9.4	3770	4.9	75	7.7	3920	4.3	74
161.74		14	3410	6.4	76	11	3650	5.3	76	8.7	3840	4.7	75
145.60		15	3270	6.8	77	12	3550	5.7	76	9.6	3730	5.0	75
131.85		17	3170	7.2	77	13	3440	6.1	76	11	3650	5.4	76
116.92		19	3020	7.7	77	15	3340	6.6	77	12	3510	5.8	76
105.71		21	2930	8.3	77	16	3210	7.0	77	13	3440	6.2	76
89.60		25	2730	9.1	77	19	3020	7.8	77	16	3240	6.9	77
78.26		28	2540	9.6	78	22	2870	8.4	78	18	3080	7.5	77
65.45		34	2120	9.7	77	26	2650	9.2	78	21	2900	8.3	78
80.85		37/3	27	3300	10.6	89	21	3270	8.2	88	17	3230	6.7
71.43	31		3300	12.0	89	24	3300	9.3	88	20	3300	7.7	88
60.59	36		3300	14.1	89	28	3300	10.9	89	23	3300	9.0	88
55.79	39		3270	15.1	89	30	3300	11.8	89	25	3300	9.8	88
49.87	44		3170	16.3	90	34	3300	13.2	89	28	3300	10.9	89
44.89	49		3050	17.5	90	38	3300	14.6	89	31	3300	12.1	89
40.65	54		2950	19	90	42	3230	15.8	90	34	3300	13.3	89
36.05	61		2810	20	90	47	3110	17.1	90	39	3300	15.0	89
32.60	67		2700	21	90	52	2980	18.1	90	43	3200	16.0	90
27.63	80		2390	22	90	62	2810	20	90	51	3010	17.8	90
24.13	91		2060	22	90	70	2670	22	90	58	2870	19	90
26.39	83		2550	24 *	93	64	2600	19	93	53	2600	15.6	92
23.59	93		2450	26 *	93	72	2600	21	93	59	2600	17.5	93
21.23	104		2380	28 *	93	80	2570	23 *	93	66	2600	19	93
19.23	114	2280	29 *	93	88	2500	25 *	93	73	2600	21	93	
17.05	35/6	129	2170	31 *	93	100	2400	27 *	93	82	2570	24 *	93
15.42		143	2040	33 *	93	110	2300	28 *	93	91	2470	25 *	93
13.07		168	1720	32 *	93	130	2170	32 *	93	107	2330	28 *	93
11.41		193	1480	32 *	93	149	2000	33 *	93	123	2210	30 *	93
9.55		230	1200	31 *	93	178	1670	33 *	93	147	2040	33 *	94
8.26		266	980	30 *	93	206	1440	33 *	93	169	1770	34 *	94

* P_{emax} = 22 kW

reducer.ir



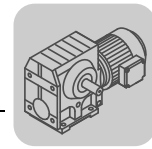
1100 - 700 rpm

02 968 097

i_{ges}	i_{sch}	$n_e = 1100 \text{ rpm}$				$n_e = 900 \text{ rpm}$				$n_e = 700 \text{ rpm}$			
		n_a [rpm]	M_{amax} [Nm]	P_e [kW]	η [%]	n_a [rpm]	M_{amax} [Nm]	P_e [kW]	η [%]	n_a [rpm]	M_{amax} [Nm]	P_e [kW]	η [%]
286.40	40/1	3.8	4200	2.4	70	3.1	4200	2.0	69	2.4	4200	1.6	68
262.22		4.2	4200	2.6	71	3.4	4200	2.2	70	2.7	4200	1.7	68
231.67		4.7	4200	2.9	72	3.9	4200	2.4	70	3.0	4200	1.9	69
196.52		5.6	4160	3.4	73	4.6	4200	2.8	71	3.6	4200	2.2	70
180.95		6.1	4120	3.6	73	5.0	4200	3.0	72	3.9	4200	2.4	70
161.74		6.8	4030	3.9	74	5.6	4160	3.3	73	4.3	4200	2.7	71
145.60		7.6	3950	4.2	74	6.2	4080	3.6	73	4.8	4200	2.9	72
131.85		8.3	3880	4.5	75	6.8	4030	3.9	74	5.3	4200	3.2	72
116.92		9.4	3760	4.9	75	7.7	3910	4.2	74	6.0	4120	3.5	73
105.71		10	3650	5.3	76	8.5	3840	4.6	75	6.6	4030	3.8	74
89.60		12	3500	5.9	76	10	3690	5.1	76	7.8	3910	4.3	75
78.26		14	3370	6.5	77	12	3580	5.7	76	8.9	3800	4.7	75
65.45		17	3170	7.2	77	14	3400	6.4	77	11	3650	5.4	76
80.85		37/3	14	3230	5.3	87	11	3200	4.3	86	8.7	3170	3.4
71.43	15		3600	6.7	87	13	3600	5.5	87	9.8	3600	4.3	86
60.59	18		3600	7.8	88	15	3600	6.4	87	12	3600	5.0	86
55.79	20		3600	8.5	88	16	3600	7.0	87	13	3600	5.5	87
49.87	22		3600	9.4	88	18	3600	7.8	88	14	3600	6.1	87
44.89	25		3600	10.4	88	20	3600	8.6	88	16	3600	6.7	87
40.65	27		3600	11.5	89	22	3600	9.5	88	17	3600	7.4	88
36.05	31		3530	12.7	89	25	3600	10.6	89	19	3600	8.3	88
32.60	34		3420	13.5	89	28	3600	11.7	89	21	3600	9.2	88
27.63	40		3260	15.2	90	33	3460	13.2	89	25	3600	10.8	89
24.13	46		3130	16.6	90	37	3320	14.5	89	29	3560	12.2	89
26.39	42		2650	12.6	92	34	2620	10.2	92	27	2620	8.0	91
23.59	47		2650	14.0	92	38	2650	11.5	92	30	2620	8.9	91
21.23	52		2650	15.6	92	42	2650	12.8	92	33	2620	9.9	92
19.23	57	2650	17.2	93	47	2650	14.1	92	36	2620	10.9	92	
17.05	35/6	65	2670	19	93	53	2650	15.9	92	41	2650	12.4	92
15.42		71	2670	21	93	58	2650	17.5	93	45	2650	13.7	92
13.07		84	2540	24 *	93	69	2670	21	93	54	2650	16.1	92
11.41		96	2420	26 *	93	79	2590	23 *	93	61	2650	18.4	93
9.55		115	2280	29 *	93	94	2440	26 *	93	73	2650	22	93
8.26	133	2140	32 *	94	109	2320	28 *	93	85	2540	24 *	93	

* $P_{emax} = 22 \text{ kW}$

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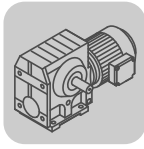


500 - 10 rpm

02 968 097

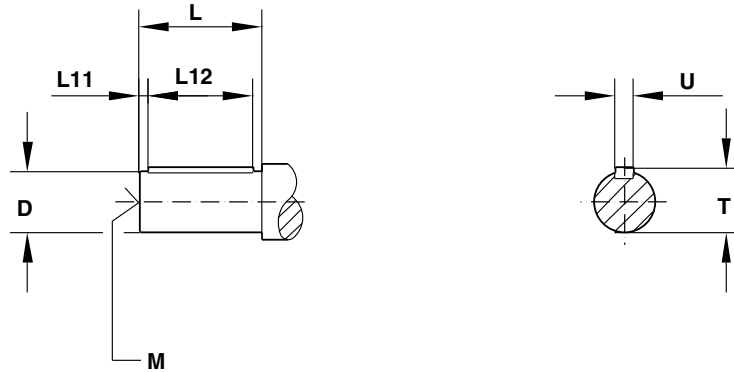
i _{ges}	i _{sch}	n _e = 500 rpm				n _e = 250 rpm				n _e = 10 rpm				
		n _a [rpm]	M _{amax} [Nm]	P _e [kW]	η [%]	n _a [rpm]	M _{amax} [Nm]	P _e [kW]	η [%]	n _a [rpm]	M _{amax} [Nm]	P _e [kW]	η [%]	
286.40	40/1	1.7	4200	1.2	65	0.87	4200	0.62	62	0.03	4200	< 0.05	60	
262.22		1.9	4200	1.3	66	0.95	4200	0.68	62	0.04	4200	< 0.05	60	
231.67		2.2	4200	1.4	67	1.1	4200	0.76	63	0.04	4200	< 0.05	60	
196.52		2.5	4200	1.6	68	1.3	4200	0.88	64	0.05	4200	< 0.05	60	
180.95		2.8	4200	1.8	68	1.4	4200	0.95	64	0.06	4200	< 0.05	60	
161.74		3.1	4200	2.0	69	1.5	4200	1.1	65	0.06	4200	< 0.05	60	
145.60		3.4	4200	2.2	70	1.7	4200	1.2	65	0.07	4200	0.05	60	
131.85		3.8	4200	2.4	70	1.9	4200	1.3	66	0.08	4200	0.06	60	
116.92		4.3	4200	2.6	71	2.1	4200	1.4	67	0.09	4200	0.06	60	
105.71		4.7	4200	2.9	72	2.4	4200	1.5	67	0.09	4200	0.07	60	
89.60		5.6	4160	3.3	73	2.8	4200	1.8	69	0.11	4200	0.08	60	
78.26		6.4	4080	3.7	74	3.2	4200	2.0	69	0.13	4200	0.09	60	
65.45		7.6	3910	4.2	75	3.8	4200	2.4	70	0.15	4200	0.11	60	
80.85		37/3	6.2	3110	2.4	84	3.1	3010	1.2	82	0.12	3010	< 0.05	80
71.43			7.0	4200	3.6	85	3.5	4160	1.9	82	0.14	4160	0.08	81
60.59	8.3		4200	4.3	85	4.1	4080	2.1	83	0.17	4080	0.09	81	
55.79	9.0		4200	4.6	86	4.5	4200	2.4	83	0.18	4200	0.10	81	
49.87	10		4200	5.1	86	5.0	4200	2.6	83	0.20	4200	0.11	81	
44.89	11		4160	5.6	86	5.6	4200	2.9	84	0.22	4200	0.12	81	
40.65	12		4120	6.1	87	6.2	4200	3.2	84	0.25	4200	0.13	81	
36.05	14		4080	6.8	87	6.9	4200	3.6	85	0.28	4200	0.15	81	
32.60	15		3990	7.3	87	7.7	4200	4.0	85	0.31	4200	0.17	81	
27.63	18		3910	8.4	88	9.0	4200	4.7	86	0.36	4200	0.20	81	
24.13	21		3800	9.3	88	10	4200	5.3	86	0.41	4200	0.23	81	
26.39	35/6		19	2590	5.7	90	9.5	2540	2.8	89	0.38	2540	0.12	87
23.59			21	2590	6.3	91	11	2540	3.2	89	0.42	2540	0.13	87
21.23			24	2590	7.0	91	12	2570	3.6	89	0.47	2570	0.15	87
19.23			26	2620	7.8	91	13	2570	3.9	89	0.52	2570	0.16	87
17.05		29	2620	8.8	91	15	2570	4.4	90	0.59	2570	0.18	87	
15.42		32	2620	9.7	92	16	2570	4.8	90	0.65	2570	0.20	87	
13.07		38	2650	11.6	92	19	2590	5.7	90	0.77	2590	0.24	87	
11.41		44	2650	13.2	92	22	2590	6.6	91	0.88	2590	0.27	87	
9.55		52	2650	15.7	92	26	2620	7.9	91	1.0	2620	0.33	87	
8.26		61	2650	18.1	93	30	2620	9.1	91	1.2	2620	0.38	87	

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12.13 Available output shafts S series

12.13.13 S Series inch solid shafts

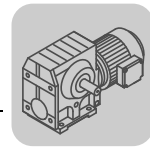


Model ¹	D	T	U	L	L11	L12	M	Change ²
S...37	0.75	0.83	3/16	1.57	0.25	1-1/16	1/4 - 20 x 0.63	0
S...47	1	1.11	1/4	1.97	0.32	1-5/16	3/8 - 16 x 0.87	0
S...57	1.25	1.36	1/4	2.36	0.26	1-11/16	1/2 - 13 x 1.12	0
S...67	1.375	1.51	5/16	2.76	0.43	1-13/16	1/2 - 13 x 1.12	0
S...77	1.75	1.92	3/8	3.54	0.38	2-3/4	5/8 - 11 x 1.38	0
S...87	2.375	2.65	5/8	4.72	0.51	3-5/8	3/4 - 10 x 1.61	0
S...97	2.875	3.2	3/4	5.51	0.67	4-1/8	3/4 - 10 x 1.61	0

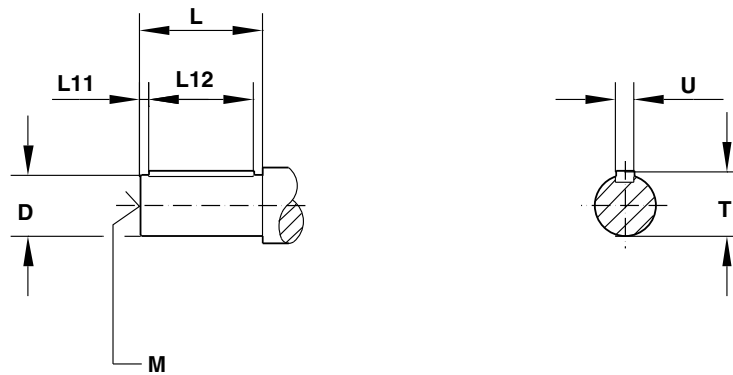
1 Longer shafts to match older designs are available for flanged units.

2 Compared to standard shaft as shown in dimension pages.

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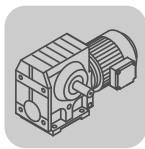
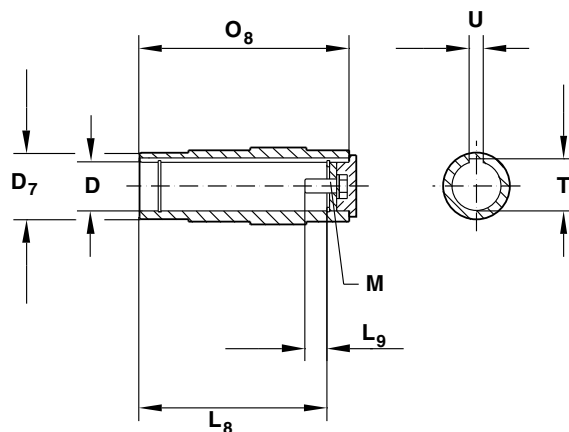
12.13.14 S Series metric solid shafts



Model ¹	D	T	U	L	L11	L12	M	Change ²
S...37	20	22.5	6	40	4	32	M6 x 16	0
S...47	25	28	8	50	5	40	M10 x 22	0
S...57	30	33	8	60	3.5	50	M10 x 22	0
S...67	35	38	10	70	7	56	M12 x 28	0
S...77	45	48.5	14	90	5	80	M16 x 36	0
S...87	60	64	18	120	5	110	M20 x 42	0
S...97	70	74.5	20	140	7.5	125	M20 x 42	0

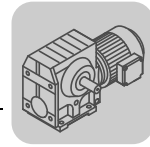
1 Longer shafts to match older designs are available for flanged units.

2 Compared to standard shaft as shown in dimension pages.

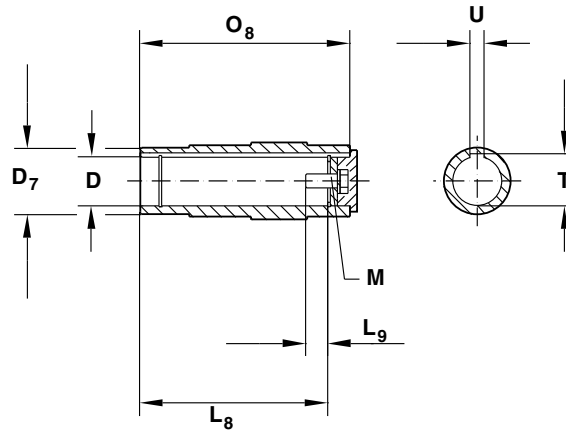

12.13.15 S Series inch hollow shafts


Model	O ₈	D	D ₇	T	U	L ₈	L ₉	M
SA...37	4.72	0.75	1.38	0.84	3/16	4.09	0.37	1/4 - 20 x 5/8
SA...47	4.72	1.25	1.77	1.37	1/4	4.13	0.67	7/16 - 14 x 1
SA...57	5.91	1.375	1.97	1.52	5/16	5.2	0.65	1/2 - 13 x 1
	5.91	1.25	1.97	1.37	1/4	5.2	0.67	7/16 - 14 x 1
SA...67	6.61	1.5	2.56	1.67	3/8	5.67	1.36	5/8 - 11 x 1-3/4
SA...77	8.27	2	3.15	2.22	1/2	7.2	1.16	5/8 - 11 x 1-3/4
SA...87	9.84	2.375	3.74	2.65	5/8	8.66	1.37	3/4 - 10 x 2
SA...97	11.42	2.75	4.72	3.03	5/8	10.23	1.24	3/4 - 10 x 2

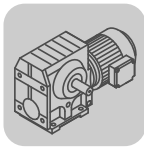
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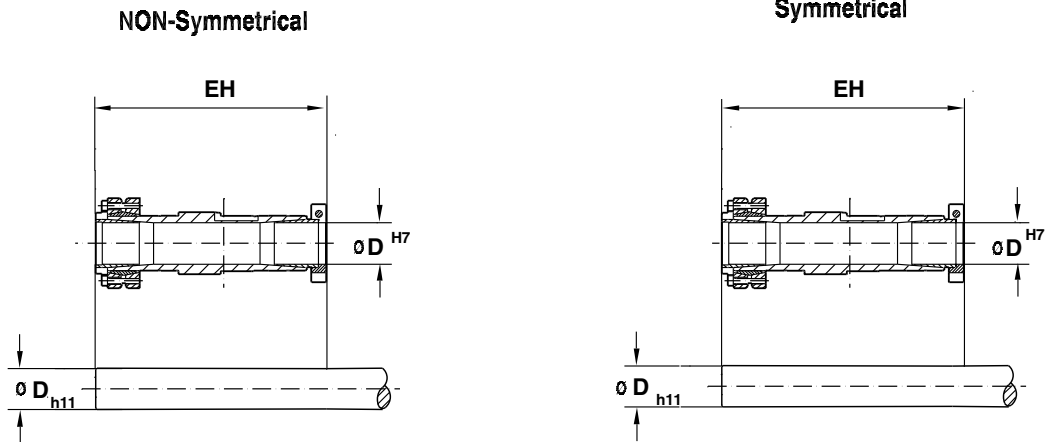
12.13.16 S Series metric hollow shafts



Model	O_8	D	D_7	T	U	L_8	L_9	M
SA...37	120	20	35	22.8	6	104	8	M6 x 16
SA...47	120	25	45	28.3	8	105	17	M10 x 25
	120	30	45	33.3	8	105	17	M10 x 25
SA...57	150	30	50	33.3	8	132	17	M10 x 25
	150	35	50	38.3	10	132	22	M12 x 30
SA...67	168	40	65	43.3	12	144	29	M16 x 40
	168	45	65	48.3	14	144	29	M16 x 40
SA...77	210	50	80	53.8	14	183	32	M16 x 45
	210	60	80	64.4	18	180	37	M20 x 50
SA...87	250	60	95	64.4	18	220	36	M20 x 50
	250	70	95	74.9	20	220	34	M20 x 50
SA...97	290	70	120	74.9	20	260	34	M20 x 50
	290	90	120	95.4	25	255	41	M24 x 60



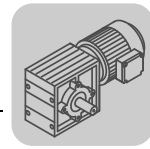
12.13.17 S Series TorqLOC



Metric and inch bores are available as shown below.

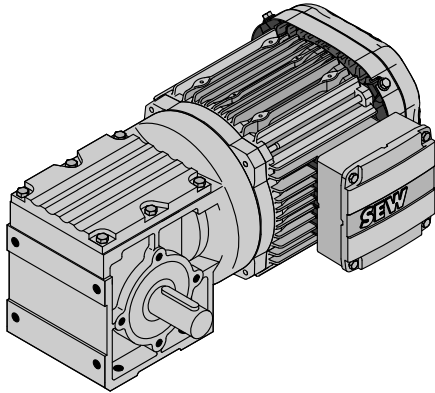
Model	Inch shafts					Metric shafts			NON-Symmetrical	Symmetrical
	D Dimension					D Dimension			EH	
ST37	0.625	0.6875	0.75	-	-	16	19	20	6.54	7.33
ST47	1.00	1.1875	1.25	-	-	25	30	-	6.69	7.63
ST57	1.1875	1.25	1.375	1.4375	-	30	35	-	8.15	9.13
ST67	1.375	1.4375	1.50	1.625	1.688	35	38	40	9.17	10.43
ST77	1.625	1.75	1.9375	2.00	-	50	-	-	11.61	13.34
ST87	1.9375	2.00	2.375	2.4375	-	51	62	65	13.50	15.47
ST97	2.4375	2.75	2.9375	-	-	62	70	75	15.00	16.97

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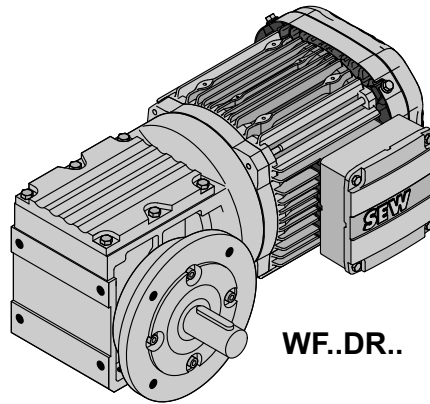


13 W..DRE/DRS

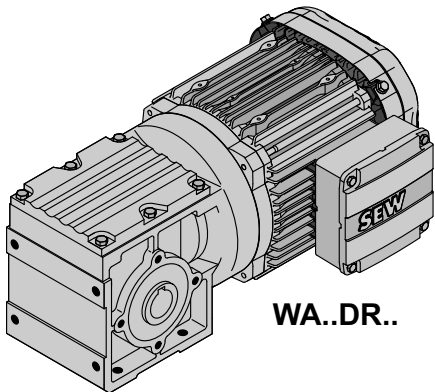
13.1 W, WF, WA, WAF, WA..B, WH..B, WHF, WH, WT..DR..



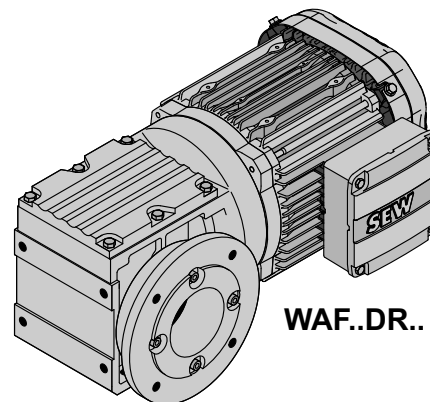
W..DR..



WF..DR..



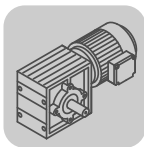
WA..DR..



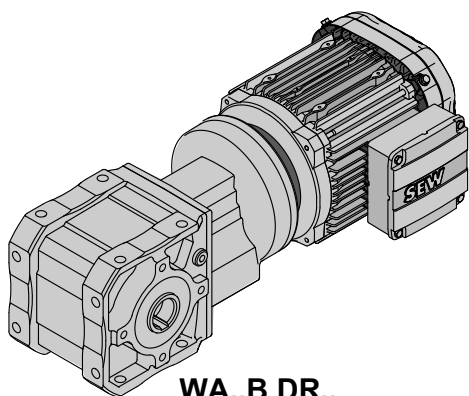
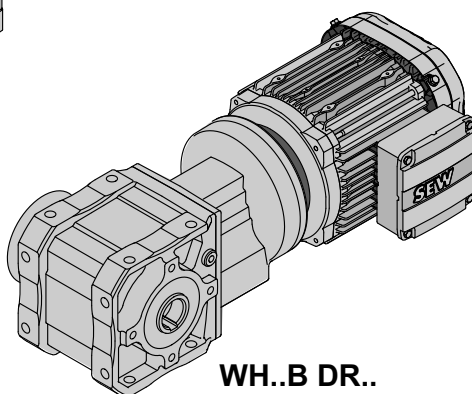
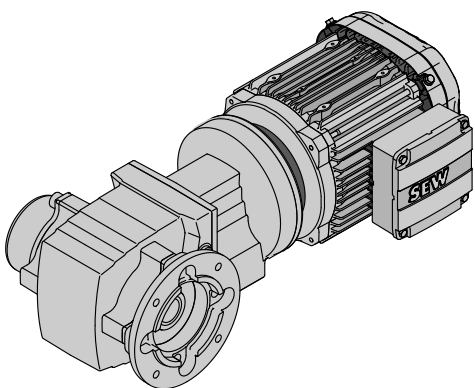
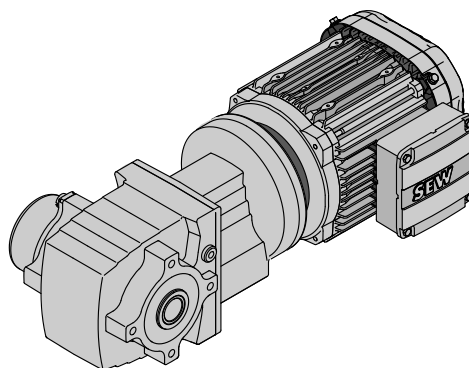
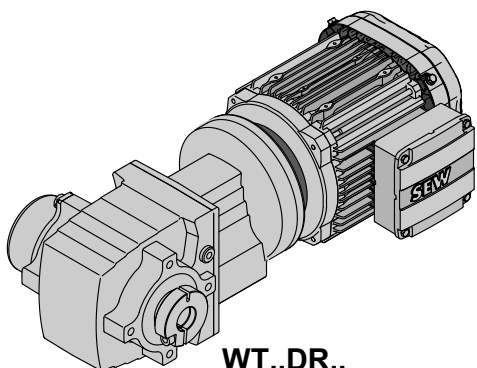
WAF..DR..

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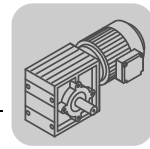
**W..DRE/DRS**

W, WF, WA, WAF, WA..B, WH..B, WHF, WH, WT..DR..

