



**SEW**  
**EURODRIVE**

# Catalog



Industrial Gear Units

**XP130 – XP250 Series Planetary Gear Units**

Torque Range from 600 kNm – 5200 kNm



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## 1 Introduction

### 1.1 The SEW-EURODRIVE group of companies

#### 1.1.1 Global presence

Driving the world – with innovative drive solutions for all industries and for every application. Products and systems from SEW-EURODRIVE are used all over the world. Be it in the automotive, building materials, food and beverage or metal-processing industry – the decision to use drive technology "made by SEW-EURODRIVE" stands for reliability for both functionality and investment.

We are represented in the most important branches of industry all over the world: with 15 manufacturing plants and 77 Drive Technology Centers worldwide as well as our customer support, which we consider an integrative service that continues our commitment to outstanding quality.

#### 1.1.2 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, available space, and ambient conditions. Gear units and gearmotors offering a unique and finely tuned performance range and the best economic prerequisites to meet your drive requirements.

The modular DR.. motor series includes the energy-efficient motor types IE1 to IE4 and was designed and constructed with all worldwide requirements for energy efficiency classes in mind. The DR.. motor easily meets the requirements for approval and certification in all relevant countries. The energy-efficient drives achieve the highest efficiency in combination with SEW-EURODRIVE gear units.

The gearmotors are electronically enhanced by MOVITRAC® frequency inverters, MOVIDRIVE® drive inverters, and MOVIAxis® multi-axis servo inverters – a combination that blends perfectly with the existing SEW-EURODRIVE program. As is the case with the mechanical systems, all development, production, and assembly is carried out entirely by SEW-EURODRIVE. In combination with our drive electronics, these drives 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 ensure precision and dynamics. From single-axis or multi-axis applications to synchronized process sequences, servo drive systems from SEW-EURODRIVE enable flexible and customized implementation of your applications.

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 has developed hybrid cables to provide cost-effective functional solutions, irrespective of the system philosophy or scope. The latest developments from SEW-EURODRIVE: DRC.. electronic motor, MOVIGEAR® mechatronic drive system, MOVIFIT® decentralized drive controller, MOVIPRO® decentralized drive, positioning, and application controller, as well as MOVITRANS® system components for contactless energy transfer.

Power, quality, and robustness combined in a single standard product: with SEW-EURODRIVE, powerful movements are delivered by industrial gear units with high torques. The modular concept once again ensures optimum adaptation of industrial gear units to meet a wide range of different applications.

**1.1.3 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 construction industry when it comes to providing drive systems for demanding drive tasks in all industries and applications.

**1.2 Products and systems from SEW-EURODRIVE**

The products and systems by SEW-EURODRIVE are divided into the following product groups:

- Industrial gear units
- Gearmotors and frequency inverters
- Servo drive systems
- Decentralized drive systems
- MAXOLUTION®

Products and systems used in applications of several groups are listed in a separate group entitled "products and systems covering several product groups". The following tables indicate the products and systems included in the respective product group:

**Industrial gear units**

- X, MC, ML series helical and bevel-helical gear units
- P002 – 102 series planetary gear units
- XP130 – 250 series planetary gear units
- P-X series planetary bevel-helical gear units
- Application solutions with connections
  - Girth gears
  - Swing base
  - Gearmotor
  - Motor
  - Coupling
  - Brake
  - Lubrication system

For conveyor drives, bucket conveyors, agitators, cooling towers, crane systems, and much more

| Gearmotors and frequency inverters                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                                                                                                                                                                                                                                                                                                                                   |                                                                                                                                                                                                                                         |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Gear units / gearmotors                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Motors                                                                                                                                                                                                                                                                                                                                                            | Frequency inverters                                                                                                                                                                                                                     |
| <ul style="list-style-type: none"> <li>• Helical gear units / helical gearmotors</li> <li>• Parallel-shaft helical gear units / parallel-shaft helical gearmotors</li> <li>• Helical-bevel gear units / gearmotors</li> <li>• Helical-worm gear units / helical-worm gearmotors</li> <li>• SPIROPLAN® right-angle gearmotors</li> <li>• EMS drives</li> <li>• Geared torque motors</li> <li>• Pole-changing gearmotors</li> <li>• Variable-speed gear units / variable-speed gearmotors</li> <li>• Aseptic gearmotors</li> <li>• Explosion-proof gear units/ gearmotors</li> <li>• Explosion-proof variable-speed gear units / variable-speed gearmotors</li> </ul> | <ul style="list-style-type: none"> <li>• Asynchronous AC motors / AC brakemotors</li> <li>• Pole-changing AC motors / AC brakemotors</li> <li>• Energy-efficient motors</li> <li>• Explosion-proof AC motors / AC brakemotors</li> <li>• Torque motors</li> <li>• Single-phase motors / single-phase brakemotors</li> <li>• Asynchronous linear motors</li> </ul> | <ul style="list-style-type: none"> <li>• MOVITRAC® frequency inverters</li> <li>• MOVI4R-U® frequency inverters</li> <li>• MOVIDRIVE® drive inverters</li> <li>• Control, technology and communication options for inverters</li> </ul> |

| Servo drive systems                                                                                                                                                                                                                                                                                                  |                                                                                                                                                                                                                                                         |                                                                                                                                                                                                                                            |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Servo gear units / gearmotors                                                                                                                                                                                                                                                                                        | Servomotors                                                                                                                                                                                                                                             | Servo drive inverters / servo inverters                                                                                                                                                                                                    |
| <ul style="list-style-type: none"> <li>• Low backlash planetary servo gear units / planetary gearmotors</li> <li>• Low backlash helical-bevel servo gear units / helical-bevel gear units</li> <li>• R, F, K, S, W gear units / gearmotors</li> <li>• Explosion-proof servo gear units / servo gearmotors</li> </ul> | <ul style="list-style-type: none"> <li>• Asynchronous servomotors / servo brakemotors</li> <li>• Synchronous servomotors / servo brakemotors</li> <li>• Explosion-proof servomotors / servo brakemotors</li> <li>• Synchronous linear motors</li> </ul> | <ul style="list-style-type: none"> <li>• MOVIDRIVE® servo drive inverters</li> <li>• MOVIAXIS® multi-axis servo inverter</li> <li>• Control, technology and communication options for servo drive inverters and servo inverters</li> </ul> |

| Decentralized drive systems                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                                                                                                                                                                                                                                       |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Decentralized drives                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Communication and installation                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Contactless energy transfer system                                                                                                                                                                                                                                                    |
| <ul style="list-style-type: none"> <li>• DRC.. electronic motor / MOVIGEAR® mechatronic drive systems               <ul style="list-style-type: none"> <li>– DBC – Direct Binary Communication</li> <li>– DAC – Direct AS-Interface Communication</li> <li>– DSC – Direct SBus Communication</li> <li>– SNI – Single Line Network Installation</li> </ul> </li> <li>• MOVIMOT® gearmotors with integrated frequency inverter</li> <li>• MOVIMOT® motors / brakemotors with integrated frequency inverter</li> <li>• MOVI-SWITCH® gearmotors with integrated switching and protection functions</li> <li>• MOVI-SWITCH® motors / brakemotors with integrated switching and protection function</li> <li>• Explosion-proof MOVIMOT® and MOVI-SWITCH® gearmotors</li> </ul> | <ul style="list-style-type: none"> <li>• Fieldbus interfaces</li> <li>• Field distributors for decentralized installation</li> <li>• MOVIFIT® product range               <ul style="list-style-type: none"> <li>– MOVIFIT® FDC for controlling MOVIGEAR® and DRC.. drive units</li> <li>– MOVIFIT® MC for controlling MOVIMOT® drives</li> <li>– MOVIFIT® SC with integrated electronic motor switch</li> <li>– MOVIFIT® FC with integrated frequency inverter</li> </ul> </li> <li>• MOVIPRO® product range               <ul style="list-style-type: none"> <li>– MOVIPRO® SDC decentralized drive and positioning control</li> </ul> </li> </ul> | <ul style="list-style-type: none"> <li>• MOVITRANS® system               <ul style="list-style-type: none"> <li>– Stationary components for energy supply</li> <li>– Mobile components for energy consumption</li> <li>– Line cables and installation material</li> </ul> </li> </ul> |

**MAXOLUTION®**

- MAXOLUTION® packages for predefined application solutions
- MAXOLUTION® systems for customer-specific system solutions and plants

**Products and systems covering several product groups**

- Operator panels
- MOVI-PLC® drive-based control system
- Components of the type "functional safety"
- Diagnostic units

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

- Technical consulting
- User software
- Seminars and training
- Extensive technical documentation
- Worldwide customer service

Visit our website at



→ **[www.sew-eurodrive.com](http://www.sew-eurodrive.com)**

The website provides comprehensive information and services.

1

### **1.3 Product names and trademarks**

All product names included in this documentation are trademarks or registered trademarks of the respective titleholders.

### **1.4 Copyright notice**

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## 2 Product description and overview of types

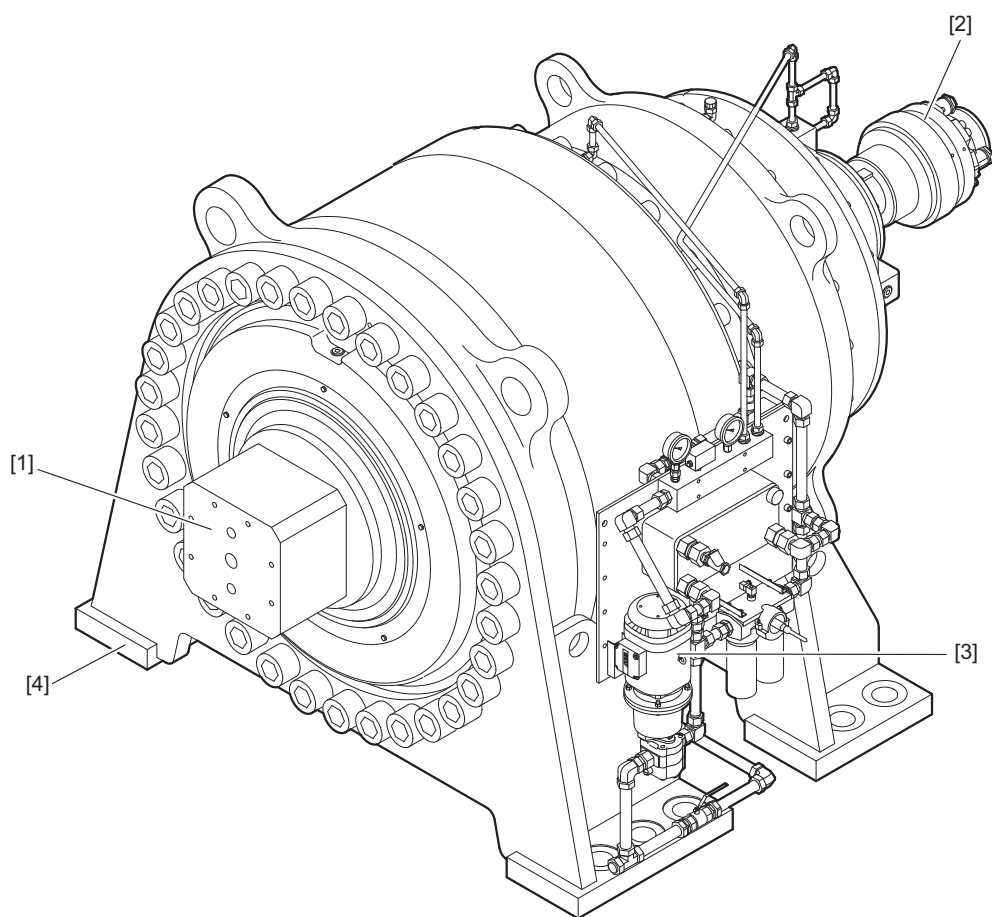
The series consists of 13 sizes of planetary gear units with nominal torques from 600 kNm to 5200 kNm.

As the load is distributed to several planet gears, a significantly higher power density and thus smaller dimensions are possible compared to helical and bevel-helical gear units.

Planetary gear units can have the following options:

- Squared output shaft or hollow output shaft with shrink disk and others
- Foot mounting or torque arm
- Cooling lubrication system
- Articulated shaft
- Safety clutch

The following figure shows an example of a planetary gear unit with squared output shaft, safety clutch, lubrication unit and foot mounting.



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- [1] Squared output shaft  
[2] Safety clutch

- [3] Oil-water cooler for pressure lubrication  
[4] Foot

## 2.1 Design features

Planetary gear units

- Can transmit a high torque
- Are very compact
- Offer a high degree of torsional rigidity

2

## 2.2 Your benefits at a glance

- Short, compact design with high degree of operational reliability.
- Standardized units, which means excellent price/performance ratio and short delivery times

## 2.3 Application areas

Planetary gear units are mainly used in applications where low output speeds and high torques are required.

For example:

- For mining industry
- For sugar industry
- For drying processes in the construction materials industry
- For filling processes in the cement industry
- For slow-running material processing systems, e.g. mixers, rotary filters
- For all branches of industry with similar requirements
- In the food industry
- And many other areas

**2.4 General information****2.4.1 Important information**

- The illustrations in the catalog are examples and are not binding.
- The specified lubricant quantities are guide values only. Use the marks on the oil dipstick or oil level glass to determine the oil level.
- On delivery, the planetary gear units are ready for operation, but not filled with oil. However, it is possible to have the gear units delivered filled with oil.
- Oil viscosity and grade must comply with those specified on the nameplate.
- The weights shown are non-binding average values.
- The buyer must provide protection against unintentional contact with moving parts. The applicable safety regulations of the country in which the unit will be used are to be followed.

#### 2.4.2 Power and torque

The power and torque values listed in the catalog apply to standard design and standard lubrication of the planetary gear unit under normal environmental conditions.

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

#### 2.4.3 Speeds

The specified output speeds of the planetary gear unit are recommended values. You can calculate the nominal output speed based on the rated speed of the motor and the gear unit ratio. Note that the actual output speed depends on the motor load and the supply system conditions.

#### 2.4.4 Noise

The noise levels of all planetary gear units are well within the maximum permitted noise levels set forth in ISO 8579-1 for gear units and EN 60034 for motors.

#### 2.4.5 Painting

Planetary gear units are painted in "blue grey" / RAL 7031 as per DIN 1843 as standard. Special paints are available on request.

#### 2.4.6 Weight information

Please note that all weights shown in the catalog exclude the oil fill because the lubricant fill quantity depends on the mounting position.

#### 2.4.7 Accessibility

The planetary gear units must be mounted on the driven machine in such a way that there is enough space for both axially and radially maintenance.



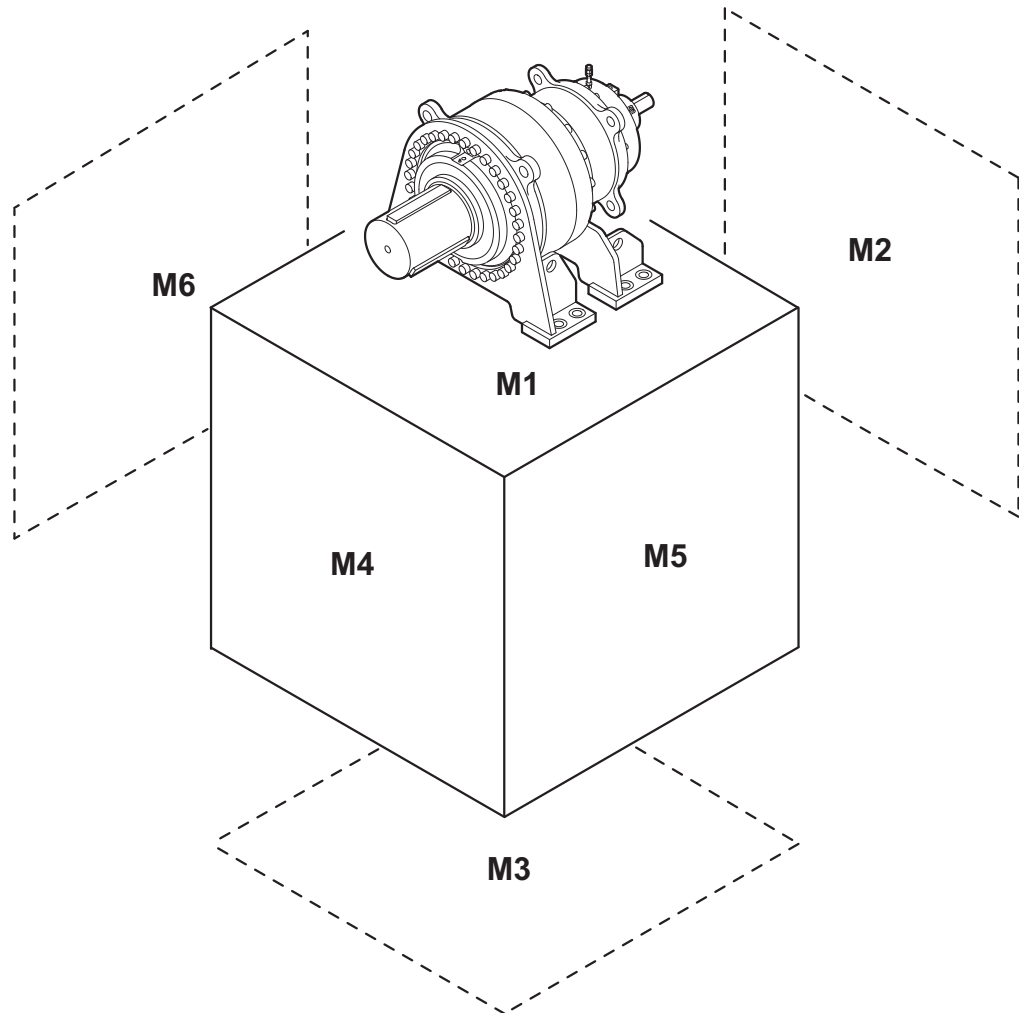
## 2.5 Sizes and torque ratings

| Size  | $M_{N2}$ in kNm |
|-------|-----------------|
| XP130 | 600             |
| XP140 | 730             |
| XP150 | 900             |
| XP160 | 1100            |
| XP170 | 1350            |
| XP180 | 1600            |
| XP190 | 1900            |
| XP200 | 2300            |
| XP210 | 2850            |
| XP220 | 3300            |
| XP230 | 4000            |
| XP240 | 4600            |
| XP250 | 5200            |

## 2.6 Mounting positions

The mounting position defines the position of the gear unit housing in the space and is designated **M1**. The mounting positions apply to planetary gear units with solid shafts and hollow shafts.

For other mounting positions, please contact SEW-EURODRIVE.



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## 2.7 Nameplate

The following example shows the layout of a nameplate.

|                                                                                   |                                   |                                   |                                   |                                             |
|-----------------------------------------------------------------------------------|-----------------------------------|-----------------------------------|-----------------------------------|---------------------------------------------|
| <input type="radio"/> <b>SEW-EURODRIVE</b>                                        |                                   | Indaiatuba/Brasil                 |                                   | <input type="radio"/>                       |
| Tipo/Type                                                                         |                                   | <input type="text" value="[1]"/>  |                                   | <input type="text" value="[2]"/>            |
| Nr.                                                                               |                                   | <input type="text" value="[3]"/>  |                                   |                                             |
|                                                                                   | norm.                             | min.                              | max.                              | i 1: <input type="text" value="[16]"/>      |
| Pk1 [kW]                                                                          | <input type="text" value="[4]"/>  | <input type="text" value="[5]"/>  | <input type="text" value="[6]"/>  | Fs <input type="text" value="[17]"/>        |
| Mk2 [Nm]                                                                          | <input type="text" value="[7]"/>  | <input type="text" value="[8]"/>  | <input type="text" value="[9]"/>  | FR1 [N] <input type="text" value="[18]"/>   |
| n1 [1/min]                                                                        | <input type="text" value="[10]"/> | <input type="text" value="[11]"/> | <input type="text" value="[12]"/> | FR2 [N] <input type="text" value="[19]"/>   |
| n2 [1/min]                                                                        | <input type="text" value="[13]"/> | <input type="text" value="[14]"/> | <input type="text" value="[15]"/> | FA1 [N] <input type="text" value="[20]"/>   |
| Acionar conforme manual                                                           |                                   |                                   |                                   | FA2 [N] <input type="text" value="[21]"/>   |
| Operation instructions have to be observed                                        |                                   |                                   |                                   | Mass [kg] <input type="text" value="[23]"/> |
| <input type="text" value="[22]"/>                                                 |                                   |                                   |                                   |                                             |
| Qty of greasing points                                                            | <input type="text" value="[24]"/> | Fans                              | <input type="text" value="[25]"/> | <input type="text" value="[26]"/>           |
| <input type="text" value="[27]"/>                                                 |                                   |                                   |                                   |                                             |
|  | <input type="text" value="[28]"/> |                                   |                                   | Year <input type="text" value="[29]"/>      |
| <input type="radio"/>                                                             | <input type="text" value="[30]"/> |                                   |                                   | <input type="radio"/>                       |

12512268427

|      |                                    |      |                                        |
|------|------------------------------------|------|----------------------------------------|
| [1]  | Planetary gear unit type           | [16] | Exact gear unit ratio of the gear unit |
| [2]  | (Empty)                            | [17] | Service factor                         |
| [3]  | Number of the customer order       | [18] | Radial load, input end                 |
| [4]  | Operating power on the input shaft | [19] | Radial load, output end                |
| [5]  | Operating power on the input shaft | [20] | Axial load, input end                  |
| [6]  | Operating power on the input shaft | [21] | Axial load, output end                 |
| [7]  | Output torque of the gear unit     | [22] | Manufactured in Brazil                 |
| [8]  | Output torque of the gear unit     | [23] | Weight of the gear unit                |
| [9]  | Output torque of the gear unit     | [24] | Number of lubrication points           |
| [10] | Input speeds                       | [25] | Number of installed fans               |
| [11] | Input speeds                       | [26] | (Empty)                                |
| [12] | Input speeds                       | [27] | Mounting position                      |
| [13] | Output speeds                      | [28] | Lubrication type, oil quantity         |
| [14] | Output speeds                      | [29] | Year of manufacture                    |
| [15] | Output speeds                      | [39] | Number of special design and note      |

## 2.8 Type designation

The type designation of the planetary gear unit starts with the component on the output side.

Example: The type designation for a planetary gear unit with 3 stages, hollow output shaft with shrink disk, mounted with torque arm and in size 160.

| <b>XP3PS160/B</b> |                                                                                                                                                                                   |
|-------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| XP                | XP series industrial gear units                                                                                                                                                   |
| 3                 | Number of stages <ul style="list-style-type: none"> <li>• 1 = 1 stage</li> <li>• 2 = 2 stages</li> <li>• 3 = 3 stages</li> <li>• 4 = 4 stages</li> </ul>                          |
| P                 | Gear unit variant <ul style="list-style-type: none"> <li>• P = Planetary gear unit</li> <li>• K = Bevel-planetary gear unit</li> <li>• F = Helical-planetary gear unit</li> </ul> |
| S                 | Output shaft (LSS) <ul style="list-style-type: none"> <li>• S = Solid shaft with key</li> <li>• H = Hollow shaft with shrink disk</li> <li>• C = Square solid shaft</li> </ul>    |
| 160               | Size <ul style="list-style-type: none"> <li>• 130 to 250</li> </ul>                                                                                                               |
| /B                | Mounting: <ul style="list-style-type: none"> <li>• B = Foot</li> <li>• F = Flange</li> <li>• T = Torque arm</li> </ul>                                                            |

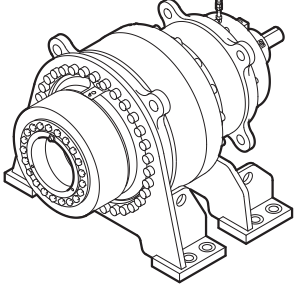
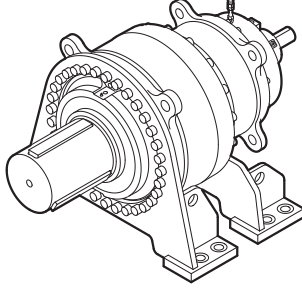
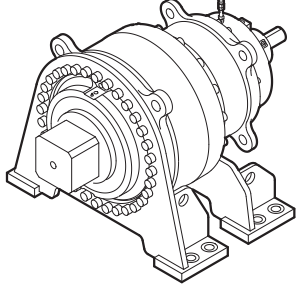
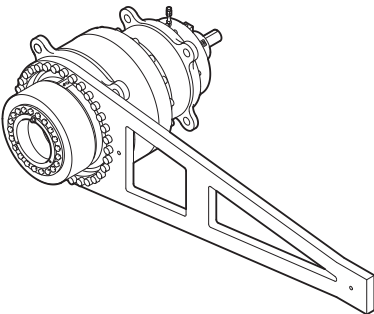
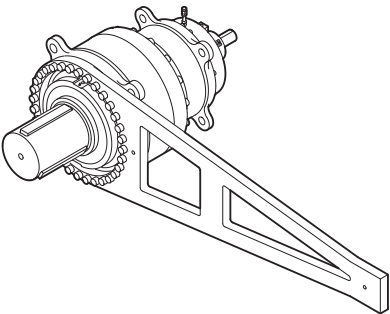
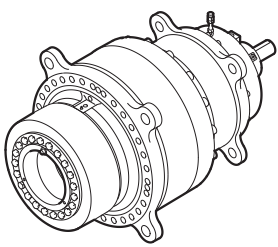
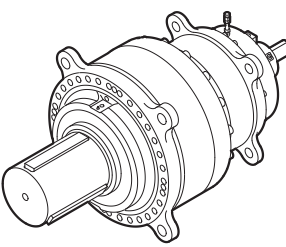
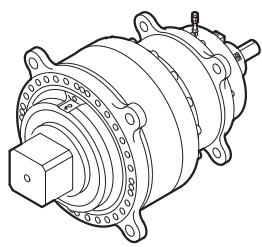
## 2.9 Type designations of options

| Designation      |                                                    |
|------------------|----------------------------------------------------|
| <b>XP.S.../B</b> | Solid shaft, foot mounting                         |
| <b>XP.H.../B</b> | Hollow shaft with shrink disk, foot mounting       |
| <b>XP.C.../B</b> | Square shaft, foot mounting                        |
| <b>XP.H.../T</b> | Hollow shaft with shrink disk, torque arm mounting |
| <b>XP.S.../F</b> | Solid shaft, flange mounting                       |
| <b>XP.S.../T</b> | Solid shaft, torque arm mounting                   |
| <b>XP.H.../F</b> | Hollow shaft with shrink disk, flange mounting     |
| <b>XP.C.../F</b> | Square shaft, flange mounting                      |

## 2.10 Output shaft types

The following table lists the output shaft types.

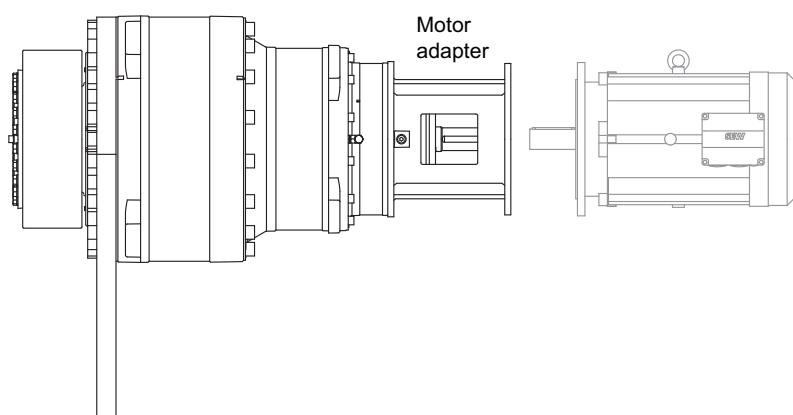
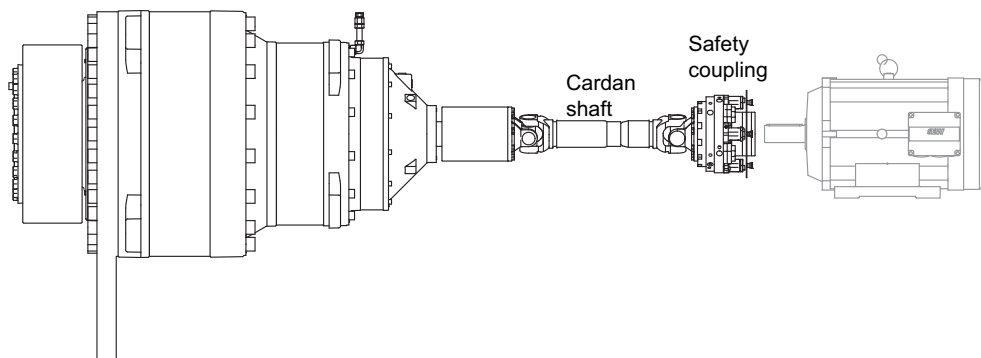
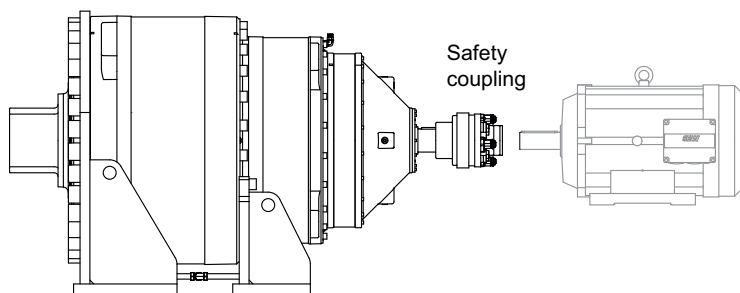
2

| Type       | Hollow shaft with shrink disk                                                                    | Solid shaft                                                                                       | Square solid shaft                                                                                 |
|------------|--------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------|
| Foot       | XP.H.../B<br>   | XP.S.../B<br>   | XP.C.../B<br>   |
| Torque arm | XP.H.../T<br>  | XP.S.../T<br>  | Not available                                                                                      |
| Flange     | XP.H.../F<br> | XP.S.../F<br> | XP.C.../F<br> |

## 2 Product description and overview of types

### Output shaft types

#### 2.10.1 Components on the input side



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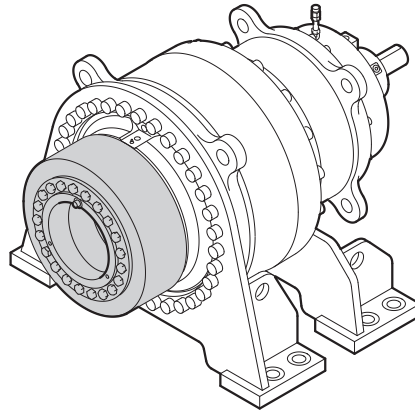


### 2.10.2 Output shaft variants

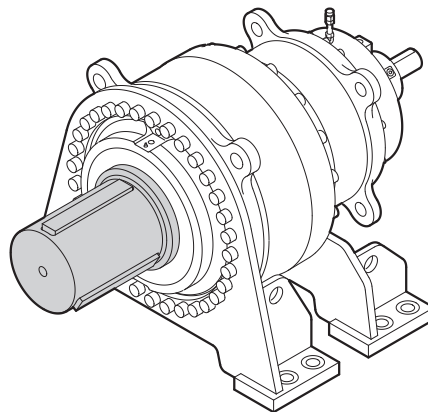
The output shaft can have the following standard designs. Other options are available on request.

2

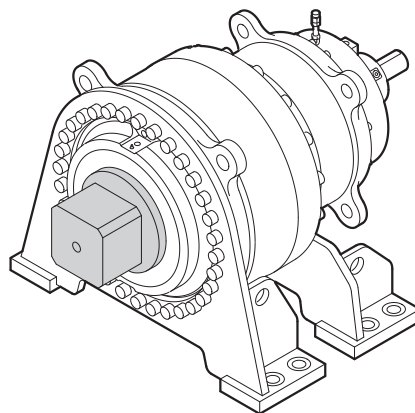
**Hollow shaft with shrink disk**



**Solid shaft with key**



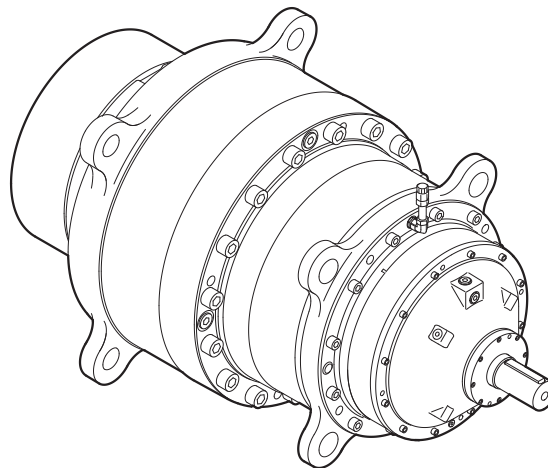
**Square shaft**



## 2.11 Basic designs

### 2.11.1 XP..P.: Planetary gear unit with coaxial shaft arrangement

The following gear ratios are possible  $i = 22.4 - 3600$

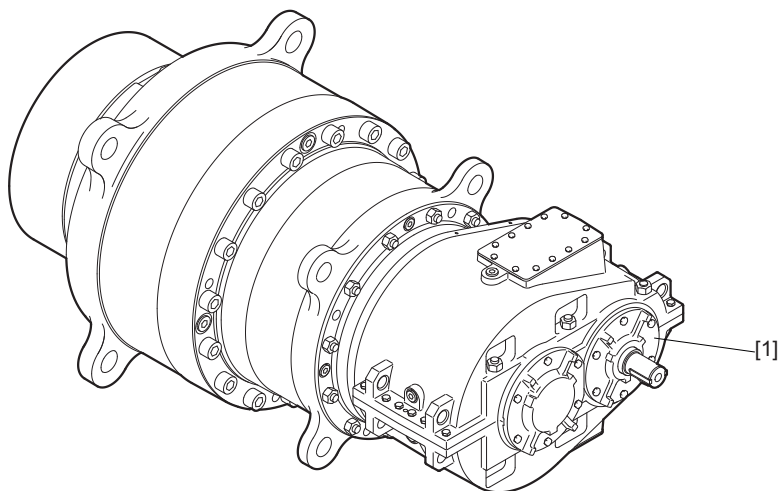


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### 2.11.2 XP..F: Helical-planetary gear unit with axially shifted shaft arrangement

The preliminary stage [1] is available in the size XP130 – 250

The following gear ratios are possible  $i = 45 - 110$



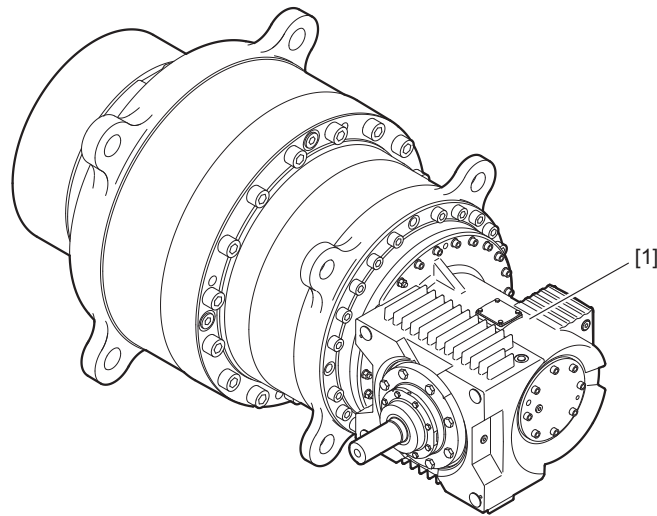
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### 2.11.3 XP..K: Bevel-planetary gear unit with right-angle shaft arrangement

The preliminary stage [1] is available in the size XP130 – 250

The following gear ratios are possible  $i = 180 - 1000$

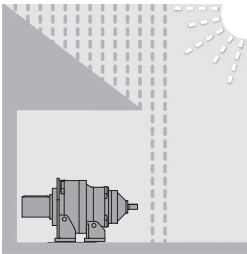
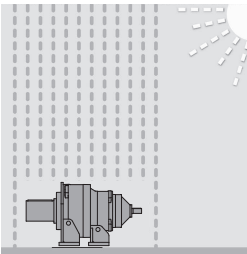
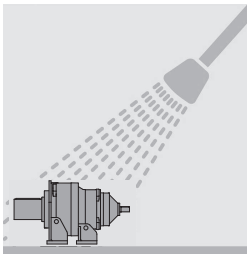
2



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## 2.12 Coating and surface protection systems

The following table gives an overview of coating and surface protection systems.

| SEW design                                                                                                    | OS 1<br>Low<br>environmental pollution                                                                                                                                                                                                                                                                                                                | OS 2<br>Medium<br>environmental pollution                                                                                                                                                                                                                                               | OS 3<br>High<br>environmental pollution                                                                                                                                                                                                                                                                                                                         |
|---------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Use as surface protection with typical environmental conditions<br>Corrosion categories<br>DIN EN ISO 12944-2 | <br>Suited for environments prone to condensation and atmospheres with low humidity or contamination, such as outdoor applications under roof or with protection, unheated buildings where condensation can build up.<br>According to corrosivity category: C2 (low) | <br>Suited for environments with high humidity or moderate atmospheric contamination, such as applications outdoors subject to direct weathering.<br>According to corrosivity category: C3 (moderate) | <br>Suitable for environments with high humidity and occasionally severe atmospheric and chemical contamination. Occasionally acidic or caustic wet cleaning. Also for applications in coastal areas with moderate salt load.<br>According to corrosivity category C4 (high) |
| Sample applications                                                                                           | <ul style="list-style-type: none"> <li>• Systems in saw mills</li> <li>• Agitators and mixers</li> </ul>                                                                                                                                                                                                                                              | <ul style="list-style-type: none"> <li>• Applications in gravel plants</li> <li>• Cable cars</li> </ul>                                                                                                                                                                                 | <ul style="list-style-type: none"> <li>• Port cranes</li> <li>• Sewage treatment plants</li> <li>• Mining applications</li> </ul>                                                                                                                                                                                                                               |
| Condensation test<br>ISO 6270                                                                                 | 120 h                                                                                                                                                                                                                                                                                                                                                 | 120 h                                                                                                                                                                                                                                                                                   | 240 h                                                                                                                                                                                                                                                                                                                                                           |
| Salt spray test ISO 7253                                                                                      | –                                                                                                                                                                                                                                                                                                                                                     | 240 h                                                                                                                                                                                                                                                                                   | 480 h                                                                                                                                                                                                                                                                                                                                                           |
| Top coat color <sup>1)</sup>                                                                                  | RAL 7031                                                                                                                                                                                                                                                                                                                                              | RAL 7031                                                                                                                                                                                                                                                                                | RAL 7031                                                                                                                                                                                                                                                                                                                                                        |
| Color according to RAL                                                                                        | Yes                                                                                                                                                                                                                                                                                                                                                   | Yes                                                                                                                                                                                                                                                                                     | Yes                                                                                                                                                                                                                                                                                                                                                             |
| Uncoated parts, shaft end/flanges                                                                             | Water and hand perspiration repelling anticorrosion agent applied at the factory for external preservation.                                                                                                                                                                                                                                           |                                                                                                                                                                                                                                                                                         |                                                                                                                                                                                                                                                                                                                                                                 |

1) Standard color

### INFORMATION



Sheet metal parts (e.g. protection covers, fan guard) are painted in RAL 1003.

