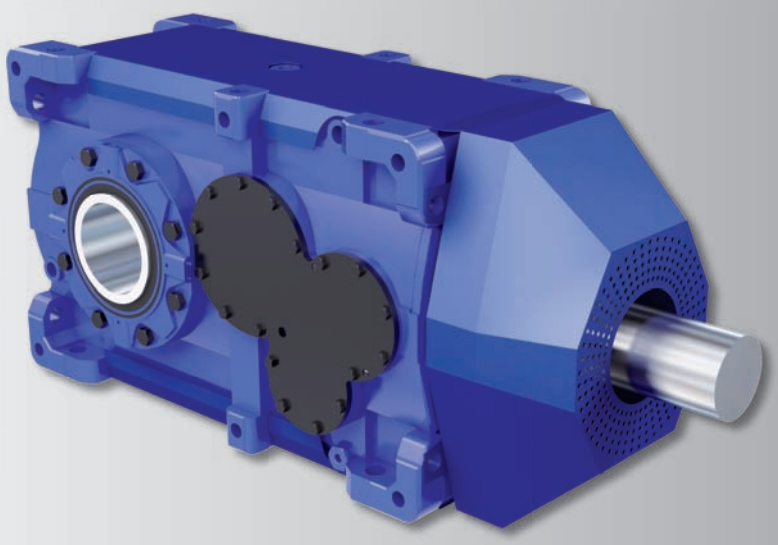
C4

Conveyor.



REXNORD STEPHAN

English Version

100 YEARS REXNORD | STEPHAN

PRECISION. POWER. PERFORMANCE.

REXNORD-STEPHAN.DE

Flexibility in the range. Speed of implementation. Reliability of partnership.

Table of Contents

1 The Rexnord Group

Combined for better performance
Integrated solutions for mechanical drive technology are our strength. We have formed a group of top businesses which in cooperation with one other, offer economical solutions for your drive technology needs, everything from single products to integrated system solutions.

Rexnord drive technology	Industrial couplings	BSD® Thomas® OmegaTM
Rexnord - France	Mechanical drive elements	Sureflex® Pencoflex Hydroflow
Rexnord chain	Industrial chains	Rex® Link Belt®
Rexnord Marbett	Conveyor systems accessories	Marbett® ROBO®
Rexnord - MCC	Hinged slat chains	Table Top® Mat Top®
Rexnord - Stephan	Geared motors	Rexnord-Stephan S4 C4 Series E4 Series

Your basis for success
High-quality products, application expertise and absolute dependability; your decision for the whole spectrum of the Rexnord family is a decision for a strong and reliable partner.

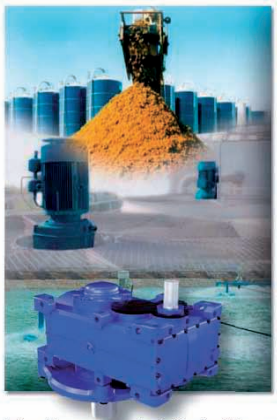
The Rexnord-Stephan Company
Rexnord-Stephan, a member of the Rexnord group, has been developing and manufacturing a wide choice of gear units, geared motors and other products from the field of mechanical drive technology at the Hameln site for decades. Perfected design, computation and manufacturing technologies have contributed to Rexnord-Stephan's outstanding reputation as a partner for individual drive solutions. Customer-oriented customised gear units or backlash-free precision gears for industrial robots are established components in our product assortment, along with the S4, C4 and E4 series. In our production area of 17,000 m² , we manufacture according to the most modern, computer-assisted and especially "streamlined" management principles of the third century. Rexnord-Stephan is an associated partner of the Rexnord group for mechanical drive technology. Along with planning, development and design, we offer our customers not only individual products, but customised solutions through worldwide distribution. Whether assemblies or closed systems, we have the correct solution for your application.

We possess outstanding references in the development, construction and manufacture of individual drive solutions. Through our worldwide distribution, we also offer package solutions for over-sized gear units and drive elements:

- Standard gear units
- Drive-Packages
- Complete solutions
- Customised gear units
- Low-backlash gear units

2 Rexnord-Stephan Product Assortment

Conveyor Solutions
C4-Gearmotor Series



Environmental Solutions
E4-Gearmotor Series

Customized Solutions
by Rexnord-Stephan

Belt conveyor Bucket elevator Crane drives Cable drums Roller table	Amusement Mining Harbours Storage area Cement industry	Agitator Mixer Aerators Cooling towers Pumps	Bio energy Underwater agitators Screw press Grit separation Grit treatment	Customised housings Welded housings Special gear ratios Reduced noise emissions	Customised gearing Transfer gear unit Gearing attributes 5-10 as per DIN 3990/ ISO 6338

2.1 The C4 Product Line

System attributes:

Housing design optimised for
High stiffness
High efficiency factor (high heat limit performance)
Versatile scaling without (cost) impact to the basic design
Construction kit optimised for
High number of multiple-use components
Scaling possibilities for meeting application-specific requirements
Basic principle:
Only as many features as are needed, scaling where possible

Application features Conveyor* product series:

Scaling for special operating conditions, for example, with a high storage life span, through the "Heavy Duty Bearing" design.
Application possibilities for special surrounding conditions, for example, high temperatures, with the "ProCool" system series.
Application possibilities for special surrounding conditions, for example, high dust level, through function integration with the "advanced protection sealing" assembly series.

Basic functionalities:

Basic functionalities cover conventional performance needs Examples:
• Various sealing systems for input and output shafts
Bevel gearboxes in 3-, 4-, 5- stage design
Wide transmission spectrum from i= 12.5 ... > 2000 (with primary reduction gearing)
• Versatile shaft options
Applicable in typical installation positions and designs, for example, mounted on motor base plate or with IEC motor adaptor
Designed for operation in harsh application and surrounding conditions

Your benefits with Rexnord-Stephan:

Best cost-performance ratio
High availability thanks to large number of multiple-use components
Functionality determines the total cost - no unnecessary features in the basic design
"Best fit" – a custom designed drive for your application

More than 80 years of experience in geared motor technology.
More than 25 years of experience in the area of HEAVY DUTY materials-handling technology, including
loose bulk goods, rolling mill,

***Conveyor= handling technology, e.g., loose bulk goods, rolling mill, transport technology,...**

2.2 C4 Product Assortment

Features		Size J	K	L	M
Torque [kNm]		**25**	**31,5**	**40**	**50**
Motor power [kW]	from	5,5	5,5	7,5	7,5
	up to	160	200	200	250
ratio	Standard, 3/4 stage	12 ... 2240	12 ... 2240	12 ... 2240	12 ... 2240
	with prestage	... > 2500	... > 2500	... > 2500	... > 2500
Housing material	Grey cast iron GG 25	●	●	●	●
	Spheroidal cast iron GGG 40	○	○	○	○
housing	Heavy duty design	●	●	●	●
Weight	[kg]	800	850	900	1050
Input	Input drive shaft	●	●	●	●
	IEC motor flange	○	○	○	○
Input sealing	Labyrinth sealing HSS	●	●	●	●
	Oil seal HSS	○	○	○	○
	Double Oil seal HSS	○	○	○	○
	Labyrinth sealing with regreasing facility (Taconite)*	○	○	○	○
Output	Solid shaft Ø [mm]	140	150	160	170
	Hollow shaft Ø [mm]	130	140	150	160
	Hollow shaft with shrink-fit ring	○	○	○	○
Input sealing	Labyrinth sealing LSS	●	●	●	●
	Oil seal LSS	○	○	○	○
	Double Oil seal LSS	○	○	○	○
	Labyrinth sealing with regreasing facility (Taconite)*	○	○	○	○
Mounting position	Horizontal	●	●	●	●
Lubrication	Splash lubrication	●	●	●	●
Painting Cooling	3 component epoxy paint	●	●	●	●
	Increased protection for rough environmental conditions	○	○	○	○
Cooling	Fan on the input shaft	○	○	○	○
	Increased cooling - ProCool System	○	○	○	○
Bearings	Long life bearings	●	●	●	●
	Heavy duty bearings	○	○	○	○
Back rotation lock	Integrated back stop, oil lubricated	○	○	○	○
Torque arm	Torque arm	○	○	○	○
Oil level control	Oil sight glass	●	●	●	●
	Oil dip stick	○	○	○	○
	Oil level sensor	○	○	○	○
	Oil Level Glass	○	○	○	○
Bleeding	Breather with dust filter	●	●	●	●
Maintenance	Oil drain with large diameter	●	●	●	●
	Oil drain tap	○	○	○	○
	Oil filler	○	○	○	○
	Relubrication facility for input and output shaft	●	●	●	●
	Heater	○	○	○	○
	Oil level switch	○	○	○	○
Accessories	Motor base plate	○	○	○	○
	Drive motor (all makes)	○	○	○	○
	Coupling HSS and LSS	○	○	○	○
	Fluid coupling	○	○	○	○
	Brake or brake motor	○	○	○	○
	Auxiliary drive	○	○	○	○
Norm / Standards	ISO 6336	●	●	●	●

● Standard ○ Option

* Advanced Protection Sealing

3 Product description

3.1 Name and model number

1	2	3	4	5	6	7	8	9	-	10	-	11

1	Gear unit series	C	Conveyor application	
2	Gear unit design	P	Parallel shaft gear units	
		K	Pin-spur gear units	
3	Fixing	Z	Foot mounting	
		F	Flange mounting	
		D	Torque arm	
4	Shaft design	N	Solid shaft	
		H	Hollow shaft with feather key	
		S	Hollow shaft with shrink-fit ring	
5	Gear unit size	J	25kNm	
		K	31,5kNm	
		L	40kNm	
		M	50kNm	
6	Construction type 1			
7	Number of stages	C	Three-stage	
		D	Four-stage	
		E	Five-stage	
8	Rated gear ratio			
9	Input shaft	I	Input drive shaft	
		U	Motor lantern for installation in IEC motors	
10	type of cooling	K	No additional cooling system	
		L	Fan on a fast rotating shaft (HSS)	
		F	ProCool System	
		W	Cooling coil for water cooling	
		O	Oil-water cooler	
11	Additional information	/M1/F2/W04		
		M1 - M6	Mounting position	Section 3.2.1
		F1-F6	Mounting surfaces	Section 3.2.2
		Wxx - Wxx	Shaft arrangement	Section 3.2.3

