Driving the world

SEW EURODRIVE

Innovations
2025

Products and solutions

→ Update

Drive solutions that impress.

The reliable partner at your side!

Humanity and partnership, solutions and services, responsibility and quality, tradition and innovation: SEW-EURODRIVE, the owner-managed family business, has stood for all this and much more for more than 90 years.

As a market leader in drive and automation technology, we don't just power countless applications in virtually every industry. With over 22 000 employees, we're also playing a key role in shaping the future of drive technology. For you. We ensure that you and your systems and machines are always up to date – not just now, but in the future, as well. We want you to achieve shared success with us.


KUKA
KUKA

SEW-EURODRIVE – the right solution for any requirement

Control technology, inverter and software

Efficiency and flexibility for your processes: Solutions from the modular automation system MOVI-C®.

System solutions

Customized drive technology for efficient, future-proof processes.

Gear units, gearmotors, and motors

High-performance drive solutions that offer maximum efficiency and durability.

Life Cycle Services

Maximum availability and efficiency for your drive systems – throughout the entire life cycle.

Industrial gear units

A compact design and maximum performance for demanding applications.

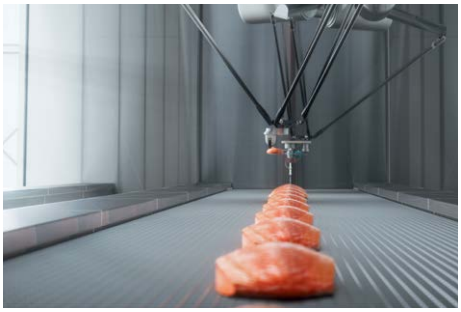
→ We have highlighted all important information and news for you in red!

Engineering software MOVISUITE® V2.70

Potential uses / typical applications

Planning
Efficient workflows for drive components thanks to offline startup.

Startup and programming
Installation and programming of all SEW-EURODRIVE drive components, including control technology devices and products.



Operation and diagnostics
The intuitive display of devices puts you in control of the system.

The advantages at a glance

Quick startup!
Thanks to the startup assistant, which enables convenient startup of the connected motors, the key parameters, and the MOVIKIT® software module being used, for example.

Seamless and complete!
MOVISUITE® standard is the engineering software for the entire MOVI-C® modular automation system, from gear unit to control technology.

Compact!
MOVISUITE® compact offers all the functions needed to start up the inverter. Installation takes only a few minutes. What's more, there are no visualizations or programming, which saves on hard disk space.

Free of charge!
Both versions of MOVISUITE® are freely available on the website. There are no charges for using them.

Overview of the techology

Manual mode extension – measuring motor data and determining the rotor position
In manual mode, the motor data can be measured via FCB25, while FCB18 can be used to determine the rotor position.

Revision of project data handling
To provide a better overview, the progress bar for the project folder on MOVI-C® CONTROLLER is displayed in one combined window.

Export and import of inverters with the MOVIKIT® software module
The inverter data and MOVIKIT® software module data can be imported and exported with the help of a new mcexpkg file format. The file also contains the familiar mcex file (without the MOVIKIT® software module data).

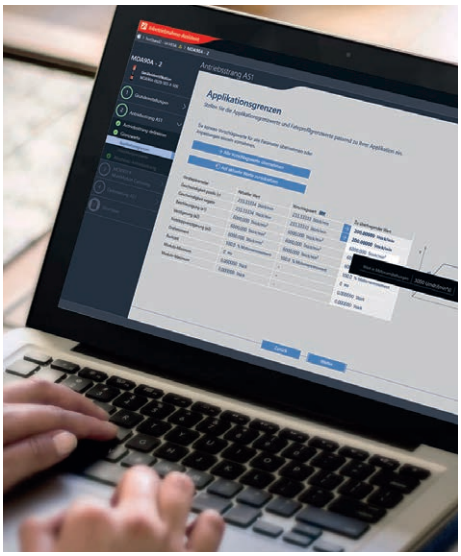
CODESYS version 3.5.20.40
Integration of CODESYS V3.5.20.40 for adding new CODESYS functions and bug fixes.

Three options for resetting a device to its delivery state
1. Restore the device to its factory settings.
2. Reset the parameterization to the default parameters, but maintaining the communication settings.
3. Reset the parameterization to the default parameters, but without loading the MOVIKIT® software module (or parameter set ex works).

Graphic implementation of the PID controller for inverters
The graphic display allows for easy operation of the PID controller.

Revision of reports for safety cards / safety options
The acceptance report and change report can be completed digitally.

Supported hardware
- MOVIONE®
- MOVITRAC® advanced MCR91A regenerative power supply
- Motors, DR2C..U series in sizes 160M to 180L
- Encoder, type EK8X
- Startup of third-party reluctance motors

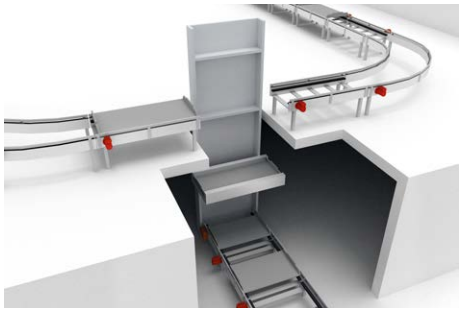


Videos
Find out more about MOVISUITE®by watching our useful tutorial videos, which you can access on our YouTube channel at any time.

MOVI-C® CONTROLLER type UHX15A

Potential uses / typical applications

Ideal for up to three frequency inverters
The controller extends the portfolio in the lower power range and has been developed for implementing simple applications.



Wide range of possible applications
The controller can be used for logic and motion control tasks – from conveying and lifting devices to motion control and automation applications.

Ready-made software modules
For simple motion control tasks such as positioning and speed mode through to synchronized motion sequences such as speed and torque coupling or position-related synchronous operation.

The advantages at a glance

Cost-effective!
The controller offers an optimum price-performance ratio for applications with up to three subordinate frequency inverters.

Straightforward!
Thanks to the state-of-the-art MOVISUITE® engineering and programming environment, motion tasks can be implemented quickly and easily.

Open!
Thanks to the real-time programming system, applications can be created on the basis of the IEC 61131-3 programming standards.

Flexible!
Thanks to a range of fieldbus connection variants, this series of controllers can be integrated into EtherNet/IP™, Modus TCP, and PROFINET.
Subordinate actuators and sensors can be connected via EtherCAT®.

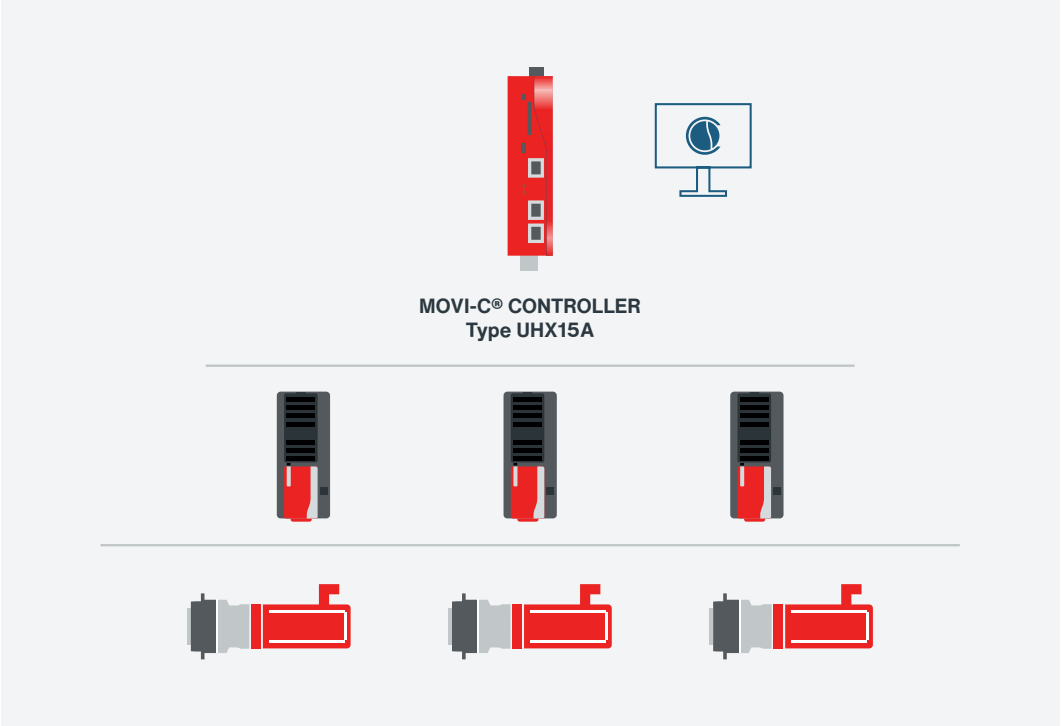
Overview of the technology

The MOVI-C® CONTROLLER type UHX15A satisfies all requirements for applications with up to three frequency inverters. It has been developed to enable users to implement applications with a small number of devices cost-effectively.

The user program is stored on a replaceable memory card, so devices can be replaced quickly.

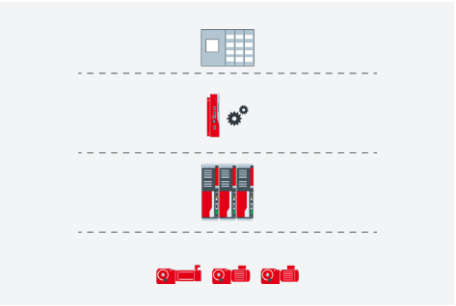
Thanks to the user-friendly MOVISUITE® engineering and programming environment, the controller supports fast implementation of machine and system solutions, which helps boost efficiency and conserve resources in machine and system automation.

Drive electronics that are available in the MOVI-C® modular automation system and accessories from an extensive range, such as I/O modules and displays, can also be added to the controller to create the perfect solution.

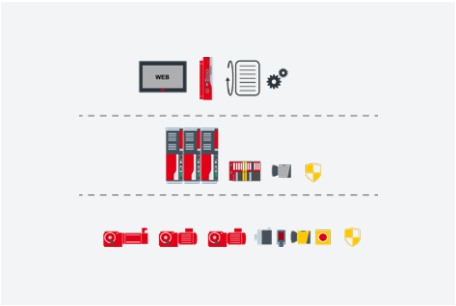


MOVI-C® CONTROLLER type UHX..A

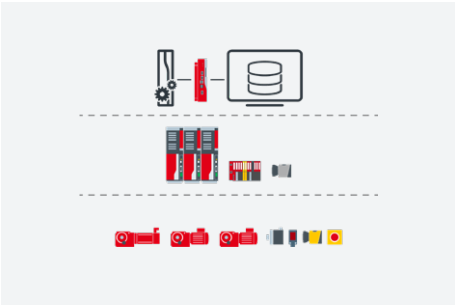
Potential uses / typical applications



High-performance motion control
Powerful motion control based on the "parameterization instead of programming" principle – ideal for complex machines with multiple synchronized axes.



Intelligent automation control
Motion control and process control for autonomous and networked industrial machines and machine modules with a wide variety of actuators and sensors.



Cyber-physical control
Scalable hypervisor system with real-time and multipurpose operating system for specialized networking – ideal for Industry 4.0 applications.

The advantages at a glance

Flexibility!
Sophisticated control portfolio across the entire range of applications, from simple to highly complex tasks – always offering the ideal hardware solution.

Consistency!
The MOVI-C® CONTROLLER family provides a fully comprehensive controller portfolio with standardized functions and features.

Versatile!
A wide range of tasks with the same family – from motion control and automation control tasks through to cyber-physical control tasks.

System compatibility!
Perfectly coordinated with the wide-ranging inverter and electromechanics portfolio from SEW-EURODRIVE's MOVI-C® modular automation system.

Overview of the technology

Type	UHX15A	UHX25A	UHX45A	UHX65A-x-01/02, UHX65A-x-04	UHX86A-x-20/40, UHX86A-x-50/60
Area of application	Controller for a minimum of three axes for implementing simple motion control tasks such as positioning or speed mode	Controller for simple motion tasks and motion control such as positioning or speed mode.	Controller for challenging motion tasks such as synchronous axes with electronic gear unit or electronic cam.	Controllers for complex motion tasks such as multi-axis control and robotics as well as automation tasks such as visualization and machine control.	Controllers that combine IPC, motion control, process control in a single solution. Developed for sophisticated high-end applications that require multibus and ERP interfaces as well as Windows and Linux apps.

Recommended for:

Motion control	Good	Excellent	Excellent	Excellent	Excellent	Excellent	Excellent
Automation control	Good	Good	Excellent	Excellent	Excellent	Excellent	Excellent
Cyber-physical control					Good	Good	Excellent

MOVIRUN® open

Potential uses / typical applications

Versatile application
Automation using an open software platform for components from the MOVI-C® modular automation system and third-party components.

Intuitive configuration
Easy configuration and diagnostics of MOVIKIT® software modules within the CODESYS programming system.

Software functions
Programming based on PLCopen, using preconfigured function blocks and open-source axis drivers.

The advantages at a glance

All-in-one!
Configuration, programming, and visualization all in a single tool.

Open!
Open, standardized interfaces and easy integration of third-party components.

Saves time!
Function blocks that have already been created can be reused.

Consistent!
A complete range – hardware and software from a single source.

Overview of the technology

MOVIRUN® software platform
MOVIRUN® is the software platform for the MOVI-C® CONTROLLER and the basis for using the MOVIKIT® software modules. There are three variants: **MOVIRUN® smart, MOVIRUN® flexible,** and **MOVIRUN® open.** After purchasing a MOVIRUN® license, one of the three variants is selected. This can be changed later as required. How it is used varies based on the variant chosen.

MOVIRUN® open in detail
MOVIRUN® open adds an open software platform for components from the MOVI-C® modular automation system and third-party components (CiA® 402 axes) to the portfolio. MOVIRUN® open offers every option when it comes to programming your application in a programming tool based on IEC 61131-3 and PLCopen. The MOVI-C® CONTROLLER can function as either a higher-level controller or a controller for motion tasks. The MOVIKIT® software modules are preconfigured to the PLCopen standard and are configured and parameterized via the MOVIRUN® open Editor. The customer's own function blocks can also be integrated and used.