**WA..B DR..****WH..B DR..****WHF..DR..****WH..DR..****WT..DR..**

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13.2 W.. → DRE/DRS

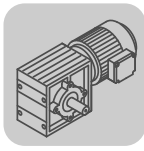
W10, $n_e = 1700$ rpm					DT56				220 lb-in
n_a [rpm]	T_{amax} [lb-in]	F_{Ra} [lb]	$\varphi_{(R)}$ [']	i					
23	220	405	-	75.00*					
28	220	405	-	60.00*					
35	220	405	-	48.00*					
44	220	405	-	39.00*					
52	220	405	-	32.50*					
62	210	405	-	27.50*					
69	220	405	-	24.50*					
87	220	405	-	19.50*					
103	177	405	-	16.50*					
119	195	405	-	14.33					
166	115	405	-	10.25*					
207	106	390	-	8.20*					
259	106	360	-	6.57					

W20, $n_e = 1700$ rpm					DR63 DRS71S				350 lb-in
n_a [rpm]	T_{amax} [lb-in]	F_{Ra} [lb]	$\varphi_{(R)}$ [']	i					
23	350	495	-	75.00*					
28	350	495	-	60.00*					
35	350	495	-	48.00*					
44	350	495	-	39.00*					
52	350	495	-	32.50*					
62	350	495	-	27.50*					
69	350	495	-	24.50*					
87	305	475	-	19.50*					
103	265	455	-	16.50*					
119	265	440	-	14.33					
166	220	400	-	10.25*					
207	177	380	-	8.20*					
259	177	360	-	6.57					

W30, $n_e = 1700$ rpm					DR63 DRS71S		DRS71M DRS80		615 lb-in
n_a [rpm]	T_{amax} [lb-in]	F_{Ra} [lb]	$\varphi_{(R)}$ [']	i					
23	615	675	-	75.00*					
28	615	675	-	60.00*					
35	615	675	-	48.00*					
44	615	675	-	39.00*					
52	615	675	-	32.50*					
62	615	675	-	27.50*					
69	615	675	-	24.50*					
87	615	675	-	19.50*					
104	530	675	-	16.33					
119	530	675	-	14.33					
166	440	620	-	10.25*					
207	350	585	-	8.20*					
259	350	545	-	6.57					

W37, $n_e = 1700$ rpm					DR63 DRS71S DRS71M				DRS80 DRE80M DRE90M				DRS90M DRE90L				DRS90L DRS100M DRE100M DRE100LC				970 lb-in
n_a [rpm]	T_{amax} [lb-in]	F_{Ra} [lb]	$\varphi_{(R)}$ [']	i																	
25	970	745	-	69.05																	
27	970	745	-	63.33																	
32	970	745	-	53.92																	
37	970	745	-	46.49																	
45	970	745	-	37.88																	

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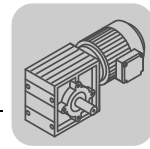


W..DRE/DRS
W.. → DRE/DRS

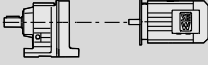


W37, $n_e = 1700$ rpm					970 lb-in			
n_a [rpm]	T_{amax} [lb-in]	F_{Ra} [lb]	$\varphi_{(R)}$ [']	i	DR63 DRS71S DRS71M	DRS80 DRE80M DRE90M	DRS90M DRE90L	DRS90L DRS100M DRE100M DRE100LC
49	795	810	-	34.52				
54	795	810	-	31.67				
54	970	745	-	31.33				
61	970	745	-	27.78				
63	795	810	-	26.96				
73	795	810	-	23.25				
80	970	695	-	21.33				
90	795	770	-	18.94				
108	795	705	-	15.67				
122	795	670	-	13.89				
134	615	795	-	12.70				
146	615	770	-	11.65				
159	795	590	-	10.67				
171	615	720	-	9.92				
199	615	680	-	8.55				
244	615	630	-	6.97				
295	615	585	-	5.77				
333	615	560	-	5.11				
433	615	500	-	3.93				
531	615	460	-	3.20*				

W47, $n_e = 1700$ rpm					1590 lb-in					
n_a [rpm]	T_{amax} [lb-in]	F_{Ra} [lb]	$\varphi_{(R)}$ [']	i	DR63 DRS71S DRS71M	DRS80 DRE80M DRE90M	DRS90M DRE90L	DRS90L DRS100M DRE100M DRE100LC DRE112M	DRS100LC DRS112M DRE132S	DRS132S DRS132M DRE132M DRE132MC DRE160S
23	1590	1460	-	74.98						
25	1590	1460	-	68.93						
29	1590	1380	-	58.98						
33	1590	1300	-	51.12						
36	1590	1260	-	47.78						
41	1590	1170	-	41.30						
48	1590	1080	-	35.09						
54	1410	-	-	31.62						
54	1590	1020	-	31.33						
62	1410	1090	-	27.41						
64	1590	-	-	26.76						
66	1410	1060	-	25.62						
68	1590	-	-	25.07						
77	1410	990	-	22.15						
90	1410	920	-	18.82						
101	1410	870	-	16.80						
118	1410	800	-	14.35						
126	1410	780	-	13.44						
138	970	-	-	12.30						
150	1410	715	-	11.32						
159	970	-	-	10.66						
171	970	880	-	9.96						
197	970	830	-	8.61						
232	970	780	-	7.32						
260	970	745	-	6.53						
305	970	700	-	5.58						
325	970	680	-	5.23						
386	970	630	-	4.40						
437	970	600	-	3.89						
520	970	555	-	3.27						

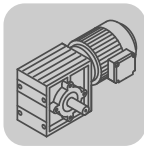
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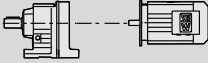


13.3 W..DRE/DRS [HP]

P_m [HP]	n_a [rpm]	T_a [lb-in]	i	$F_{Ra}^{1)}$ [lb]	SEW f_B		m [lbs]		
0.13	22	160	75.00*	405	1.40				
	27	141	60.00*	405	1.55				
	34	128	48.00*	405	1.70				
	42	118	39.00*	405	1.90				
	50	106	32.50*	405	2.1	W 10	DT 56M4	12	666
	60	94	27.50*	405	2.3	WF 10	DT 56M4	12	667
	67	88	24.50*	405	2.5	WA 10	DT 56M4	12	668
	84	74	19.50*	405	3.0	WAF 10	DT 56M4	12	667
	99	66	16.50*	405	2.7				
	160	46	10.25*	405	2.5				
	200	37	8.20*	405	2.9				
0.20	27	215	60.00*	405	1.05				
	33	197	48.00*	405	1.10				
	41	180	39.00*	405	1.25				
	49	163	32.50*	405	1.35				
	58	143	27.50*	405	1.50	W 10	DT 56L4	12	666
	65	134	24.50*	405	1.65	WF 10	DT 56L4	12	667
	82	115	19.50*	405	1.90	WA 10	DT 56L4	12	668
	97	103	16.50*	405	1.70	WAF 10	DT 56L4	12	667
	112	92	14.33	405	2.1				
	156	70	10.25*	405	1.65				
	195	58	8.20*	405	1.85				
243	48	6.57	385	2.2					
0.25	5.3	1530	318	1450	1.05				
	5.8	1460	291	1460	1.10				
	6.3	1300	270	1480	1.20				
	6.4	1350	265	1480	1.15				
	7.2	1220	237	1500	1.30				
	8.1	1060	210	1520	1.50				
	9.3	920	183	1540	1.75	W 47R17	DRS 71S4	46	684
	11	830	159	1560	1.90	WF 47R17	DRS 71S4	47	684
	12	740	141	1570	2.1	WA 47R17	DRS 71S4	43	684
	14	760	124	1580	1.85	WAF 47R17	DRS 71S4	45	684
	14	630	120	1580	2.5				
	16	640	105	1590	2.2				
	18	610	95	1600	2.3				
	20	530	85	1610	2.6				
	22	495	77	1610	2.8				
	8.2	910	207	770	1.05				
	9.2	830	184	800	1.15				
	11	765	160	820	1.25				
	12	685	141	840	1.40				
	14	610	125	860	1.60	W 37R17	DRS 71S4	34	684
	16	545	109	880	1.75	WF 37R17	DRS 71S4	34	684
	18	485	96	890	2.00	WA 37R17	DRS 71S4	34	684
21	415	82	900	2.3	WAF 37R17	DRS 71S4	34	684	
23	430	73	900	1.85					
27	380	63	900	2.1					
32	325	53	910	2.4					
35	300	48	920	2.6					
25	425	69.05	900	2.3	W 37	DRS 71S4	28	675	
27	395	63.33	900	2.5	WF 37	DRS 71S4	28	676	
32	340	53.92	910	2.8	WA 37	DRS 71S4	28	678	
					WAF 37	DRS 71S4	28	676	
23	305	75.00*	675	2.0	W 30	DRS 71S4	25	672	
28	285	60.00*	675	2.2	WF 30	DRS 71S4	26	673	
35	245	48.00*	675	2.5	WA 30	DRS 71S4	25	674	
44	220	39.00*	675	2.8	WAF 30	DRS 71S4	26	673	

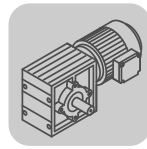
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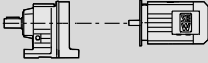




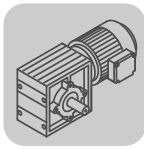
W..DRE/DRS
W..DRE/DRS [HP]

P_m [HP]	n_a [rpm]	T_a [lb-in]	i	$F_{Ra}^{1)}$ [lb]	SEW f_B		m [lbs]		
0.25	23	275	75.00*	495	1.25				
	28	240	60.00*	495	1.45				
	35	220	48.00*	495	1.60				
	44	200	39.00*	495	1.75				
	52	199	32.50*	495	1.80	W 20	DRS 71S4	20	669
	62	167	27.50*	495	2.1	WF 20	DRS 71S4	20	670
	69	151	24.50*	495	2.3	WA 20	DRS 71S4	19	671
	87	130	19.50*	495	2.4	WAF 20	DRS 71S4	19	670
	103	113	16.50*	495	2.3				
	119	104	14.33	495	2.5				
	166	78	10.25*	455	2.8				
207	64	8.20*	420	2.8					
0.33	8.1	1520	210	1450	1.05				
	9.3	1320	183	1480	1.20				
	11	1190	159	1500	1.35				
	12	1060	141	1520	1.50				
	14	1090	124	1540	1.30	W 47R17	DRS 71S4	46	684
	14	910	120	1540	1.75	WF 47R17	DRS 71S4	47	684
	16	920	105	1560	1.50	WA 47R17	DRS 71S4	43	684
	18	870	95	1570	1.65	WAF 47R17	DRS 71S4	45	684
	20	765	85	1580	1.85				
	22	710	77	1590	2.00				
	24	645	72	1590	2.2				
	14	870	125	785	1.10				
	16	780	109	820	1.25				
	18	700	96	840	1.40	W 37R17	DRS 71S4	34	684
	21	600	82	860	1.60	WF 37R17	DRS 71S4	34	684
	23	620	73	860	1.25	WA 37R17	DRS 71S4	34	684
	27	550	63	880	1.45	WAF 37R17	DRS 71S4	34	684
	32	465	53	890	1.70				
	35	430	48	900	1.85				
15	1000	74.98	1530	1.60					
16	930	68.93	1540	1.70	W 47	DRS 71S6	40	681	
19	810	58.98	1560	1.95	WF 47	DRS 71S6	41	682	
22	715	51.12	1570	2.2	WA 47	DRS 71S6	37	683	
23	675	47.78	1580	2.4	WAF 47	DRS 71S6	38	682	
27	590	41.30	1590	2.7					
35	505	31.62	1610	2.8					
23	680	74.98	1580	2.3	W 47	DRS 71S4	40	681	
25	630	68.93	1580	2.5	WF 47	DRS 71S4	41	682	
29	550	58.98	1590	2.9	WA 47	DRS 71S4	37	683	
					WAF 47	DRS 71S4	38	682	
16	860	69.05	790	1.15					
17	800	63.33	810	1.20					
20	695	53.92	840	1.40					
24	610	46.49	860	1.60					
29	510	37.88	880	1.90	W 37	DRS 71S6	28	675	
32	535	34.52	880	1.50	WF 37	DRS 71S6	28	676	
35	490	31.67	890	1.60	WA 37	DRS 71S6	28	678	
35	430	31.33	900	2.2	WAF 37	DRS 71S6	28	676	
40	390	27.78	900	2.5					
41	425	26.96	900	1.85					
47	370	23.25	910	2.1					
58	305	18.94	910	2.6					
87	220	12.70	920	2.8					
25	590	69.05	870	1.65					
27	550	63.33	880	1.75	W 37	DRS 71S4	28	675	
32	475	53.92	890	2.0	WF 37	DRS 71S4	28	676	
37	415	46.49	900	2.3	WA 37	DRS 71S4	28	678	
45	345	37.88	910	2.8	WAF 37	DRS 71S4	28	676	
49	355	34.52	910	2.2					
54	330	31.67	910	2.4					
63	280	26.96	920	2.8					

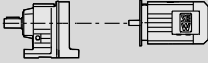

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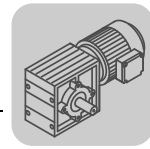
P_m [HP]	n_a [rpm]	T_a [lb-in]	i	$F_{Ra}^{1)}$ [lb]	SEW f_B		m [lbs]		
0.33	18	580	60.00*	675	1.05				
	23	505	48.00*	675	1.20				
	28	460	39.00*	675	1.35				
	34	385	32.50*	675	1.60				
	40	360	27.50*	675	1.70	W 30	DRS 71S6	25	672
	45	335	24.50*	675	1.85	WF 30	DRS 71S6	26	673
	56	285	19.50*	675	2.2	WA 30	DRS 71S6	25	674
	67	245	16.33	675	2.1	WAF 30	DRS 71S6	26	673
	77	220	14.33	675	2.4				
	107	170	10.25*	675	2.6				
	134	139	8.20*	675	2.6				
	23	430	75.00*	675	1.45				
	28	395	60.00*	675	1.55	W 30	DRS 71S4	25	672
	35	340	48.00*	675	1.80	WF 30	DRS 71S4	26	673
44	310	39.00*	675	2.00	WA 30	DRS 71S4	25	674	
52	260	32.50*	675	2.4	WAF 30	DRS 71S4	26	673	
62	240	27.50*	675	2.6					
69	225	24.50*	675	2.8					
40	345	27.50*	495	1.00					
45	310	24.50*	495	1.15					
56	265	19.50*	495	1.15	W 20	DRS 71S6	20	669	
67	235	16.50*	495	1.10	WF 20	DRS 71S6	20	670	
77	215	14.33	495	1.20	WA 20	DRS 71S6	19	671	
107	164	10.25*	495	1.35	WAF 20	DRS 71S6	19	670	
134	134	8.20*	465	1.30					
167	113	6.57	440	1.55					
28	335	60.00*	495	1.05					
35	310	48.00*	495	1.15					
44	280	39.00*	495	1.25					
52	275	32.50*	495	1.30					
62	230	27.50*	495	1.50	W 20	DRS 71S4	20	669	
69	210	24.50*	495	1.70	WF 20	DRS 71S4	20	670	
87	180	19.50*	495	1.70	WA 20	DRS 71S4	19	671	
103	157	16.50*	495	1.70	WAF 20	DRS 71S4	19	670	
119	144	14.33	495	1.85					
166	108	10.25*	450	2.0					
207	88	8.20*	410	2.0					
259	74	6.57	390	2.4					
0.50	14	1390	120	1470	1.15				
	16	1410	105	1490	1.00	W 47R17	DRS 71S4	46	684
	18	1310	95	1510	1.10	WF 47R17	DRS 71S4	47	684
	20	1160	85	1530	1.20	WA 47R17	DRS 71S4	43	684
	22	1070	77	1540	1.30	WAF 47R17	DRS 71S4	45	684
	24	990	72	1550	1.45				
	21	920	82	765	1.05	W 37R17	DRS 71S4	34	684
	32	715	53	840	1.10	WF 37R17	DRS 71S4	34	684
	35	655	48	850	1.20	WA 37R17	DRS 71S4	34	684
						WAF 37R17	DRS 71S4	34	684
	15	1490	74.98	1460	1.05				
	16	1380	68.93	1470	1.15				
	19	1200	58.98	1500	1.30				
	22	1060	51.12	1520	1.50				
23	990	47.78	1530	1.60					
27	870	41.30	1550	1.80					
31	755	35.09	1570	2.1	W 47	DRS 71M6	43	681	
35	750	31.62	1560	1.90	WF 47	DRS 71M6	44	682	
35	680	31.33	1540	2.3	WA 47	DRS 71M6	39	683	
40	655	27.41	1510	2.2	WAF 47	DRS 71M6	41	682	
41	590	26.76	1480	2.7					
43	615	25.62	1480	2.3					
44	555	25.07	1450	2.8					
50	535	22.15	1420	2.6					
89	325	12.30	1230	3.0					
23	1010	74.98	1530	1.55					
25	930	68.93	1540	1.70					
29	810	58.98	1560	1.95	W 47	DRS 71S4	40	681	
33	715	51.12	1560	2.2	WF 47	DRS 71S4	41	682	
36	675	47.78	1530	2.4	WA 47	DRS 71S4	37	683	
41	590	41.30	1480	2.7	WAF 47	DRS 71S4	38	682	
54	495	31.62	1390	2.8					

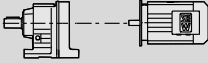



W..DRE/DRS
W..DRE/DRS [HP]

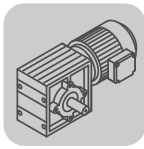
P_m [HP]	n_a [rpm]	T_a [lb-in]	i	$F_{Ra}^{1)}$ [lb]	SEW f_B		m [lbs]		
0.50	24	900	46.49	775	1.05				
	29	760	37.88	820	1.30				
	32	790	34.52	810	1.00				
	35	730	31.67	830	1.10				
	35	640	31.33	860	1.50				
	40	575	27.78	870	1.70				
	41	630	26.96	860	1.25	W 37	DRS 71M6	30	675
	47	550	23.25	880	1.45	WF 37	DRS 71M6	30	676
	52	455	21.33	890	2.1	WA 37	DRS 71M6	30	678
	58	450	18.94	890	1.75	WAF 37	DRS 71M6	30	676
	70	380	15.67	910	2.1				
	79	335	13.89	910	2.3				
	87	330	12.70	910	1.90				
	94	300	11.65	910	2.0				
	111	255	9.92	910	2.4				
	129	220	8.55	870	2.8				
	25	870	69.05	785	1.10				
	27	810	63.33	810	1.20				
	32	705	53.92	840	1.40				
37	620	46.49	860	1.55					
45	515	37.88	880	1.90					
49	525	34.52	880	1.50	W 37	DRS 71S4	28	675	
54	485	31.67	890	1.65	WF 37	DRS 71S4	28	676	
54	435	31.33	900	2.2	WA 37	DRS 71S4	28	678	
61	390	27.78	900	2.5	WAF 37	DRS 71S4	28	676	
63	420	26.96	900	1.90					
73	365	23.25	910	2.2					
90	300	18.94	920	2.6					
134	215	12.70	860	2.9					
34	570	32.50*	675	1.10					
40	535	27.50*	675	1.15					
45	500	24.50*	675	1.25					
56	420	19.50*	675	1.45	W 30	DRS 71M6	28	672	
67	365	16.33	675	1.45	WF 30	DRS 71M6	29	673	
77	330	14.33	675	1.60	WA 30	DRS 71M6	28	674	
107	250	10.25*	675	1.75	WAF 30	DRS 71M6	28	673	
134	205	8.20*	675	1.70					
167	173	6.57	675	2.0					
28	585	60.00*	675	1.05					
35	505	48.00*	675	1.20					
44	460	39.00*	675	1.35					
52	385	32.50*	675	1.60					
62	355	27.50*	675	1.75	W 30	DRS 71S4	25	672	
69	330	24.50*	675	1.85	WF 30	DRS 71S4	26	673	
87	280	19.50*	675	2.2	WA 30	DRS 71S4	25	674	
104	240	16.33	675	2.2	WAF 30	DRS 71S4	26	673	
119	215	14.33	675	2.4					
166	165	10.25*	675	2.7					
207	134	8.20*	645	2.6					
62	340	27.50*	495	1.05					
69	310	24.50*	495	1.15					
87	265	19.50*	495	1.15	W 20	DRS 71S4	20	669	
103	230	16.50*	495	1.15	WF 20	DRS 71S4	20	670	
119	210	14.33	485	1.25	WA 20	DRS 71S4	19	671	
166	160	10.25*	440	1.40	WAF 20	DRS 71S4	19	670	
207	131	8.20*	400	1.35					
259	111	6.57	380	1.60					

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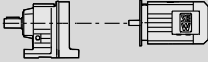




P_m [HP]	n_a [rpm]	T_a [lb-in]	i	$F_{Ra}^{1)}$ [lb]	SEW f_B		m [lbs]		
0.75	22	1550	51.12	1450	1.05				
	23	1460	47.78	1460	1.10				
	27	1280	41.30	1490	1.25				
	32	1100	35.09	1460	1.45				
	35	1100	31.62	1460	1.30				
	36	1000	31.33	1430	1.60				
	41	960	27.41	1420	1.45				
	42	860	26.76	1380	1.85				
	44	900	25.62	1390	1.55	W 47	DRS 80S6	48	681
	45	810	25.07	1360	1.95	WF 47	DRS 80S6	49	682
	51	785	22.15	1350	1.80	WA 47	DRS 80S6	45	683
	60	670	18.82	1300	2.1	WAF 47	DRS 80S6	46	682
	67	600	16.80	1260	2.3				
	78	520	14.35	1210	2.7				
83	485	13.44	1190	2.9					
91	480	12.30	1200	2.0					
105	415	10.66	1150	2.3					
112	390	9.96	1130	2.5					
130	335	8.61	1080	2.9					
23	1510	74.98	1450	1.05					
25	1400	68.93	1470	1.15					
29	1220	58.98	1490	1.30					
33	1070	51.12	1450	1.50					
35	1010	47.78	1430	1.60					
41	880	41.30	1390	1.80	W 47	DRS 71M4	43	681	
48	760	35.09	1340	2.1	WF 47	DRS 71M4	44	682	
53	745	31.62	1330	1.90	WA 47	DRS 71M4	39	683	
54	685	31.33	1300	2.3	WAF 47	DRS 71M4	41	682	
62	650	27.41	1280	2.2					
63	595	26.76	1260	2.7					
66	610	25.62	1260	2.3					
67	560	25.07	1240	2.8					
76	530	22.15	1220	2.7					
46	800	74.98	1360	2.00	W 47	DRS 71M2	43	681	
50	740	68.93	1330	2.2	WF 47	DRS 71M2	44	682	
58	640	58.98	1280	2.5	WA 47	DRS 71M2	39	683	
67	560	51.12	1240	2.8	WAF 47	DRS 71M2	41	682	
36	940	31.33	760	1.05					
40	840	27.78	795	1.15					
52	665	21.33	850	1.45					
59	660	18.94	850	1.20					
71	555	15.67	880	1.45	W 37	DRS 80S6	35	675	
81	495	13.89	890	1.60	WF 37	DRS 80S6	35	676	
105	385	10.67	850	2.1	WA 37	DRS 80S6	35	678	
113	375	9.92	890	1.65	WAF 37	DRS 80S6	35	676	
131	325	8.55	850	1.90					
161	265	6.97	800	2.3					
194	220	5.77	755	2.8					
36	920	46.49	765	1.05					
45	770	37.88	820	1.25					
49	790	34.52	810	1.00					
53	730	31.67	830	1.10					
54	650	31.33	850	1.50					
61	580	27.78	870	1.65					
63	625	26.96	860	1.25	W 37	DRS 71M4	30	675	
73	545	23.25	880	1.45	WF 37	DRS 71M4	30	676	
79	455	21.33	890	2.1	WA 37	DRS 71M4	30	678	
89	450	18.94	880	1.75	WAF 37	DRS 71M4	30	676	
108	375	15.67	840	2.1					
122	335	13.89	820	2.4					
133	320	12.70	850	1.90					
145	295	11.65	830	2.1					
170	250	9.92	785	2.5					
198	215	8.55	755	2.8					

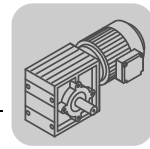
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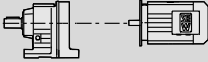



W..DRE/DRS
W..DRE/DRS [HP]

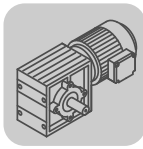
P_m [HP]	n_a [rpm]	T_a [lb-in]	i	$F_{Ra}^{1)}$ [lb]	SEW f_B		m [lbs]		
0.75	50	700	69.05	840	1.40				
	54	650	63.33	850	1.50				
	63	560	53.92	870	1.75				
	74	490	46.49	890	2.00	W 37	DRS 71M2	30	675
	90	405	37.88	870	2.4	WF 37	DRS 71M2	30	676
	99	405	34.52	860	1.95	WA 37	DRS 71M2	30	678
	108	375	31.67	840	2.1	WAF 37	DRS 71M2	30	676
	109	340	31.33	830	2.8				
	127	320	26.96	810	2.5				
	147	280	23.25	780	2.8				
	78	485	14.33	675	1.10	W 30	DRS 80S6	33	672
	109	365	10.25*	675	1.20	WF 30	DRS 80S6	34	673
	137	300	8.20*	675	1.20	WA 30	DRS 80S6	32	674
	170	250	6.57	670	1.40	WAF 30	DRS 80S6	33	673
52	575	32.50*	675	1.05					
61	535	27.50*	675	1.15					
69	495	24.50*	675	1.25					
87	420	19.50*	675	1.45	W 30	DRS 71M4	28	672	
103	360	16.33	675	1.45	WF 30	DRS 71M4	29	673	
118	325	14.33	675	1.60	WA 30	DRS 71M4	28	674	
165	245	10.25*	675	1.80	WAF 30	DRS 71M4	28	673	
206	200	8.20*	630	1.75					
257	170	6.57	595	2.1					
46	505	75.00*	675	1.25					
57	460	60.00*	675	1.35					
71	395	48.00*	675	1.55					
88	355	39.00*	675	1.75	W 30	DRS 71M2	28	672	
105	300	32.50*	675	2.0	WF 30	DRS 71M2	29	673	
124	275	27.50*	675	2.2	WA 30	DRS 71M2	28	674	
140	250	24.50*	675	2.4	WAF 30	DRS 71M2	28	673	
175	210	19.50*	655	2.9					
209	183	16.33	625	2.9					
1.0	33	1480	35.09	1330	1.10				
	37	1330	31.33	1310	1.20				
	42	1280	27.41	1320	1.10				
	43	1150	26.76	1280	1.35				
	45	1200	25.62	1300	1.20				
	46	1090	25.07	1260	1.45				
	52	1040	22.15	1270	1.35				
	61	890	18.82	1220	1.55				
	68	800	16.80	1190	1.75	W 47	DRE 90L6	70	681
	80	695	14.35	1150	2.0	WF 47	DRE 90L6	71	682
	85	650	13.44	1130	2.2	WA 47	DRE 90L6	67	683
	101	550	11.32	1090	2.6	WAF 47	DRE 90L6	69	682
	107	555	10.66	1120	1.75				
	115	520	9.96	1100	1.85				
	133	450	8.61	1050	2.2				
	156	380	7.32	1000	2.5				
	175	340	6.53	970	2.8				
	34	1420	51.12	1320	1.10				
	36	1340	47.78	1310	1.20				
42	1170	41.30	1280	1.35					
50	1010	35.09	1240	1.55					
55	980	31.62	1250	1.45					
56	910	31.33	1220	1.75					
63	860	27.41	1210	1.65	W 47	DRE 80M4	54	681	
65	790	26.76	1180	2.0	WF 47	DRE 80M4	55	682	
68	810	25.62	1200	1.75	WA 47	DRE 80M4	50	683	
69	740	25.07	1160	2.1	WAF 47	DRE 80M4	52	682	
79	705	22.15	1160	2.0					
92	600	18.82	1110	2.3					
104	540	16.80	1080	2.6					
141	420	12.30	1030	2.3					
163	365	10.66	990	2.6					
175	345	9.96	970	2.8					

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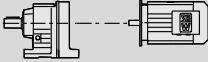




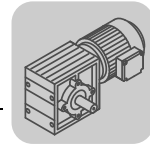
P_m [HP]	n_a [rpm]	T_a [lb-in]	i	$F_{Ra}^{1)}$ [lb]	SEW f_B		m [lbs]	
1.0	59	860	58.98	1200	1.85			
	68	755	51.12	1170	2.1	W 47	DRE 80M2	54 681
	73	705	47.78	1150	2.2	WF 47	DRE 80M2	55 682 **
	84	620	41.30	1110	2.6	WA 47	DRE 80M2	50 683
	99	530	35.09	1070	3.0	WAF 47	DRE 80M2	52 682
	110	510	31.62	1060	2.8			
	54	890	21.33	780	1.10			
	73	740	15.67	830	1.05			
	82	660	13.89	840	1.20	W 37	DRE 90L6	56 675
	107	515	10.67	800	1.55	WF 37	DRE 90L6	56 676 **
	134	435	8.55	820	1.40	WA 37	DRE 90L6	56 678
	164	355	6.97	780	1.75	WAF 37	DRE 90L6	56 676
	199	295	5.77	740	2.1			
	224	260	5.11	715	2.4			
	56	860	31.33	790	1.15			
	63	775	27.78	820	1.25			
	75	725	23.25	830	1.10			
	82	610	21.33	830	1.60	W 37	DRE 80M4	41 675
	92	595	18.94	830	1.35	WF 37	DRE 80M4	41 676 **
	111	495	15.67	795	1.60	WA 37	DRE 80M4	41 678
	125	445	13.89	775	1.80	WAF 37	DRE 80M4	41 676
	163	345	10.67	730	2.3			
	175	330	9.92	765	1.85			
	203	285	8.55	735	2.2			
250	235	6.97	690	2.6				
65	750	53.92	830	1.30				
75	655	46.49	840	1.50	W 37	DRE 80M2	41 675	
92	545	37.88	810	1.80	WF 37	DRE 80M2	41 676 **	
111	455	31.33	780	2.1	WA 37	DRE 80M2	41 678	
126	410	27.78	760	2.4	WAF 37	DRE 80M2	41 676	
129	430	26.96	770	1.85				
150	375	23.25	745	2.1				
184	305	18.94	710	2.6				
107	480	16.33	675	1.10	W 30	DRE 80M4	39 672	
121	435	14.33	675	1.20	WF 30	DRE 80M4	40 673 **	
170	325	10.25*	675	1.35	WA 30	DRE 80M4	38 674	
212	265	8.20*	610	1.30	WAF 30	DRE 80M4	39 673	
265	220	6.57	575	1.55				
142	340	24.50*	665	1.80	W 30	DRE 80M2	39 672	
214	245	16.33	605	2.2	WF 30	DRE 80M2	40 673 **	
243	220	14.33	585	2.4	WA 30	DRE 80M2	38 674	
340	165	10.25*	550	2.7	WAF 30	DRE 80M2	39 673	
426	135	8.20*	500	2.6				
1.5	50	1480	35.09	1090	1.05			
	56	1330	31.33	1080	1.20			
	63	1260	27.41	1100	1.10			
	65	1150	26.76	1060	1.35			
	68	1180	25.62	1090	1.20			
	69	1090	25.07	1050	1.45			
	79	1030	22.15	1070	1.35			
	92	880	18.82	1040	1.60	W 47	DRE 90M4	65 681
	104	795	16.80	1010	1.80	WF 47	DRE 90M4	66 682 **
	121	680	14.35	980	2.1	WA 47	DRE 90M4	61 683
	129	640	13.44	970	2.2	WAF 47	DRE 90M4	63 682
	141	620	12.30	1000	1.55			
	154	545	11.32	930	2.6			
	163	540	10.66	960	1.80			
	175	505	9.96	940	1.90			
	202	435	8.61	910	2.2			
	238	370	7.32	870	2.6			
	266	330	6.53	840	2.9			