)[k] information for combined cooling: L/W/ fan on a HSS and integrated cooling coil for water cooling

Example:

1	2	3	4	5	6	7	8	9	-	10	-	11
C	**K**	**Z**	**N**	**M**	**1**	**C**	**22,4**	**I**	**-**	**/L/W**	**-**	**/M1/F2/W03**

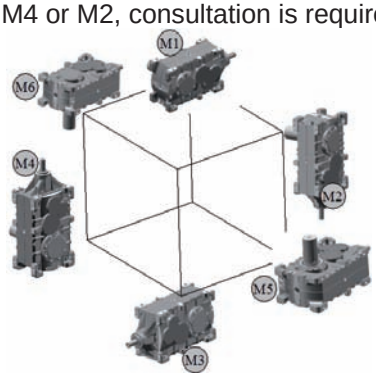
1	C	Rexnord C4 conveyor series	
2	K	Pin-spur gear units	
3	Z	Foot mounting	
4	N	Solid shaft	
5	M	Gear unit size M 50 kNm	
6	1	Construction type	
7	C	3-stage gear unit	
8	22,4	Rated gear ratio	
9	I	Input drive shaft	
10	/L	Fan on a fast rotating shaft (HSS)	
	/W	Cooling coil for water cooling	
11	/M1	Mounting positions M1	Abschnitt 3.2.1
	/F2	Mounting surface F2	Abschnitt 3.2.2
	/W03	Shaft arrangement	Abschnitt 3.2.3

3.2 Installation

The standard design of the C4 series gear units is intended for horizontal output shaft positions. For positioning the output shaft vertically, please consult Rexnord-Stephan. Slanted installation, i.e. for helical conveyors, is possible. The oil level and the oil control instruments must be adapted to the mounting position. After the gear unit has been delivered, the mounting position may only be changed after consulting with Rexnord-Stephan! For the correct choice, please contact Rexnord-Stephan.

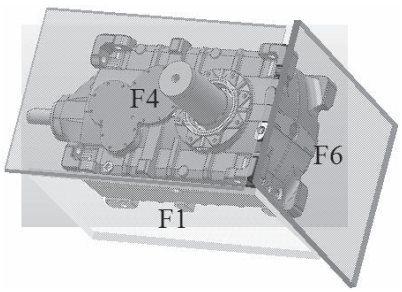
3.2.1 Positioning:

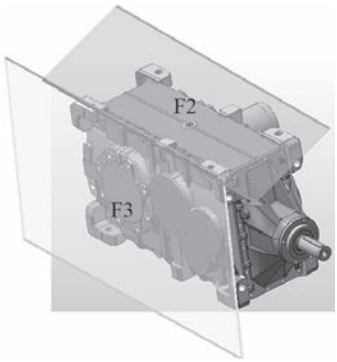
Standard positioning for C4 gear unit is M1. As an alternative, the gear units may be installed in M3. Specific indications must also be observed. There are some limitations regarding the conditions of use or designs For vertical installation M4 or M2, consultation is required.



3.2.2 Mounting surfaces

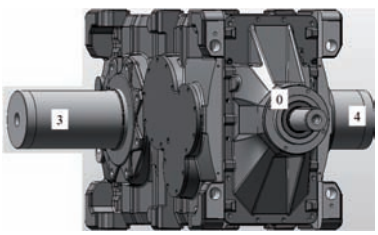
The surfaces F1 to F6 are defined for mounting. The Input shaft is on the F5 surface and is therefore not designed for gear unit fixing.



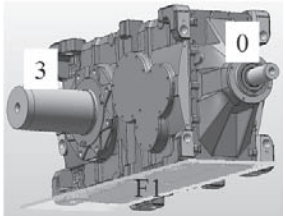


3.2.3 Shaft position

The shaft position is marked with 0, 3 and 4. There may be limitations in some options (reverse rotation lock, integrated pump).



3.2.4 3.6 Standard positioning, mounting surface and shaft position



- Positioning: M1
- Mounting surface F1
- Shaft position W03

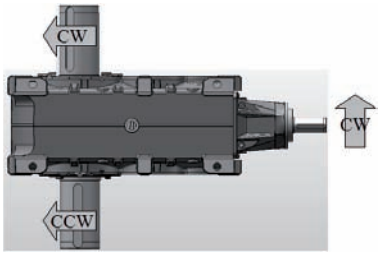
Ordering information:

/M1/F1/W03

3.2.5 Rotation direction dependencies

- The gear units are suitable for both rotation directions
- The rotation direction of the output shaft is dependent of the number of gear speeds and the arrangement of the gear wheels within the gear unit.
- An installed back rotation lock can prevent one rotation direction from operating.

3 and 5 speed

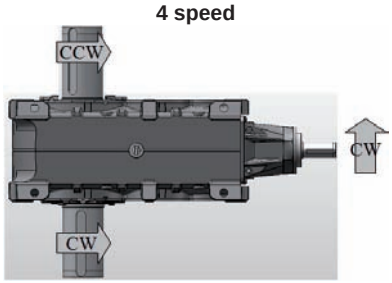


Rotation direction with view towards the gear unit

CW: right (clockwise)

CCW: left (counter-clockwise)

4 speed



3.3 Main components

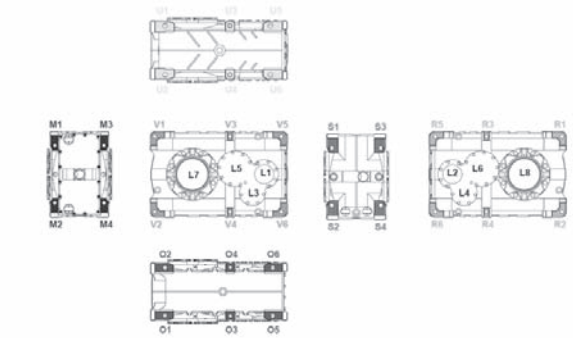
3.3.1 Gearing

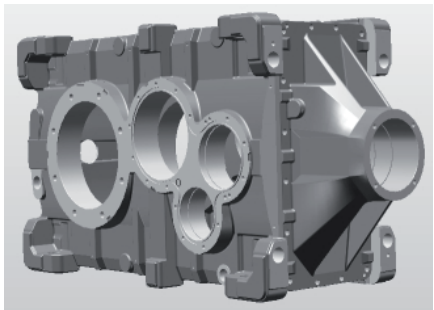
The helical cut spur gears and spiral cut bevel gears are optimised according to AGMA/ISO 6336 for highest torque transfer with minimal losses and less noise development.

3.3.2 Housing

High stiffness at low material use is achieved by the mono-block housing made of grey cast iron (optionally available in spheriodal iron design). The openings are positioned far from the stress zones (output shaft, flange mounting). Various fixing points always ensure the optimal installation corresponding to the customer requirements.

The available fixing points are marked.





3.3.3 Low speed shaft (LSS)

The output shaft can be manufactured as solid shafts or hollow shafts. The solid shaft can be positioned either on the left or the right. Hollow shafts can be supplied with a feather key* connection or a shrink-fit ring connection. Couplings on the output shaft cam be offered as an option and mounted by Rexnord-Stephan.

3.3.4 Bearings

For position choice and planning, Rexnord-Stephan standards and the market-approved calculation programs will be used. Self-aligning roller bearings, cylindrical roller bearings and tapered roller bearings will be used from various manufacturers. The specific calculation data from the bearing manufacturer facilitate the bearing configuration that is customised to the application.

3.3.5 "Heavy Duty Bearings"

Selecting the position of the output shaft is done in accordance with the requirements of the application and the necessary storage life span. For the "Heavy Duty Bearings" design, generously measured tapered roller bearings with a labyrinth sealing are used.

3.4 Lubrication

Mineral oil with pressure additives are used as the standard lubrication substance. Please observe the operating instructions that are included in delivery.
Gear units with a horizontal output shaft are designed with Splash lubrication as a standard. A pump design can also be used for vertical output shafts. In some application cases, a pressure lubrication is used.

3.5 Sealing

O-rings or liquid sealing agent is used for static sealing.

3.5.1 Standard shaft sealing

The shaft sealing is done radially with shaft sealing rings. As an alternative, shaft sealing rings made of viton on an annealed running surface ground to a perfectly flat finish are used.

3.5.2 "Advanced Protective Sealing"

For very high dust exposure, the "Advanced Protective Sealing" series is used, with a labyrinth sealing and re-greasing.
Leak tightness for a vertical output shaft can be achieved by using our E4 gear units with "Protective Sealing". In combination with the "Active Lubricant System", operating costs are reduced, due to less oil usage.

3.6 Cooling

The resulting heat loss in the gear unit warms the oil and other components. In order to not exceed temperature limits, adequate cooling must be ensured. When selecting a gear unit, the cooling conditions must be considered.
By combining the types of cooling, the utilisation of the gear unit can be further increased. The following variations are possible:

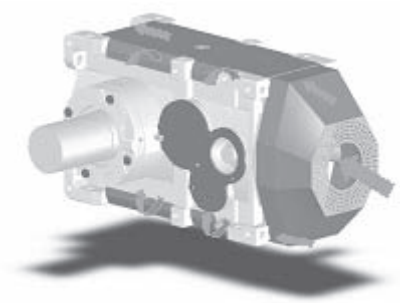
	LU0	VAR1	LU1	WK1	VAR4	WT0
Konvektion	X					
Fan		X	X		X	
fan cover			X		X	
Kühlpatrone				X	X	
heat exchanger						X

3.6.1 LU0 Convection cooling

Without additional cooling, the housing surface cooling is adequate for discharging the resulting heat loss.