## 2.13 Corrosion and surface protection

### 2.13.1 General information

2

SEW-EURODRIVE offers various optional protective measures for operation of motors and gearmotors and industrial gear units under special ambient conditions.

The protective measures comprise two groups:

- Corrosion protection KS for motors
- Surface protection OS for motors and gear units

For motors, optimum protection is offered by a combination of KS corrosion protection and OS surface protection.

### 2.13.2 KS corrosion protection

KS corrosion protection for motors comprises the following measures:

- All retaining screws that are loosened during operation are made of stainless steel.
- The nameplates are made of stainless steel.
- A top coating is applied to various motor parts.
- The flange contact surfaces and shaft ends are treated with a temporary anticorrosion agent.
- Additional measures for brakemotors.

A sticker labeled "KORROSIONSSCHUTZ" (corrosion protection) on the fan guard indicates special treatment has been applied. Motors with a forced cooling fan and motors with a spread shaft encoder (ES..) cannot be supplied with KS corrosion protection.

## 2.14 Storage and transport conditions

The gear units can be provided with the following protection and packaging types depending on the storage and transport conditions.

### 2.14.1 Internal conservation

#### Standard corrosion protection

After the test run, the test oil is drained out of the gear unit. The remaining oil film protects the gear unit against corrosion for a limited period of time.

#### Long-term corrosion protection

After the test run, the test oil is drained out of the gear unit and the interior space is filled with a vapor phase inhibitor. The breather filter is replaced by a screw plug and enclosed with the gear unit.

### 2.14.2 Exterior corrosion protection

The following measures are taken for exterior corrosion protection:

- Anti-corrosion agent is applied to bare, non-painted functional surfaces of shafts, flanges, mounting and foot surfaces of the housing. Remove it only using an appropriate solvent which is not harmful to the oil seal.
- Small spare parts and loose pieces, such as bolts, nuts, etc., are packed in corrosion protection plastic bags (VCI corrosion protection bags).
- Threaded holes and blind holes are covered by plastic plugs.

## INFORMATION



- If the gear unit is stored longer than 6 months, regularly check the protective coating of unpainted areas as well as the paint coating. Areas in which the protective coating and/or painting has been damaged may have to be repainted.
- 

### 2.14.3 Packaging

#### Standard packaging

The gear unit is delivered on a pallet, securely attached and without cover.

Use: Transportation by land

#### Long-term packaging

The gear unit is delivered in a wooden box that is also appropriate for sea transport.

Application: Sea transport and/or for extended storage

## 2.14.4 Storage conditions

## INFORMATION



- During storage up to startup, the gear unit must be stored in a shock-free manner to prevent damage to the rolling bearing races.
- The output shaft must be rotated at least one full revolution every 6 months so that the position of the rolling elements in the bearings of the input and output shafts changes.
- The gear units are delivered without oil; different protection systems are required depending on the storage period and storage conditions as shown in the table below.

| Corrosion protection + packaging                           | Storage location                                                                                                                                                                                                                                                                             | Storage duration                                                  |
|------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------|
| Standard corrosion protection<br>+<br>Standard packaging   | Under roof and enclosed at constant temperature and atmospheric humidity ( $5\text{ °C} < \vartheta < 60\text{ °C}$ , $< 50\%$ relative humidity).<br><br>No sudden temperature fluctuations. Controlled ventilation with filter (free from dust and dirt). No aggressive vapors, no shocks. | Max. 6 months with intact surface protection.                     |
| Long-term corrosion protection<br>+<br>Standard packaging  | Under roof and enclosed at constant temperature and atmospheric humidity ( $5\text{ °C} < \vartheta < 60\text{ °C}$ , $< 50\%$ relative humidity).<br><br>No sudden temperature fluctuations. Controlled ventilation with filter (free from dust and dirt). No aggressive vapors, no shocks. | Max. 3 years with regular inspection and checking for intactness. |
| Long-term corrosion protection<br>+<br>Long-term packaging | With roof, protected against rain and shocks.                                                                                                                                                                                                                                                | Max. 3 years with regular inspection and checking for intactness. |

## INFORMATION



If stored in tropical zones, provide for sufficient protection against insect damage. Contact SEW-EURODRIVE for differing requirements.

### 2.15 Lubrication type

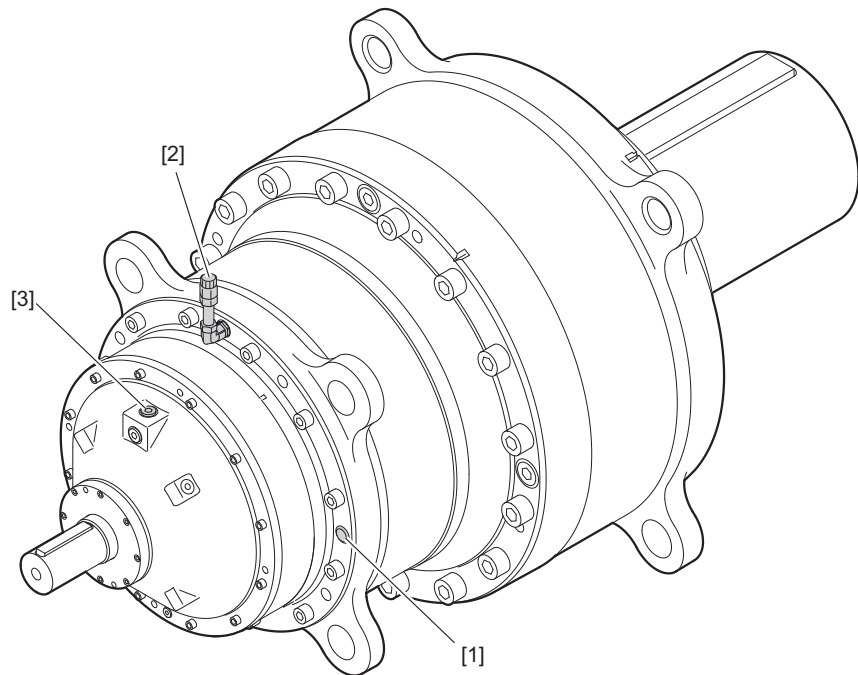
The lubrication type depends on the mounting position of the gear unit.

In horizontal mounting position M1, the gear unit is half filled with oil. Gearing and bearing parts that are not immersed in the oil bath are lubricated by splashing oil.

### 2.16 Checking the oil level/filling oil

The oil is filled into the gear unit via the riser pipe [2]. As an alternative, the oil can be filled in via the gear unit opening [3].

The oil level is checked via the oil sight glass [1].



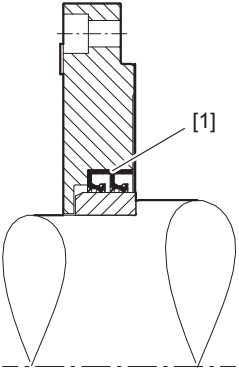
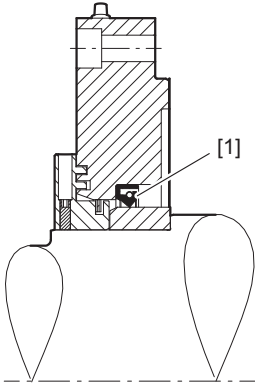
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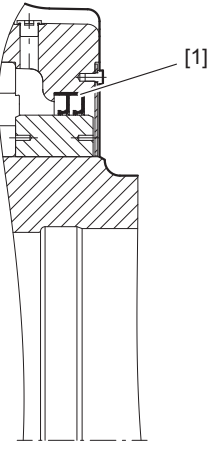
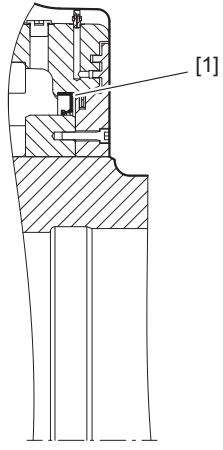
## 2.17 Overview of sealing systems

2

Input shaft

| Standard                                                                          | Radial labyrinth seal (Taconite), re-greasable                                      |
|-----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Two oil seals [1] with dust protection lip on bearing race                        | Single oil seal [1] on bearing race with radial labyrinth seal                      |
| Normal environment                                                                | Very dusty environments with abrasive particles                                     |
|  |  |

Output shaft

| Standard                                                                            | Radial labyrinth seal (Taconite), re-greasable                                        |
|-------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
| Two oil seals [1] with dust protection lip on bearing race                          | Single oil seal [1] on bearing race with radial labyrinth seal                        |
| Normal environment                                                                  | Very dusty environments with abrasive particles                                       |
|  |  |

## 3 Options

### 3.1 Torque arm

The torque arm can be mounted according to customer requirements.

The retaining screws are included in the delivery.

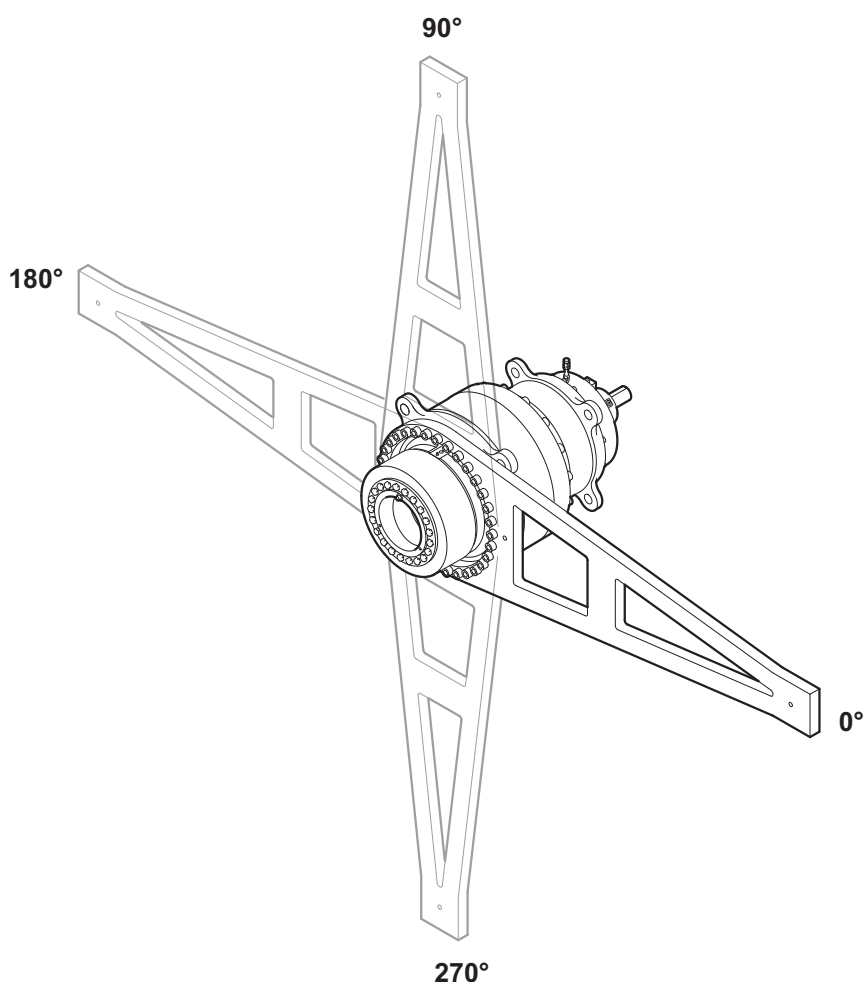
The position of the torque arm is determined as looking onto the output shaft (mounting position 0°, 90°, 180°, 270°).

#### INFORMATION



Different mounting positions are possible depending on the angle division (number of retaining screws).

The following figure shows a sample mounting position and combination of a planetary gear unit and a torque arm.

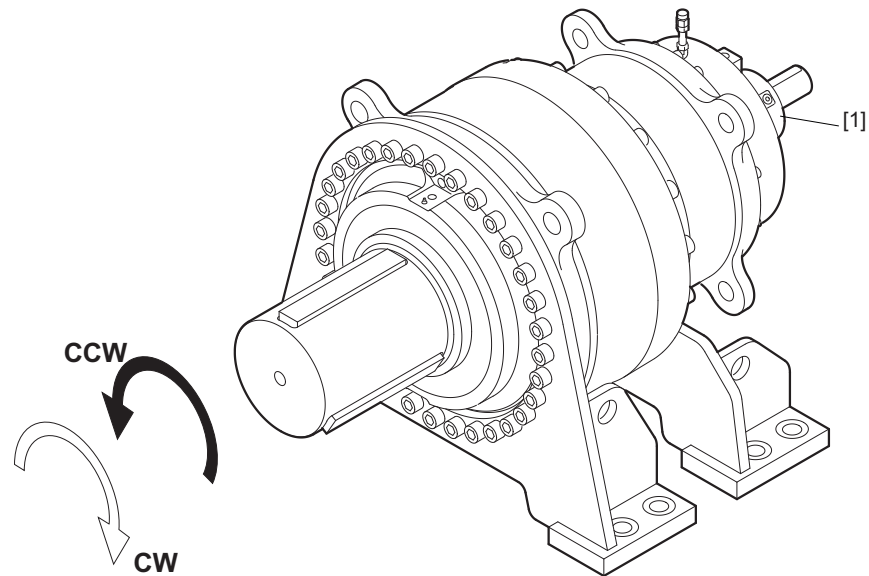


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### 3.2 Backstop

The backstop is installed in the input cover [1]. The purpose of it is to prevent undesirable reverse rotation. During operation, the backstop permits rotation in only one specified direction of rotation.



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CW     Rotation in clockwise direction  
CCW    Rotation in counterclockwise direction

## 4 Project planning for gear units

### 4.1 Selecting the application factors

#### 4.1.1 Service factor $F_s$

| Area of application         | Application type<br>(Driven machine) | Application-specific service factor<br>FS min<br>Operating period/day |        |        |
|-----------------------------|--------------------------------------|-----------------------------------------------------------------------|--------|--------|
|                             |                                      | < 3 h                                                                 | 3-10 h | > 10 h |
| Sugar factory               | Disintegrators                       | -                                                                     | -      | 2.00   |
|                             | Conveyor belt                        | 1.15                                                                  | 1.30   | 1.50   |
|                             | Crystallizers                        | -                                                                     | 1.50   | 1.80   |
|                             | 45° table                            | -                                                                     | 1.40   | 1.50   |
|                             | Shredder                             | -                                                                     | -      | 2.00   |
|                             | Chippers                             | -                                                                     | -      | 2.00   |
|                             |                                      |                                                                       |        |        |
| Waste water treatment       | Aerator wheel                        | -                                                                     | 1.80   | 2.00   |
|                             | Thickeners                           | 1.15                                                                  | 1.25   | 1.50   |
|                             | Vacuum filters                       | 1.15                                                                  | 1.30   | 1.50   |
|                             | Collector                            | 1.15                                                                  | 1.25   | 1.50   |
|                             | Screw pump                           | -                                                                     | 1.30   | 1.50   |
|                             | Brush aerators                       | -                                                                     | -      | 2.00   |
|                             |                                      |                                                                       |        |        |
| Mining                      | Shredders                            | 2.30                                                                  | 2.70   | 3.00   |
|                             | Screens and shakers                  | 1.55                                                                  | 1.75   | 2.00   |
|                             | Slewing drives                       | -                                                                     | 1.55   | 1.80   |
|                             | Bucket-wheel excavator               | 1)                                                                    | 1)     | 1)     |
| Energy industry             | Frequency inverters                  | -                                                                     | 1.80   | 2.00   |
|                             | Water wheels (low speed)             | -                                                                     | -      | 1.70   |
|                             | Water turbines                       | -                                                                     | -      | 1)     |
| Conveyor belts              | Bucket elevator                      | -                                                                     | 1.40   | 1.50   |
|                             | Other vertical conveyors             | -                                                                     | 1.50   | 1.80   |
|                             | Belt conveyors ≤ 100 kW              | 1.15                                                                  | 1.25   | 1.40   |
|                             | Belt conveyors > 100 kW              | 1.15                                                                  | 1.30   | 1.50   |
|                             | Apron feeders                        | -                                                                     | 1.25   | 1.50   |
|                             | Screw feeder                         | 1.15                                                                  | 1.25   | 1.50   |
|                             | Shaking devices Screens              | 1.55                                                                  | 1.75   | 2.00   |
|                             | Elevators                            | 1.25                                                                  | 1.25   | 1.50   |
|                             | Passenger elevators                  | 1)                                                                    | 1)     | 1)     |
| Rubber and plastic industry | Extruders (plastic)                  | -                                                                     | 1.40   | 1.60   |
|                             | Extruders (rubber)                   | -                                                                     | 1.50   | 1.80   |
|                             | Rubber rollers (2 in a row)          | 1.55                                                                  | 1.75   | 2.00   |
|                             | Rubber rollers (3 in a row)          | -                                                                     | 1.50   | 1.75   |
|                             | Heatable rollers                     | 1.35                                                                  | 1.50   | 1.75   |
|                             | Calender                             | -                                                                     | 1.65   | 1.65   |
|                             | Rollers                              | 1.55                                                                  | 1.75   | 2.00   |
|                             | Mixing rollers                       | 1)                                                                    | 1)     | 1)     |
|                             | Slab rollers                         | 1.55                                                                  | 1.75   | 2.00   |
|                             | Refiners                             | 1.55                                                                  | 1.75   | 2.00   |
|                             | Tire machines                        | 1)                                                                    | 1)     | 1)     |
|                             |                                      |                                                                       |        |        |
| Timber industry             | Timber industry                      | 1)                                                                    | 1)     | 1)     |
| Cranes                      | Cranes and hoists                    | 2)                                                                    | 2)     | 2)     |
| Food industry               | Shredders and rollers                | -                                                                     | -      | 1.75   |
|                             | Beet slicers                         | -                                                                     | 1.25   | 1.50   |
|                             | Drying drums                         | -                                                                     | 1.25   | 1.50   |

| Area of application             | Application type<br>(Driven machine)                     | Application-specific service factor<br>FS min<br>Operating period/day |        |        |
|---------------------------------|----------------------------------------------------------|-----------------------------------------------------------------------|--------|--------|
|                                 |                                                          | < 3 h                                                                 | 3-10 h | > 10 h |
| Metal production and processing | Winders                                                  | -                                                                     | 1.60   | 1.75   |
|                                 | Slitting rollers                                         | 1.55                                                                  | 1.75   | 2.00   |
|                                 | Circular conveyors Single drives                         | 1)                                                                    | 1)     | 1)     |
|                                 | Circular conveyors Group drives                          | 1)                                                                    | 1)     | 1)     |
|                                 | Circular conveyors with lifting cylinder                 | 1)                                                                    | 1)     | 1)     |
|                                 | Wire drawing machines                                    | 1.35                                                                  | 1.50   | 1.75   |
|                                 | Rollers                                                  | 1)                                                                    | 1)     | 1)     |
| Mills and drums                 | Cooling and drying drums                                 | -                                                                     | 1.50   | 1.60   |
|                                 | Rotary kilns                                             | -                                                                     | -      | 2.00   |
|                                 | Ball mills                                               | -                                                                     | -      | 2.00   |
|                                 | Coal mills                                               | -                                                                     | 1.50   | 1.75   |
| Pulp and paper industry         | Debarking drums and barkers                              | 1.55                                                                  | 1.80   | -      |
|                                 | Rolls (pick-up roll, wire drive roll, wire suction roll) | -                                                                     | 1.80   | 2.00   |
|                                 | Drying cylinders (rolling bearings)                      | -                                                                     | 1.80   | 2.00   |
|                                 | Calenders (rolling bearings)                             | -                                                                     | 1.80   | 2.00   |
|                                 | Filters (pressure and vacuum)                            | -                                                                     | 1.80   | 2.00   |
|                                 | Beaters and shredders                                    | 1.55                                                                  | 1.75   | 2.00   |
|                                 | Jordan refiners                                          | -                                                                     | 1.50   | 1.75   |
|                                 | Presses (bark, Paper machine felt, Adhesive, Suction)    | -                                                                     | -      | 1.75   |
|                                 | Roles                                                    | -                                                                     | -      | 1.75   |
|                                 | Kneading machine                                         | 1)                                                                    | 1)     | 1)     |
|                                 | Washer filters                                           | -                                                                     | -      | 1.50   |
|                                 | Yankee cylinders (dryers)                                | 1)                                                                    | 1)     | 1)     |
| Pumps                           | Centrifugal pumps                                        | 1.15                                                                  | 1.35   | 1.45   |
|                                 | Reciprocating pumps (single-cylinder)                    | 1.35                                                                  | 1.50   | 1.80   |
|                                 | Reciprocating pumps (multi-cylinder)                     | 1.20                                                                  | 1.40   | 1.50   |
|                                 | Screw pumps                                              | -                                                                     | 1.25   | 1.50   |
|                                 | Rotary pumps (gear unit, Vane)                           | -                                                                     | -      | 1.25   |
| Agitators and mixers            | Agitators for liquids                                    | 1.00                                                                  | 1.25   | 1.50   |
|                                 | Agitators for liquids (variable density)                 | 1.20                                                                  | 1.50   | 1.65   |
|                                 | Agitators for solids (inhomogeneous material)            | 1.40                                                                  | 1.60   | 1.70   |
|                                 | Agitators for solids (homogeneous material)              | -                                                                     | 1.35   | 1.40   |
|                                 | Concrete mixers                                          | -                                                                     | 1.50   | 1.50   |
| Cableways                       | Material cableway                                        | -                                                                     | 1.40   | 1.50   |
|                                 | Aerial cableways                                         |                                                                       | 1)     | 1)     |
|                                 | Surface lifts                                            | 1)                                                                    | 1)     | 1)     |
|                                 | Continuous aerial cableways                              | 1)                                                                    | 1)     | 1)     |
|                                 | Funicular railways                                       | 1)                                                                    | 1)     | 1)     |
| Fan                             | Heat exchangers                                          | 1.50                                                                  | 1.50   | 1.50   |
|                                 | Dry cooling towers                                       | -                                                                     | -      | 2.00   |
|                                 | Wet cooling towers                                       | 2.00                                                                  | 2.00   | 2.00   |
|                                 | Blowers (axial and radial)                               | 1.50                                                                  | 1.50   | 1.50   |
| Compressors                     | Reciprocating compressors                                | -                                                                     | 1.80   | 1.90   |
|                                 | Radial compressors                                       | -                                                                     | 1.40   | 1.50   |
|                                 | Screw-type compressors                                   | -                                                                     | 1.50   | 1.75   |

1) Contact SEW-EURODRIVE.

2) Contact SEW-EURODRIVE. Dimensioning according to FEM1001.

#### 4.1.2 Peak load factor

The peak load factor  $F_F$  takes account of the overload capacity of the gearing and the torque-transmitting parts.

| Peak load frequency per hour |         |          |          |           |       |
|------------------------------|---------|----------|----------|-----------|-------|
| 1 to 5                       | 6 to 20 | 21 to 40 | 41 to 80 | 81 to 160 | > 160 |
| 1.0                          | 1.2     | 1.3      | 1.5      | 1.75      | 2.0   |

#### 4.1.3 Startup factor – $F_{start}$

The startup factor  $F_{start}$  takes account of the overload caused by startup.

The following startup factors are guide values. The actual values depend on the application.

| Startup mode                             | Startup factor – $F_{start}$ |
|------------------------------------------|------------------------------|
| Direct                                   | 3.0                          |
| Soft start                               | 1.8                          |
| Frequency inverter                       | 1.5 to 2.0 <sup>1)</sup>     |
| Star/delta                               | 1.3                          |
| Hydraulic coupling without delay chamber | 2.0                          |
| Hydraulic coupling with delay chamber    | 1.6                          |

1) Depending on settings

### 4.2 Calculating the basic data

#### 4.2.1 Checking the input speeds

$$n_{1per} > n_{1max}$$

$n_{1per}$  = Permitted input speed in  $\text{min}^{-1}$

$n_{1max}$  = Maximum input speed in  $\text{min}^{-1}$

If the permitted input speed is exceeded, contact SEW-EURODRIVE.

Planetary gear unit:

$$n_{1per} \text{ (XP4P.)} = 1800 \text{ min}^{-1}$$

$$n_{1per} \text{ (XP3P.)} = 1800 \text{ min}^{-1}$$

$$n_{1per} \text{ (XP2P.)} = 1200 \text{ min}^{-1}$$

Helical-planetary gear unit:

$$n_{1per} \text{ (XP3F.)} = 1200 \text{ min}^{-1}$$

Bevel-planetary gear unit:

$$n_{1per} \text{ (XP4K.)} = 1800 \text{ min}^{-1}$$

#### 4.2.2 Checking the output speeds

$$n_{2per} > n_{2max}$$

$$n_{2per} = 10 \text{ min}^{-1} \geq n_{2max}$$

$n_{2per}$  = Permitted output speed in  $\text{min}^{-1}$

$n_{2max}$  = Maximum output speed in  $\text{min}^{-1}$

If the permitted output speed is exceeded, contact SEW-EURODRIVE.

#### 4.2.3 Calculation of ratio

$$i_{ex} = \frac{n_1}{n_2}$$

$n_1$  = Input speed at HSS in  $\text{min}^{-1}$   
 $n_2$  = Output speed at LSS in  $\text{min}^{-1}$

#### 4.2.4 Determination of operating torque of driven machine

$$M_{K2} = 9,55 \times \frac{P_{K2}}{n_2}$$

$M_{K2}$  = Operating torque at LSS in  $\text{kNm}$   
 $P_{K2}$  = Operating power at LSS in  $\text{kW}$   
 $n_2$  = Output speed at LSS in  $\text{min}^{-1}$

### 4.3 Selecting the nominal motor power

$$P_M \geq P_{K1} = \frac{P_{K2}}{\eta}$$

$P_M$  = Nominal motor power in  $\text{kW}$   
 $P_{K1}$  = Operating power on HSS in  $\text{kW}$   
 $P_{K2}$  = Operating power at LSS in  $\text{kW}$   
 $\eta$  = Efficiency (0.975 for 3-stage XP planetary gear unit)

Efficiency:

XP2P. = 0.985

XP3P. = 0.975

XP4P. = 0.965

XP3F. = 0.97

XP4K. = 0.96

#### 4.4 Calculating the required nominal gear unit torque – $M_{N2}$

Constant load direction – constant torque:

$$M_{N2} \geq M_{K2} \times F_{S \min}$$

$M_{N2}$  = Nominal torque of the gear unit in kNm  
 $M_{K2}$  = Operating torque at LSS in kNm  
 $F_{S \min}$  = Application-specific service factor

Reversing load direction – constant torque:

$$M_{N2} \geq M_{K2} \times F_{S \min} \times 1.43$$

$M_{N2}$  = Nominal torque of the gear unit in kNm  
 $M_{K2}$  = Operating torque at LSS in kNm  
 $F_{S \min}$  = Application-specific service factor

Selecting the size:

| Size  | $M_{N2}$ in kNm |
|-------|-----------------|
| XP130 | 600             |
| XP140 | 730             |
| XP150 | 900             |
| XP160 | 1100            |
| XP170 | 1350            |
| XP180 | 1600            |
| XP190 | 1900            |
| XP200 | 2300            |
| XP210 | 2850            |
| XP220 | 3300            |
| XP230 | 4000            |
| XP240 | 4600            |
| XP250 | 5200            |



#### 4.5 Checking the peak load states $M_{K2 \text{ per}}$ $M_{K2 \text{ max}}$

Permitted peak output torque  $M_{K2 \text{ per}}$ :

Constant load direction

$$M_{K2 \text{ per}} = \frac{2 \times M_{N2}}{F_F}$$

$M_{K2 \text{ per}}$  = Permitted peak output torque kNm  
 $M_{N2}$  = Nominal torque of the gear unit kNm  
 $F_F$  = Peak load factor

Calculating the peak output torque  $M_{K2 \text{ max}}$

$$M_{K2 \text{ max}} = \frac{P_M \times 9,55 \times \eta}{n_2} \times F_{\text{start}}$$

$M_{K2 \text{ max}}$  = Peak output torque kNm  
 $F_{\text{start}}$  = Startup factor  
 $P_M$  = Nominal motor power kW  
 $\eta$  = Efficiency (0.975 for 3-stage XP planetary gear unit)

Checking the gear unit selection:

$$M_{K2 \text{ max}} \leq M_{K2 \text{ per}}$$

$M_{K2 \text{ max}}$  = Peak output torque kNm  
 $M_{K2 \text{ per}}$  = Permitted peak output torque kNm

4.6 Checking the bearing service life  $L_{h10} \geq L_{h10 \text{ required}}$ 

## INFORMATION



The bearing service life check only applies for 3-stage XP3P. planetary gear units. For the bearing service life for other gear unit designs, contact SEW-EURODRIVE.

$$L_{h10} = \left[ \frac{M_{N2}}{M_{K2}} \right]^{3.33} \times \frac{5000 \times n_{2B}}{n_2} \geq L_{h10 \text{ required}}$$

$L_{h10}$  = Bearing service life in hours  
 $L_{h10 \text{ required}}$  = Required bearing service life in hours  
 $M_{N2}$  = Nominal torque of the gear unit in kNm  
 $M_{K2}$  = Operating torque at LSS in kNm  
 $n_2$  = Output speed at LSS  
 $n_{2B}$  = Reference output speed in  $\text{min}^{-1}$ , see following table

| Size  | Reference output speed $n_{2B}$ in $\text{min}^{-1}$ |
|-------|------------------------------------------------------|
| XP130 | 9.9                                                  |
| XP140 | 13.8                                                 |
| XP150 | 11.4                                                 |
| XP160 | 10.4                                                 |
| XP170 | 9.9                                                  |
| XP180 | 13.2                                                 |
| XP190 | 13.8                                                 |
| XP200 | 10.0                                                 |
| XP210 | 11.0                                                 |
| XP220 | 14.0                                                 |
| XP230 | 10.1                                                 |
| XP240 | 9.1                                                  |
| XP250 | 16.2                                                 |

## 4.7 Radial and axial forces

### 4.7.1 Influences and dependencies:

The permitted additional forces depend on the following factors:

- Existing service factor of the gear unit with respect to the selection data
- Required bearing service life
- Direction of the axial force (from or towards gear unit)
- Application angle of the radial load (rotating or at a specific position)
- Point of force application
- Ratio between radial and axial load
- Gear unit mounting

### 4.7.2 Determining the overhung load

If no overhung loads are specified, they can be determined by approximation as follows. When determining the resulting overhung load, the type of transmission element mounted on the shaft end must be considered. The following transmission element factors  $f_z$  must be considered for various transmission elements.

| Transmission element  | Transmission element factor $f_z$ | Comments                    |
|-----------------------|-----------------------------------|-----------------------------|
| Gears                 | 1.15                              | < 17 teeth                  |
| Sprockets             | 1.40                              | < 13 teeth                  |
| Sprockets             | 1.25                              | < 20 teeth                  |
| Narrow V-belt pulleys | 1.75                              | Influence of pre-tensioning |
| Flat belt pulleys     | 2.50                              | Influence of pre-tensioning |
| Toothed belt pulleys  | 1.50                              | Influence of pre-tensioning |

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

$$F_R = \frac{M_d \times 2000}{d_0} \times f_z N$$

$F_R$  = Overhung load in N

$M_d$  = Torque in Nm

$d_0$  = Mean diameter of the installed transmission element in mm

$f_z$  = Transmission element factor

### 4.7.3 Permitted overhung load

The basis for determining the permitted overhung loads in the roller bearing calculation is the nominal bearing service life  $L_{10h}$  (according to ISO 281).

For special operating conditions, the permitted overhung loads can be determined on the basis of the modified service life  $L_{nmh}$  on request.

For applications with defined service life, the permitted overhung loads have been calculated based on an adapted shaft safety. The values can therefore be reduced.

### 4.7.4 Overhung load on output

The permitted overhung loads  $F_{R\text{ per}}$  for solid shaft gear units can be calculated exactly. The force values relate to the force application in the center of the shaft end for solid shafts and to the gear unit flange contact point for hollow shafts. In planetary gear units, the force application angle and direction of rotation do not influence the permitted values as there are no inner forces from the gear unit acting on the output bearing.

### 4.7.5 Permitted overhung loads and axial loads on the input

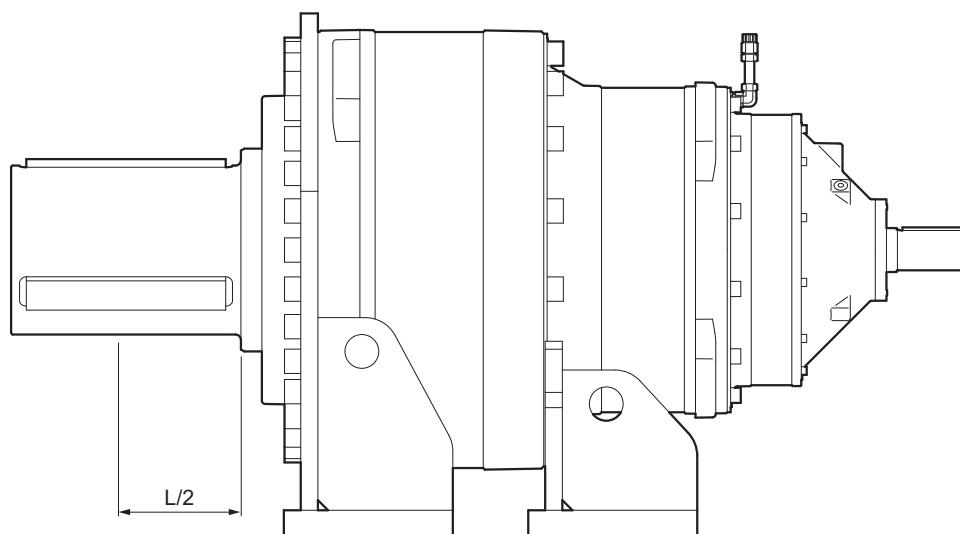
If overhung and axial loads apply on the input shaft, contact SEW-EURODRIVE.

#### Checking the permitted radial load on the output shaft

Use the following table to check if the required overhung load  $F_R$  in the center of the shaft end is permitted. The load is permitted if:

$$F_{R \text{ permitted}} \geq F_R$$

The values apply to force application to the middle of the shaft end  $L/2$  and the output speed of  $n_2 = 10 \text{ min}^{-1}$ .



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| Size                           | XP130  | XP140 | XP150  | XP160  | XP170   | XP180   | XP190 to XP250 |
|--------------------------------|--------|-------|--------|--------|---------|---------|----------------|
| $F_{R \text{ permitted}}$ in N | 520000 | 61500 | 725000 | 850000 | 1000000 | 1150000 | On request     |

## 4.8 Checking the thermal rating P<sub>T</sub>



### INFORMATION

The bearing service life check only applies for 3-stage XP3P. planetary gear units. For the thermal rating for other gear unit designs, contact SEW-EURODRIVE.

The thermal rating P<sub>T</sub> of a gear unit is the power that the gear unit can transmit constantly without exceeding a defined oil temperature. Thermal rating depends on the following factors:

- Ambient temperature
- Air circulation and sunlight exposure at the installation site
- Installation altitude
- Heat conduction to foundation at installation site
- Gear unit type, size and gear ratio
- External cooling of the gear unit
- Lubrication of the gear unit
- Lubricant type
- Cyclic duration factor

For the following ambient conditions, the thermal rating can be directly read from the selection tables "Thermal rating for XP3P.." (→ 60):

- Installation in a large hall (air velocity 1.4 m/s)
- Natural cooling
  - Ambient temperature 30 °C
  - Steel foundation
  - Installation altitudes up to 1000 m above sea level
  - Horizontal mounting position (M1)
  - Input speed: 750 – 1800 min<sup>-1</sup>
  - Service factor F<sub>S min</sub> ≤ 2.0



### INFORMATION

For outdoor installations, ensure that there is sufficient protection against sunlight. Contact SEW-EURODRIVE if you have deviating ambient conditions.

$$P_T = P_{TH} \times f_1 \times f_T$$

- P<sub>T</sub> = Thermal rating of the gear unit in kW  
 P<sub>TH</sub> = Nominal thermal rating of the gear unit in kW  
 f<sub>T</sub> = Temperature factor  
 f<sub>1</sub> = Altitude factor

Altitude factor f<sub>1</sub>

| Height                | Height, meters about sea level |             |             |             |             |
|-----------------------|--------------------------------|-------------|-------------|-------------|-------------|
| Factor f <sub>1</sub> | Up to 1000                     | 1000 – 2000 | 2000 – 3000 | 3000 – 4000 | 4000 – 5000 |
|                       | 1.00                           | 0.95        | 0.91        | 0.87        | 0.83        |

# 4 Project planning for gear units

## Checking the thermal rating PT

Temperature factor  
 $f_T$

| Ambient temperature °C |      |      |     |      |
|------------------------|------|------|-----|------|
| 10                     | 20   | 30   | 40  | 50   |
| 1.9                    | 1.35 | 1.00 | 0.8 | 0.45 |

The gear unit's thermal rating must be at least as large as the operating power on the input shaft HSS.

$$P_T \geq P_{K1}$$

$P_T$  = Nominal thermal rating of the gear unit in kW

$P_{K1}$  = Operating power on HSS in kW

### INFORMATION



If the thermal rating  $P_T$  is smaller than the operating power, use an external cooling system. The required cooling capacity must be determined depending on the operating power  $P_{K1}$ , see chapter "Required cooling capacity" (→ 61).

## 4.9 Calculation example

XP3P. planetary gear unit

**Drive machine: Motor with soft starter (10 starts per hour)**

Motor power:  $P_1 = 2000 \text{ kW}$

Motor speed:  $n_1 = 1200 \text{ min}^{-1}$

Operating power at HSS:  $P_{K1} = 1423 \text{ kW}$

**Driven machine: Disintegrators**

$P_{K2} = 1380 \text{ kW}$

$F_{s \text{ min}} = 2.00$  (see chapter "Service factor" (→ 32))

Output speed:  $n_2 = 6 \text{ min}^{-1}$

Required bearing service life  $L_{h10 \text{ required}} = 50000 \text{ hours}$

Ambient condition:

- Ambient temperature:  $20 \text{ }^{\circ}\text{C}$
- Installation altitude:  $800 \text{ m}$
- Installation location: Large rooms and halls

### 4.9.1 Checking the input speeds

$$n_{1\text{max}} = 1200 \text{ min}^{-1}$$

$$n_{1\text{per}} > n_{1\text{max}}$$

$$1800 \text{ min}^{-1} > 1200 \text{ min}^{-1}$$

→ Maximum input speed permitted

$$n_{1\text{per}} = \text{Permitted input speed in min}^{-1}$$

$$n_{1\text{max}} = \text{Maximum input speed in min}^{-1}$$

### 4.9.2 Checking the output speeds

$$n_{2\text{per}} > n_{2\text{max}}$$

$$10 \text{ min}^{-1} > 6 \text{ min}^{-1}$$

→ Maximum output speed permitted

$$n_{2\text{per}} = \text{Permitted output speed in min}^{-1}$$

$$n_{2\text{max}} = \text{Maximum output speed in min}^{-1}$$

### 4.9.3 Calculation of ratio

$$i_{\text{ex}} = \frac{n_1}{n_2} \quad i_{\text{ex}} = \frac{1200}{6} \quad i_{\text{ex}} = 200$$

**4.9.4 Determination of operating torque of driven machine**

$$M_{K2} = \frac{P_{K2} \times 9.55}{n_2} = \frac{1380 \text{ kW} \times 9.55}{6 \text{ min}^{-1}} = 2196.5 \text{ kNm}$$

$M_{K2}$  = Operating torque at LSS in kNm  
 $P_{K2}$  = Operating power at LSS in kW  
 $n_2$  = Output speed at LSS in  $\text{min}^{-1}$

**4.9.5 Determination of required nominal gear unit torque**

$$M_{N2} \geq M_{K2} \times F_{S \min} = 2196.5 \text{ kNm} \times 2 = 4393 \text{ kNm}$$

$M_{N2}$  = Nominal torque in kNm  
 $M_{K2}$  = Operating torque at LSS in kNm  
 $F_{S \min}$  = Application-specific service factor

Selected gear unit:

- XP240
- Gear ratio 205.7, see chapter "Gear ratio" (→ 57)
- Nominal torque of the gear unit 4600 kNm, see data sheet "Sizes and torque ratings" (→ 14).