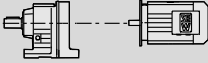


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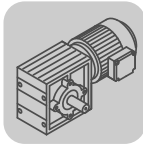
W..DRE/DRS
W..DRE/DRS [HP]

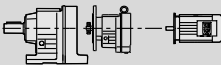

P_m [HP]	n_a [rpm]	T_a [lb-in]	i	$F_{Ra}^{1)}$ [lb]	SEW f_B		m [lbs]		
1.5	59	1270	58.98	1070	1.25				
	68	1110	51.12	1050	1.45				
	73	1040	47.78	1040	1.50				
	84	910	41.30	1020	1.75				
	99	780	35.09	990	2.0	W 47	DRE 90M2	65	681
	110	750	31.62	1000	1.90	WF 47	DRE 90M2	66	682
	111	705	31.33	970	2.3	WA 47	DRE 90M2	61	683
	127	655	27.41	970	2.2	WAF 47	DRE 90M2	63	682
	130	605	26.76	940	2.6				
	135	615	25.62	960	2.3				
	138	570	25.07	930	2.8				
	157	535	22.15	930	2.6				
	82	890	21.33	720	1.10				
	111	730	15.67	720	1.10				
	125	650	13.89	705	1.20	W 37	DRE 90M4	51	675
	163	505	10.67	675	1.55	WF 37	DRE 90M4	51	676
	175	490	9.92	740	1.25	WA 37	DRE 90M4	51	678
	203	420	8.55	710	1.45	WAF 37	DRE 90M4	51	676
	250	345	6.97	670	1.80				
302	285	5.77	635	2.2					
340	250	5.11	615	2.4					
75	970	46.49	720	1.00					
92	800	37.88	715	1.20					
111	675	31.33	700	1.45					
125	605	27.78	690	1.60	W 37	DRE 90M2	51	675	
129	635	26.96	705	1.25	WF 37	DRE 90M2	51	676	
149	550	23.25	690	1.45	WA 37	DRE 90M2	51	678	
163	475	21.33	660	2.0	WAF 37	DRE 90M2	51	676	
183	450	18.94	665	1.75					
221	375	15.67	640	2.1					
250	335	13.89	620	2.4					
350	245	9.92	610	2.5					
406	210	8.55	585	2.9					
2.0	65	1580	26.76	930	1.00				
	69	1480	25.07	920	1.05				
	79	1410	22.15	970	1.00				
	92	1200	18.82	950	1.15				
	104	1080	16.80	940	1.30				
	121	930	14.35	910	1.50	W 47	DRE 90L4	70	681
	129	870	13.44	900	1.60	WF 47	DRE 90L4	71	682
	154	740	11.32	880	1.90	WA 47	DRE 90L4	67	683
	163	735	10.66	930	1.30	WAF 47	DRE 90L4	69	682
	175	690	9.96	910	1.40				
	202	595	8.61	880	1.60				
	238	510	7.32	840	1.90				
	266	455	6.53	820	2.1				
	312	390	5.58	785	2.5				
	333	365	5.23	770	2.7				
	163	690	10.67	615	1.15				
	203	575	8.55	685	1.05	W 37	DRE 90L4	56	675
	250	470	6.97	650	1.30	WF 37	DRE 90L4	56	676
	302	390	5.77	620	1.60	WA 37	DRE 90L4	56	678
340	345	5.11	600	1.80	WAF 37	DRE 90L4	56	676	
443	265	3.93	560	2.3					
544	215	3.20*	525	2.8					
3.0	121	1370	14.35	800	1.05				
	129	1290	13.44	795	1.10				
	153	1090	11.32	785	1.30				
	201	880	8.61	830	1.10	W 47	DRE 100L4	88	681
	237	750	7.32	800	1.30	WF 47	DRE 100L4	89	682
	266	670	6.53	780	1.45	WA 47	DRE 100L4	84	683
	311	575	5.58	750	1.70	WAF 47	DRE 100L4	86	682
	332	535	5.23	740	1.80				
	394	450	4.40	710	2.1				
	446	400	3.89	685	2.4				
	531	335	3.27	655	2.9				
	301	575	5.77	590	1.10	W 37	DRE 100L4	74	675
	339	510	5.11	570	1.20	WF 37	DRE 100L4	74	676
	442	390	3.93	535	1.55	WA 37	DRE 100L4	74	678
	542	320	3.20*	510	1.90	WAF 37	DRE 100L4	74	676



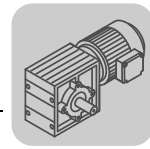
P_m [HP]	n_a [rpm]	T_a [lb-in]	i	$F_{Ra}^{1)}$ [lb]	SEW f_B		m [lbs]		
5.0	314	950	5.58	685	1.00	W 47	DRE 100LC4	92	681
	335	890	5.23	675	1.10	WF 47	DRE 100LC4	93	682
	397	755	4.40	655	1.30	WA 47	DRE 100LC4	89	683
	450	670	3.89	635	1.45	WAF 47	DRE 100LC4	90	682
	536	565	3.27	615	1.70				
	547	535	3.20*	470	1.15	W 37	DRE 100LC4	78	675
5.4	401	810	4.40	640	1.20	WF 47	DRE 132S4	125	682
	454	715	3.89	625	1.35	WA 47	DRE 132S4	120	683
	540	605	3.27	605	1.60	WAF 47	DRE 132S4	120	682
7.5	537	830	3.27	565	1.15	W 47	DRE 132M4	150	681
						WF 47	DRE 132M4	150	682
						WA 47	DRE 132M4	145	683
						WAF 47	DRE 132M4	150	682

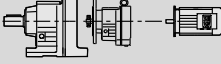


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13.4 W..R..DRE/DRS [lb-in]

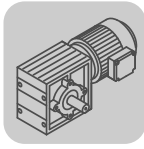
$T_a \text{ max}$ [lb-in]	n_a [rpm]	i	$F_{Ra} \text{ } ^1)$ [lb]		m [lbs]		
970	0.39	4402	745				
	0.45	3795	745				
	0.52	3272	745				
	0.59	2899	745				
	0.66	2558	745				
	0.71	2382	745	W 37R17	DRS 71S4	35	684
	0.78	2172	745	WF 37R17	DRS 71S4	35	684
	0.87	1952	745	WA 37R17	DRS 71S4	35	684
	0.95	1795	745	WAF 37R17	DRS 71S4	35	684
	1.1	1593	745				
	1.2	1463	745				
	1.3	1298	745				
	2.2	754	745				
	2.5	669	745				
	1.4	1173	745				
	1.6	1063	745				
	1.8	956	745				
	2.0	854	745				
	2.8	600	745				
	3.2	532	745				
	3.6	472	745				
	3.9	434	745				
	4.4	384	745				
	4.7	359	745	W 37R17	DRS 71S4	34	684
5.2	327	745	WF 37R17	DRS 71S4	34	684	
6.0	286	745	WA 37R17	DRS 71S4	34	684	
6.4	267	745	WAF 37R17	DRS 71S4	34	684	
7.3	233	745					
8.2	207	745					
9.2	184	745					
11	160	745					
12	141	745					
14	125	745					
16	109	745					
18	96	745					
21	82	745	W 37R17	DRS 71M4	37	684	
			WF 37R17	DRS 71M4	37	684	
			WA 37R17	DRS 71M4	37	684	
			WAF 37R17	DRS 71M4	37	684	
795	23	73	810	W 37R17	DRS 71S4	34	684
	27	63	810	WF 37R17	DRS 71S4	34	684
				WA 37R17	DRS 71S4	34	684
				WAF 37R17	DRS 71S4	34	684
	32	53	810	W 37R17	DRS 71M4	37	684
	35	48	810	WF 37R17	DRS 71M4	37	684
				WA 37R17	DRS 71M4	37	684
				WAF 37R17	DRS 71M4	37	684
1590	0.35	4815	1440				
	0.41	4173	1440				
	0.44	3870	1440				
	0.47	3598	1440				
	0.51	3354	1440				
	0.54	3171	1440				
	0.62	2748	1440				
	0.70	2425	1440	W 47R17	DRS 71S4	47	684
	0.75	2258	1440	WF 47R17	DRS 71S4	48	684
	0.81	2111	1440	WA 47R17	DRS 71S4	43	684
	0.87	1959	1440	WAF 47R17	DRS 71S4	45	684
	0.95	1797	1440				
	1.1	1595	1440				
	1.1	1486	1440				
	1.2	1448	1440				
	1.4	1170	1440				
2.2	754	1440					

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$T_{a \max}$ [lb-in]	n_a [rpm]	i	$F_{Ra}^{1)}$ [lb]		m [lbs]			
1590	1.3	1290	1440					
	1.4	1183	1440					
	1.6	1042	1440					
	1.8	956	1440					
	2.0	869	1440					
	2.6	661	1440					
	2.8	596	1440					
	3.2	536	1440					
	3.6	473	1440					
	3.9	434	1440		W 47R17	DRS 71S4	46	684
	4.4	386	1440		WF 47R17	DRS 71S4	47	684
	4.7	359	1440		WA 47R17	DRS 71S4	43	684
	5.3	318	1440		WAF 47R17	DRS 71S4	45	684
	5.8	291	1440					
	6.3	270	1440					
	6.4	265	1440					
7.2	237	1440						
8.1	210	1440						
9.3	183	1440						
11	159	1440						
12	141	1440						
1410	14	124	1500	W 47R17	DRS 71S4	46	684	
				WF 47R17	DRS 71S4	47	684	
				WA 47R17	DRS 71S4	43	684	
				WAF 47R17	DRS 71S4	45	684	
1590	14	120	1440	W 47R17	DRS 71M4	49	684	
				WF 47R17	DRS 71M4	50	684	
				WA 47R17	DRS 71M4	46	684	
				WAF 47R17	DRS 71M4	48	684	
1410	16	105	1500	W 47R17	DRS 71S4	46	684	
				WF 47R17	DRS 71S4	47	684	
				WA 47R17	DRS 71S4	43	684	
				WAF 47R17	DRS 71S4	45	684	
	18	95	1500	W 47R17	DRS 71M4	49	684	
	20	85	1500	WF 47R17	DRS 71M4	50	684	
	22	77	1500	WA 47R17	DRS 71M4	46	684	
	23	72	1500	WAF 47R17	DRS 71M4	48	684	

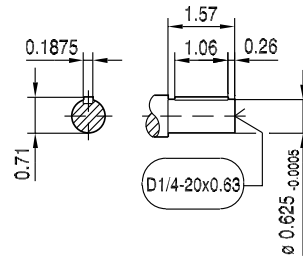
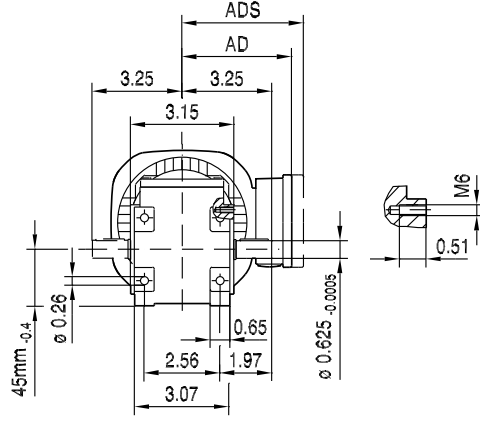
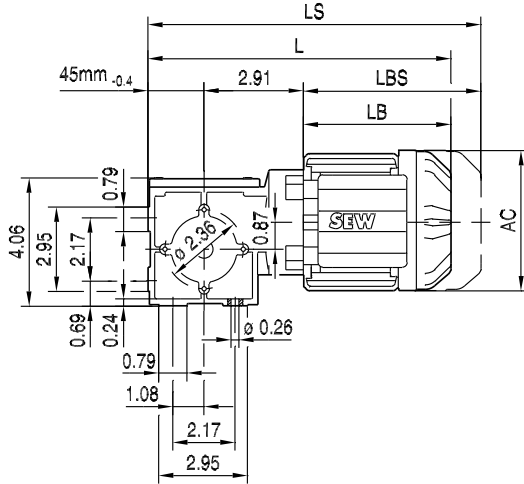
reducer.ir



13.5 W..[in]

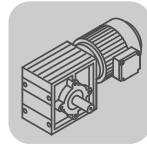
20 019 00 09

W10..



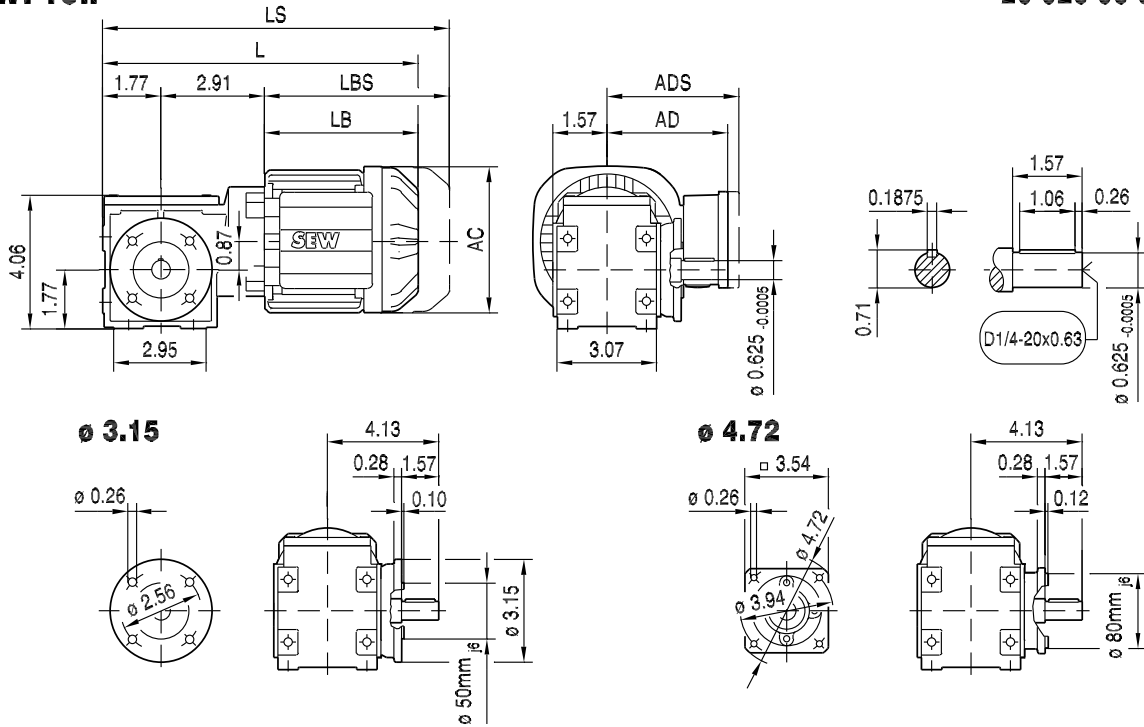
(→ 125)	DT56..							
AC	4.29							
AD	3.43							
ADS	3.43							
L	10.04							
LS	11.46							
LB	5.35							
LBS	6.77							

reducer.ir

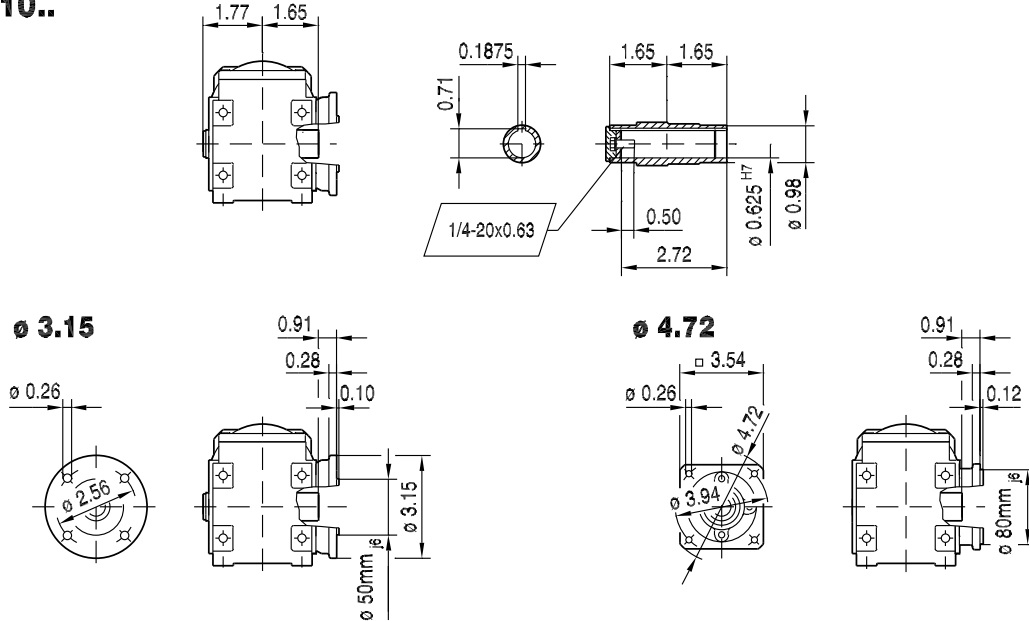


WF10..

20 020 00 09

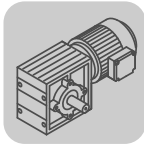


WAF10..

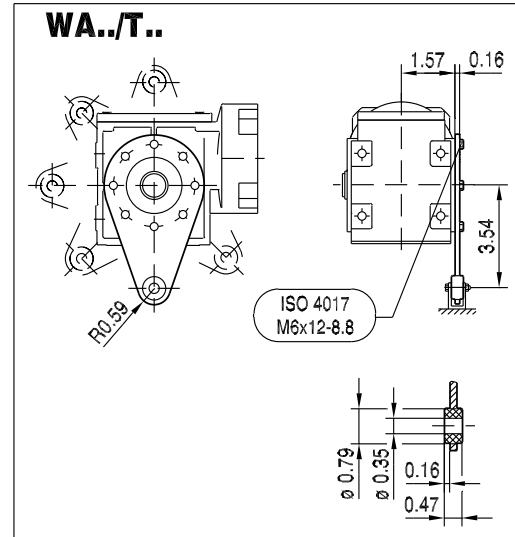


(→ 125)	DT56..					
AC	4.29					
AD	3.43					
ADS	3.43					
L	10.04					
LS	11.46					
LB	5.35					
LBS	6.77					

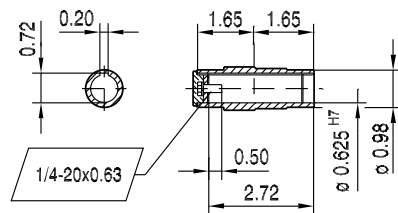
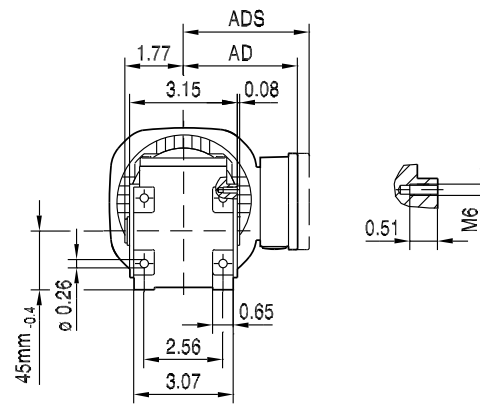
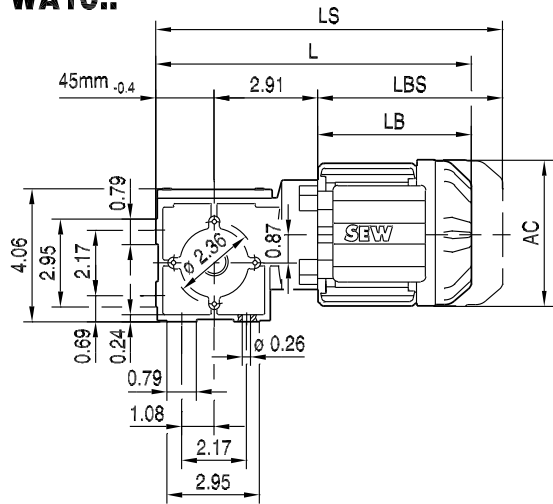
reducer.ir



20 021 00 09

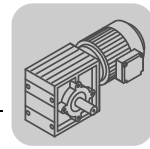


WA10..



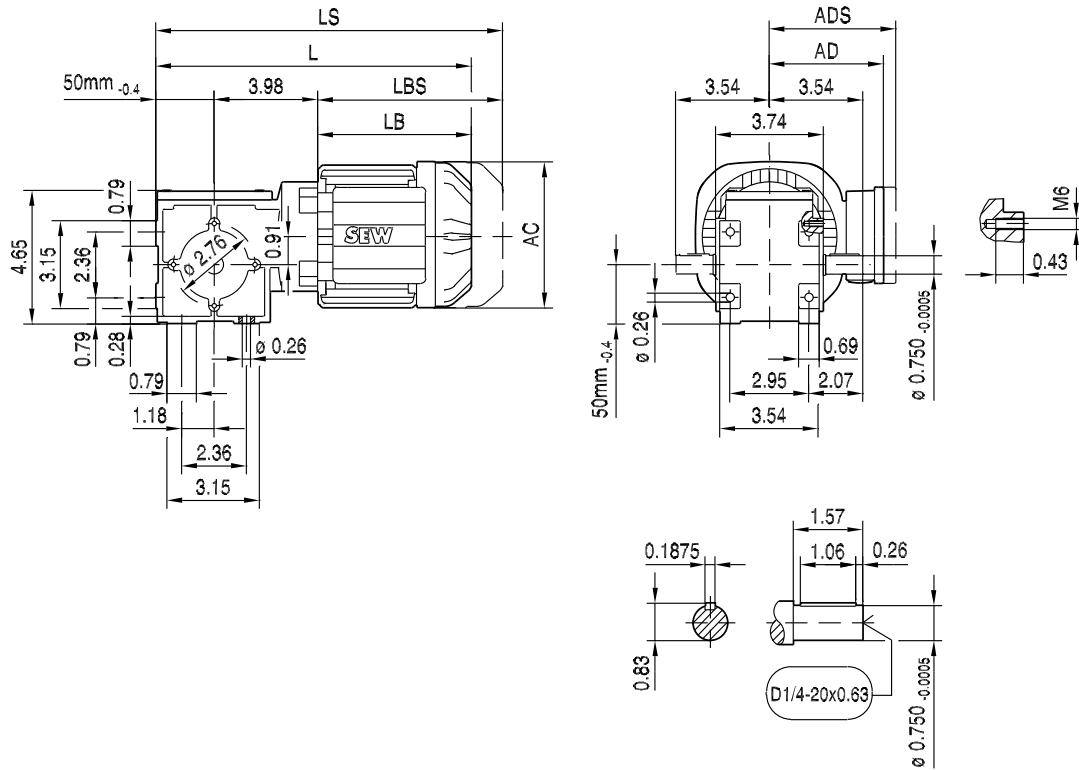
(→ 125)	DT56..						
AC	4.29						
AD	3.43						
ADS	3.43						
L	10.04						
LS	11.46						
LB	5.35						
LBS	6.77						

reducer.ir



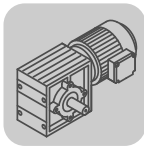
W20..

20 022 00 09



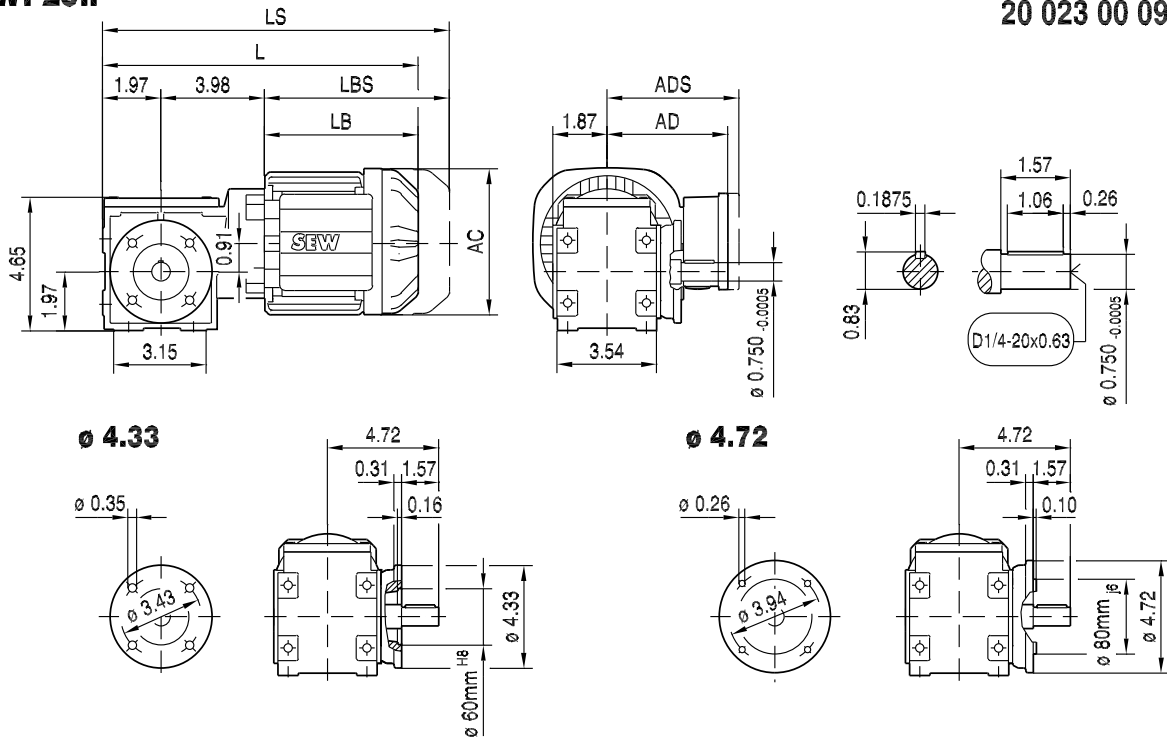
(→ 125)	DR63..	DR71S					
AC	5.20	5.47					
AD	4.13	4.69					
ADS	4.13	5.08					
L	11.81	12.24					
LS	13.98	14.92					
LB	5.87	6.30					
LBS	8.03	8.98					

reducer.ir

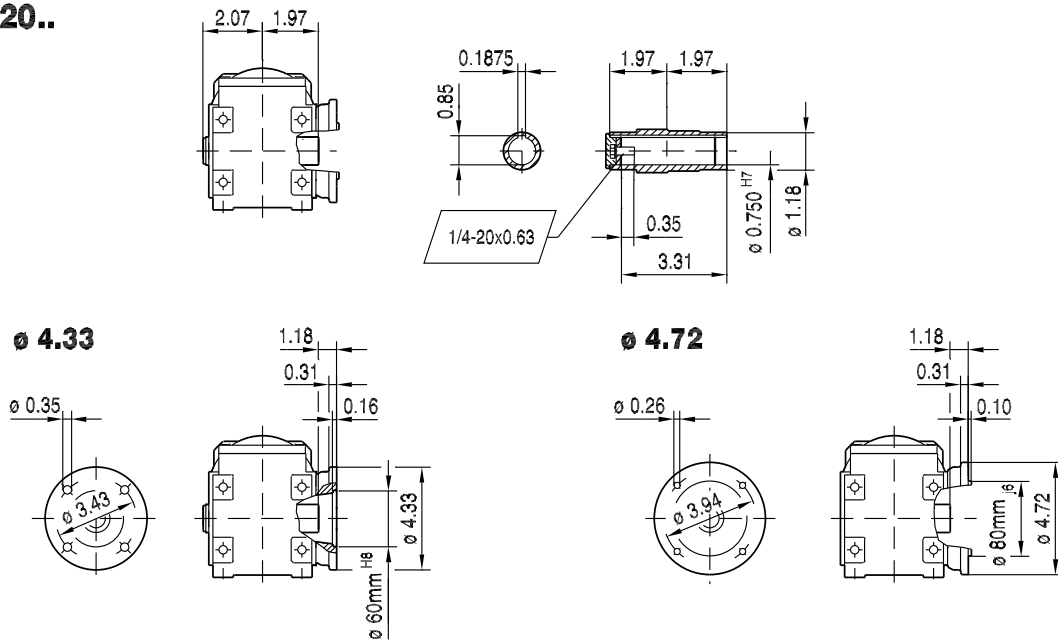


WF20..