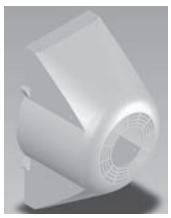
3.6.2 "**ProCool**" System:

The gear units can be designed with a ProCool system for discharging large amounts of heat or with high surrounding temperatures. The fan mounted on the Input shaft supplies the necessary air volume. The optimised airflow system "ProCool" directs the air flow over the housing surfaces. This includes the side surfaces as cooling surfaces. Depending on conditions of use, the entire mechanically-available capacity can be transferred.



"ProCool" System:

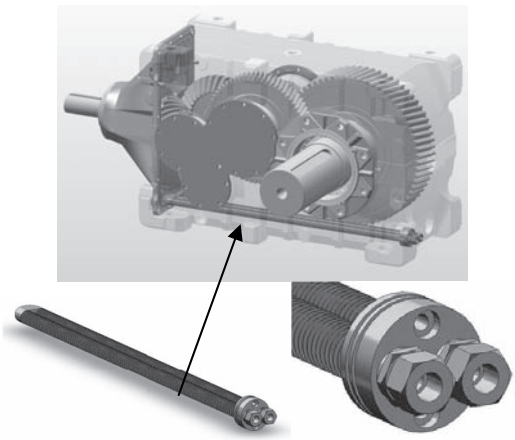
- The air flow created by the fan blade is directed over the entire housing surface by means of air baffles.
- Intensive cooling of the gear unit leads to less construction volume
- Customer advantages: Less space, light weight, smaller amounts of oil, less maintenance costs



- Two-part ventilation hood made of GRP
- Air flow over the entire length of the housing surface
- Smooth surface of the fan hood, no dust accumulation
- Optimal noise reduction

3.6.3 WK1 Water cooling

For optimal utilisation of the transferred capacity, the gear unit can be additionally fitted with a cooling cartridge with water cooling. The integration of two cooling cartridges is possible for vertical output shafts.



The water cooling cartridge is positioned in the oil sump. The water connection takes place on sit by G1/2" threaded bores Cooling capacity is dependent on the intake temperature and flow volume. Reference values are 11 litre/min., at a maximum of 30°C.

The cooling coil is made of ribbed pipe. Due to the large surface area, only a small amount of water is needed.
Displacement-safe connections ensure a trouble-free installation of the water supply line,

3.6.4 Heat exchanger, oil-air coolers, or oil-water coolers (WT0)

For intensive cooling of the gear unit, a heat exchanger as an oil-air or oil-water cooler is available. The assembly can be connected directly to the gear unit or be assembled separately. Please ensure that the cooling assembly is filled with oil.

3.7 Heater

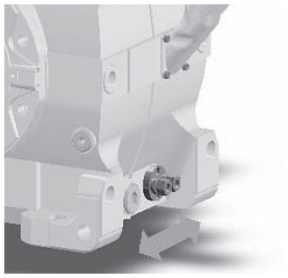
In order to maintain lubrication for a cold start, an oil heating unit is required.

3.7.1 Water heating

The cooling cartridge can also handle warm water flow (max. 80°C) and can then serve as heating. A start-up with cold oil should be avoided by means of installed thermostats and thermostat valves.

3.7.2 Electronic heating

An electronic heat rod with an integrated thermostat can also be installed for oil heating. By means of separately installed temperature sensors, it must be ensured that a start-up is only performed after the gear unit has been heated to the temperature listed in the operating instructions.



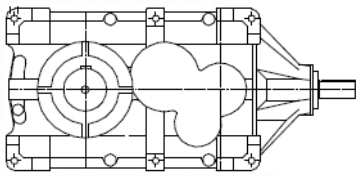
The electronic heat rod is completely immersed in the oil sump and installed instead of a cooling cartridge.

Control is done by a thermostat. The standard connection voltage for the heating elements is 230V/50/60Hz.

3.8 Designs for the drive side, overview

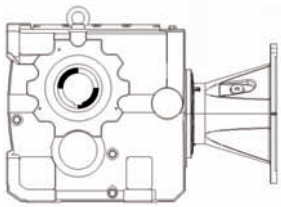
High speed shaft "I"

Normally the gear units are fitted with a solid shaft on the drive side, with a feather key to hold the coupling or pulley



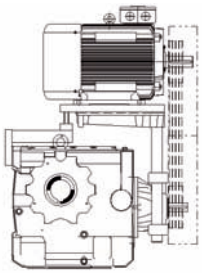
Motor lantern with coupling "U"

For assembly of flange motors, the gear units can be fitted with a lantern on the drive side.



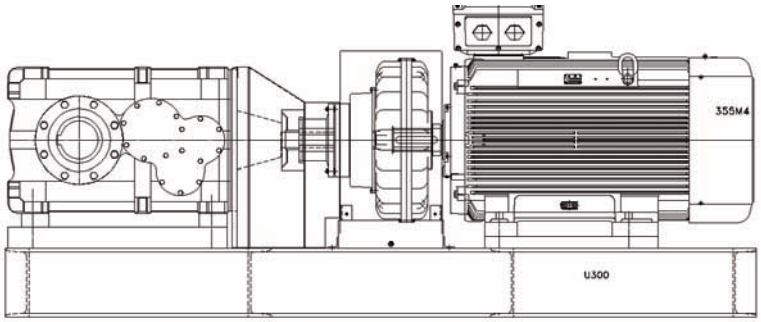
Motor type and belt drive "MSR"

Operated by foot motor with v-belt drive



Base frame and motor shifting arm "RAH"

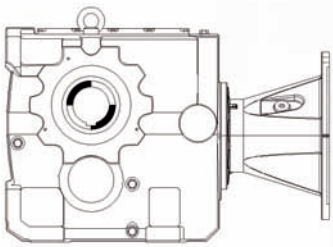
Ready-to-install drive units are combined according to customer requirements



3.9 Motor installation

3.9.1 Motor lantern

For mounting motors with a B5 flange, the gear unit can be delivered optionally with a motor lantern. The required claw coupling is included in delivery. The motor lantern is also available in combination with a fan and the ProCool System.
The illustration shows the mounting principles for the motor lantern (without fan).



The following motor adapters are available for mounting standard IEC motors with B5 flange:

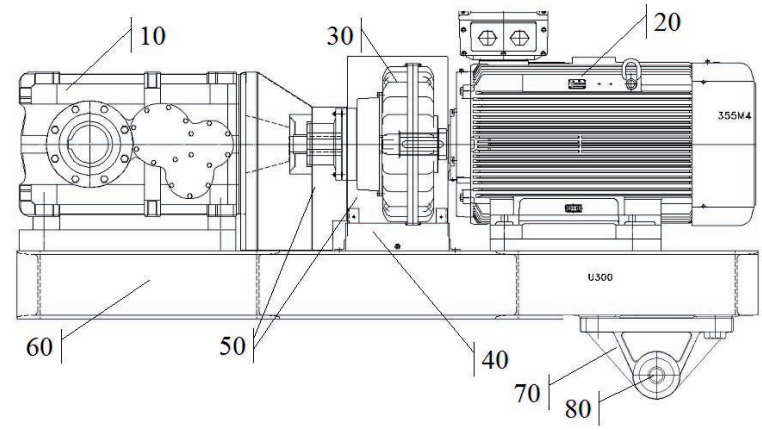
	Size			
IEC motor	**J**	**K**	**L**	**M**
180	X	X		
200	X	X	X	X
225	X	X	X	X
250	X	X	X	X
280	X	X	X	X
315	X	X	X	X

Further motor sizes or flange dimensions in accordance with NEMA if requested.
The weight of the motor may not exceed the weight of the gear unit. For heavy motors, please consult Rexnord-Stephan and inform us of the exact motor dimensions and weight.

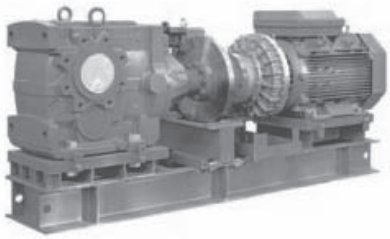
3.9.2 Base frame and motor shifting arm

As an ready-to-install unit with a drive motor, coupling and brake, the gear units can be installed onto a base frame or lever.

Example for typical configuration for a conveyor belt drive:



10 Gear unit with hollow shaft
20 Electric motor
30 Fluid coupling with electronic monitoring
40 Oil pan
50 Protection hood
60 Fixing frame
70 Torque arm
80 Elastic element



Description and assembly:
- Ready-to-install drive unit
- Base frame as a steel construction
- For hollow shaft gear units as lever with torque support
- Optionally with creep feed gear unit

3-phase motor:
- 3-phase motor up to 315kW
- Design according to international standard
- 3-phase motors from various renowned manufacturers, such as Siemens, VEM, ABB

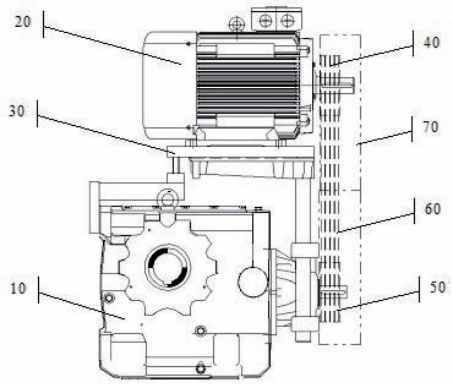
Highly flexible couplings
- Torsionally flexible coupling between motor and gear unit for drives with frequency converter.
- Delivery of the output-side coupling

Fluid coupling
- Use with direct start-up
- Restriction of start-up torque

Disc brake
- Use in connection with highly flexible coupling or start-up coupling

3.9.3 Belt drive

A motor bracket with belt drive and protective covering is available as an option. The complete belt drive is also available in ATEX.



