

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 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, both in terms of functionality and investment.

Not only are we represented in all the main industries of our time, but we are also found 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 met 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 of SEW-EURODRIVE are divided into four product groups:

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

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

Industrial gear units

- X, MC, ML helical and bevel-helical gear units
- P002 - 102 series planetary gear units
- P.MC..., P.X... series helical and bevel-helical planetary gear units
- Application solutions with connections
 - 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"> • Helical gear units / helical gearmotors • Parallel-shaft helical gear units / parallel-shaft helical gearmotors • Helical-bevel gear units / helical-bevel gearmotors • Helical-worm gear units and gearmotors • SPIROPLAN® right-angle gearmotors • Drives for electrified monorail systems • Geared torque motors • Pole-changing gearmotors • Variable-speed gear units / variable-speed gearmotors • Aseptic gearmotors • Explosion-proof gear units / gearmotors • Explosion-proof variable-speed gear units / variable-speed gearmotors 	<ul style="list-style-type: none"> • Asynchronous AC motors / AC brakemotors • Pole-changing AC motors / AC brakemotors • Energy-efficient motors • Explosion-proof AC motors / AC brakemotors • Torque motors • Single-phase motors / single-phase brakemotors • Asynchronous linear motors 	<ul style="list-style-type: none"> • MOVITRAC® frequency inverters • MOVI4R-U® frequency inverters • MOVIDRIVE® drive inverters • Control, technology, and communication options for inverters

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

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

VARIOLUTION® and MAXOLUTION®

- VARIOLUTION® packages for high technical solution expertise in plants and machines
- MAXOLUTION® systems for customer-specific system solutions and plants

Products and systems covering several product groups

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

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

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

Visit our website at

www.sew-eurodrive.com

The website provides comprehensive information and services.

1.3 Documentation

1.3.1 Contents of this publication

This "AC Motors" catalog provides a detailed description of the following product groups offered by SEW-EURODRIVE:

- DRS.., DRE.., DRP.. series AC motors
- DRM.. torque motors
- DRK.. single-phase motor
- DRL.. asynchronous servomotors
- DT56 and DR63 series AC motors
- Motor options and versions

1.3.2 Additional documentation

The following documents are available from SEW-EURODRIVE in addition to this "AC Motors" catalog:

- DRE.. DRS.. gearmotors
- Asynchronous servo gearmotors
- Synchronous servomotors
- Synchronous servo gearmotors
- Geared torque motors
- Explosion-proof drives
- Explosion-proof AC motors

The motor/inverter combinations and dynamic and thermal limit characteristics for drive project planning can be found in the manual titled "AC Motors – Inverter Assignments and Characteristic Curves", which supplements this catalog.

The manual contains the following:

- Motor/inverter assignment DRL..-MOVIDRIVE®
- Dynamic and thermal limit characteristics DRL..-MOVIDRIVE®
- Motor/inverter assignment DRL..-MOVIAXIS®; PWM = 4 kHz; $V_{DC\ link} = 565\ V$ and $V_{DC\ link} = 750\ V$
- Dynamic and thermal limit characteristics DRL..-MOVIAXIS®; PWM = 4 kHz; $V_{DC\ link} = 565\ V$ and $V_{DC\ link} = 750\ V$
- Motor/inverter assignment DRL..-MOVIAXIS®; PWM = 8 kHz; $V_{DC\ link} = 565\ V$ and $V_{DC\ link} = 750\ V$
- dynamic and thermal limit characteristics DRL..-MOVIAXIS®; PWM = 8 kHz; $V_{DC\ link} = 565\ V$ and $V_{DC\ link} = 750\ V$
- DRM.. torque magnet speed-torque characteristics

1.4 Product names and trademarks

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