20 023 00 09

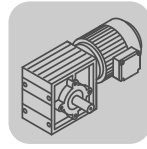


WAF20..

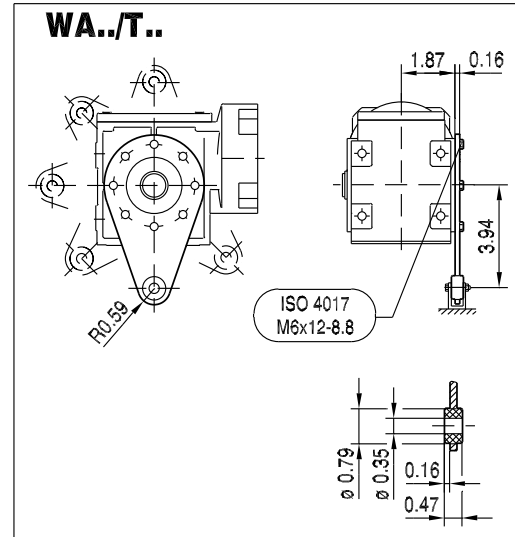


(→ 125)	DR63..	DR71S				
AC	5.20	5.47				
AD	4.13	4.69				
ADS	4.13	5.08				
L	11.81	12.24				
LS	13.98	14.92				
LB	5.87	6.30				
LBS	8.03	8.98				

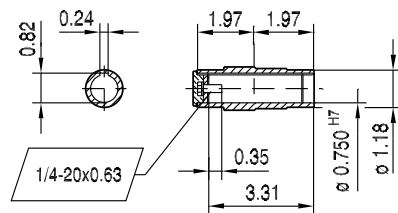
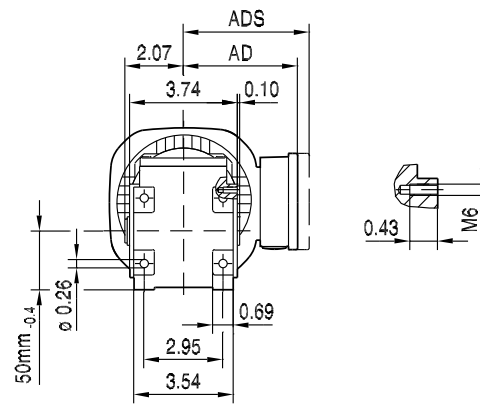
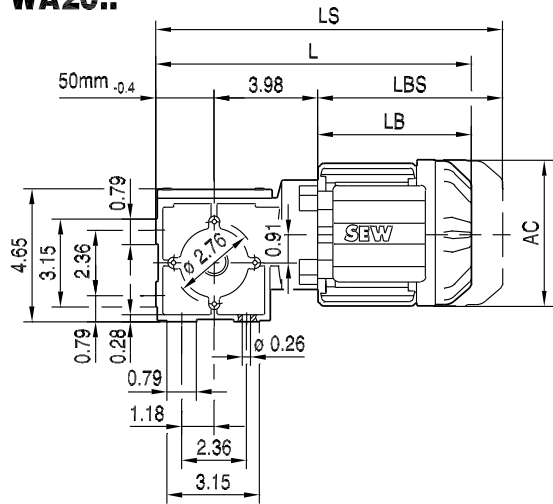
reducer.ir



20 024 00 09

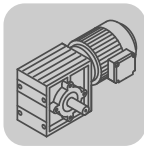


WA20..



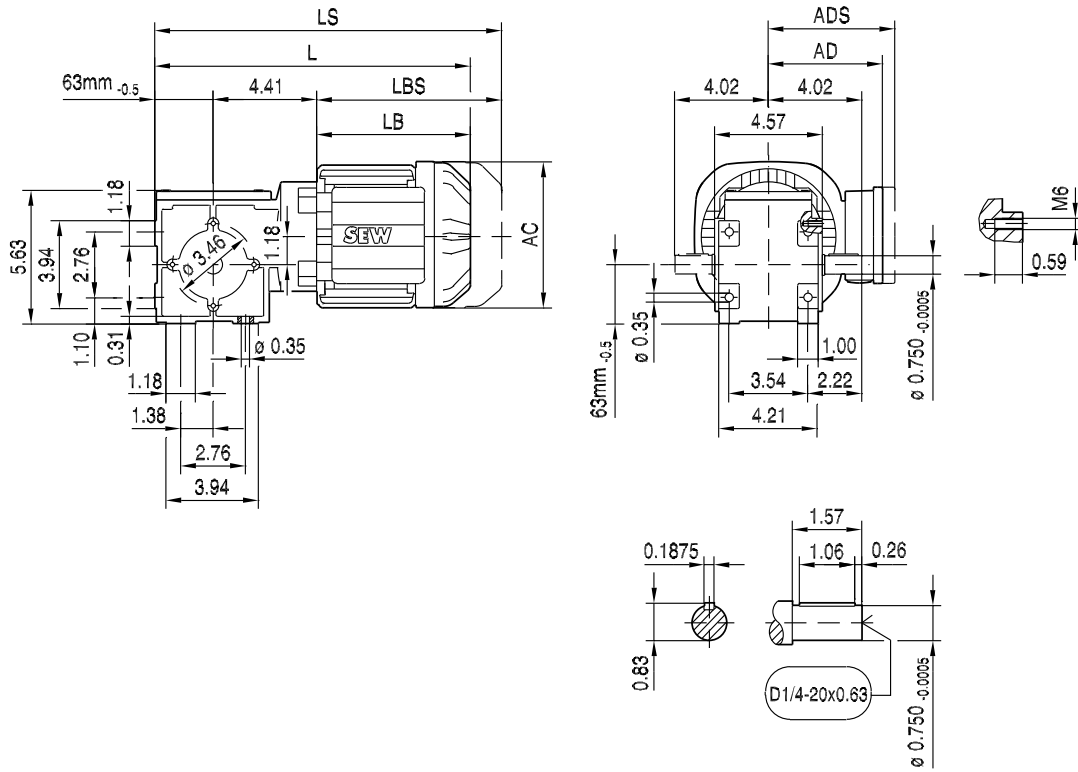
(→ 125)	DR63..	DR71S					
AC	5.20	5.47					
AD	4.13	4.69					
ADS	4.13	5.08					
L	11.81	12.24					
LS	13.98	14.92					
LB	5.87	6.30					
LBS	8.03	8.98					

reducer.ir



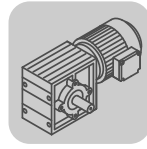
20 025 00 09

W30..



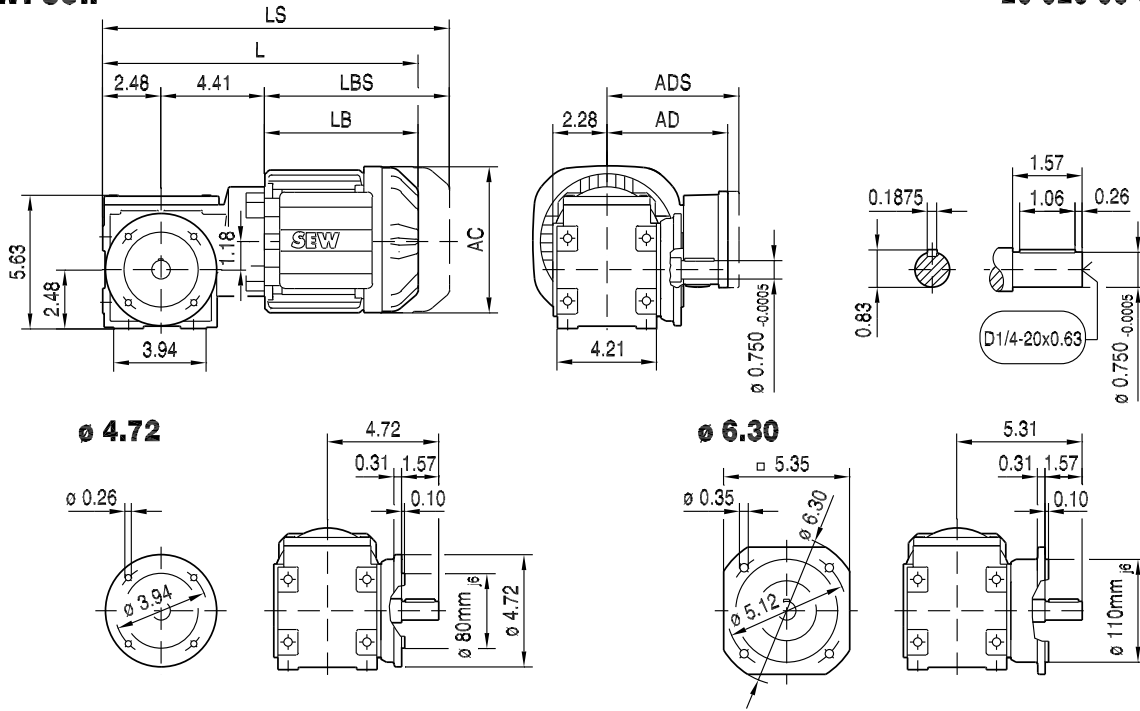
(→ 125)	DR63..	DR71S	DR71M	DR80S	DR80M			
AC	5.20	5.47	5.47	6.14	6.14			
AD	4.13	4.69	4.69	5.04	5.04			
ADS	4.13	5.08	5.08	5.47	5.47			
L	12.76	13.19	14.17	14.33	15.55			
LS	14.92	15.87	16.85	17.52	18.74			
LB	5.87	6.30	7.28	7.44	8.66			
LBS	8.03	8.98	9.96	10.63	11.85			

reducer.ir

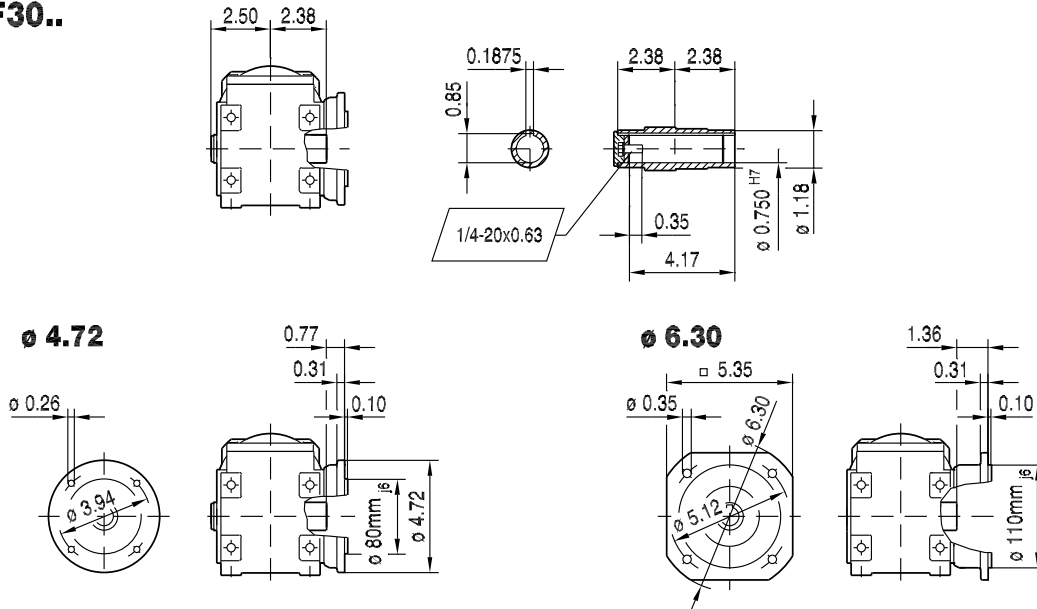


WF30..

20 026 00 09

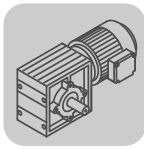


WAF30..

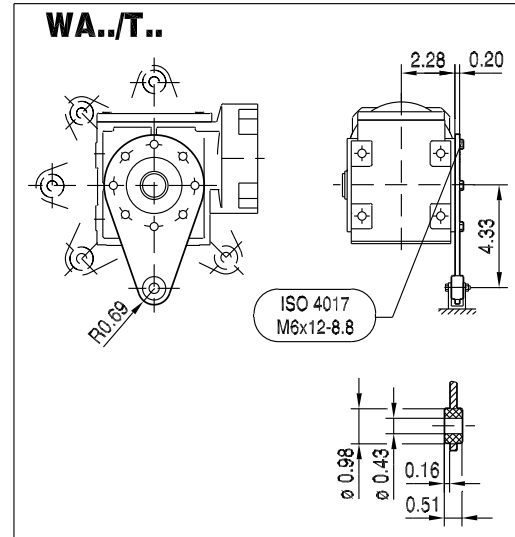


(→ 125)	DR63..	DR71S	DR71M	DR80S	DR80M			
AC	5.20	5.47	5.47	6.14	6.14			
AD	4.13	4.69	4.69	5.04	5.04			
ADS	4.13	5.08	5.08	5.47	5.47			
L	12.76	13.19	14.17	14.33	15.55			
LS	14.92	15.87	16.85	17.52	18.74			
LB	5.87	6.30	7.28	7.44	8.66			
LBS	8.03	8.98	9.96	10.63	11.85			

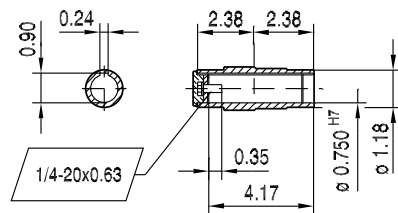
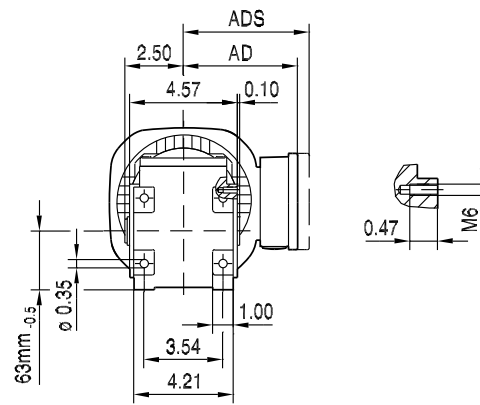
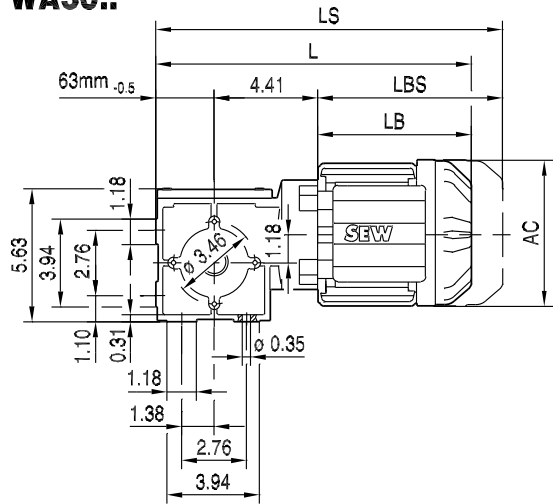
reducer.ir



20 027 00 09

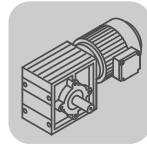


WA30..



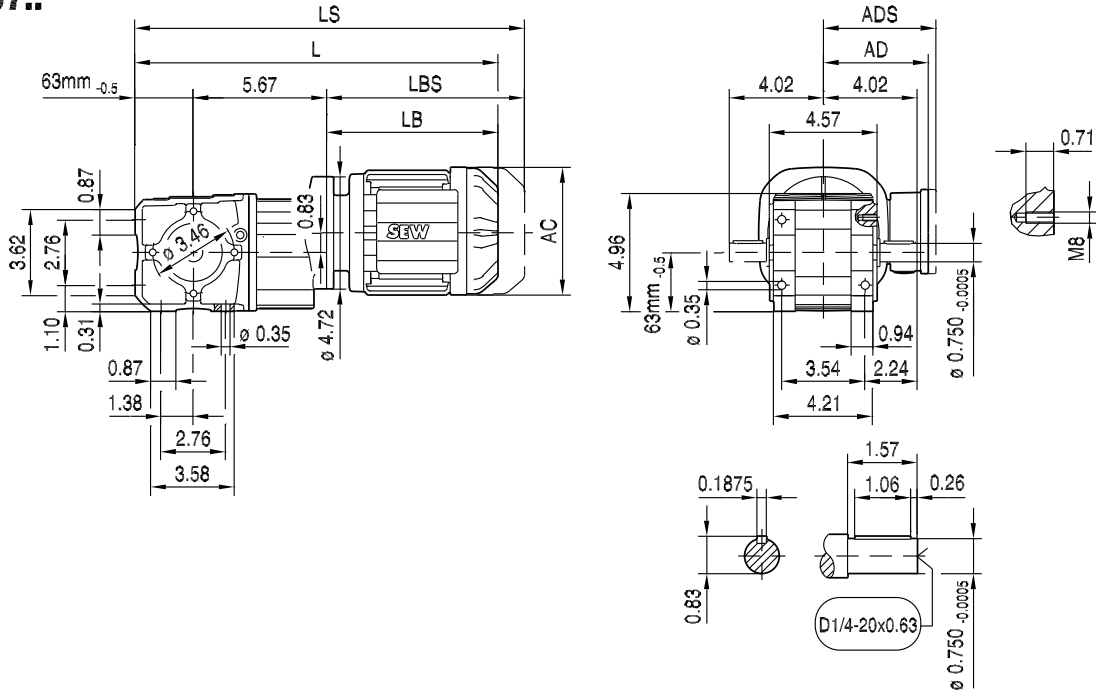
(→ 125)	DR63..	DR71S	DR71M	DR80S	DR80M			
AC	5.20	5.47	5.47	6.14	6.14			
AD	4.13	4.69	4.69	5.04	5.04			
ADS	4.13	5.08	5.08	5.47	5.47			
L	12.76	13.19	14.17	14.33	15.55			
LS	14.92	15.87	16.85	17.52	18.74			
LB	5.87	6.30	7.28	7.44	8.66			
LBS	8.03	8.98	9.96	10.63	11.85			

reducer.ir

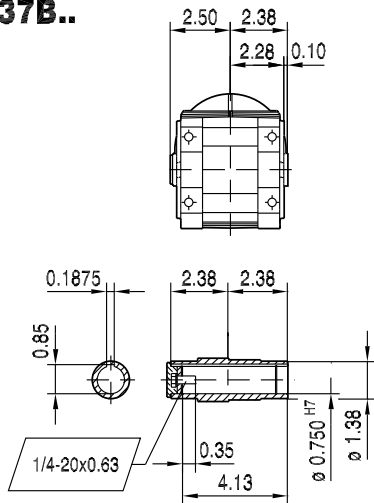


20 028 00 09

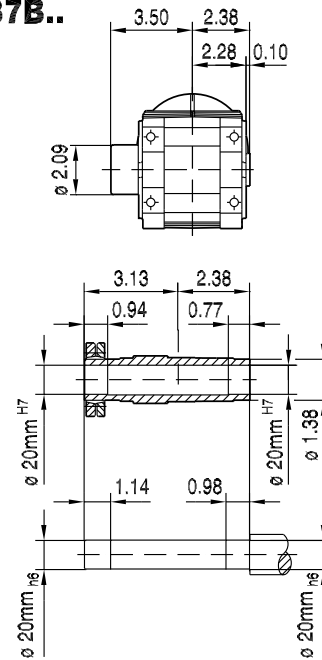
W37..



WA37B..

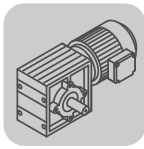


WH37B..



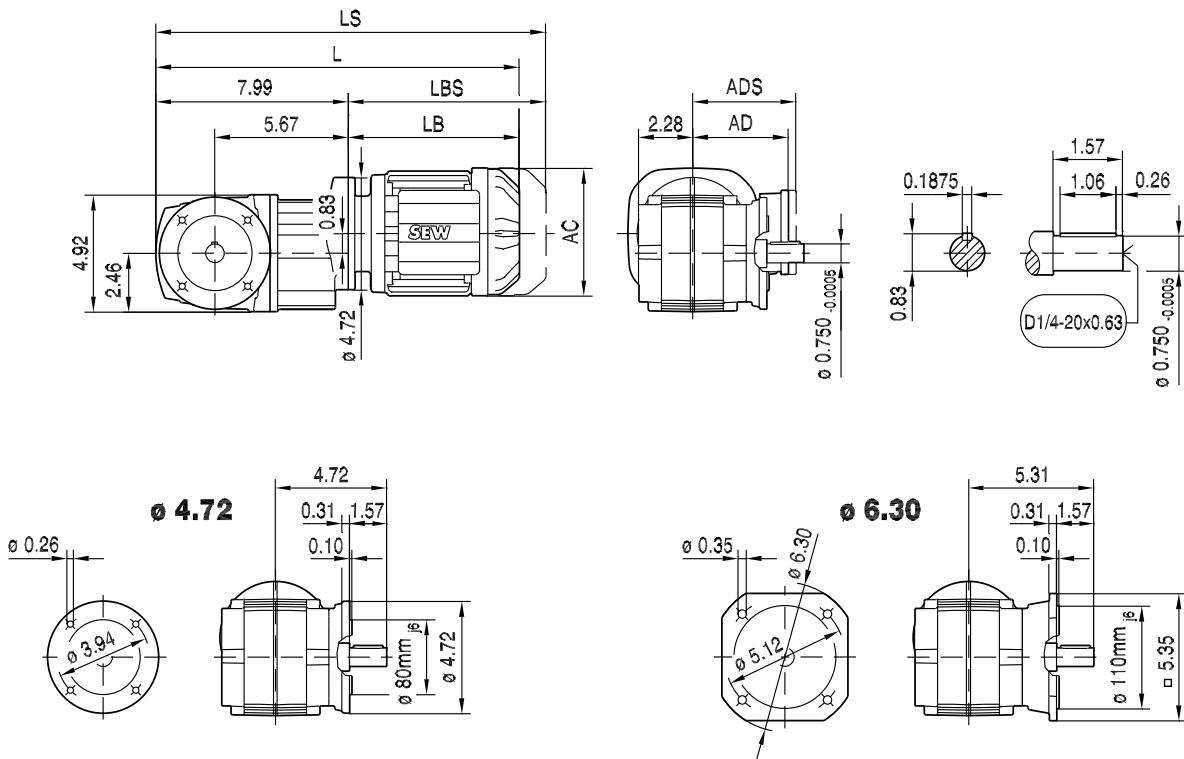
(→ 125)	DR63..	DR71S	DR71M	DR80S	DR80M	DR90M	DR90L	DR100M	DR100L/LC
AC	5.20	5.47	5.47	6.14	6.14	7.05	7.05	7.76	7.76
AD	4.13	4.69	4.69	5.04	5.04	5.51	5.51	6.18	6.18
ADS	4.13	5.08	5.08	5.47	5.47	5.91	5.91	6.22	6.22
L	15.67	16.14	17.13	17.48	18.70	18.86	19.65	20.83	22.01
LS	17.83	18.82	19.80	20.67	21.89	22.52	23.31	24.49	25.67
LB	7.52	7.99	8.98	9.33	10.55	10.71	11.50	12.68	13.86
LBS	9.69	10.67	11.65	12.52	13.74	14.37	15.16	16.34	17.52

reducer.ir

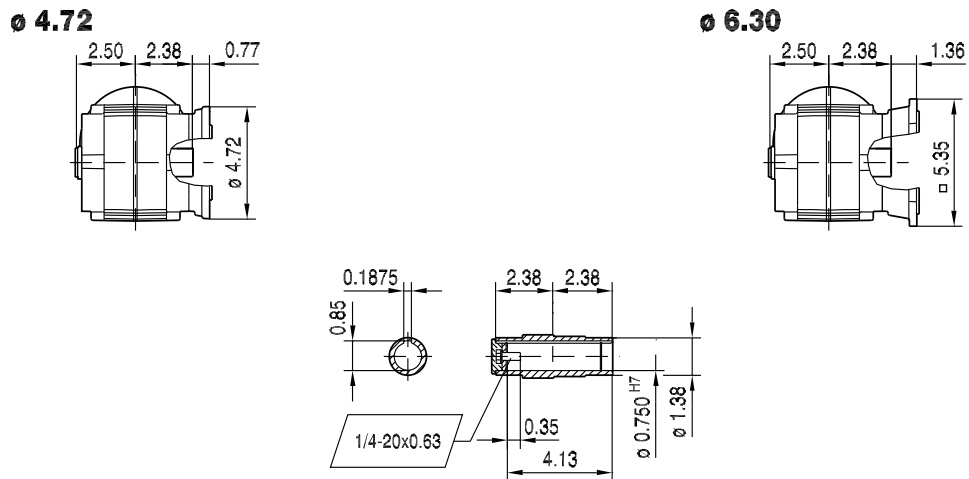


20 029 00 09

WF37..

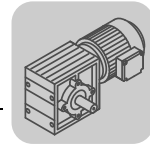


WAF37..