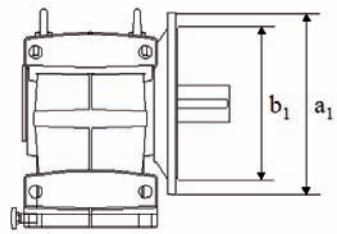
10	Gear unit
20	motor
30	Motor type
40	Motor belt disk
50	Pulley, gear unit
60	Drive belts
70	Contact protection

Customer advantages:

- Speed adjustment by v-belt pulleys
- Ready-to-install drive unit
- Adjustable engine bracket mounted on the gear unit
- Use of foot motors up to IEC 315
- 3-phase motors from various renowned manufacturers, such as Siemens, VEM, ABB
- Standard efficiency level and Eff1 (IE2) motors

3.10 Flange design

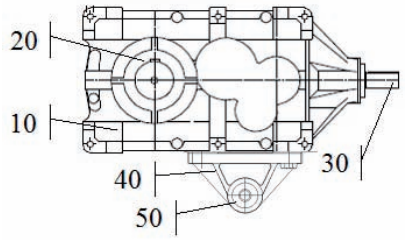
The gear units are available with a flange on the output shaft. If attached above the flange, the permissible weights in the required mounting position must be observed. Consultation with Rexnord-Stephan is required.



Size	J	K	L	M
a_1	670	670	730	730
b_1	520	520	560	560

3.11 Torque arm

Optional for hollow shaft gear units. Design and dimensions are determined according to customer requirements. Dimensions and exact design depend on the fixing possibilities.

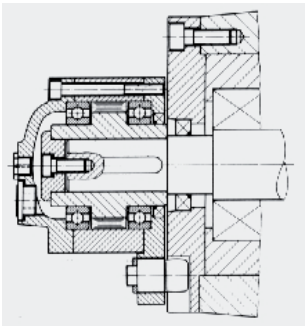


10 Gear unit
20 Hollow shaft
30 Input drive shaft
40 Torque arm
50 Rubber bumper

The torque arm absorbs the force in hollow shaft gear units. Depending on conditions of use and requirements, the torque arm can be fitted onto mounting surfaces F1 to F6. Rexnord-Stephan offers a customised solution for your individual usage needs. Thrust bearing and necessary elastic elements can also be offered if needed.

3.12 Back rotation lock

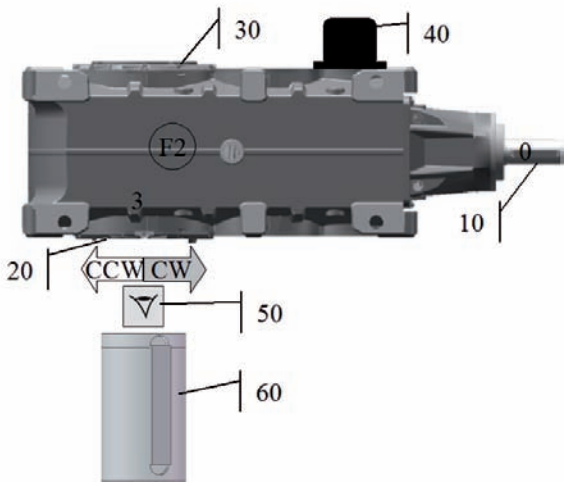
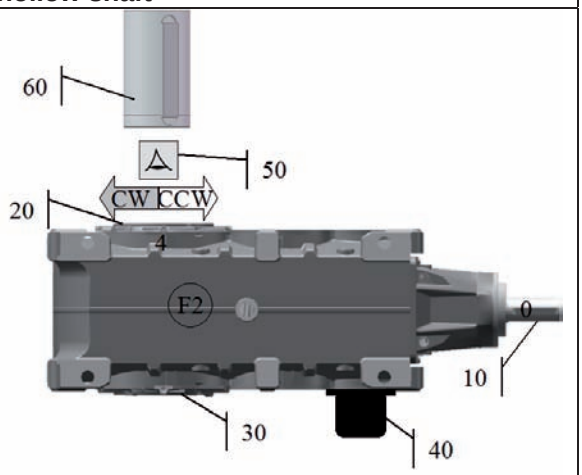
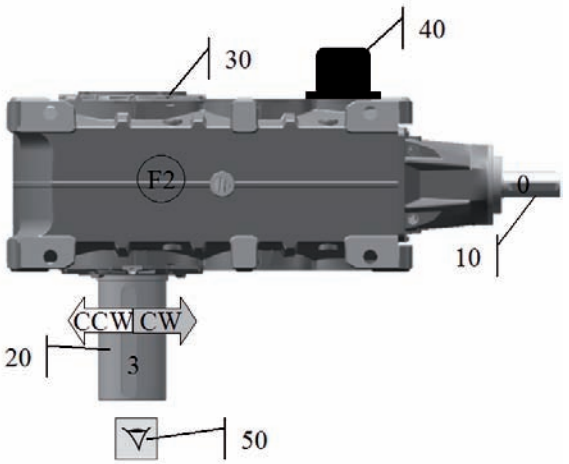
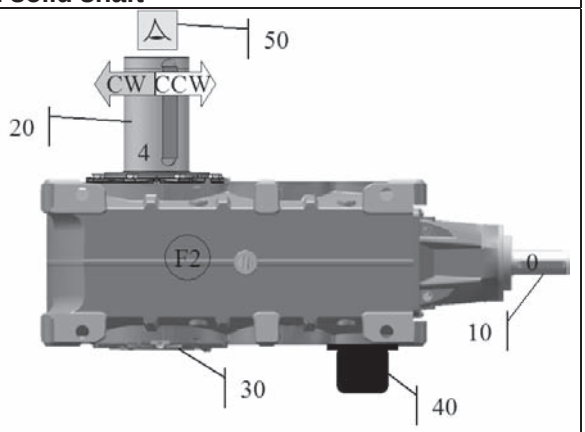
The back rotation lock is optional for all gear unit designs. No separate lubrication is necessary The back rotation lock is low maintenance and mounted on the outside where it is easily accessible.



Back rotation locks function on the principle of clamping the rolls at a construction-specified geometric angle to lock one rotation direction
The lock-up torques correspond to the gear unit size.
Warning! A start-up against the lock-up torque must always be avoided.

3.13 Rotation direction and positioning of back rotation lock

- The rotation direction must be specified in the order.
- The rotation direction is defined from the perspective of the output shaft (LSS).
- The permissible rotation direction is marked on the casing.
- For full-length output shafts or double-sided solid shafts (W034), the rotation direction is defined for shaft position 3.

Shaft arrangement W03	Shaft arrangement W04
C4 gear unit with hollow shaft	
	
C4 gear unit with solid shaft	
	

10	10 Drive shaft (HSS) position "0"	40	Back rotation lock
20	Low speed shaft (LSS)	50	Blickrichtung zum Getriebe
30	Shaft covering or shrink-fit ring	60	Customer shaft

CW Rotation direction **"right"** (**C**lock-**W**ise)

CCW: Rotation direction **"left"** (**C**ounter-**Cl**ock-**W**ise)

3.14 Painting system

Rexnord-Stephan normally uses casted elements with a base coat. This ensures a complete covering of all non-processed cast surfaces. Blank components (shafts, fixing surfaces, flange coatings) are treated with a rust-protection substance prior to delivery.

- Standard surface protection A01 for light load, NDFT on GG 6060µm.
- Increased surface protection A04 for medium environmental load, NDFT on GG 100µm.
- Increased surface protection A05 for heavy environmental load, NDFT on GG 180µm.

Standard colour RAL 5002, other RAL shades, other layer thicknesses or another base coat is possible.

Painting system	**A01.**	**A04.**	**A05.**
Total layer thickness NDFT (on GG)	60 µm	100 µm	180 µm
Colour composition	Immersion base coat cover paint RAL 5002	Immersion base coat primer paint cover paint RAL 5002	Immersion base coat 2 x primer paint Intermediate coat 2 x cover paint RAL 5002
Paint basis	Acrylic/PVC	Polyurethane	Epoxide
Application	**Standard** low environmental load Within buildings	**Option** medium environmental load Outdoor assembly	**Option** heavy environmental load Outdoor assembly Indoor assembly

NDFT: (nominal dry film thickness) = nominal layer thickness; min 80% NDFT; max 3 x NDFT

3.15 Lubricants

The C4 series Rexnord-Stephan gear units are delivered without oil. The oil types and quantities can be found in the enclosed operating instructions. All greasing points are filled with the necessary quantities at the factory.

4 Choice:

4.1 Information sheet in the internet

In order to facilitate your choice, you can refer to the information sheet on gear unit choice in the internet at www.rexnord-stephan.de. Fill out the information sheet as completely as possible. We will select a gear unit for you, and make you an offer.

4.2 Application factor SF

The operating factors are empirical values that are based on AGMA and ISO and our experience. The apply to electromotor-driven gear units and for state-of-the-art machinery. Operation is done under normal operating conditions. For gear unit choice, the positioning notices from Rexnord-Stephan must be observed.