**4.9.6 Selecting the nominal motor power**

$$P_M \geq P_{K1} = \frac{P_{K2}}{\eta} = \frac{1380 \text{ kW}}{0.975} = 1415.4 \text{ kW}$$

$P_M$  = Nominal motor power in kW  
 $P_{K1}$  = Operating power on HSS in kW  
 $P_{K2}$  = Operating power at LSS in kW  
 $\eta$  = Efficiency (0.975 for 3-stage XP planetary gear unit)

→ Selected motor with  $P_M = 2000 \text{ kW}$  is permitted.



4.9.7 Checking the peak load states  $M_{K2\ per} > M_{K2\ max}$ Permitted peak output torque  $M_{K2\ per}$ 

$$M_{K2\ per} = \frac{2 \times M_{N2}}{F_F} = \frac{2 \times 4600\ \text{kNm}}{1.2} = 7667\ \text{kNm}$$

$M_{K2\ per}$  = Permitted peak output torque in kNm  
 $M_{N2}$  = Nominal torque of the gear unit in kNm  
 $F_F$  = Peak load factor

Calculating the output torque  $M_{K2\ max}$ 

$$M_{K2\ max} = \frac{P_M \times 9.55 \times \eta}{n_2} \times F_{start} = \frac{2000\ \text{kW} \times 9.55 \times 0.975}{6\ \text{rpm}} = 5\ 886.8\ \text{kNm}$$

$M_{K2\ max}$  = Peak output torque in kNm  
 $F_{start}$  = Startup factor  
 $P_M$  = Nominal motor power in kW  
 $\eta$  = Efficiency (0.975 for 3-stage XP planetary gear unit)

 $M_{K2\ per} > M_{K2\ max} \rightarrow$  Selected gear unit size permitted

## 4.9.8 Calculating the bearing service life

## INFORMATION



The bearing service life check only applies for 3-stage XP3P. planetary gear units.

$$L_{h10} = \left[ \frac{M_{N2}}{M_{K2}} \right]^{3.33} \times \frac{5000 \times n_{2B}}{n_2} = \left[ \frac{4393\ \text{kNm}}{2196.5\ \text{kNm}} \right]^{3.33} \times \frac{5000 \times 9.1\ \text{min}^{-1}}{6\ \text{min}^{-1}} = 76418\ \text{hours}$$

 $L_{h10} > L_{h10\ required}$ 76418 hours > 50000 hours  $\rightarrow$  Bearing service life fulfilled

$L_{h10}$  = Bearing service life in hours  
 $L_{h10\ required}$  = Required bearing service life in hours  
 $M_{N2}$  = Nominal torque of the gear unit in kNm  
 $M_{K2}$  = Operating torque at LSS in kNm  
 $n_2$  = Output speed at LSS in  $\text{min}^{-1}$   
 $n_{2B}$  = Reference output speed in  $\text{min}^{-1}$ , see following table

| Size  | Reference output speed $n_{2B}$ |
|-------|---------------------------------|
| XP130 | 9.9                             |
| XP140 | 13.8                            |
| XP150 | 11.4                            |
| XP160 | 10.4                            |
| XP170 | 9.9                             |
| XP180 | 13.2                            |
| XP190 | 13.8                            |
| XP200 | 10.0                            |
| XP210 | 11.0                            |
| XP220 | 14.0                            |
| XP230 | 10.1                            |
| XP240 | 9.1                             |
| XP250 | 16.2                            |

**4.9.9 Checking the thermal rating**

$$P_T \geq P_{TH} \times f_1 \times f_T = 1245 \text{ kW} \times 1.00 \times 1.35 = 1680 \text{ kW}$$

$P_{TH} = 1245 \text{ kW}$  see table chapter "Thermal rating" (→ 60).

$f_1 = 1.00$  see installation altitude of 800 m in chapter "Checking the thermal rating" (→ 41).

$f_T = 1.35$  see ambient temperature for splash lubrication without additional cooling in chapter "Checking the thermal rating" (→ 41).

The operating power  $P_{K1}$  must not exceed the thermal rating  $P_T$  ( $P_{K1} \leq P_T$ ). Additional cooling is required if  $P_{K1} > P_T$

$$1680 \text{ kW} > 1415.4 \text{ kW}$$

The thermal rating is sufficient at 20 °C. No additional cooling is required.

## 5 Permitted lubricants

This chapter describes the permitted lubricants and the permitted temperatures for industrial gear units from SEW-EURODRIVE.

### INFORMATION



- The standard for viscosity and oil grade is the type of oil that is specified by SEW-EURODRIVE in the order (see order confirmation and nameplate).
- Contact SEW-EURODRIVE if you use bio and food grade lubricants or polyglycol oils.
- Check the compatibility of the greases and oils used.
- The tables contain the lubricants approved by SEW-EURODRIVE.
- Oils of the same viscosity class from different manufacturers do not have the same characteristics. In particular, the minimum permitted oil bath temperatures are manufacturer-specific. These temperatures are specified in the lubricant tables.
- The minimum permitted oil bath temperatures depend on the lubrication type used. These temperatures are specified in the lubricant tables. The values correspond to the maximum viscosity of the individual lubricants.
- The values specified in the lubricant tables apply as of the time of printing of this document. The data of the lubricants are subject to dynamic change on the part of the lubricant manufacturers. For the latest information about the lubricants, visit: [www.sew-eurodrive.de/lubricants](http://www.sew-eurodrive.de/lubricants)

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### 5.1 Guidelines for lubricant selection

SEW-EURODRIVE delivers the planetary gear units without oil.

### INFORMATION



- The oil viscosity and type (mineral/synthetic) that are to be used are determined by SEW-EURODRIVE specifically for each order. This information is noted in the order confirmation and on the gear unit's nameplate. You must contact SEW-EURODRIVE in case of a deviation from this specification. This lubricant recommendation in chapter "Lubricant table" in no way represents a guarantee as to the quality of the lubricant delivered by each respective supplier. Each lubricant manufacturer is responsible for the quality of its product.
- Ensure that the planetary gear units are filled with the correct oil grade and volume before startup. You can obtain the corresponding information from the gear unit nameplate and the lubricant table on the following pages.
- Do not mix different synthetic lubricants and do not mix synthetic with mineral lubricants.
- Check the compatibility of the used greases and oils.

## 5.2 Structure of the tables and abbreviations

|     | DIN (ISO)<br>API | ISO,SAE<br>NLGI      |  |                    |                 |                 |     |  |
|-----|------------------|----------------------|------------------------------------------------------------------------------------|--------------------|-----------------|-----------------|-----|--|
| [1] |                  |                      | -20                                                                                | +65                | -20             | +65             |     |  |
|     |                  |                      | -5                                                                                 |                    | -5              |                 |     |  |
|     |                  |                      | +5                                                                                 |                    | +5              |                 |     |  |
|     |                  | VG 150 <sup>1)</sup> | Optigear<br>BM 150                                                                 |                    | Alpha<br>SP 150 |                 |     |  |
|     |                  |                      | S0                                                                                 |                    | S0              |                 |     |  |
| [2] | CLP              |                      | -15                                                                                | +75                | -15             | +75             |     |  |
|     |                  |                      | 0                                                                                  |                    | 0               |                 |     |  |
|     |                  |                      | +10                                                                                |                    | +10             |                 |     |  |
|     |                  |                      | VG 220                                                                             | Optigear<br>BM 220 |                 | Alpha<br>SP 220 |     |  |
|     |                  |                      |                                                                                    | S0                 |                 | S0              |     |  |
|     |                  |                      |                                                                                    | -10                | +85             | -10             | +80 |  |
|     |                  |                      |                                                                                    | +5                 |                 | +5              |     |  |
|     |                  |                      |                                                                                    | +15                |                 | +15             |     |  |
|     |                  |                      | VG 320                                                                             | Optigear<br>BM 320 |                 | Alpha<br>SP 320 |     |  |
|     |                  |                      |                                                                                    | S0                 |                 | S0              |     |  |
|     |                  |                      |                                                                                    |                    |                 |                 |     |  |

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[1] Viscosity class

[2] Lubricant type

## Abbreviations

| Icons                                                                               | Designation                                                                     |
|-------------------------------------------------------------------------------------|---------------------------------------------------------------------------------|
| CLP                                                                                 | = Mineral oil                                                                   |
| CLP HC                                                                              | = Synthetic polyalphaolefin (PAO)                                               |
| E                                                                                   | = Ester-based oil                                                               |
|  | = Mineral lubricant                                                             |
|  | = Synthetic lubricant                                                           |
|  | = Lubricant for the food industry ( <b>NSF H1</b> -compliant)                   |
|  | = Biodegradable oil (lubricant for agriculture, forestry, and water management) |
| 1)                                                                                  | = Lubricants may only be used if service factor $F_s \geq 1.3$                  |

### 5.3 Explanation of the various lubricants

|     |              |     |     |
|-----|--------------|-----|-----|
|     |              |     | [5] |
| [1] | -20          |     |     |
| [2] | -5           | +65 | [6] |
| [3] | +5           |     |     |
| [4] | xyz          |     |     |
|     | SEW070040013 |     | [7] |

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- [1] Lowest cold start temperature in °C for splash lubrication\*
- [2] Lowest cold start temperature in °C for drives with pumps up to a max. oil viscosity of 5000 cSt\*
- [3] Lowest cold start temperature in °C for drives with pumps up to a max. oil viscosity of 2000 cSt\*
- [4] Trade name
- [5] Manufacturer
- [6] Highest oil bath temperature in °C. MUST NOT BE EXCEEDED.
- [7] Approvals

\*In case of low temperatures, the oil must be heated to the specified minimum temperature, for example by using an oil heater. The maximally permitted oil viscosity per pump type is specified in the following chapter.

## 5.4 Lubricant tables

The lubricant table is valid when this document is printed. Please refer to [www.sew-eurodrive.de/lubricants](http://www.sew-eurodrive.de/lubricants) for the latest version of the table.

| DIN (ISO)<br>API | ISO, SAE<br>NLGI     |  |     |     |  |     |     |  |     |     |  |     |     |  |     |     |  |     |     |  |     |     |
|------------------|----------------------|-------------------------------------------------------------------------------------|-----|-----|--------------------------------------------------------------------------------------|-----|-----|---------------------------------------------------------------------------------------|-----|-----|---------------------------------------------------------------------------------------|-----|-----|---------------------------------------------------------------------------------------|-----|-----|---------------------------------------------------------------------------------------|-----|-----|---------------------------------------------------------------------------------------|-----|-----|
| CLP              | VG 150 <sup>1)</sup> | -20                                                                                 | -5  | +65 | -20                                                                                  | -5  | +65 | -20                                                                                   | -5  | +65 | -20                                                                                   | -5  | +65 | -20                                                                                   | -5  | +65 | -20                                                                                   | -5  | +65 | -15                                                                                   | 0   | +75 |
|                  |                      | -5                                                                                  |     |     | -5                                                                                   |     |     | -5                                                                                    |     |     | -5                                                                                    |     |     | -5                                                                                    |     |     | -5                                                                                    |     |     | -15                                                                                   |     |     |
|                  |                      | +5                                                                                  |     |     | +5                                                                                   |     |     | +5                                                                                    |     |     | +5                                                                                    |     |     | +5                                                                                    |     |     | +5                                                                                    |     |     | +10                                                                                   |     |     |
|                  | VG 220               | -15                                                                                 | 0   | +75 | -15                                                                                  | 0   | +75 | -15                                                                                   | 0   | +75 | -15                                                                                   | 0   | +75 | -15                                                                                   | 0   | +75 | -15                                                                                   | 0   | +75 | -15                                                                                   | 0   | +75 |
|                  |                      | 0                                                                                   |     |     | 0                                                                                    |     |     | 0                                                                                     |     |     | 0                                                                                     |     |     | 0                                                                                     |     |     | 0                                                                                     |     |     | 0                                                                                     |     |     |
|                  |                      | +10                                                                                 |     |     | +10                                                                                  |     |     | +10                                                                                   |     |     | +10                                                                                   |     |     | +10                                                                                   |     |     | +10                                                                                   |     |     | +10                                                                                   |     |     |
|                  | VG 320               | -10                                                                                 | +5  | +85 | -10                                                                                  | +5  | +85 | -10                                                                                   | +5  | +85 | -10                                                                                   | +5  | +85 | -10                                                                                   | +5  | +85 | -10                                                                                   | +5  | +85 | -10                                                                                   | +5  | +85 |
|                  |                      | +5                                                                                  |     |     | +5                                                                                   |     |     | +5                                                                                    |     |     | +5                                                                                    |     |     | +5                                                                                    |     |     | +5                                                                                    |     |     | +5                                                                                    |     |     |
|                  |                      | +15                                                                                 |     |     | +15                                                                                  |     |     | +15                                                                                   |     |     | +15                                                                                   |     |     | +15                                                                                   |     |     | +15                                                                                   |     |     | +15                                                                                   |     |     |
|                  | VG 460               | -5                                                                                  | +10 | +90 | -5                                                                                   | +10 | +90 | -5                                                                                    | +10 | +90 | -5                                                                                    | +10 | +90 | -5                                                                                    | +10 | +90 | -5                                                                                    | +10 | +90 | -5                                                                                    | +10 | +90 |
|                  |                      | +10                                                                                 |     |     | +10                                                                                  |     |     | +10                                                                                   |     |     | +10                                                                                   |     |     | +10                                                                                   |     |     | +10                                                                                   |     |     | +10                                                                                   |     |     |
|                  |                      | +20                                                                                 |     |     | +20                                                                                  |     |     | +20                                                                                   |     |     | +20                                                                                   |     |     | +20                                                                                   |     |     | +20                                                                                   |     |     | +20                                                                                   |     |     |
|                  | VG 680               | 0                                                                                   | +15 | +90 | 0                                                                                    | +15 | +90 | 0                                                                                     | +15 | +90 | 0                                                                                     | +15 | +90 | 0                                                                                     | +15 | +90 | 0                                                                                     | +15 | +90 | 0                                                                                     | +15 | +90 |
|                  |                      | +15                                                                                 |     |     | +15                                                                                  |     |     | +15                                                                                   |     |     | +15                                                                                   |     |     | +15                                                                                   |     |     | +15                                                                                   |     |     | +15                                                                                   |     |     |
|                  |                      | +25                                                                                 |     |     | +25                                                                                  |     |     | +25                                                                                   |     |     | +25                                                                                   |     |     | +25                                                                                   |     |     | +25                                                                                   |     |     | +25                                                                                   |     |     |
|                  | VG 1000              | +5                                                                                  | +20 | +30 | +5                                                                                   | +20 | +30 | +5                                                                                    | +20 | +30 | +5                                                                                    | +20 | +30 | +5                                                                                    | +20 | +30 | +5                                                                                    | +20 | +30 | +5                                                                                    | +20 | +30 |
|                  |                      |                                                                                     |     |     |                                                                                      |     |     |                                                                                       |     |     |                                                                                       |     |     |                                                                                       |     |     |                                                                                       |     |     |                                                                                       |     |     |
|                  |                      | Optigear<br>BM 1000                                                                 |     |     |                                                                                      |     |     |                                                                                       |     |     |                                                                                       |     |     |                                                                                       |     |     |                                                                                       |     |     |                                                                                       |     |     |

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The lubricant table is valid when this document is printed. Please refer to [www.sew-eurodrive.de/lubricants](http://www.sew-eurodrive.de/lubricants) for the latest version of the table.

| DIN (ISO)<br>API | ISO,SAE<br>NLGI      |                               |                                         |                                        |                                        |                                         |                                          |                                       |                                                                                                                    |                                                                                                                    |                                                                                                                  |  |
|------------------|----------------------|------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------|--|
| CLP HC           | VG 32 <sup>1)</sup>  |                                                                                                                  |                                                                                                                            | <div><div>-40</div><div>-30</div><div>+30</div><div>-25</div></div> <div>SHC 624</div> <div>S0</div>                     |                                                                                                                         |                                                                                                                          |                                                                                                                           |                                                                                                                        |                                                                                                                    |                                                                                                                    |                                                                                                                  |  |
|                  | VG 68 <sup>1)</sup>  |                                                                                                                  | <div><div>-35</div><div>-20</div><div>+50</div><div>-10</div></div> <div>Renolin<br/>Unisyn CLP 68</div> <div>S0</div>     | <div><div>-40</div><div>-25</div><div>+50</div><div>-15</div></div> <div>SHC 626</div> <div>S0</div>                     | <div><div>-35</div><div>-20</div><div>+50</div><div>-10</div></div> <div>Klubersynth<br/>GEM 4-68 N</div> <div>S0</div> | <div><div>-40</div><div>-20</div><div>+50</div><div>-10</div></div> <div>Omala<br/>S4 GX 68</div> <div>S0</div>          |                                                                                                                           |                                                                                                                        |                                                                                                                    |                                                                                                                    |                                                                                                                  |  |
|                  | VG 150 <sup>1)</sup> | <div><div>-25</div><div>-10</div><div>+70</div><div>0</div></div> <div>Alphasyn<br/>EP 150</div> <div>S0</div>   | <div><div>-30</div><div>-10</div><div>+70</div><div>+0</div></div> <div>Renolin<br/>Unisyn CLP 150</div> <div>S0</div>     | <div><div>-35</div><div>-15</div><div>+75</div><div>-5</div></div> <div>SHC Gear 150</div> <div>S0</div>                 | <div><div>-25</div><div>-10</div><div>+70</div><div>0</div></div> <div>Klubersynth<br/>GEM 4-150 N</div> <div>S0</div>  | <div><div>-30</div><div>-10</div><div>+75</div><div>0</div></div> <div>Omala<br/>S4 GX 150</div> <div>S0</div>           | <div><div>-25</div><div>-10</div><div>+70</div><div>0</div></div> <div>Pinnacle<br/>EP 150</div> <div>S0</div>            | <div><div>-35</div><div>-15</div><div>+75</div><div>-5</div></div> <div>Carter<br/>SH 150</div> <div>S0</div>          |                                                                                                                    |                                                                                                                    |                                                                                                                  |  |
|                  | VG 220               | <div><div>-25</div><div>-5</div><div>+80</div><div>+5</div></div> <div>Alphasyn<br/>EP 220</div> <div>S0</div>   | <div><div>-25</div><div>-5</div><div>+80</div><div>+5</div></div> <div>Renolin<br/>Unisyn CLP 220</div> <div>S0</div>      | <div><div>-20</div><div>0</div><div>+75</div><div>+10</div></div> <div>HighGear<br/>Synth 220</div> <div>S0</div>        | <div><div>-30</div><div>-10</div><div>+85</div><div>+5</div></div> <div>SHC Gear 220</div> <div>S0</div>                | <div><div>-25</div><div>-5</div><div>+80</div><div>+5</div></div> <div>Klubersynth<br/>GEM 4-220 N</div> <div>S0</div>   | <div><div>-25</div><div>-5</div><div>+85</div><div>+5</div></div> <div>Omala<br/>S4 GX 220</div> <div>S0</div>            | <div><div>-25</div><div>-5</div><div>+80</div><div>+5</div></div> <div>Pinnacle<br/>EP 220</div> <div>S0</div>         | <div><div>-25</div><div>-5</div><div>+80</div><div>+5</div></div> <div>Carter<br/>SH 220</div> <div>S0</div>       |                                                                                                                    |                                                                                                                  |  |
|                  | VG 320               | <div><div>-20</div><div>0</div><div>+90</div><div>+10</div></div> <div>Alphasyn<br/>EP 320</div> <div>S0</div>   | <div><div>-20</div><div>0</div><div>+90</div><div>+10</div></div> <div>Renolin<br/>Unisyn CLP 320</div> <div>S0</div>      | <div><div>-15</div><div>0</div><div>+85</div><div>+15</div></div> <div>HighGear<br/>Synth 320</div> <div>S0</div>        | <div><div>-25</div><div>-5</div><div>+95</div><div>+10</div></div> <div>SHC Gear 320</div> <div>S0</div>                | <div><div>-20</div><div>0</div><div>+95</div><div>+10</div></div> <div>Klubersynth<br/>GEM 4-320 N</div> <div>S0</div>   | <div><div>-20</div><div>0</div><div>+95</div><div>+10</div></div> <div>Omala<br/>S4 GX 320</div> <div>S0</div>            | <div><div>-20</div><div>0</div><div>+90</div><div>+10</div></div> <div>Pinnacle<br/>EP 320</div> <div>S0</div>         | <div><div>-20</div><div>0</div><div>+90</div><div>+10</div></div> <div>Carter<br/>SH 320</div> <div>S0</div>       |                                                                                                                    |                                                                                                                  |  |
|                  | VG 460               | <div><div>-15</div><div>+5</div><div>+100</div><div>+15</div></div> <div>Alphasyn<br/>EP 460</div> <div>S0</div> | <div><div>-15</div><div>+5</div><div>+100</div><div>+15</div></div> <div>Renolin<br/>Unisyn CLP 460</div> <div>S0</div>    | <div><div>-10</div><div>+5</div><div>+95</div><div>+20</div></div> <div>HighGear<br/>Synth 460</div> <div>S0</div>       | <div><div>-15</div><div>+5</div><div>+105</div><div>+15</div></div> <div>SHC Gear 460</div> <div>S0</div>               | <div><div>-15</div><div>+5</div><div>+105</div><div>+20</div></div> <div>Klubersynth<br/>GEM 4-460 N</div> <div>S0</div> | <div><div>-15</div><div>+5</div><div>+105</div><div>+15</div></div> <div>Omala<br/>S4 GX 460</div> <div>S0</div>          | <div><div>-15</div><div>+5</div><div>+100</div><div>+15</div></div> <div>Pinnacle<br/>EP 460</div> <div>S0</div>       | <div><div>-15</div><div>+5</div><div>+100</div><div>+15</div></div> <div>Carter<br/>SH 460</div> <div>S0</div>     |                                                                                                                    |                                                                                                                  |  |
|                  | VG 680               |                                                                                                                  | <div><div>-10</div><div>+10</div><div>+110</div><div>+25</div></div> <div>Optigear<br/>Synthetic X 680</div> <div>S0</div> | <div><div>-10</div><div>+10</div><div>+110</div><div>+25</div></div> <div>Renolin<br/>Unisyn CLP 680</div> <div>S0</div> | <div><div>-10</div><div>+10</div><div>+110</div><div>+25</div></div> <div>HighGear<br/>Synth 680</div> <div>S0</div>    | <div><div>-10</div><div>+10</div><div>+110</div><div>+25</div></div> <div>SHC Gear 680</div> <div>S0</div>               | <div><div>-10</div><div>+10</div><div>+110</div><div>+25</div></div> <div>Klubersynth<br/>GEM 4-680 N</div> <div>S0</div> | <div><div>-10</div><div>+10</div><div>+110</div><div>+25</div></div> <div>Omala<br/>S4 GX 680</div> <div>S0</div>      | <div><div>-10</div><div>+10</div><div>+110</div><div>+25</div></div> <div>Pinnacle<br/>EP 680</div> <div>S0</div>  | <div><div>-10</div><div>+10</div><div>+110</div><div>+25</div></div> <div>Carter<br/>SH 680</div> <div>S0</div>    |                                                                                                                  |  |
|                  | VG 1000              |                                                                                                                  |                                                                                                                            |                                                                                                                          | <div><div>-10</div><div>+15</div><div>+110</div><div>+30</div></div> <div>SHC 639</div> <div>S0</div>                   | <div><div>-10</div><div>+15</div><div>+110</div><div>+30</div></div> <div>SHC Gear 1000</div> <div>S0</div>              | <div><div>-10</div><div>+20</div><div>+110</div><div>+30</div></div> <div>SHC Gear 1000</div> <div>S0</div>               | <div><div>-10</div><div>+20</div><div>+110</div><div>+30</div></div> <div>Klubersynth<br/>EG4-1000</div> <div>S0</div> | <div><div>-10</div><div>+20</div><div>+110</div><div>+30</div></div> <div>Omala<br/>S4 GX 1000</div> <div>S0</div> | <div><div>-10</div><div>+20</div><div>+110</div><div>+30</div></div> <div>Pinnacle<br/>EP 1000</div> <div>S0</div> | <div><div>-10</div><div>+20</div><div>+110</div><div>+30</div></div> <div>Carter<br/>SH 1000</div> <div>S0</div> |  |

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The lubricant table is valid when this document is printed. Please refer to [www.sew-eurodrive.de/lubricants](http://www.sew-eurodrive.de/lubricants) for the latest version of the table.

| DIN (ISO)<br>API | ISO, SAE<br>NLGI     |  |  |  |  |
|------------------|----------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
| CLP HC<br>NSF H1 | VG 68 <sup>1)</sup>  | -35                                                                                 | -40                                                                                 |                                                                                       | -35                                                                                   |
|                  |                      | -20                                                                                 | -25                                                                                 |                                                                                       | -20                                                                                   |
|                  |                      | +45                                                                                 | +45                                                                                 |                                                                                       | +45                                                                                   |
|                  |                      | -10                                                                                 | -15                                                                                 |                                                                                       | -10                                                                                   |
|                  | VG 220 <sup>1)</sup> | Cassida<br>Fluid HF 68                                                              |                                                                                     | Optileb<br>HY 68                                                                      | Klüberoil<br>4UH1-68 N                                                                |
|                  |                      | S0                                                                                  | S0                                                                                  |                                                                                       |                                                                                       |
|                  |                      | -20                                                                                 | -25                                                                                 |                                                                                       | -25                                                                                   |
|                  |                      | -5                                                                                  | -5                                                                                  |                                                                                       | -5                                                                                    |
|                  | VG 460 <sup>1)</sup> | +75                                                                                 | +75                                                                                 |                                                                                       | +75                                                                                   |
|                  |                      | +5                                                                                  | +5                                                                                  |                                                                                       | +5                                                                                    |
|                  |                      | Cassida<br>Fluid GL 220                                                             |                                                                                     | Optileb<br>GT 220                                                                     | Klüberoil<br>4UH1-220 N                                                               |
|                  |                      | S0                                                                                  | S0                                                                                  |                                                                                       | S0                                                                                    |
|                  |                      | -15                                                                                 | -15                                                                                 |                                                                                       | -15                                                                                   |
|                  |                      | +5                                                                                  | +5                                                                                  |                                                                                       | +5                                                                                    |
| E                | VG 460               | +90                                                                                 | +95                                                                                 |                                                                                       | +95                                                                                   |
|                  |                      | +20                                                                                 | +20                                                                                 |                                                                                       | +15                                                                                   |
|                  |                      | Cassida<br>Fluid GL 460                                                             |                                                                                     | Optileb<br>GT 460                                                                     | Klüberoil<br>4UH1-460 N                                                               |
|                  |                      | S0                                                                                  | S0                                                                                  |                                                                                       | S0                                                                                    |
|                  | VG 460               | -15                                                                                 | -15                                                                                 |                                                                                       | -15                                                                                   |
|                  |                      | +5                                                                                  | +5                                                                                  |                                                                                       | +5                                                                                    |
|                  |                      | +95                                                                                 | +95                                                                                 |                                                                                       | +95                                                                                   |
|                  |                      | +15                                                                                 | +15                                                                                 |                                                                                       | +15                                                                                   |
|                  | VG 460               | Plantogear<br>460 S                                                                 |                                                                                     | Klüberbio<br>CA2-460                                                                  | Klüberbio<br>CA2-460                                                                  |
|                  |                      | S0                                                                                  | S0                                                                                  |                                                                                       | S0                                                                                    |

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## 5.5 Lubricant fill quantities

The specified fill quantity are guide values for 3-stage gear units in coaxial design. The exact values depend on the number of stages and the gear ratio of the gear unit.

The required oil quantity depends on the mark on the oil sight glass.

### INFORMATION



Planetary gear units are delivered without lubricant.

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#### 5.5.1 XP2.P.: 2-stage planetary gear unit

| Size  | Oil quantity in liters/mounting position M1 |
|-------|---------------------------------------------|
| XP130 | 90                                          |
| XP140 | 100                                         |
| XP150 | 115                                         |
| XP160 | 135                                         |
| XP170 | 160                                         |
| XP180 | 170                                         |
| XP190 | 245                                         |
| XP200 | 265                                         |
| XP210 | Contact SEW-EURODRIVE.                      |
| XP220 |                                             |
| XP230 |                                             |
| XP240 |                                             |
| XP250 |                                             |

#### 5.5.2 XP3.P.: 3-stage planetary gear unit

| Size  | Oil quantity in liters/mounting position M1 |
|-------|---------------------------------------------|
| XP130 | 97                                          |
| XP140 | 105                                         |
| XP150 | 120                                         |
| XP160 | 145                                         |
| XP170 | 170                                         |
| XP180 | 182                                         |
| XP190 | 260                                         |
| XP200 | 285                                         |
| XP210 | 390                                         |
| XP220 | 415                                         |
| XP230 | 475                                         |
| XP240 | 550                                         |
| XP250 | 660                                         |

## 5.5.3 XP4.P.: 4-stage planetary gear unit

| Size  | Oil quantity in liters/mounting position M1 |
|-------|---------------------------------------------|
| XP130 | 115                                         |
| XP140 | 125                                         |
| XP150 | 145                                         |
| XP160 | 170                                         |
| XP170 | 200                                         |
| XP180 | 215                                         |
| XP190 | 305                                         |
| XP200 | 330                                         |
| XP210 | 450                                         |
| XP220 | 480                                         |
| XP230 | 550                                         |
| XP240 | 635                                         |
| XP250 | 765                                         |

## 5.5.4 XP3F.: 3-stage helical-planetary gear unit

| Size  | Oil quantity in liters/mounting position M1 |
|-------|---------------------------------------------|
| XP130 | 110                                         |
| XP140 | 120                                         |
| XP150 | 135                                         |
| XP160 | 160                                         |
| XP170 | 190                                         |
| XP180 | 205                                         |
| XP190 | 290                                         |
| XP200 | 315                                         |
| XP210 | 430                                         |
| XP220 | 560                                         |
| XP230 | 525                                         |
| XP240 | 605                                         |
| XP250 | 730                                         |

## 5.5.5 XP4K.: 4-stage bevel-planetary gear unit

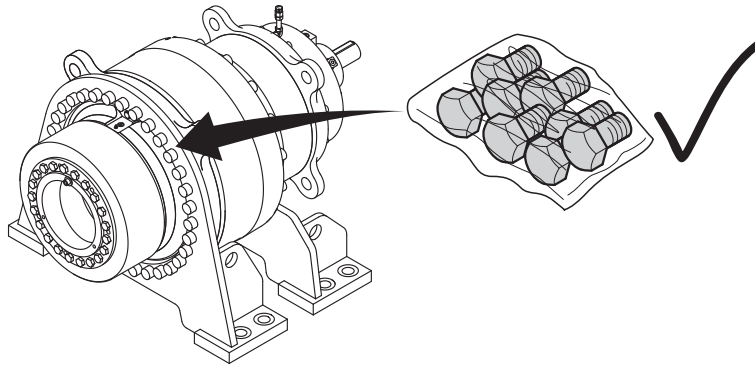
| Size  | Oil quantity in liters/mounting position M1 |
|-------|---------------------------------------------|
| XP130 | 112                                         |
| XP140 | 120                                         |
| XP150 | 145                                         |
| XP160 | 170                                         |
| XP170 | 200                                         |
| XP180 | 212                                         |
| XP190 | 300                                         |
| XP200 | 325                                         |
| XP210 | 450                                         |
| XP220 | 475                                         |
| XP230 | 550                                         |
| XP240 | 625                                         |
| XP250 | 740                                         |

## 6 Design and operating notes

### 6.1 Screws included in the delivery

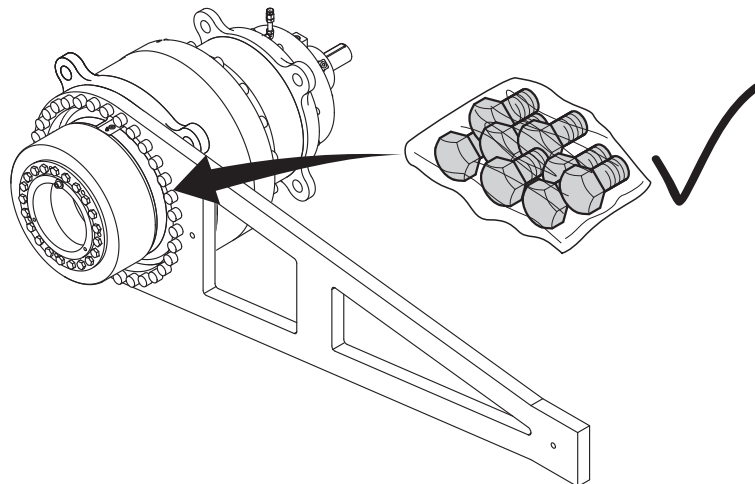
The screws at the flange are included in the delivery for the following gear unit designs:

- Gear unit with foot mounting



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- Torque arm

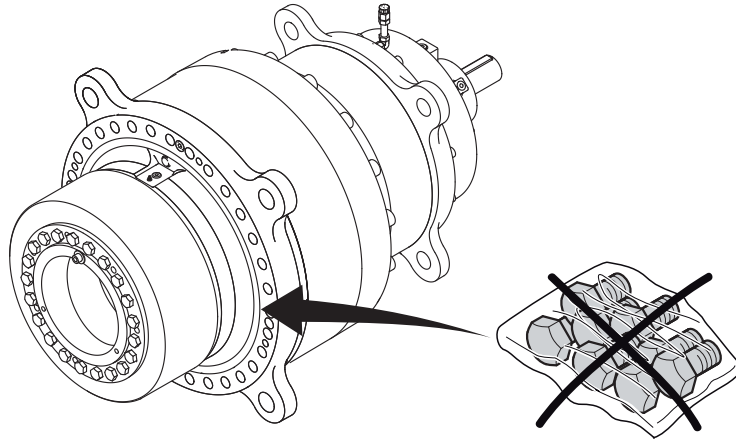


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## 6.2 Screws not included in the delivery

The screws at the flange are NOT included in the delivery for the following gear unit designs:

- Gear unit with flange mounting



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## 7 Gear ratio

### 7.1 XP2P.: 2-stage planetary gear unit

| $i_{nom}$   | XP size/gear ratio $i_{ex}$ |       |       |       |       |       |       |       |       |       |       |       |       |
|-------------|-----------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
|             | XP130                       | XP140 | XP150 | XP160 | XP170 | XP180 | XP190 | XP200 | XP210 | XP220 | XP230 | XP240 | XP250 |
| <b>22.4</b> | 22.20                       | 22.20 | 22.20 | 22.20 | 22.20 | 22.34 | 22.20 | 22.34 | 22.86 | 23.00 | 22.86 | 22.86 | 22.86 |
| <b>25</b>   | 25.14                       | 25.14 | 25.14 | 25.14 | 25.14 | 25.30 | 25.14 | 25.30 | 25.90 | 26.07 | 25.90 | 25.90 | 25.90 |
| <b>28</b>   | 29.25                       | 29.25 | 29.25 | 29.25 | 29.25 | 29.44 | 29.25 | 29.44 | 30.17 | 30.36 | 30.17 | 30.17 | 30.17 |

### 7.2 XP3P.: 3-stage planetary gear unit

| $i_{nom}$  | XP size/gear ratio $i_{ex}$ |       |       |       |       |       |       |       |       |       |       |       |       |
|------------|-----------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
|            | XP130                       | XP140 | XP150 | XP160 | XP170 | XP180 | XP190 | XP200 | XP210 | XP220 | XP230 | XP240 | XP250 |
| <b>120</b> | 123.7                       | 123.7 | 123.7 | 123.7 | 123.7 | 124.5 | 123.7 | 124.5 | 127.4 | 128.1 | 127.4 | 127.4 | 127.4 |
| <b>130</b> | 135.9                       | 135.9 | 135.9 | 135.9 | 135.9 | 136.7 | 135.9 | 136.7 | 139.9 | 140.8 | 139.9 | 139.9 | 139.9 |
| <b>140</b> | 140.1                       | 140.1 | 140.1 | 140.1 | 140.1 | 141   | 140.1 | 141   | 144.3 | 145.2 | 144.3 | 144.3 | 144.3 |
| <b>150</b> | 153.9                       | 153.9 | 153.9 | 153.9 | 153.9 | 154.8 | 153.9 | 154.8 | 158.5 | 159.5 | 158.5 | 158.5 | 158.5 |
| <b>160</b> | 163                         | 163   | 163   | 163   | 163   | 164   | 163   | 164   | 168.1 | 169.2 | 168.1 | 168.1 | 168.1 |
| <b>180</b> | 179.1                       | 179.1 | 179.1 | 179.1 | 179.1 | 180.2 | 179.1 | 180.2 | 184.7 | 185.8 | 184.7 | 184.7 | 184.7 |
| <b>200</b> | 199.8                       | 199.8 | 199.8 | 199.8 | 199.8 | 201.1 | 199.8 | 201.1 | 205.7 | 207   | 205.7 | 205.7 | 205.7 |
| <b>220</b> | 226.3                       | 226.3 | 226.3 | 226.3 | 226.3 | 227.7 | 226.3 | 227.7 | 233.1 | 234.6 | 233.1 | 233.1 | 233.1 |
| <b>240</b> | 240.8                       | 240.8 | 240.8 | 240.8 | 240.8 | 242.3 | 240.8 | 242.3 | 247.9 | 249.5 | 247.9 | 247.9 | 247.9 |
| <b>260</b> | 263.3                       | 263.3 | 263.3 | 263.3 | 263.3 | 265   | 263.3 | 265   | 271.5 | 273.2 | 271.5 | 271.5 | 271.5 |
| <b>280</b> | 272.7                       | 272.7 | 272.7 | 272.7 | 272.7 | 274.4 | 272.7 | 274.4 | 281   | 282.7 | 281   | 281   | 281   |
| <b>320</b> | 317.3                       | 317.3 | 317.3 | 317.3 | 317.3 | 319.3 | 317.3 | 319.3 | 327.2 | 329.3 | 327.2 | 327.2 | 327.2 |