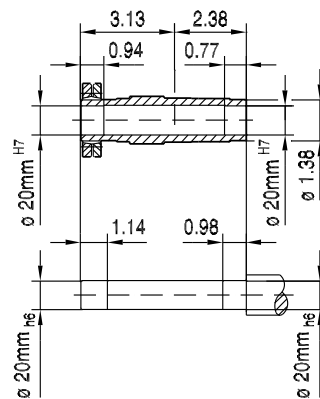
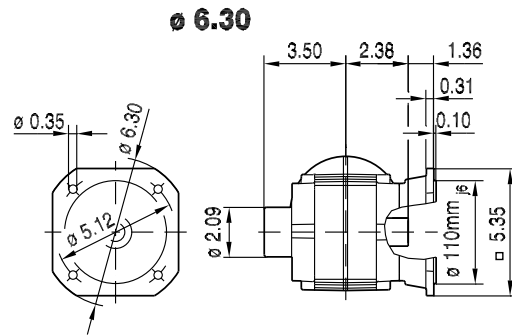
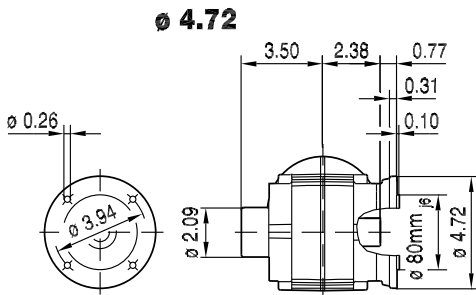
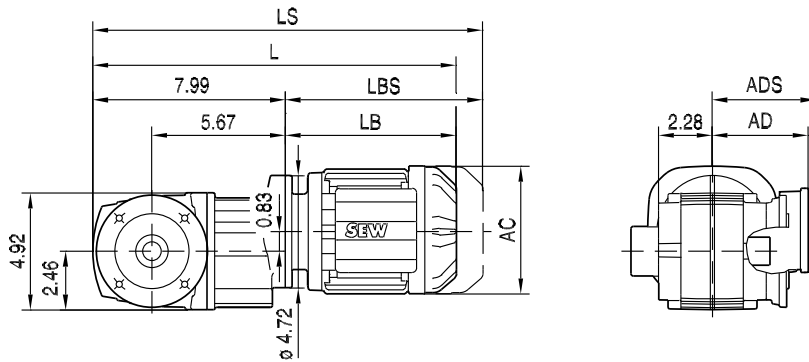
(→ 125)	DR63..	DR71S	DR71M	DR80S	DR80M	DR90M	DR90L	DR100M	DR100L/LC
AC	5.20	5.47	5.47	6.14	6.14	7.05	7.05	7.76	7.76
AD	4.13	4.69	4.69	5.04	5.04	5.51	5.51	6.18	6.18
ADS	4.13	5.08	5.08	5.47	5.47	5.91	5.91	6.22	6.22
L	15.51	15.98	16.97	17.32	18.54	18.70	19.49	20.67	21.85
LS	17.68	18.66	19.65	20.51	21.73	22.36	23.15	24.33	25.51
LB	7.52	7.99	8.98	9.33	10.55	10.71	11.50	12.68	13.86
LBS	9.69	10.67	11.65	12.52	13.74	14.37	15.16	16.34	17.52

reducer.ir



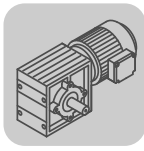
20 030 00 09

WHF37..



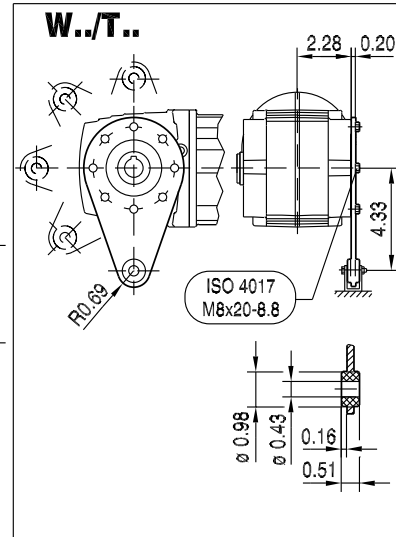
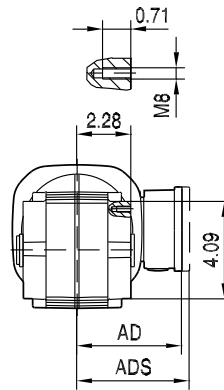
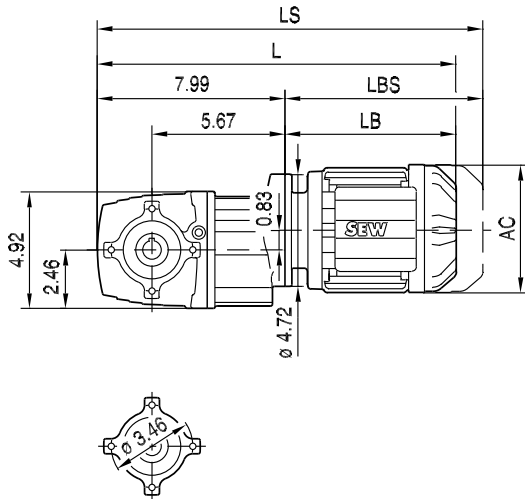
(→ 125)	DR63..	DR71S	DR71M	DR80S	DR80M	DR90M	DR90L	DR100M	DR100L/LC
AC	5.20	5.47	5.47	6.14	6.14	7.05	7.05	7.76	7.76
AD	4.13	4.69	4.69	5.04	5.04	5.51	5.51	6.18	6.18
ADS	4.13	5.08	5.08	5.47	5.47	5.91	5.91	6.22	6.22
L	15.51	15.98	16.97	17.32	18.54	18.70	19.49	20.67	21.85
LS	17.68	18.66	19.65	20.51	21.73	22.36	23.15	24.33	25.51
LB	7.52	7.99	8.98	9.33	10.55	10.71	11.50	12.68	13.86
LBS	9.69	10.67	11.65	12.52	13.74	14.37	15.16	16.34	17.52

reducer.ir

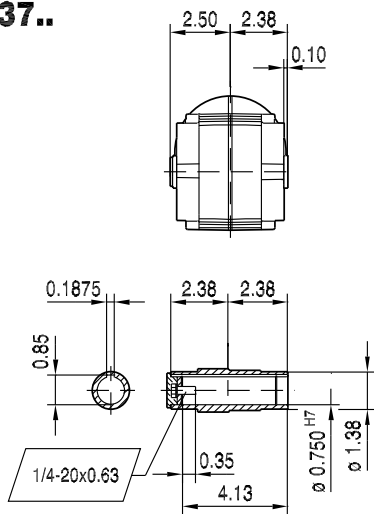


20 031 00 09

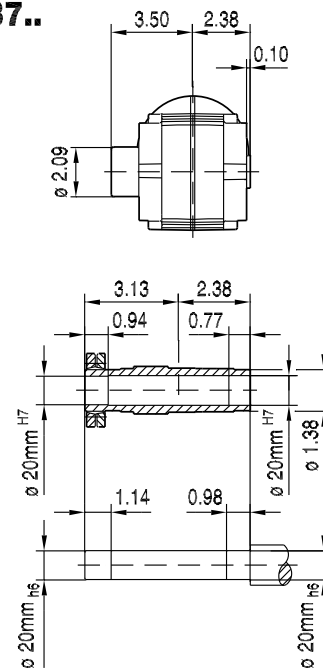
WA37..



WA37..

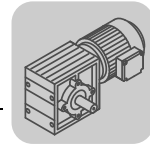


WH37..

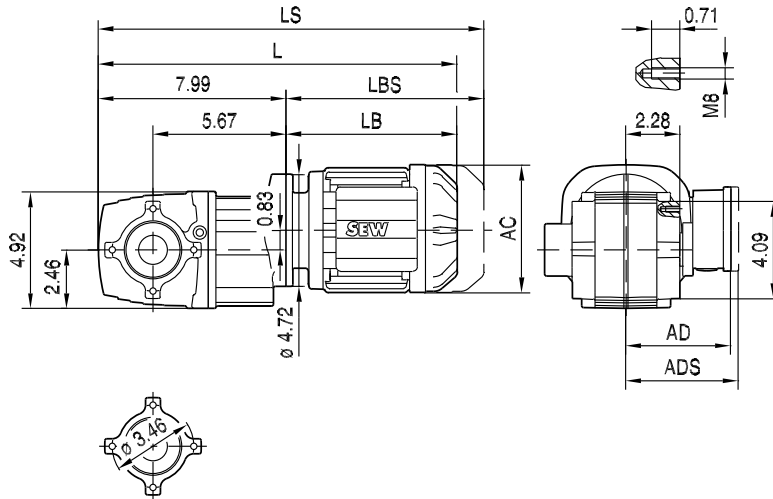


(→ 125)	DR63..	DR71S	DR71M	DR80S	DR80M	DR90M	DR90L	DR100M	DR100L/LC
AC	5.20	5.47	5.47	6.14	6.14	7.05	7.05	7.76	7.76
AD	4.13	4.69	4.69	5.04	5.04	5.51	5.51	6.18	6.18
ADS	4.13	5.08	5.08	5.47	5.47	5.91	5.91	6.22	6.22
L	15.51	15.98	16.97	17.32	18.54	18.70	19.49	20.67	21.85
LS	17.68	18.66	19.65	20.51	21.73	22.36	23.15	24.33	25.51
LB	7.52	7.99	8.98	9.33	10.55	10.71	11.50	12.68	13.86
LBS	9.69	10.67	11.65	12.52	13.74	14.37	15.16	16.34	17.52

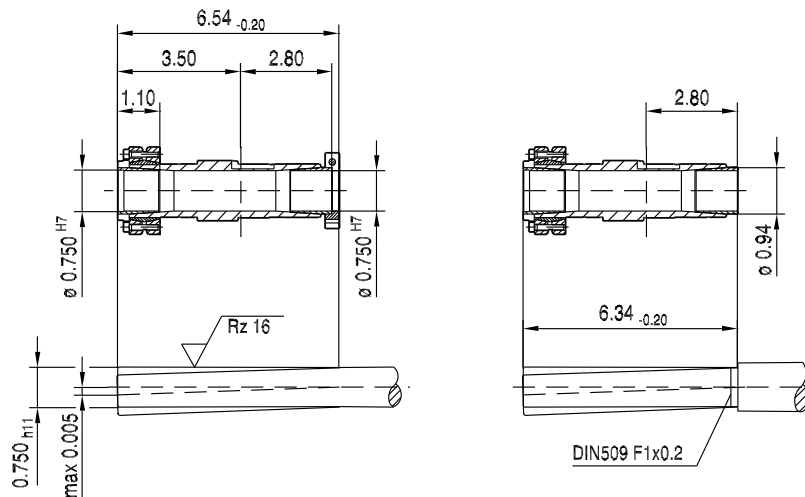
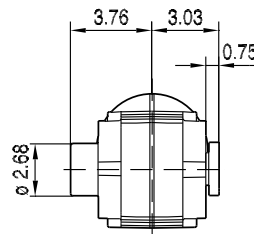
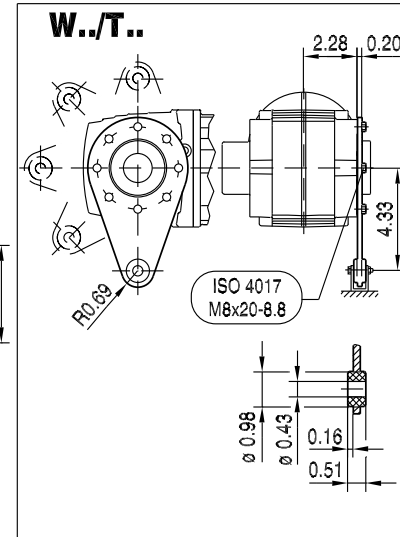
reducer.ir



WT37..

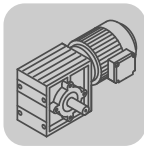


20 032 00 09



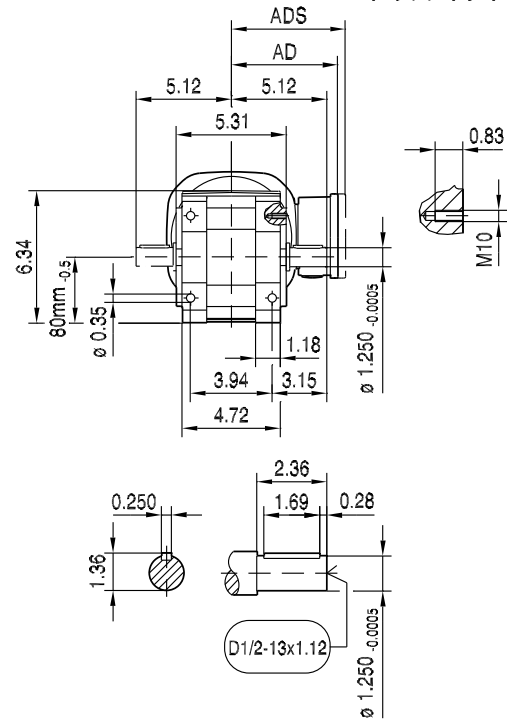
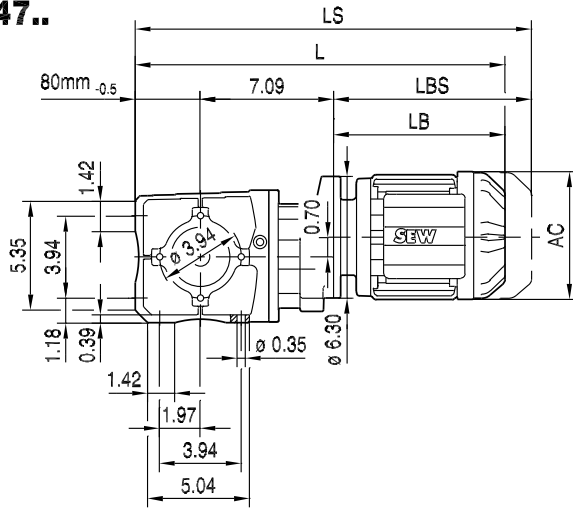
(→ 125)	DR63..	DR71S	DR71M	DR80S	DR80M	DR90M	DR90L	DR100M	DR100L/LC
AC	5.20	5.47	5.47	6.14	6.14	7.05	7.05	7.76	7.76
AD	4.13	4.69	4.69	5.04	5.04	5.51	5.51	6.18	6.18
ADS	4.13	5.08	5.08	5.47	5.47	5.91	5.91	6.22	6.22
L	15.51	15.98	16.97	17.32	18.54	18.70	19.49	20.67	21.85
LS	17.68	18.66	19.65	20.51	21.73	22.36	23.15	24.33	25.51
LB	7.52	7.99	8.98	9.33	10.55	10.71	11.50	12.68	13.86
LBS	9.69	10.67	11.65	12.52	13.74	14.37	15.16	16.34	17.52

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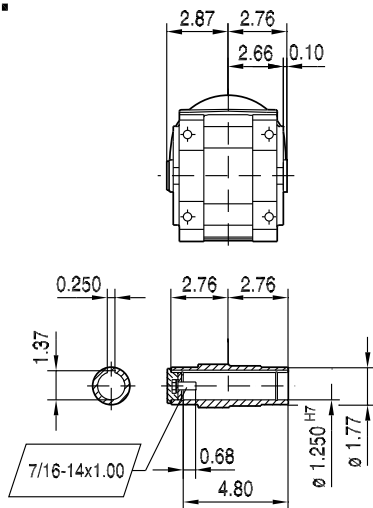


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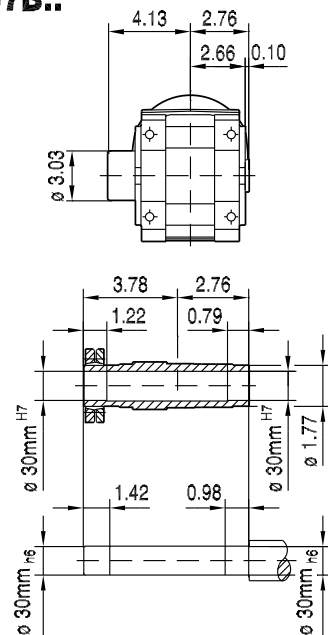
W47..



WA47B..

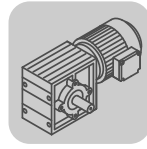


WH47B..



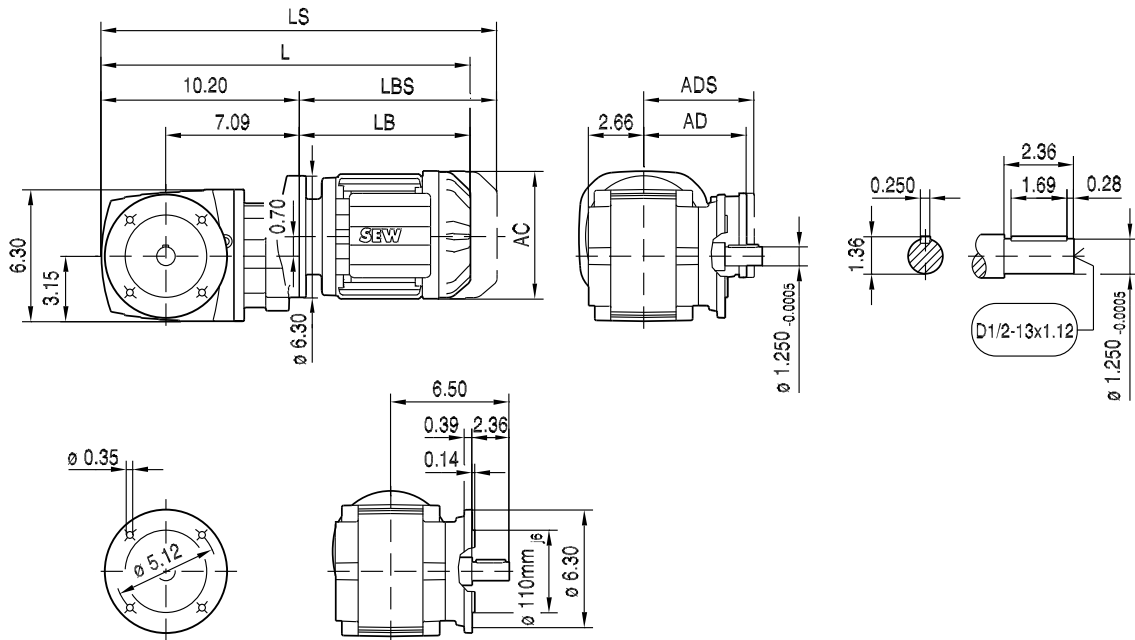
(→ 125)	DR63..	DR71S	DR71M	DR80S	DR80M	DR90M	DR90L	DR100M	DR100L/C	DR132S	DR132M/MC
AC	5.20	5.47	5.47	6.14	6.14	7.05	7.05	7.76	7.76	8.70	8.70
AD	4.13	4.69	4.69	5.04	5.04	5.51	5.51	6.18	6.18	6.69	6.69
ADS	4.13	5.08	5.08	5.47	5.47	5.91	5.91	6.22	6.22	6.77	6.77
L	17.56	17.99	18.98	19.33	20.55	20.63	21.42	22.60	23.78	25.63	27.60
LS	19.72	20.67	21.65	22.52	23.74	24.29	25.08	26.26	27.44	30.04	32.01
LB	7.28	7.72	8.70	9.06	10.28	10.35	11.14	12.32	13.50	15.35	17.32
LBS	9.45	10.39	11.38	12.24	13.46	14.02	14.80	15.98	17.17	19.76	21.73

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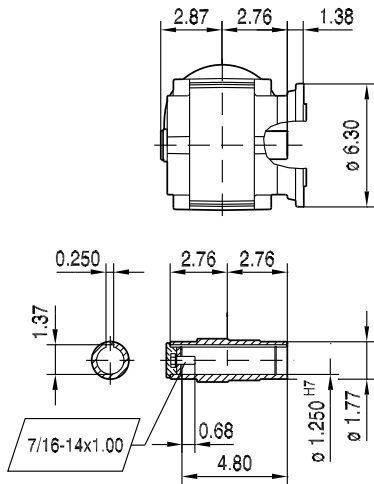


20 034 00 09

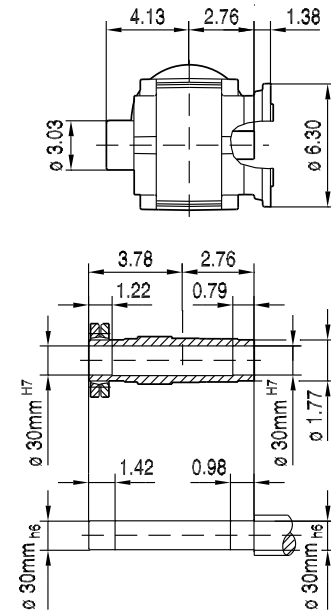
WF47..



WAF47..

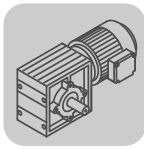


WHF47..



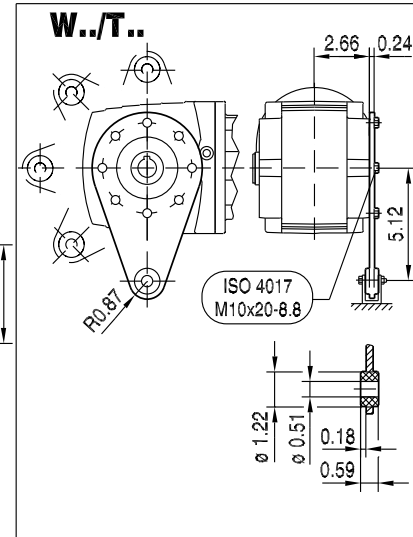
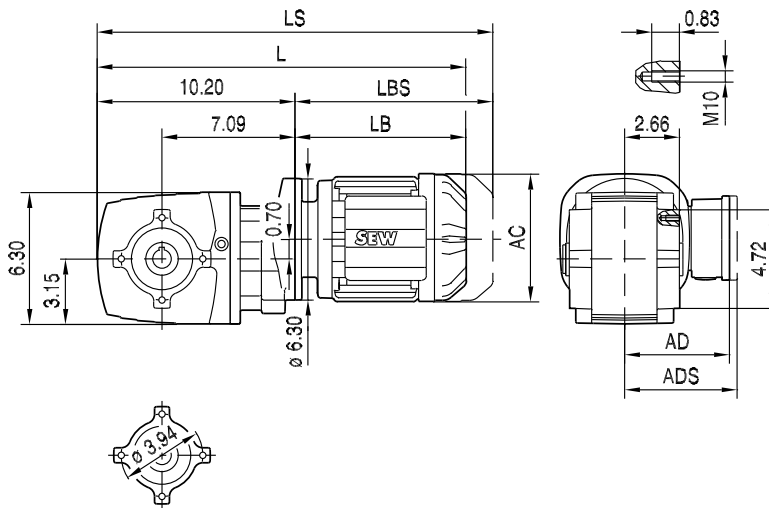
(→ 125)	DR63..	DR71S	DR71M	DR80S	DR80M	DR90M	DR90L	DR100M	DR100L/LC	DR132S	DR132M/MC
AC	5.20	5.47	5.47	6.14	6.14	7.05	7.05	7.76	7.76	8.70	8.70
AD	4.13	4.69	4.69	5.04	5.04	5.51	5.51	6.18	6.18	6.69	6.69
ADS	4.13	5.08	5.08	5.47	5.47	5.91	5.91	6.22	6.22	6.77	6.77
L	17.52	17.95	18.94	19.29	20.51	20.59	21.38	22.56	23.74	25.59	27.56
LS	19.69	20.63	21.61	22.48	23.70	24.25	25.04	26.22	27.40	30.00	31.97
LB	7.28	7.72	8.70	9.06	10.28	10.35	11.14	12.32	13.50	15.35	17.32
LBS	9.45	10.39	11.38	12.24	13.46	14.02	14.80	15.98	17.17	19.76	21.73

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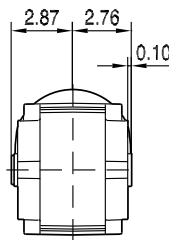


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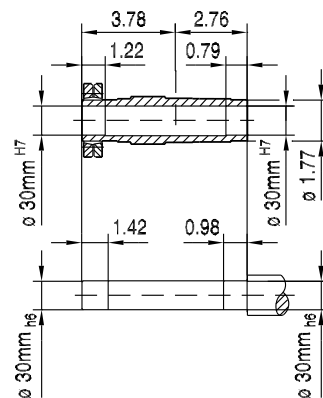
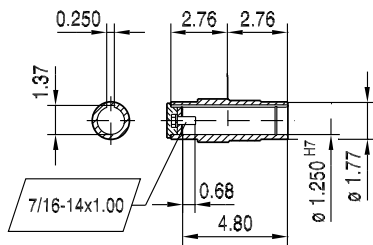
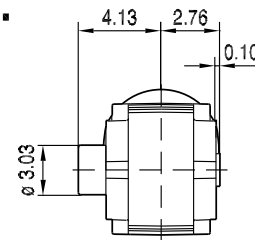
WA47..



WA47..

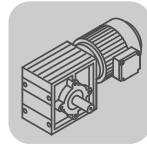


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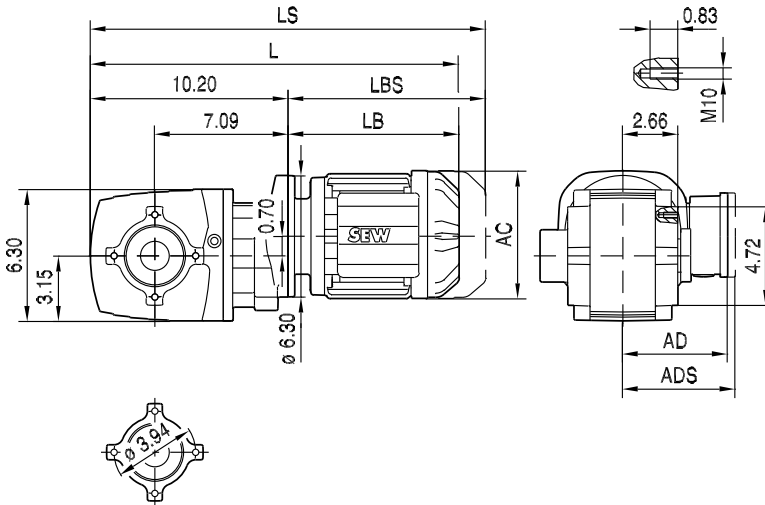


(→ 125)	DR63..	DR71S	DR71M	DR80S	DR80M	DR90M	DR90L	DR100M	DR100L/LC	DR132S	DR132M/MC
AC	5.20	5.47	5.47	6.14	6.14	7.05	7.05	7.76	7.76	8.70	8.70
AD	4.13	4.69	4.69	5.04	5.04	5.51	5.51	6.18	6.18	6.69	6.69
ADS	4.13	5.08	5.08	5.47	5.47	5.91	5.91	6.22	6.22	6.77	6.77
L	17.52	17.95	18.94	19.29	20.51	20.59	21.38	22.56	23.74	25.59	27.56
LS	19.69	20.63	21.61	22.48	23.70	24.25	25.04	26.22	27.40	30.00	31.97
LB	7.28	7.72	8.70	9.06	10.28	10.35	11.14	12.32	13.50	15.35	17.32
LBS	9.45	10.39	11.38	12.24	13.46	14.02	14.80	15.98	17.17	19.76	21.73

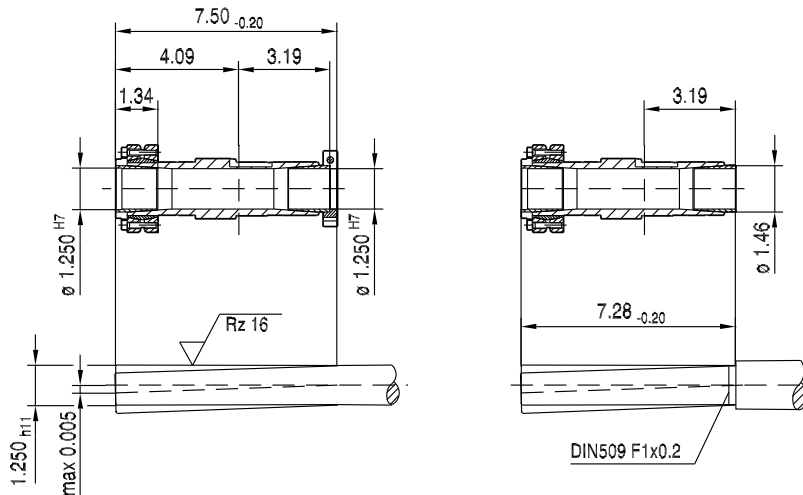
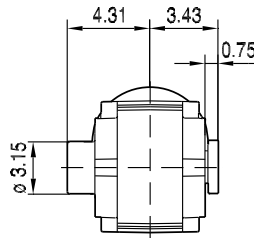
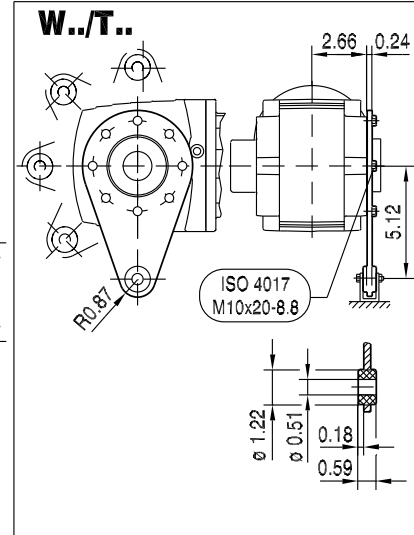
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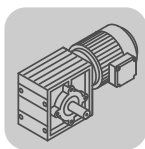
WT47..