Table 1

Application	Machinery	Operating factor		
		Operating hours per day		
	Machinery	<= 3 h	<= 10 h	> 10 h
Mining	Crusher	1.55	1.75	2.00
	Shaker	1.55	1.75	2.00
	Slewing gear		1.55	1.80
Conveyor systems horizontal and inclined	belt conveyors	1.10	1.25	1.40
	helical conveyor	1.00	1.10	1.25
	slat conveyors		1.20	1.45
	escalator	1.00	1.20	1.40
	sieve and shaker	1.50	1.70	1.90
Conveyor systems vertical	bucket conveyor		1.40	1.50
	Vertical conveyor system, other		1.50	1.75
Metal industry Steel plant	wire-drawing machine	1.30	1.45	1.70
	roller table and turntable drive	1)	1)	1)
	winder	1.35	1.60	1.70
mills and drums	cooling and drying drums		1.30	1.60
	rotary kiln			2.00
	ball mill			2.00
	coal mill		1.45	1.70
	stone mill		1.75	2.00
Paper industry	all applications		1.80	2.00
Pumping	Centrifuge pumps	1.15	1.30	1.40
	piston pump (1 cylinder)	1.30	1.45	1.70
	piston pump (multi-cylinder)	1.15	1.25	1.50
Mixers	firm median (irregular material)	1.35	1.55	1.65
	firm median (regular material)		1.30	1.35
Compactor	piston compactor		1.60	1.85
	radial compactor		1.40	1.50
	screw compactor		1.40	1.60
Other applications	Industrial gear units	1)	1)	1)

1) It is necessary to consult with Rexnord-Stephan.

4.3 Process chart for gear unit choice

Table 1

1	Fill in information sheet at www.rexnord-stephan.de
Step 2	Determination of basic data M_2, n_1, n_2, P_2, i
Step 3	Determination of application factor SF
Step 4	Calculation of gear unit torque, M_{2mi}
Step 5	Determination of gear unit size, M_{2n}
Step 6	Calculation of motor output, P_m
Step 6	Control the peak load torque and factors
Step 7	Determination of the thermal performance limit
Step 8	Examine the permissible thermal performance limit
Step 9	Examine the permissible outside forces and the storage life span
Step 10	Select the options
Step 11	Summarize the gear unit choice

4.4 Choice "Step by Step"

Step 1. Fill out gear unit information sheet in the internet

Step 2. Determine the basic data

M_{2org} Organic performance P_2 n_2

M_{2inst} installed motor output P_{1inst} n_1

$$M_2 = \frac{P_2 \quad 9550}{n_2}$$

i_{soll} ratio i_{soll}

$$i = \frac{n_1}{n_2}$$

Step 3. Application specific operating factor SF:
SF selected:
If the operating factor is not minimal, the appropriate factor based on the classification can be selected by using the "operating factors " table. The table applies to gear units which are driven by electro-motors. For drives with combustion engines, please consult with Rexnord-Stephan.
The selected operating factor is based on: ☐ rganic performance ☒ installed motor output

Step 4. Calculation of the necessary gear unit torque M_{nmin}

M_{nmin} Necessary rated torque at continuous load

$$M_{n\min} \quad M_2 \quad S_F \quad r$$

☐ oscillating load r = 1.43 ☐ non-oscillating load: r = 1

M_2 drive torque based on step 2

SF Operating factor

M_{nmin}:

Step 5. Choice of gear unit size and ratio from the choice tables

Gear unit size
Rated gear ratio
Exact gear ratio
Number of stages

Step 6. Calculation of the required motor performance (only necessary if no installed motor performance is listed in step 2)

$$P_m \quad \frac{M_2 \quad n_2}{9550}$$

Stages	b	C	D	E
η	0,96	0,95	0,94	0,93

Required motor performance (kW):
Selected motor performance (kW):

Step 7. Control of the peak load torque

$$M_{2zul} = \frac{M_n \quad r_2}{F_7 \quad r}$$

M_n Gear unit rated torque from the choice table
r See **Step 4**
r_2 ☐ r2 = 2 for solid shaft ☐ r_2 = 1,6 for hollow shaft
F7 Peak load factor
The peak load factor considers the overload capability of the mechanical components and the frequency of peak load occurrences.

Frequency of peak load per hour	1 - 5	6 - 20	21 - 40	41 - 100	101 - 160	> 160
Peak load factor F7	1	1,2	1,3	1,6	1,8	2

F7 selected:
M_{2zul}:

Determination of the required peak drive torque M_{2ma}

$$M_{2\max} = M_m \quad F_8 \quad i$$

M_m Torque at high speed shaft (HSS)
F8 The warm up factor considers the load of the gear unit caused by the warm up procedure.

Type of start	Direct start	Star-delta start	Electronic soft starter	frequency converter	fluid coupling
start-up factor F8	3,0	1,3	1,5...1,9)*	1,3...2,0)*	1,5...2,0)*

)* Dependent on the required warm-up time and device settings

F8 selected:
M_{2max} :

Test: $M_{2\max} \quad M_{2zul}$ ☐ yes ☐ no

If no, select a larger gear unit or reduce start-up factor F8

Step 8. Examine the permissible thermal performance limit

The permissible thermal performance limit is dependent on various factors: - Surrounding temperature and mounting height - Air circulation and direct sunlight at the place of operation - Type of gear unit, size, ratio - Workload of the gear unit - Gear unit cooling type - Type of lubrication and lubricant used - Duration of operation	The permissible thermal performance limit must be taken from the following Table 2. The values apply to: - Horizontal mounting in a large hall - Cooling agent temperature of 20° C - Drive rpm 1500U/min - Natural cooling or cooling by: + Fan + cooling coil + combination of fan and cooling coil - Mounting height <= 1000m - Splash lubrication

Table 2. thermal performance limit

Stufen		iN from		iN up to	Cooling	Thermische Leistung bei n1=1500U/min Pth J	K	L	M
C	3	12,5	up to	71	ohne	65	65	90	90
					Fan	205	205	270	270
					cooling spiral	210	210	270	270
					Lüfter/Kühls.	315	315	405	405
D	4	71	up to	315	ohne	56	56	80	80
					Fan	190	190	255	255
					cooling spiral	190	190	240	240
E	5	315	up to	2800	ohne	50	50	75	75
					Fan	175	175	230	230
					cooling spiral	170	170	215	215

Selected cooling type:
☐ without additional cooling ☐ Fan ☐ cooling coil ☐ Fan and cooling coil

thermal performance limit P_{th} from table:

Deviating conditions:
In the case of deviating surrounding conditions, values from Table for the following factors should be corrected:
- F3 for rotation speed different from 1500U/min
- F4 for surrounding temperature differing from 20° C
- F5 for mounting heights above 1000m
- F6 for mounting in small rooms or above a hall

F3 rotation speed factor						
	rotation speed n1					
Cooling	1800	1500	1200	1000	900	750
without	1	1	1	1	1	1
Fan	1,1	1	0,9	0,81	0,75	0,7
cooling spiral	1	1	1	1	1	1
both	1,05	1	0,95	0,9	0,86	0,83

Temperatur	10°C	20°C	30°C	40°C	50°C
F4	1,11	1,00	0,88	0,75	0,63

Höhe über	0 m	1000 m	2000 m	3000 m	4000 m
F5	1,00	0,95	0,91	0,87	0,83

F6

Installation	Air speed m/sec	F6 for gear units without additional cooling	F6 for gear units with additional cooling
Closed small room	0,50	0,70	1,00
Large hall	1,40	1,00	1,00
Outdoors, no direct sunlight	3,00	1,35	1,00

Thermal performance limit at place of ap $P_{thzul} = P_{th} \quad F3 \quad F4 \quad F5 \quad F6$

Test: $P_m \quad P_{thzul}$ ☐ yes ☐ no

If no, select a different cooling type or larger gear unit.

Step 9. Examine the permissible outside forces and the storage life span
The transferrable forces to the drive and output shaft are dependent on various factors:
- Required storage life span
- Balancing of axial forces
- Point of origin and angle of the radial forces
- Gear unit operation factor
- Type of transfer device (chain wheel, belt drive)

For testing the projected storage life span under the specific application conditions, please consult with Rexnord-Stephan.

Step 10. Choice of options and mounting position
Gear unit mounting position:

☐ M1 ☐ M2 ☐ M3 ☐ M4 ☐ M5 ☐ M6

Fixing surface:

☐ F1 ☐ F2 ☐ F3 ☐ F4 ☐ F5 ☐ F6

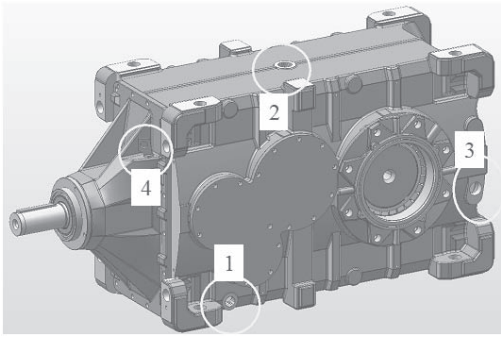
Shaft arrangement ☐ W03 ☐ W04 ☐ W034

Back rotation lock ☐ without ☐ CW ☐ CCW:

Step 11. Summary of the choice
Selected gear unit type:

5 Maintenance elements

5.1 Attachment positions

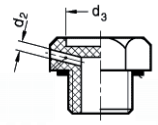
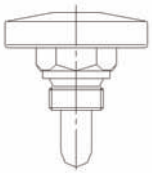
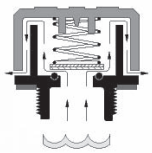


1	Oil drainage plug
	Optional: Oil drain tap
2	Bleeding screw
	Optional: Filter or valve
3	Oil-level plug
4	Option: Oil dip stick

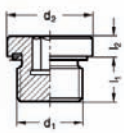
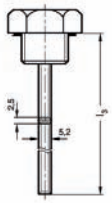
5.2 Oil change

For a necessary oil change, the oil is drained by the generously dimensioned oil drainage plug. For tight installation conditions, a ball valve can be used at the same place. The oil change should be performed by using a connected hose. The oil quality, quantity and oil changing intervals can be found in the operating instructions enclosed in the delivery.

5.3 Bleeding

 The gear units are fitted with a bleeding screw as a standard.	 To prevent the penetration of dust, a fan filter is used.	 In damp surroundings, a bleeding valve may be used: In this way, the penetration of water is prevented and the oil life duration is extended.