MOVIRUN® open includes the **following components:**
- MOVIRUN® open Editor (programming tool based on CODESYS)
- Plug-ins for the MOVIRUN® open Editor (e.g. axis configurator, online monitor with manual operation, CAM Editor, advanced diagnostics, etc.)
- Device descriptions
- MOVIKIT® software modules to PLCopen standard
- Libraries
- MOVIRUN® open Installer (tool for automatic updates of various module packages)

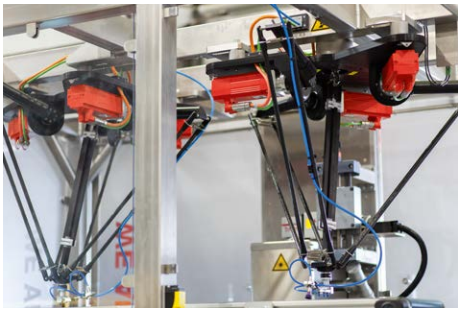
MOVIKIT® software modules for the MOVIRUN® open software platform:
MOVIKIT® PLCopen MotionControl provides users with access to universal motion control functions that are based on the PLCopen standard and used with MOVIRUN® open.
- Graphical configuration and diagnostics in CODESYS-based programming tool
- Use with MOVI-C®, virtual axes, and third-party axes (CiA® 402)
- Touchprobe and cam switch
- Additional use of synchronous operation functionality with the MOVIKIT® PLCopen MotionControl addon Gearing
- Additional use of electronic cam functionality with the MOVIKIT® PLCopen MotionControl addon Camming
- Curves can be configured from the control program

Currently, only the following MOVIKIT® software modules are available for MOVIRUN® open:

MOVIKIT® PLCopen MotionControl	MOVIKIT® PLCopen MotionControl addon Gearing
MOVIKIT® PLCopen MotionControl addon Camming	MOVIKIT® CamSwitch

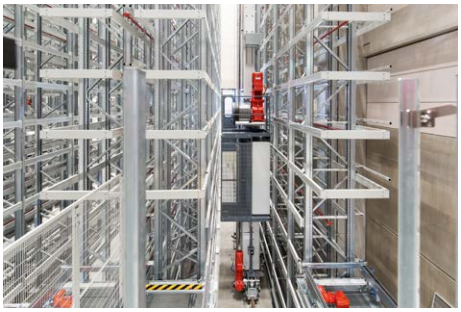
MOVIRUN® flexible

Potential uses / typical applications



Conveying
Startup of simple applications

Aligning
Parameterized startup of logistics applications



Positioning
Parameterized startup of complex applications

The advantages at a glance

Your way in!
- Simple introduction to MOVISUITE®
- Integrated basic functions

Saves time!
- Reuse of modules that have already been configured
- Efficient diagnostic tools

Flexible!
- Flexible choice of automation concept
- Simple parameterization and programming

Cost-saving!
- Predefined, documented, and tested software modules

Overview of the technology

MOVIRUN® is the software platform for MOVI-C® CONTROLLERs and the basis for using MOVIKIT® software modules. The software platform determines how the MOVIKIT® software modules can be used – either as purely parameterizable functions with a fieldbus interface or with a programming interface.

MOVIRUN flexible® puts the focus on parameterization for use of the MOVIKIT® software modules. A multitude of motion control functions are available via a fieldbus interface, without any further programming of the MOVI-C® CONTROLLER. A cutting-edge programming system based on IEC 61131-3 makes it easy to incorporate customized add-ons and extensions.

MOVIKIT® EncoderInterface is used to take data from an external source and convert it from system units to user units.

MOVIKIT® EnergyRecovery provides functions that can be used to deliver energy supply solutions with the new block-type or sinusoidal energy recovery.

MOVIKIT® MultiMotion provides universal motion functions for interpolating axes.

MOVIKIT® MultiMotion Auxiliary Velocity makes it possible to configure speed and torque control for non-interpolating axes.

MOVIKIT® ProcessData forwards fieldbus data from a higher-level controller through the MOVI-C® CONTROLLER to the inverter directly and without modifying it.

MOVIKIT® EnergyRecovery ParallelMode enables parallel connection of two devices of type MDR9.B-.., to increase overall performance.

MOVIKIT® MultiMotion Auxiliary Positioning makes it possible to configure speed and torque specifications and positioning for non-interpolating axes.

MOVIKIT® Positioning makes it possible to implement positioning applications with a predefined fieldbus interface.

MOVIKIT® Velocity makes it possible to implement applications with velocity control and a predefined fieldbus interface.

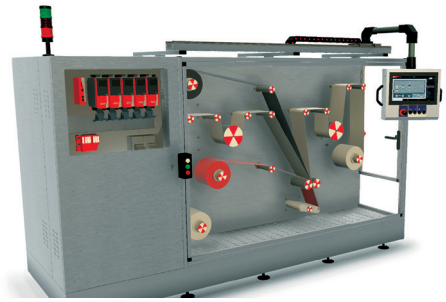
MOVIKIT® Power and Energy Solutions DirectMode makes it possible to have a simple, programmable energy supply for inverters – together with a power supply module or energy converter.

MOVIKIT® DeviceIdentitymakes it possible to record and monitor parameters to identify components from the MOVI-C® modular automation system.

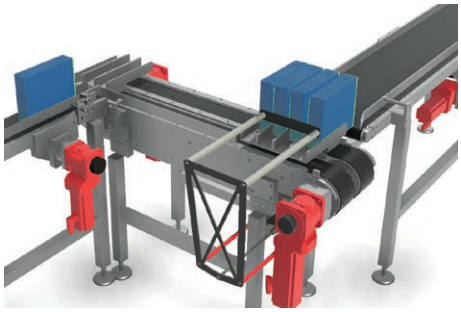
MOVIKIT® PowerAndEnergySolutions ParallelMode enables parallel connection of several MDP92A power supply modules or MDE90A energy converters.

MotionGateway

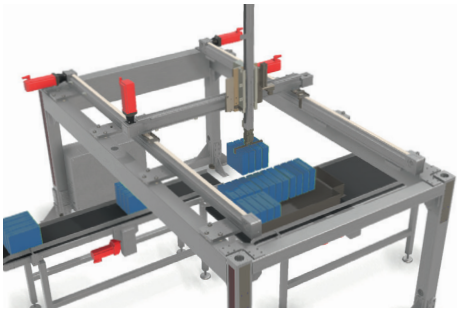
Potential uses / typical applications



Battery production



Product grouping



Gantry system

The advantages at a glance

Easy entry
The boot project offers an attractive no-code solution for implementing simple motion control applications outside the PLC.

No programming
Intuitive and fast startup thanks to predefined motion blocks that do not require programming via IEC Editor.

Synchronized
MotionGateway supports synchronized applications via the local SBusPLUS of the inverters from the MOVI-C® modular automation system.

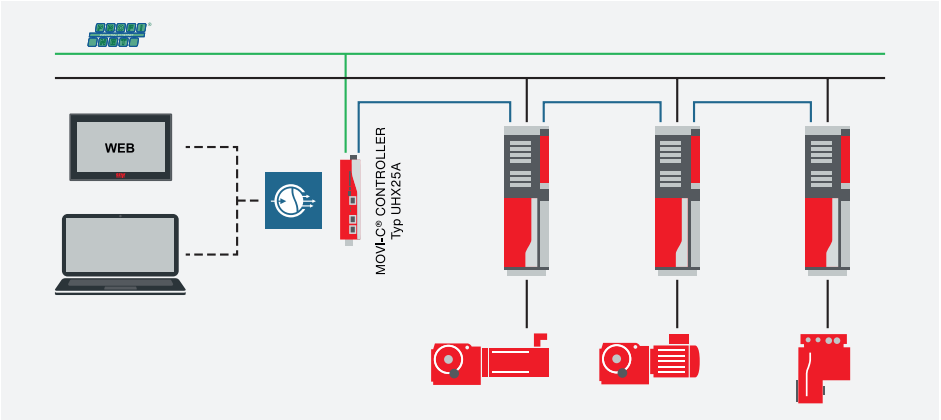
Browser-based diagnostics
Web-based diagnostic tools enable hardware-independent diagnostics of the drive train and communication interface.

Overview of the technology

The MotionGateway application for the UHX25A MOVI-C® CONTROLLER can be used to implement cost-efficient solutions for controlling inverters of the MOVI-C® modular automation system via PROFINET.

You do not have to use the MOVIRUN® IEC Editor, so the system can be started up more intuitively and quickly. In addition, a web server facilitates diagnostics without having to install MOVISUITE®.
MotionGateway supports the MOVIKIT® Positioning and MOVIKIT® Gearing software modules in the following inverters:

- MOVIDRIVE® modular (single-axis)
- MOVIDRIVE® system
- MOVIDRIVE® technology
- MOVITRAC® advanced



Device installation with MOVI-C® CONTROLLER, type UHX25A with MotionGateway

MotionGateway is characterized by the following special features:

- MotionGateway operates as a PROFINET device on the PROFINET network and transfers the fieldbus setpoints and fieldbus actual values to the inverter via the integrated EtherCAT®/SBus^{PLUS} interface.
- As the inverters communicate via the integrated EtherCAT®/SBus^{PLUS} interface,only a fieldbus control is required.
- Configuration is performed in the MOVISUITE® standard engineering software without having to open the IEC Editor – no programming knowledge is required.
- Up to 8 axes can be configured in one MotionGateway.
  This gives you the following options:
  - Up to 8 MOVIDRIVE® axes with the MOVIKIT® Positioning or MOVIKIT® Gearing software module.
  - Up to 2 virtual axes with MOVIKIT® Gearing software module possible.
  - In addition, up to 2 encoders can be read with the MOVIKIT® EncoderInterface software module.
- The axes are addressed using the EtherCAT® ID and optional slaves.
- Functional safety can be used via the hardware wiring at X6.

→ For more information, refer to our website.

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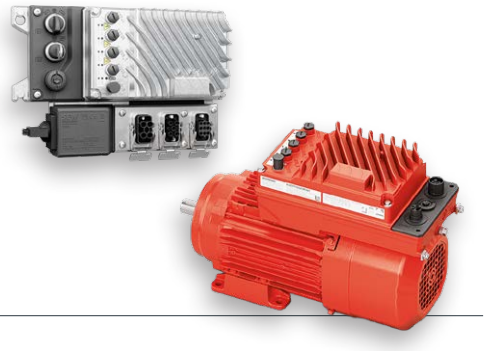
MOVIONE® – decentralized drive unit and decentralized inverter



Potential uses / typical applications

Parcel logistics and distribution

Warehouse technology and order picking

Materials handling technology, including low-temperature applications

The advantages at a glance

Flexibility!
From a gearmotor with integrated frequency inverter to a decentralized inverter for installation close to the motor, MOVIONE® provides flexibility for your applications, while also saving you time and money.

Integrated!
From gearmotor to control technology and engineering software – end-to-end integration into the MOVI-C® modular automation system opens up synergies during planning and startup.

Optimized!
Always running the drive train at the optimum operating point is crucial for efficient system management. MOVIONE® drive units enable reliable operation of your system.

Efficient!
Whether in partial-load or full-load operation, energy-efficient motors with synchronous technology and an ECO2 design reduce energy requirements and CO_2 equivalents on a sustainable basis.

Overview of the technology

- Rated power of 1.5 kW, continuous current of up to 4.0 A, and overload capacity of 200%
- Communication via PROFINET or EtherNet/IP™ (in preparation), with communication-based STO
- Integrated brake control and DI/DIO with status LED

MOVIONE® – integrated into the motor
- All brake types and braking torques for the relevant motor size can be controlled
- Standard ECO2 design, with the option of selecting a painted variant
- The inverter can be mounted rotated by 180°
- Selection of connection technology: 1 × MQ15* (in) or 2 × MQ15* (in & out)
- Local engineering interface

MOVIONE® – installed close to the motor
- Selection of options:
  - Maintenance switch /D11 (input side of inverter)
  - Local control elements
- Selection of connection technology:
  - 1 × MQ15* (in) or 2 × MQ15* (in & out)
  - 1 × HAN Q4/2 (in) or 2 × HAN Q4/2 (in & out)
- HAN Q8/0 motor output connector
- Local engineering interface

Efficiency / speed min^{-1}	Nominal motor power kW DR2C.. synchronous motors / DRN.. asynchronous motors					
	0.25	0.37	0.55	0.75	1.1	1.5
IE5/2000[1)]	DR2C71MKAR4	DR2C71MKA4	DR2C71MSAR4	DR2C71MSA4	DR2C71MA4	DR2C80MKA4
IE5/3000[1)]	–	DR2C71MKAR4	DR2C71MKA4	DR2C71MSAR4	DR2C71MSA4	DR2C71MA4
IE3/1450[1)]	DRN71MS4	DRN71M4	DRN80MK4	DRN80M4	DRN90S4	DRN90L4
IE3/2960[2)]	–	DRN71MS4	DRN71M4	DRN80MK4	DRN80M4	DRN90S4

[1)] Y-type motor connection, motor design: integrated into the motor and installed close to the motor
[2)] D-type motor connection, motor design: installed close to the motor

ECDriveS® – scalable extra-low voltage system for roller conveyors

Potential uses / typical applications

Zero pressure accumulation
Zero pressure accumulation of boxes or packages in intralogistics and e-commerce

Conveyor belts for machines and systems
Conveyor belts for machines and systems in mobile and stationary applications.

Rotary tables and corner transfer units
Use of gearmotors in complementary applications in the area around roller conveyors

The advantages at a glance

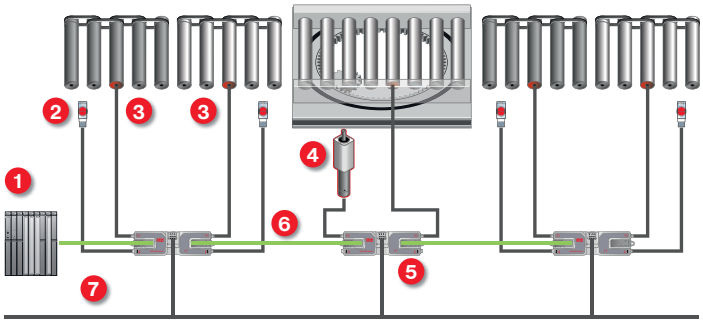
High power density
Power rating up to 65 W and 200% overload capacity, higher torque than typical comparable solutions with up to 8 Nm dynamic limit torque.