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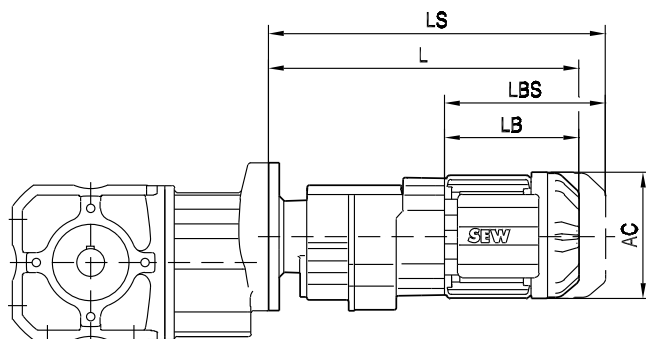


(→ 125)	DR63..	DR71S	DR71M	DR80S	DR80M	DR90M	DR90L	DR100M	DR100L/LC	DR132S	DR132M/MC
AC	5.20	5.47	5.47	6.14	6.14	7.05	7.05	7.76	7.76	8.70	8.70
AD	4.13	4.69	4.69	5.04	5.04	5.51	5.51	6.18	6.18	6.69	6.69
ADS	4.13	5.08	5.08	5.47	5.47	5.91	5.91	6.22	6.22	6.77	6.77
L	17.52	17.95	18.94	19.29	20.51	20.59	21.38	22.56	23.74	25.59	27.56
LS	19.69	20.63	21.61	22.48	23.70	24.25	25.04	26.22	27.40	30.00	31.97
LB	7.28	7.72	8.70	9.06	10.28	10.35	11.14	12.32	13.50	15.35	17.32
LBS	9.45	10.39	11.38	12.24	13.46	14.02	14.80	15.98	17.17	19.76	21.73



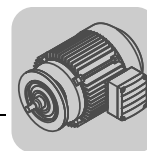
W..DRE/DRS
W..[in]

20 018 00 09



(→ 125)		AC	L	LS	LB	LBS
W..37R17	DR63..	5.20	12.76	14.92	5.87	8.03
	DR71S..	5.47	13.19	15.87	6.30	8.98
W..47R17	DR63..	5.20	12.76	14.92	5.87	8.03
	DR71S..	5.47	13.19	15.87	6.30	8.98
	DR71M..	5.47	14.17	16.85	7.28	9.96

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14 AC Brakemotors – Technical Data

14.1 Key to the data tables

The following table lists the short symbols used in the "Technical Data DR AC Brakemotors" tables.

P_N	Rated power
T_N	Rated torque
n_N	Rated speed
I_N	Rated current
$\cos\varphi$	Power factor
$\eta_{100\%}$	Efficiency at 100% of the rated power
I_A/I_N	Starting current ratio
T_A/T_N	Starting torque ratio
T_H/T_N	Ramp-up torque ratio
Code Letter	NEMA code letter
J_{Mot}	Mass moment of inertia of the motor
J_{Mot_BE}	Mass moment of inertia of the brakemotor
BE..	Standard brake size
Z_0 BG	Switching frequency for operation with BG brake controller
Z_0 BGE	Switching frequency for operation with BGE brake controller
T_B	Standard brake torque
m	Mass of the motor
m_{BE}	Mass of the brakemotor



14.2 Technical data of 2-pole high efficiency motors

3600 rpm - S1

Motor type	$\frac{P_N}{T_N}$	n_N [rpm]	I_N			$\cos\varphi$	$\eta_{100\%}$ [%] ¹⁾	I_A/I_N	$\frac{T_A/T_N}{T_H/T_N}$	Code Letter	J_{Mot} [10 ⁻³ lb-ft ²]	m [lb] ²⁾
	[HP] [lb-in]		230V	460V	575V				[A]			
DRS71S2 ³⁾	0.5 9.4	3300	1.9	0.95	0.76	0.89	54.9	3.2	$\frac{2.2}{1.9}$	E	11.6	17.2
DRS71M2 ³⁾	0.75 13.6	3420	2.2	1.1	0.88	0.83	75.5	5.8	$\frac{3.1}{1.9}$	H	16.8	20.1
DRE80M2	1 18.1	3490	2.5	1.26	1.01	0.92	80.0	8.8	$\frac{3.5}{2.9}$	K	51.0	31.5
DRE90M2	1.5 27.0	3470	3.6	1.8	1.44	0.91	82.5	8.4	$\frac{3.4}{3.1}$	K	84.3	40.6
DRE90L2	2 36.7	3460	4.8	2.4	1.92	0.93	84.0	7.9	$\frac{3.4}{2.8}$	J	103	47.4
DRE100M2	3 53.1	3475	6.8	3.4	2.7	0.93	85.5	9	$\frac{3.9}{3.1}$	K	133	57.3

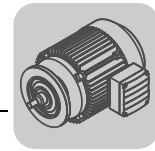
1) Efficiency levels according to IEC 60034-2-1 Ed. 1 (2007) / PLL from Residual Losses, NEMA MG1 and/or DoE

2) Applies for foot-mounted motor (DRS and DRE.../FL..)

3) Standard efficiency motor

US DoE CC056A applies to DRE, DRP and DVE motors

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Motor type	P_N T_N	n_N [rpm]	BE..	T_B [lb-in] ³⁾	Z_0 BG ¹⁾ BGE ²⁾	J_{Mot_BE} [10 ⁻³ lb-ft ²]	m_{BE} [lb] ⁴⁾
	[HP] [lb-in]				[1/h]		
DRS71S2 ⁵⁾	0.5 9.4	3300	BE05	22	2000 3300	14.7	22.5
DRS71M2 ⁵⁾	0.75 13.6	3420	BE05	31	1600 3600	20.0	25.4
DRE80M2	1 18.1	3490	BE05	44	1040 2400	54.6	37.5
DRE90M2	1.5 27.0	3470	BE1	88	880 2160	87.8	49.6
DRE90L2	2 36.7	3460	BE2	88	720 1760	115	57.3
DRE100M2	3 53.1	3475	BE2	124	560 1440	145	67.2

- 1) Operation with BG brake control system
- 2) Operation with BGE brake control system
- 3) Standard braking torque for IEC brakemotor
- 4) Applies for foot-mounted motor (DRS and DRE..BE../Fl..)
- 5) Standard efficiency motor

US DoE CC056A applies to DRE, DRP and DVE motors



14.3 Technical data of 2-pole premium efficiency motors

3600 rpm - S1

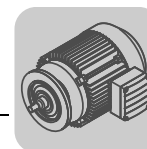
Motor type	$\frac{P_N}{T_N}$	n_N [rpm]	I_N			$\cos\varphi$	$\eta_{100\%}$ [%] ¹⁾	I_A/I_N	$\frac{T_A}{T_N}$	Code Letter	J_{Mot} [10 ⁻³ lb-ft ²]	m [lb] ²⁾
	[HP] [lb-in]		230V	460V	575V				$\frac{T_H}{T_N}$			
DRP80M2	1 18.1	3490	2.45	1.22	0.98	0.92	82.5	8.8	$\frac{3.5}{2.9}$	K	51	31.5
DRP90M2	1.5 27	3470	3.55	1.78	1.42	0.91	84.0	8.4	$\frac{3.4}{3.1}$	J	84.3	40.5
DRP100M2	2 36.3	3490	4.6	2.3	1.83	0.93	86.5	9.8	$\frac{3.9}{3.3}$	K	133	57.3
DRP100M2	3 53.1	3475	6.8	3.4	2.75	0.93	86.5	9	$\frac{3.9}{3.1}$	K	133	57.3

1) Efficiency levels according to IEC 60034-2-1 Ed. 1 (2007) / PLL from Residual Losses, NEMA MG1 and/or DoE

2) Applies for foot-mounted motor (DRP.../FL..)

US DoE CC056A applies to DRE, DRP and DVE motors

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Motor type	P_N T_N	n_N [rpm]	BE..	T_B [lb-in] ³⁾	Z_0 BG ¹⁾ BGE ²⁾	J_{Mot_BE} [10 ⁻³ lb-ft ²]	m_{BE} [lb] ⁴⁾
	[HP] [lb-in]				[1/h]		
DRP80M2	1 18.1	3490	BE05	44	1040 2400	54.6	37.4
DRP90M2	1.5 27	3470	BE1	62	880 2160	87.8	49.6
DRP100M2	2 36.3	3490	BE2	88	560 1440	144	67.2
DRP100M2	3 53.1	3475	BE2	124	560 1440	144	67.2

- 1) Operation with BG brake control system
- 2) Operation with BGE brake control system
- 3) Standard braking torque for IEC brakemotor
- 4) Applies for foot-mounted motor (DRP..BE../FI..)

US DoE CC056A applies to DRE, DRP and DVE motors

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14.4 Technical data of 4-pole high efficiency motors

1800 rpm - S1

Motor type	$\frac{P_N}{T_N}$	n_N [rpm]	I_N			$\cos\phi$	$\eta_{100\%}$ [%] ¹⁾	I_A/I_N	$\frac{T_A/T_N}{T_H/T_N}$	Code Letter	J_{Mot} [10 ⁻³ lb-ft ²]	m [lb] ²⁾
	[HP] [lb-in]		230V	460V	575V				[A]			
DRS71S4 ³⁾	0.25 8.93	1700	0.9	0.45	0.36	0.69	72.0	4.2	1.9 1.9	G	11.6	17.2
DRS71S4 ³⁾	0.33 12.3	1700	1.24	0.62	0.49	0.69	72.0	4.2	1.9 1.9	G	11.6	17.2
DRS71S4 ³⁾	0.5 18.5	1700	1.84	0.92	0.74	0.69	72.0	4.2	1.9 1.9	G	11.6	17.2
DRS71M4 ³⁾	0.75 27.4	1690	2.5	1.25	1.0	0.71	74.0	4.3	2.2 2.1	G	16.8	20.1
DRE80M4	1 36.2	1740	2.9	1.44	1.15	0.78	82.5	7.1	3 2.1	K	51	31.5
DRE90M4	1.5 53.1	1740	4.5	2.25	1.8	0.73	84.0	7.7	3.6 2.9	L	84.3	40.6
DRE90L4	2 72.5	1740	5.7	2.85	2.3	0.77	85.5	7.5	3.4 3.0	K	103	47.4
DRE100L4	3 107	1735	8.0	4.0	3.2	0.79	87.5	8.1	4 3.3	K	161	63.9
DRE100LC4	5 177	1750	12.9	6.5	5.2	0.83	87.5	7.6	2.5 2.3	J	213	68.4
DRE132S4	5.4 190	1765	13.8	6.9	5.5	0.81	88.5	8.7	2.9 2.5	K	451	102
DRE132M4	7.5 265	1755	18	9	7.2	0.85	89.5	8.1	2.5 1.6	J	605	132
DRE132MC4	10 358	1770	24.5	12.3	9.8	0.82	89.5	8.7	2.1 1.6	K	807	138
DRE160M4	12.5 438	1770	31	15.4	12.3	0.82	91.0	8	3 2.2	J	1068	196
DRE160MC4	15 522	1780	36.5	18.3	14.6	0.82	91.7	8.2	2.9 2	J	1401	207
DRE180M4	20 716	1775	47.5	24	19	0.86	91.7	7.4	2.6 1.9	H	2636	304
DRE180L4	25 885	1775	60	30	24	0.84	93.0	8.1	2.9 2.2	J	3087	335
DRE180LC4	30 1044	1780	71	35.5	28.5	0.84	93.0	7.6	2.4 1.8	J	3990	355
DRE200L4	40 1424	1780	99	49.5	39.5	0.82	93.0	7.4	2.6 2.1	J	5605	573
DRE225S4	50 1761	1775	119	59	47.5	0.84	93.0	7.2	2.7 2.0	H	6958	650
DRE225M4	60 2124	1780	142	71	57	0.85	93.6	7.3	2.8 1.9	H	8146	694

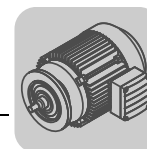
1) Efficiency levels according to IEC 60034-2-1 Ed. 1 (2007) / PLL from Residual Losses, NEMA MG1 and/or DoE

2) Applies for foot-mounted motor (DRS and DRE.../FL...)

3) Standard efficiency motor

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Motor type	$\frac{P_N}{T_N}$ [HP] [lb-in]	n_N [rpm]	BE..	T_B [lb-in] ³⁾	Z_0 BG ¹⁾ BGE ²⁾ [1/h]	J_{Mot_BE} [10 ⁻³ lb-ft ²]	m_{BE} [lb] ⁴⁾
DRS71S4 ⁵⁾	0.25 8.93	1700	BE05	22	4800 7600	14.7	22.5
DRS71S4 ⁵⁾	0.33 12.3	1700	BE05	31	4800 7600	14.7	22.5
DRS71S4 ⁵⁾	0.5 18.5	1700	BE05	44	4800 7600	14.7	22.5
DRS71M4 ⁵⁾	0.75 27.4	1690	BE1	88	3300 8800	19.9	25.8
DRE80M4	1 36.2	1740	BE1	88	2800 7200	54.6	38.1
DRE90M4	1.5 53.1	1740	BE2	124	2400 6400	95	50.7
DRE90L4	2 72.5	1740	BE2	177	2400 6400	115	57.3
DRE100L4	3 107	1735	BE5	248	- 3000	175	77.2
DRE100LC4	5 177	1750	BE5	354	- 3000	228	81.6
DRE132S4	5.4 190	1765	BE5	487	- 2200	463	121
DRE132M4	7.5 265	1755	BE11	708	- 1600	629	165
DRE132MC4	10 358	1770	BE11	974	- 1200	843	172
DRE160M4	12.5 438	1770	BE20	1328	- 1000	1187	253
DRE160MC4	15 522	1780	BE20	1328	- 900	1520	264
DRE180M4	20 716	1775	BE20	1770	- 800	2778	374
DRE180L4	25 885	1775	BE30	2655	- 590	3420	423
DRE180LC4	30 1044	1780	BE30	2655	- 520	4322	441
DRE200L4	40 1424	1780	BE30 BE32	2655 ⁶⁾ 3540 ⁷⁾	- 550	5938 6151	661 695
DRE225S4	50 1761	1775	BE30 BE32	2655 ⁶⁾ 4425 ⁷⁾	- 320	7291 7505	738 771
DRE225M4	60 2124	1780	BE30 BE32	2655 ⁶⁾ 5310 ⁷⁾	- 270	8479 8692	782 815

- 1) Operation with BG brake control system
- 2) Operation with BGE brake control system
- 3) Standard braking torque for IEC brakemotor
- 4) Applies for foot-mounted motor (DRS and DRE..BE../FL..)
- 5) Standard efficiency motor
- 6) Alternate reduced brake torque
- 7) Double-disc brake

US DoE CC056A applies to DRE, DRP and DVE motors

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AC Brakemotors – Technical Data

Technical data of 4-pole high efficiency motors

Motor type	$\frac{P_N}{T_N}$ [HP] [lb-in]	n_N [rpm]	I_N			$\cos\varphi$	$\eta_{100\%}$ [%]	I_A/I_N	$\frac{T_A}{T_N}$ $\frac{T_H}{T_N}$		Code Letter	J_{Mot} [10 ⁻³ lb-ft ²]	$m^{1)}$ [lb]
			230V	460V	575V				[A]				
DVE250M4	75 2610	1780	174	87	70	0.84	94.1	6.6	3.1 1.9	G	14962	988	
DVE280S4	100 3557	1780	235	118	94	0.85	94.5	6.6	3.2 1.8	G	21196	1147	
DVE280M4	125 4274	1780	285	142	114	0.84	94.5	7.1	3.6 2.2	H	21196	1147	

1) Applies to flange motor

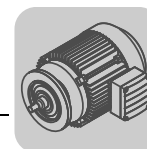
Motor type	$\frac{P_N}{T_N}$ [HP] [lb-in]	n_N [rpm]	I_N			$\cos\varphi$	$\eta_{100\%}$ [%] ¹⁾	I_A/I_N	$\frac{T_A}{T_N}$ $\frac{T_H}{T_N}$		Code Letter	J_{Mot} [10 ⁻³ lb-ft ²]	m [lb] ²⁾
			230V	460V	575V				[A]				
DRE315K4	150 5221	1786	-	169	135	0.86	95	6.9	2.6 2.1	G	43700	1874	
DRE315S4	180 6256	1784	-	205	163	0.88	95	5.7	2 1.6	F	53438	2051	
DRE315S4	200 7080	1786	-	225	173	0.87	95.4	6.4	2.2 1.9	G	53438	2051	
DRE315M4	220 7575	1785	-	240	198	0.88	95	6.3	2.5 2.1	F	66263	2403	
DRE315M4	250 8761	1783	-	275	230	0.89	95	6.6	2.3 1.8	G	66263	2403	
DRE315L4	275 9469	1785	-	295	250	0.89	95.4	7.4	2.9 2.1	H	75762	2580	
DRE315L4	300 10708	1783	-	335	280	0.89	95.4	6.1	2.3 1.8	F	75762	2580	

1) Efficiency levels according to IEC 60034-2-1 Ed. 1 (2007) / PLL from Residual Losses, NEMA MG1 and/or DoE

2) Applies for foot-mounted motor (DRS and DRE.../FL..)

US DoE CC056A applies to DRE, DRP and DVE motors

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Motor type	$\frac{P_N}{T_N}$ [HP] [lb-in]	n_N [rpm]	BG..	T_B [lb-in]	Z_0 BG ²⁾ BGE ³⁾ [1/h]	J_{Mot_BG} [10 ⁻³ lb-ft ²]	$m_{BE}^{1)}$ [lb]
DVE250M4	75 2610	1780	BMG61 BMG122	5310 10620 ⁴⁾	- 160	15674 15984	1164 1186
DVE280S4	100 3557	1780	BMG61 BMG122	5310 ⁵⁾ 10620 ⁴⁾	- 120	21908 22218	1322 1345
DVE280M4	125 4274	1780	BMG61 BMG122	5310 ⁵⁾ 10620 ⁴⁾	- 100	21908 22218	1322 1345

- 1) Applies to flange motor
- 2) Operation with BG brake control system
- 3) Operation with BGE brake control system
- 4) Double-disc brake
- 5) Alternate reduced brake torque

Motor type	$\frac{P_N}{T_N}$ [HP] [lb-in]	n_N [rpm]	BE..	T_B [lb-in] ³⁾	Z_0 BG ¹⁾ BGE ²⁾ [1/h]	J_{Mot_BE} [10 ⁻³ lb-ft ²]	m_{BE} [lb] ⁴⁾
DRE315K4	150 5221	1786	BE122	14160	- 65	46312	2205
DRE315S4	180 6256	1784	BE122	17700	- 50	56050	2381
DRE315S4	200 7080	1786	BE122	17700	- 50	56050	2381
DRE315M4	220 7575	1785	BE122	17700	- 35	68875	2712
DRE315M4	250 8761	1783	BE122	17700	- 35	68875	2712
DRE315L4	275 9469	1785	BE122	17700	- 25	78375	2889
DRE315L4	300 10708	1783	BE122	17700	- 25	78375	2889

- 1) Operation with BG brake control system
- 2) Operation with BGE brake control system
- 3) Standard braking torque for IEC brakemotor
- 4) Applies for foot-mounted motor (DRS and DRE..BE../FI..)

US DoE CC056A applies to DRE, DRP and DVE motors



14.5 Technical data of 4-pole premium efficiency motors

1800 rpm - S1

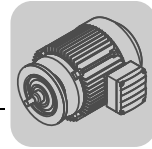
Motor type	P_N	n_N	I_N			$\cos\varphi$	$\eta_{100\%}$	I_A/I_N	T_A/T_N		Code Letter	J_{Mot}	m
	T_N		230V	460V	575V				T_H/T_N				
	[HP] [lb-in]	[rpm]		[A]							[10 ⁻³ lb-ft ²]	[lb] ²	
DRP90M4	1 36.3	1750	2.9	1.46	1.17	0.76	85.5	7.8	3.6 3.2	L	84.3	40.5	
DRP90L4	1.5 53.1	1740	4.15	2.05	1.66	0.77	86.5	7.7	3.5 2.8	K	103	47.4	
DRP90L4	2 72.6	1740	5.7	2.85	2.25	0.77	86.5	7.5	3.4 3.0	K	103	47.4	
DRP112M4	3 105	1765	7.5	3.75	3	0.82	89.5	8.6	2.5 1.9	K	346	91.5	
DRP132S4	5 177	1765	12.4	6.2	4.95	0.83	90.2	8.6	2.4 2.1	K	451	102	
DRP160S4	7.5 261	1775	18.5	9.3	7.4	0.81	91.7	8.9	3.4 2.5	K	878	176	
DRP160S4	10 358	1770	25	12.6	10.1	0.82	91.7	8.1	3.1 2.3	K	878	176	
DRP160M4	12.5 438	1770	30.5	15.4	12.3	0.82	91.7	8.2	3.5 2.6	K	1068	196	
DRP160MC4	15 522	1780	37	18.4	14.7	0.81	92.4	8.9	3.3 2.5	K	1401	207	
DRP180M4	20 717	1775	47	23.5	18.8	0.86	93.0	7.9	2.9 2.1	J	2636	304	
DRP180L4	25 885	1775	58	29	23.5	0.85	93.6	8.2	3 2.4	J	3087	335	
DRP180LC4	30 1044	1780	69	34.5	27.5	0.86	93.6	8.8	3.2 2.6	K	3990	355	
DRP225S4	40 1425	1782	95	47.5	38	0.84	94.1	8.3	3.3 2.5	J	6958	639	
DRP225M4	50 1752	1783	118	59	47	0.84	94.5	8.6	3.4 2.4	K	8146	694	

1) Efficiency levels according to IEC 60034-2-1 Ed. 1 (2007) / PLL from Residual Losses, NEMA MG1 and/or DoE

2) Applies for foot-mounted motor (DRP.../FL...)

US DoE CC056A applies to DRE, DRP and DVE motors

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Motor type	$\frac{P_N}{T_N}$ [HP] [lb-in]	n_N [rpm]	BE..	T_B [lb-in] ³⁾	Z_0 BG ¹⁾ BGE ²⁾ [1/h]	J_{Mot_BE} [10 ⁻³ lb-ft ²]	m_{BE} [lb] ⁴⁾
DRP90M4	1 36.3	1750	BE1	88	2400 6400	87.8	49.6
DRP90L4	1.5 53.1	1740	BE2	124	2400 6400	115	57.3
DRP90L4	2 72.6	1740	BE2	177	2400 6400	115	57.3
DRP112M4	3 105	1765	BE5	248	- 2400	358	110
DRP132S4	5 177	1765	BE5	354	- 2200	463	121
DRP160S4	7.5 261	1775	BE11	708	- 1100	926	216
DRP160S4	10 358	1770	BE11	708	- 1100	926	216
DRP160M4	12.5 438	1770	BE11	974	- 1000	1116	235
DRP160MC4	15 522	1780	BE20	1328	- 900	1520	264
DRP180M4	20 717	1775	BE20	1770	- 800	2778	374
DRP180L4	25 885	1775	BE20	1770	- 590	3230	405
DRP180LC4	30 1044	1780	BE30	2655	- 520	4322	441
DRP225S4	40 1425	1782	BE30 BE32	2655 ⁵⁾ 3540 ⁶⁾	- 320	7291 7505	727 761
DRP225M4	50 1752	1783	BE30 BE32	2655 ⁵⁾ 4425 ⁶⁾	- 270	8479 8692	782 815

- 1) Operation with BG brake control system
- 2) Operation with BGE brake control system
- 3) Standard braking torque for IEC brakemotor
- 4) Applies for foot-mounted motor (DRP..BE../FI..)
- 5) Alternate reduced brake torque
- 6) Double-disc brake

US DoE CC056A applies to DRE, DRP and DVE motors



14.6 Technical data of 6-pole high and premium efficiency motors

1200 rpm - S1

Motor type	$\frac{P_N}{T_N}$ [HP] [lb-in]	n_N [rpm]	I_N			$\cos\varphi$	$\eta_{100\%}$ [%] ¹⁾	I_A/I_N	$\frac{T_A/T_N}{T_H/T_N}$	Code Letter	J_{Mot} [10 ⁻³ lb-ft ²]	m [lb] ²⁾
			230V	460V	575V							
DRS71S6 ³⁾	0.25 13.8	1100	0.95	0.82	0.66	0.71	67	3.2	1.7 1.7	E	19.2	17.1
DRS71S6 ³⁾	0.33 19	1100	1.3	0.65	0.52	0.71	66.0	3.2	1.7 1.7	F	19.2	17.1
DRS71M6 ³⁾	0.5 28.3	1100	1.8	0.9	0.72	0.72	70.0	3.5	1.9 1.9	F	27.7	20.1
DRS80S6 ³⁾	0.75 41.6	1120	2.65	1.32	1.06	0.71	72.0	3.9	1.8 1.8	F	35.3	25.3
DRE90L6	1 55.8	1145	3.6	1.8	1.44	0.64	81.5	5.1	2.4 2.4	J	103	47.4
DRP100M6	1 54.9	1155	3.78	1.89	1.51	0.61	82.5	5.4	3.2 3.1	K	133	57.3

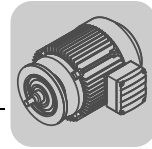
1) Efficiency levels according to IEC 60034-2-1 Ed. 1 (2007) / PLL from Residual Losses, NEMA MG1 and/or DoE

2) Applies for foot-mounted motor (DRS, DRE and DRP.../FL..)

3) Standard efficiency motor

US DoE CC056A applies to DRE, DRP and DVE motors

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Motor type	$\frac{P_N}{T_N}$	n_N [rpm]	BE..	T_B [lb-in] ³⁾	Z_0	J_{MOT_BE} [10 ⁻³ lb-ft ²]	m_{BE} [lb] ⁴⁾
	[HP] [lb-in]				BG ¹⁾ BGE ²⁾		
DRS71S6⁵⁾	0.25 13.8	1100	BE05	31	5600 12800	22.3	22.4
DRS71S6⁵⁾	0.33 19	1100	BE05	44	5600 12800	22.3	22.4
DRS71M6⁵⁾	0.5 28.3	1100	BE1	88	5280 12000	30.8	25.7
DRS80S6⁵⁾	0.75 41.6	1120	BE2	124	4800 11200	46	33.5
DRE90L6	1 55.8	1145	BE2	177	2800 6400	114	57.3
DRP100M6	1 54.9	1155	BE2	177	- 5600	143	67.3

- 1) Operation with BG brake control system
- 2) Operation with BGE brake control system
- 3) Standard braking torque for IEC brakemotor
- 4) Applies for foot-mounted motor (DRS, DRE and DRP..BE../FI..)
- 5) Standard efficiency motor

US DoE CC056A applies to DRE, DRP and DVE motors

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AC Brakemotors – Technical Data

Technical data for pole-changing motors DRS..8/2, 8/4

14.7 Technical data for pole-changing motors DRS..8/2, 8/4

900/3600 - S3 - 40/60% cdf

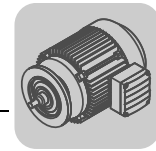
Motor type	P_N	n_N	I_N			$\cos\varphi$	$\eta_{100\%}$	I_A/I_N	T_A/T_N		Code Letter	J_{Mot}	m
	T_N		230V	460V	575V				T_H/T_N				
	[HP] [lb-in]	[rpm]	[A]				[%] ¹⁾				[10 ⁻³ lb-ft ²]	[lb] ²⁾	
DRS71S8/2	0.08 5.9	850	0.86	0.43	0.35	0.54	32.4	1.9	1.9 1.8	J	11.6	17.1	
	0.34 6.0	3470	1.52	0.76	0.61	0.69	59.5	4.2	2.3 1.6				
DRS71M8/2	0.14 10.1	840	1.26	0.63	0.5	0.54	36.9	1.9	1.8 1.8	G	16.8	20	
	0.54 9.8	3450	2.05	1.02	0.82	0.65	75.5	3.8	2.2 1.6				
DRS80S8/2	0.2 15.5	820	1.56	0.78	0.62	0.53	45.5	2.2	1.8 1.8	E	35.3	25.3	
	0.82 15.3	3315	2.55	1.27	1.02	0.88	66	3.9	2.5 2.2				
DRS80M8/2	0.3 22.1	840	1.98	0.99	0.79	0.54	51.7	2.2	1.8 1.8	G	50.8	31.5	
	1.2 22.7	3360	3.55	1.78	1.42	0.87	72	5.1	2.8 2.5				
DRS90M8/2	0.4 29.5	860	2.45	1.23	0.98	0.51	59.5	2.8	1.5 1.4	H	84	40.5	
	1.8 31.5	3490	5.4	2.7	2.15	0.81	74	5.7	2.2 1.7				
DRS90L8/2	0.6 44.3	860	3.75	1.87	1.5	0.51	57.5	2.7	1.5 1.5	H	103	47.4	
	2.4 43.5	3490	7.5	3.75	3	0.82	72	5.5	2.1 1.9				
DRS100M8/2	0.8 58.9	860	4.8	2.4	1.92	0.53	59.5	2.9	1.6 1.6	K	133	57.3	
	3.3 57.8	3510	8.6	4.3	3.45	0.86	81.5	7.9	2.8 2.0				
DRS112M8/2	1.1 78.1	865	6	3	2.4	0.50	66	3	1.4 1.4	G	346	91.5	
	4 75.7	3350	11.8	5.9	4.7	0.86	72	5	3.1 1.8				
DRS132M8/2	1.5 108	860	7.2	3.6	2.9	0.54	70	3.3	1.4 1.4	H	600	132	
	6.3 115	3390	16.2	8.1	6.5	0.92	77	6.5	3.1 1.8				

1) Efficiency levels according to IEC 60034-2-1 Ed. 1 (2007) / PLL from Residual Losses, NEMA MG1 and/or DoE

2) Applies for foot-mounted motor (DRS and DRE.../FL..)