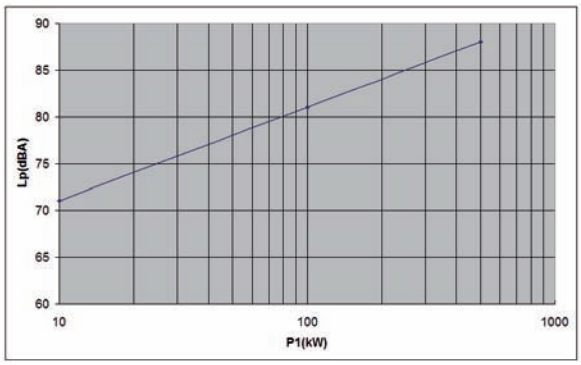
5.4 Oil level control

 The oil level is monitored by the control screw as a standard	 An oil inspection glass can also be used as an alternative. Reading is easy because of the clear marking.	 An Oil dip stick can also be installed for easy control of the oil level.

6 Explosion protection according to ATEX

The E4 series Rexnord-Stephan gear units can be delivered in a modified design, certified in accordance with guidelines 94/9/EC, if requested by the customer. These gear units may be used in explosion prone surroundings. They are designed for category 2 and 3, and therefore usable in zones 1 and 2 for occurring gases and vapours, and in zones 21 and 22 for explosive dusts.
For gear units in the ATEX design, the thermal arrangement can be different from the parameters listed in this catalogue. In this case, consultation with Rexnord-Stephan is required.
Gear units in ATEX design are marked accordingly on the name plate. Standard gear units may not be used in explosion prone areas.

7 Sound power level



The diagram shows the maximum sound power level for Rexnord-Stephan C4 gear units.
Conditions:
SF > 5
N1 = 1500 /min
Probability: 90%
For compulsory values for the sound power level please ask Rexnord-Stephan.

8 Selection tables

8.1 i = 12,5 ..... 28 3 stage (C)

Nennleistung	Mechanical power rating	Puissances mécaniques nominales
Nenndrehmoment	Nominal torque	Couple nominal

			Baugröße - Size - Taille							
			J		K		L		M	
i_N	n_1	n_2	kNm	kW	kNm	kW	kNm	kW	kNm	kW
12,5	**1800**	**144,0**	**24,0**	362	**24,3**	366	**38,5**	581	**38,5**	581
	1500	**120,0**		302		305		484		484
	1200	**96,0**		241		244		387		387
	1000	**80,0**		201		204		323		323
	900	**72,0**		181		183		290		290
	750	**60,0**		151		153		242		242
14	**1800**	**128,6**	**25,0**	337	**26,8**	361	**40,0**	539	**42,5**	572
	1500	**107,1**		280		301		449		477
	1200	**85,7**		224		241		359		381
	1000	**71,4**		187		200		299		318
	900	**64,3**		168		180		269		286
	750	**53,6**		140		150		224		238
16	**1800**	**112,5**	**25,0**	295	**30,8**	363	**40,0**	471	**49,0**	577
	1500	**93,8**		245		302		393		481
	1200	**75,0**		196		242		314		385
	1000	**62,5**		164		202		262		321
	900	**56,3**		147		181		236		289
	750	**46,9**		123		151		196		241
18	**1800**	**100,0**	**25,0**	262	**31,5**	330	**40,0**	419	**50,0**	524
	1500	**83,3**		218		275		349		436
	1200	**66,7**		175		220		279		349
	1000	**55,6**		145		183		233		291
	900	**50,0**		131		165		209		262
	750	**41,7**		109		137		175		218
20	**1800**	**90,0**	**25,0**	236	**31,5**	297	**40,0**	377	**50,0**	471
	1500	**75,0**		196		247		314		393
	1200	**60,0**		157		198		251		314
	1000	**50,0**		131		165		209		262
	900	**45,0**		118		148		188		236
	750	**37,5**		98		124		157		196
22,4	**1800**	**80,4**	**25,0**	210	**31,5**	265	**40,0**	337	**50,0**	421
	1500	**67,0**		175		221		280		351
	1200	**53,6**		140		177		224		280
	1000	**44,6**		117		147		187		234
	900	**40,2**		105		133		168		210
	750	**33,5**		88		110		140		175
25	**1800**	**72,0**	**25,0**	188	**31,5**	238	**40,0**	302	**50,0**	377
	1500	**60,0**		157		198		251		314
	1200	**48,0**		126		158		201		251
	1000	**40,0**		105		132		168		209
	900	**36,0**		94		119		151		188
	750	**30,0**		79		99		126		157
28	**1800**	**64,3**	**25,0**	168	**31,5**	212	**40,0**	269	**50,0**	337
	1500	**53,6**		140		177		224		280
	1200	**42,9**		112		141		180		224
	1000	**35,7**		93		118		150		187
	900	**32,1**		84		106		135		168
	750	**26,8**		70		88		112		140

8.2 i = 31,5 ..... 71 3 stage (C)

Nennleistung	Mechanical power rating	Puissances mécaniques nominales
Nenndrehmoment	Nominal torque	Couple nominal

			Baugröße - Size - Taille							
			J		K		L		M	
i_N	n_1	n_2	kNm	kW	kNm	kW	kNm	kW	kNm	kW
31,5	**1800**	**57,1**	**25,0**	150	**31,5**	188	**40,0**	239	**50,0**	299
	1500	**47,6**		125		157		199		249
	1200	**38,1**		100		126		160		199
	1000	**31,7**		83		105		133		166
	900	**28,6**		75		94		120		150
	750	**23,8**		62		79		100		125
35,5	**1800**	**50,7**	**25,0**	133	**31,5**	167	**40,0**	212	**50,0**	265
	1500	**42,3**		111		139		177		221
	1200	**33,8**		88		112		142		177
	1000	**28,2**		74		93		118		147
	900	**25,4**		66		84		106		133
	750	**21,1**		55		70		88		111
40	**1800**	**45,0**	**25,0**	118	**31,5**	148	**40,0**	188	**50,0**	236
	1500	**37,5**		98		124		157		196
	1200	**30,0**		79		99		126		157
	1000	**25,0**		65		82		105		131
	900	**22,5**		59		74		94		118
	750	**18,8**		49		62		79		98
45	**1800**	**40,0**	**25,0**	105	**31,5**	132	**40,0**	168	**50,0**	209
	1500	**33,3**		87		110		140		175
	1200	**26,7**		70		88		112		140
	1000	**22,2**		58		73		93		116
	900	**20,0**		52		66		84		105
	750	**16,7**		44		55		70		87
50	**1800**	**36,0**	**25,0**	94	**31,5**	119	**40,0**	151	**50,0**	188
	1500	**30,0**		79		99		126		157
	1200	**24,0**		63		79		101		126
	1000	**20,0**		52		66		84		105
	900	**18,0**		47		59		75		94
	750	**15,0**		39		49		63		79
56	**1800**	**32,1**	**25,0**	84	**31,5**	106	**40,0**	135	**50,0**	168
	1500	**26,8**		70		88		112		140
	1200	**21,4**		56		71		90		112
	1000	**17,9**		47		59		75		93
	900	**16,1**		42		53		67		84
	750	**13,4**		35		44		56		70
63	**1800**	**28,6**	**25,0**	75	**31,5**	94	**40,0**	120	**50,0**	150
	1500	**23,8**		62		79		100		125
	1200	**19,0**		50		63		80		100
	1000	**15,9**		42		52		66		83
	900	**14,3**		37		47		60		75
	750	**11,9**		31		39		50		62
71	**1800**	**25,4**	**25,0**	66	**31,5**	84	**40,0**	106	**50,0**	133
	1500	**21,1**		55		70		88		111
	1200	**16,9**		44		56		71		88
	1000	**14,1**		37		46		59		74
	900	**12,7**		33		42		53		66
	750	**10,6**		28		35		44		55

8.3 i = 71 ..... 180 4 stage (D)

Nennleistung	Mechanical power rating	Puissances mécaniques nominales
Nenndrehmoment	Nominal torque	Couple nominal

			Baugröße - Size - Taille							
			J		K		L		M	
i_N	n_1	n_2	kNm	kW	kNm	kW	kNm	kW	kNm	kW
71	**1800**	**25,4**	**25,0**	66	**31,5**	84	**40,0**	106	**50,0**	133
	1500	**21,1**		55		70		88		111
	1200	**16,9**		44		56		71		88
	1000	**14,1**		37		46		59		74
	900	**12,7**		33		42		53		66
	750	**10,6**		28		35		44		55
80	**1800**	**22,5**	**25,0**	59	**31,5**	74	**40,0**	94	**50,0**	118
	1500	**18,8**		49		62		79		98
	1200	**15,0**		39		49		63		79
	1000	**12,5**		33		41		52		65
	900	**11,3**		29		37		47		59
	750	**9,4**		25		31		39		49
90	**1800**	**20,0**	**25,0**	52	**31,5**	66	**40,0**	84	**50,0**	105
	1500	**16,7**		44		55		70		87
	1200	**13,3**		35		44		56		70
	1000	**11,1**		29		37		47		58
	900	**10,0**		26		33		42		52
	750	**8,3**		22		27		35		44
100	**1800**	**18,0**	**25,0**	47	**31,5**	59	**40,0**	75	**50,0**	94
	1500	**15,0**		39		49		63		79
	1200	**12,0**		31		40		50		63
	1000	**10,0**		26		33		42		52
	900	**9,0**		24		30		38		47
	750	**7,5**		20		25		31		39
112	**1800**	**16,1**	**25,0**	42	**31,5**	53	**40,0**	67	**50,0**	84
	1500	**13,4**		35		44		56		70
	1200	**10,7**		28		35		45		56
	1000	**8,9**		23		29		37		47
	900	**8,0**		21		27		34		42
	750	**6,7**		18		22		28		35
125	**1800**	**14,4**	**25,0**	38	**31,5**	48	**40,0**	60	**50,0**	75
	1500	**12,0**		31		40		50		63
	1200	**9,6**		25		32		40		50
	1000	**8,0**		21		26		34		42
	900	**7,2**		19		24		30		38
	750	**6,0**		16		20		25		31
140	**1800**	**12,9**	**25,0**	34	**31,5**	42	**40,0**	54	**50,0**	67
	1500	**10,7**		28		35		45		56
	1200	**8,6**		22		28		36		45
	1000	**7,1**		19		24		30		37
	900	**6,4**		17		21		27		34
	750	**5,4**		14		18		22		28
160	**1800**	**11,3**	**25,0**	29	**31,5**	37	**40,0**	47	**50,0**	59
	1500	**9,4**		25		31		39		49
	1200	**7,5**		20		25		31		39
	1000	**6,3**		16		21		26		33
	900	**5,6**		15		19		24		29
	750	**4,7**		12		15		20		25
180	**1800**	**10,0**	**25,0**	26	**31,5**	33	**40,0**	42	**50,0**	52
	1500	**8,3**		22		27		35		44
	1200	**6,7**		17		22		28		35
	1000	**5,6**		15		18		23		29
	900	**5,0**		13		16		21		26
	750	**4,2**		11		14		17		22