Advanced controller
You still have a free choice – central control via PLC or decentralized, intelligent conveyor logic for zero pressure accumulation; automatic startup (electr. nameplate); integrated encoders reduce sensors/limit switches.

Optimum system availability
Thanks to diagnostics and visualization for every space, digital motor interface consistently connects all drives, continuous monitoring and preventive maintenance, simple handling in the event of failures.

Long service life
Brushless permanent magnet motor, full-metal planetary gear unit with bearings on both ends of the planetary gears ensures high stiffness, optimum tooth engagement, and minimum wear – even at high loads.

Overview of the technology



Installation topology with ECC DFC-..

1. **PLC/controller**
2. **Sensors**
3. **ECR roller motors**
4. **ECG gearmotors**
5. **ECC-DFC fieldbus controller**
6. **Fieldbus**
7. **24 V supply or 48 V supply**

ECR.. roller drive and ECG.. gearmotor			
Type	IA2M	A2M	A4M
Nominal voltage	24 V	24 V	48 V
Power rating / current	40 W / 2.5 A	50 W / 3 A	65 W / 1.9 A
Overload	150%	200%	230%
Description	Integrated commutation electronics – Operating modes: analog (0 - 10 V) – Connection to third-party motor control modules, especially ASi motor modules	External commutation electronics – High overload capacity and thermal reserves for high cycle rates – Optionally with integrated holding brake at 24 V – Connection to ECC-DFC fieldbus module or ECC-DBC binary module	

MOVITRAC® classic control cabinet inverter

Potential uses / typical applications

Agitators

Hoists

Corner transfer units

The advantages at a glance

Open solution!
Plug-in gateway supports various fieldbus protocols, enabling connection to standard control systems.

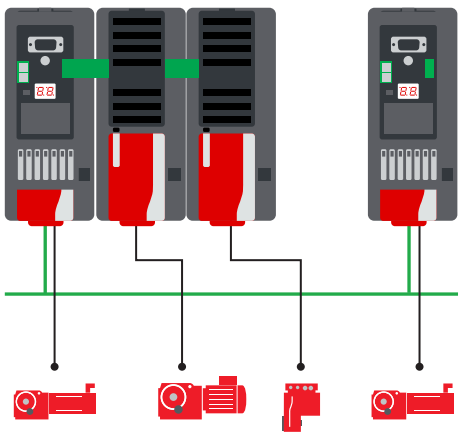
Saves time!
Fast, straightforward startup without an engineering tool, thanks to MOVIKIT® Drive software modules.

Simple product selection!
Minimal number of variants and straightforward handling.

Cost-optimized!
An optimized price-performance ratio, even for simple applications.

Overview of the technology

MOVITRAC® classic control cabinet inverter		
Technical data	**Nominal line voltage V**	1 × AC 200 – 240 3 × AC 200 – 500
	Nominal power kW	0.25 – 11
	Overload capacity	150%
Motor control	**Controlling and monitoring of:** – Synchronous and asynchronous AC motors without encoder – Asynchronous motors with LSPM technology	
Communication interface	– Plug-in gateway – choose from PROFINET, EtherNet/IP™, Modbus TCP, EtherCAT®/SBUS^{PLUS}	
Functional safety	– STO (safe torque off) to PL d integrated into the basic unit	
Additional features and equipment	– State-of-the-art control modes: U/f, VFC^{PLUS}, ELSM®, CFC – Torque and speed control – Startup via plug-in and scalable keypads or MOVISUITE® engineering software – Simple startup via MOVIKIT® software modules	



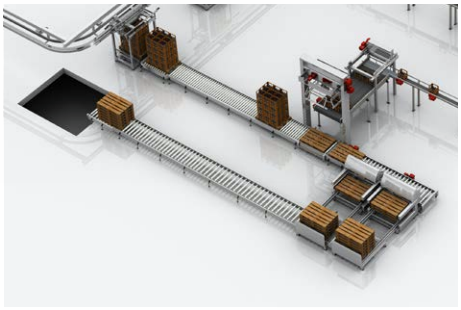
PROFINET EtherNet/IP MODBUS TCP EtherCAT Technology Group

MOVISAFE® CS..A for MOVITRAC® advanced

Potential uses / typical applications

Materials handling technology

Hoists



Palletizers

The advantages at a glance

Flexible!
Support for a wide range of concepts – from the simplest solutions to reducing speed safely with digital safety encoders.

User-friendly!
Simple startup and parameterization using the startup wizard. The inverter parameters can be taken over in the safety section.

Consistent!
Parameterization is identical for all safety options, with all parameters working in the same way and having the same meaning.

Easy maintenance!
The safety key helps ensure quick and easy replacement of the safety card without a PC.

Overview of the technology

Hardware	../CSB/..	../CSL/..	../CSS/.. NEW
Safe inputs	4	4	4
Safe outputs	–	1	1
Safe stop functions	STO, SS1-t	STO, SS1-t, SBC	STO, SS1-t, SBC
Safe motion functions[1]	–	SS1-r, SLS, SSM,SDI	SOS, SS1-r, SS2, SLS, SSR, SLA, SSM,SDI
Safe positioning functions[1]	–	–	SLI
Safe communication	PROFIsafe, Safety over EtherCAT®, CIP Safety™	PROFIsafe, Safety over EtherCAT®, CIP Safety™	PROFIsafe, Safety over EtherCAT®, CIP Safety™
Process value via safe communication		Speed	Speed
Safety encoder		EI7C[2] (DRN)	EI7C[2] (DRN..) EK8Z (DRN..) AK8Z (DRN.., DR2C..A) In preparation, Q2/2025: EK0Z (CM3C.., CM3P..) AK0Z (CM3C.., CM3P..)

[1] Only with safety encoder.
[2] Only for monitoring movement; no closed-loop speed control and no positioning possible.

StarterSET compact

Potential uses / typical applications

Multipacker erectors

Fill and seal machines, cutting machines

Form, fill, and seal machines

The advantages at a glance

Fast!
Considerable time savings during the project planning and startup phases.

Complete!
Automation from a single source – software, communication, sensors, and control, inverter, and drive technology.

Cost-effective!
Compact hardware combined with coordinated software covers all the functions needed for the application.

Flexible!
The StarterSET can be flexibly extended and customized for the machine solution.

Overview of the technology

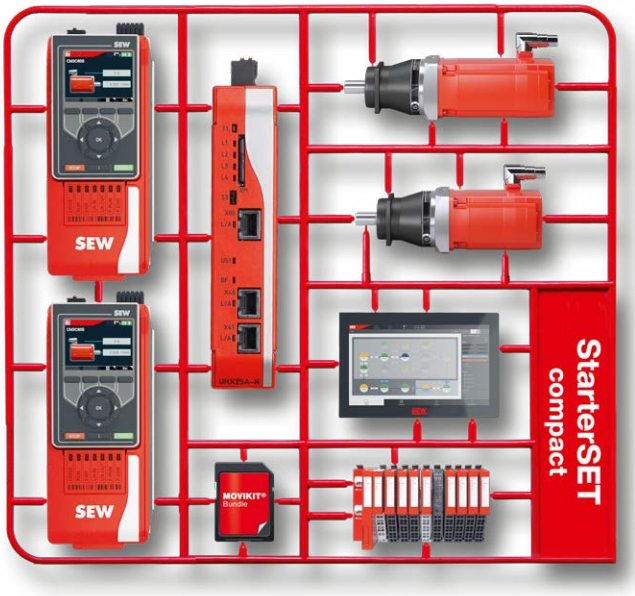
The StarterSET compact is the cost-effective machine automation solution for compact applications with up to six axes.
Cost pressures are making it difficult or impossible to meet the ever-increasing requirements relating to small and compact packaging machines.

Questions over cost-effectiveness are holding back innovative ideas. The StarterSET compact from SEW-EURODRIVE offers an attractive and cost-effective solution without any loss of performance.

The StarterSET compact focuses on cost-effectiveness and so includes the compact MOVITRAC® advanced inverter with a digital MOVILINK® DDI motor interface with single-cable technology.
In addition to the coordinated hardware components, a comprehensive software package (MOVIKIT® bundle) is available as a cost-saving option that includes all the necessary functions for the application in question.

The package solution is rounded off by standardized communication interfaces such as OPC UA, PROFINET, EtherNet/IP™, and web visualization.

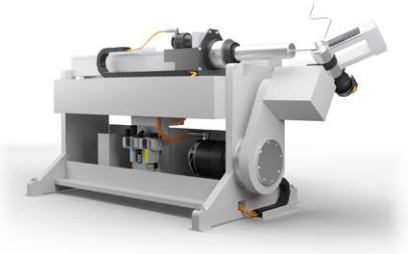
As part of the MOVI-C® modular automation system from SEW-EURODRIVE, the MOVIKIT® software modules offer application-specific software functionalities for parameterizing and operating your drive technology.



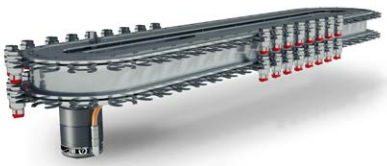

100%
SUSTAINABLE
AUTOMATION
FROM
SEW
EURODRIVE
SEW-EURODRIVE GmbH & Co KG
22
PAP
100%

PxG® integrated precision planetary gearmotors

Potential uses / typical applications



Wire and pipe bending machine



Chain magazine and tool changer

Four-way pallet shuttle

The advantages at a glance

Dynamic!
Three different gear unit sizes are available, each in three performance classes, with peak torques ranging from 70 to 990 Nm.

Compact!
Installation length up to 40% shorter than conventional servo gearmotors mounted using an adapter

Precise!
Single-stage, two-stage, and three-stage precision gear units with gear ratios ranging from 4 to 220

Flexible!
Wide range of options, such as reduced rotational clearance, food-grade lubrication, and all kinds of encoder systems

Overview of the technology

Developed for challenging robotics and automation applications, the new PxG® integrated precision planetary gearmotors combine precision with an extremely compact design.

The impressive features of this fully integrated gear unit and motor combination include state-of-the-art magnet and winding technology, dynamic performance, versatility, and hygienic lubricant options, if required.

A further focal point is ensuring the solution can be used even in the tightest of spaces. PxG® integrated variants are up to 40% shorter than comparable planetary servo gear units mounted using an adapter. Boasting accuracy down to one angular minute, they are the ideal drive solution for demanding applications and can boost productivity by up to 34% in applications with short cycle times.

Further flexibility is provided by the variety of encoder options available:
- MOVILINK® DDI digital motor interface[1)]
- HIPERFACE®
- Resolver
- HIPERFACE® DSL from SICK Stegmann
- EnDat 2.2 from Heidenhain
- DRIVE-CLiQ from Siemens AG
- No encoder

PxG® precision planetary gear unit	P5.G	P6.G	P7BG
Gear ratio i	4 – 100	4 – 100	16 – 220
Dyn. output torque Nm	47 – 760	47 – 480	70 – 990
Rotational clearance	≤ 1 (R) – 6 (N)	≤ 2 (R) – 8 (N)	≤ 1 (R) – 3 (N)

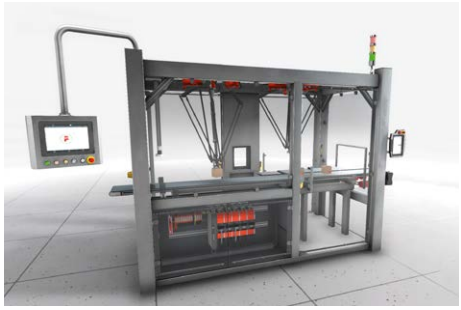
CM3G.. servomotors	71S	71M	80S	80M	100S	100M
System voltage V	400[2)]	400[2)]	400[2)]	400[2)]	400[2)]	400[2)]
	3000/6000	3000/6000	3000/6000	3000/6000	3000/6000	3000/6000
Standstill torque Nm	2.45	5.8	4.65	15.6	8.8	25.5
Standstill current A	1.46/2.75	3.95/7.3	3.15/6.2	10.1/18.9	7.3/14.4	12.5/22
Dyn. limit torque Nm	4.5	12.6	8	30	15.6	60
Max. motor current A	3.2/6	9.2/17	6.1/12	21.5/40	16.7/33	33.5/59

[1)] In preparation [2)] NEW: DC 48 V also available

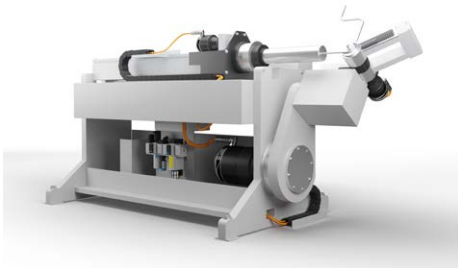
Electric cylinders Type LM3S..

Potential uses / typical applications

Handling systems / machining centers



Pick-and-place applications



Machine tools

The advantages at a glance

Dynamic and flexible
The high speeds that can be achieved and sophisticated travel profiles support short cycle times, even under high loads.

Digital
Simple startup and less installation work between hardware components thanks to MOVILINK® DDI.

Combinable
Each cylinder is suitable for mounting two different synchronous servomotor sizes, and several belt transmissions are available. This ensures excellent adaptability in terms of dynamics, braking torques, and holding forces.

Long service life
Patented oil bath lubrication makes the linear unit a maintenance-free solution and minimizes wear.