US DoE CC056A applies to DRE, DRP and DVE motors

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Motor type	$\frac{P_N}{T_N}$ [HP] [lb-in]	n_N [rpm]	BE..	T_B [lb-in] ³⁾	Z_0 BG ¹⁾ BGE ²⁾ [1/h]	J_{Mot_BE} [10 ⁻³ lb-ft ²]	m_{BE} [lb] ⁴⁾
DRS71S8/2	.08 5.9	850	BE05	15	12000 16000	14.7	22.4
	0.34 6.0	3470			4800 7200		
DRS71M8/2	0.14 10.1	840	BE05	31	11200 14400	20	25.3
	0.54 9.8	3450			4800 6400		
DRS80S8/2	0.2 15.5	820	BE05	44	6400 11200	39	31.3
	0.82 15.3	3315			3040 4000		
DRS80M8/2	0.3 22.1	840	BE1	62	6400 11200	54.4	38.1
	1.2 22.7	3360			2400 3200		
DRS90M8/2	0.4 29.5	860	BE1	88	5600 8800	87.6	49.6
	1.8 31.5	3490			1840 2800		
DRS90L8/2	0.6 44.3	860	BE2	124	4000 8000	115	57.3
	2.4 43.5	3490			1360 2640		
DRS100M8/2	0.8 58.9	860	BE2	177	3200 7200	144	67.2
	3.3 57.8	3510			1360 2080		
DRS112M8/2	1.1 78.1	865	BE5	248	- 5600	358	110
	4 75.7	3350			- 1200		
DRS132M8/2	1.5 108	860	BE5	354	- 4000	612	152
	6.3 115	3390			- 800		

- 1) Operation with BG brake control system
- 2) Operation with BGE brake control system
- 3) Standard braking torque for IEC brakemotor
- 4) Applies for foot-mounted motor (DRS and DRE..BE../F1..)

US DoE CC056A applies to DRE, DRP and DVE motors

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AC Brakemotors – Technical Data

Technical data for pole-changing motors DRS..8/2, 8/4

900/1800 - S1

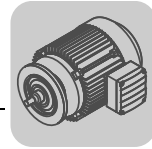
Motor type	$\frac{P_N}{T_N}$ [HP] [lb-in]	n_N [rpm]	I_N			$\cos\varphi$	$\eta_{100\%}$ [%] ¹⁾	I_A/I_N	$\frac{T_A}{T_N}$		Code Letter	J_{Mot} [10 ⁻³ lb-ft ²]	m [lb] ²⁾
			230V	460V	575V				T_H/T_N	T_L/T_N			
DRS112M8/4	1.6 120	840	7.1	3.55	2.85	0.57	74	3.6	1.9 1.9	H	346	91.5	
	3 109	1700	8.1	4.05	3.25	0.86	80	5.9	2.5 2.0				
DRS132S8/4	2.2 161	840	9.3	4.65	3.7	0.56	75.5	3.7	1.9 1.9	G	451	97	
	4.5 164	1690	11.8	5.9	3.3	0.87	80	5.7	2.3 1.9				
DRS132M8/4	2.9 211	840	11.7	5.8	4.65	0.58	77	3.7	1.8 1.8	G	600	132	
	5.7 208	1700	14.7	7.3	5.9	0.87	82.5	5.9	2.3 1.9				
DRS160S8/4	3.7 257	885	15.7	7.9	6.3	0.54	81.5	3.8	2.3 2.0	J	878	176	
	7.5 262	1770	19	9.5	7.6	0.83	86.5	7.1	2.1 1.5				
DRS160M8/4	5.2 364	880	21.5	10.7	8.5	0.54	81.5	4.5	2.2 1.9	J	1064	202	
	10 358	1770	25.5	12.8	10.3	0.84	86.5	7	2.1 1.4				
DRS180S8/4	7.5 528	880	28.5	14.2	11.4	0.57	85.5	4.4	2.4 2.0	G	2125	269	
	13.5 478	1765	32.5	16.3	13	0.87	88.5	6.2	1.9 1.4				
DRS180L8/4	10 715	885	36.5	18.3	14.7	0.58	88.5	4.7	2.5 2.0	G	3087	335	
	20 718	1765	47.5	23.5	19	0.88	90.2	6.1	1.9 1.4				
DRS200L8/4	15 1044	890	59	29.5	23.5	0.55	87.5	4.3	2.7 1.6	F	5605	573	
	30 1044	1775	73	36.5	29	0.84	90.2	5.6	2.1 1.6				
DRS225S8/4	19 1327	890	74	37	29.5	0.55	88.5	4.4	2.7 1.6	F	6958	650	
	38 1336	1775	91	45.5	36.5	0.85	91	5.7	2.2 1.6				
DRS225M8/4	25 1716	885	91	45.5	36.5	0.56	88.5	4.3	2.6 1.6	F	8146	694	
	46 1610	1780	110	55	44	0.86	91.7	5.8	2.2 1.6				

1) Efficiency levels according to IEC 60034-2-1 Ed. 1 (2007) / PLL from Residual Losses, NEMA MG1 and/or DoE

2) Applies for foot-mounted motor (DRS and DRE.../FL..)

US DoE CC056A applies to DRE, DRP and DVE motors

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Motor type	P_N T_N	n_N [rpm]	BE..	T_B [lb-in] ³⁾	Z_0 BG ¹⁾ BGE ²⁾	J_{Mot_BE} [10 ⁻³ lb-ft ²]	m_{BE} [lb] ⁴⁾
	[HP] [lb-in]				[1/h]		
DRS112M8/4	1.6 120	840	BE5	354	- 3040	359	110
	3 109	1700			- 1440		
DRS132S8/4	2.2 161	840	BE5	487	- 2400	463	116
	4.5 164	1690			- 1280		
DRS132M8/4	2.9 211	840	BE11	708	- 2400	627	165
	5.7 208	1700			- 1200		
DRS160S8/4	3.7 257	885	BE11	708	- 2080	931	216
	7.5 262	1770			- 1120		
DRS160M8/4	5.2 364	880	BE11	974	- 1520	1116	242
	10 358	1770			- 1040		
DRS180S8/4	7.5 528	880	BE20	1328	- 1280	2268	339
	13.5 478	1765			- 960		
DRS180L8/4	10 715	885	BE20	1770	- 880	3230	405
	20 718	1765			- 720		
DRS200L8/4	15 1044	890	BE30	2655	- 720	5926	683
	30 1044	1775			- 560		
DRS225S8/4	19 1327	890	BE32	3540	- 560	7505	771
	38 1336	1775			- 400		
DRS225M8/4	25 1716	885	BE32	4425	- 480	8693	815
	46 1610	1780			- 360		

- 1) Operation with BG brake control system
- 2) Operation with BGE brake control system
- 3) Standard braking torque for IEC brakemotor
- 4) Applies for foot-mounted motor (DRS and DRE..BE../Fl..)

US DoE CC056A applies to DRE, DRP and DVE motors

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14.8 Technical data of DT56, DR63

3600 rpm- S1

Motor type	$\frac{P_N}{T_N}$	n_N	I_N			$\cos\phi$	$\eta_{100\%}$	I_A/I_N	$\frac{T_A/T_N}{T_H/T_N}$	Code letter	J_{Mot}		Z_0 BG ⁴⁾ BGE ⁵⁾	T_{Bmax}	$m^1)$	
	[hp] [lb-in]		[rpm]	230V	460V						575V	[A]			[10 ⁻³ lb-ft ²]	[1/h]
DR63S2	0.25 4.58	3320	0.78	0.39	0.31	0.88	65.8	4.6	2.4 2.2	G	8.54	11.4	4000 -	14	13.7	17.6
DR63M2	0.33 6.5	3260	1.14	0.57	0.46	0.86	64.6	3.5	2.2 1.9	E	8.54	11.4	3600 -	21	13.7	17.9
DR63L2	0.5 9.7	3250	1.6	0.80	0.64	0.87	66.7	3.8	2.1 1.9	E	10.4	13.3	3200 -	28	14.8	18.7

- 1) applies to flange motor
- 2) without brake
- 3) with brake
- 4) Operation with BG brake control system
- 5) Operation with BGE brake control system

1800 rpm - S1

Motor type	$\frac{P_N}{T_N}$	n_N	I_N			$\cos\phi$	$\eta_{100\%}$	I_A/I_N	$\frac{T_A/T_N}{T_H/T_N}$	Code letter	J_{Mot}		Z_0 BG ⁴⁾ BGE ⁵⁾	T_{Bmax}	$m^1)$	
	[hp] [lb-in]		[rpm]	230V	460V						575V	[A]			[10 ⁻³ lb-ft ²]	[1/h]
DT56M4	0.13 5.2	1640	0.57	0.29	0.23	0.65	67.8	3.0	2.4 2.0	E	2.61	2.85	8000 -	7	Only available with R..07.. or W..10.	
DT56L4	0.20 7.9	1600	0.82	0.41	0.33	0.70	65.6	2.8	2.2 2.0	E	2.85	2.85	8000 -	10.6		
DR63S4	0.16 6.0	1680	0.68	0.34	0.27	0.69	64.2	3.6	2.4 2.2	G	8.54	11.4	8000 -	21	13.4	16.8
DR63M4	0.25 9.4	1620	0.96	0.48	0.68	0.78	60.3	3.2	1.8 1.7	E	8.54	11.4	8000 -	28	13.4	16.8
DR63L4	0.33 13.2	1600	1.20	0.60	0.48	0.81	65.1	3.1	1.8 1.7	D	10.4	13.3	8000 -	28	14.8	18.1

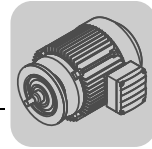
- 1) applies to flange motor
- 2) without brake
- 3) with brake
- 4) Operation with BG brake control system
- 5) Operation with BGE brake control system

1200 rpm - S1

Motor type	$\frac{P_N}{T_N}$	n_N	I_N			$\cos\phi$	$\eta_{100\%}$	I_A/I_N	$\frac{T_A/T_N}{T_H/T_N}$	Code letter	J_{Mot}		Z_0 BG ⁴⁾ BGE ⁵⁾	T_{Bmax}	$m^1)$	
	[hp] [lb-in]		[rpm]	230V	460V						575V	[A]			[10 ⁻³ lb-ft ²]	[1/h]
DR63S6	0.12 6.9	1100	0.66	0.33	0.26	0.64	53.5	2.2	1.8 1.6	E	12.8	15.7	16000 -	22	13.2	16.5
DR63M6	0.16 9.2	1100	1.00	0.50	0.40	0.65	46.3	2.1	1.8 1.7	E	12.8	15.7	16000 -	28	13.2	16.5
DR63L6	0.25 14.3	1070	1.36	0.68	0.54	0.70	47.8	2.2	1.6 1.5	E	12.8	15.7	16000 -	28	14.6	17.9

- 1) applies to flange motor
- 2) without brake
- 3) with brake
- 4) Operation with BG brake control system
- 5) Operation with BGE brake control system

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15 Abbreviation Key and Index

15.1 Abbreviation key

a, b, f	Constants for converting overhung loads	[in]
c	Constant for converting overhung loads	[lb-in]
cosφ	Power factor of the motor	
F _A	Axial load on the output shaft	[lb]
f _B	Service factor	
f _{supply}	Mains frequency	[Hz]
F _R	Overhung load on the output shaft	[lb]
f _T , f _H	Power reduction factors of the motor	
f _Z	Transmission element factor for determining the overhung load	
H	Installation altitude	[ft]
η	Forward efficiency	
η'	Retrodriving efficiency	
η _{75%/100%}	Efficiency of the motor at 75%/100% nominal load	
I _A /I _N	Ratio betw. starting current and nominal current of the motor	
I _N	Nominal current	[A]
IP..	Degree of protection	
i _{ges}	Total gear ratio	
i _{sch}	Ratio of the helical-worm gear stage	
ϑ _{Umg}	Ambient temperature	[°F]
J _{Last}	Mass moment of inertia to be driven	[lb-ft ²]
J _{Mot}	Mass moment of inertia of the motor	[lb-ft ²]
J _X	Mass moment of inertia scaled down to the motor shaft	[lb-ft ²]
J _Z	Mass moment of inertia of the flywheel fan	[lb-ft ²]
T _a	Output torque	[lb-in]
T _B	Braking torque	[lb-in]
T _H /T _N	Ratio between acceleration torque and rated torque of the motor	
T _A /T _N	Ratio between run-up torque and rated torque of the motor	
n _a	Output speed	[rpm]
n _e	Input speed	[rpm]
n _M	Motor speed	[rpm]
n _N	Rated speed	[rpm]
P _a	Output power	[HP]
P _e	Calculated drive power of the gear unit	[HP]
P _N	Rated power	[HP]
S.., % ED	Duty type and cyclic duration factor cdf	
T	Duty cycle time	[min]
t1	Brake response time	[10 ⁻³ s]
t2	Brake application time	[10 ⁻³ s]
U _{Brake}	Operating voltage of the brake	[V]
U _{Mot}	Operating voltage of the motor	[V]
Z	Starting frequency	[1/h], [c/h]
Z ₀	No-load starting frequency	[1/h], [c/h]



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Croatia			
Sales Service	Zagreb	KOMPEKS d. o. o. PIT Erdödy 4 II HR 10 000 Zagreb	Tel. +385 1 4613-158 Fax +385 1 4613-158 kompeks@inet.hr
Czech Republic			
Sales	Praha	SEW-EURODRIVE CZ S.R.O. Business Centrum Praha Lužná 591 CZ-16000 Praha 6 - Vokovice	Tel. +420 255 709 601 Fax +420 220 121 237 http://www.sew-eurodrive.cz sew@sew-eurodrive.cz
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	Plzeň	SEW-EURODRIVE CZ S.R.O. Areal KRPA a.s. Zahradní 173/2 CZ-32600 Plzeň	Tel. +420 378775300 Fax +420 377970710
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Egypt			
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Service	Sharjah	Copam Middle East (FZC) Sharjah Airport International Free Zone P.O. Box 120709 Sharjah United Arab Emirates	Tel. +971 6 5578-488 Fax +971 6 5578-499 copam_me@eim.ae
Estonia			
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Finland			
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	Rovaniemi	SEW-EURODRIVE OY Valtakatu 4 A FIN-96100 Rovaniemi	Tel. +358 201 589-300 Fax +358 201 589-239 sew@sew.fi
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France			
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	Bretagne	SEW-USOCOME Le bois Foucaud F-44270 Saint Mème Le Tenu	Tel. +33 2 28 21 12 52 Fax +33 2 28 21 12 84
	Centre / Poitou	SEW-USOCOME 18 avenue André Ampère Appartement 14 F-37540 Saint Cyr sur Loire	Tel. +33 2 47 41 33 23 Fax +33 2 47 41 34 03
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Greece			
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Iceland			
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India			
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	Pune	SEW-EURODRIVE India Private Limited Lunawat Prism 4th floor, S. No. 148, Neena Co-Operative Housing Society, Paud Road, Pune 411038 - Maharashtra	Tel. +91 20 25380730 / 735 Fax +91 20 25380721 salespune@seweurodriveindia.com praveen.hosur@seweurodriveindia.com
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Italy			
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	Caserta	SEW-EURODRIVE di R. Blickle & Co.s.a.s. Viale Carlo III Km. 23,300 I-81020 S. Nicola la Strada (Caserta)	Tel. +39 0823 219011 Fax +39 0823 421414
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Japan			
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Technical Offices	Fukuoka	SEW-EURODRIVE JAPAN CO., LTD. C-go, 5th-floor, Yakuin-Hiruzu-Bldg. 1-5-11, Yakuin, Chuo-ku Fukuoka, 810-0022	Tel. +81 92 713-6955 Fax +81 92 713-6860 sewkyushu@jasmine.ocn.ne.jp
	Osaka	SEW-EURODRIVE JAPAN CO., LTD. Higobashi Shimizu Bldg. 10th flor 1-3-7 Tosabori, Nishi-ku Osaka, 550-0001	Tel. +81 6 6444--8330 Fax +81 6 6444--8338 sewosaka@crocus.ocn.ne.jp
	Tokyo	SEW-EURODRIVE JAPAN CO., LTD. Omarimon Yusen Bldg. 13th floor 3-23-5 Nishinbashi, Minato-ku Tokyo 105-0003	Tel. +81 3 3239-0469 Fax +81 3 3239-0943 sewtokyo@basil.ocn.ne.jp
Korea			
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	Beirut	Middle East Drives S.A.L. (offshore) Sin El Fil. B. P. 55-378 Beirut	Tel. +961 1 494 786 Fax +961 1 494 971 philipppe.acar@medrives.com
Lithuania			
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Luxembourg			
Assembly Sales Service	Brüssel	CARON-VECTOR S.A. Avenue Eiffel 5 B-1300 Wavre	Tel. +32 10 231-311 Fax +32 10 231-336 http://www.sew-eurodrive.lu info@caron-vector.be
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Assembly Sales Service	Rotterdam	VECTOR Aandrijftechniek B.V. Industrieweg 175 NL-3044 AS Rotterdam Postbus 10085 NL-3004 AB Rotterdam	Tel. +31 10 4463-700 Fax +31 10 4155-552 http://www.vector.nu info@vector.nu
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	Christchurch	SEW-EURODRIVE NEW ZEALAND LTD. 10 Settlers Crescent, Ferrymead Christchurch	Tel. +64 3 384-6251 Fax +64 3 384-6455 sales@sew-eurodrive.co.nz
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Peru			
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		24 Hour Service	Tel. +48 602 739 739 (+48 602 SEW SEW) sewis@sew-eurodrive.pl
Technical Office	Tychy	SEW-EURODRIVE Polska Sp.z.o.o. ul. Nad Jeziozem 87 PL-43-100 Tychy	Tel. +48 32 32 32 610 Fax +48 32 32 32 649
	Bydgoszcz	SEW-EURODRIVE Polska Sp.z.o.o. ul. Fordońska 246 PL-85-959 Bydgoszcz	Tel. +48 52 3606590 Fax +48 52 3606591
	Poznan	SEW-EURODRIVE Polska Sp.z.o.o. ul. Romana Maya 1 PL-61-371 Poznań	Tel. +48 61 8741640 Fax +48 61 8741641
	Szczecinek	SEW-EURODRIVE Polska Sp.z.o.o. ul. Mickiewicza 2 pok. 36 PL-78-400 Szczecinek	Tel. +48 94 3728820 Fax +48 94 3728821
Portugal			
Assembly Sales Service	Coimbra	SEW-EURODRIVE, LDA. Apartado 15 P-3050-901 Mealhada	Tel. +351 231 20 9670 Fax +351 231 20 3685 http://www.sew-eurodrive.pt infosew@sew-eurodrive.pt
Technical Offices	Lisboa	SEW-EURODRIVE, LDA. Núcleo Empresarial I de São Julião do Tojal Rua de Entremuros, 54 Fracção I P-2660-533 São Julião do Tojal	Tel. +351 21 958-0198 Fax +351 21 958-0245 esc.lisboa@sew-eurodrive.pt
	Porto	SEW-EURODRIVE, LDA. Av. 25 de Abril, 68 4440-502 Valongo	Tel. +351 229 350 383 Fax +351 229 350 384 MobilTel. +351 9 32559110 esc.porto@sew-eurodrive.pt
Romania			
Sales Service	Bucureşti	Sialco Trading SRL str. Madrid nr.4 011785 Bucureşti	Tel. +40 21 230-1328 Fax +40 21 230-7170 sialco@sialco.ro

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Russia			
Assembly Sales Service	St. Petersburg	ZAO SEW-EURODRIVE P.O. Box 36 195220 St. Petersburg Russia	Tel. +7 812 3332522 +7 812 5357142 Fax +7 812 3332523 http://www.sew-eurodrive.ru sew@sew-eurodrive.ru
Technical Office	Yekaterinburg	ZAO SEW-EURODRIVE Kominterna Str. 16 Office 614 RUS-620078 Ekaterinburg	Tel. +7 343 310 3977 Fax +7 343 310 3978 eso@sew-eurodrive.ru
	Irkutsk	ZAO SEW-EURODRIVE 5-Armii Str., 31 RUS-664011 Irkutsk	Tel. +7 3952 25 5880 Fax +7 3952 25 5881 iso@sew-eurodrive.ru
	Moskau	ZAO SEW-EURODRIVE RUS-107023 Moskau	Tel. +7 495 9337090 Fax +7 495 9337094 mso@sew-eurodrive.ru
	Novosibirsk	ZAO SEW-EURODRIVE pr. K Marksa, d.30 RUS-630087 Novosibirsk	Tel. +7 383 3350200 Fax +7 383 3462544 nso@sew-eurodrive.ru
	Togliatti	ZAO SEW-EURODRIVE Sportivnaya Str. 4B, office 2 Samarskaya obl. RUS-445057 Togliatti	Tel. +7 8482 710529 Fax +7 8482 810590
Senegal			
Sales	Dakar	SENEMECA Mécanique Générale Km 8, Route de Rufisque B.P. 3251, Dakar	Tel. +221 338 494 770 Fax +221 338 494 771 senemeca@sentoo.sn
Serbia			
Sales	Beograd	DIPAR d.o.o. Ustanicka 128a PC Košum, IV floor SCG-11000 Beograd	Tel. +381 11 347 3244 / +381 11 288 0393 Fax +381 11 347 1337 office@dipar.co.yu
Singapore			
Assembly Sales Service	Singapore	SEW-EURODRIVE PTE. LTD. No 9, Tuas Drive 2 Jurong Industrial Estate Singapore 638644	Tel. +65 68621701 Fax +65 68612827 http://www.sew-eurodrive.com.sg sewsingapore@sew-eurodrive.com
Slovakia			
Sales	Bratislava	SEW-Eurodrive SK s.r.o. Rybničná 40 SK-831 06 Bratislava	Tel. +421 2 33595 202 Fax +421 2 33595 200 sew@sew-eurodrive.sk http://www.sew-eurodrive.sk
	Žilina	SEW-Eurodrive SK s.r.o. Industry Park - PChZ ulica M.R.Štefánika 71 SK-010 01 Žilina	Tel. +421 41 700 2513 Fax +421 41 700 2514 sew@sew-eurodrive.sk
	Banská Bystrica	SEW-Eurodrive SK s.r.o. Rudlovská cesta 85 SK-974 11 Banská Bystrica	Tel. +421 48 414 6564 Fax +421 48 414 6566 sew@sew-eurodrive.sk
	Košice	SEW-Eurodrive SK s.r.o. Slovenská ulica 26 SK-040 01 Košice	Tel. +421 55 671 2245 Fax +421 55 671 2254 sew@sew-eurodrive.sk

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Slovenia			
Sales Service	Celje	Pakman - Pogonska Tehnika d.o.o. Ul. XIV. divizije 14 SLO - 3000 Celje	Tel. +386 3 490 83-20 Fax +386 3 490 83-21 pakman@siol.net
South Africa			
Assembly Sales Service	Johannesburg	SEW-EURODRIVE (PROPRIETARY) LIMITED Eurodrive House Cnr. Adcock Ingram and Aerodrome Roads Aeroton Ext. 2 Johannesburg 2013 P.O.Box 90004 Bertsham 2013	Tel. +27 11 248-7000 Fax +27 11 494-3104 http://www.sew.co.za info@sew.co.za
	Cape Town	SEW-EURODRIVE (PROPRIETARY) LIMITED Rainbow Park Cnr. Racecourse & Omuramba Road Montague Gardens Cape Town P.O.Box 36556 Chempet 7442 Cape Town	Tel. +27 21 552-9820 Fax +27 21 552-9830 Telex 576 062 cfoster@sew.co.za
	Durban	SEW-EURODRIVE (PROPRIETARY) LIMITED 2 Monaceo Place Pinetown Durban P.O. Box 10433, Ashwood 3605	Tel. +27 31 700-3451 Fax +27 31 700-3847 hengela@sew.co.za
	Nelspruit	SEW-EURODRIVE (PTY) LTD. 7 Christie Crescent Vintonia P.O.Box 1942 Nelspruit 1200	Tel. +27 13 752-8007 Fax +27 13 752-8008 robermeyer@sew.co.za
Technical Offices	Port Elizabeth	SEW-EURODRIVE PTY LTD. 8 Ruan Access Park Old Cape Road Greenbushes 6000 Port Elizabeth	Tel. +27 41 3722246 Fax +27 41 3722247 dtait@sew.co.za
	Richards Bay	SEW-EURODRIVE PTY LTD. 103 Bulion Blvd Richards Bay P.O. Box 458 Richards Bay, 3900	Tel. +27 35 797-3805 Fax +27 35 797-3819 jswart@sew.co.za
Spain			
Assembly Sales Service	Bilbao	SEW-EURODRIVE ESPAÑA, S.L. Parque Tecnológico, Edificio, 302 E-48170 Zamudio (Vizcaya)	Tel. +34 94 43184-70 Fax +34 94 43184-71 http://www.sew-eurodrive.es sew.spain@sew-eurodrive.es
Technical Offices	Barcelona	Delegación Barcelona Avenida Francesc Maciá 40-44 Oficina 4.2 E-08208 Sabadell (Barcelona)	Tel. +34 93 7162200 Fax +34 93 7233007
	Lugo	Delegación Noroeste Apartado, 1003 E-27080 Lugo	Tel. +34 639 403348 Fax +34 982 202934
	Madrid	Delegación Madrid Gran Vía. 48-2° A-D E-28220 Majadahonda (Madrid)	Tel. +34 91 6342250 Fax +34 91 6340899
	Seville	MEB Pólogono Catonge, C/A Nave 2 - C E-41.077 Sevilla	Tel. +34 954 356 361 Fax +34 954 356 274 mebsa.sevilla@mebsa.com



