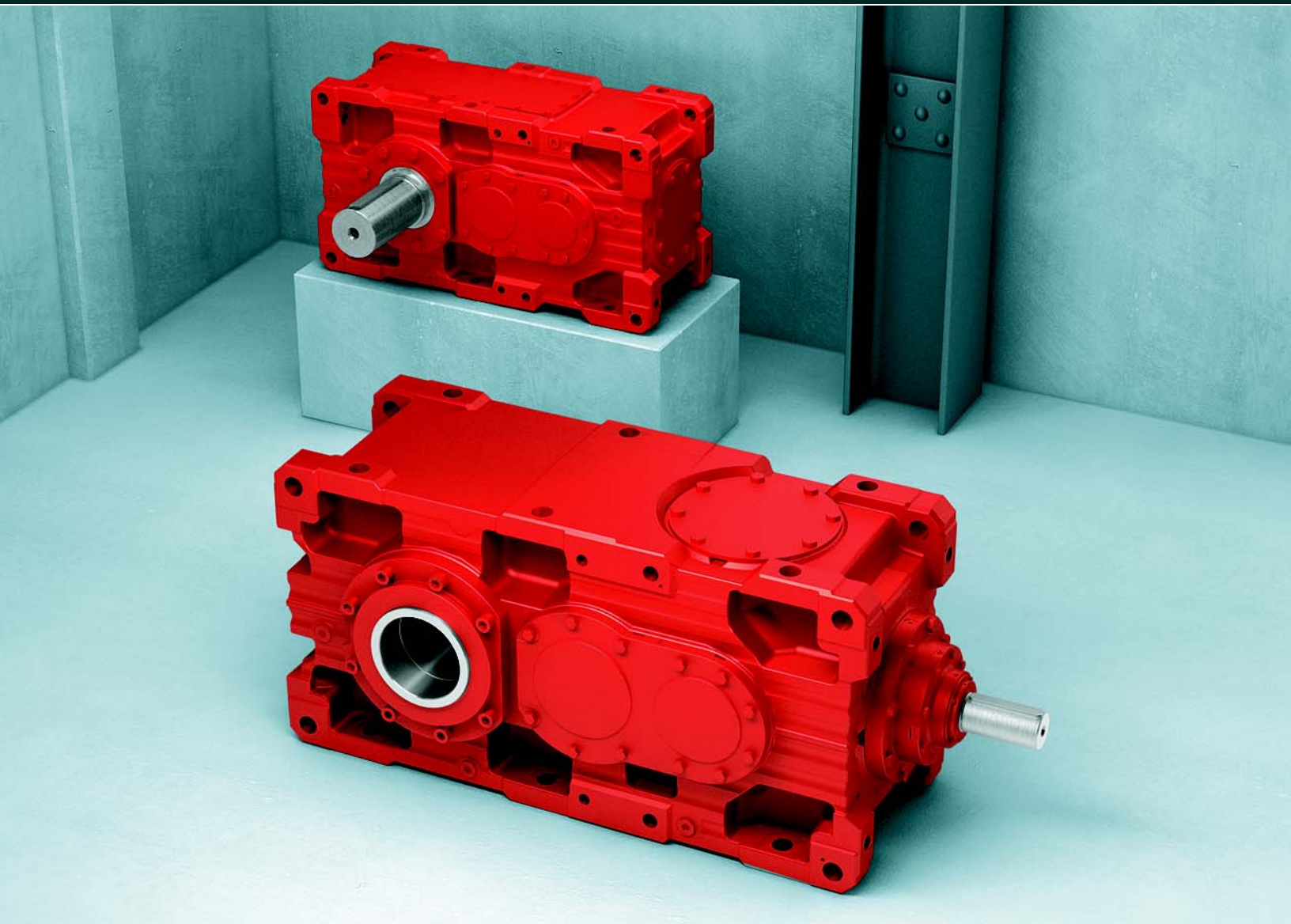
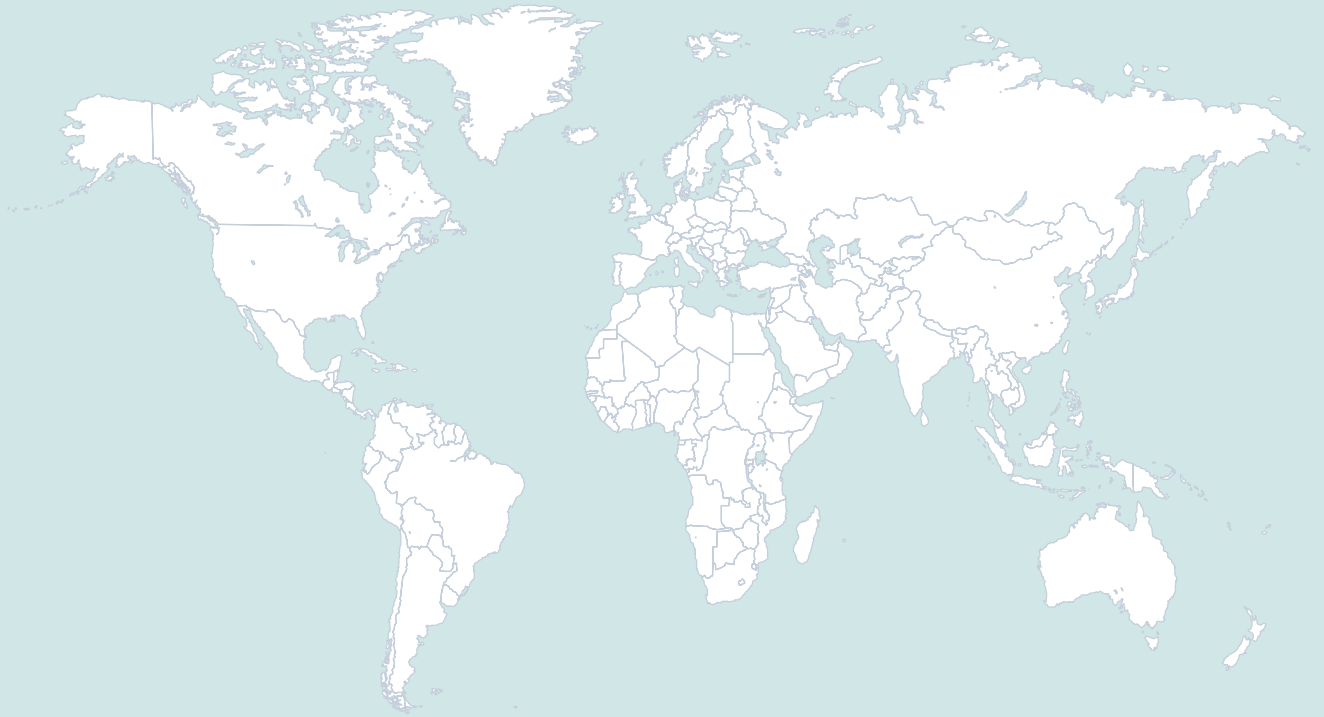