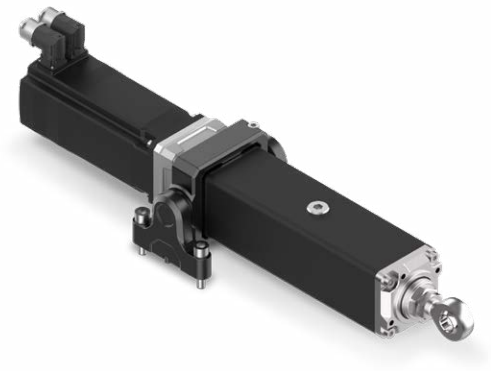
Overview of the technology

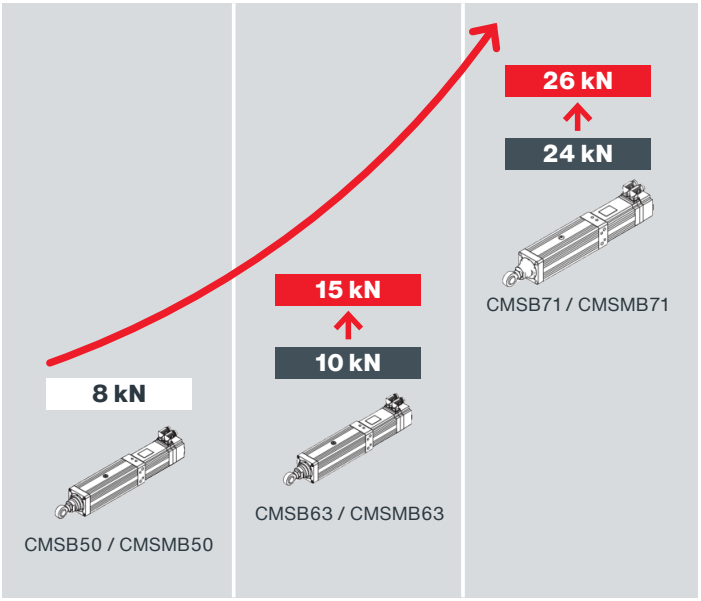
Following on from the successful CMS.. series, the LM3S.. series of linear cylinders is particularly suited to applications that call for linear movements with high accelerations/speeds and precision.

The cylinders can be combined with CMP.. servomotors and the entire CM3.. modular motor system, resulting in maximum scalability in the range up to 26 kN. As always, parallel or series mounting of the cylinder is possible, meaning it is suitable for narrow and short designs.

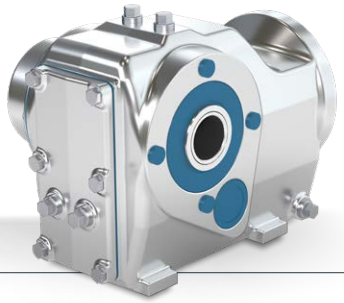
Configuring the drives is easy, either online or using the familiar, freely available SEW-Workbench planning and configuration tool.

Besides Resolver and HIPERFACE® encoders, the DDI encoder variant from SEW-EURODRIVE is also available, making it quick and easy to connect the motor to the inverter technology of the MOVI-C® modular automation system and thus enjoy all the benefits of this technology.





Stainless steel gear units – designs and sizes



Potential uses / typical applications

Source:
JBT/alco, Bad Iburg

Food processing
Applying fine coating materials such as flour, powder, powdered spices, and sugar to products

Food packaging
High-precision portioning and filling of yogurt or pudding

Source:
Alpma, Rott am Inn

Food stirrer
Stirring milk and similar primary products in cheese production

The advantages at a glance

Scalable!
New sizes in the relevant torque classes make it easier to select the right design for an application.

High quality!
The stainless steel (V2A, SS304) used for the housing is robust, ideal for casting, and can have centering features, bores, and threads machined into it without great difficulty.

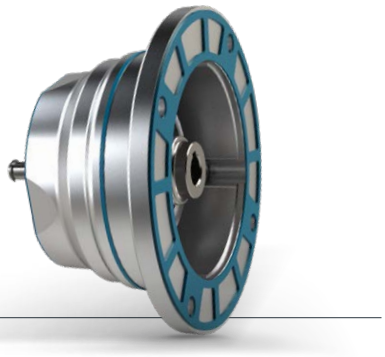
Integrated!
The stainless steel gear units are part of the SEW-EURODRIVE modular portfolio and use the same parts wherever possible.

Clean!
Thanks to the hygienic design and a surface that is resistant to acids and alkalis, these stainless steel gear units practically clean themselves.

Overview of the technology

Type		Helical gear units		Helical-bevel gear units				Compound gear units			SPIROPLAN® right-angle gear units	
Designation		RES..		KES..				KES..RES..			WES..	
With solid shaft	and B5 flange	RESF..		KESF..				KESF.. RES..			WESF..	
With hollow shaft (key)		–		KESA..				KESA.. RES..			WESA..	
With hollow shaft (key)	and B5 flange	–		KESAF..				KESAF.. RES..			WESAF..	
With hollow shaft (shrink disk)		–		KESH..				KESH.. RES..			–	WESH..
With hollow shaft (shrink disk)	and B5 flange	–		KESHF..				KESHF.. RES..			–	WESHF..
With hollow shaft (TorqLOC®)		–		KEST..				KEST.. RES..			–	WEST..
		Sizes										
Maximum output torque	80 Nm	–	–	–	–	–	–	–	–	–	19	–
	130 Nm	27	–	–	–	–	–	–	–	–	29	29
	200 Nm	–	37	–	–	–	–	–	–	–	39	39
	230 Nm	–	–	37	–	–	–	–	–	–	–	–
	450 Nm	–	–	–	47	–	–	47..37	–	–	–	–
	630 Nm	–	–	–	–	57	–		57..37		–	–
	870 Nm	–	–	–	–	–	67			67..37	–	–
Number of stages possible in gear unit		2- and 3-stage		3-stage				5- 6-stage			2- and 3-stage	

AES.. stainless steel adapters – designs and sizes



Potential uses / typical applications

Source:
JBT/alco, Bad Iburg

Food processing
Applying fine coating materials such as flour, powder, powdered spices, and sugar to products

Food packaging
High-precision portioning and filling of yogurt or pudding

Source:
Alpma, Rott am Inn

Food stirrer
Stirring milk and similar primary products in cheese production

The advantages at a glance

Smooth and clean!
The smooth surface is easy to keep clean and can also be cleaned with conventional high-pressure washers.

High quality!
The stainless steel (V2A, SS304) used for the housing is robust, ideal for casting, and can have centering features, bores, and threads machined into it without great difficulty.

Versatile!
Whether synchronous servomotors or asynchronous motors in IEC or NEMA sizes, the AES.. adapters are extremely versatile and can be used to attach third-party motors to RESF.., KES.., and WES.. stainless steel gear units.

Straightforward!
Using a simple tool, attached motors can be easily removed for inspection and maintenance purposes.

Overview of the technology

Motor type			IEC motor sizes						NEMA motor sizes					Servomotor sizes				
Stainless steel gear units	Flange		AESMS..						AESMS..					AESQS..				
	FG	D	63	71	80	90	100	112	56	143	145	182	184	80/1	100/4	115/3	115/5	140/3
Helical gear units																		
RESF27	100	120	×	×	×	×	–	–	×	×	×	–	–	×	×	×	×	–
RESF37	100	120	×	×	×	×	–	–	×	×	×	–	–	×	×	×	×	–
Helical-bevel gear units																		
KES..37	100	120	×	×	×	×	–	–	×	×	×	–	–	×	×	×	×	–
KES..47	130	160	–	–	×	×	×	×	×	×	×	×	×	–	×	×	×	×
KES..57	130	160	–	–	×	×	×	×	×	×	×	×	×	–	×	×	×	×
KES..67	130	160	–	–	×	×	×	×	×	×	×	×	×	–	×	×	×	×
Compound gear units																		
KES..47 RES37	100	120	–	×	×	×	–	–	×	×	×	–	–	×	×	×	×	–
KES..57 RES37	100	120	–	×	×	×	–	–	×	×	×	–	–	×	×	×	×	–
KES..67 RES37	100	120	–	×	×	×	–	–	×	×	×	–	–	×	×	×	×	–
SPIROPLAN® right-angle gear units																		
WES..19	85	105	×	×	×	–	–	–	×	–	–	–	–	×	×	–	–	–
WES..29	100	120	×	×	×	–	–	–	×	×	–	–	–	×	×	×	×	–
WES..39	100	120	×	×	×	–	–	–	×	×	–	–	–	×	×	×	×	–

ZN.. CM3C.. precision cycloidal gearmotors in compact mounting

Potential uses / typical applications

Robotics
- Precise travel of path curves
- High transmission accuracy and stiffness

Tripod
- Precision in medical technology
- Low vibration and noise level

Tie sheet inserter
Positioning of intermediate layers on a pallet stack by a handling robot. High dynamics and repeat accuracy with precise positioning.

The advantages at a glance

High load-bearing capacity and impact resistance Thanks to large contact surfaces, high pull-out rigidity due to the main bearing in the O configuration, and low inertia.

No mechanical clearance
Due to pre-tensioned cycloidal stage.

Simple installation
Complete drive, simple disassembly as a result of the adapter, easy to clean thanks to smooth surfaces, and very compact due to the enormous power density.

High-end positioning
Thanks to high torsional stiffness and low hysteresis losses.

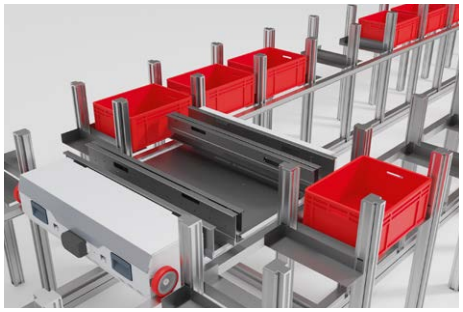
Overview of the technology

Gear unit type	ZN..31	ZN..41	ZN..51	ZN..61	ZN..71	ZN..81	ZN..91	ZN..101	ZN..111	ZN..121
CM3C.. servomotor	63S – 63L	63S – 71L	63S – 100L	63S – 100L	63S – 100L	63S – 100L	71S – 100L	71S – 100L	71S – 100L	100S – 100L
Gear ratio i	41 – 164.07	41 – 164.07	41 – 161	41 – 171	41 – 161	41 – 161	41 – 201	75 – 185	81 – 249	105 – 203.52
Nominal torque M_{a_N} Nm	341	573	834	1090	1390	1703	2225	5178	6813	9733
Peak torque M_{a_pk} Nm	612	1029	1500	1960	2500	3062	4000	9310	12250	17500
Emergency stop torque M_{a_es} Nm	1225	2058	3000	3920	5000	6125	8000	18620	24500	35000
Torsional rigidity c_{tr} Nm/arcmin	61	113	200	212	312	334	490	948	1620	2600
Pull-out rigidity c_{pr} Nm/arcmin	530	840	1140	1190	1400	1600	2050	5200	6850	9000
Hysteresis loss y arcmin	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Max. permitted dynamic breakdown torque M_{k_dyn} Nm	784	1660	2000	2150	2700	3430	4000	7050	11000	15000
Gear unit outer diameter mm	133	159	183	189	208	221	238	295	325	395

SPIROPLAN® right-angle gear units W..9/W..9HG

Potential uses / typical applications

Wastewater technology
- Sand trap with scraper
- Secondary clarifier with rotary scraper
- Sludge thickener



Mobile logistics applications
- Travel drives
- Load handling devices
- Pallet transfer shuttles

Vertical conveyors
- Lifting stations
- Transfer units

The advantages at a glance

Lightweight!
Particularly beneficial for lightweight machine designs and mobile applications.

Efficient!
Low energy costs thanks to energy-efficient gear units with a high level of efficiency across the entire gear ratio range.

Quiet!
Low noise development and quiet operation at any speed, for reduced noise levels at nearby workstations.

Future-proof!
Using the latest technologies in both the gear unit and motor ensures long-term availability and functionality.

Overview of the technology


Solid shaft with key and flange


Hollow shaft with keyway


Hollow shaft with key and flange


Hollow shaft with shrink disk and flange

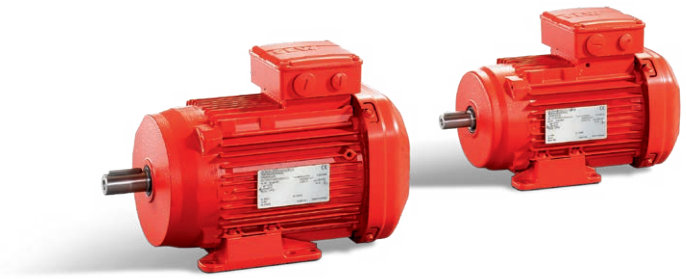

Hollow shaft with shrink disc


Hollow shaft with shrink disk in TorqLOC® design


Hollow shaft with keyway and torque arm

Gear unit size	W..19 (NEW)	W..29	W..39	W..49 (NEW)	W..59 (NEW)
M_{amax} Nm	80	130	200	400	600
Gear ratio i (W..9)	5.90 – 167.59	4.68 – 188.47	4.72 – 210.49	7.22 – 200.76	6.76 – 213.21
Gear ratio i (W..9HG)	–	203.19 – 2100.14	233.35 – 2355.20	224.25 – 2426.20	262.28 – 2123.38
Motor power range kW	0.09 – 0.75	0.12 – 1.1	0.12 – 1.5	0.12 – 3.0	0.18 – 4.0
Hollow output shaft diameter mm	18 / 20	20 / 25 / 30	25 / 30	30 / 35	35 / 40
Flange diameter mm	110 / 120	120 / 160	160 / 200	160	200

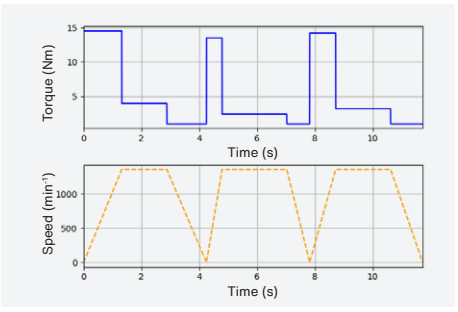
IE5 solutions – DR2C..A series synchronous motors



Potential uses / typical applications

Fine-tune your materials handling
Materials are moved fast and without any collisions. Saving energy – which used to be a secondary issue – is now of equal importance in the production process.

Use speed to your advantage
Optimize motor speed and, therefore, overall speed. To ensure energy-efficient conveying, only run motors as fast as you actually need to.



Customize load profiles
Put an end to the oversizing of drives and make better use of overload capacity. Optimize drive tasks in terms of time/energy, reduce idle periods, and put productivity and energy saving on an equal footing.