Spain			
	Valencia	MEB Músico Andreu i Piqueres, 4 E-46.900 Torrente (Valencia)	Tel. +34 961 565 493 Fax +34 961 566 688 mebsa.valencia@mebsa.com
Sri Lanka			
Sales	Colombo	SM International (Pte) Ltd 254, Galle Raod Colombo 4, Sri Lanka	Tel. +94 1 2584887 Fax +94 1 2582981
Sweden			
Assembly Sales Service	Jönköping	SEW-EURODRIVE AB Gnejsvägen 6-8 S-55303 Jönköping Box 3100 S-55003 Jönköping	Tel. +46 36 3442 00 Fax +46 36 3442 80 http://www.sew-eurodrive.se jonkoping@sew.se
Sales	Göteborg	SEW-EURODRIVE AB Gustaf Werners gata 8 S-42132 Västra Frölunda	Tel. +46 31 70968 80 Fax +46 31 70968 93 goteborg@sew.se
	Stockholm	SEW-EURODRIVE AB Björkholmsvägen 10 S-14146 Huddinge	Tel. +46 8 44986 80 Fax +46 8 44986 93 stockholm@sew.se
	Malmö	SEW-EURODRIVE AB Borrgatan 5 S-21124 Malmö	Tel. +46 40 68064 80 Fax +46 40 68064 93 malmo@sew.se
	Skellefteå	SEW-EURODRIVE AB Trädgårdsgatan 8 S-93131 Skellefteå	Tel. +46 910 7153 80 Fax +46 910 7153 93 skelleftea@sew.se
Switzerland			
Assembly Sales Service	Basel	Alfred Imhof A.G. Jurastrasse 10 CH-4142 Münchenstein bei Basel	Tel. +41 61 417 1717 Fax +41 61 417 1700 http://www.imhof-sew.ch info@imhof-sew.ch
Technical Offices	Rhaetian Switzerland	André Gerber Es Perreyres CH-1436 Chamblon	Tel. +41 24 445 3850 Fax +41 24 445 4887
	Bern / Solothurn	Rudolf Bühler Muntersweg 5 CH-2540 Grenchen	Tel. +41 32 652 2339 Fax +41 32 652 2331
	Central Switzerland and Ticino	Beat Lütolf Baumacher 11 CH-6244 Nebikon	Tel. +41 62 756 4780 Fax +41 62 756 4786
	Central Switzerland, Aargau	Armin Pfister Stierenweid CH-4950 Huttwill, BE	Tel. +41 62 962 54 55 Fax +41 62 962 54 56
	Zürich, Ticino	Gian-Michele Muletta Fischerstrasse 61 CH-8132 Egg bei Zürich	Tel. +41 44 994 81 15 Fax +41 44 994 81 16
	Bodensee and East Switzerland	Markus Künzle Eichweg 4 CH-9403 Goldach	Tel. +41 71 845 2808 Fax +41 71 845 2809
Taiwan (R.O.C.)			
Sales	Nan Tou	Ting Shou Trading Co., Ltd. No. 55 Kung Yeh N. Road Industrial District Nan Tou 540	Tel. +886 49 255353 Fax +886 49 257878

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Taiwan (R.O.C.)			
	Taipei	Ting Shou Trading Co., Ltd. 6F-3, No. 267, Sec. 2 Tung Hwa South Road, Taipei	Tel. +886 2 27383535 Fax +886 2 27368268 Telex 27 245 sewtwn@ms63.hinet.net
Thailand			
Assembly Sales Service	Chonburi	SEW-EURODRIVE (Thailand) Ltd. 700/456, Moo.7, Donhuaroh Muang Chonburi 20000	Tel. +66 38 454281 Fax +66 38 454288 sewthailand@sew-eurodrive.com
Technical Offices	Bangkok	SEW-EURODRIVE (Thailand) Ltd. 6th floor, TPS Building 1023, Phattanakarn Road Suanluang Bangkok, 10250	Tel. +66 2 7178149 Fax +66 2 7178152 sewthailand@sew-eurodrive.com
	Hadyai	SEW-EURODRIVE (Thailand) Ltd. Hadyai Country Home Condominium 59/101 Soi.17/1 Rachas-Utid Road. Hadyai, Songkhla 90110	Tel. +66 74 359441 Fax +66 74 359442 sewthailand@sew-eurodrive.com
	Khonkaen	SEW-EURODRIVE (Thailand) Ltd. 4th Floor, Kaow-U-HA MOTOR Bldg, 359/2, Mitraphab Road. Muang District Khonkaen 40000	Tel. +66 43 225745 Fax +66 43 324871 sew-thailand@sew-eurodrive.com
Tunisia			
Sales	Tunis	T. M.S. Technic Marketing Service Zone Industrielle Mghira 2 Lot No. 39 2082 Fouchana	Tel. +216 71 4340-64 + 71 4320-29 Fax +216 71 4329-76 tms@tms.com.tn
Turkey			
Assembly Sales Service	Istanbul	SEW-EURODRIVE Hareket Sistemleri San. ve Tic. Ltd. Sti. Bagdat Cad. Koruma Cikmazi No. 3 TR-34846 Maltepe ISTANBUL	Tel. +90 216 4419163 / 4419164 Fax +90 216 3055867 http://www.sew-eurodrive.com.tr sew@sew-eurodrive.com.tr
Technical Offices	Adana	SEW-EURODRIVE Hareket Sistemleri San. ve Tic. Ltd. Sti. Kizilay Caddesi 8 Sokak No 6 Dađtekin Is Merkezi Kat 4 Daire 2 TR-01170 SEYHAN / ADANA	Tel. +90 322 359 94 15 Fax +90 322 359 94 16
	Ankara	SEW-EURODRIVE Hareket Sistemleri San. ve Tic. Ltd. Sti. Özcelik Is Merkezi, 14. Sok, No. 4/42 TR-06370 Ostim/Ankara	Tel. +90 312 385 33 90 Fax +90 312 385 32 58
	Bursa	SEW-EURODRIVE Hareket Sistemleri San. ve Tic. Ltd. Sti. Üçevler Mah. Bayraktepe Sok. Akay İş Merkezi Kat:3 No: 7/6 TR Nilüfer/Bursa	Tel. +90 224 443 45 60 Fax +90 224 443 45 58
	Izmir	SEW-EURODRIVE Hareket Sistemleri San. ve Tic. Ltd. Sti. 1203/11 Sok. No. 4/613 Hasan Atli Is Merkezi TR-35110 Yenisehir-Izmir	Tel. +90 232 469 62 64 Fax +90 232 433 61 05

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Ukraine			
Sales Service	Dnepropetrovsk	SEW-EURODRIVE Str. Rabochaja 23-B, Office 409 49008 Dnepropetrovsk	Tel. +380 56 370 3211 Fax +380 56 372 2078 http://www.sew-eurodrive.ua sew@sew-eurodrive.ua
Sales	Kiev	SEW-EURODRIVE GmbH S. Oleynika str. 21 02068 Kiev	Tel. +380 44 503 95 77 Fax +380 44 503 95 78 kso@sew-eurodrive.ua
	Donetsk	SEW-EURODRIVE GmbH 25th anniversary of RKKA av. 1-B, of. 805 Donetsk 83000	Tel. +380 62 38 80 545 Fax +380 62 38 80 533 dso@sew-eurodrive.ua
Uruguay			
Sales	Montevideo	SEW-EURODRIVE Uruguay, S. A. Jose Serrato 3569 Esqina Corumbe CP 12000 Montevideo	Tel. +598 2 21181-89 Fax +598 2 21181-89 sewuy@sew-eurodrive.com.uy
Venezuela			
Assembly Sales Service	Valencia	SEW-EURODRIVE Venezuela S.A. Av. Norte Sur No. 3, Galpon 84-319 Zona Industrial Municipal Norte Valencia, Estado Carabobo	Tel. +58 241 832-9804 Fax +58 241 838-6275 http://www.sew-eurodrive.com.ve ventas@sew-eurodrive.com.ve sewfinanzas@cantv.net

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SEW-EURODRIVE, Inc. Terms and Conditions of Sale

1. GENERAL

All orders for products and drawings furnished in connection therewith (hereinafter collectively called "products") manufactured or supplied by SEW-Eurodrive, Inc. ("Eurodrive"), shall be subject to these terms and conditions of sale. No modifications or additions hereto will be binding unless agreed to in writing by an authorized officer of Eurodrive.

2. QUOTATIONS

Price quotations by Eurodrive are subject to change without notice. All products sold are subject to price in effect at time of shipment.

3. TAXES

Prices do not include Sales, Use, Excise, or other taxes payable to any governmental authority in respect of the sale of Eurodrive's products. The purchaser shall pay the amount of any such taxes or shall reimburse Eurodrive for the amount thereof that Eurodrive may be required to pay.

4. PAYMENTS

Unless otherwise provided, terms of payment are 30 days net from date of invoice for purchasers whose credit is approved. Eurodrive reserves the right to charge interest on any balance outstanding at 2% per month (or fraction thereof) or as Eurodrive shall determine, up to the maximum rate allowed by law, from the date payment is due to the date payment is actually received. Pro rata payments shall become due as shipments are made. If shipments are delayed by or at the request of the purchaser, payment shall become due when Eurodrive is prepared to make shipment. If the cost to Eurodrive of products is increased by reason of delays caused by the purchaser, such additional cost incurred by Eurodrive shall be paid by the purchaser. Eurodrive may, if it deems itself insecure by reason of the financial condition of purchaser or otherwise, require full or partial payment in advance and as a condition to the continuance of production or shipment on the terms specified herein.

5. ACCEPTANCE

No order or other offer shall be binding upon Eurodrive until accepted in writing by an authorized officer of Eurodrive.

6. CHANGES

Eurodrive will not accept changes in specification unless such changes are requested in writing and agreed to in writing by an authorized officer of Eurodrive and the purchaser agrees to pay, if necessary, in addition to the original purchase price a sum so set by Eurodrive.

7. CANCELLATION

Any order when placed with and accepted by Eurodrive is not subject to cancellation unless agreed to in writing by an authorized officer of Eurodrive. Cancellations are subject to reasonable charges based upon expenses already incurred and commitments made by Eurodrive.

8. DELIVERY

Any indicated dates of delivery are approximate only, but Eurodrive will attempt to meet them where possible. Eurodrive shall not be liable for delays in manufacturing or delivery or failure to manufacture or deliver due to any event in the nature of force majeure or any cause beyond Eurodrive's reasonable control. Eurodrive will not be bound by any penalty clause contained in any specification or order submitted by the purchaser unless such clause is agreed to in writing by an authorized officer of Eurodrive. Delivery of products shall be made FOB Eurodrive's factory unless otherwise agreed to in writing by authorized officer of Eurodrive.

9. PATENTS

Eurodrive shall indemnify and hold harmless the purchaser against all claims or actions that are instituted against the purchaser on the grounds that the purchaser has infringed the patent rights of others by using, reselling, or promoting the sale or resale of Eurodrive's products, provided that Eurodrive shall not be obligated hereunder if:

a) The purchaser fails to give Eurodrive prompt notice of any such claim or actions, or

b) Such claims or actions against the purchaser are based wholly or in part on the existence or operation of any complete installation or apparatus incorporating Eurodrive's products as components and which is designed or manufactured by the purchaser or its customers.

10. REGULATORY LAWS OR STANDARDS

Eurodrive makes no representation that its products conform to state or local laws, ordinances, regulations, codes or standards except as may be otherwise agreed to in writing by an authorized officer of Eurodrive.

11. LIMITED WARRANTY

Eurodrive warrants all its products against defects in material and workmanship for a period of one (1) year from the date the product is placed in service to a maximum of eighteen (18) months from date of shipment. Parts subject to replacement due to operational wear and tear, viz. Vargear belts and Varimot traction elements, are not covered by this Limited Warranty. Notwithstanding the foregoing, any equipment or components of the products not of Eurodrive's own manufacture and/or specified by the purchaser is sold under only such warranty as the maker thereof gives Eurodrive and Eurodrive is able to enforce, but such items are not warranted by Eurodrive in any way. Use of products above rated capacity, misuse

field alterations of products, damage due to lack of maintenance or improper storage, neglect or accident are also excluded from this Limited Warranty.

This Limited Warranty is effective provided:

a) The purchaser notifies Eurodrive in writing of the alleged defect immediately after it becomes known to the purchaser; and

b) no alterations, repairs, or services have been performed by the purchaser or third parties on the products without written approval of an authorized officer of Eurodrive.

Eurodrive's obligation under this Limited Warranty is limited to the repair or replacement FOB Eurodrive's factory or any part or parts found to be defective in material or workmanship.

Eurodrive shall, in no event, be liable to the user/purchaser under this Limited Warranty, or otherwise, for claims, expenditures or losses arising from operational delays or work stoppages or damages to property or people caused by defective products or for consequential or indirect damage of any nature whatsoever.

THIS LIMITED WARRANTY IS IN LIEU OF ALL OTHER EXPRESS OR IMPLIED WARRANTIES INCLUDING ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR ANY PARTICULAR PURPOSE.

12. ASSIGNMENT

No contract to purchase goods from Eurodrive may be assigned by the purchaser without prior agreement in writing by an authorized officer of Eurodrive.

13. SECURITY INTEREST

Unless and until the products are fully paid for, Eurodrive reserves a security interest in them to secure the unpaid balance of the price and all other obligations of the purchaser to Eurodrive however arising. The purchaser hereby grants Eurodrive a power of attorney to execute and file on behalf of purchaser all necessary financing statements and other similar documents required to protect the security interest granted herein.

14. DAMAGES; LIMITATION

In the event of breach of this agreement by Eurodrive, the rights of the purchaser are limited to the amount therefore paid to Eurodrive for the goods. **THE PURCHASER SHALL HAVE NO RIGHT TO CONSEQUENTIAL OR INDIRECT DAMAGES, WHETHER FOR INJURES TO PERSON, PROPERTY OR OTHERWISE.**

15. DEFAULT

If the purchaser defaults in performing any of its obligations to Eurodrive under this agreement, or any other agreements, Eurodrive may, at its option and without incurring any liability thereby, elect to terminate this agreement or to terminate any or all other agreements with the purchaser or to terminate this agreement together with any or all such other agreements. Furthermore, Eurodrive shall have a right to all damages sustained, including loss of profits.

16. INSOLVENCY

If the purchaser shall be insolvent or cease doing business or be the subject of any proceedings under any bankruptcy, insolvency, reorganization or arrangement statute or law, such act shall at the option of Eurodrive, be deemed a default under this agreement, and Eurodrive may elect to cease performing and cancel this agreement with respect to any products not delivered or received prior to the election. All of the foregoing shall be without prejudice to recovery by Eurodrive of damages for work performed and for loss of profits and material and products delivered.

17. CONFIDENTIALITY

Only officers of SEW Eurodrive have the authority to sign confidentiality agreements.

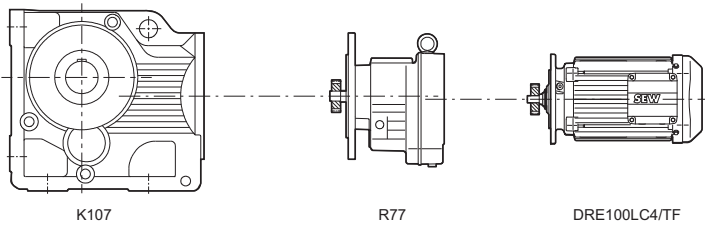
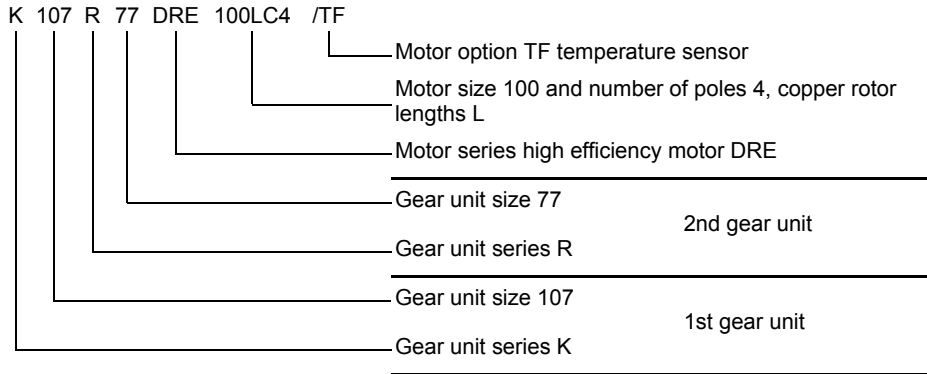
18. MISCELLANEOUS

The provisions of this agreement shall be governed and construed in accordance with the laws of the State of South Carolina. These terms and conditions set forth the entire understanding and agreement of the parties hereto in respect to the subject matter hereof, and all prior undertakings between the parties hereto, together with all representations and obligations of such parties in respect to such subject matter, shall be superseded by and merged into this agreement. No provisions hereof shall be waived, changed, terminated, modified, discharged or rescinded, orally or otherwise, except by a writing signed by the party to be charged by any such waiver, change, termination, modification, discharge, or rescission. No waiver of any breach of any provision of this agreement shall constitute an amendment or modification of this agreement, or any provision thereof. If any provision of this agreement shall be held to be unenforceable or inapplicable in any way or respect, such holding shall not affect the enforceability of any other provision of this agreement under any other circumstances. The provisions of this agreement shall bind and inure to the benefits of the parties hereto and their respective heirs, executors, administrators, successors, and (subject to any restrictions on assignment hereinabove set forth) assigns. In the event unspecified redress or commitments develop not covered above, terms of the Uniform Commercial Code under the laws of South Carolina will be construed as being effective as they may pertain.

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Order information for AC gearmotors

The following diagram shows an example of the technical information required for placing an order for geared motors. The data should be given in the order starting from the output side of the unit.



60442AXX

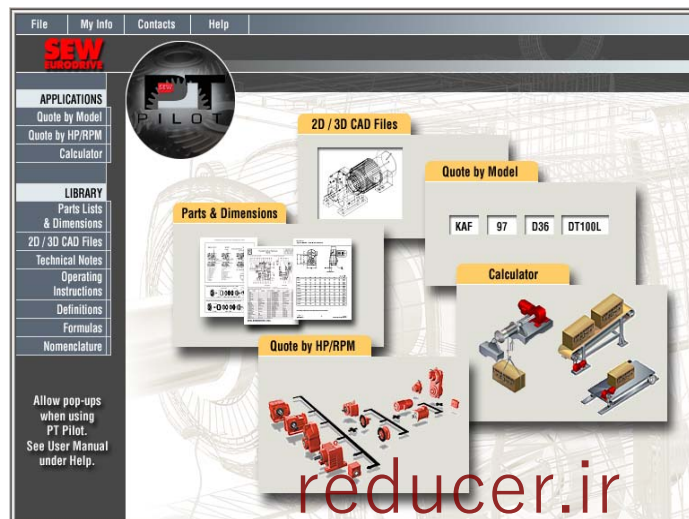
The following data is also required depending on gear unit series and type:

Type (examples)	Mounting position	Shaft at	Flange at	Position of terminal box	Cable entry	Direction of output rotation
K47DRS71S4/RS	M2	A	-	0°	"X"	CW
SF77DRE100M4	M6	AB	AB	90°	"3"	-
KA97DRE132S4	M4	B	-	270°	"2"	-
KH107DRE132M4	M1	A	-	180°	"3"	-
WF20DRS71M4	-	A	A	0°	"X"	-
KAF67A	M3	A	B	-	-	-

Drive selection using the electronic catalog from SEW-EURODRIVE

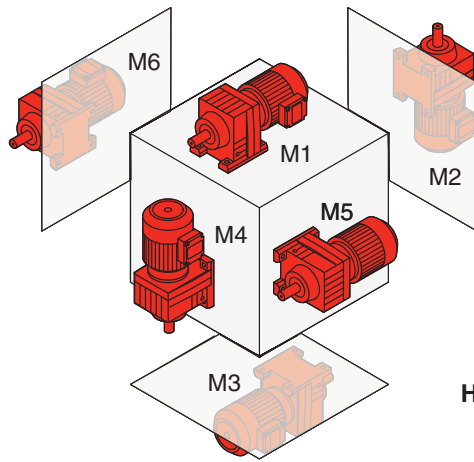
Selecting a custom gear unit or gearmotor is fast and easy. No installation or purchase is necessary. PT Pilot® is our cutting-edge internet selection tool with the following features:

DR-gearmotor

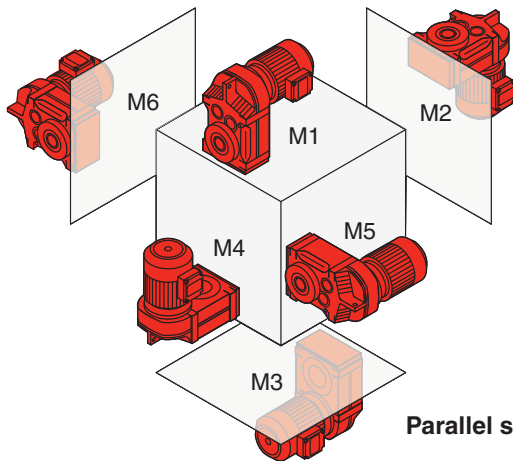
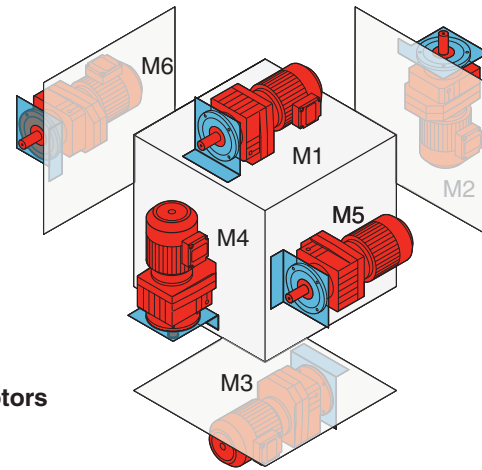


- Quotation with net price
- Online ordering
- Open/save quotations
- Open co-workers saved quotations
- Parts lists/dimensions
- 2D or 3D electronic CAD files
- Drive application calculator

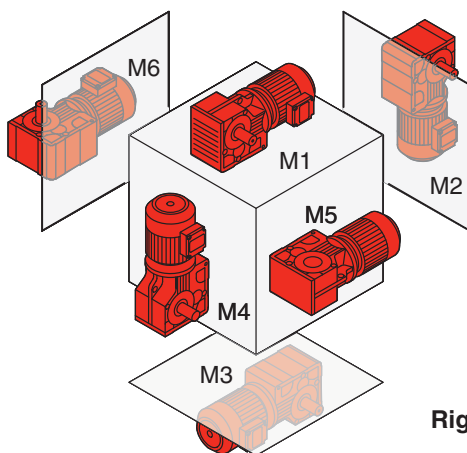
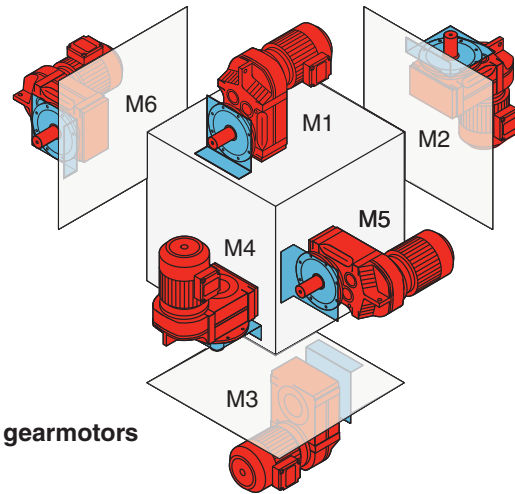
Overview of mounting positions*



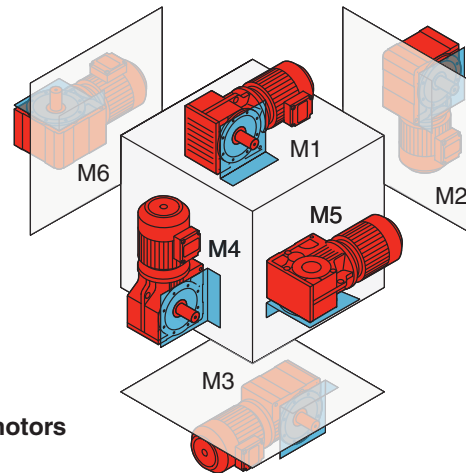
Helical gearmotors



Parallel shaft helical gearmotors



Right-angle gearmotors




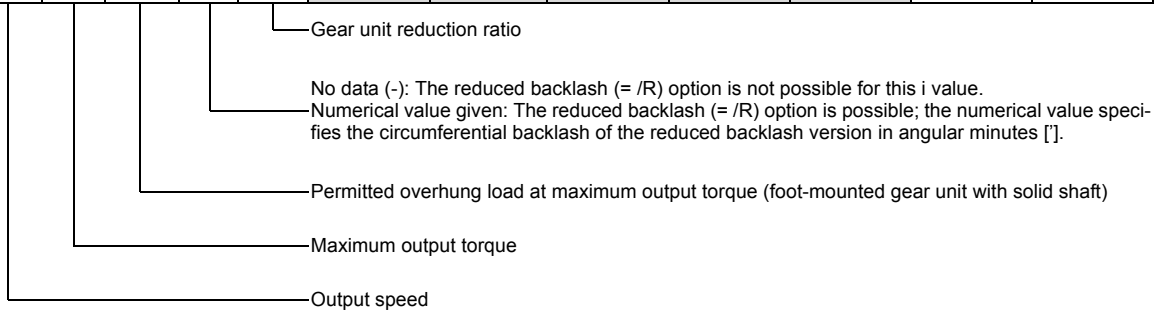
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* Refer to the main document for detailed information on mounting positions for SEW gearmotors.

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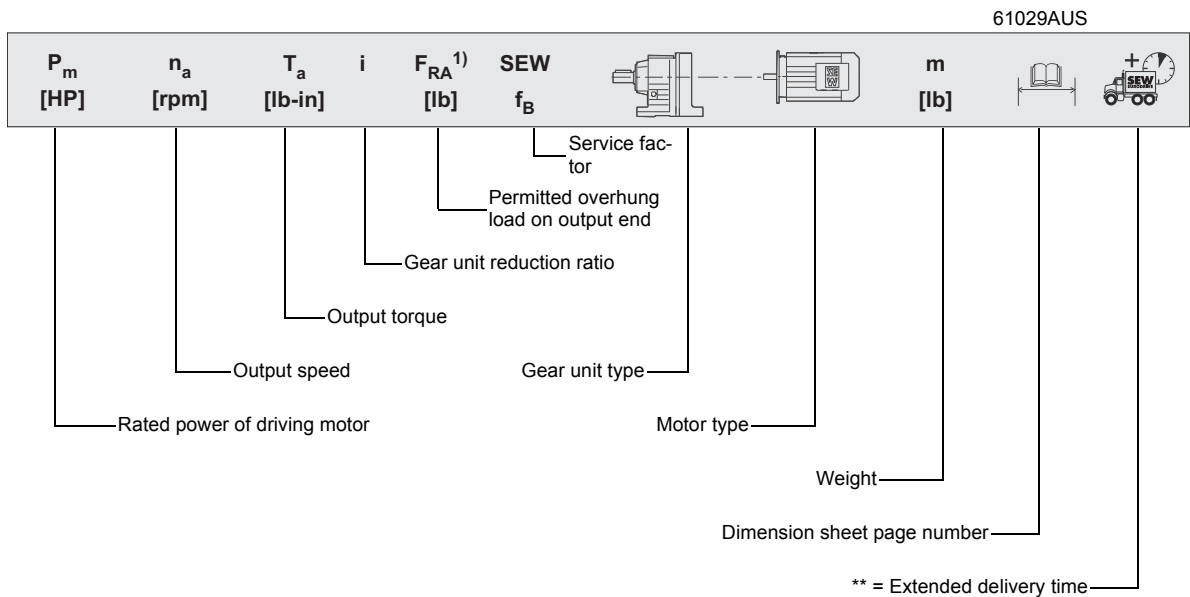
Geometrically possible combinations

R57, n _e = 1700 rpm						3980 lb-in					
n _a [rpm]	T _{amax} [lb-in]	F _{RA} [lb]	φ (/R) [']	i	DR63 DRS71S DRS71M	DRS80 DRE80M DRE90M	DRS90M DRE90L	DRS90L DRS100M DRE100M DRE100LC DRE112M	DRS100LC DRS112M DRE132S	DRS132S DRS132M DRE132M DRE132MC DRE160S	DRS132MC
					 2						
9.1	3980	1600	6.9	186.89							
9.9	3980	1600	6.9	172.17							
11	3980	1600	6.9	147.92							
13	3980	1600	6.9	128.77							



	Combination with the motor in the header is possible .
	Combination with the motor in the header is not possible .

Structure of gearmotors selection table



Legend

- * Finite gear ratios
- 1) Overhung load for foot-mounted gear units with solid shaft; overhung loads for other gear unit types upon request

Note

The motor power of drive units for particularly low output speeds (multi-stage geared motors) must be limited in relation to the maximum permissible output torque of the gear unit.

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