### 7.3 XP4P.: 4-stage planetary gear unit

| $i_{nom}$ | XP size/gear ratio $i_{ex}$ |        |        |        |        |        |        |        |        |        |        |        |        |
|-----------|-----------------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
|           | XP130                       | XP140  | XP150  | XP160  | XP170  | XP180  | XP190  | XP200  | XP210  | XP220  | XP230  | XP240  | XP250  |
| 700       | 689.2                       | 689.2  | 689.2  | 689.2  | 689.2  | 693.5  | 689.2  | 693.5  | 709.5  | 713.9  | 709.5  | 709.5  | 709.5  |
| 750       | 757.1                       | 757.1  | 757.1  | 757.1  | 757.1  | 761.8  | 757.1  | 761.8  | 779.3  | 784.2  | 779.3  | 779.3  | 779.3  |
| 800       | 780.4                       | 780.4  | 780.4  | 780.4  | 780.4  | 785.3  | 780.4  | 785.3  | 804.1  | 809.1  | 804.1  | 804.1  | 804.1  |
| 900       | 908.1                       | 908.1  | 908.1  | 908.1  | 908.1  | 913.8  | 908.1  | 913.8  | 883.3  | 888.8  | 883.3  | 883.3  | 883.3  |
| 1000      | 997.6                       | 997.6  | 997.6  | 997.6  | 997.6  | 1003.7 | 997.6  | 1003.7 | 1028.7 | 976.3  | 1028.7 | 1028.7 | 1028.7 |
| 1100      | 1095.8                      | 1095.8 | 1095.8 | 1095.8 | 1095.8 | 1102.6 | 1095.8 | 1102.6 | 1130.1 | 1137.1 | 1130.1 | 1130.1 | 1130.1 |
| 1200      | 1223.0                      | 1223.0 | 1223.0 | 1223.0 | 1223.0 | 1230.7 | 1223.0 | 1230.7 | 1146.2 | 1153.3 | 1146.2 | 1146.2 | 1146.2 |
| 1300      | 1260.7                      | 1260.7 | 1260.7 | 1260.7 | 1260.7 | 1268.6 | 1260.7 | 1268.6 | 1299.0 | 1307.0 | 1299.0 | 1299.0 | 1299.0 |
| 1400      | 1384.9                      | 1384.9 | 1384.9 | 1384.9 | 1384.9 | 1393.6 | 1384.9 | 1393.6 | 1381.7 | 1390.3 | 1381.7 | 1381.7 | 1381.7 |
| 1500      | 1519.2                      | 1519.2 | 1519.2 | 1519.2 | 1519.2 | 1483.6 | 1519.2 | 1483.6 | 1512.5 | 1522.0 | 1512.5 | 1512.5 | 1512.5 |
| 1600      | 1611.5                      | 1611.5 | 1611.5 | 1611.5 | 1611.5 | 1621.5 | 1611.5 | 1621.5 | 1566.0 | 1575.7 | 1566.0 | 1566.0 | 1566.0 |
| 1700      | 1669.5                      | 1669.5 | 1669.5 | 1669.5 | 1669.5 | 1680.0 | 1669.5 | 1680.0 | 1719.5 | 1672.2 | 1719.5 | 1719.5 | 1719.5 |
| 1800      | 1798.6                      | 1798.6 | 1798.6 | 1798.6 | 1798.6 | 1809.8 | 1798.6 | 1809.8 | 1823.1 | 1834.5 | 1823.1 | 1823.1 | 1823.1 |
| 1900      | 1942.1                      | 1942.1 | 1942.1 | 1942.1 | 1942.1 | 1954.2 | 1942.1 | 1954.2 | 1851.4 | 1863.0 | 1851.4 | 1851.4 | 1851.4 |
| 2000      | 2036.6                      | 2036.6 | 2036.6 | 2036.6 | 2036.6 | 1954.8 | 2036.6 | 1954.8 | 2002.7 | 2015.3 | 2002.7 | 2002.7 | 2002.7 |
| 2100      | 2036.6                      | 2036.6 | 2036.6 | 2036.6 | 2036.6 | 2049.3 | 2036.6 | 2049.3 | 2098.3 | 2111.4 | 2098.3 | 2098.3 | 2098.3 |
| 2200      | 2168.3                      | 2168.3 | 2168.3 | 2168.3 | 2168.3 | 2181.8 | 2168.3 | 2181.8 | 2231.2 | 2245.5 | 2231.2 | 2231.2 | 2231.2 |
| 2300      | 2369.8                      | 2369.8 | 2369.8 | 2369.8 | 2369.8 | 2384.6 | 2369.8 | 2384.6 | 2232.0 | 2246.0 | 2232.0 | 2232.0 | 2232.0 |
| 2400      | 2369.8                      | 2369.8 | 2369.8 | 2369.8 | 2369.8 | 2384.6 | 2369.8 | 2384.6 | 2443.5 | 2458.8 | 2443.5 | 2443.5 | 2443.5 |
| 2500      | 2455.2                      | 2455.2 | 2455.2 | 2455.2 | 2455.2 | 2470.5 | 2455.2 | 2470.5 | 2528.7 | 2458.8 | 2528.7 | 2528.7 | 2528.7 |
| 2600      | 2613.0                      | 2613.0 | 2613.0 | 2613.0 | 2613.0 | 2629.3 | 2613.0 | 2629.3 | 2529.6 | 2545.4 | 2529.6 | 2529.6 | 2529.6 |
| 2700      | 2613.0                      | 2613.0 | 2613.0 | 2613.0 | 2613.0 | 2629.3 | 2613.0 | 2629.3 | 2689.8 | 2707.1 | 2689.8 | 2689.8 | 2689.8 |
| 2800      | 2856.0                      | 2856.0 | 2856.0 | 2856.0 | 2856.0 | 2873.8 | 2856.0 | 2873.8 | 2689.8 | 2707.1 | 2689.8 | 2689.8 | 2689.8 |
| 2900      | 2856.9                      | 2856.9 | 2856.9 | 2856.9 | 2856.9 | 2874.8 | 2856.9 | 2874.8 | 2945.2 | 2963.6 | 2945.2 | 2945.2 | 2945.2 |
| 3000      | 2958.8                      | 2958.8 | 2958.8 | 2958.8 | 2958.8 | 2977.3 | 2958.8 | 2977.3 | 3048.5 | 2964.2 | 3048.5 | 3048.5 | 3048.5 |
| 3100      | 2958.8                      | 2958.8 | 2958.8 | 2958.8 | 2958.8 | 2977.3 | 2958.8 | 2977.3 | 3048.5 | 3067.5 | 3048.5 | 3048.5 | 3048.5 |
| 3200      | 2958.8                      | 2958.8 | 2958.8 | 2958.8 | 2958.8 | 2977.3 | 2958.8 | 2977.3 | 3048.5 | 3067.5 | 3048.5 | 3048.5 | 3048.5 |
| 3300      | 3443.0                      | 3443.0 | 3443.0 | 3443.0 | 3443.0 | 3464.5 | 3443.0 | 3464.5 | 3550.6 | 3067.5 | 3550.6 | 3550.6 | 3550.6 |
| 3400      | 3443.0                      | 3443.0 | 3443.0 | 3443.0 | 3443.0 | 3464.5 | 3443.0 | 3464.5 | 3550.6 | 3572.8 | 3550.6 | 3550.6 | 3550.6 |
| 3500      | 3443.0                      | 3443.0 | 3443.0 | 3443.0 | 3443.0 | 3464.5 | 3443.0 | 3464.5 | 3550.6 | 3572.8 | 3550.6 | 3550.6 | 3550.6 |
| 3600      | 3443.0                      | 3443.0 | 3443.0 | 3443.0 | 3443.0 | 3464.5 | 3443.0 | 3464.5 | 3550.6 | 3572.8 | 3550.6 | 3550.6 | 3550.6 |

## 7.4 XP3F.: 3-stage helical-planetary gear unit

| $i_{nom}$ | XP size/gear ratio $i_{ex}$ |       |       |       |       |       |       |       |       |       |       |       |       |
|-----------|-----------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
|           | XP130                       | XP140 | XP150 | XP160 | XP170 | XP180 | XP190 | XP200 | XP210 | XP220 | XP230 | XP240 | XP250 |
| 45        | 44.4                        | 44.4  | 43.8  | 43.8  | 44.4  | 44.7  | 44.4  | 44.7  | 44.4  | 46.0  | 45.7  | 45.7  | 45.7  |
| 50        | 50.3                        | 50.3  | 49.5  | 49.5  | 50.3  | 50.6  | 50.3  | 50.6  | 50.3  | 52.2  | 51.8  | 51.8  | 51.8  |
| 55        | 55.5                        | 55.5  | 55.5  | 55.5  | 56.8  | 57.1  | 56.8  | 57.1  | 56.8  | 58.8  | 56.3  | 56.3  | 56.3  |
| 60        | 58.5                        | 58.5  | 57.6  | 57.6  | 58.5  | 58.9  | 58.5  | 58.9  | 58.5  | 60.7  | 60.3  | 60.3  | 60.3  |
| 65        | 62.8                        | 62.8  | 62.8  | 62.8  | 64.3  | 64.7  | 64.3  | 64.7  | 64.3  | 66.7  | 63.8  | 63.8  | 63.8  |
| 70        | 69.4                        | 69.4  | 69.4  | 69.4  | 70.5  | 71.0  | 70.5  | 71.0  | 70.5  | 73.0  | 70.6  | 70.6  | 70.6  |
| 75        | 73.1                        | 73.1  | 73.1  | 73.1  | 74.8  | 75.2  | 74.8  | 75.2  | 74.8  | 77.6  | 74.3  | 74.3  | 74.3  |
| 80        | 78.5                        | 78.5  | 78.5  | 78.5  | 79.8  | 80.3  | 79.8  | 80.3  | 79.8  | 82.8  | 80.1  | 80.1  | 80.1  |
| 90        | 91.4                        | 91.4  | 91.4  | 91.4  | 92.9  | 93.4  | 92.9  | 93.4  | 92.9  | 96.4  | 93.2  | 93.2  | 93.2  |
| 100       | 99.9                        | 99.9  | 99.4  | 99.4  | 98.9  | 99.5  | 98.9  | 99.5  | 97.7  | 101.2 | 100.5 | 100.5 | 100.5 |
| 110       | 113.1                       | 113.1 | 112.5 | 112.5 | 111.9 | 112.6 | 111.9 | 112.6 | 110.6 | 114.8 | 114.0 | 114.0 | 114.0 |

## 7.5 XP4K.: 4-stage bevel-planetary gear unit

| $i_{nom}$ | XP size/gear ratio $i_{ex}$ |       |       |       |       |       |       |       |       |       |       |       |       |
|-----------|-----------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
|           | XP130                       | XP140 | XP150 | XP160 | XP170 | XP180 | XP190 | XP200 | XP210 | XP220 | XP230 | XP240 | XP250 |
| 180       | 172.1                       | 172.1 | 172.1 | 194.9 | 189.1 | -     | 189.1 | -     | -     | -     | -     | -     | -     |
| 200       | 194.9                       | 194.9 | 194.9 | 194.9 | 194.9 | 215.4 | 194.9 | -     | -     | -     | 203.1 | -     | -     |
| 225       | 221.4                       | 226.8 | 225.6 | 226.8 | 226.8 | 228.2 | 226.8 | 228.2 | 220.6 | -     | 223.1 | 236.6 | -     |
| 250       | 250.7                       | 250.7 | 249.1 | 249.1 | 250.7 | 250.7 | 250.7 | 250.7 | 256.9 | 258.5 | 253.1 | 259.9 | 259.9 |
| 280       | 278.0                       | 278.0 | 280.6 | 280.6 | 278.0 | 279.8 | 278.0 | 279.8 | 283.7 | -     | 286.9 | 286.9 | 289.5 |
| 320       | 320.4                       | 320.4 | 326.5 | 326.5 | 320.4 | 322.4 | 320.4 | 322.4 | 324.4 | 326.4 | 328.1 | 328.1 | 328.1 |
| 360       | 357.6                       | 357.6 | 364.4 | 364.4 | 357.6 | 359.8 | 357.6 | 359.8 | 368.1 | 370.4 | 368.1 | 368.1 | 372.2 |
| 400       | 404.9                       | 404.9 | 405.9 | 405.9 | 404.9 | 407.5 | 404.9 | 407.5 | 390.9 | 393.4 | 395.4 | 395.4 | 395.4 |
| 450       | 453.0                       | 453.0 | 453.0 | 453.0 | 453.0 | 455.8 | 453.0 | 455.8 | 455.3 | 446.4 | 448.6 | 448.6 | 448.6 |
| 500       | 495.8                       | 512.9 | 497.3 | 497.3 | 497.3 | 500.4 | 512.9 | 491.0 | 502.8 | 505.9 | 502.8 | 502.8 | 502.8 |
| 550       | 553.4                       | 545.9 | 553.4 | 545.9 | 553.4 | 549.3 | 553.4 | 549.3 | 561.9 | 565.4 | 561.9 | 561.9 | -     |
| 600       | 596.8                       | 596.8 | 596.8 | 596.8 | 596.8 | 600.6 | 596.8 | 600.6 | 585.6 | 589.3 | 592.2 | 592.2 | 592.2 |
| 650       | 666.9                       | 666.9 | 666.9 | 666.9 | 666.9 | 630.6 | 666.9 | 671.1 | 645.6 | 640.8 | 645.6 | 636.9 | 636.9 |
| 700       | 708.5                       | 719.3 | 708.5 | 719.3 | 708.5 | 723.8 | 708.5 | 723.8 | -     | -     | -     | 686.5 | -     |
| 750       | 755.2                       | 755.2 | 755.2 | 755.2 | 755.2 | 759.9 | 755.2 | 759.9 | 752.0 | 746.4 | 752.0 | 752.0 | 752.0 |
| 800       | 802.3                       | 802.3 | 802.3 | -     | 802.3 | 807.3 | 802.3 | -     | 778.1 | 782.9 | 778.1 | 778.1 | 778.1 |
| 850       | 853.8                       | 853.8 | 853.8 | 853.8 | 853.8 | 859.2 | 853.8 | 859.2 | 826.6 | -     | 826.6 | 879.0 | -     |
| 900       | 878.8                       | 878.8 | 878.8 | 878.8 | 878.8 | 884.2 | 878.8 | 884.2 | 906.2 | 911.9 | 906.2 | 906.2 | 906.2 |
| 1000      | 1125                        | 1125  | 1125  | 1125  | 1125  | 1132  | 1125  | 1132  | 1160  | 1002  | 1160  | 1160  | 1160  |

## 8 Thermal rating for XP3P..

The following table applies for the following conditions:

- $T_{oil} = 90\text{ °C}$
- $T_{ambient} = 30\text{ °C}$
- Installation altitude: 0 to 1000 meters
- Operational environment: large halls and rooms
- Input speed: 750 – 1800 min<sup>-1</sup>

|           | XP size/thermal rating specifications in kW |       |       |       |       |       |       |       |       |       |       |       |       |
|-----------|---------------------------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| $i_{nom}$ | XP130                                       | XP140 | XP150 | XP160 | XP170 | XP180 | XP190 | XP200 | XP210 | XP220 | XP230 | XP240 | XP250 |
| 120       | 345                                         | 390   | 390   | 430   | 490   | 550   | 630   | 720   | 910   | 1010  | 1130  | 1300  | 1390  |
| 130       | 340                                         | 385   | 385   | 425   | 480   | 545   | 625   | 715   | 910   | 1010  | 1130  | 1300  | 1390  |
| 140       | 345                                         | 420   | 425   | 465   | 530   | 605   | 685   | 785   | 900   | 985   | 1130  | 1280  | 1380  |
| 150       | 345                                         | 420   | 420   | 460   | 520   | 595   | 670   | 780   | 780   | 860   | 960   | 1115  | 1185  |
| 160       | 310                                         | 350   | 355   | 390   | 440   | 500   | 560   | 655   | 775   | 845   | 960   | 1090  | 1175  |
| 170       | 310                                         | 350   | 355   | 390   | 440   | 500   | 560   | 655   | 810   | 895   | 1015  | 1175  | 1250  |
| 180       | 300                                         | 345   | 350   | 380   | 430   | 495   | 560   | 650   | 795   | 885   | 1000  | 1145  | 1230  |
| 200       | 330                                         | 375   | 375   | 380   | 460   | 530   | 610   | 680   | 875   | 955   | 1080  | 1245  | 1330  |
| 220       | 345                                         | 405   | 405   | 445   | 505   | 570   | 655   | 745   | 745   | 810   | 920   | 1055  | 1140  |
| 240       | 320                                         | 360   | 365   | 400   | 450   | 505   | 585   | 660   | 835   | 925   | 1030  | 1190  | 1290  |
| 260       | 295                                         | 335   | 340   | 370   | 420   | 470   | 550   | 630   | 775   | 850   | 960   | 1115  | 1180  |
| 280       | 345                                         | 385   | 390   | 430   | 480   | 545   | 630   | 710   | 715   | 790   | 890   | 1015  | 1100  |
| 320       | 285                                         | 325   | 325   | 360   | 400   | 460   | 525   | 605   | 740   | 815   | 930   | 1060  | 1140  |

### INFORMATION



For more thermal ratings, contact SEW-EURODRIVE.



## 9 Required cooling capacity

The following table applies for the following conditions:

- Ambient temperature: 20, 30 or 40 °C
- Water temperature: 25 °C
- Max. oil temperature: 80 °C
- Operational environment: large halls and rooms
- Installation altitude: 0 to 1000 meters
- Mounting position M1
- 3-stage XP gear unit
- Drive power  $P_{k1}$

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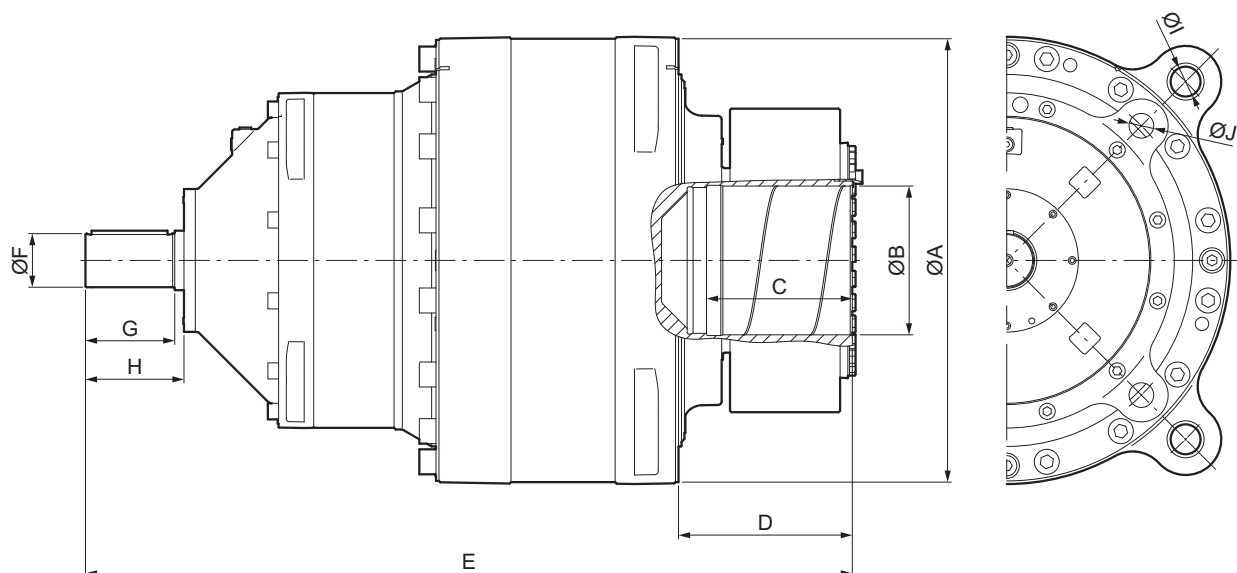
| Pk1<br>kW | XP size                |    |    |       |    |    |       |    |    |       |    |    |       |    |    |       |    |    |       |    |    |
|-----------|------------------------|----|----|-------|----|----|-------|----|----|-------|----|----|-------|----|----|-------|----|----|-------|----|----|
|           | XP130                  |    |    | XP140 |    |    | XP150 |    |    | XP160 |    |    | XP170 |    |    | XP180 |    |    | XP190 |    |    |
|           | Ambient temperature °C |    |    |       |    |    |       |    |    |       |    |    |       |    |    |       |    |    |       |    |    |
|           | 20                     | 30 | 40 | 20    | 30 | 40 | 20    | 30 | 40 | 20    | 30 | 40 | 20    | 30 | 40 | 20    | 30 | 40 | 20    | 30 | 40 |
|           | Cooling capacity in kW |    |    |       |    |    |       |    |    |       |    |    |       |    |    |       |    |    |       |    |    |
| 200       | 5                      | 5  | 5  | -     | -  | -  | -     | -  | -  | -     | -  | -  | -     | -  | -  | -     | -  | -  | -     | -  | -  |
| 300       | 5                      | 9  | 9  | 5     | 5  | 9  | 5     | 5  | 9  | 5     | 5  | 9  | -     | -  | -  | -     | -  | -  | -     | -  | -  |
| 400       | 9                      | 9  | 14 | 9     | 9  | 9  | 9     | 9  | 9  | 9     | 9  | 9  | 9     | 9  | 9  | 5     | 9  | 9  | -     | -  | -  |
| 500       | 14                     | 14 | 14 | 14    | 14 | 14 | 14    | 14 | 14 | 14    | 14 | 14 | 9     | 14 | 14 | 9     | 9  | 14 | 9     | 9  | 14 |
| 600       | 14                     | 22 | 22 | 22    | 22 | 22 | 14    | 22 | 22 | 14    | 22 | 22 | 14    | 14 | 22 | 14    | 14 | 14 | 14    | 14 | 14 |
| 700       | 22                     | 22 | 22 | 22    | 22 | 22 | 22    | 22 | 22 | 22    | 22 | 22 | 22    | 22 | 22 | 22    | 22 | 22 | 14    | 22 | 22 |
| 800       | -                      | -  | -  | 22    | 30 | 30 | 22    | 30 | 30 | 22    | 30 | 22 | 22    | 22 | 22 | 22    | 22 | 22 | 22    | 22 | 22 |
| 900       | -                      | -  | -  | -     | -  | -  | 30    | 30 | 30 | 22    | 30 | 30 | 30    | 30 | 30 | 22    | 30 | 30 | 22    | 22 | 30 |
| 1000      | -                      | -  | -  | -     | -  | -  | 30    | 30 | 30 | 30    | 30 | 30 | 30    | 30 | 30 | 30    | 30 | 30 | 30    | 30 | 30 |

| Pk1<br>kW | XP size                |    |    |       |    |    |       |    |    |       |    |    |       |    |    |       |    |    |
|-----------|------------------------|----|----|-------|----|----|-------|----|----|-------|----|----|-------|----|----|-------|----|----|
|           | XP200                  |    |    | XP210 |    |    | XP220 |    |    | XP230 |    |    | XP240 |    |    | XP250 |    |    |
|           | Ambient temperature °C |    |    |       |    |    |       |    |    |       |    |    |       |    |    |       |    |    |
|           | 20                     | 30 | 40 | 20    | 30 | 40 | 20    | 30 | 40 | 20    | 30 | 40 | 20    | 30 | 40 | 20    | 30 | 40 |
|           | Cooling capacity in kW |    |    |       |    |    |       |    |    |       |    |    |       |    |    |       |    |    |
| 500       | 9                      | 9  | 9  | -     | -  | -  | -     | -  | -  | -     | -  | -  | -     | -  | -  | -     | -  | -  |
| 600       | 9                      | 14 | 14 | 14    | 14 | 14 | -     | -  | -  | -     | -  | -  | -     | -  | -  | -     | -  | -  |
| 700       | 14                     | 14 | 22 | 14    | 22 | 22 | 14    | 14 | 14 | -     | -  | -  | -     | -  | -  | -     | -  | -  |
| 800       | 22                     | 22 | 22 | 22    | 22 | 22 | 14    | 14 | 22 | 22    | 22 | 22 | -     | -  | -  | -     | -  | -  |
| 900       | 22                     | 22 | 22 | 22    | 22 | 22 | 22    | 22 | 22 | 22    | 22 | 22 | 22    | 22 | 22 | -     | -  | -  |
| 1000      | 30                     | 30 | 30 | 22    | 30 | 30 | 22    | 22 | 30 | 22    | 22 | 30 | 22    | 22 | 22 | 22    | 22 | 22 |
| 1100      | 30                     | 30 | 30 | 30    | 30 | 30 | 30    | 30 | 30 | 30    | 30 | 30 | 22    | 22 | 30 | 22    | 22 | 30 |
| 1200      | 30                     | 30 | 45 | 30    | 30 | 30 | 30    | 30 | 30 | 30    | 30 | 30 | 30    | 30 | 30 | 22    | 30 | 30 |
| 1300      | 45                     | 45 | 45 | 30    | 45 | 45 | 30    | 30 | 45 | 30    | 30 | 45 | 30    | 30 | 45 | 30    | 30 | 30 |
| 1400      | 45                     | 45 | 45 | 45    | 45 | 45 | 45    | 45 | 45 | 45    | 45 | 45 | 45    | 45 | 45 | 30    | 30 | 45 |
| 1500      | 45                     | 45 | 45 | 45    | 45 | 45 | 45    | 45 | 45 | 45    | 45 | 45 | 45    | 45 | 45 | 45    | 45 | 45 |
| 1600      | -                      | -  | -  | -     | -  | -  | -     | -  | -  | 45    | 45 | 45 | 45    | 45 | 45 | 45    | 45 | 45 |
| 1700      | -                      | -  | -  | -     | -  | -  | -     | -  | -  | 45    | 45 | 45 | 45    | 45 | 70 | 45    | 45 | 45 |
| 1800      | -                      | -  | -  | -     | -  | -  | -     | -  | -  | 45    | 70 | 70 | 45    | 70 | 70 | 45    | 45 | 70 |
| 1900      | -                      | -  | -  | -     | -  | -  | -     | -  | -  | 70    | 70 | 70 | 70    | 70 | 70 | 45    | 70 | 70 |
| 2000      | -                      | -  | -  | -     | -  | -  | -     | -  | -  | 70    | 70 | 70 | 70    | 70 | 70 | 70    | 70 | 70 |

## 10 Dimension sheets

### 10.1 Gear unit

#### 10.1.1 XP2P.: 2-stage planetary gear unit



17475821963

| Dimensions in mm |      |                   |     |     |                       |                   |     |     |     |     |       |                              |
|------------------|------|-------------------|-----|-----|-----------------------|-------------------|-----|-----|-----|-----|-------|------------------------------|
| XP               | Ø A  | Ø B               | C   | D   | E                     | Ø F               | G   | H   | Ø I | Ø J | kg    | Fill quantity in liters (M1) |
| XP130            | 1045 | 320 <sup>H7</sup> | 315 | 442 | 1873                  | 150 <sub>m6</sub> | 250 | 277 | 80  | 70  | 4810  | 90                           |
| XP140            | 1045 | 340 <sup>H7</sup> | 325 | 458 | 1946                  | 150 <sub>m6</sub> | 250 | 277 | 80  | 70  | 5325  | 100                          |
| XP150            | 1070 | 360 <sup>H7</sup> | 325 | 439 | 2028                  | 150 <sub>m6</sub> | 250 | 277 | 80  | 70  | 5860  | 115                          |
| XP160            | 1160 | 380 <sup>H7</sup> | 365 | 485 | 2095                  | 150 <sub>m6</sub> | 250 | 277 | 85  | 70  | 6710  | 135                          |
| XP170            | 1260 | 400 <sup>H7</sup> | 375 | 505 | 2286                  | 180 <sub>m6</sub> | 300 | 331 | 90  | 80  | 8555  | 160                          |
| XP180            | 1300 | 450 <sup>H7</sup> | 405 | 538 | 2365                  | 180 <sub>m6</sub> | 300 | 331 | 90  | 80  | 9715  | 170                          |
| XP190            | 1390 | 470 <sup>H7</sup> | 435 | 529 | 2502                  | 180 <sub>m6</sub> | 300 | 331 | 90  | 85  | 12260 | 245                          |
| XP200            | 1500 | 500 <sup>H7</sup> | 490 | 584 | 2577                  | 180 <sub>m6</sub> | 300 | 331 | 100 | 85  | 14160 | 265                          |
| XP210            | 1625 | 530 <sup>H7</sup> | 500 | 586 | Contact SEW-EURODRIVE |                   |     |     |     |     |       |                              |
| XP220            | 1690 | 560 <sup>H7</sup> | 525 | 612 |                       |                   |     |     |     |     |       |                              |
| XP230            | 1740 | 600 <sup>H7</sup> | 555 | 624 |                       |                   |     |     |     |     |       |                              |
| XP240            | 1930 | 640 <sup>H7</sup> | 565 | 674 |                       |                   |     |     |     |     |       |                              |
| XP250            | 1940 | 710 <sup>H7</sup> | 625 | 724 |                       |                   |     |     |     |     |       |                              |

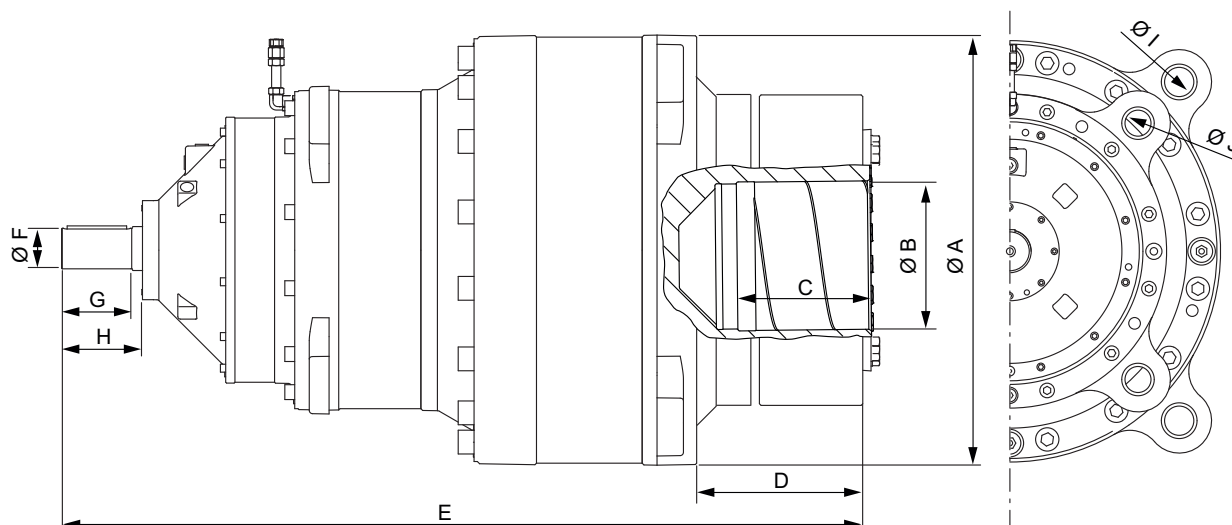
## INFORMATION



The key and the keyways at the input shaft are in accordance with DIN 6885/1.

The weight is specified without oil fill.

### 10.1.2 XP3P.: 3-stage planetary gear unit



12543156491

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| Dimensions in mm |      |                   |     |     |      |                   |     |     |     |     |       |
|------------------|------|-------------------|-----|-----|------|-------------------|-----|-----|-----|-----|-------|
| XP               | A    | B                 | C   | D   | E    | Ø F               | G   | H   | Ø I | Ø J | kg    |
| XP130            | 1045 | 320 <sup>H7</sup> | 315 | 442 | 1963 | 100 <sub>m6</sub> | 210 | 239 | 80  | 70  | 4930  |
| XP140            | 1045 | 340 <sup>H7</sup> | 325 | 458 | 2036 | 100 <sub>m6</sub> | 210 | 239 | 80  | 70  | 5455  |
| XP150            | 1070 | 360 <sup>H7</sup> | 325 | 439 | 2168 | 100 <sub>m6</sub> | 210 | 239 | 80  | 70  | 6120  |
| XP160            | 1160 | 380 <sup>H7</sup> | 365 | 485 | 2235 | 100 <sub>m6</sub> | 210 | 239 | 85  | 70  | 6955  |
| XP170            | 1260 | 400 <sup>H7</sup> | 375 | 505 | 2387 | 120 <sub>m6</sub> | 210 | 240 | 90  | 85  | 8800  |
| XP180            | 1300 | 450 <sup>H7</sup> | 405 | 538 | 2466 | 120 <sub>m6</sub> | 210 | 240 | 90  | 85  | 9960  |
| XP190            | 1390 | 470 <sup>H7</sup> | 435 | 529 | 2678 | 150 <sub>m6</sub> | 250 | 276 | 90  | 85  | 12825 |
| XP200            | 1500 | 500 <sup>H7</sup> | 490 | 584 | 2753 | 150 <sub>m6</sub> | 250 | 276 | 100 | 85  | 14730 |
| XP210            | 1625 | 530 <sup>H7</sup> | 500 | 586 | 3035 | 180 <sub>m6</sub> | 300 | 331 | 100 | 85  | 19650 |
| XP220            | 1690 | 560 <sup>H7</sup> | 525 | 612 | 3083 | 180 <sub>m6</sub> | 300 | 331 | 120 | 90  | 21845 |
| XP230            | 1740 | 600 <sup>H7</sup> | 555 | 624 | 3240 | 180 <sub>m6</sub> | 300 | 331 | 120 | 90  | 25865 |
| XP240            | 1930 | 640 <sup>H7</sup> | 565 | 674 | 3280 | 180 <sub>m6</sub> | 300 | 331 | 120 | 90  | 29620 |
| XP250            | 1940 | 710 <sup>H7</sup> | 625 | 724 | 3570 | 180 <sub>m6</sub> | 300 | 331 | 120 | 90  | 34125 |

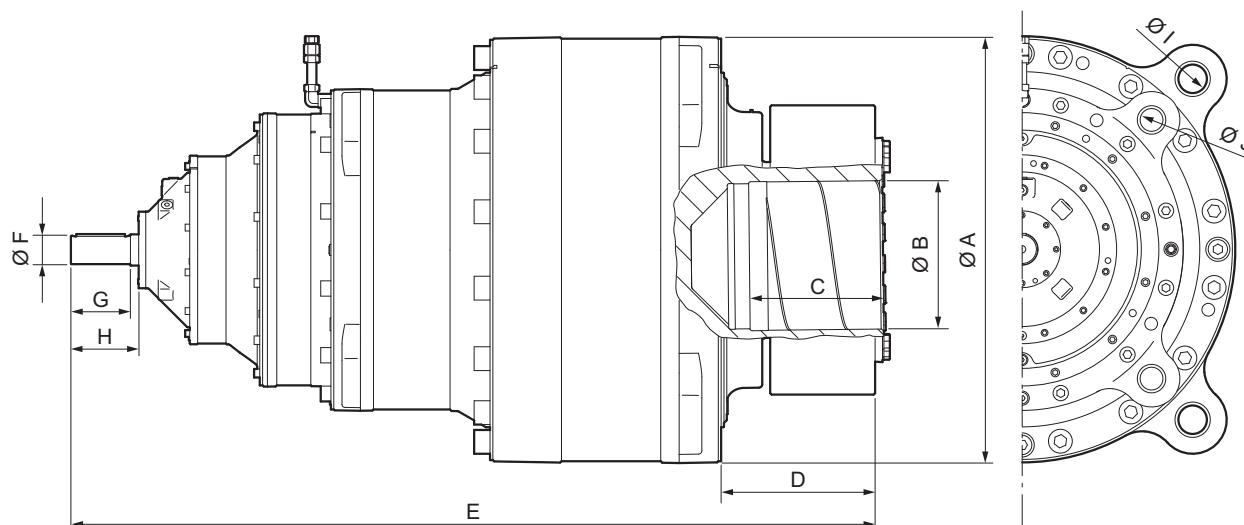
## INFORMATION



The key and the keyways at the input shaft are in accordance with DIN 6885/1.

The weight is specified without oil fill.

## 10.1.3 XP4P.: 4-stage planetary gear unit



18948627851

| Dimensions in mm |      |                   |     |     |        |                   |     |     |     |     |       |
|------------------|------|-------------------|-----|-----|--------|-------------------|-----|-----|-----|-----|-------|
| XP               | A    | B                 | C   | D   | E      | Ø F               | G   | H   | Ø I | Ø J | kg    |
| XP130            | 1045 | 320 <sup>H7</sup> | 315 | 442 | 2079.5 | 60 <sub>m6</sub>  | 140 | 163 | 80  | 70  | 5165  |
| XP140            | 1045 | 340 <sup>H7</sup> | 325 | 458 | 2152.5 | 60 <sub>m6</sub>  | 140 | 163 | 80  | 70  | 5600  |
| XP150            | 1070 | 360 <sup>H7</sup> | 325 | 439 | 2298.5 | 60 <sub>m6</sub>  | 140 | 163 | 80  | 70  | 6420  |
| XP160            | 1160 | 380 <sup>H7</sup> | 365 | 485 | 2365.5 | 60 <sub>m6</sub>  | 140 | 163 | 85  | 70  | 7250  |
| XP170            | 1260 | 400 <sup>H7</sup> | 375 | 505 | 2479   | 60 <sub>m6</sub>  | 140 | 163 | 90  | 85  | 9020  |
| XP180            | 1300 | 450 <sup>H7</sup> | 405 | 538 | 2558   | 60 <sub>m6</sub>  | 140 | 163 | 90  | 85  | 10150 |
| XP190            | 1390 | 470 <sup>H7</sup> | 435 | 529 | 2802   | 100 <sub>m6</sub> | 210 | 240 | 90  | 85  | 12640 |
| XP200            | 1500 | 500 <sup>H7</sup> | 490 | 584 | 2877   | 100 <sub>m6</sub> | 210 | 240 | 100 | 85  | 13230 |
| XP210            | 1625 | 530 <sup>H7</sup> | 500 | 586 | 3140   | 100 <sub>m6</sub> | 210 | 240 | 100 | 85  | 19940 |
| XP220            | 1690 | 560 <sup>H7</sup> | 525 | 612 | 3188   | 100 <sub>m6</sub> | 210 | 240 | 120 | 90  | 22125 |
| XP230            | 1740 | 600 <sup>H7</sup> | 555 | 624 | 3345   | 100 <sub>m6</sub> | 210 | 240 | 120 | 90  | 26255 |
| XP240            | 1930 | 640 <sup>H7</sup> | 565 | 674 | 3385   | 100 <sub>m6</sub> | 210 | 240 | 120 | 90  | 29965 |
| XP250            | 1940 | 710 <sup>H7</sup> | 625 | 724 | 3643   | 120 <sub>m6</sub> | 210 | 240 | 120 | 90  | 34630 |

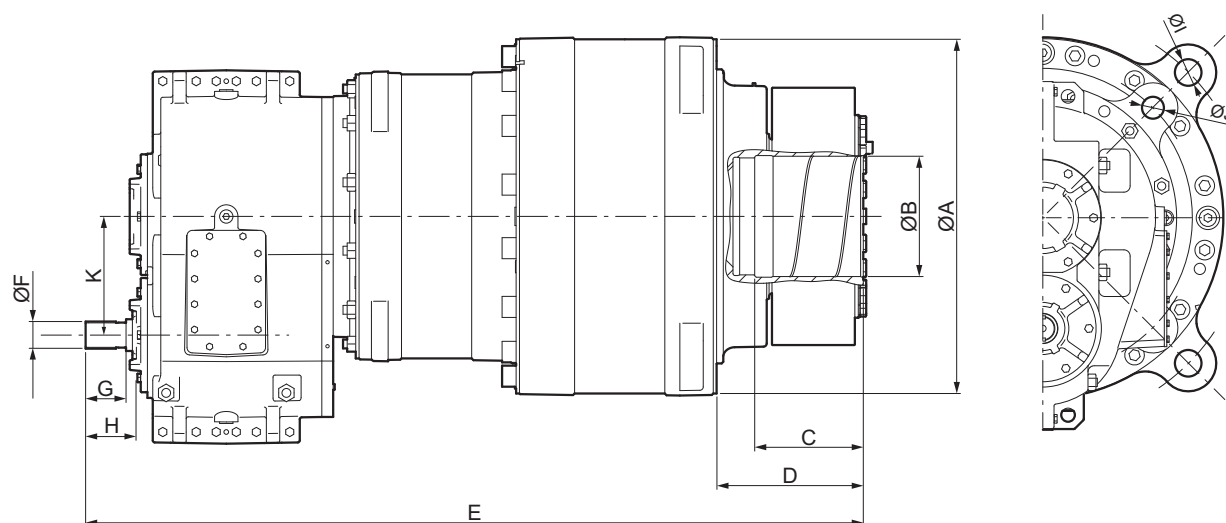
## INFORMATION



The key and the keyways at the input shaft are in accordance with DIN 6885/1.