The advantages at a glance

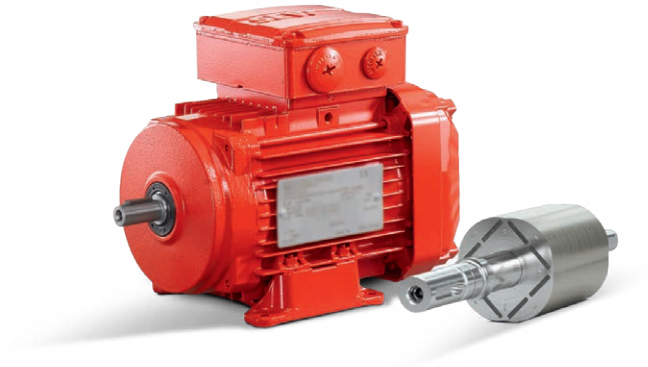
Maximum overall efficiency!
Efficient solutions utilize high-quality components and unlock further energy-saving potential in relation to system time management by making use of the range of speeds.

Standard-based efficiency!
IE5 energy efficiency is measured according to IEC 60034-2-3 and certified in the standard-based classification of the highest IE class with the maximum speeds from IEC TS 60034-30-2.

Strong options!
Many potential uses, thanks to two speed classes, the IE5 efficiency class, and the option of making greater use of the thermal capacity.

Part of a modular system!
Seven installation lengths in the 4-pole design and six installation lengths in the 6-pole design are part of the DR.. modular motor system – as DR2C..A – with all relevant options (connectors, encoders, brakes, forced cooling fans, etc.).

Overview of the technology

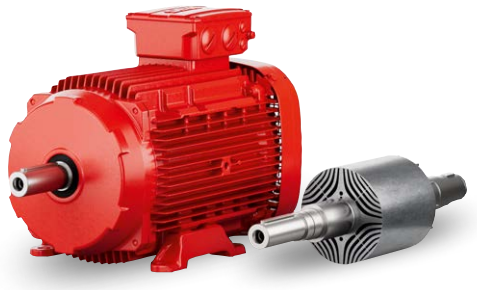


DR2C..A series synchronous motors (interior permanent magnets)
- Speed classes: 2000 and 3000 min^{-1}
- Overload capacity: 200 – 250%
- With or without speed feedback
- With or without MOVILINK® DDI digital interface
- Gearmotor or IEC foot-mounted and/or flange-mounted motor
- Approvals for the USA (UR) and/or Canada (CSA)
- Approval for China (CEL)

Size	Availability	M_{2000}	P_{2000}	M_{3000}	P_{3000}
		Nm	kW	Nm	kW
DR2C71MKAR4	Since May 2025	1.19	0.25	1.18	0.37
DR2C71MKA4	Since May 2025	1.77	0.37	1.75	0.55
DR2C71MSAR4	Since May 2025	2.65	0.55	2.40	0.75
DR2C71MSA4	Since Feb 2023	3.30	0.69	3.55	1.10
DR2C71MA4	Since Feb 2023	4.95	1.00	5.30	1.70
DR2C80MKA4	Since Feb 2023	7.10	1.50	7.60	2.40
DR2C80MA4	Since Feb 2023	10.8	2.30	11.30	3.50

Size	Availability	M_{2000}	P_{2000}	M_{3000}	P_{3000}
		Nm	kW	Nm	kW
DR2C90SA6	Since Nov 2023	17.3	3.60	18.5	5.80
DR2C90LA6	Since Nov 2023	22.5	4.70	22.5	7.10
DR2C100LSA6	Since Nov 2023	28.0	5.90	30.0	9.40
DR2C100LA6	Since Nov 2023	34.5	7.20	34.0	10.7
DR2C112MA6	Since Jul 2024	47.0	9.80	47.0	14.8
DR2C132SA6	Since Jul 2024	63.0	13.2	54.0	17.0

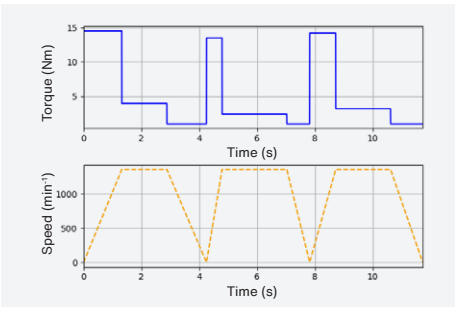
IE5 solutions – DR2C..U series synchronous motors



Potential uses / typical applications

Fine-tune your materials handling
Materials are moved fast and without any collisions. Saving energy – which used to be a secondary issue – is now of equal importance in the production process.

Use speed to your advantage
Optimize motor speed and, therefore, overall speed. To ensure energy-efficient conveying, only run motors as fast as you actually need to.



Customize load profiles
Put an end to the oversizing of drives and make better use of overload capacity. Optimize drive tasks in terms of time/energy, reduce idle periods, and put productivity and energy saving on an equal footing.

The advantages at a glance

Maximum overall efficiency!
Efficient solutions utilize high-quality components and unlock further energy-saving potential in relation to system time management by making use of the range of speeds.

Standard-based efficiency!
IE5 energy efficiency is measured according to IEC 60034-2-3 and certified in the standard-based classification of the highest IE class with the maximum speeds from IEC TS 60034-30-2.

Strong options!
Many potential uses, thanks to three speed classes in two system voltages and the IE5 efficiency class.

Part of a modular system!
Ten installation lengths in the 4-pole design are part of the DR.. modular motor system – as DR2C..U – with all relevant options (connectors, encoders, brakes, forced cooling fans, etc.).

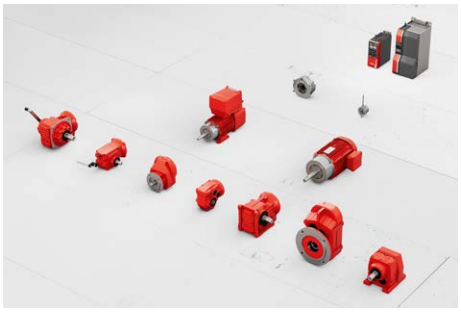
Overview of the technology

DR2C..U series synchronous motors (reluctance technology)
- Three speed classes
- Overload capacity up to 200%
- With or without speed feedback
- With or without MOVILINK® DDI digital interface
- Gearmotor or IEC foot-mounted and/or flange-mounted motor

Size Provisional details	**Availability**	U_{sys} = 400 V		U_{sys} = 460 V		U_{sys} = 400 V / U_{sys} = 460 V	
		M_{1500}	P_{1500}	M_{1800}	P_{1800}	M_{3000}	P_{3000}
		Nm	kW	Nm	kW	Nm	kW
DR2C160MU4	From Q1 2026	70	11	58	11	35	11
						47.5	15
						59	18.5
DR2C160LU4	From Q1 2026	96	15	80	15	–	–
DR2C180MU4	From Q1 2026	118	18.5	98	18.5	70	22
						96	30
DR2C180LU4	From Q1 2026	140	22	117	22	–	–
DR2C200LU4	From Q1 2026	191	30	159	30	118	37
						143	45
DR2C225SU4	From Q1 2026	236	37	196	37	–	–
DR2C225MEU4	From Q1 2026	286	45	240	45	–	–
DR2C250MU4	From Q1 2026	350	55	292	55	–	–
DR2C280SU4	From Q1 2026	477	75	398	75	–	–
DR2C280MU4	From Q1 2026	573	90	478	90	–	–

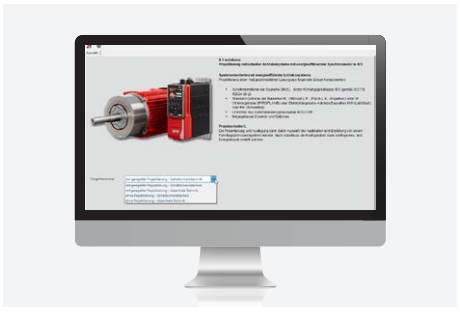
IE5 solutions in five easy steps

Potential uses / typical applications



Selection aid
This tool provides a preselection to help you identify your perfect drive system from an almost unlimited number of combinations of gear unit, motor, and power electronics.

Tried-and-tested tools
The SEW-Workbench planning and configuration tool has been expanded to include IE5 solutions, which makes the practical handling of IE5 complexity much easier.



Up to date
The tool with integrated IE5 solutions is revised several times a year and the updated version is made available to users.

The advantages at a glance

Always efficient!
Besides the highly efficient IE5 motors from the DR2C.. series, gear units with maximum levels of efficiency and inverters are also combined in the preselection.

Easy!
Predefined topologies make it easier to get started with IE5 solutions by simplifying the choice of components and configuration of drive systems with IE5 motors.

Always up to date!
All additions to the product portfolio as well as changes and modifications are made available for use with each release of the SEW-Workbench.

Maximum overall efficiency!
An optional energy report compares the various solutions once the configuration is complete. Alongside the investment itself, the procurement costs can therefore be factored into the purchasing decision.

Overview of the technology

Step 1
Basic selection of the topology and specification of the configuration – without application data or controlled with an inverter (control cabinet or decentralized)

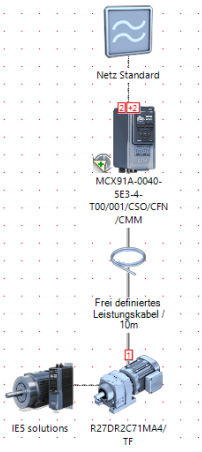
Step 2
In the case of a controlled configuration, the application data and type of application are entered and the application parameters are calculated.

Step 3
The optimum solution is determined from the preselected possible combinations with motors or gearmotors, and options are added as necessary.

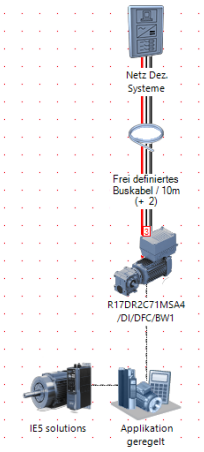
Step 4
The solution selected in Step 3 is then supplemented with the relevant preselected potential inverter solutions (control cabinet or decentralized) and options are added as necessary.

Step 5
Further preconfigured cable options are then available as add-ons for the solutions selected in Steps 3 and 4 – for power, encoder, brake, motor protection, or hybrid.

Control cabinet technology



Decentralized technology

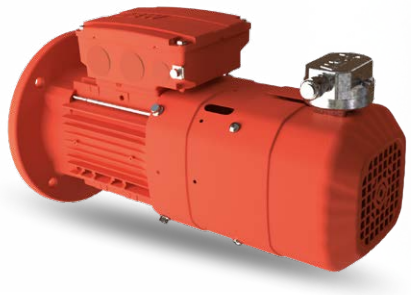


Parallel-shaft gear units		Right-angle gear units	
Helical gear units	R..07 – R..147	SPIROPLAN® right-angle gear units	W..19 – W..59
Parallel-shaft helical gear units	F..27 – F..127	Helical-bevel gear units	K..19 – K..49 K..37 – K..127

DR2C..A* series of synchronous motors (IPM technology), IE5 energy efficiency class			
Speed class, min^{-1}	2000	3000	Type
Power kW	0.25 – 2.3	0.37 – 3.5	DR2C71MKAR4 – DR2C80MA4
	3.6 – 13.2	5.8 – 17	DR2C90SA6 – DR2C132SA6

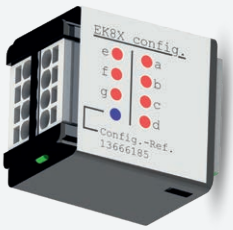
* DR2C..U (reluctance technology) in preparation.

EK8X cone shaft encoders: selectable resolution per motor revolution



Potential uses / typical applications

a	1
b	2
c	6
d	24
e	100
f	128
g	1024



Customize your resolution
The resolution per revolution can be adjusted, so the downstream electronics and analysis are not overworked.

Use speed to your advantage
Speed monitoring and feedback in terms of resolution and signal heights do not have to be specified at purchase. These are only defined when the system is set up.

Select the connection type
In the *K8* cone encoder series, only the EK8X offers the additional connection option of a terminal strip in the terminal box. This means the resolution can be determined using a wire break.

The advantages at a glance

Later-stage specification!
Standardized variant solutions are not a contradiction. Flexible setting options open up the possibility of setting the resolution and signal type at a later point.

Tried-and-tested design!
Tens of thousands of encoders from the *K8* series have proved their worth in every industrial sector and application, and are a key link to the control function.

Available worldwide!
The standardization associated with the *K8* encoder mechanics is available worldwide at SEW-EURODRIVE sites.

Part of a modular system!
Encoders in the *K8* series can be combined with all motor sizes in the DR.. series from sizes 63 to 355.