8.4 i = 200 ..... 315 4 stage (D)

Nennleistung	Mechanical power rating	Puissances mécaniques nominales
Nenndrehmoment	Nominal torque	Couple nominal

			Baugröße - Size - Taille							
			J		K		L		M	
i_N	n_1	n_2	kNm	kW	kNm	kW	kNm	kW	kNm	kW
200	**1800**	**9,0**	**25,0**	24	**31,5**	30	**40,0**	38	**50,0**	47
	1500	**7,5**		20		25		31		39
	1200	**6,0**		16		20		25		31
	1000	**5,0**		13		16		21		26
	900	**4,5**		12		15		19		24
	750	**3,8**		10		12		16		20
224	**1800**	**8,0**	**25,0**	21,0	**31,5**	26,5	**40,0**	33,7	**50,0**	42,1
	1500	**6,7**		17,5		22,1		28,0		35,1
	1200	**5,4**		14,0		17,7		22,4		28,0
	1000	**4,5**		11,7		14,7		18,7		23,4
	900	**4,0**		10,5		13,3		16,8		21,0
	750	**3,3**		8,8		11,0		14,0		17,5
250	**1800**	**7,2**	**25,0**	18,8	**31,5**	23,8	**40,0**	30,2	**50,0**	37,7
	1500	**6,0**		15,7		19,8		25,1		31,4
	1200	**4,8**		12,6		15,8		20,1		25,1
	1000	**4,0**		10,5		13,2		16,8		20,9
	900	**3,6**		9,4		11,9		15,1		18,8
	750	**3,0**		7,9		9,9		12,6		15,7
280	**1800**	**6,4**	**25,0**	16,8	**31,5**	21,2	**40,0**	26,9	**50,0**	33,7
	1500	**5,4**		14,0		17,7		22,4		28,0
	1200	**4,3**		11,2		14,1		18,0		22,4
	1000	**3,6**		9,3		11,8		15,0		18,7
	900	**3,2**		8,4		10,6		13,5		16,8
	750	**2,7**		7,0		8,8		11,2		14,0
315	**1800**	**5,7**	**25,0**	15,0	**31,5**	18,8	**40,0**	23,9	**50,0**	29,9
	1500	**4,8**		12,5		15,7		19,9		24,9
	1200	**3,8**		10,0		12,6		16,0		19,9
	1000	**3,2**		8,3		10,5		13,3		16,6
	900	**2,9**		7,5		9,4		12,0		15,0
	750	**2,4**		6,2		7,9		10,0		12,5

8.5 i = 315 ..... 2240 5 stage (E)

Nennleistung	Mechanical power rating	Puissances mécaniques nominales
Nenndrehmoment	Nominal torque	Couple nominal

			Baugröße - Size - Taille							
			J		K		L		M	
i_N	n_1	n_2	kNm	kW	kNm	kW	kNm	kW	kNm	kW
315	**1800**	**5,7**	**25,0**	15,0	**31,5**	18,8	**40,0**	23,9	**50,0**	29,9
	1500	**4,8**		12,5		15,7		19,9		24,9
	1200	**3,8**		10,0		12,6		16,0		19,9
	1000	**3,2**		8,3		10,5		13,3		16,6
	900	**2,9**		7,5		9,4		12,0		15,0
	750	**2,4**		6,2		7,9		10,0		12,5
450	**1800**	**4,0**	**25,0**	10,5	**31,5**	13,2	**40,0**	16,8	**50,0**	20,9
	1500	**3,3**		8,7		11,0		14,0		17,5
	1200	**2,7**		7,0		8,8		11,2		14,0
	1000	**2,2**		5,8		7,3		9,3		11,6
	900	**2,0**		5,2		6,6		8,4		10,5
	750	**1,7**		4,4		5,5		7,0		8,7
560	**1800**	**3,2**	**25,0**	8,4	**31,5**	10,6	**40,0**	13,5	**50,0**	16,8
	1500	**2,7**		7,0		8,8		11,2		14,0
	1200	**2,1**		5,6		7,1		9,0		11,2
	1000	**1,8**		4,7		5,9		7,5		9,3
	900	**1,6**		4,2		5,3		6,7		8,4
	750	**1,3**		3,5		4,4		5,6		7,0
710	**1800**	**2,5**	**25,0**	6,6	**31,5**	8,4	**40,0**	10,6	**50,0**	13,3
	1500	**2,1**		5,5		7,0		8,8		11,1
	1200	**1,7**		4,4		5,6		7,1		8,8
	1000	**1,4**		3,7		4,6		5,9		7,4
	900	**1,3**		3,3		4,2		5,3		6,6
	750	**1,1**		2,8		3,5		4,4		5,5
800	**1800**	**2,3**	**25,0**	5,9	**31,5**	7,4	**40,0**	9,4	**50,0**	11,8
	1500	**1,9**		4,9		6,2		7,9		9,8
	1200	**1,5**		3,9		4,9		6,3		7,9
	1000	**1,3**		3,3		4,1		5,2		6,5
	900	**1,1**		2,9		3,7		4,7		5,9
	750	**0,9**		2,5		3,1		3,9		4,9
1120	**1800**	**1,6**	**25,0**	4,2	**31,5**	5,3	**40,0**	6,7	**50,0**	8,4
	1500	**1,3**		3,5		4,4		5,6		7,0
	1200	**1,1**		2,8		3,5		4,5		5,6
	1000	**0,9**		2,3		2,9		3,7		4,7
	900	**0,8**		2,1		2,7		3,4		4,2
	750	**0,7**		1,8		2,2		2,8		3,5
1400	**1800**	**1,3**	**25,0**	3,4	**31,5**	4,2	**40,0**	5,4	**50,0**	6,7
	1500	**1,1**		2,8		3,5		4,5		5,6
	1200	**0,9**		2,2		2,8		3,6		4,5
	1000	**0,7**		1,9		2,4		3,0		3,7
	900	**0,6**		1,7		2,1		2,7		3,4
	750	**0,5**		1,4		1,8		2,2		2,8
1800	**1800**	**1,0**	**25,0**	2,6	**31,5**	3,3	**40,0**	4,2	**50,0**	5,2
	1500	**0,8**		2,2		2,7		3,5		4,4
	1200	**0,7**		1,7		2,2		2,8		3,5
	1000	**0,6**		1,5		1,8		2,3		2,9
	900	**0,5**		1,3		1,6		2,1		2,6
	750	**0,4**		1,1		1,4		1,7		2,2
2240	**1800**	**0,8**	**25,0**	2,1	**31,5**	2,7	**40,0**	3,4	**50,0**	4,2
	1500	**0,7**		1,8		2,2		2,8		3,5
	1200	**0,5**		1,4		1,8		2,2		2,8
	1000	**0,4**		1,2		1,5		1,9		2,3
	900	**0,4**		1,1		1,3		1,7		2,1
	750	**0,3**		0,9		1,1		1,4		1,8

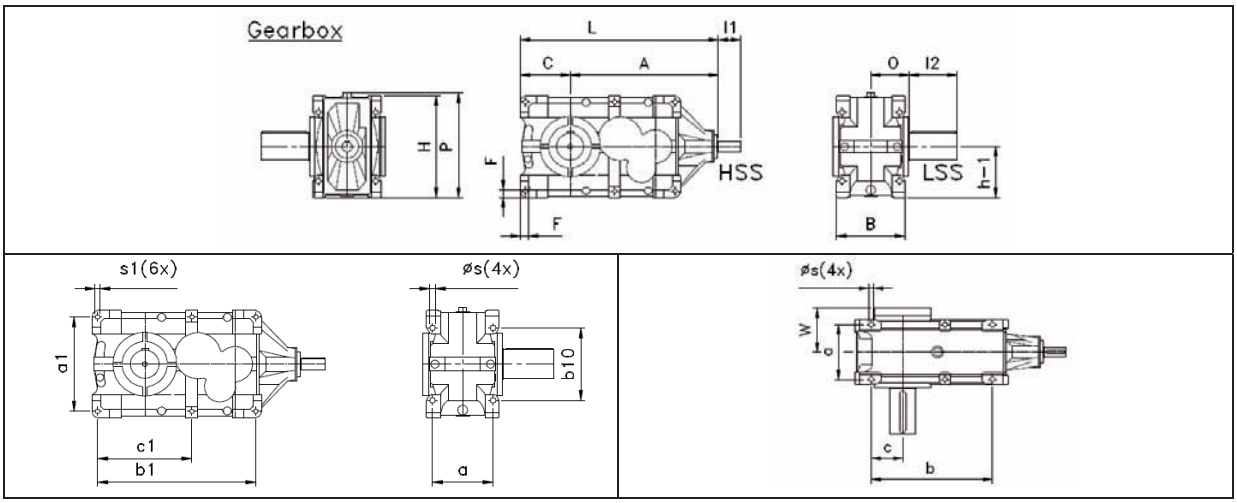
9 Dimension drawing

9.1 3 and 4 stage

Es werden die erforderlichen Funktionsflächen bearbeitet. Die angegebenen Maße sind nur für die bearbeiten Flächen gültig.