The weight is specified without oil fill.

### 10.1.4 XP3F: 3-stage helical-planetary gear unit



18595029259

| Dimensions in mm |      |                   |     |     |      |                   |     |     |     |     |     |       |
|------------------|------|-------------------|-----|-----|------|-------------------|-----|-----|-----|-----|-----|-------|
| XP               | A    | B                 | C   | D   | E    | Ø F               | G   | H   | Ø I | Ø J | K   | kg    |
| XP130            | 1045 | 320 <sup>H7</sup> | 315 | 442 | 2140 | 110 <sub>m6</sub> | 165 | 174 | 80  | 70  | 280 | 5640  |
| XP140            | 1045 | 340 <sup>H7</sup> | 325 | 458 | 2220 | 110 <sub>m6</sub> | 165 | 174 | 80  | 70  | 280 | 6075  |
| XP150            | 1070 | 360 <sup>H7</sup> | 325 | 439 | 2420 | 140 <sub>m6</sub> | 200 | 210 | 80  | 70  | 355 | 7237  |
| XP160            | 1160 | 380 <sup>H7</sup> | 365 | 485 | 2485 | 140 <sub>m6</sub> | 200 | 210 | 85  | 70  | 355 | 8068  |
| XP170            | 1260 | 400 <sup>H7</sup> | 375 | 505 | 2670 | 150 <sub>m6</sub> | 200 | 212 | 90  | 80  | 400 | 10070 |
| XP180            | 1300 | 450 <sup>H7</sup> | 405 | 538 | 2735 | 150 <sub>m6</sub> | 200 | 212 | 90  | 80  | 400 | 11200 |
| XP190            | 1390 | 470 <sup>H7</sup> | 435 | 529 | 3005 | 170 <sub>m6</sub> | 240 | 252 | 90  | 85  | 450 | 14250 |
| XP200            | 1500 | 500 <sup>H7</sup> | 490 | 584 | 3080 | 170 <sub>m6</sub> | 240 | 252 | 100 | 85  | 450 | 14840 |
| XP210            | 1625 | 530 <sup>H7</sup> | 500 | 586 | 3325 | 180 <sub>m6</sub> | 240 | 260 | 100 | 85  | 500 | 21723 |
| XP220            | 1690 | 560 <sup>H7</sup> | 525 | 612 | 3370 | 180 <sub>m6</sub> | 240 | 260 | 120 | 90  | 500 | 24062 |
| XP230            | 1740 | 600 <sup>H7</sup> | 555 | 624 | 3675 | 200 <sub>m6</sub> | 280 | 297 | 120 | 90  | 560 | 29422 |
| XP240            | 1930 | 640 <sup>H7</sup> | 565 | 674 | 3715 | 200 <sub>m6</sub> | 280 | 297 | 120 | 90  | 560 | 33132 |
| XP250            | 1940 | 710 <sup>H7</sup> | 625 | 724 | 3930 | 200 <sub>m6</sub> | 280 | 297 | 120 | 90  | 560 | 37632 |

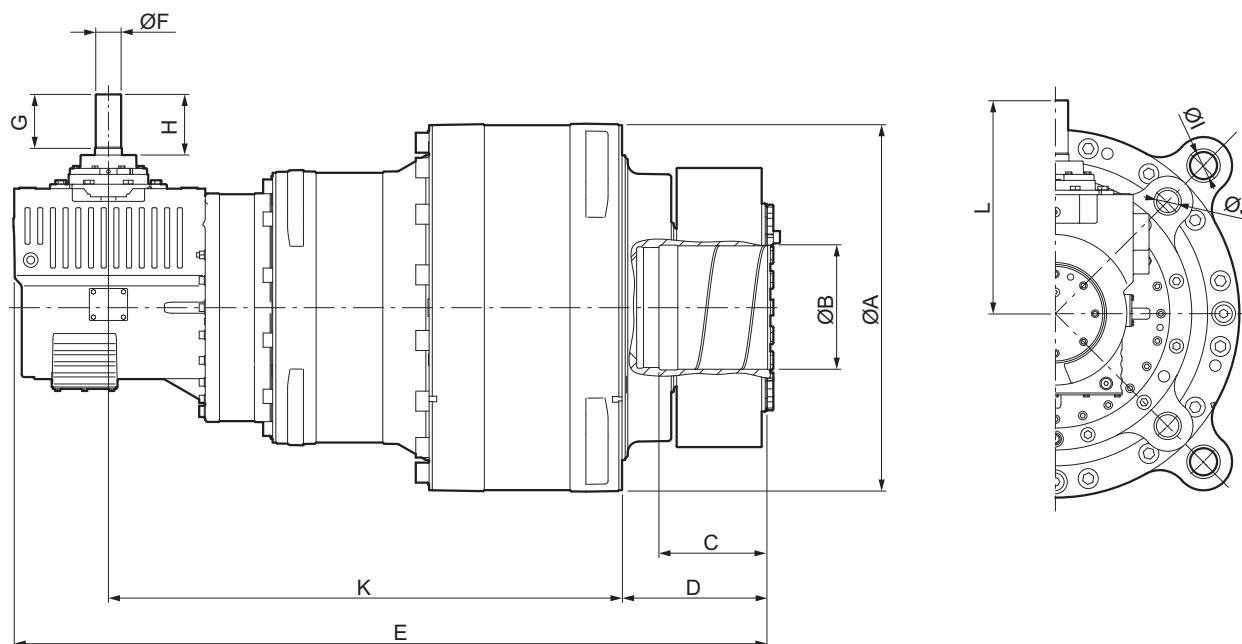
## INFORMATION



The key and the keyways at the input shaft are in accordance with DIN 6885/1.

The weight is specified without oil fill.

## 10.1.5 XP4K.: 4-stage bevel-planetary gear unit



17475819275

| Dimensions in mm |      |                   |     |     |      |                   |     |     |     |     |        |      |       |
|------------------|------|-------------------|-----|-----|------|-------------------|-----|-----|-----|-----|--------|------|-------|
| XP               | A    | B                 | C   | D   | E    | Ø F               | G   | H   | Ø I | Ø J | K      | L    | kg    |
| XP130            | 1045 | 320 <sup>H7</sup> | 315 | 442 | 1963 | 70 <sub>m6</sub>  | 140 | 161 | 80  | 70  | 1339   | 591  | 5400  |
| XP140            | 1045 | 340 <sup>H7</sup> | 325 | 458 | 2036 | 70 <sub>m6</sub>  | 140 | 161 | 80  | 70  | 1396   | 591  | 5925  |
| XP150            | 1070 | 360 <sup>H7</sup> | 325 | 439 | 2168 | 80 <sub>m6</sub>  | 170 | 191 | 80  | 70  | 1597.5 | 672  | 6850  |
| XP160            | 1160 | 380 <sup>H7</sup> | 365 | 485 | 2235 | 80 <sub>m6</sub>  | 170 | 191 | 85  | 70  | 1618.5 | 672  | 7685  |
| XP170            | 1255 | 400 <sup>H7</sup> | 375 | 505 | 2387 | 85 <sub>m6</sub>  | 170 | 191 | 90  | 85  | 1752   | 736  | 9800  |
| XP180            | 1300 | 450 <sup>H7</sup> | 405 | 538 | 2466 | 85 <sub>m6</sub>  | 170 | 191 | 90  | 85  | 1798   | 736  | 10960 |
| XP190            | 1390 | 470 <sup>H7</sup> | 435 | 529 | 2678 | 100 <sub>m6</sub> | 210 | 231 | 90  | 85  | 1957   | 821  | 14000 |
| XP200            | 1500 | 500 <sup>H7</sup> | 490 | 584 | 2753 | 100 <sub>m6</sub> | 210 | 231 | 100 | 85  | 1977   | 821  | 15905 |
| XP210            | 1625 | 530 <sup>H7</sup> | 500 | 586 | 3035 | 110 <sub>m6</sub> | 210 | 231 | 100 | 85  | 2259   | 912  | 21455 |
| XP220            | 1690 | 560 <sup>H7</sup> | 525 | 612 | 3083 | 110 <sub>m6</sub> | 210 | 231 | 120 | 90  | 2281   | 912  | 23650 |
| XP230            | 1740 | 600 <sup>H7</sup> | 555 | 624 | 3240 | 120 <sub>m6</sub> | 210 | 231 | 120 | 90  | 2426   | 1034 | 28055 |
| XP240            | 1930 | 640 <sup>H7</sup> | 565 | 674 | 3280 | 120 <sub>m6</sub> | 210 | 231 | 120 | 90  | 2416   | 1034 | 31810 |
| XP250            | 1940 | 710 <sup>H7</sup> | 625 | 724 | 3570 | 120 <sub>m6</sub> | 210 | 231 | 120 | 90  | 2583   | 1034 | 36215 |

## INFORMATION

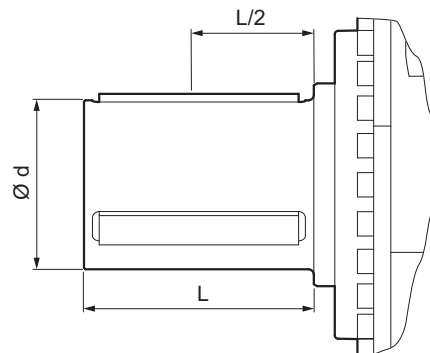


The key and the keyways at the input shaft are in accordance with DIN 6885/1.

The weight is specified without oil fill.

## 10.2 Options

### 10.2.1 XP.S. Solid shaft with key on output side

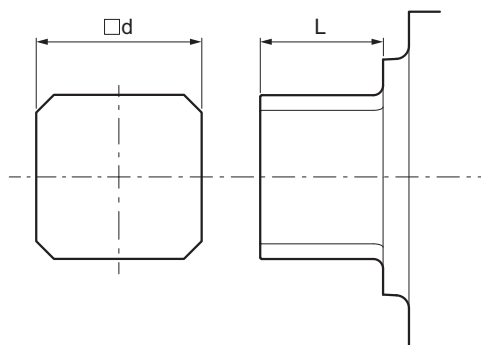


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| XP    | Diameter dimension (Ø d)        |               |      | L   |
|-------|---------------------------------|---------------|------|-----|
|       | Min.                            | Nominal value | Max. |     |
| XP130 | 310                             | 340           | 370  | 540 |
| XP140 | 310                             | 360           | 410  | 540 |
| XP150 | 350                             | 400           | 450  | 540 |
| XP160 | 400                             | 440           | 480  | 540 |
| XP170 | 420                             | 460           | 500  | 680 |
| XP180 | 450                             | 500           | 550  | 680 |
| XP190 | Upon request from SEW-EURODRIVE |               |      |     |
| XP200 |                                 |               |      |     |
| XP210 |                                 |               |      |     |
| XP220 |                                 |               |      |     |
| XP230 |                                 |               |      |     |
| XP240 |                                 |               |      |     |
| XP250 |                                 |               |      |     |

For complete dimension sheets, contact SEW-EURODRIVE.

## 10.2.2 XP.C. Square output shaft



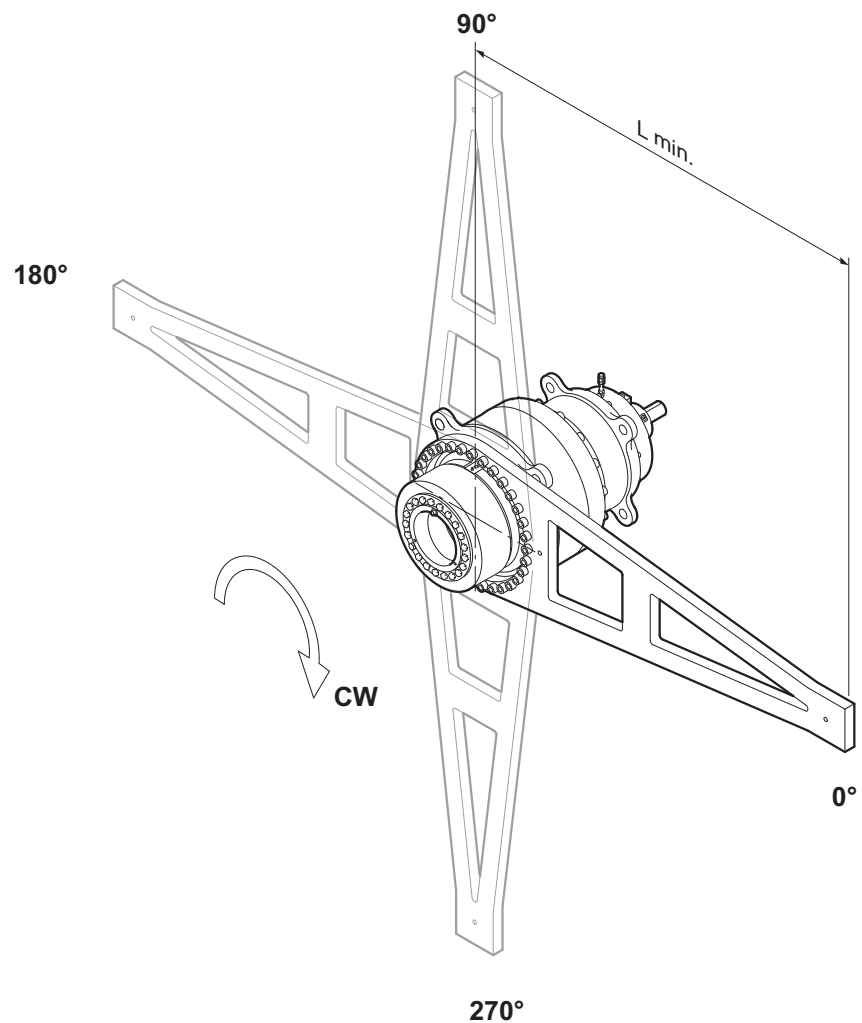
12546354315

| XP    | Dimensions of the square shaft  |               |      | L   |
|-------|---------------------------------|---------------|------|-----|
|       | Min.                            | Nominal value | Max. |     |
| XP130 | 250                             | 260           | 300  | 220 |
| XP140 | 270                             | 280           | 320  | 240 |
| XP150 | 290                             | 310           | 340  | 260 |
| XP160 | 310                             | 340           | 375  | 280 |
| XP170 | 330                             | 360           | 395  | 300 |
| XP180 | 340                             | 390           | 425  | 320 |
| XP190 | Upon request from SEW-EURODRIVE |               |      |     |
| XP200 |                                 |               |      |     |
| XP210 |                                 |               |      |     |
| XP220 |                                 |               |      |     |
| XP230 |                                 |               |      |     |
| XP240 |                                 |               |      |     |
| XP250 |                                 |               |      |     |

For complete dimension sheets, contact SEW-EURODRIVE.



### 10.2.3 Torque arm – minimum length



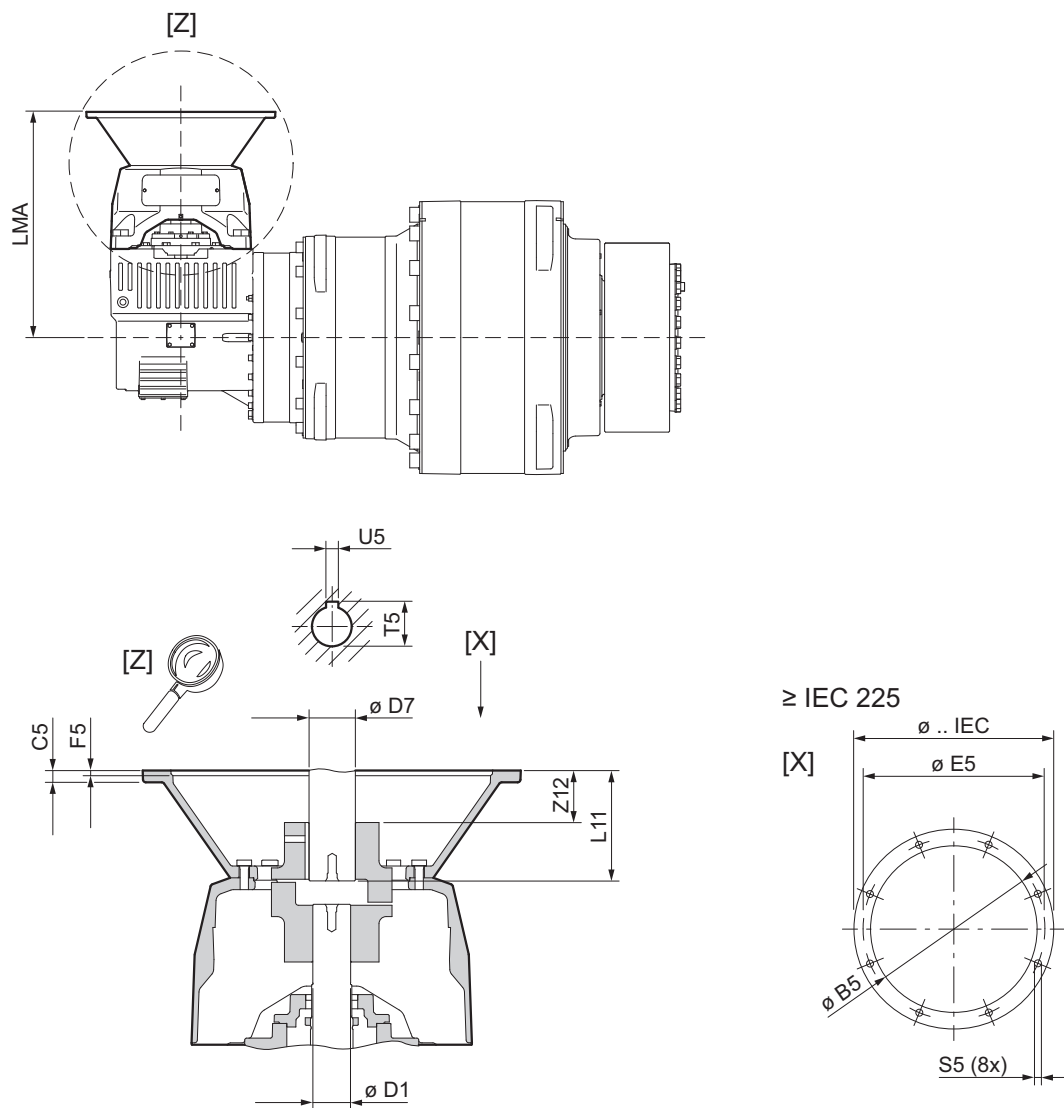
10

12833382155

|             | XP size / minimum length Lmin [m] |     |     |     |     |     |     |     |     |     |     |      |      |
|-------------|-----------------------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|------|
|             | 130                               | 140 | 150 | 160 | 170 | 180 | 190 | 200 | 210 | 220 | 230 | 240  | 250  |
| <b>0°</b>   | 2.0                               | 2.5 | 3.0 | 3.0 | 4.0 | 4.5 | 5.5 | 6.0 | 6.5 | 8.0 | 8.5 | 10.0 | 10.0 |
| <b>45°</b>  | 2.0                               | 2.5 | 3.0 | 3.0 | 3.5 | 4.0 | 5.5 | 5.5 | 6.0 | 7.0 | 8.0 | 9.0  | 9.0  |
| <b>90°</b>  | 2.0                               | 2.5 | 2.5 | 2.5 | 3.0 | 3.5 | 4.5 | 4.5 | 5.0 | 5.5 | 6.0 | 6.5  | 6.5  |
| <b>135°</b> | 1.5                               | 2.0 | 2.5 | 2.5 | 3.0 | 3.0 | 3.5 | 4.0 | 4.0 | 4.5 | 5.0 | 5.0  | 5.0  |
| <b>180°</b> | 1.5                               | 2.0 | 2.5 | 2.5 | 2.5 | 3.0 | 3.5 | 3.5 | 3.5 | 4.0 | 4.5 | 4.5  | 4.5  |
| <b>225°</b> | 1.5                               | 2.0 | 2.5 | 2.5 | 3.0 | 3.0 | 3.5 | 4.0 | 4.0 | 4.5 | 5.0 | 5.0  | 5.0  |
| <b>270°</b> | 2.0                               | 2.5 | 2.5 | 2.5 | 3.0 | 3.5 | 4.5 | 4.5 | 5.0 | 5.5 | 6.0 | 6.5  | 6.5  |
| <b>315°</b> | 2.0                               | 2.5 | 3.0 | 3.0 | 3.5 | 4.0 | 5.5 | 5.5 | 6.0 | 7.0 | 8.0 | 9.0  | 9.0  |

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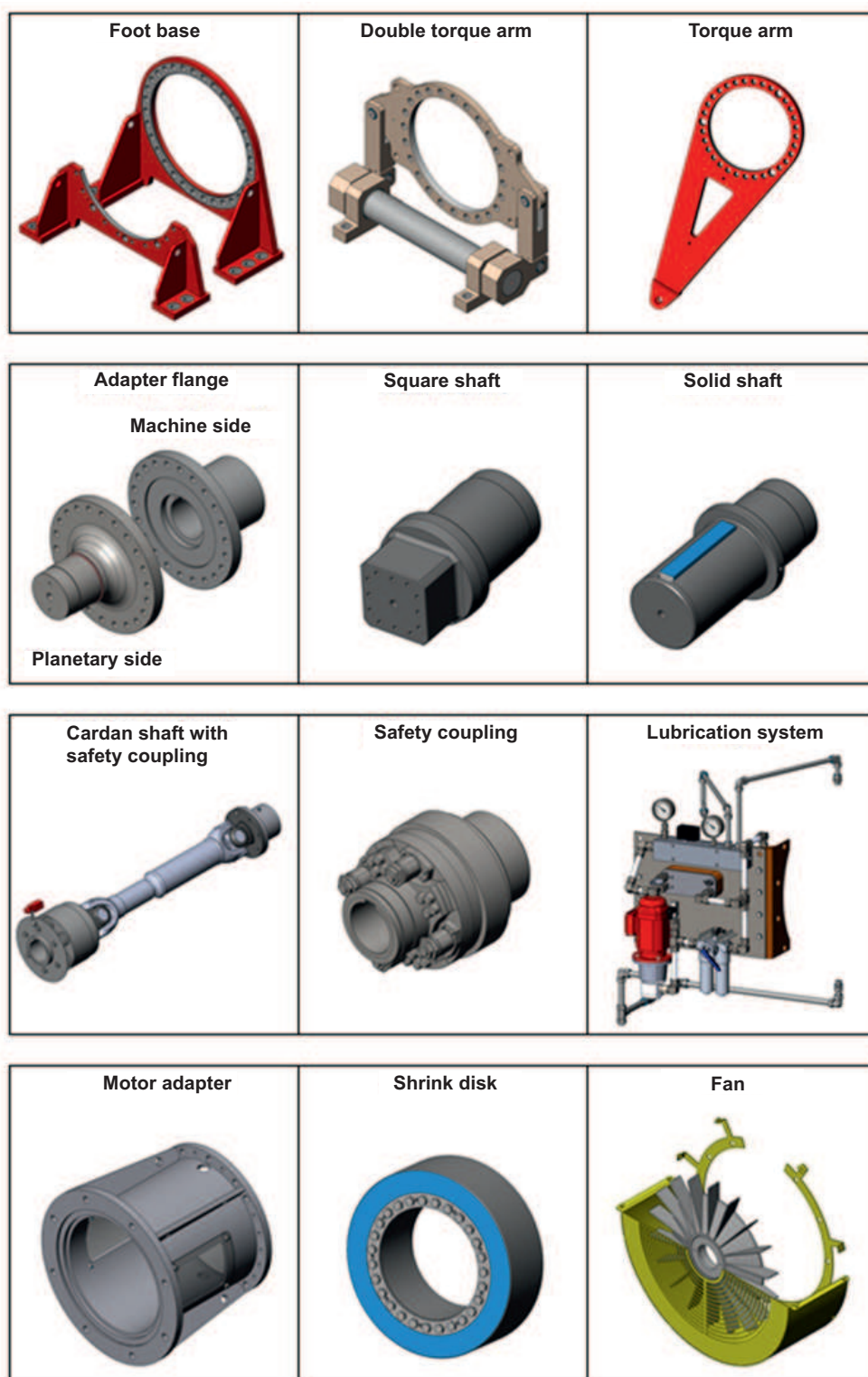
## 10.2.4 Motor adapter



18590766347

| XP4K..  | IEC    | Ø IEC | Ø B5              | C5 | Ø D7              | Ø E5 | F5 | L11 | S5       | T5    | U5                | Ø D1 | LMA  | Z12  | kg  |
|---------|--------|-------|-------------------|----|-------------------|------|----|-----|----------|-------|-------------------|------|------|------|-----|
| 130-140 | 250    | 550   | 450 <sup>H7</sup> | 25 | 65 <sup>H7</sup>  | 500  | 7  | 140 | M16 (8x) | 69.4  | 18 <sup>JS9</sup> | 70   | 764  | 52   | 130 |
|         | 280    | 550   | 450 <sup>H7</sup> | 25 | 75 <sup>H7</sup>  | 500  | 7  | 140 | M16 (8x) | 79.9  | 20 <sup>JS9</sup> | 70   | 764  | 52   | 130 |
|         | 315S-L | 660   | 550 <sup>H7</sup> | 25 | 80 <sup>H7</sup>  | 600  | 7  | 170 | M20 (8x) | 85.4  | 22 <sup>JS9</sup> | 70   | 764  | 66   | 160 |
| 150-160 | 250    | 550   | 450 <sup>H7</sup> | 25 | 65 <sup>H7</sup>  | 500  | 7  | 140 | M16 (8x) | 69.4  | 18 <sup>JS9</sup> | 80   | 840  | 50   | 150 |
|         | 280    | 550   | 450 <sup>H7</sup> | 25 | 75 <sup>H7</sup>  | 500  | 7  | 140 | M16 (8x) | 79.9  | 20 <sup>JS9</sup> | 80   | 840  | 50   | 150 |
|         | 315S-L | 660   | 550 <sup>H7</sup> | 25 | 80 <sup>H7</sup>  | 600  | 7  | 170 | M20 (8x) | 85.4  | 22 <sup>JS9</sup> | 80   | 879  | 62   | 180 |
|         | 315    | 800   | 680 <sup>H7</sup> | 25 | 85 <sup>H7</sup>  | 740  | 7  | 170 | M20 (8x) | 90.4  | 22 <sup>JS9</sup> | 80   | 915  | 73   | 220 |
|         | 355    | 800   | 680 <sup>H7</sup> | 25 | 100 <sup>H7</sup> | 740  | 7  | 210 | M20 (8x) | 106.4 | 28 <sup>JS9</sup> | 80   | 955  | 110  | 250 |
| 170-180 | 250    | 550   | 450 <sup>H7</sup> | 25 | 65 <sup>H7</sup>  | 500  | 7  | 140 | M16 (8x) | 69.4  | 18 <sup>JS9</sup> | 85   | 906  | 50   | 180 |
|         | 280    | 550   | 450 <sup>H7</sup> | 25 | 75 <sup>H7</sup>  | 500  | 7  | 140 | M16 (8x) | 79.9  | 20 <sup>JS9</sup> | 85   | 906  | 50   | 180 |
|         | 315S-L | 660   | 550 <sup>H7</sup> | 25 | 80 <sup>H7</sup>  | 600  | 7  | 170 | M20 (8x) | 85.4  | 22 <sup>JS9</sup> | 85   | 945  | 64.5 | 210 |
|         | 315    | 800   | 680 <sup>H7</sup> | 25 | 85 <sup>H7</sup>  | 740  | 7  | 170 | M20 (8x) | 90.4  | 22 <sup>JS9</sup> | 85   | 981  | 60   | 250 |
|         | 355    | 800   | 680 <sup>H7</sup> | 25 | 100 <sup>H7</sup> | 740  | 7  | 210 | M20 (8x) | 106.4 | 28 <sup>JS9</sup> | 85   | 1021 | 100  | 275 |
| 190-200 | 315S-L | 660   | 680 <sup>H7</sup> | 25 | 80 <sup>H7</sup>  | 600  | 7  | 170 | M20 (8x) | 85.4  | 22 <sup>JS9</sup> | 100  | 994  | 32.5 | 225 |
|         | 315    | 800   | 680 <sup>H7</sup> | 25 | 85 <sup>H7</sup>  | 740  | 7  | 170 | M20 (8x) | 90.4  | 22 <sup>JS9</sup> | 100  | 1030 | 39   | 270 |
|         | 355    | 800   | 680 <sup>H7</sup> | 25 | 100 <sup>H7</sup> | 740  | 7  | 210 | M20 (8x) | 106.4 | 28 <sup>JS9</sup> | 100  | 1070 | 74   | 295 |
| 210-220 | 315S-L | 660   | 550 <sup>H7</sup> | 25 | 80 <sup>H7</sup>  | 600  | 7  | 170 | M20 (8x) | 85.4  | 22 <sup>JS9</sup> | 110  | 1076 | 33   | 265 |
|         | 315    | 800   | 680 <sup>H7</sup> | 25 | 85 <sup>H7</sup>  | 740  | 7  | 170 | M20 (8x) | 90.4  | 22 <sup>JS9</sup> | 110  | 1112 | 54   | 305 |
|         | 355    | 800   | 680 <sup>H7</sup> | 25 | 100 <sup>H7</sup> | 740  | 7  | 210 | M20 (8x) | 106.4 | 28 <sup>JS9</sup> | 110  | 1152 | 89   | 330 |

## 10.2.5 Overview



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## 11 Address directory SEW-EURODRIVE

| Algeria                      |              |                                                                                                                                     |                                                                                                                                                                                                                  |
|------------------------------|--------------|-------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Sales                        | Algiers      | REDUCOM Sarl<br>16, rue des Frères Zaghroune<br>Bellevue<br>16200 El Harrach Alger                                                  | Tel. +213 21 8214-91<br>Fax +213 21 8222-84<br><a href="http://www.reducom-dz.com">http://www.reducom-dz.com</a><br><a href="mailto:info@reducom-dz.com">info@reducom-dz.com</a>                                 |
| Argentina                    |              |                                                                                                                                     |                                                                                                                                                                                                                  |
| Assembly<br>Sales            | Buenos Aires | SEW EURODRIVE ARGENTINA S.A.<br>Ruta Panamericana Km 37.5, Lote 35<br>(B1619IEA) Centro Industrial Garín<br>Prov. de Buenos Aires   | Tel. +54 3327 4572-84<br>Fax +54 3327 4572-21<br><a href="http://www.sew-eurodrive.com.ar">http://www.sew-eurodrive.com.ar</a><br><a href="mailto:sewar@sew-eurodrive.com.ar">sewar@sew-eurodrive.com.ar</a>     |
|                              | Córdoba      | SEW EURODRIVE ARGENTINA S.A.<br>Ruta Nacional 19, Manzana 97, Lote 5<br>(X5125) Malvinas Argentinas<br>Prov. de Córdoba             | Tel. +54 351-490-0010<br><a href="http://www.sew-eurodrive.com.ar">http://www.sew-eurodrive.com.ar</a><br><a href="mailto:sewcor@sew-eurodrive.com.ar">sewcor@sew-eurodrive.com.ar</a>                           |
|                              | Santa Fe     | SEW EURODRIVE ARGENTINA S.A.<br>Ruta Prov. 21 Km 7, Lote 41<br>Parque Industrial Alvear<br>(2126) Gral. Alvear<br>Prov. de Santa Fe | Tel. +54 341-317-7277<br><a href="http://www.sew-eurodrive.com.ar">http://www.sew-eurodrive.com.ar</a><br><a href="mailto:sewsfe@sew-eurodrive.com.ar">sewsfe@sew-eurodrive.com.ar</a>                           |
| Service                      | Mendoza      | SEW EURODRIVE ARGENTINA S.A.<br>Francisco Gabrielli (ex Urquiza)<br>2060-Zona Industrial- Guaymallen- CP 5521                       | Tel. +54 261-4214150<br><a href="http://www.sew-eurodrive.com.ar">http://www.sew-eurodrive.com.ar</a><br><a href="mailto:sewmen@sew-eurodrive.com.ar">sewmen@sew-eurodrive.com.ar</a>                            |
| Technical Offices            | Tucumán      | SEW EURODRIVE ARGENTINA S.A.<br>Balcarce 609<br>(T4000IAM) S.M. de Tucumán<br>Prov. de Tucumán                                      | Tel. +54 381-400-4569<br><a href="http://www.sew-eurodrive.com.ar">http://www.sew-eurodrive.com.ar</a><br><a href="mailto:sewtuc@sew-eurodrive.com.ar">sewtuc@sew-eurodrive.com.ar</a>                           |
|                              | Bahía Blanca | SEW EURODRIVE ARGENTINA S.A.<br>O'Higgins 95, 1er Piso A<br>(B8000IVA) Bahía Blanca<br>Prov. de Buenos Aires                        | Tel. +54 291-451-7345<br><a href="http://www.sew-eurodrive.com.ar">http://www.sew-eurodrive.com.ar</a><br><a href="mailto:sewbb@sew-eurodrive.com.ar">sewbb@sew-eurodrive.com.ar</a>                             |
|                              | Neuquén      | SEW EURODRIVE ARGENTINA S.A.                                                                                                        | Tel. +549 299 588 7950<br><a href="http://www.sew-eurodrive.com.ar">http://www.sew-eurodrive.com.ar</a><br><a href="mailto:sewnqn@sew-eurodrive.com.ar">sewnqn@sew-eurodrive.com.ar</a>                          |
| Australia                    |              |                                                                                                                                     |                                                                                                                                                                                                                  |
| Assembly<br>Sales<br>Service | Melbourne    | SEW-EURODRIVE PTY. LTD.<br>27 Beverage Drive<br>Tullamarine, Victoria 3043                                                          | Tel. +61 3 9933-1000<br>Fax +61 3 9933-1003<br><a href="http://www.sew-eurodrive.com.au">http://www.sew-eurodrive.com.au</a><br><a href="mailto:enquires@sew-eurodrive.com.au">enquires@sew-eurodrive.com.au</a> |
|                              | Sydney       | SEW-EURODRIVE PTY. LTD.<br>9, Sleigh Place, Wetherill Park<br>New South Wales, 2164                                                 | Tel. +61 2 9725-9900<br>Fax +61 2 9725-9905<br><a href="mailto:enquires@sew-eurodrive.com.au">enquires@sew-eurodrive.com.au</a>                                                                                  |
| Sales<br>Service             | Adelaide     | SEW-EURODRIVE PTY. LTD.<br>9C Park Way<br>Mawson Lakes, SA 5095                                                                     | Tel. +61 8 8161 4000<br>Fax +61 8 8161 4002<br><a href="mailto:enquires@sew-eurodrive.com.au">enquires@sew-eurodrive.com.au</a>                                                                                  |
|                              | Brisbane     | SEW-EURODRIVE PTY. LTD.<br>1 /34 Collinsvale St<br>Rocklea, Queensland, 4106                                                        | Tel. +61 7 3276 5100<br>Fax +61 7 3276 5102<br><a href="mailto:enquires@sew-eurodrive.com.au">enquires@sew-eurodrive.com.au</a>                                                                                  |
|                              | Perth        | SEW-EURODRIVE PTY. LTD.<br>10 Colin Jamieson Drive<br>Welshpool, WA 6106                                                            | Tel. +61 8 9251-4900<br>Fax +61 8 9251-4903<br><a href="mailto:enquires@sew-eurodrive.com.au">enquires@sew-eurodrive.com.au</a>                                                                                  |
| Sales                        | Townsville   | SEW-EURODRIVE PTY. LTD.<br>12 Leyland Street<br>Garbutt, QLD 4814                                                                   | Tel. +61 7 4779 4333<br>Fax +61 7 4779 5333<br><a href="mailto:enquires@sew-eurodrive.com.au">enquires@sew-eurodrive.com.au</a>                                                                                  |
| Austria                      |              |                                                                                                                                     |                                                                                                                                                                                                                  |
| Assembly<br>Sales<br>Service | Vienna       | SEW-EURODRIVE Ges.m.b.H.<br>Richard-Strauss-Straße 24<br>1230 Wien                                                                  | Tel. +43 1 617 55 00-0<br>Fax +43 1 617 55 00-30<br><a href="http://www.sew-eurodrive.at">http://www.sew-eurodrive.at</a><br><a href="mailto:sew@sew-eurodrive.at">sew@sew-eurodrive.at</a>                      |
| Technical Offices            | Linz         | SEW-EURODRIVE Ges.m.b.H.<br>Jaxstraße 2-4<br>4020 Linz                                                                              | Tel. +43 732 655 109-0<br>Fax +43 732 655 109-20<br><a href="mailto:tb-linz@sew-eurodrive.at">tb-linz@sew-eurodrive.at</a>                                                                                       |

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| Graz     | SEW-EURODRIVE Ges.m.b.H.<br>Grabenstraße 231<br>8045 Graz          | Tel. +43 316 685 756-0<br>Fax +43 316 685 756-20<br>tb-graz@sew-eurodrive.at       |
| Dornbirn | SEW-EURODRIVE Ges.m.b.H.<br>Lustenauerstraße 27/1<br>6850 Dornbirn | Tel. +43 5572 3725 99-0<br>Fax +43 5572 3725 99-20<br>tb-dornbirn@sew-eurodrive.at |

**Bangladesh**

|       |            |                                                                                               |                                                                |
|-------|------------|-----------------------------------------------------------------------------------------------|----------------------------------------------------------------|
| Sales | Bangladesh | SEW-EURODRIVE INDIA PRIVATE LIMITED<br>345 DIT Road<br>East Rampura<br>Dhaka-1219, Bangladesh | Tel. +88 01729 097309<br>salesdhaka@seweurodrivebangladesh.com |
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**Belarus**

|       |       |                                                                                       |                                                                                                  |
|-------|-------|---------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------|
| Sales | Minsk | Foreign unitary production enterprise SEW-EURODRIVE<br>RybalkoStr. 26<br>220033 Minsk | Tel. +375 17 298 47 56 / 298 47 58<br>Fax +375 17 298 47 54<br>http://www.sew.by<br>sales@sew.by |
|-------|-------|---------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------|