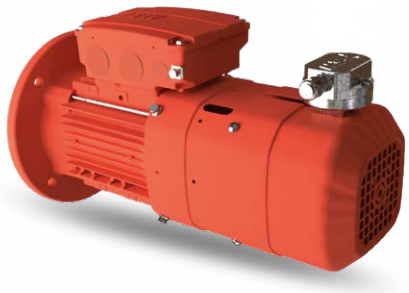
Overview of the technology

Mechanics	Unit	Value
Vibration resistance EN 60068-2-6	m/s^2	≤ 98.1 (f > 18.5 Hz)
Shock resistance EN 60068-2-27	m/s^2	≤ 981 (t = 6 ms, 18 pulses)
Maximum speed	min^{-1}	6000
Maximum angular acceleration	rad/s^2	10 000
Maximum cable length	m	Up to 300
Direction of rotation – clockwise		A before B when looking at the motor output shaft
Environment	**Unit**	**Value**
Degree of protection to EN 60529	IP	66
Installation altitude	m	≤ 4000
Permitted ambient temperature	°C	-30 to +60
OS[1] or KS[1] (optional[2])		OS1 to OS4 or KS
Connection	**Unit**	**Value**
Encoder connection cover (optional)	°	0, 90, 180, 270, axial; Resolution can be set via rotary switch
Terminal strip in terminal box (optional)	m	Resolution can be set via terminal

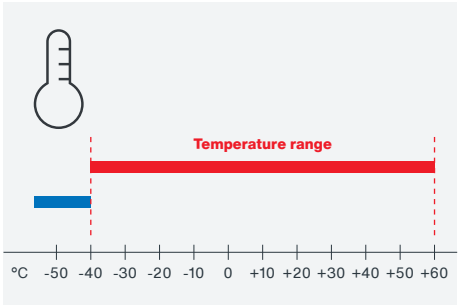
[1] Surface protection or corrosion protection
[2] In the complete design with motors from the DR.. series

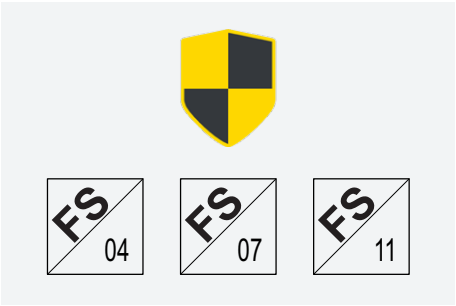
Electrics	Unit	Value
Signal output		HTL/TTL
Supply voltage V_B	DC V	4.75 to 30
Maximum current consumption I_{in}	mA	100 (at V_B = DC 7 V)
Maximum pulse frequency f_{pulse_max}	kHz	120
Incremental tracks, periods per revolution	A, B	1024 128 100 24 6 2 1
	C	1 – – – – – –
Coding the periods per revolution		g f e d c b a
Voltage output signal V_t Not differential (peak-to-peak)	TTL $V_B \le 6$ V	V_{LOW} = 0 V (≤ 0.5 V) V_{High} = 5 V (≥ 2.5 V)
	HTL $V_B > 6$ V	V_{LOW} = 0 V to 3 V V_{High} = (V_B to 2.5 V) – V_B
Load resistance/load current R_L/I_L Differential	Ω $V_B \le 6$ V	120 ± 10%
	kΩ $V_B > 6$ V	1 to 3
Voltage output signal V_{t_C} Not differential C, #C (peak-to-peak)	DC V $V_B \le 6$ V	V_{LOW} = ≤ 0.5 V_{High} = ≥ 2.5
	DC V $V_B > 6$ V	V_{LOW} = ≤ 3 V_{High} = ≥ V_B – 2.5
Signal width track/C	° electric	90
Signal logic track/C		C = log 1, when A = B = log 1

AK8H cone shaft encoders: absolute encoders down to -40 °C – with FS[1)]



Potential uses / typical applications





Extended combination options
Thanks to the AK8H, the absolute encoder with cone shaft portfolio can now also be used in temperatures ranging from -40 °C to +60 °C.

Functionally safe
Functional safety (FS) motion profiles can now also be used down to - 40 °C thanks to the AK8H absolute encoder.

Choose your connection type
The 7 connection options of the AK8H cone encoder are also available down to -40 °C. Other available options: Connection via cover, M23 connector or terminal strip in the terminal box.

The advantages at a glance

Absolute resolution!
The type-AK8H absolute encoders resolve motor speed at 2048 sin/cos per revolution with a multi-turn capability of 4096 revolutions. The electrical interface is HIPERFACE®.

Tried-and-tested design!
Tens of thousands of encoders from the *K8* series have proved their worth in every industrial sector and application, and are a key link to the control function.

Available worldwide!
The standardization associated with the *K8* encoder mechanics is available worldwide at SEW-EURODRIVE sites.

Part of a modular system!
Encoders from the *K8* series can be combined with sizes 63 to 355 of the DR.. motor series.

Overview of the technology

Mechanics	Unit	Value
Vibration resistance EN 60068-2-6	m/s^2	≤ 98.1 (f > 18.5 Hz)
Shock resistance EN 60068-2-27	m/s^2	≤ 981 (t = 6 ms, 18 pulses)
Maximum speed	min^{-1}	6000
Maximum angular acceleration	rad/s^2	Up to 10 000
Maximum cable length	m	Up to 300
Direction of rotation – clockwise		A before B when looking at the motor output shaft

Environment	Unit	Value
Degree of protection to EN 60529	IP	66
Installation altitude	m	≤ 2000
Permitted storage temperature	°C	-15 to +70
Permitted ambient temperature	°C	-40 to +60

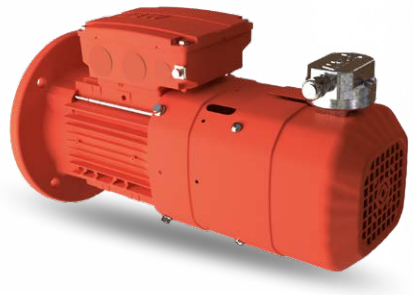
Functional safety	Unit	Coding value
Safe encoder mounting	FS	04[1)] / 07[2)] / 11[3)]

[1)] At the motor
[2)] At the motor with safety functions in the decentralized inverter
[3)] At the motor with safe brake

Electrics	Unit	Value
Signal output		sin/cos + HIPERFACE®
Supply voltage V_B	DC V	7 to 12
Maximum current consumption I_{in}	mA	80
Maximum pulse frequency f_{pulse_max}	kHz	200
Sin/cos incremental tracks, periods per revolution	A, B	1024
	C	–
Phase offset A:B; #A:#B; n = constant	°	90 ± 2
Sin/cos voltage output signal V_{t_diff}, differential (peak-to-peak) A' = A - #A ; B' = B - #B	V	1 ± 10%
Sin/cos voltage output signal V_t, not differential (peak-to-peak)	V	0.5 ± 10%
Sin/cos signal level output, Offset nominal against 0V	V	2.5 ± 0.3
Number of revolutions		4096
Electronic nameplate	Byte	HIPERFACE®: 1792

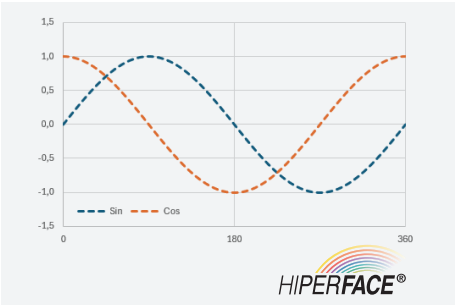
Connection	Unit	Value
Encoder connection cover	°	**0**, 90, 180, 270, axial
M23 connector (optional)	°	+90 or -90 to terminal box

Cone shaft encoders: in combination with motor size DR..63



Potential uses / typical applications

Extended combination options
The portfolio of encoders with cone shafts can also be combined with motors in size DR..63. This means the same encoders are available for sizes ranging from 63 to 355.



Use speed to your advantage
Speed measurement and feedback in terms of resolution and signal heights covers seven different interfaces, four of which are also available in functional safety design.

Choose your connection type
Three of the seven types of connection options for the encoders with cone shaft are also available for size DR..63.

The advantages at a glance

Space-saving resolution!
The small size 63 in the DR.. series with low rated power no longer rules out high-resolution speed measurement or absolute positioning – thanks to the encoders of the *K8* series.

Tried-and-tested design!
Tens of thousands of encoders from the *K8* series have proved their worth in every industrial sector and application, and are a key link to the control function.

Available worldwide!
The standardization associated with the *K8* encoder mechanics is available worldwide at SEW-EURODRIVE sites.

Part of a modular system!
The encoders in the *K8* series can be combined with all motors in the DR.. series from sizes 63 to 355.

Overview of the technology

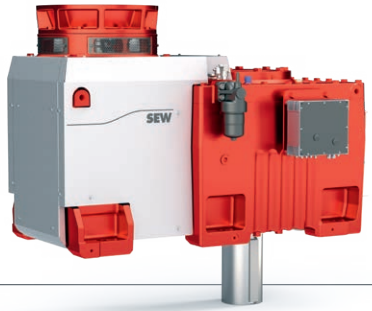
DR.. motor size			63	71 – 355
Type	**Interface**	**Resolution**		
EK8S	Sin/cos	1024	×	×
EK8R	TTL	1024 ppr	×	×
EK8C	HTL/TTL	1024 ppr	×	×
EK8X	HTL/TTL	1 – 1024 ppr	×	×
RK8M	Resolver	8192	×	×
AK8W	Sin/cos + RS485	2048 / 65 536	×	×
AK8Y	Sin/cos + (M)SSI	2048/4096	×	×
AK8H	Sin/cos + HIPERFACE®	1024/4096	×	×
EK8S (in FS[1])	Sin/cos + RS485	1024	×	×
AK8W (in FS[1])	Sin/cos + RS485	2048 / 65 536	×	×
AK8Y (in FS[1])	Sin/cos + (M)SSI	2048 / 4096	×	×
AK8H (in FS[1])	Sin/cos + HIPERFACE®	1024 / 4096	×	×

DR.. motor size		63	71 – 132S	132M/L – 180	200 – 355
Connection	**Position**				
Cover on the hood	0°, 90°, 180°, 270°	×	×	×	×
Cover on the hood with M23[2] on a short cable	0°, 90°, 180°, 270°	×	×	×	×
M23[2] on cable	+90° or -90°	×	×	×	×
Axial Deckel44	B-side	–	×	×	×
Axial cover with M23[2] on a short cable	B-side	–	×	×	×
M23[2] installation socket at the terminal box	0°, 90°, 180°, 270°	–	×	–	–
Terminal strip in the terminal box	0°, 90°, 180°, 270°	–	×	×	–

[1] FS = functional safety
[2] M23 = M23 connector (male)


IoT Suite
SEW

Application gear unit agitator – X.e series



Potential uses / typical applications

Chemicals

Plastics industry

Open pit mining

The advantages at a glance

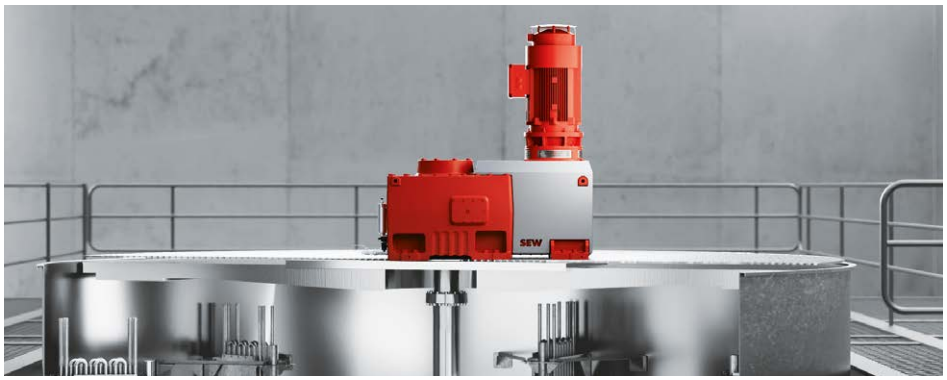
Powerful
An optimized housing and enlarged output shafts ensure that the drives can withstand even the most extreme loads.

Customized!
Shaft diameters and rolling bearings can be selected to suit the respective loads.

Reliable operation
The fail-safe design ensures with 100% certainty that no oil will leak out.

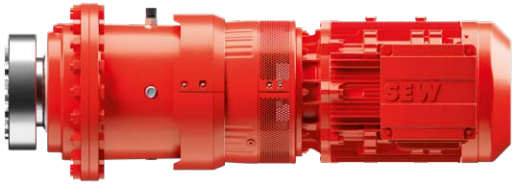
Simple maintenance
A service-friendly design (including pop-up valves and symmetrically arranged gear unit feet) makes installation and servicing work both simple and safe.

Overview of the technology



Gear unit	Gear ratio i	Nominal torque M_{N2} kNm
X..150e/HM	29.2	25 – 112
X..170e/HM	47.5	25 – 112
X..190e/HM	69	22.5 – 100
X..210e/HM	96	22.5 – 100
X..220e/HM	117	20 – 400
X..240e/HM	165	20 – 400
X..260e/HM	217	20 – 400
X..280e/HM	285	20 – 400

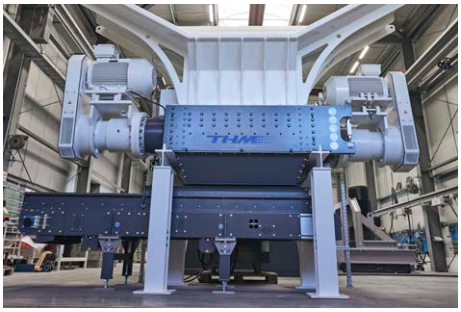
Generation P2.e planetary gear units



Potential uses / typical applications

Crusher

Screw press



Shredder

The advantages at a glance

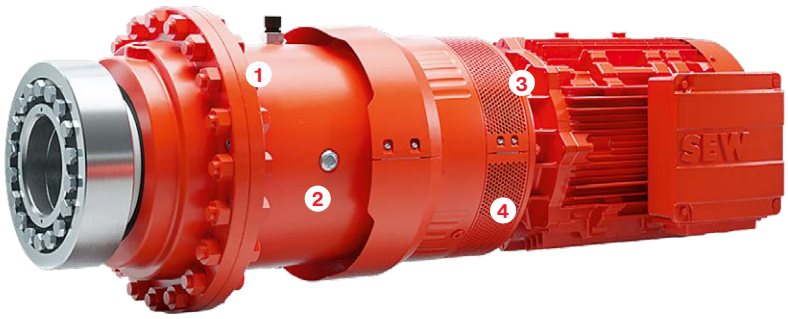
Compact
The P2.e series of planetary gear units makes the most of tight installation spaces in machines and systems.

Powerful
Generation P2.e has a very high thermal rating and therefore requires no additional external cooling.

Flexible
Together with a wide range of options for the input and output sides, combining this solution with our modular motor system creates a considerable degree of freedom when it comes to the machine design.

Simple
A variety of mounting types and output shafts makes it quick and easy to connect the machine.

Overview of the technology



1 **Large gear ratio range**
The large gear ratio range of i = 15.2 to 332 makes the gear units suitable for all kinds of applications.

2 **Direct bearing arrangement**
With a direct bearing arrangement and no outer ring, the new full complement cylindrical roller bearing offers the optimum combination of a long bearing service life and compactness.

3 **Variable motor interfaces**
A variety of options – from direct mounting of SEW-EURODRIVE motors to input covers and IEC motor adapters – ensures a high degree of flexibility.

4 **Motor mounting with integrated fan**
Fans can be integrated both when using direct motor mounting and when opting for the IEC motor adapter and the open shaft end – for a best-in-class thermal rating.