# Catalog



Industrial Gear Units  
**Helical and Bevel-Helical Gear Units**  
**X.. Series**  
Torque Ranges from 60,100 lb-in – 4,202,000 lb-in





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## 1 Introduction

### 1.1 The SEW-EURODRIVE Group of Companies

#### *Global presence*

SEW-EURODRIVE is driving the world with innovative drive solutions for all branches and every application. Products and systems from SEW-EURODRIVE are used in a multitude of applications worldwide. 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 and quality.

We currently have 15 manufacturing plants, 67 assembly plants in 44 countries, and a comprehensive range of services that represents our commitment to outstanding quality.

#### *Always the right drive*

The SEW-EURODRIVE modular concept offers millions of combinations. This wide selection enables you to choose the correct drive for all applications, based upon your required speed, torque, available space, and ambient conditions. We offer many gradual sizes of gear units so there is always a unit that closely matches your torque requirement to provide the best economic solution and to prevent unnecessary oversizing.

Gearmotors are powered by MOVITRAC® or MOVIDRIVE® frequency inverters or MOVIAXIS® multi-axis servo inverters, providing a single-source solution for all of your needs. Whether its electronics or mechanical systems, SEW-EURODRIVE is responsible for the complete development, production and assembly of all products in order to provide the utmost in flexibility.