**Belgium**

|                              |                     |                                                                                           |                                                                                                         |
|------------------------------|---------------------|-------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------|
| Assembly<br>Sales<br>Service | Brussels            | SEW-EURODRIVE n.v./s.a.<br>Researchpark Haasrode 1060<br>Evenementenlaan 7<br>3001 Leuven | Tel. +32 16 386-311<br>Fax +32 16 386-336<br>http://www.sew-eurodrive.be<br>info@sew-eurodrive.be       |
| Service Competence<br>Center | Industrial<br>Gears | SEW-EURODRIVE n.v./s.a.<br>Rue de Parc Industriel, 31<br>6900 Marche-en-Famenne           | Tel. +32 84 219-878<br>Fax +32 84 219-879<br>http://www.sew-eurodrive.be<br>service-IG@sew-eurodrive.be |

**Brazil**

|                                |           |                                                                                                                                                   |                                                                          |
|--------------------------------|-----------|---------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------|
| Production<br>Sales<br>Service | São Paulo | SEW-EURODRIVE Brasil Ltda.<br>Estrada Municipal José Rubim, 205 – Rodovia<br>Santos Dumont Km 49<br>Indaiatuba – 13347-510 – SP                   | Tel. +55 19 3835-8000<br>sew@sew.com.br                                  |
| Assembly<br>Sales<br>Service   | Rio Claro | SEW-EURODRIVE Brasil Ltda.<br>Rodovia Washington Luiz, Km 172<br>Condomínio Industrial Conpark<br>Caixa Postal: 327<br>13501-600 – Rio Claro / SP | Tel. +55 19 3522-3100<br>Fax +55 19 3524-6653<br>montadora.rc@sew.com.br |
|                                | Joinville | SEW-EURODRIVE Brasil Ltda.<br>Rua Dona Francisca, 12.346 – Pirabeiraba<br>89239-270 – Joinville / SC                                              | Tel. +55 47 3027-6886<br>Fax +55 47 3027-6888<br>filial.sc@sew.com.br    |

**Bulgaria**

|       |       |                                                     |                                                             |
|-------|-------|-----------------------------------------------------|-------------------------------------------------------------|
| Sales | Sofia | BEVER-DRIVE GmbH<br>Bogdanovetz Str.1<br>1606 Sofia | Tel. +359 2 9151160<br>Fax +359 2 9151166<br>bever@bever.bg |
|-------|-------|-----------------------------------------------------|-------------------------------------------------------------|

**Cameroon**

|       |        |                                                                                              |                                                                          |
|-------|--------|----------------------------------------------------------------------------------------------|--------------------------------------------------------------------------|
| Sales | Douala | SEW-EURODRIVE S.A.R.L.<br>Ancienne Route Bonabéri<br>P.O. Box<br>B.P 8674<br>Douala-Cameroun | Tel. +237 233 39 02 10<br>Fax +237 233 39 02 10<br>info@sew-eurodrive-cm |
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**Canada**

|                              |           |                                                                                                          |                                                                                                         |
|------------------------------|-----------|----------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------|
| Assembly<br>Sales<br>Service | Toronto   | SEW-EURODRIVE CO. OF CANADA LTD.<br>210 Walker Drive<br>Bramalea, ON L6T 3W1                             | Tel. +1 905 791-1553<br>Fax +1 905 791-2999<br>http://www.sew-eurodrive.ca<br>l.watson@sew-eurodrive.ca |
|                              | Vancouver | SEW-EURODRIVE CO. OF CANADA LTD.<br>Tilbury Industrial Park<br>7188 Honeyman Street<br>Delta, BC V4G 1G1 | Tel. +1 604 946-5535<br>Fax +1 604 946-2513<br>b.wake@sew-eurodrive.ca                                  |
|                              | Montreal  | SEW-EURODRIVE CO. OF CANADA LTD.<br>2555 Rue Leger<br>Lasalle, PQ H8N 2V9                                | Tel. +1 514 367-1124<br>Fax +1 514 367-3677<br>a.peluso@sew-eurodrive.ca                                |

| Chile                                      |                                               |                                                                                                                                                                           |                                                                                                                                                                                                      |
|--------------------------------------------|-----------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Assembly<br>Sales<br>Service               | Santiago de Chile                             | SEW-EURODRIVE CHILE LTDA<br>Las Encinas 1295<br>Parque Industrial Valle Grande<br>LAMP<br>Santiago de Chile<br>P.O. Box<br>Casilla 23 Correo Quilicura - Santiago - Chile | Tel. +56 2 2757 7000<br>Fax +56 2 2757 7001<br><a href="http://www.sew-eurodrive.cl">http://www.sew-eurodrive.cl</a><br><a href="mailto:ventas@sew-eurodrive.cl">ventas@sew-eurodrive.cl</a>         |
| China                                      |                                               |                                                                                                                                                                           |                                                                                                                                                                                                      |
| Production<br>Assembly<br>Sales<br>Service | Tianjin                                       | SEW-EURODRIVE (Tianjin) Co., Ltd.<br>No. 78, 13th Avenue, TEDA<br>Tianjin 300457                                                                                          | Tel. +86 22 25322612<br>Fax +86 22 25323273<br><a href="http://www.sew-eurodrive.cn">http://www.sew-eurodrive.cn</a><br><a href="mailto:info@sew-eurodrive.cn">info@sew-eurodrive.cn</a>             |
| Assembly<br>Sales<br>Service               | Suzhou                                        | SEW-EURODRIVE (Suzhou) Co., Ltd.<br>333, Suhong Middle Road<br>Suzhou Industrial Park<br>Jiangsu Province, 215021                                                         | Tel. +86 512 62581781<br>Fax +86 512 62581783<br><a href="mailto:suzhou@sew-eurodrive.cn">suzhou@sew-eurodrive.cn</a>                                                                                |
|                                            | Guangzhou                                     | SEW-EURODRIVE (Guangzhou) Co., Ltd.<br>No. 9, JunDa Road<br>East Section of GETDD<br>Guangzhou 510530                                                                     | Tel. +86 20 82267890<br>Fax +86 20 82267922<br><a href="mailto:guangzhou@sew-eurodrive.cn">guangzhou@sew-eurodrive.cn</a>                                                                            |
|                                            | Shenyang                                      | SEW-EURODRIVE (Shenyang) Co., Ltd.<br>10A-2, 6th Road<br>Shenyang Economic Technological Development Area<br>Shenyang, 110141                                             | Tel. +86 24 25382538<br>Fax +86 24 25382580<br><a href="mailto:shenyang@sew-eurodrive.cn">shenyang@sew-eurodrive.cn</a>                                                                              |
|                                            | Taiyuan                                       | SEW-EURODRIVE (Taiyuan) Co., Ltd.<br>No.3, HuaZhang Street,<br>TaiYuan Economic & Technical Development Zone<br>ShanXi, 030032                                            | Tel. +86-351-7117520<br>Fax +86-351-7117522<br><a href="mailto:taiyuan@sew-eurodrive.cn">taiyuan@sew-eurodrive.cn</a>                                                                                |
|                                            | Wuhan                                         | SEW-EURODRIVE (Wuhan) Co., Ltd.<br>10A-2, 6th Road<br>No. 59, the 4th Quanli Road, WEDA<br>430056 Wuhan                                                                   | Tel. +86 27 84478388<br>Fax +86 27 84478389<br><a href="mailto:wuhan@sew-eurodrive.cn">wuhan@sew-eurodrive.cn</a>                                                                                    |
|                                            | Xi'An                                         | SEW-EURODRIVE (Xi'An) Co., Ltd.<br>No. 12 Jinye 2nd Road<br>Xi'An High-Technology Industrial Development Zone<br>Xi'An 710065                                             | Tel. +86 29 68686262<br>Fax +86 29 68686311<br><a href="mailto:xian@sew-eurodrive.cn">xian@sew-eurodrive.cn</a>                                                                                      |
| Sales<br>Service                           | Hong Kong                                     | SEW-EURODRIVE LTD.<br>Unit No. 801-806, 8th Floor<br>Hong Leong Industrial Complex<br>No. 4, Wang Kwong Road<br>Kowloon, Hong Kong                                        | Tel. +852 36902200<br>Fax +852 36902211<br><a href="mailto:contact@sew-eurodrive.hk">contact@sew-eurodrive.hk</a>                                                                                    |
| Colombia                                   |                                               |                                                                                                                                                                           |                                                                                                                                                                                                      |
| Assembly<br>Sales<br>Service               | Bogota                                        | SEW-EURODRIVE COLOMBIA LTDA.<br>Calle 17 No. 132-18<br>Interior 2 Bodega 6, Manzana B<br>Santafé de Bogotá                                                                | Tel. +57 1 54750-50<br>Fax +57 1 54750-44<br><a href="http://www.sew-eurodrive.com.co">http://www.sew-eurodrive.com.co</a><br><a href="mailto:sew@sew-eurodrive.com.co">sew@sew-eurodrive.com.co</a> |
| Croatia                                    |                                               |                                                                                                                                                                           |                                                                                                                                                                                                      |
| Sales<br>Service                           | Zagreb                                        | KOMPEKS d. o. o.<br>Zeleni dol 10<br>10 000 Zagreb                                                                                                                        | Tel. +385 1 4613-158<br>Fax +385 1 4613-158<br><a href="mailto:kompeks@inet.hr">kompeks@inet.hr</a>                                                                                                  |
| Czech Republic                             |                                               |                                                                                                                                                                           |                                                                                                                                                                                                      |
| Assembly<br>Sales<br>Service               | Hostivice                                     | SEW-EURODRIVE CZ s.r.o.<br>Floriánova 2459<br>253 01 Hostivice                                                                                                            | Tel. +420 255 709 601<br>Fax +420 235 350 613<br><a href="http://www.sew-eurodrive.cz">http://www.sew-eurodrive.cz</a><br><a href="mailto:sew@sew-eurodrive.cz">sew@sew-eurodrive.cz</a>             |
|                                            | Drive Service<br>Hotline / 24<br>Hour Service | +420 800 739 739 (800 SEW SEW)                                                                                                                                            | Service<br>Tel. +420 255 709 632<br>Fax +420 235 358 218<br><a href="mailto:servis@sew-eurodrive.cz">servis@sew-eurodrive.cz</a>                                                                     |



|                   |                |                                                                                                   |                                                                                    |
|-------------------|----------------|---------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|
| Assembly Service  | Plzeň          | SEW-EURODRIVE CZ s.r.o.<br>Areal KRPA a.s.<br>Zahradní 173/2<br>326 00 Plzeň                      | Tel. +420 378 775 320<br>Fax +420 377 970 710<br>sew@sew-eurodrive.cz              |
| Technical Offices | Brno           | SEW-EURODRIVE CZ s.r.o.<br>Křenová 52<br>60200 Brno                                               | Tel. +420 543 254 174<br>Fax +420 543 256 845<br>ilona.cermakova@sew-eurodrive.cz  |
|                   | Hradec Králové | SEW-EURODRIVE CZ s.r.o.<br>Čechova 498<br>50202 Hradec Králové                                    | Tel. +420 495 510 141<br>Fax +420 495 521 313<br>miroslav.moravec@sew-eurodrive.cz |
|                   | Ostrava        | SEW-EURODRIVE CZ s.r.o.<br>Studentská 6202/17<br>708 00 Ostrava-Poruba                            | Tel. +420 597 329 044<br>david.kenkus@sew-eurodrive.cz                             |
|                   | Klatovy        | SEW-EURODRIVE CZ s.r.o.<br>Videňská 841<br>33901 Klatovy                                          | Tel. +420 376 331 634<br>Fax +420 376 331 634<br>viktor.kubernat@sew-eurodrive.cz  |
| Service           | Přerov         | SEW-EURODRIVE CZ s.r.o.<br>Areál STS Přerov a.s.<br>ul. 9. května 2452<br>750 02 Přerov I – Město | Tel. +420 581 224 374<br>Fax +420 581 224 374<br>servis@sew-eurodrive.cz           |

**Denmark**

|                        |            |                                                   |                                                                                                                                            |
|------------------------|------------|---------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------|
| Assembly Sales Service | Copenhagen | SEW-EURODRIVEA/S<br>Geminivej 28-30<br>2670 Greve | Tel. +45 43 95 8500<br>Fax +45 43 9585-09<br><a href="http://www.sew-eurodrive.dk">http://www.sew-eurodrive.dk</a><br>sew@sew-eurodrive.dk |
|------------------------|------------|---------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------|

**Egypt**

|               |       |                                                                                                                   |                                                                                                                                                        |
|---------------|-------|-------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------|
| Sales Service | Cairo | Copam Egypt<br>for Engineering & Agencies<br>Building 10, Block 13005, First Industrial Zone,<br>Obour City Cairo | Tel. +202 44812673 / 79 (7 lines)<br>Fax +202 44812685<br><a href="http://www.copam-egypt.com">http://www.copam-egypt.com</a><br>copam@copam-egypt.com |
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**Estonia**

|       |        |                                                                     |                                                                                                                                    |
|-------|--------|---------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------|
| Sales | Tallin | ALAS-KUUL AS<br>Reti tee 4<br>75301 Peetri küla, Rae vald, Harjumaa | Tel. +372 6593230<br>Fax +372 6593231<br><a href="http://www.alas-kuul.ee">http://www.alas-kuul.ee</a><br>veiko.soots@alas-kuul.ee |
|-------|--------|---------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------|

**Finland**

|                        |          |                                                                                     |                                                                                                                                      |
|------------------------|----------|-------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------|
| Assembly Sales Service | Hollola  | SEW-EURODRIVE OY<br>Vesimäentie 4<br>15860 Hollola                                  | Tel. +358 201 589-300<br>Fax +358 3 780-6211<br><a href="http://www.sew-eurodrive.fi">http://www.sew-eurodrive.fi</a><br>sew@sew.fi  |
| Service                | Hollola  | SEW-EURODRIVE OY<br>Keskikankaantie 21<br>15860 Hollola                             | Tel. +358 201 589-300<br>Fax +358 3 780-6211<br><a href="http://www.sew-eurodrive.fi">http://www.sew-eurodrive.fi</a><br>sew@sew.fi  |
| Production Assembly    | Karkkila | SEW Industrial Gears Oy<br>Santasalonkatu 6, PL 8<br>03620 Karkkila, 03601 Karkkila | Tel. +358 201 589-300<br>Fax +358 201 589-310<br><a href="http://www.sew-eurodrive.fi">http://www.sew-eurodrive.fi</a><br>sew@sew.fi |
| Technical Offices      | Helsinki | SEW-EURODRIVE OY<br>Luutnantintie 5<br>00410 Helsinki                               | Tel. +358 201 589-300<br>sew@sew.fi                                                                                                  |
|                        | Oulu     | SEW Industrial Gears Oy<br>Paulaharjuntie 22<br>90530 Oulu                          | Tel. +358 201 589 300<br>sew@sew.fi                                                                                                  |
|                        | Vaasa    | SEW Industrial Gears Oy<br>Asemakatu 7<br>65100 Vaasa                               | Tel. +358 201 589-300<br>sew@sew.fi                                                                                                  |
|                        | Kuopio   | SEW Industrial Gears Oy<br>Leväsentie 23<br>70780 Kuopio                            | Tel. +358 201 589-300<br>sew@sew.fi                                                                                                  |
|                        | Tampere  | SEW Industrial Gears Oy<br>Hermiankatu 3 A<br>33720 Tampere                         | Tel. +358 201 589-300<br>sew@sew.fi                                                                                                  |



|       |                                                        |                                     |
|-------|--------------------------------------------------------|-------------------------------------|
| Kotka | SEW Industrial Gears Oy<br>Heikinkatu 7<br>48100 Kotka | Tel. +358 201 589 300<br>sew@sew.fi |
|-------|--------------------------------------------------------|-------------------------------------|

**France**

|                                |                                        |                                                                                                        |                                                                                                                                   |
|--------------------------------|----------------------------------------|--------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------|
| Production<br>Sales<br>Service | Hagenau                                | SEW-USOCOME<br>48-54 route de Soufflenheim<br>B. P. 20185<br>67506 Haguenau Cedex                      | Tel. +33 3 88 73 67 00<br>Fax +33 3 88 73 66 00<br><a href="http://www.usocome.com">http://www.usocome.com</a><br>sew@usocome.com |
| Production                     | Forbach                                | SEW-USOCOME<br>Zone industrielle<br>Technopôle Forbach Sud<br>B. P. 30269<br>57604 Forbach Cedex       | Tel. +33 3 87 29 38 00                                                                                                            |
|                                | Brumath                                | SEW-USOCOME<br>1 Rue de Bruxelles<br>67670 Mommenheim Cedex                                            | Tel. +33 3 88 37 48 00                                                                                                            |
| Assembly<br>Sales<br>Service   | Bordeaux                               | SEW-USOCOME<br>Parc d'activités de Magellan<br>62 avenue de Magellan – B. P. 182<br>33607 Pessac Cedex | Tel. +33 5 57 26 39 00<br>Fax +33 5 57 26 39 09                                                                                   |
|                                | Lyon                                   | SEW-USOCOME<br>75 rue Antoine Condorcet<br>38090 Vaulx-Milieu                                          | Tel. +33 4 74 99 60 00<br>Fax +33 4 74 99 60 15                                                                                   |
|                                | Nantes                                 | SEW-USOCOME<br>Parc d'activités de la forêt<br>4 rue des Fontenelles<br>44140 Le Bignon                | Tel. +33 2 40 78 42 00<br>Fax +33 2 40 78 42 20                                                                                   |
|                                | Paris                                  | SEW-USOCOME<br>Zone industrielle<br>2 rue Denis Papin<br>77390 Verneuil l'Étang                        | Tel. +33 1 64 42 40 80<br>Fax +33 1 64 42 40 88                                                                                   |
| Technical Offices              | Alsace                                 | SEW-USOCOME                                                                                            | Tel. +33 3 89 74 51 62<br>Fax +33 3 89 76 58 71                                                                                   |
|                                | Aquitaine /<br>Charentes               | SEW-USOCOME                                                                                            | Tel. +33 5 57 26 39 08<br>Fax +33 5 57 26 39 09                                                                                   |
|                                | Auvergne /<br>Limousin                 | SEW-USOCOME                                                                                            | Tel. +33 5 55 20 12 10<br>Fax +33 5 55 20 12 11                                                                                   |
|                                | Lower Nor-<br>mandie                   | SEW-USOCOME                                                                                            | Tel. +33 2 31 37 92 86<br>Fax +33 2 31 74 68 15                                                                                   |
|                                | Brittany                               | SEW-USOCOME                                                                                            | Tel. +33 2 40 78 42 04<br>Fax +33 2 40 78 42 20                                                                                   |
|                                | Burgundy                               | SEW-USOCOME                                                                                            | Tel. +33 3 85 49 92 18<br>Fax +33 3 85 49 92 19                                                                                   |
|                                | Centre / Poitou                        | SEW-USOCOME                                                                                            | Tel. +33 2 40 78 42 11<br>Fax +33 2 40 78 42 20                                                                                   |
|                                | Champagne-<br>Ardenne                  | SEW-USOCOME                                                                                            | Tel. +33 3 25 79 63 24<br>Fax +33 3 25 79 63 25                                                                                   |
|                                | Franche-<br>Comté                      | SEW-USOCOME                                                                                            | Tel. +33 3 84 68 57 71<br>Fax +33 3 84 68 57 95                                                                                   |
|                                | Île-de-France<br>East / Aisne          | SEW-USOCOME                                                                                            | Tel. +33 3 23 62 81 24<br>Fax +33 3 23 62 81 44                                                                                   |
|                                | Île-de-France<br>North / Pi-<br>cardie | SEW-USOCOME                                                                                            | Tel. +33 1 41 05 92 74<br>Fax +33 1 41 05 92 75                                                                                   |
|                                | Île-de-France<br>South                 | SEW-USOCOME                                                                                            | Tel. +33 1 60 81 10 56<br>Fax +33 1 60 81 10 57                                                                                   |
|                                | Lorraine /<br>Alsace North             | SEW-USOCOME                                                                                            | Tel. +33 3 83 96 28 04<br>Fax +33 3 83 96 28 07                                                                                   |
|                                | Midi-<br>Pyrénées /<br>Roussillon      | SEW-USOCOME                                                                                            | Tel. +33 5 61 08 15 85<br>Fax +33 5 61 08 16 44                                                                                   |
|                                | Nord-Pas-de-<br>Calais                 | SEW-USOCOME                                                                                            | Tel. +33 3 21 10 86 86<br>Fax +33 3 21 10 86 87                                                                                   |

|                            |             |                                                 |
|----------------------------|-------------|-------------------------------------------------|
| Paris / Île-de-France West | SEW-USOCOME | Tel. +33 1 30 90 89 86<br>Fax +33 1 30 90 93 15 |
| Pays de la Loire           | SEW-USOCOME | Tel. +33 2 40 78 42 03<br>Fax +33 2 40 78 42 20 |
| Provence-Alpes-Côte d'Azur | SEW-USOCOME | Tel. +33 4 91 18 00 11<br>Fax +33 4 91 18 00 12 |
| Rhône-Alpes East           | SEW-USOCOME | Tel. +33 4 75 05 65 95<br>Fax +33 4 75 05 65 96 |
| Rhône-Alpes North          | SEW-USOCOME | Tel. +33 4 74 99 60 03<br>Fax +33 4 74 99 60 15 |
| Rhône-Alpes West           | SEW-USOCOME | Tel. +33 4 74 99 60 04<br>Fax +33 4 74 99 60 15 |

**Gabon**

|       |            |                                                                                         |                                                                                                                                                                                      |
|-------|------------|-----------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Sales | Libreville | SEW-EURODRIVE SARL<br>183, Rue 5.033.C, Lalala à droite<br>P.O. Box 15682<br>Libreville | Tel. +241 03 28 81 55<br>+241 06 54 81 33<br><a href="http://www.sew-eurodrive.cm">http://www.sew-eurodrive.cm</a><br><a href="mailto:sew@sew-eurodrive.cm">sew@sew-eurodrive.cm</a> |
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**Germany**

|                                     |                             |                                                                                                                                    |                                                                                                                                                                                       |
|-------------------------------------|-----------------------------|------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Headquarters<br>Production<br>Sales | Bruchsal                    | SEW-EURODRIVE GmbH & Co KG<br>Ernst-Blickle-Straße 42<br>76646 Bruchsal<br>P.O. Box<br>Postfach 3023 – D-76642 Bruchsal            | Tel. +49 7251 75-0<br>Fax +49 7251 75-1970<br><a href="http://www.sew-eurodrive.de">http://www.sew-eurodrive.de</a><br><a href="mailto:sew@sew-eurodrive.de">sew@sew-eurodrive.de</a> |
| Production / Industrial<br>Gears    | Bruchsal                    | SEW-EURODRIVE GmbH & Co KG<br>Christian-Pähr-Str. 10<br>76646 Bruchsal                                                             | Tel. +49 7251 75-0<br>Fax +49 7251 75-2970                                                                                                                                            |
| Production                          | Graben                      | SEW-EURODRIVE GmbH & Co KG<br>Ernst-Blickle-Straße 1<br>76676 Graben-Neudorf<br>P.O. Box<br>Postfach 1220 – D-76671 Graben-Neudorf | Tel. +49 7251 75-0<br>Fax +49 7251-2970                                                                                                                                               |
|                                     | Östringen                   | SEW-EURODRIVE GmbH & Co KG, Werk<br>Östringen<br>Franz-Gurk-Straße 2<br>76684 Östringen                                            | Tel. +49 7253 9254-0<br>Fax +49 7253 9254-90<br><a href="mailto:oestringen@sew-eurodrive.de">oestringen@sew-eurodrive.de</a>                                                          |
| Service Competence<br>Center        | Mechanics /<br>Mechatronics | SEW-EURODRIVE GmbH & Co KG<br>Ernst-Blickle-Straße 1<br>76676 Graben-Neudorf                                                       | Tel. +49 7251 75-1710<br>Fax +49 7251 75-1711<br><a href="mailto:scc-mechanik@sew-eurodrive.de">scc-mechanik@sew-eurodrive.de</a>                                                     |
|                                     | Electronics                 | SEW-EURODRIVE GmbH & Co KG<br>Ernst-Blickle-Straße 42<br>76646 Bruchsal                                                            | Tel. +49 7251 75-1780<br>Fax +49 7251 75-1769<br><a href="mailto:scc-elektronik@sew-eurodrive.de">scc-elektronik@sew-eurodrive.de</a>                                                 |
| Drive Technology<br>Center          | North                       | SEW-EURODRIVE GmbH & Co KG<br>Alte Ricklinger Straße 40-42<br>30823 Garbsen (Hannover)                                             | Tel. +49 5137 8798-30<br>Fax +49 5137 8798-55<br><a href="mailto:dtc-nord@sew-eurodrive.de">dtc-nord@sew-eurodrive.de</a>                                                             |
|                                     | East                        | SEW-EURODRIVE GmbH & Co KG<br>Dänkritzter Weg 1<br>08393 Meerane (Zwickau)                                                         | Tel. +49 3764 7606-0<br>Fax +49 3764 7606-30<br><a href="mailto:dtc-ost@sew-eurodrive.de">dtc-ost@sew-eurodrive.de</a>                                                                |
|                                     | South                       | SEW-EURODRIVE GmbH & Co KG<br>Domagkstraße 5<br>85551 Kirchheim (München)                                                          | Tel. +49 89 909552-10<br>Fax +49 89 909552-50<br><a href="mailto:dtc-sued@sew-eurodrive.de">dtc-sued@sew-eurodrive.de</a>                                                             |
|                                     | West                        | SEW-EURODRIVE GmbH & Co KG<br>Siemensstraße 1<br>40764 Langenfeld (Düsseldorf)                                                     | Tel. +49 2173 8507-30<br>Fax +49 2173 8507-55<br><a href="mailto:dtc-west@sew-eurodrive.de">dtc-west@sew-eurodrive.de</a>                                                             |
| Drive Center                        | Berlin                      | SEW-EURODRIVE GmbH & Co KG<br>Alexander-Meißner-Straße 44<br>12526 Berlin                                                          | Tel. +49 306331131-30<br>Fax +49 306331131-36<br><a href="mailto:dc-berlin@sew-eurodrive.de">dc-berlin@sew-eurodrive.de</a>                                                           |
|                                     | Ludwigshafen                | SEW-EURODRIVE GmbH & Co KG<br>c/o BASF SE<br>Gebäude W130 Raum 101<br>67056 Ludwigshafen                                           | Tel. +49 7251 75 3759<br>Fax +49 7251 75 503759<br><a href="mailto:dc-ludwigshafen@sew-eurodrive.de">dc-ludwigshafen@sew-eurodrive.de</a>                                             |
|                                     | Saarland                    | SEW-EURODRIVE GmbH & Co KG<br>Gottlieb-Daimler-Straße 4<br>66773 Schwalbach Saar – Hülzweiler                                      | Tel. +49 6831 48946 10<br>Fax +49 6831 48946 13<br><a href="mailto:dc-saarland@sew-eurodrive.de">dc-saarland@sew-eurodrive.de</a>                                                     |

**Germany**

|                                         |                    |                                                                                                                         |                                                                                 |
|-----------------------------------------|--------------------|-------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------|
|                                         | Ulm                | SEW-EURODRIVE GmbH & Co KG<br>Dieselstraße 18<br>89160 Dornstadt                                                        | Tel. +49 7348 9885-0<br>Fax +49 7348 9885-90<br>dc-ulm@sew-eurodrive.de         |
|                                         | Würzburg           | SEW-EURODRIVE GmbH & Co KG<br>Nürnbergerstraße 118<br>97076 Würzburg-Lengfeld                                           | Tel. +49 931 27886-60<br>Fax +49 931 27886-66<br>dc-wuerzburg@sew-eurodrive.de  |
| Drive Service Hotline / 24 Hour Service |                    |                                                                                                                         | 0 800 SEWHELP<br>0 800 7394357                                                  |
| Technical Offices                       | Augsburg           | SEW-EURODRIVE GmbH & Co KG<br>August-Wessels-Straße 27<br>86156 Augsburg                                                | Tel. +49 821 22779-10<br>Fax +49 821 22779-50<br>tb-augsburg@sew-eurodrive.de   |
|                                         | Lake Constance     | SEW-EURODRIVE GmbH & Co KG<br>Dornierstraße 4<br>88677 Markdorf                                                         | Tel. +49 7544 96590-90<br>Fax +49 7544 96590-99<br>tb-bodensee@sew-eurodrive.de |
|                                         | Bremen             | SEW-EURODRIVE GmbH & Co KG<br>Bornstr.19 ... 22<br>28195 Bremen                                                         | Tel. +49 421 33918-10<br>Fax +49 421 33918-22<br>tb-bremen@sew-eurodrive.de     |
|                                         | Dortmund           | SEW-EURODRIVE GmbH & Co KG<br>Hildastraße 8<br>44145 Dortmund                                                           | Tel. +49 231 229028-10<br>Fax +49 231 229028-20<br>tb-dortmund@sew-eurodrive.de |
|                                         | Dresden            | SEW-EURODRIVE GmbH & Co KG<br>Hauptstraße 32<br>01445 Radebeul                                                          | Tel. +49 351 26338-0<br>Fax +49 351 26338-38<br>tb-dresden@sew-eurodrive.de     |
|                                         | Erfurt             | SEW-EURODRIVE GmbH & Co KG<br>Dubliner Straße 12<br>99091 Erfurt                                                        | Tel. +49 361 21709-70<br>Fax +49 361 21709-79<br>tb-erfurt@sew-eurodrive.de     |
|                                         | Güstrow            | SEW-EURODRIVE GmbH & Co KG<br>Glasewitzer Chaussee 33 B<br>18273 Güstrow<br>P.O. Box<br>Postfach 1216 – D-18262 Güstrow | Tel. +49 3843 8557-80<br>Fax +49 3843 8557-88<br>tb-guestrow@sew-eurodrive.de   |
|                                         | Hamburg            | SEW-EURODRIVE GmbH & Co KG<br>Bramfelder Straße 119<br>22305 Hamburg                                                    | Tel. +49 40 298109-60<br>Fax +49 40 298109-70<br>tb-hamburg@sew-eurodrive.de    |
|                                         | Hannover / Garbsen | SEW-EURODRIVE GmbH & Co KG<br>Alte Ricklinger Str.40-42<br>30823 Garbsen                                                | Tel. +49 5137 8798-10<br>Fax +49 5137 8798-50<br>tb-hannover@sew-eurodrive.de   |
|                                         | Heilbronn          | SEW-EURODRIVE GmbH & Co KG<br>Zeppelinstraße 7<br>74357 Bönningheim                                                     | Tel. +49 7143 8738-0<br>Fax +49 7143 8738-25<br>tb-heilbronn@sew-eurodrive.de   |
|                                         | Herford            | SEW-EURODRIVE GmbH & Co KG<br>Goebenstraße 3 – 7<br>32052 Herford                                                       | Tel. +49 5221 9141-0<br>Fax +49 5221 9141-20<br>tb-herford@sew-eurodrive.de     |
|                                         | Karlsruhe          | SEW-EURODRIVE GmbH & Co KG<br>Ettlinger Weg 2<br>76467 Bietigheim<br>P.O. Box<br>Postfach 43 – D-76463 Bietigheim       | Tel. +49 7245 9190-10<br>Fax +49 7245 9190-20<br>tb-karlsruhe@sew-eurodrive.de  |
|                                         | Kassel             | SEW-EURODRIVE GmbH & Co KG<br>Sonnenweg 3<br>34260 Kaufungen                                                            | Tel. +49 561 95144-80<br>Fax +49 561 95144-90<br>tb-kassel@sew-eurodrive.de     |
|                                         | Koblenz            | SEW-EURODRIVE GmbH & Co KG<br>Bahnstraße 17a<br>56743 Mendig                                                            | Tel. +49 2652 9713-30<br>Fax +49 2652 9713-40<br>tb-koblenz@sew-eurodrive.de    |
|                                         | Lahr               | SEW-EURODRIVE GmbH & Co KG<br>Europastraße 3/1<br>77933 Lahr / Schwarzwald                                              | Tel. +49 7821 90999-60<br>Fax +49 7821 90999-79<br>tb-lahr@sew-eurodrive.de     |
|                                         | Langenfeld         | SEW-EURODRIVE GmbH & Co KG<br>Siemensstraße 1<br>40764 Langenfeld                                                       | Tel. +49 2173 8507-10<br>Fax +49 2173 8507-50<br>tb-langenfeld@sew-eurodrive.de |
|                                         | Magdeburg          | SEW-EURODRIVE GmbH & Co KG<br>Breiteweg 53<br>39179 Barleben                                                            | Tel. +49 39203 7577-1<br>Fax +49 39203 7577-9<br>tb-magdeburg@sew-eurodrive.de  |

|                      |                                                                                         |                                                                                 |
|----------------------|-----------------------------------------------------------------------------------------|---------------------------------------------------------------------------------|
| Mannheim             | SEW-EURODRIVE GmbH & Co KG<br>Besselstraße 26<br>68219 Mannheim                         | Tel. +49 621 71683-10<br>Fax +49 621 71683-22<br>tb-mannheim@sew-eurodrive.de   |
| München              | SEW-EURODRIVE GmbH & Co KG<br>Domagkstraße 5<br>85551 Kirchheim                         | Tel. +49 89 90955-110<br>Fax +49 89 90955-150<br>tb-muenchen@sew-eurodrive.de   |
| Münster              | SEW-EURODRIVE GmbH & Co KG<br>Hafenplatz 4<br>48155 Münster                             | Tel. +49 251 41475-11<br>Fax +49 251 41475-50<br>tb-muenster@sew-eurodrive.de   |
| Nuremberg            | SEW-EURODRIVE GmbH & Co KG<br>Lina-Ammon-Straße 22<br>90471 Nürnberg                    | Tel. +49 911 98884-50<br>Fax +49 911 98884-60<br>tb-nuernberg@sew-eurodrive.de  |
| Regensburg           | SEW-EURODRIVE GmbH & Co KG<br>Im Gewerbepark A15<br>93059 Regensburg                    | Tel. +49 941 46668-68<br>Fax +49 941 46668-66<br>tb-regensburg@sew-eurodrive.de |
| Rhine-Main           | SEW-EURODRIVE GmbH & Co KG<br>Niederstedter Weg 5<br>61348 Bad Homburg                  | Tel. +49 6172 9617-0<br>Fax +49 6172 9617-50<br>tb-rheinmain@sew-eurodrive.de   |
| Stuttgart            | SEW-EURODRIVE GmbH & Co KG<br>Friedrich-List-Straße 46<br>70771 Leinfelden-Echterdingen | Tel. +49 711 16072-0<br>Fax +49 711 16072-72<br>tb-stuttgart@sew-eurodrive.de   |
| Zwickau /<br>Meerane | SEW-EURODRIVE GmbH & Co KG<br>Dankritzer Weg1<br>08393 Meerane                          | Tel. +49 3764 7606-0<br>Fax +49 3764 7606-20<br>tb-zwickau@sew-eurodrive.de     |

**Great Britain**

|                              |                                         |                                                                                                              |                                                                                                                                                          |
|------------------------------|-----------------------------------------|--------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------|
| Assembly<br>Sales<br>Service | Normanton                               | SEW-EURODRIVE Ltd.<br>DeVilliers Way<br>Trident Park<br>Normanton<br>West Yorkshire<br>WF6 1GX               | Tel. +44 1924 893-855<br>Fax +44 1924 893-702<br><a href="http://www.sew-eurodrive.co.uk">http://www.sew-eurodrive.co.uk</a><br>info@sew-eurodrive.co.uk |
|                              | Drive Service Hotline / 24 Hour Service |                                                                                                              | Tel. 01924 896911                                                                                                                                        |
| Service Competence<br>Center | Southern Eng-<br>land                   | SEW-EURODRIVE Ltd.<br>Unit 41<br>Easter Park<br>Benyon Road<br>Silchester<br>Reading<br>Berkshire<br>RG7 2PQ | Tel. +44 1189 701-699<br>Fax +44 1189 701-021                                                                                                            |
| Technical Offices            | Midlands                                | SEW-EURODRIVE Ltd.<br>5 Sugar Brook court<br>Aston Road<br>Bromsgrove<br>Worcs.<br>B60 3EX                   | Tel. +44 1527 877-319<br>Fax +44 1527 575-245                                                                                                            |
|                              | Scotland                                | SEW-EURODRIVE Ltd.<br>No 37 Enterprise House<br>Springkerse Business Park<br>Stirling<br>FK7 7UF             | Tel. +44 17 8647-8730<br>Fax +44 17 8645-0223                                                                                                            |
|                              | Northern Ire-<br>land                   | Heyn Engineering (NI) Ltd.<br>1 Corry Place,<br>Belfast,<br>BT3 9AH                                          | Tel. +44 02890350022<br>Fax +44 02890350012<br><a href="http://www.heyne.co.uk">http://www.heyne.co.uk</a><br>info@heyne.co.uk                           |