Gear unit design	Nominal torque M_{N2} kNm	Gear ratio i
P..**002**e	24.8	15.2 – 332
P..**012**e	36.8	
P..**022**e	51.2	
P..**032**e	69.6	
P..**042**e	100.2	
P..**052**e	124	
NEW P..**062**e	185	
NEW P..**072**e	245	
NEW P..**082**e	359	

P2.e-X1KP.e planetary gear units with helical-bevel preliminary stage

Potential uses / typical applications

Paper and pulp industry

Food industry

Recycling industry

The advantages at a glance

Compact
The P2.e-X1KP.e series of planetary gear units makes the most of tight installation spaces in machines and systems.

Robust
Its durable direct bearing arrangement, gearing with high fatigue strength, and housing with optimized rigidity make this gear unit the ideal solution for heavy-duty applications that are subject to high loads.

Versatile
Together with options for the input and output sides, combining this solution with our modular motor system creates a considerable degree of freedom when it comes to the machine design.

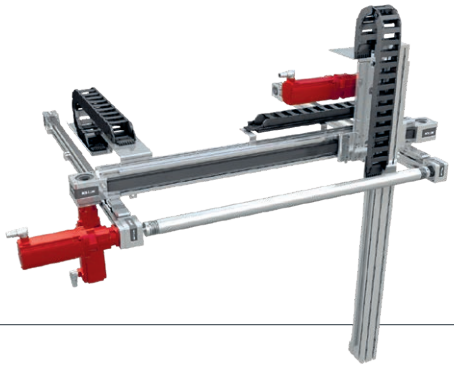
Flexible
A wide range of gear ratio and size combinations between the preliminary stage and planetary gear unit enable maximum flexibility and resistance – even under challenging operating conditions.

Overview of the technology

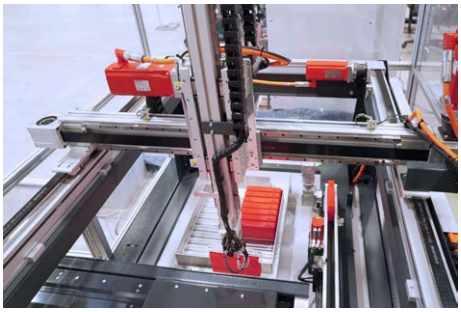
The 3-stage planetary gear unit in the **P2.e-X1KP.e** series offers numerous finely graduated gear ratios ranging from 22.4 to 142 – perfect for challenging applications that call for compact gear units and excellent reliability.

Size	Nominal torque M_{N2} kNm
P2P.**002**e X1KP..e	24.8
P2P.**012**e X1KP..e	36.8
P2P.**022**e X1KP..e	51.2
P2P.**032**e X1KP..e	69.6
P2P.**042**e X1KP..e	100.2
P2P.**052**e X1KP..e	124
NEW P2.**062**e X1KP..e	185.7
NEW P2.**072**e X1KP..e	245.7
NEW P2.**082**e X1KP..e	359.4
NEW P.**092** X1KP..e	423
NEW P.**102** X1KP..e	500

Solutions for gantry robots

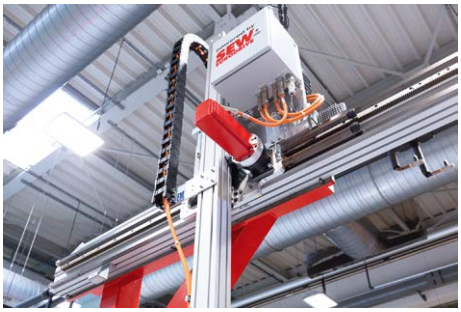


Potential uses / typical applications



Handling applications
e.g. in battery production, where precision gantry robots place individual cells into trays.

Order picking
e.g. in a storage table – products are placed gently and with precision into containers as they pass.



Production/processing
Suitable for use in any cuboid space, gantry robots adapt their dimensions and load bearing capacity to the application.

The advantages at a glance

Flexible!
Make planning easier – shorten startup. The software modules of the MOVIKIT® bundle can help you with this. These modules offer every opportunity to coordinate the robot's functionality with the application requirements.

Simple!
The MOVIKIT® Robotics software module offers a robot controller with 3D simulation and integrated user interface.
No PLC programming expertise is required for startup.

User-friendly!
The MOVISUITE® RobotMonitor user interface is always the same, whether startup is conducted using a PC, tablet, or handheld device. This makes it more user-friendly during operations and service.

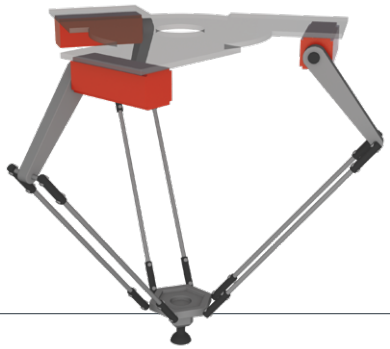
Customized for a perfect fit!
The preconfigured components have a modular design. As a result, the application can be flexibly adapted and expanded easily – to any specific requirements.

Overview of the technology

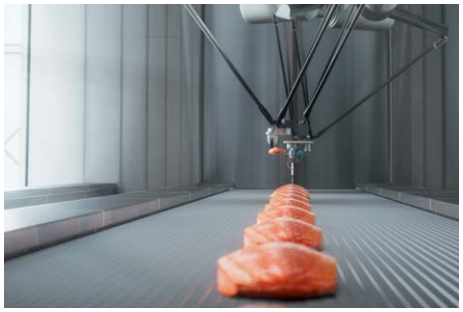
Collaboration between SEW-EURODRIVE and linear technology specialist Rollon GmbH has produced a completely new offering for implementing gantry robots. This joint package includes servo gearmotors, electronics, control technology, and the necessary software, resulting in a simple, plug-and-play solution. It has as much standardization as needed, but is always application-specific and custom-designed. The MOVIKIT® Robotics software module is at the heart of the solution and offers a fully programmed robot controller with integrated user interface.

You benefit from a partnership that closely networks teams of experts, thus reducing the number of contacts you have to deal with to a minimum. Not only does this collaboration speed up your projects, it also enables you to cut total costs considerably. SEW-EURODRIVE and Rollon stand for rapid processes, quick coordination, and fast delivery times.

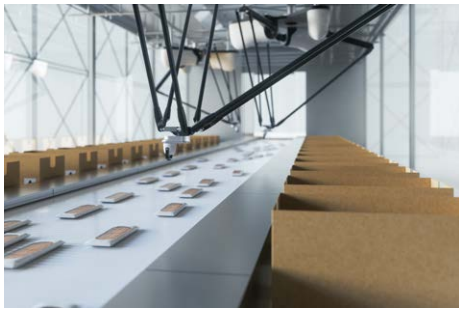
Solutions for delta robots



Potential uses / typical applications



Food/beverages
in fish and meat processing, e.g. cutting and filtering; available in standard or hygienic design for special food areas



Packaging technology
for precise pick-and-place tasks and applications with high cycle rates, e.g. filling, positioning, gluing, and sorting of secondary and end packaging

Intralogistics
Arranging or grouping of small to large loads in handling systems or in order picking

The advantages at a glance

Simple!
Parameterization instead of programming, thanks to MOVIKIT® Robotics software modules incl. 3D simulation. The pick-and-place control modules are PackML-compatible.

Customized!
Our solutions offer open interfaces for integrating common peripherals such as camera systems and grippers. They enable you to determine the value creation within your application yourself.

Precise!
Thanks to a high level of positioning accuracy and coordinated mechanics and software, it is possible to achieve a high degree of repeatability.

Energy-efficient!
Component packages that are optimally tailored to the application ensure resource-conserving, efficient solutions.

Overview of the technology

Our modular delta robot solution – consisting of mechanical, axis, and software packages – enables rapid assembly and simple startup without specific programming expertise in robotics. The special kinematics enable precise pick-and-place tasks at high speed. We help you with selection and design for seamless integration into your production processes.

Designation	Number of arms	Optional additional axes	Hygienic design [3]	Work envelope[1][2] mm²	Payload kg	Cycle min⁻¹
D2	Two	Rotational axis	No	1000 × 342	30	50
			No	1500 × 347	30	45
D4	Three	Rotational axis	No	500 × 200	2	200
			Yes	700 × 355	3	200
			Yes	900 × 530	3	200
			Yes	1100 × 500	3	180
			Yes	1300 × 680	3	150
			Yes	1600 × 810	2.5	150
D5	Three	Rotational axis, tilt axis	No	800 × 250	1.5	130
			No	1300 × 250	1.5	120

[1] Two arms: Width × height
[2] Three arms: Diameter × height
[3] Mechanical elements also available in stainless steel.

Rail-guided systems with ASi-5

Potential uses / typical applications

Electrified monorail system (EMS)

Electric floor conveyer

Pallet transfer shuttle

The advantages at a glance

Connected!
State-of-the-art ASi-5 communication technology makes it easy to integrate devices with high volumes of data and large parameter sets.

Adaptable!
Customized project planning and flexible adaptation for both hardware and software.
Based on IEC 61131-3 (CODESYS) with MOVIKIT® RailGuidedSystems software modules.

Proven technology!
Approved solutions with a functional warranty based on the MOVI-C® modular automation system – simply wire, configure and go!

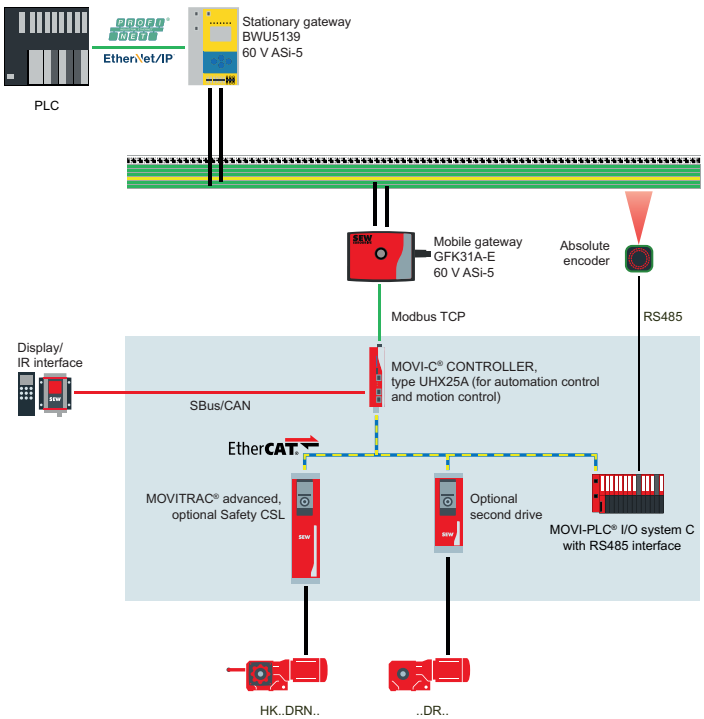
Available worldwide!
Automation solution with global availability, local service, and spare parts kept in stock at SEW-EURODRIVE sites.

Overview of the technology

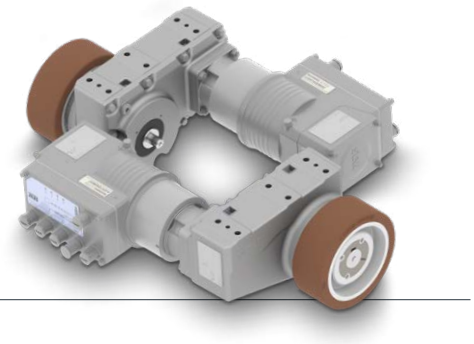
ASi-5 technology sets new standards in communication technology and expands the potential uses of the decentralized MOVI-C® modular automation system. When used as rail bus communication for system solutions, ASi-5 facilitates quick startup and easy integration of devices.

Stationary
- Open-system connection of the stationary, higher-level system controller to the ASi-5 DC 60 V railbus device:
  - Possible communication interfaces: PROFINET, EtherNet/IP™
  - Up to 2 track segments of max. 200 m each
  - Up to 40 mobile devices
  - Short communication cycle of 40 ms at 17 bytes per vehicle
- Switch control (optional)

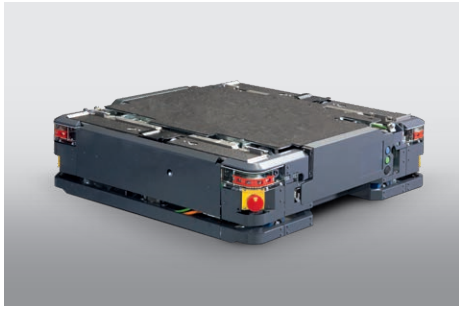
Mobile
- Preconfigured ASi-5 gateway for quick startup and reliable communication
- MOVI-C® CONTROLLER of type UHX25A with MOVIKIT® RailGuidedSystems application software module
- Inverter from the MOVI-C® modular automation system, e.g. MOVITRAC® advanced
- Monorail system gearmotors that can be decoupled mechanically
- Display with infrared interface for manual operation (optional)



Travel drives for mobile systems FL.9 series



Possible uses / Typical applications



Mobile systems: AGV/AGVS

Shuttles in warehouse logistics

Pallet transfer carriage

The advantages at a glance

Variant-rich!
- Wide gear ratio range
- Multiple sizes
- Extensive motor portfolio
- Individual wheel selection

Efficient!
- High efficiency
- Long service life
- Cost-optimized
- Easy to maintain

Application-specific!
- Optimum installation space
- Small vehicle width
- Gear axes are optimized for coaxial and overhung loads
- Ideal for using ELV technology

Automation from a single source!
- Extensive drive portfolio
- Flexible control and safety technology
- Preconfigured software modules
- Simple startup and comprehensive service

Overview of the technology

Gear unit series				
Size		**FL09**	**FL29***	**FL39***
Gear ratio range		6 – 48	7 – 140	7 – 128
Nominal output torque		40 Nm	130 Nm	200 Nm
Nominal wheel load		7500 N	10000 N	15000 N
Wheel diameter	minimum recommended	120 mm 200 mm	150 mm 200 mm	180 mm 250 mm
Mounting option		Top baseboards (series), flange on output (on request)		
Options		– Mounting the encoder on the output shaft – Wheel according to customer request or from the preferred series by SEW-EURODRIVE		
Gear unit type		Helical gear unit in two-part aluminum housing		
ELV motor portfolio		DCA63S – DCA80M / CMP50S/M/L / CM3C63M		
Electronics portfolio ELV		MOVIMOT® performance ELV compact extra-low voltage drive – Nominal power 180 – 503 W		
		Multi-axis servo controller of type SCM – System power up to 1.9 kW		

Optional second shaft end
e.g. for encoder mounting

Versatile wheel interface

* Product announcement

MAXOLUTION®
Logistics assistant for pallet transport

Possible uses / Typical applications

Transporting of pallets
Internal transportation of various pallet types.