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

For economical decentralized installations, SEW-EURODRIVE offers components such as MOVIMOT®, the gearmotor with integrated frequency inverter or MOVI-SWITCH®, the gearmotor with integrated switching and protection. Our hybrid cables have been designed specifically to ensure cost-effective solutions, independent of the system size or system type.

The latest developments from SEW-EURODRIVE include: MOVITRANS® - contactless energy transfer, MOVIPRO® - decentralized drive control, and MOVIFIT® - decentralized intelligence.

Power, quality, and sturdy design define the industrial gear units available from SEW-EURODRIVE. With high torque capacity and a modular concept, the industrial gear units once again provide optimum adaptation of a standard product for a wide range of demanding applications.

#### *Your ideal partner*

Our global presence, extensive product range, and broad spectrum of services make SEW-EURODRIVE the ideal partner for demanding applications in all industries and applications.



## 1.2 Products and systems from SEW-EURODRIVE

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

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

Consult the following tables to locate the products and systems included in the respective product groups. The last table includes products that fit more than one category.

1. 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/helical-bevel 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>Gear units/gearmotors to ATEX standard</li> <li>Variable speed gear units/variable speed gearmotors to ATEX standard</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>MOVIDRIVE® inverters</li> <li>Control, technology and communication options for inverters</li> </ul>

2. Servo drive systems		
Servo gear units/servo 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 gear units / helical-bevel gearmotors</li> <li>Explosion-proof servo gear units/servo gearmotors</li> </ul>	<ul style="list-style-type: none"> <li>Asynchronous servo-motors/servo brakemotors</li> <li>Synchronous servo-motors/servo brakemotors</li> <li>Explosion-proof servo-motors/servo brakemotors</li> <li>Synchronous linear motors</li> </ul>	<ul style="list-style-type: none"> <li>MOVIDRIVE® servo inverters</li> <li>MOVIAXIS® multi-axis servo inverters</li> <li>Control, technology and communication options for servo drive inverters and servo inverters</li> </ul>





3. Decentralized drive systems		
Decentralized drives	Communication and installation	Contactless energy transfer
<ul style="list-style-type: none"> <li>• MOVIMOT® gearmotors with integrated frequency inverter</li> <li>• MOVIMOT® motors/brake-motors with integrated frequency inverter</li> <li>• MOVI-SWITCH® gearmotors with integrated switching and protection function</li> <li>• MOVI-SWITCH® motors/brakemotors with integrated switching and protection function</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® 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> </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>

4. Industrial gear units		
Helical and bevel-helical gear units <ul style="list-style-type: none"> <li>• X series</li> <li>• MC series</li> <li>• ML series</li> </ul>	Helical and bevel-helical planetary gear units <ul style="list-style-type: none"> <li>• P series (also as planetary gearmotors)</li> <li>• PMC series</li> </ul>	Drive packages <ul style="list-style-type: none"> <li>• Application solutions with                             <ul style="list-style-type: none"> <li>- Swing base</li> <li>- Gearmotors</li> <li>- Motors</li> <li>- Couplings</li> <li>- Drum and disk brakes</li> <li>- Lubrication systems</li> </ul> </li> </ul> <p>for conveyor drives, bucket elevators, crushers, agitators, cooling towers, crane systems and many more</p>

Products and systems covering several product groups
<ul style="list-style-type: none"> <li>• Operator terminals</li> <li>• MOVI-PLC® drive-based control system</li> </ul>

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

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

Visit our homepage at [www.seweurodrive.com](http://www.seweurodrive.com)

The website provides comprehensive information and services.




### 1.3 Copyright

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### 1.4 Structure of the notes

The notes in this catalog are designed as follows:

Pictogram	Signal word	Meaning
	<b>INFORMATION</b>	Useful information or tip. Simplifies the handling of the drive system.

### 1.5 Important notes

Note the following points:

#### INFORMATION



- The illustrations in the catalog are examples. Final dimensions are available from SEW-EURODRIVE upon request.
- Oil fill quantities are recommended values. Use the marks on the oil dipstick or oil level glass to determine the oil level.
- The gear units are ready for operation when delivered, **but are not filled with oil.**
- Oil viscosity and grade must comply with those specified on the nameplate.
- The specified weights are guide 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 should be followed.