**Greece**

|                  |              |                                                                                            |                                                                                                                              |
|------------------|--------------|--------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------|
| Sales            | Athens       | Christ. Boznos & Son S.A.<br>12, K. Mavromichali Street<br>P.O. Box 80136<br>18545 Piraeus | Tel. +30 2 1042 251-34<br>Fax +30 2 1042 251-59<br><a href="http://www.boznos.gr">http://www.boznos.gr</a><br>info@boznos.gr |
| Technical Office | Thessaloniki | Christ. Boznos & Son S.A.<br>Asklipiou 26<br>562 24 Evosmos, Thessaloniki                  | Tel. +30 2 310 7054-00<br>Fax +30 2 310 7055-15<br>info@boznos.gr                                                            |

| Hungary                                           |            |                                                                                                                                                                                        |                                                                                                                                                                                                                                |
|---------------------------------------------------|------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Sales Service                                     | Budapest   | SEW-EURODRIVE Kft.<br>Csillaghegyi út 13.<br>1037 Budapest                                                                                                                             | Tel. +36 1 437 06-58<br>Fax +36 1 437 06-50<br><a href="http://www.sew-eurodrive.hu">http://www.sew-eurodrive.hu</a><br><a href="mailto:office@sew-eurodrive.hu">office@sew-eurodrive.hu</a>                                   |
| Iceland                                           |            |                                                                                                                                                                                        |                                                                                                                                                                                                                                |
| Sales                                             | Reykjavik  | Varma & Vélaverk ehf.<br>Knarrarvogi 4<br>104 Reykjavik                                                                                                                                | Tel. +354 585 1070<br>Fax +354 585)1071<br><a href="http://www.varmaverk.is">http://www.varmaverk.is</a><br><a href="mailto:vov@vov.is">vov@vov.is</a>                                                                         |
| India                                             |            |                                                                                                                                                                                        |                                                                                                                                                                                                                                |
| Registered Office<br>Assembly<br>Sales<br>Service | Vadodara   | SEW-EURODRIVE India Private Limited<br>Plot No. 4, GIDC<br>POR Ramangamdi • Vadodara - 391 243<br>Gujarat                                                                              | Tel. +91 265 3045200<br>Fax +91 265 3045300<br><a href="http://www.seweurodriveindia.com">http://www.seweurodriveindia.com</a><br><a href="mailto:salesvadodara@seweurodriveindia.com">salesvadodara@seweurodriveindia.com</a> |
| Assembly<br>Sales<br>Service                      | Chennai    | SEW-EURODRIVE India Private Limited<br>Plot No. K3/1, Sipcot Industrial Park Phase II<br>Mambakkam Village<br>Sriperumbudur - 602105<br>Kancheepuram Dist, Tamil Nadu                  | Tel. +91 44 37188888<br>Fax +91 44 37188811<br><a href="mailto:saleschennai@seweurodriveindia.com">saleschennai@seweurodriveindia.com</a>                                                                                      |
|                                                   | Pune       | SEW-EURODRIVE India Private Limited<br>Plant: Plot No. D236/1,<br>Chakan Industrial Area Phase- II,<br>Warale, Tal- Khed,<br>Pune-410501, Maharashtra                                  | Tel. +91 21 35 628700<br>Fax +91 21 35 628715<br><a href="mailto:salespune@seweurodriveindia.com">salespune@seweurodriveindia.com</a>                                                                                          |
| Technical Offices                                 | Ahmedabad  | SEW-EURODRIVE India Private Limited<br>306, Shaan office complex, Behind Sakar-IV,<br>Ellisebridge, Ashram Road<br>Ahmedabad – 380006, Gujarat                                         | Tel. +91 79 40072067 / 68<br>Fax +91 79 40072069<br><a href="mailto:salesahmedabad@seweurodriveindia.com">salesahmedabad@seweurodriveindia.com</a>                                                                             |
|                                                   | Aurangabad | SEW-EURODRIVE India Private Limited<br>Flat.No.403 , Prism Appt.<br>The Venus Housing Society.<br>Beed Bypass Road, Behind Nishant Park<br>Hotel,<br>Aurangabad – 431003, Maharashtra. | Tel. +91 86000 12333<br><a href="mailto:salesaurangabad@seweurodriveindia.com">salesaurangabad@seweurodriveindia.com</a>                                                                                                       |
|                                                   | Bangalore  | SEW-EURODRIVE India Private Limited<br>Sy.no:41-P3, Peenya1, Phase 1A, Peenya Vil-<br>lage,<br>Yeswanthapura Hobli, Bangalore North Taluk,<br>Bangalore - 560058, Karnataka            | Tel. +91 80 28370664<br>Fax +91 80 28370665<br><a href="mailto:salesbangalore@seweurodriveindia.com">salesbangalore@seweurodriveindia.com</a>                                                                                  |
|                                                   | Bangalore  | SEW-EURODRIVE India Private Limited<br># C-104, 3rd Block, KSSIDC Complex,<br>Electronic City.<br>Bangalore – 560100, Karnataka                                                        | Tel. +91 80 28522662 / 28522663<br><a href="mailto:salesbangalore@seweurodriveindia.com">salesbangalore@seweurodriveindia.com</a>                                                                                              |
|                                                   | Bangladesh | SEW-EURODRIVE India Private Limited<br>Genetic Udayanchal, House-96 (6th Floor),<br>Road-23/A, Block-B, Banani,<br>Dhaka-1213, Bangladesh                                              | Tel. +88 01729 097309<br><a href="mailto:salesdhaka@seweurodrivebangladesh.com">salesdhaka@seweurodrivebangladesh.com</a>                                                                                                      |
|                                                   | Bellary    | SEW-EURODRIVE India Private Limited<br>Door no-56/279 Ward No-15,<br>Sindhigi compound,<br>Near Raghavendra talkies,<br>Bellary-583101, Karnataka                                      | Tel. +91 77609 88668<br><a href="mailto:salesbellary@seweurodriveindia.com">salesbellary@seweurodriveindia.com</a>                                                                                                             |
|                                                   | Chandigarh | SEW-EURODRIVE India Private Limited<br>#699, Type -3, Power Colony,<br>Chandigarh - Rupnagar Highway<br>Rupnagar - 140001, Punjab                                                      | Tel. +91 81462 67606<br><a href="mailto:saleschandigarh@seweurodriveindia.com">saleschandigarh@seweurodriveindia.com</a>                                                                                                       |
|                                                   | Chennai    | SEW-EURODRIVE India Private Limited<br>2nd Floor, Josmans Complex,<br>No. 5, McNichols Road, Chetpet<br>Chennai - 600031, Tamil Nadu                                                   | Tel. +91 44 42849812 / 13 / 14 / 15<br>Fax +91 44 42849816<br><a href="mailto:saleschennai@seweurodriveindia.com">saleschennai@seweurodriveindia.com</a>                                                                       |
|                                                   | Kochi      | SEW-EURODRIVE India Private Limited<br>House No: 30/1168 A<br>Kaniyampuzha Road<br>Vyttila Post Office<br>Cochin – 682019, Kerala                                                      | Tel. +91 98951 30375<br><a href="mailto:salescochin@seweurodriveindia.com">salescochin@seweurodriveindia.com</a>                                                                                                               |

|             |                                                                                                                                                                         |                                                                                      |
|-------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|
| Coimbatore  | SEW-EURODRIVE India Private Limited<br>687/2, Sri Sakthivel Towers (Near Deepam Hospital)<br>Trichy Road, Ramanathapuram<br>Coimbatore - 641 045, Tamil Nadu            | Tel. +91 422 2322420<br>Fax +91 422 2323988<br>salescoimbatore@seweurodriveindia.com |
| Cuttack     | SEW-EURODRIVE India Private Limited<br>Plot No.: F/56, Chandaka Industrial Estate,<br>P.O.- K I I T,<br>Bhubaneswar – 751024. Orissa                                    | Tel. +91 9937446333<br>salescuttack@seweurodriveindia.com                            |
| Faridabad   | SEW-EURODRIVE India Private Limited<br>H.No.: -1172 ,Sector-9 ,<br>Near St Anthony School<br>Faridabad 121006                                                           | Tel. +91 99580 09275<br>salesfaridabad@seweurodriveindia.com                         |
| Gandhidham  | SEW-EURODRIVE India Private Limited<br>TCX-S-28, FF, Ward 12/A,<br>Gandhidham - 370201, Kutch - Gujarat                                                                 | Tel. +91 81282 36850<br>salesgandhidham@seweurodriveindia.com                        |
| Gandhinagar | SEW-EURODRIVE India Private Limited<br>Office No. 304, Siddhraj Zavod,<br>Between Kh-0 & G-0 Circle,<br>Sarkhej Gandhinagar Highway, Sargasan,<br>Gandhinagar – 382423  | Tel. +91 787 8601656<br>salesgandhinagar@seweurodriveindia.com                       |
| Gurgaon     | SEW-EURODRIVE India Private Limited<br>136, Hope Appartment, Sec. 15, Part – II,<br>Jharsa Road, Near Reliance Fresh,<br>Gurgaon-122001, Haryana                        | Tel. +91 99588 78855<br>salesgurgaon@seweurodriveindia.com                           |
| Hyderabad   | SEW-EURODRIVE India Private Limited<br>408, 4th Floor, Meridian Place<br>Green Park Road, Amerpet<br>Hyderabad - 500016, Telangana                                      | Tel. +91 40 23414698<br>Fax +91 40 23413884<br>saleshyderabad@seweurodriveindia.com  |
| Indore      | SEW-EURODRIVE India Private Limited<br>103, Abhishek Avenue, Slide-4,<br>Sch. No. 78,<br>Indore - 452010, Madhya Pradesh                                                | Tel. +91 97524 12068<br>salesindore@seweurodriveindia.com                            |
| Jamshedpur  | SEW-EURODRIVE India Private Limited<br>Flat No :- S1 "Kashi Kunj",h. No. 60,<br>New Rani Kudar Road No - 3, P.O. + P.S. -<br>Kadma<br>Jamshedpur - 831005, Jharkhand    | Tel. +91 99341 23671<br>salesjamshedpur@seweurodriveindia.com                        |
| Kolhapur    | SEW-EURODRIVE India Private Limited<br>C/O. Mr.S.V.Pawar.461/37, Abhideep Resid-<br>ency,<br>Opp-Shriram Petrol Pump, Kasaba Bawada,<br>Kolhapur - 416 122, Maharashtra | Tel. +91 86000 20846<br>saleskolhapur@seweurodriveindia.com                          |
| Kolkata     | SEW-EURODRIVE India Private Limited<br>2nd floor, Room No. 35 Chowringhee Court<br>55, Chowringhee Road<br>Kolkata - 700 071, West Bengal                               | Tel. +91 33 22827457<br>Fax +91 33 22894204<br>saleskolkata@seweurodriveindia.com    |
| Lucknow     | SEW-EURODRIVE India Private Limited<br>69, Shiv Vihar Colony<br>Vikas Nagar – Sector 5<br>Lucknow - 226022, Uttar Pradesh                                               | Tel. +91 97936 27333<br>saleslucknow@seweurodriveindia.com                           |
| Mumbai      | SEW-EURODRIVE India Private Limited<br>312 A, 3rd Floor, Acme Plaza, J.B. Nagar,<br>Andheri Kurla Road, Andheri (E)<br>Mumbai - 400059, Maharashtra                     | Tel. +91 22 28348440<br>Fax +91 22 28217858<br>salesmumbai@seweurodriveindia.com     |
| Nagpur      | SEW-EURODRIVE India Private Limited<br>Plot No 49,<br>New Kailash Nager, Samta colony,<br>Nagpur-440027, Maharashtra                                                    | Tel. +91 95610 89525<br>salesnagpur@seweurodriveindia.com                            |
| Nashik      | SEW-EURODRIVE India Private Limited<br>107, "YOG" Bungalow,<br>Mahatma Nagar, Trimbak Road,<br>Nashik – 422 007, Maharashtra                                            | Tel. +91 96657 52978<br>salesnashik@seweurodriveindia.com                            |
| New Delhi   | SEW-EURODRIVE India Private Limited<br># B-206<br>DLF Towers-B<br>District Centre Jasola<br>New Delhi -110044                                                           | Tel. +91 11 26944551<br>Fax +91 11 26944467<br>salesdelhi@seweurodriveindia.com      |



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|-----------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Navi Mumbai     | SEW-EURODRIVE India Private Limited<br>No.202, Shivam Yeshoram<br>Plot No. 262/257, Sector 19<br>Kopar Khairane,<br>Navi Mumbai - 400 709, Maharashtra                                                   | Tel. +91 99677 21324<br>salesmumbai@seweurodriveindia.com                           |
| Pondicherry     | SEW-EURODRIVE India Private Limited<br>Plot No 1, Flat No S2,<br>Shubhamangala Apartment,<br>14th Cross Extension, Krishna Nagar,<br>Pondicherry 605008                                                  | Tel. +91 9840971370<br>salespondicherry@seweurodriveindia.com                       |
| Pune            | SEW-EURODRIVE India Private Limited<br>Plot No. 7, "Shri Shantadurga Niwas"<br>Shivaji Co-operative Housing Society Ltd.,<br>Behind J.W. Marriot. Off Senapati Bapat Marg.<br>Pune -411 016, Maharashtra | Tel. +91 20 25635466 / 467<br>salespune@seweurodriveindia.com                       |
| Pune            | SEW-EURODRIVE India Private Limited<br>Jai Tulajabhavani Complex.<br>Office No:- 15 First Floor,<br>Opp. Century Enka Company,<br>MIDC Bhosari, Pune 411 026                                             | Tel. +91 20-65118890 / 91<br>Fax +91 20 25380721<br>salespune@seweurodriveindia.com |
| Raipur          | SEW-EURODRIVE India Private Limited<br>A-42, Ashoka Millenium Complex,<br>Ring Road-1,<br>Raipur 492 001 - Chhattisgarh                                                                                  | Tel. +91 771 4090765<br>Fax +91 771 4090765<br>salesraipur@seweurodriveindia.com    |
| Ranchi          | SEW-EURODRIVE India Private Limited<br>1D- Shail Madhuri Apartment,<br>Near Kokar Pool, H.B Road, Kokar<br>Ranchi - 834001, Jharkhand.                                                                   | Tel. +91 82946 30772<br>salesranchi@seweurodriveindia.com                           |
| Tiruchirappalli | SEW-EURODRIVE India Private Limited<br>Plot No.24, Door No.64A<br>Rajaram Salai,<br>K.K Nagar<br>Trichy-620 021, Tamilnadu                                                                               | Tel. +91 97899 79855<br>salestrichy@seweurodriveindia.com                           |
| Vadodara        | SEW-EURODRIVE India Private Limited<br>Unit No. 301, Savorite Bldg,<br>Plot No. 143, Vinayak Society, off old Padra<br>Road,<br>Vadodara - 390 007, Gujarat                                              | Tel. +91 265 2325258 / 6560482<br>salesvadodara@seweurodriveindia.com               |
| Vizag           | SEW-EURODRIVE India Private Limited<br>D.No.7-13-50/1,<br>Near Padmaja hospital, Ramalayam street,<br>Chittinaidu colony, Old gajuwaka,<br>Visakhapatnam - 530026, Andhra Pradesh                        | Tel. +91 99895 01748<br>salesvizag@seweurodriveindia.com                            |

**Indonesia**

|       |          |                                                                                                                                                        |                                                                                                                                                                   |
|-------|----------|--------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Sales | Medan    | PT. Serumpun Indah Lestari<br>Jl.Pulau Solor no. 8, Kawasan Industri Medan II<br>Medan 20252                                                           | Tel. +62 61 687 1221<br>Fax +62 61 6871429 / +62 61 6871458 / +62 61 30008041<br>sil@serumpunindah.com<br>serumpunindah@yahoo.com<br>http://www.serumpunindah.com |
|       | Jakarta  | PT. Cahaya Sukses Abadi<br>Komplek Rukan Puri Mutiara Blok A no 99,<br>Sunter<br>Jakarta 14350                                                         | Tel. +62 21 65310599<br>Fax +62 21 65310600<br>csajkt@cbn.net.id                                                                                                  |
|       | Jakarta  | PT. Agrindo Putra Lestari<br>Jl.Pantai Indah Selatan, Komplek Sentra Industri Terpadu, Pantai indah Kapuk Tahap III,<br>Blok E No. 27<br>Jakarta 14470 | Tel. +62 21 2921-8899<br>Fax +62 21 2921-8988<br>aplindo@indosat.net.id<br>http://www.aplindo.com                                                                 |
|       | Surabaya | PT. TRIAGRI JAYA ABADI<br>Jl. Sukosemolo No. 63, Galaxi Bumi Permai<br>G6 No. 11<br>Surabaya 60111                                                     | Tel. +62 31 5990128<br>Fax +62 31 5962666<br>sales@triagri.co.id<br>http://www.triagri.co.id                                                                      |
|       | Surabaya | CV. Multi Mas<br>Jl. Raden Saleh 43A Kav. 18<br>Surabaya 60174                                                                                         | Tel. +62 31 5458589<br>Fax +62 31 5317220<br>sianhwa@sby.centrin.net.id<br>http://www.cvmultimas.com                                                              |

| Ireland                |          |                                                                                                                            |                                                                                                                                                                                                                                                                                                |
|------------------------|----------|----------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Sales Service          | Dublin   | Alpert Engineering Ltd.<br>48 Moyle Road<br>Dublin Industrial Estate<br>Glasnevin, Dublin 11                               | Tel. +353 1 830-6277<br>Fax +353 1 830-6458<br><a href="http://www.alperton.ie">http://www.alperton.ie</a><br><a href="mailto:info@alperton.ie">info@alperton.ie</a>                                                                                                                           |
| Israel                 |          |                                                                                                                            |                                                                                                                                                                                                                                                                                                |
| Sales                  | Tel Aviv | Liraz Handasa Ltd.<br>Ahofer Str 34B / 228<br>58858 Holon                                                                  | Tel. +972 3 5599511<br>Fax +972 3 5599512<br><a href="http://www.liraz-handasa.co.il">http://www.liraz-handasa.co.il</a><br><a href="mailto:office@liraz-handasa.co.il">office@liraz-handasa.co.il</a>                                                                                         |
| Italy                  |          |                                                                                                                            |                                                                                                                                                                                                                                                                                                |
| Assembly Sales Service | Milan    | SEW-EURODRIVE di R. Blickle & Co.s.a.s.<br>Via Bernini,14<br>20020 Solaro (Milano)                                         | Tel. +39 02 96 980229<br>Fax +39 02 96 980 999<br><a href="http://www.sew-eurodrive.it">http://www.sew-eurodrive.it</a><br><a href="mailto:milano@sew-eurodrive.it">milano@sew-eurodrive.it</a>                                                                                                |
| Drive Center           | Bologna  | SEW-EURODRIVE di R. Blickle & Co.s.a.s.<br>Via della Grafica, 47<br>40064 Ozzano dell'Emilia (Bo)                          | Tel. +39 051 65-23-801<br>Fax +39 02 96 980 499<br><a href="mailto:bologna@sew-eurodrive.it">bologna@sew-eurodrive.it</a>                                                                                                                                                                      |
|                        | Caserta  | SEW-EURODRIVE di R. Blickle & Co.s.a.s.<br>Viale Carlo III Km. 23,300<br>81020 S. Nicola la Strada (Caserta)               | Tel. +39 0823 219011<br>Fax +39 02 96 980 599<br><a href="mailto:caserta@sew-eurodrive.it">caserta@sew-eurodrive.it</a>                                                                                                                                                                        |
|                        | Pescara  | SEW-EURODRIVE di R. Blickle & Co.s.a.s.<br>Viale Europa,132<br>65010 Villa Raspa di Spoltore (PE)                          | Tel. +39 085 41-59-427<br>Fax +39 02 96 980 699<br><a href="mailto:pescara@sew-eurodrive.it">pescara@sew-eurodrive.it</a>                                                                                                                                                                      |
|                        | Turin    | SEW-EURODRIVE di R. Blickle & Co.s.a.s.<br>Filiale Torino<br>c.so Unione Sovietica 612/15 - int. C<br>10135 Torino         | Tel. +39 011 3473780<br>Fax +39 02 96 980 799<br><a href="mailto:torino@sew-eurodrive.it">torino@sew-eurodrive.it</a>                                                                                                                                                                          |
|                        | Verona   | SEW-EURODRIVE di R. Blickle & Co.s.a.s.<br>Via Antonio Meucci, 5<br>37042 - Caldiero ( VR )                                | Tel. +39 045 89-239-11<br>Fax +39 02 96 980 814<br><a href="mailto:verona@sew-eurodrive.it">verona@sew-eurodrive.it</a>                                                                                                                                                                        |
| Ivory Coast            |          |                                                                                                                            |                                                                                                                                                                                                                                                                                                |
| Sales                  | Abidjan  | SEW-EURODRIVE SARL<br>Ivory Coast<br>Rue des Pêcheurs, Zone 3<br>26 BP 916 Abidjan 26                                      | Tel. +225 21 21 81 05<br>Fax +225 21 25 30 47<br><a href="mailto:info@sew-eurodrive.ci">info@sew-eurodrive.ci</a><br><a href="http://www.sew-eurodrive.ci">http://www.sew-eurodrive.ci</a>                                                                                                     |
| Japan                  |          |                                                                                                                            |                                                                                                                                                                                                                                                                                                |
| Assembly Sales Service | Iwata    | SEW-EURODRIVE JAPAN CO., LTD<br>250-1, Shimoman-no,<br>Iwata<br>Shizuoka 438-0818                                          | Tel. +81 538 373811<br>Fax +81 538 373814<br><a href="http://www.sew-eurodrive.co.jp">http://www.sew-eurodrive.co.jp</a><br><a href="mailto:sewjapan@sew-eurodrive.co.jp">sewjapan@sew-eurodrive.co.jp</a><br><a href="mailto:hamamatsu@sew-eurodrive.co.jp">hamamatsu@sew-eurodrive.co.jp</a> |
| Technical Offices      | Fukuoka  | SEW-EURODRIVE JAPAN CO., LTD<br>C-go, 5th-floor, Yakuin-Hiruzu-Bldg.<br>1-5-11, Yakuin, Chuo-ku<br>Fukuoka, 810-0022       | Tel. +81 92 713-6955<br>Fax +81 92 713-6860<br><a href="mailto:fukuoka@sew-eurodrive.co.jp">fukuoka@sew-eurodrive.co.jp</a>                                                                                                                                                                    |
|                        | Kyoto    | SEW-EURODRIVE JAPAN CO., LTD<br>Kyoto Operation Center<br>9-1-11 Seikadai, Seika-cho, Souraku-gun,<br>Kyoto 619-0238       | Tel. +81 774 98-2750<br>Fax +81 774 93-2100<br><a href="mailto:sewjapan@sew-eurodrive.co.jp">sewjapan@sew-eurodrive.co.jp</a>                                                                                                                                                                  |
|                        | Osaka    | SEW-EURODRIVE JAPAN CO., LTD<br>Higobashi Shimizu Bldg. 10th floor<br>1-3-7 Tosabori, Nishi-ku<br>Osaka, 550-0001          | Tel. +81 6 6444--8330<br>Fax +81 6 6444--8338<br><a href="mailto:osaka@sew-eurodrive.co.jp">osaka@sew-eurodrive.co.jp</a>                                                                                                                                                                      |
|                        | Tokio    | SEW-EURODRIVE JAPAN CO., LTD<br>Renai Partire Shiodome 5th floor<br>2-18-3 Higashi-Shinbashi, Minato-Ku,<br>Tokyo 105-0021 | Tel. +81 3 3239-0469<br>Fax +81 3 3239-0943<br><a href="mailto:tokyo@sew-eurodrive.co.jp">tokyo@sew-eurodrive.co.jp</a>                                                                                                                                                                        |
| Kazakhstan             |          |                                                                                                                            |                                                                                                                                                                                                                                                                                                |
| Sales                  | Almaty   | SEW-EURODRIVE LLP<br>291-291A, Tole bi street<br>050031, Almaty                                                            | Tel. +7 (727) 350 5156<br>Fax +7 (727) 350 5156<br><a href="http://www.sew-eurodrive.kz">http://www.sew-eurodrive.kz</a><br><a href="mailto:sew@sew-eurodrive.kz">sew@sew-eurodrive.kz</a>                                                                                                     |



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|--------------------------------------------------------|--------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                                        | Tashkent     | SEW-EURODRIVE LLP<br>Representative office in Uzbekistan<br>96A, Sharaf Rashidov street,<br>Tashkent, 100084                                        | Tel. +998 71 2359411<br>Fax +998 71 2359412<br><a href="http://www.sew-eurodrive.uz">http://www.sew-eurodrive.uz</a><br><a href="mailto:sew@sew-eurodrive.uz">sew@sew-eurodrive.uz</a> |
|                                                        | Ulaanbaatar  | IM Trading LLC<br>Naryn zam street 62<br>Sukhbaatar district,<br>Ulaanbaatar 14230                                                                  | Tel. +976-77109997<br>Fax +976-77109997<br><a href="mailto:imt@imt.mn">imt@imt.mn</a>                                                                                                  |
| Technical Offices                                      | Karagandy    | SEW-EURODRIVE LLP<br>82, Molokov Street<br>100004, Karagandy                                                                                        | Tel. +7 (7212) 955 956<br>Fax +7 (7212) 955 956<br><a href="mailto:karagandy@sew-eurodrive.kz">karagandy@sew-eurodrive.kz</a>                                                          |
|                                                        | Oskemen      | SEW-EURODRIVE LLP<br>181/3, Abai avenue,<br>070005, Oskemen                                                                                         | Tel. +7 (7212) 913 748<br>Fax +7 (7212) 913 748<br><a href="mailto:oskemen@sew-eurodrive.kz">oskemen@sew-eurodrive.kz</a>                                                              |
| <b>Kenya</b>                                           |              |                                                                                                                                                     |                                                                                                                                                                                        |
| Sales                                                  | Nairobi      | SEW-EURODRIVE Pty Ltd<br>Transnational Plaza, 5th Floor<br>Mama Ngina Street<br>P.O. Box 8998-00100<br>Nairobi                                      | Tel. +254 791 398840<br><a href="http://www.sew-eurodrive.co.tz">http://www.sew-eurodrive.co.tz</a><br><a href="mailto:info@sew.co.tz">info@sew.co.tz</a>                              |
| <b>Latvia</b>                                          |              |                                                                                                                                                     |                                                                                                                                                                                        |
| Sales                                                  | Riga         | SIA Alas-Kuul<br>Katlakalna 11C<br>1073 Riga                                                                                                        | Tel. +371 6 7139253<br>Fax +371 6 7139386<br><a href="http://www.alas-kuul.lv">http://www.alas-kuul.lv</a><br><a href="mailto:info@alas-kuul.com">info@alas-kuul.com</a>               |
| <b>Lebanon</b>                                         |              |                                                                                                                                                     |                                                                                                                                                                                        |
| Sales (Lebanon)                                        | Beirut       | Gabriel Acar & Fils sarl<br>B. P. 80484<br>Bourj Hammoud, Beirut                                                                                    | Tel. +961 1 510 532<br>Fax +961 1 494 971<br><a href="mailto:ssacar@inco.com.lb">ssacar@inco.com.lb</a>                                                                                |
| Sales (Jordan, Kuwait , Beirut<br>Saudi Arabia, Syria) |              | Middle East Drives S.A.L. (offshore)<br>Sin El Fil.<br>B. P. 55-378<br>Beirut                                                                       | Tel. +961 1 494 786<br>Fax +961 1 494 971<br><a href="http://www.medrives.com">http://www.medrives.com</a><br><a href="mailto:info@medrives.com">info@medrives.com</a>                 |
| <b>Lithuania</b>                                       |              |                                                                                                                                                     |                                                                                                                                                                                        |
| Sales                                                  | Alytus       | UAB Irseva<br>Statybininku 106C<br>63431 Alytus                                                                                                     | Tel. +370 315 79204<br>Fax +370 315 56175<br><a href="http://www.irseva.lt">http://www.irseva.lt</a><br><a href="mailto:irmantas@irseva.lt">irmantas@irseva.lt</a>                     |
| <b>Luxembourg</b>                                      |              |                                                                                                                                                     |                                                                                                                                                                                        |
| representation: Belgium                                |              |                                                                                                                                                     |                                                                                                                                                                                        |
| <b>Macedonia</b>                                       |              |                                                                                                                                                     |                                                                                                                                                                                        |
| Sales                                                  | Skopje       | Boznos DOOEL<br>Dime Anicin 2A/7A<br>1000 Skopje                                                                                                    | Tel. +389 23256553<br>Fax +389 23256554<br><a href="http://www.boznos.mk">http://www.boznos.mk</a>                                                                                     |
| <b>Malaysia</b>                                        |              |                                                                                                                                                     |                                                                                                                                                                                        |
| Assembly<br>Sales<br>Service                           | Johor        | SEW-EURODRIVE SDN BHD<br>No. 95, Jalan Seroja 39, Taman Johor Jaya<br>81000 Johor Bahru, Johor<br>West Malaysia                                     | Tel. +60 7 3549409<br>Fax +60 7 3541404<br><a href="mailto:sales@sew-eurodrive.com.my">sales@sew-eurodrive.com.my</a>                                                                  |
| Technical Offices                                      | Kuala Lumpur | SEW-EURODRIVE SDN BHD<br>No. 2, Jalan Anggerik Mokara 31/46<br>Kota Kemuning Seksyen 31<br>40460 Shah Alam<br>Selangor Darul Ehsan<br>West Malaysia | Tel. +60 3 51229633<br>Fax +60 3 51229622<br><a href="mailto:sewsa@sew-eurodrive.com.my">sewsa@sew-eurodrive.com.my</a>                                                                |
|                                                        | Penang       | SEW-EURODRIVE SDN BHD<br>No. 38, Jalan Bawal<br>Kimsar Garden<br>13700 Prai, Penang<br>West Malaysia                                                | Tel. +60 4 3999349<br>Fax +60 4 3999348<br><a href="mailto:sewpg@sew-eurodrive.com.my">sewpg@sew-eurodrive.com.my</a>                                                                  |

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|---------------|-----------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------|
| Kuching       | SEW-EURODRIVE SDN BHD<br>No. 69, Lot 10899<br>1st Floor, Jalan Tun Jugah<br>93350 Kuching<br>Sarawak<br>East Malaysia | Tel. +60 82 572780<br>Fax +60 82 571780<br>sewswk@sew-eurodrive.com.my |
| Kota Kinabalu | SEW-EURODRIVE SDN BHD<br>East Malaysia                                                                                | Tel. +60 19 7539395<br>sales@sew-eurodrive.com.my                      |
| Ipoh          | SEW-EURODRIVE SDN BHD<br>West Malaysia                                                                                | Tel. +60 19 7177366<br>sewsa@sew-eurodrive.com.my                      |

**Mexiko**

|                              |           |                                                                                                                                                |                                                                                                                                                                |
|------------------------------|-----------|------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Assembly<br>Sales<br>Service | Quéretaro | SEW-EURODRIVE MEXICO S.A. de C.V.<br>SEM-981118-M93<br>Tequisquiapan No. 102<br>Parque Industrial Quéretaro<br>C.P. 76220<br>Querétaro, México | Tel. +52 442 1030-300<br>Fax +52 442 1030-301<br><a href="http://www.sew-eurodrive.com.mx">http://www.sew-eurodrive.com.mx</a><br>scmexico@seweurodrive.com.mx |
| Sales<br>Service             | Puebla    | SEW-EURODRIVE MEXICO S.A. de C.V.<br>Calzada Zavaleta No. 3922 Piso 2 Local 6<br>Col. Santa Cruz Buenavista<br>C.P. 72154<br>Puebla, México    | Tel. +52 (222) 221 248<br><a href="http://www.sew-eurodrive.com.mx">http://www.sew-eurodrive.com.mx</a><br>scmexico@seweurodrive.com.mx                        |

**Mongolia**

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|------------------|-------------|---------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------|
| Technical Office | Ulaanbaatar | IM Trading LLC<br>Naryn zam street 62<br>Union building, Suite A-403-1<br>Sukhbaatar district,<br>Ulaanbaatar 14230 | Tel. +976-77109997<br>Tel. +976-99070395<br>Fax +976-77109997<br><a href="http://imt.mn/">http://imt.mn/</a><br>imt@imt.mn |
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**Morocco**

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| Sales<br>Service | Bouskoura | SEW-EURODRIVE Morocco<br>Parc Industriel CFCIM, Lot 55 and 59<br>Bouskoura | Tel. +212 522 88 85 00<br>Fax +212 522 88 84 50<br><a href="http://www.sew-eurodrive.ma">http://www.sew-eurodrive.ma</a><br>sew@sew-eurodrive.ma |
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**Namibia**

|       |            |                                                                                                      |                                                                      |
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| Sales | Swakopmund | DB Mining & Industrial Services<br>Einstein Street<br>Strauss Industrial Park<br>Unit1<br>Swakopmund | Tel. +264 64 462 738<br>Fax +264 64 462 734<br>anton@dbminingnam.com |
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**Netherlands**

|                              |           |                                                                                                   |                                                                                                                                                                        |
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| Assembly<br>Sales<br>Service | Rotterdam | SEW-EURODRIVE B.V.<br>Industrieweg 175<br>3044 AS Rotterdam<br>Postbus 10085<br>3004 AB Rotterdam | Tel. +31 10 4463-700<br>Fax +31 10 4155-552<br>Service: 0800-SEWHELP<br><a href="http://www.sew-eurodrive.nl">http://www.sew-eurodrive.nl</a><br>info@sew-eurodrive.nl |
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**New Zealand**

|                              |                  |                                                                                                  |                                                                                                                                                     |
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| Assembly<br>Sales<br>Service | Auckland         | SEW-EURODRIVE NEW ZEALAND LTD.<br>P.O. Box 58-428<br>82 Greenmount drive<br>East Tamaki Auckland | Tel. +64 9 2745627<br>Fax +64 9 2740165<br><a href="http://www.sew-eurodrive.co.nz">http://www.sew-eurodrive.co.nz</a><br>sales@sew-eurodrive.co.nz |
|                              | Christchurch     | SEW-EURODRIVE NEW ZEALAND LTD.<br>30 Lodestar Avenue, Wigram<br>Christchurch                     | Tel. +64 3 384-6251<br>Fax +64 3 384-6455<br>sales@sew-eurodrive.co.nz                                                                              |
| Technical Office             | Palmerston North | SEW-EURODRIVE NEW ZEALAND LTD.<br>C/-Grant Shearman, RD 5, Aronui Road<br>Palmerston North       | Tel. +64 6 355-2165<br>Fax +64 6 355-2316<br>sales@sew-eurodrive.co.nz                                                                              |

**Nigeria**

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| Sales | Lagos | Greenpeg Nig. Ltd<br>Plot 296A, Adeyemo Akapo Str. Omole GRA<br>Ikeja Lagos-Nigeria | Tel. +234-701-821-9200-1<br><a href="http://www.greenpeg ltd.com">http://www.greenpeg ltd.com</a><br>bolaji.adekunle@greenpeg ltd.com |
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| Norway                       |                     |                                                                                                                                              |                                                                                                                                                                                                            |
|------------------------------|---------------------|----------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Assembly<br>Sales<br>Service | Moss                | SEW-EURODRIVE A/S<br>Solgaard skog 71<br>1599 Moss                                                                                           | Tel. +47 69 24 10 20<br>Fax +47 69 24 10 40<br><a href="http://www.sew-eurodrive.no">http://www.sew-eurodrive.no</a><br><a href="mailto:sew@sew-eurodrive.no">sew@sew-eurodrive.no</a>                     |
| Pakistan                     |                     |                                                                                                                                              |                                                                                                                                                                                                            |
| Sales                        | Karachi             | Industrial Power Drives<br>Al-Fatah Chamber A/3, 1st Floor Central Commercial Area,<br>Sultan Ahmed Shah Road, Block 7/8,<br>Karachi         | Tel. +92 21 452 9369<br>Fax +92-21-454 7365<br><a href="mailto:seweurodrive@cyber.net.pk">seweurodrive@cyber.net.pk</a>                                                                                    |
| Paraguay                     |                     |                                                                                                                                              |                                                                                                                                                                                                            |
| Sales                        | Fernando de la Mora | SEW-EURODRIVE PARAGUAY S.R.L<br>De la Victoria 112, Esquina nueva Asunción<br>Departamento Central<br>Fernando de la Mora, Barrio Bernardino | Tel. +595 991 519695<br>Fax +595 21 3285539<br><a href="mailto:sewpy@sew-eurodrive.com.py">sewpy@sew-eurodrive.com.py</a>                                                                                  |
| Peru                         |                     |                                                                                                                                              |                                                                                                                                                                                                            |
| Assembly<br>Sales<br>Service | Lima                | SEW EURODRIVE DEL PERU S.A.C.<br>Los Calderos, 120-124<br>Urbanizacion Industrial Vulcano, ATE, Lima                                         | Tel. +51 1 3495280<br>Fax +51 1 3493002<br><a href="http://www.sew-eurodrive.com.pe">http://www.sew-eurodrive.com.pe</a><br><a href="mailto:sewperu@sew-eurodrive.com.pe">sewperu@sew-eurodrive.com.pe</a> |
| Philippines                  |                     |                                                                                                                                              |                                                                                                                                                                                                            |
| Sales                        | Makati              | P.T. Cerna Corporation<br>4137 Ponte St., Brgy. Sta. Cruz<br>Makati City 1205                                                                | Tel. +63 2 519 6214<br>Fax +63 2 890 2802<br><a href="mailto:mech_drive_sys@ptcerna.com">mech_drive_sys@ptcerna.com</a><br><a href="http://www.ptcerna.com">http://www.ptcerna.com</a>                     |
| Poland                       |                     |                                                                                                                                              |                                                                                                                                                                                                            |
| Assembly<br>Sales<br>Service | Łódź                | SEW-EURODRIVE Polska Sp.z.o.o.<br>ul. Techniczna 5<br>92-518 Łódź                                                                            | Tel. +48 42 293 00 00<br>Fax +48 42 293 00 49<br><a href="http://www.sew-eurodrive.pl">http://www.sew-eurodrive.pl</a><br><a href="mailto:sew@sew-eurodrive.pl">sew@sew-eurodrive.pl</a>                   |
|                              | Service             | Tel. +48 42 293 0030<br>Fax +48 42 293 0043                                                                                                  | 24 Hour Service<br>Tel. +48 602 739 739 (+48 602 SEW SEW)<br><a href="mailto:serwis@sew-eurodrive.pl">serwis@sew-eurodrive.pl</a>                                                                          |
| Technical Offices            | Tychy               | SEW-EURODRIVE Polska Sp.z.o.o.<br>ul. Strzelecka 66<br>43-109 Tychy                                                                          | Tel. +48 32 32 32 610<br>Fax +48 32 32 32 648                                                                                                                                                              |
|                              | Bydgoszcz           | SEW-EURODRIVE Polska Sp.z.o.o.<br>ul. Fordońska 246<br>85-766 Bydgoszcz                                                                      | Tel. +48 52 567 30 00<br>Fax +48 52 567 30 09                                                                                                                                                              |
|                              | Gdansk              | SEW-EURODRIVE Polska Sp.z.o.o.<br>ul. Galaktyczna 30A<br>80-299 Gdańsk                                                                       | Tel. +48 58 762 70 00<br>Fax +48 58 762 70 09                                                                                                                                                              |
|                              | Posen               | SEW-EURODRIVE Polska Sp.z.o.o.<br>ul. Wschodnia 7B<br>62-080 Swadzim k. Poznania                                                             | Tel. +48 61 6465500<br>Fax +48 61 6465519                                                                                                                                                                  |
|                              | Radom               | SEW-EURODRIVE Polska Sp.z.o.o.<br>ul. Słowackiego 84<br>26-600 Radom                                                                         | Tel. +48 48 679 47 00<br>Fax +48 48 679 47 09                                                                                                                                                              |
|                              | Rzeszów             | SEW-EURODRIVE Polska Sp.z.o.o.<br>ul. Armii Krajowej 80<br>35-307 Rzeszów                                                                    | Tel. +48 17 784 27 00<br>Fax +48 17 784 27 09                                                                                                                                                              |
| Portugal                     |                     |                                                                                                                                              |                                                                                                                                                                                                            |
| Assembly<br>Sales<br>Service | Coimbra             | SEW-EURODRIVE, LDA.<br>Av. da Fonte Nova, n.º 86<br>3050-379 Mealhada                                                                        | Tel. +351 231 20 9670<br>Fax +351 231 20 3685<br><a href="http://www.sew-eurodrive.pt">http://www.sew-eurodrive.pt</a><br><a href="mailto:infosew@sew-eurodrive.pt">infosew@sew-eurodrive.pt</a>           |
| Service Competence Center    | Lisbon              | SEW-EURODRIVE, LDA.<br>Núcleo Empresarial I de São Julião do Tojal<br>Rua de Entremuros, 54<br>Fracção I<br>2660-533 São Julião do Tojal     | Tel. +351 21 958-0198 / +351 939 598 717<br>Fax +351 21 958-0245<br><a href="mailto:esc.lisboa@sew-eurodrive.pt">esc.lisboa@sew-eurodrive.pt</a>                                                           |