Plate transfer with roller conveyor
The integrated longitudinal conveyor allows load to be transferred to a station on both sides.

Processes with high capacity utilization needs
Intelligent, contactless charging in the process enables effective utilization of the overall system.

The advantages at a glance

Robust and flexible!
Cross-industry applications offer flexibility. The robust design is ideal for demanding conditions, For example, in the building materials industry.

Individual and precise!
The integrated longitudinal conveyor enables precise load transfer on both sides to a station with a defined, customer-specific transfer height.

Well networked!
Interoperable VDA 5050 communication interface for easy integration into the fleet manager.

Modular design!
From the MAXOLUTION® modular technology system for versatility and maximum availability.

Overview of the technology

Dimensions
L = 1400 mm, W = 1000 mm, H > 520 mm

Speed
Max. 1.5 m/s

Drive concept
Middle differential drive

Payload
1200 kg

Energy consumption
Inductive charging with MOVITRANS® line

Weight
800 kg

Load handling device
Longitudinal conveyor, incl. load securing and gap control (functional safety)

Energy storage
Lithium-ion battery or capacitor storage

Navigation
Free navigation, inductive track guidance, positioning with RFID

Control cabinet engineering and production

Potential uses / typical applications

Applications in intralogistics
- Storage/retrieval systems
- Horizontal materials handling technology
- Hoists

Handling applications
- Gantry/bridge cranes
- Palletizers

Other applications
- Custom machine design
- Test systems
- Screw pumps

The advantages at a glance

Risk minimization!
On-time delivery of a turnkey, all-in-one solution.

Savings!
Process costs are lowered, time outlay is reduced.

Maximum efficiency!
Optimally coordinated individual components are assembled to create a cost-effective turnkey solution.

Cost and time savings!
Certification requirements for the North America region are met.

Overview of the technology

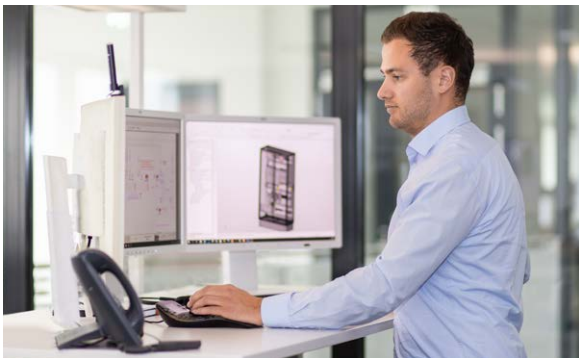
Control cabinet engineering
- Incorporation of customer-specific requirements
- Production of control cabinet installation concept and the functions it requires
- Planning of circuit diagram
- Creation of 3D design
- Configuration, including the required safety elements
- Climate-based calculation of the cooling capacity in the control cabinet

Control cabinet production
- Installation and machining of control cabinet housing
- Wiring and routine test of the control cabinet
- Control cabinet acceptance inspection, including field labeling for the North American region (to UL 508A and CSA C22.2), by SEW-EURODRIVE

Planning and engineering
- Preparation of control cabinet documentation
- Preparation of parts list, risk assessment, circuit diagram, test protocols, and verification calculations
- Operating instructions and declaration of conformity in line with technical standards and directives

Project management
- Operational project management to ensure compliance with parameters: deadlines, costs, quality/monitoring
- Interface management and coordination of external work packages
- Creation and coordination of project documentation
- Overall contract management

Optional
- Connecting the control cabinet's power supply / assembling and securing the control cabinet at the relevant location



Reforming

Potential uses / typical applications

Reforming for third-party inverters, too

Reforming to prevent capacitor explosions

Labeling of checked frequency inverters

The advantages at a glance

Available fast!
Increased system availability thanks to frequency inverters in storage that are ready for immediate use.

Safe startup!
Avoid the risk of capacitor explosion and damage to other components during startup.

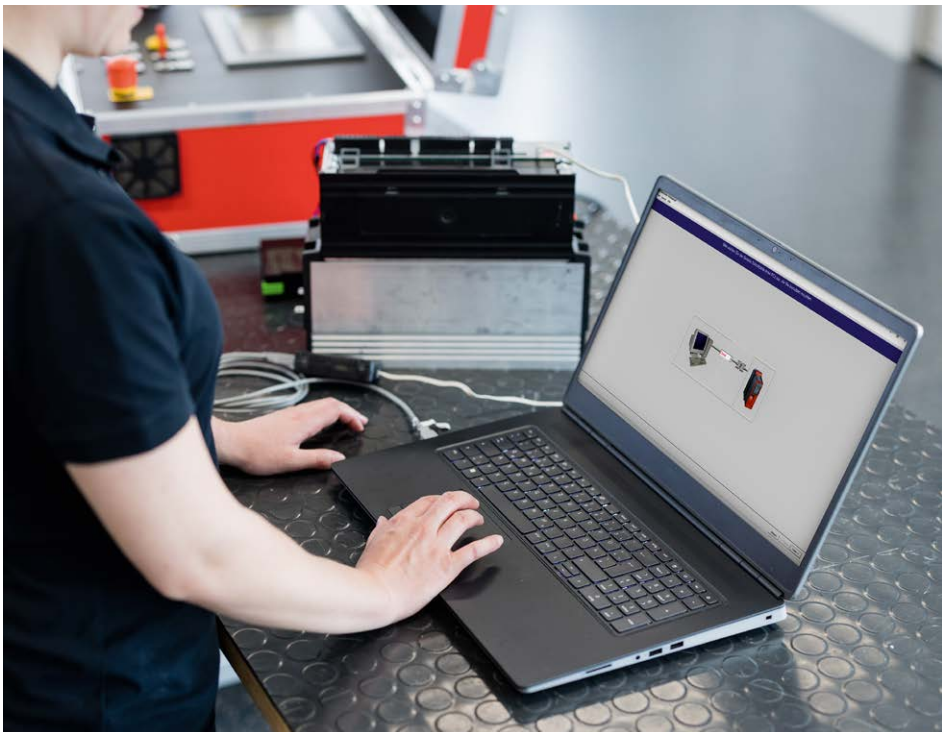
Minimized outlay!
Reduced spare parts procurement because frequency inverters have been formed in good time.

Seamless documentation!
Certainty of meeting auditing requirements thanks to verification and documentation of completed maintenance activities.

Overview of the technology

- Inspection of the frequency inverters to check for external surface damage, dirt, and missing parts
- Rapid and gentle regeneration of the oxide layer through a continuous gradual increase in voltage and continuous condition monitoring for the DC link capacitors
- Discharging the DC link capacitors
- Clear labeling of the checked frequency inverters together with an indication of the next forming date
- Creation of a service report including any necessary recommendations for action

Optional
Following consultation, a firmware update can be performed for SEW-EURODRIVE frequency inverters, if this is technically possible.



Electronics repairs

Potential uses / typical applications

Control technology

Control cabinet technology

Decentralized drive technology

The advantages at a glance

Short downtimes!
Our wide service network responds rapidly and has access to large quantities of original spare parts. Exceptionally short repair times can be achieved with an express order.

High-quality repairs!
Our repair service installs only original spare parts. In the case of a new-value repair, we provide a 24-month warranty for defects.

Central contact person!
Full implementation of the repair service for our drive technology and components from other manufacturers.

No repair more expensive than a new product!
If requested, a cost estimate can also state the price of an equivalent new product.

Overview of the technology

Services
Our repair service for electronic components incorporates various elements such as emergency repair and new-value repair with a 24-month warranty for defects on all drive components.

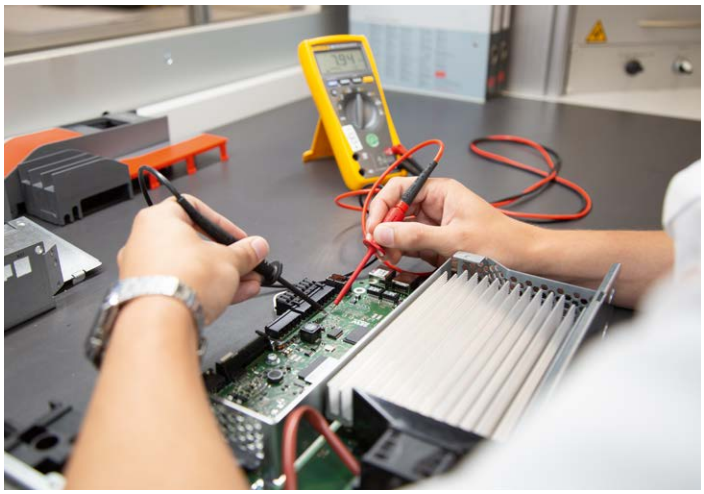
When things have to move fast, order an express repair. What's more, our repair service naturally also covers modifications if your drive technology has to be adapted to new system conditions. You can also utilize our Pick-Up and Delivery Service to reduce your logistics outlay.

Service available for SEW-EURODRIVE inverters, control technology, options, and accessories (e.g. line filters, line chokes, braking resistors, option cards) as well as for inverters from other manufacturers by arrangement.

Example
New-value repair (24-month warranty for defects covering the entire drive technology component)

- Restoration of the function of the drive technology component
- Inspection of the drive technology component
- Removal of parts subject to wear (e.g. electrolytic capacitors)
- Inspection of all electrical components with an impulse voltage tester, and replacement if defective
- Installation of the new spare parts
- Final inspection of the assembly, including functional check

Optional
- Modification or extension of the function (e.g. activating different technology levels)
- Repair by express order within one to three days (by arrangement)



You can reach us through our 24h Service Hotline.

Mobile vibration analysis

Potential uses / typical applications

Cement industry
- Crushers/mills
- Conveyor systems
- Fans

Logistics
- Cranes
- Materials handling equipment

Process industry
- Pumps
- Stirrers/mixers
- Fans

The advantages at a glance

Reduce!
Lower downtime costs thanks to early detection of damage and weak points.

Avoid!
Avoid production disruption, since measurements are taken while operations are ongoing.

Optimize!
Optimize vibration behavior in the drive technology and drive peripherals thanks to a holistic assessment.

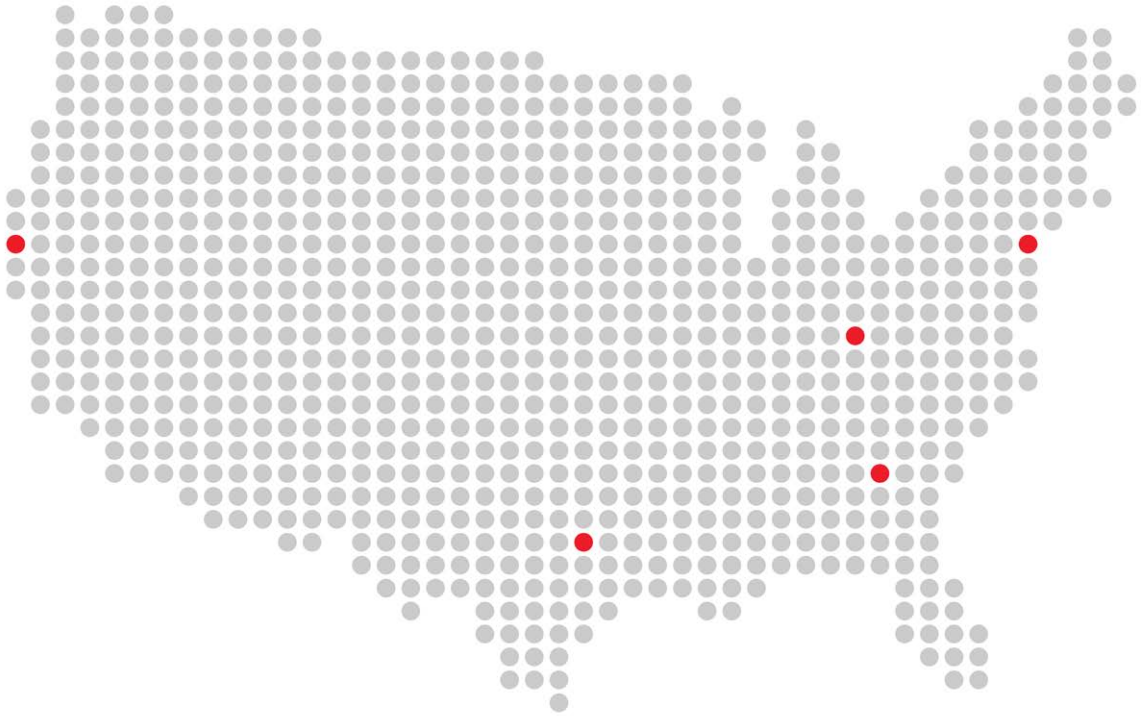
Plan!
Plan maintenance activities for the drive technology and for individual parts showing early signs of damage.

Overview of the technology

- Inspection and photographic documentation of the machine or system
- Determination of the operating conditions, e.g. environmental influences, shift patterns
- Inspection for external damage, wear and soiling of the drive technology component
- Definition, marking, and photographic documentation of the measuring points
- Performing vibration measurement on the entire drive technology component, including influential drive peripherals such as couplings and fans, if necessary

- Processing and analysis of the measured vibration data and comparison with the relevant standards
- Determination of the condition of the drive technology components inspected and formulation and documentation of any recommended courses of action that may be necessary
- Drawing up of a service report based on a detailed frequency analysis for each measuring point and taking account of any damage, wear, or other anomalies discovered
- Creation of a trend analysis based on a comparison with previous vibration analyses

Notes



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