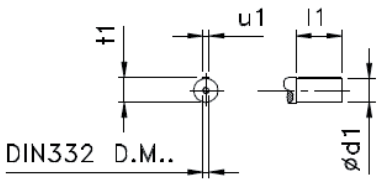
The necessary function surfaces are worked on. The indicated measures are only for those work on surfaces valid.

Les surfaces de fonction nécessaires sont travaillées. La masse indiquée que pour ceux travaillent, valable des surfaces ne sont.



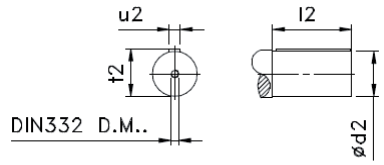
Gearbox										Mounting								
Size	**A**	**B**	**C**	**F**	**H**	**L**	**O**	**P**	**h**	**a**	**b**	**c**	**Øs**	**a1**	**b1**	**c1**	**s1**	**b10**
J	820	367_{-1}	274_{-1}	45	560	1094	210	580	280_{-1}	305	700	180	28	490	830	490	M24x32	380
K	820	367_{-1}	274_{-1}	45	560	1094	210	580	280_{-1}	305	700	180	28	490	830	490	M24x32	380
L	930	430_{-1}	311_{-1}	50	640	1243	240	660	320_{-1}	360	800	205	35	560	950	560	M30x37	430
M	930	430_{-1}	311_{-1}	50	640	1243	240	660	320_{-1}	360	800	205	35	560	950	560	M30x37	430

9.1.1 High speed shaft



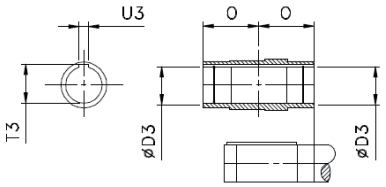
	i = 12,5 - 71					i = 71 - 315				
Size	**Ød1**	**l1**	**u1**	**t1**	DIN332 D.M..	**Ød1**	**l1**	**u1**	**t1**	DIN332 D.M..
J	60_{m6}	140	18	64	M20	55_{m6}	110	16	59	M20
K	60_{m6}	140	18	64	M20	55_{m6}	110	16	59	M20
L	65_{m6}	160	18	69	M20	55_{m6}	110	16	59	M20
M	65_{m6}	160	18	69	M20	55_{m6}	110	16	59	M20

9.1.2 Low speed solid shaft



Size	Ød2	l2	u2	t2	DIN332 D.M..	W
J	140_{m6}	250	36	148	M30	208,5
K	150_{m6}	250	36	158	M30	208,5
L	160_{m6}	300	40	169	M30	238,5
M	170_{m6}	300	40	179	M30	238,5

9.1.3 Low speed hollow shaft

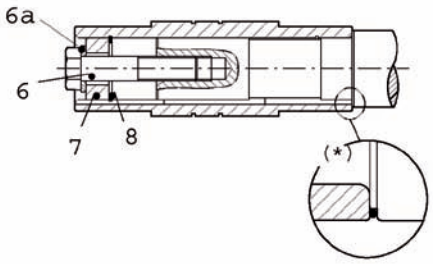


Size	ØD3	U3	T3	W	O
J	130^{H7}	32	137,4	220	210
K	140^{H7}	36	148,4	220	210
L	150^{H7}	36	159,4	250	240
M	160^{H7}	40	169,4	250	240

Die kundenseitige Welle ist ausreichend zu dimensionieren. Rexnord-Stephan ist nicht verantwortlich für die korrekte Ausführung der Welle. Hinweise zur Wellenausführung erhalten Sie von Rexnord-Stephan. Die erforderlichen Befestigungsteile sind im Standardlieferumfang erhalten. Ein Montage- und Demontagekit ist optional erhältlich.

The user shaft is to be dimensioned sufficiently. Rexnord Stephan is not responsible for the correct execution of the shaft. References to the shaft execution receive you from Rexnord Stephan. The necessary mounting elements are received in the standard scope of supply. An assembly and an fixing kit are optionally available.

L'axe d'utilisateur doit être dimensionné suffisamment. Rexnord Stephan n'est pas responsable de l'exécution correcte de l'axe. Les références à l'exécution d'axe vous reçoivent de Rexnord Stephan. Les éléments nécessaires de support sont reçus dans la portée standard de l'approvisionnement. Une assemblée et un kit de réparation sont sur option disponibles.

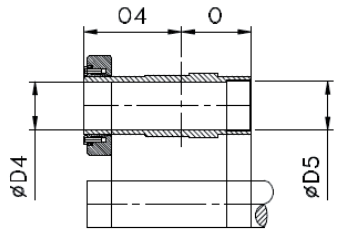


Befestigung:
6: Befestigungsschraube
6a: Scheibe
7: Befestigungsscheibe
8: Sicherungsring
(*) Für erhöhten Feuchtigkeitsschutz wird ein O-Ring empfohlen.

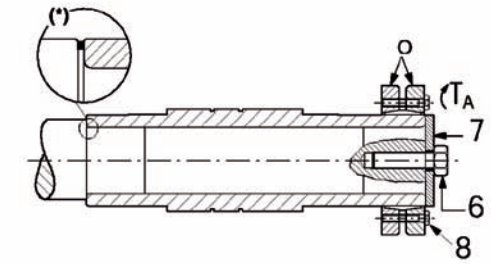
Attachment:
6: Fixing bolt
6a: Disk
7: Attachment disk
8: Snap ring
(*) For increased humidity protection an O-ring is recommended.

Fixation :
6 : Vis de fixation
6a : Glace
7 : Glace de fixation
8 : Circlip
(*) pour protection d'humidité accrue un joint circulaire est recommandé.

9.1.4 Low speed shaft with shrink disc



Size	ØD4	ØD5	O4	W	O
J	130^{H7}	130	318	330	210
K	140^{H7}	140	318	330	210
L	150^{H7}	150	348	360	240
M	160^{H7}	160	348	360	240



Die Drehmomentübertragung erfolgt über die reibschlüssige Verbindung der Schrumpfscheibe.
Falls die axiale Belastung nicht vom Absatz der Maschinenwelle aufgenommen wird, sind eine Befestigungsscheibe (7) und eine Schraube (6) vorzusehen.
(*) Für erhöhten Feuchtigkeitsschutz wird ein O-Ring empfohlen

The torque transmission is made by the frictionconclusive connection of the contraction disk.
If the axial load is not taken up by the paragraph of the machine shaft, is an attachment disk to plan (7) and a screw (6).
(*) For increased humidity protection becomes an O-ring recommended

Le transfert de couple est effectué sur la relation reibschlüssige de la glace de rétrécissement.
Si la charge axiale n'est pas commencée par la vente de la vague d'appareil, une glace de fixation (7) et une vis (6) doivent être prévues.
(*) pour protection d'humidité accrue devient un joint circulaire recommandé

Rexnord-Stephan GmbH & Co. KG

Ohsener Straße 79-83
D-31789 Hameln / Germany

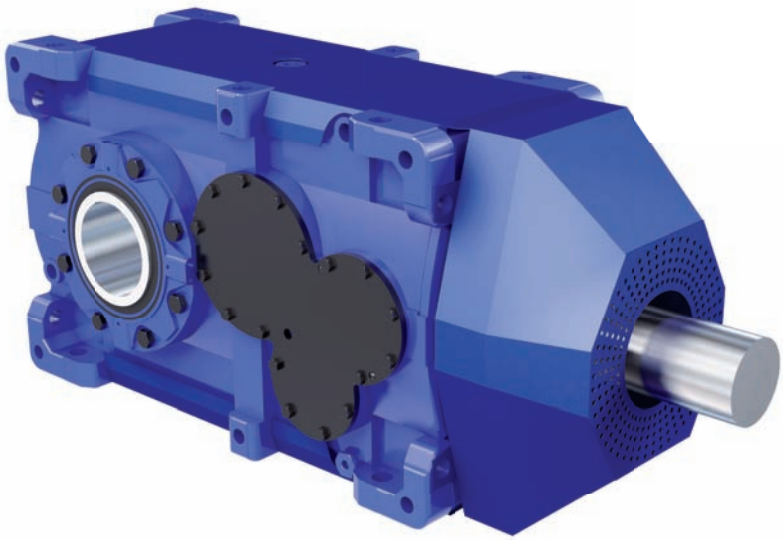
Tel: +49 (0) 5151 / 780 0
Fax: +49 (0) 5151 / 780 441

info.stephan@rexnord.com
www.rexnord-stephan.de

Your world-wide partner
See our world-wide sales and service network at
www.rexnord-stephan.de
We work closely together with around 45 sales, service and fitting centres in North America, Japan, China, Thailand, Malaysia, Australia, in the EU, eastern Europe and South Africa. This number is growing while at the same time we are ever more closely involved with our dealer network.

REXNORD
PRECISION. POWER. PERFORMANCE.

The Rexnord Group:
www.rexnord.eu
Rexnord drive technology: Industrial couplings
www.rexnord-antrieb.de
Rexnord Kette: Industrial chains
www.rexnord.de
Rexnord France: Power transmission and conveying components
www.rexnord.fr



100 YEARS REXNORD PRECISION. POWER. PERFORMANCE. | STEPHAN REXNORD-STEPHAN.DE

3P1001-32EN / 2009-03 / 1.0 (Subject to change / Änderungen vorbehalten / Modifications réservé) Photo: Stahl-Zentrum