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|------------------|-------|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------|
| Technical Office | Porto | SEW-EURODRIVE, LDA.<br>Rua Monte da Bela, N.º 191, Fração X<br>4445-294 Ermesinde | Tel. +351 229 350 383 / +351 932 559 110<br>Fax +351 229 350 384<br>esc.porto@sew-eurodrive.pt |
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**Romania**

|               |           |                                                                |                                                                 |
|---------------|-----------|----------------------------------------------------------------|-----------------------------------------------------------------|
| Sales Service | Bucharest | Sialco Trading SRL<br>str. Brazilia nr. 36<br>011783 Bucuresti | Tel. +40 21 230-1328<br>Fax +40 21 230-7170<br>sialco@sialco.ro |
|---------------|-----------|----------------------------------------------------------------|-----------------------------------------------------------------|

**Russia**

|                        |                |                                                           |                                                                                                                                                             |
|------------------------|----------------|-----------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Assembly Sales Service | St. Petersburg | ЗАО «СЕВ-ЕВРОДРАЙФ»<br>а. я. 36<br>195220 Санкт-Петербург | Tel. +7 812 3332522 / +7 812 5357142<br>Fax +7 812 3332523<br><a href="http://www.sew-eurodrive.ru">http://www.sew-eurodrive.ru</a><br>sew@sew-eurodrive.ru |
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| Technical Offices | Ekaterinburg | ЗАО «СЕВ-ЕВРОДРАЙФ»<br>Kominterna Str. 16<br>Office 614<br>620078 Ekaterinburg              | Tel. +7 343 310 3977<br>Fax +7 343 310 3978<br>eso@sew-eurodrive.ru |
|                   | Irkutsk      | ЗАО «СЕВ-ЕВРОДРАЙФ»<br>5-Armii Str., 31<br>664011 Irkutsk                                   | Tel. +7 3952 25 5880<br>Fax +7 3952 25 5881<br>iso@sew-eurodrive.ru |
|                   | Moscow       | ЗАО «СЕВ-ЕВРОДРАЙФ»<br>Malaja Semjonovskaja Str.<br>д. 9, корпус 2<br>107023 Moskau         | Tel. +7 495 9337090<br>Fax +7 495 9337094<br>mso@sew-eurodrive.ru   |
|                   | Novosibirsk  | ЗАО «СЕВ-ЕВРОДРАЙФ»<br>pr. K Marksa 30<br>630087 Novosibirsk                                | Tel. +7 383 3350200<br>Fax +7 383 3462544<br>nso@sew-eurodrive.ru   |
|                   | Perm         | ЗАО «СЕВ-ЕВРОДРАЙФ»<br>Stakhanovskaya str., 45 Office 512<br>614066 Perm                    | Tel. +7 342 2219494<br>Fax +7 342 2219444<br>pso@sew-eurodrive.ru   |
|                   | Togliatti    | ЗАО «СЕВ-ЕВРОДРАЙФ»<br>Sportivnaya Str. 4B, office 2<br>Samarskaya obl.<br>445057 Togliatti | Tel. +7 8482 710529<br>Fax +7 8482 810590<br>tso@sew-eurodrive.ru   |

**Sambia**

representation: South Africa

**Senegal**

|       |       |                                                                               |                                                                                                                                        |
|-------|-------|-------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------|
| Sales | Dakar | SENEMECA<br>Mécanique Générale<br>Km 8, Route de Rufisque<br>B.P. 3251, Dakar | Tel. +221 338 494 770<br>Fax +221 338 494 771<br><a href="http://www.senemeca.com">http://www.senemeca.com</a><br>senemeca@senemeca.sn |
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**Serbia**

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| Sales | Belgrade | DIPAR d.o.o.<br>Ustanicka 128a<br>PC Košum, IV floor<br>11000 Beograd | Tel. +381 11 347 3244 / +381 11 288 0393<br>Fax +381 11 347 1337<br>office@dipar.rs |
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**Singapore**

|                        |           |                                                                                               |                                                                                                                                                          |
|------------------------|-----------|-----------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------|
| Assembly Sales Service | Singapore | SEW-EURODRIVE PTE. LTD.<br>No 9, Tuas Drive 2<br>Jurong Industrial Estate<br>Singapore 638644 | Tel. +65 68621701<br>Fax +65 68612827<br><a href="http://www.sew-eurodrive.com.sg">http://www.sew-eurodrive.com.sg</a><br>sewsingapore@sew-eurodrive.com |
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**Slovakia**

|       |            |                                                                |                                                                                                                                                          |
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| Sales | Bratislava | SEW-Eurodrive SK s.r.o.<br>Rybničná 40<br>831 06 Bratislava    | Tel. +421 2 33595 202, 217, 201<br>Fax +421 2 33595 200<br><a href="http://www.sew-eurodrive.sk">http://www.sew-eurodrive.sk</a><br>sew@sew-eurodrive.sk |
|       | Košice     | SEW-Eurodrive SK s.r.o.<br>Slovenská ulica 26<br>040 01 Košice | Tel. +421 55 671 2245<br>Fax +421 55 671 2254<br>Mobile +421 907 671 976<br>sew@sew-eurodrive.sk                                                         |

| Slovenia                     |                |                                                                                                                                                                           |                                                                                                                                                        |
|------------------------------|----------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------|
| Sales<br>Service             | Celje          | Pakman - Pogonska Tehnika d.o.o.<br>Ul. XIV. divizije 14<br>3000 Celje                                                                                                    | Tel. +386 3 490 83-20<br>Fax +386 3 490 83-21<br>pakman@siol.net                                                                                       |
| South Africa                 |                |                                                                                                                                                                           |                                                                                                                                                        |
| Assembly<br>Sales<br>Service | Johannesburg   | SEW-EURODRIVE (PROPRIETARY) LIMITED<br>Eurodrive House<br>Cnr. Adcock Ingram and Aerodrome Roads<br>Aeroton Ext. 2<br>Johannesburg 2013<br>P.O.Box 90004<br>Bertsham 2013 | Tel. +27 11 248-7000<br>Fax +27 11 248-7289<br><a href="http://www.sew.co.za">http://www.sew.co.za</a><br>info@sew.co.za                               |
|                              | Cape Town      | SEW-EURODRIVE (PROPRIETARY) LIMITED<br>Rainbow Park<br>Cnr. Racecourse & Omuramba Road<br>Montague Gardens<br>Cape Town<br>P.O.Box 36556<br>Chempet 7442                  | Tel. +27 21 552-9820<br>Fax +27 21 552-9830<br>Telex 576 062<br>bgriffiths@sew.co.za                                                                   |
|                              | Durban         | SEW-EURODRIVE (PROPRIETARY) LIMITED<br>48 Prospecton Road<br>Isipingo<br>Durban<br>P.O. Box 10433, Ashwood 3605                                                           | Tel. +27 31 902 3815<br>Fax +27 31 902 3826<br>cdejager@sew.co.za                                                                                      |
|                              | Nelspruit      | SEW-EURODRIVE (PROPRIETARY) LIMITED<br>7 Christie Crescent<br>Vintonia<br>P.O.Box 1942<br>Nelspruit 1200                                                                  | Tel. +27 13 752-8007<br>Fax +27 13 752-8008<br>robermeyer@sew.co.za                                                                                    |
| Technical Office             | Port Elizabeth | SEW-EURODRIVE (PROPRIETARY) LIMITED<br>8 Ruan Access Park<br>Old Cape Road<br>Greenbushes<br>6000 Port Elizabeth                                                          | Tel. +27 41 3722246<br>Fax +27 41 3722247<br><a href="http://www.sew.co.za">http://www.sew.co.za</a><br>fsieberhagen@sew-co-za                         |
| South Korea                  |                |                                                                                                                                                                           |                                                                                                                                                        |
| Assembly<br>Sales<br>Service | Ansan          | SEW-EURODRIVE KOREA CO., LTD.<br>7, Dangjaengi-ro,<br>Danwon-gu,<br>Ansan-si, Gyeonggi-do, Zip 425-839                                                                    | Tel. +82 31 492-8051<br>Fax +82 31 492-8056<br><a href="http://www.sew-eurodrive.kr">http://www.sew-eurodrive.kr</a><br>master.korea@sew-eurodrive.com |
|                              | Busan          | SEW-EURODRIVE KOREA CO., LTD.<br>28, Noksansandan 262-ro 50beon-gil,<br>Gangseo-gu,<br>Busan, Zip 618-820                                                                 | Tel. +82 51 832-0204<br>Fax +82 51 832-0230                                                                                                            |
| Technical Offices            | Daegu          | SEW-EURODRIVE KOREA CO., LTD.<br>No.303 Sungan officetel, 1834,<br>Dalgubeol-daero, Dalseo-gu,<br>Daegu, Zip 704-712                                                      | Tel. +82 53 650-7111<br>Fax +82 53 650-7112                                                                                                            |
|                              | Daejeon        | SEW-EURODRIVE KOREA CO., LTD.<br>No.302 Hongin officetel, 28, Daehak-ro,<br>Yuseong-gu,<br>Daejeon, Zip 305-710                                                           | Tel. +82 42 828-6461<br>Fax +82 42 828-6463                                                                                                            |
|                              | Gwangju        | SEW-EURODRIVE KOREA CO., LTD.<br>5fl., Hyundai B/D B, 40,<br>Bungmun-daero, Buk-gu,<br>Gwangju, Zip 500-855                                                               | Tel. +82 62 511-9172<br>Fax +82 62 511-9174                                                                                                            |
|                              | Seoul          | SEW-EURODRIVE KOREA CO., LTD.<br>No.1804 Ace Hiend Tower 8th, 84,<br>Gasam digital 1-ro, Geumcheon-gu,<br>Seoul, Zip 153-797                                              | Tel. +82 2 862-8051<br>Fax +82 2 862-8199                                                                                                              |
| Spain                        |                |                                                                                                                                                                           |                                                                                                                                                        |
| Assembly<br>Sales<br>Service | Bilbao         | SEW-EURODRIVE ESPAÑA, S.L.<br>Parque Tecnológico, Edificio, 302<br>48170 Zamudio (Vizcaya)                                                                                | Tel. +34 94 43184-70<br>Fax +34 94 43184-71<br><a href="http://www.sew-eurodrive.es">http://www.sew-eurodrive.es</a><br>sew.spain@sew-eurodrive.es     |

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| Technical Offices            | Barcelona                                        | SEW-EURODRIVE ESPAÑA, S.L.<br>Avda. Francesc Macià, 60 – Planta 16, porta 1<br>Eix Macià – “Torre Milenium”<br>08208 Sabadell (Barcelona) | Tel. +34 93 7162200<br>Fax +34 93 7233007                                                                                                |
|                              | Madrid                                           | SEW-EURODRIVE ESPAÑA, S.L.<br>Gran Via. 48-2° A-D<br>28220 Majadahonda (Madrid)                                                           | Tel. +34 91 6342250<br>Fax +34 91 6340899                                                                                                |
|                              | Seville                                          | MEB<br>Pol. Ind. Calonge, C/ Metalurgia N°-71.<br>41007 Sevilla                                                                           | Tel. +34 954 356 361<br>Fax +34 954 356 274<br>mebsa.sevilla@mebsa.com                                                                   |
|                              | Valencia                                         | MEB<br>Músico Andreu i Piqueres, 4<br>46.900 Torrente (Valencia)                                                                          | Tel. +34 961 565 493<br>Fax +34 961 566 688<br>mebsa.valencia@mebsa.com                                                                  |
| <b>Sri Lanka</b>             |                                                  |                                                                                                                                           |                                                                                                                                          |
| Sales                        | Colombo                                          | SM International (Pte) Ltd<br>254, Galle Raod<br>Colombo 4, Sri Lanka                                                                     | Tel. +94 1 2584887<br>Fax +94 1 2582981                                                                                                  |
| <b>Swaziland</b>             |                                                  |                                                                                                                                           |                                                                                                                                          |
| Sales                        | Manzini                                          | C G Trading Co. (Pty) Ltd<br>PO Box 2960<br>Manzini M200                                                                                  | Tel. +268 2 518 6343<br>Fax +268 2 518 5033<br>engineering@cgtrading.co.sz                                                               |
| <b>Sweden</b>                |                                                  |                                                                                                                                           |                                                                                                                                          |
| Assembly<br>Sales<br>Service | Jönköping                                        | SEW-EURODRIVE AB<br>Gnejsvägen 6-8<br>553 03 Jönköping<br>Box 3100 S-550 03 Jönköping                                                     | Tel. +46 36 34 42 00<br>Fax +46 36 34 42 80<br><a href="http://www.sew-eurodrive.se">http://www.sew-eurodrive.se</a><br>jonkoping@sew.se |
| Sales                        | Gothemburg                                       | SEW-EURODRIVE AB<br>Gustaf Werners gata 8<br>421 32 Västra Frölunda                                                                       | Tel. +46 31 709 68 80<br>Fax +46 31 709 68 93<br>goteborg@sew.se                                                                         |
|                              | Stockholm                                        | SEW-EURODRIVE AB<br>Björkholmsvägen 10<br>141 46 Huddinge                                                                                 | Tel. +46 8 449 86 80<br>Fax +46 8 449 86 93<br>stockholm@sew.se                                                                          |
|                              | Malmö                                            | SEW-EURODRIVE AB<br>Borrgatan 5<br>211 24 Malmö                                                                                           | Tel. +46 40 680 64 80<br>Fax +46 40 680 64 93<br>malmo@sew.se                                                                            |
|                              | Skellefteå                                       | SEW-EURODRIVE AB<br>Trädgårdsgatan 8<br>931 31 Skellefteå                                                                                 | Tel. +46 910 71 53 80<br>Fax +46 910 71 53 93<br>skelleftea@sew.se                                                                       |
| <b>Switzerland</b>           |                                                  |                                                                                                                                           |                                                                                                                                          |
| Assembly<br>Sales<br>Service | Basel                                            | Alfred Imhof A.G.<br>Jurastrasse 10<br>4142 Münchenstein bei Basel                                                                        | Tel. +41 61 417 1717<br>Fax +41 61 417 1700<br><a href="http://www.imhof-sew.ch">http://www.imhof-sew.ch</a><br>info@imhof-sew.ch        |
| Technical Offices            | Rhaetian<br>Switzerland                          | Patrice Salvi<br>Rue des Ormes 10<br>2300 La Chaux-de-Fonds                                                                               | Tel. +41 61 417 17 81<br>Fax +41 61 417 17 00                                                                                            |
|                              | Bern / Solo-<br>thurn                            | Rudolf Bühler<br>Muntersweg 5<br>2540 Grenchen                                                                                            | Tel. +41 32 652 2339<br>Fax +41 32 652 2331                                                                                              |
|                              | Central<br>Switzerland,<br>Aargau                | Armin Pfister<br>Stierenweid<br>4950 Huttwil, BE                                                                                          | Tel. +41 62 962 54 55<br>Fax +41 62 962 54 56                                                                                            |
|                              | Zürich, Ticino                                   | Gian-Michele Muletta<br>Fischerstrasse 61<br>8132 Egg bei Zürich                                                                          | Tel. +41 44 994 81 15<br>Fax +41 44 994 81 16                                                                                            |
|                              | Lake Con-<br>stance and<br>East Switzer-<br>land | Markus Künzle<br>Eichweg 4<br>9403 Goldach                                                                                                | Tel. +41 71 845 2808<br>Fax +41 71 845 2809                                                                                              |

| Taiwan                       |               |                                                                                                                                               |                                                                                                                    |
|------------------------------|---------------|-----------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------|
| Sales                        | Taipei        | Ting Shou Trading Co., Ltd.<br>6F-3, No. 267, Sec. 2<br>Tung Huw S. Road<br>Taipei                                                            | Tel. +886 2 27383535<br>Fax +886 2 27368268<br>Telex 27 245<br>sewtwn@ms63.hinet.net<br>http://www.tingshou.com.tw |
|                              | Nan Tou       | Ting Shou Trading Co., Ltd.<br>No. 55 Kung Yeh N. Road<br>Industrial District<br>Nan Tou 540                                                  | Tel. +886 49 255353<br>Fax +886 49 257878<br>sewtwn@ms63.hinet.net<br>http://www.tingshou.com.tw                   |
| Tanzania                     |               |                                                                                                                                               |                                                                                                                    |
| Sales                        | Daressalam    | SEW-EURODRIVE PTY LIMITED TANZANIA<br>Plot 52, Regent Estate<br>PO Box 106274<br>Dar Es Salaam                                                | Tel. +255 0 22 277 5780<br>Fax +255 0 22 277 5788<br>http://www.sew-eurodrive.co.tz<br>info@sew.co.tz              |
| Thailand                     |               |                                                                                                                                               |                                                                                                                    |
| Assembly<br>Sales<br>Service | Chonburi      | SEW-EURODRIVE (Thailand) Ltd.<br>700/456, Moo.7, Donhuaroh<br>Muang<br>Chonburi 20000                                                         | Tel. +66 38 454281<br>Fax +66 38 454288<br>sewthailand@sew-eurodrive.com                                           |
| Technical Offices            | Bangkok       | SEW-EURODRIVE (Thailand) Ltd.<br>6th floor, TPS Building<br>1023, Phattanakarn Road<br>Suanluang<br>Bangkok, 10250                            | Tel. +66 2 7178149<br>Fax +66 2 7178152<br>sewthailand@sew-eurodrive.com                                           |
|                              | Hat Yai       | SEW-EURODRIVE (Thailand) Ltd.<br>Hadyai Country Home Condominium<br>59/101 Soi.17/1<br>Rachas-Utid Road.<br>Hadyai, Songkhla 90110            | Tel. +66 74 359441<br>Fax +66 74 359442<br>sewthailand@sew-eurodrive.com                                           |
|                              | Khon Kaen     | SEW-EURODRIVE (Thailand) Ltd.<br>4th Floor, Kaow-U-HA MOTOR Bldg,<br>359/2, Mitraphab Road.<br>Muang District<br>Khonkaen 40000               | Tel. +66 43 225745<br>Fax +66 43 324871<br>sewthailand@sew-eurodrive.com                                           |
| Tunisia                      |               |                                                                                                                                               |                                                                                                                    |
| Sales                        | Tunis         | T. M.S. Technic Marketing Service<br>Zone Industrielle Mghira 2<br>Lot No. 39<br>2082 Fouchana                                                | Tel. +216 79 40 88 77<br>Fax +216 79 40 88 66<br>http://www.tms.com.tn<br>tms@tms.com.tn                           |
| Turkey                       |               |                                                                                                                                               |                                                                                                                    |
| Assembly<br>Sales<br>Service | Kocaeli-Gebze | SEW-EURODRIVE Hareket<br>Sistemleri San. Ve TIC. Ltd. Sti<br>Gebze Organize Sanayi Böl. 400 Sok No. 401<br>41480 Gebze Kocaeli                | Tel. +90 262 9991000 04<br>Fax +90 262 9991009<br>http://www.sew-eurodrive.com.tr<br>sew@sew-eurodrive.com.tr      |
| Technical Offices            | Adana         | SEW-EURODRIVE Hareket                                                                                                                         | Tel. +90 533 491 81 77 / +90 542 660 34 89<br>Fax +90 262 999 10 09                                                |
|                              | Ankara        | SEW-EURODRIVE Hareket<br>Sistemleri San. Ve TIC. Ltd. Sti<br>1368.Cadde Eminel İşmerkezi<br>No: 18/68<br>İvogsan / Ankara                     | Tel. +90 312 385 33 90<br>Fax +90 312 385 32 58                                                                    |
|                              | Bursa         | SEW-EURODRIVE Hareket<br>Sistemleri San. Ve TIC. Ltd. Sti<br>Üçevler Mah. Bayraktepe Sok.<br>Akay İş Merkezi Kat:3 No: 7/6<br>Nilüfer / Bursa | Tel. +90 224 443 45 60<br>Fax +90 224 443 45 58                                                                    |
|                              | Istanbul      | SEW-EURODRIVE Hareket<br>Sistemleri San. Ve TIC. Ltd. Sti<br>Tekstil Kent Ticaret Merkezi<br>B-13 Blok No:70<br>Esenler / İstanbul            | Tel. +90 262 9991000 04<br>Fax +90 262 9991009                                                                     |



|       |                                                                                                                                                                        |                                                 |
|-------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------|
| Izmir | SEW-EURODRIVE Hareket<br>IAOSB Küçük Parseller Grubu Sosyal Tesis<br>merkezi<br>merkezi 10030 sokak No: 16 / 110<br>Kara Hasan Atlı İş Merkezi Kat :6<br>Çigli / İzmir | Tel. +90 232 469 62 64<br>Fax +90 232 433 61 05 |
|-------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------|

**Ukraine**

|                              |                 |                                                                              |                                                                                                                                                                                          |
|------------------------------|-----------------|------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Assembly<br>Sales<br>Service | Dnipropetrovsk  | ООО «СЕВ-Евродрайв»<br>ул. Рабочая, 23-В, офис 409<br>49008 Днепропетровск   | Tel. +380 56 370 3211<br>Fax +380 56 372 2078<br><a href="http://www.sew-eurodrive.ua">http://www.sew-eurodrive.ua</a><br><a href="mailto:sew@sew-eurodrive.ua">sew@sew-eurodrive.ua</a> |
| Sales                        | Kiev            | ООО «СЕВ-Евродрайв»<br>ул. С.Олейника, 21<br>02068 Киев                      | Tel. +380 44 503 95 77<br>Fax +380 44 503 95 78<br><a href="mailto:kso@sew-eurodrive.ua">kso@sew-eurodrive.ua</a>                                                                        |
|                              | Ivano-Frankivsk | ООО «СЕВ-Евродрайв»<br>ул. Независимости, 4, оф.303<br>76000 Ивано-Франковск | Tel. +380 342 725 190<br>Fax +380 342 725 191<br><a href="mailto:ifso@sew-eurodrive.ua">ifso@sew-eurodrive.ua</a>                                                                        |

**Uruguay**

|                   |            |                                                                                          |                                                                                                                           |
|-------------------|------------|------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------|
| Assembly<br>Sales | Montevideo | SEW-EURODRIVE Uruguay, S. A.<br>Jose Serrato 3569 Esquina Corumbe<br>CP 12000 Montevideo | Tel. +598 2 21181-89<br>Fax +598 2 21181-90<br><a href="mailto:sewuy@sew-eurodrive.com.uy">sewuy@sew-eurodrive.com.uy</a> |
|-------------------|------------|------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------|

**USA**

|                                            |                     |                                                                                                                  |                                                                                                                                                                                                                                                                                                               |
|--------------------------------------------|---------------------|------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Production<br>Assembly<br>Sales<br>Service | Southeast<br>Region | SEW-EURODRIVE INC.<br>1295 Old Spartanburg Highway<br>P.O. Box 518<br>Lyman, S.C. 29365                          | Tel. +1 864 439-7537<br>Fax Sales +1 864 439-7830<br>Fax Production +1 864 439-9948<br>Fax Assembly +1 864 439-0566<br>Fax Confidential/HR +1 864 949-5557<br><a href="http://www.seweurodrive.com">http://www.seweurodrive.com</a><br><a href="mailto:cslyman@seweurodrive.com">cslyman@seweurodrive.com</a> |
| Assembly<br>Sales<br>Service               | Northeast<br>Region | SEW-EURODRIVE INC.<br>Pureland Ind. Complex<br>2107 High Hill Road, P.O. Box 481<br>Bridgeport, New Jersey 08014 | Tel. +1 856 467-2277<br>Fax +1 856 845-3179<br><a href="mailto:csbridgeport@seweurodrive.com">csbridgeport@seweurodrive.com</a>                                                                                                                                                                               |
|                                            | Midwest<br>Region   | SEW-EURODRIVE INC.<br>2001 West Main Street<br>Troy, Ohio 45373                                                  | Tel. +1 937 335-0036<br>Fax +1 937 332-0038<br><a href="mailto:cstroy@seweurodrive.com">cstroy@seweurodrive.com</a>                                                                                                                                                                                           |
|                                            | Southwest<br>Region | SEW-EURODRIVE INC.<br>3950 Platinum Way<br>Dallas, Texas 75237                                                   | Tel. +1 214 330-4824<br>Fax +1 214 330-4724<br><a href="mailto:csdallas@seweurodrive.com">csdallas@seweurodrive.com</a>                                                                                                                                                                                       |
|                                            | Western<br>Region   | SEW-EURODRIVE INC.<br>30599 San Antonio St.<br>Hayward, CA 94544                                                 | Tel. +1 510 487-3560<br>Fax +1 510 487-6433<br><a href="mailto:cshayward@seweurodrive.com">cshayward@seweurodrive.com</a>                                                                                                                                                                                     |
|                                            | Wellford            | SEW-EURODRIVE INC.<br>148/150 Finch Rd.<br>Wellford, S.C. 29385                                                  | <a href="mailto:IGLogistics@seweurodrive.com">IGLogistics@seweurodrive.com</a>                                                                                                                                                                                                                                |

Additional addresses for service provided on request!

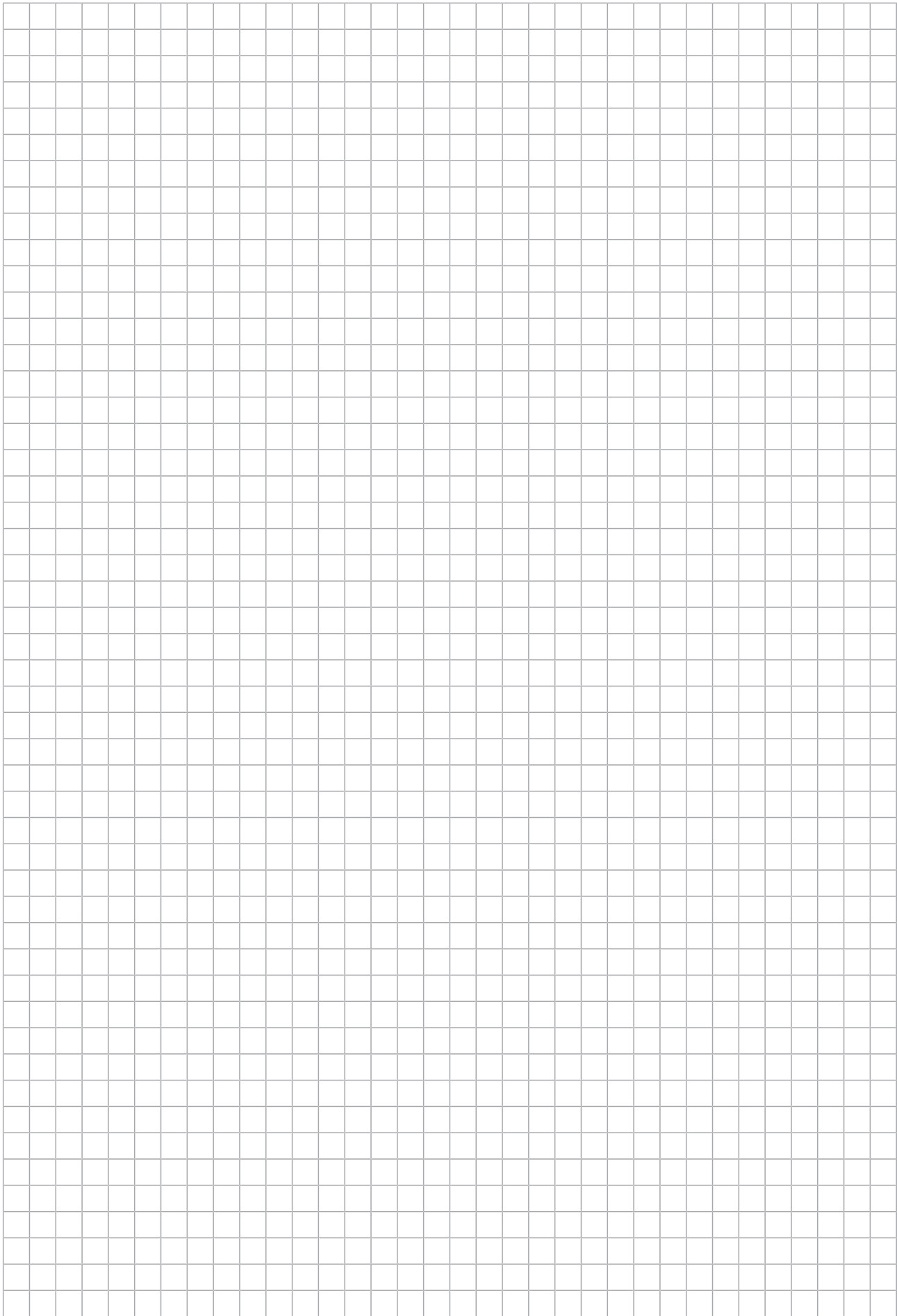
**Uzbekistan**

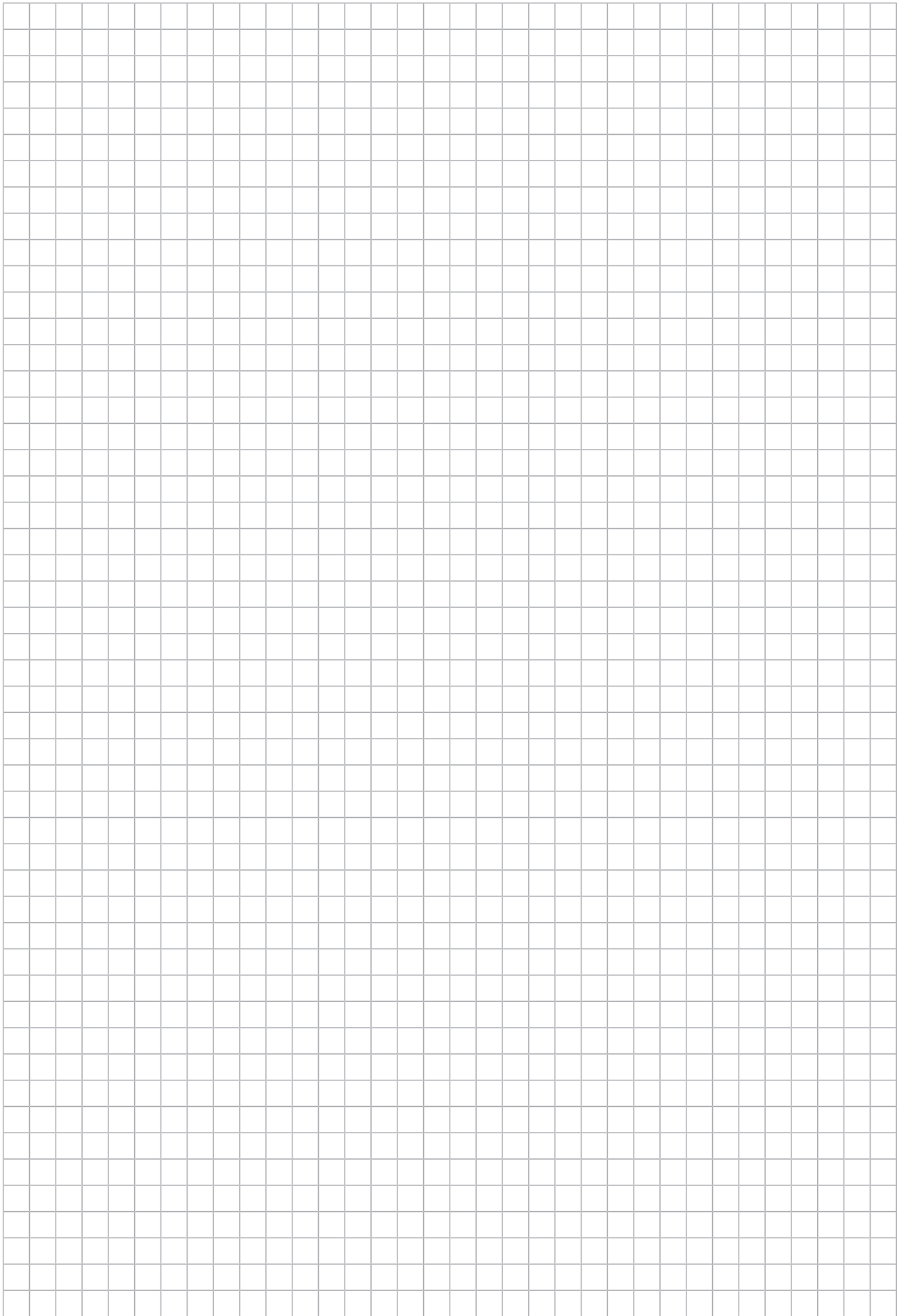
|                  |          |                                                                                                              |                                                                                                                                                                                        |
|------------------|----------|--------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Technical Office | Tashkent | SEW-EURODRIVE LLP<br>Representative office in Uzbekistan<br>96A, Sharaf Rashidov street,<br>Tashkent, 100084 | Tel. +998 71 2359411<br>Fax +998 71 2359412<br><a href="http://www.sew-eurodrive.uz">http://www.sew-eurodrive.uz</a><br><a href="mailto:sew@sew-eurodrive.uz">sew@sew-eurodrive.uz</a> |
|------------------|----------|--------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

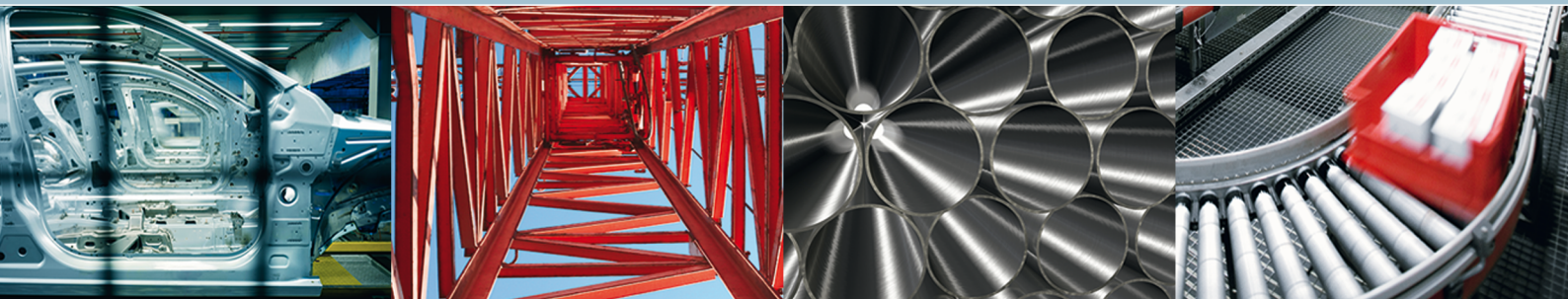
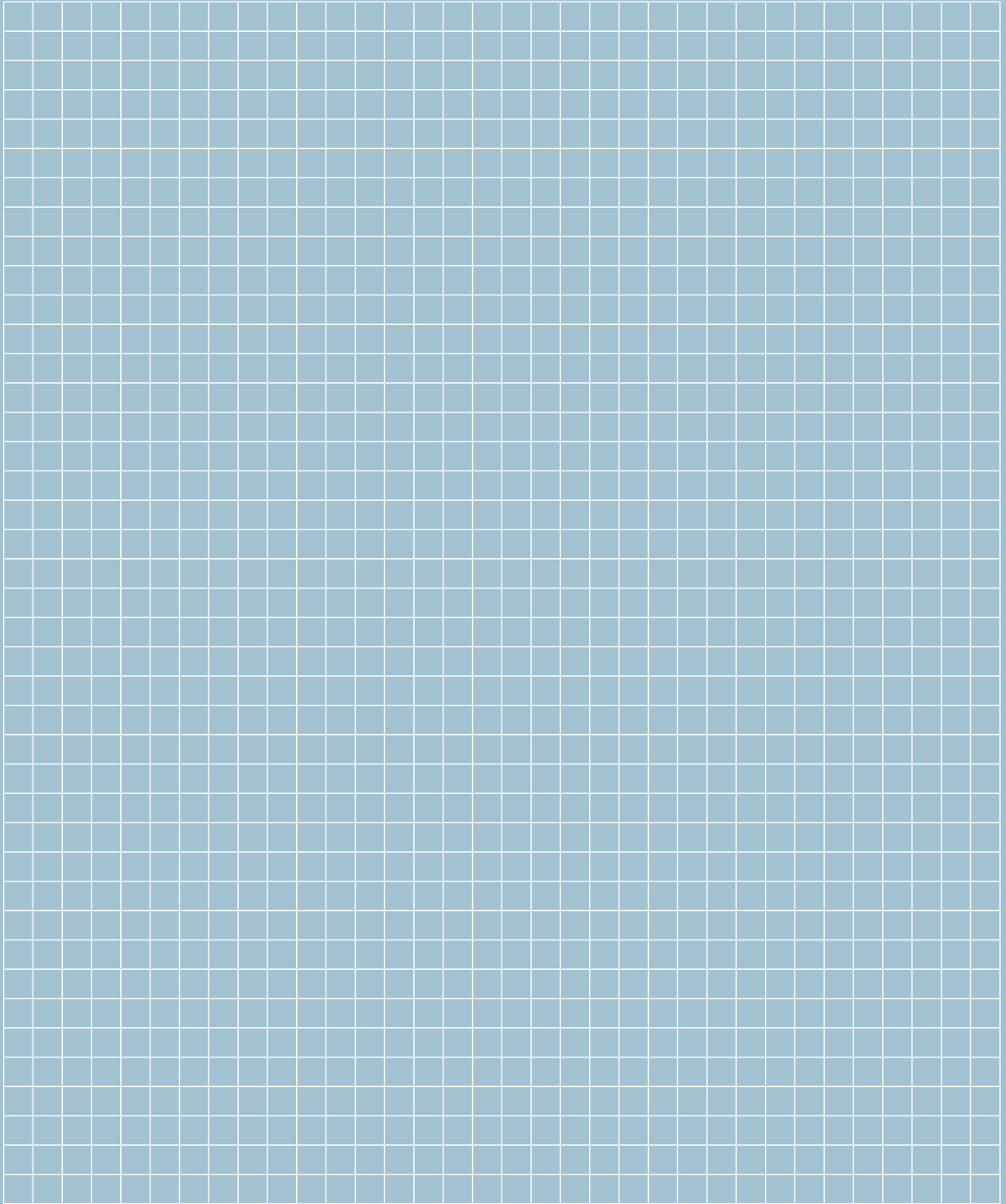
**Vietnam**

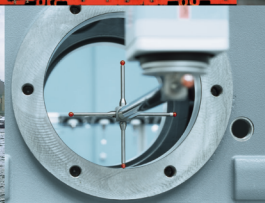
|       |                     |                                                                                                                                                                                                                 |                                                                                                                                                                                                  |
|-------|---------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Sales | Ho Chi Minh<br>City | Nam Trung Co., Ltd<br>Huế - South Vietnam / Construction Materials<br>250 Binh Duong Avenue, Thu Dau Mot Town,<br>Binh Duong Province<br>HCM office: 91 Tran Minh Quyen Street<br>District 10, Ho Chi Minh City | Tel. +84 8 8301026<br>Fax +84 8 8392223<br><a href="mailto:khanh-nguyen@namtrung.com.vn">khanh-nguyen@namtrung.com.vn</a><br><a href="http://www.namtrung.com.vn">http://www.namtrung.com.vn</a> |
|       | Hanoi               | MICO LTD<br>Quảng Trị - North Vietnam / All sectors except<br>Construction Materials<br>8th Floor, Ocean Park Building, 01 Dao Duy<br>Anh St, Ha Noi, Viet Nam                                                  | Tel. +84 4 39386666<br>Fax +84 4 3938 6888<br><a href="mailto:nam_ph@micogroup.com.vn">nam_ph@micogroup.com.vn</a><br><a href="http://www.micogroup.com.vn">http://www.micogroup.com.vn</a>      |











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Driving the world

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