SEW EURODRIVE

Efficient drive solutions for logistics

For an industry that connects

+H2

Regalbediengerät: modular – dynamisch – effizient
Storage/retrieval system: modular – dynamic – efficient

bis zu up to **40 %**	weniger Energieverbrauch less energy consumption
bis zu up to **80 %**	kürzere Inbetriebnahme shorter startup times
um den Faktor by a factor of **8**	kleinere Netzleistung lower grid power

CO₂ REDUCTION

IE5

SEW

Drive solutions that impress.

For an industry that moves.

Sorting, storing, handling, transporting, distributing: The logistics industry moves a great deal – in the truest sense. SEW-EURODRIVE is the motor for that movement. That is not just because we are a market leader in technical terms in drive and automation technology, but also because, for more than 90 years, we have been giving everything we have to always develop the best possible solutions for our customers.

We look at the bigger picture in everything we do:

→ As an owner-operated family enterprise that takes quality and responsibility personally.
→ As a leading innovator that breaks new ground with pioneering ideas and plays a major part in shaping the future of drive technology.
→ And as a dependable partner that is always at your side with wide-ranging advice and services, no matter what your wants and needs.

We are your reliable partner and always near.

55 countries	> 22 000 employees	110 000 active customers	20 million individual parts/ month at > sites	525 600 minutes a year, we are available for you	Solutions for many different industries

Major challenges call for great solutions.

In industry and trade, nothing works without logistics. It plans and controls processes along the entire value creation chain of a product, from raw materials to the door of the end user – even beyond, if you include the recycling cycles.

In a world that is undergoing massive change in many areas, logistics must also change to meet new challenges.

The major trends of our time are setting the pace:

Growth and globalization

They indicate uncertain times for the field of logistics. This is because more and more complex, international production networks are being created. The result is a rapid increase in global flows of goods and foreign trade. At the same time, the requirements placed on suppliers are becoming increasingly demanding. Goods need to be delivered "just in time". **Global uncertainties mean that logistics have to be able to react quickly to changes in capacity.** This calls for flexible system concepts. In order to compensate for the lack of capacity, productivity must also be increased significantly and systems must be available 24/7.

E-commerce and online trade

have been booming for years. Consumers are gaining more and more influence, for example through new demands such as real-time shipment tracking, including influence on the delivery location, "same-day delivery", or demands for more sustainability, such as lower CO_2 emissions. The prerequisite for this is continuous connectivity and the networking of machines and processes to make data available at any time and to be able to use it intelligently. **This demands the creation of new structures, both physically and digitally.**

Ecology and sustainability

have become important issues due to accelerating climate change. Politicians are demanding clear reductions in CO_2 emissions and are responding with higher levies. **This makes energy saving even more important for companies.**

Digitalization

is an important driver of innovation. It is simultaneously both a challenge and a solution. After all, intelligent technologies are taking on more and more functions in an increasingly complex system landscape, whether it is a question of transparency, automation, or process optimization. Even though many companies are still in the early stages, **digitalization is the key to a successful future.** New concepts for data processing and provision via cloud solutions make it possible to start using intelligent data.

Our solutions
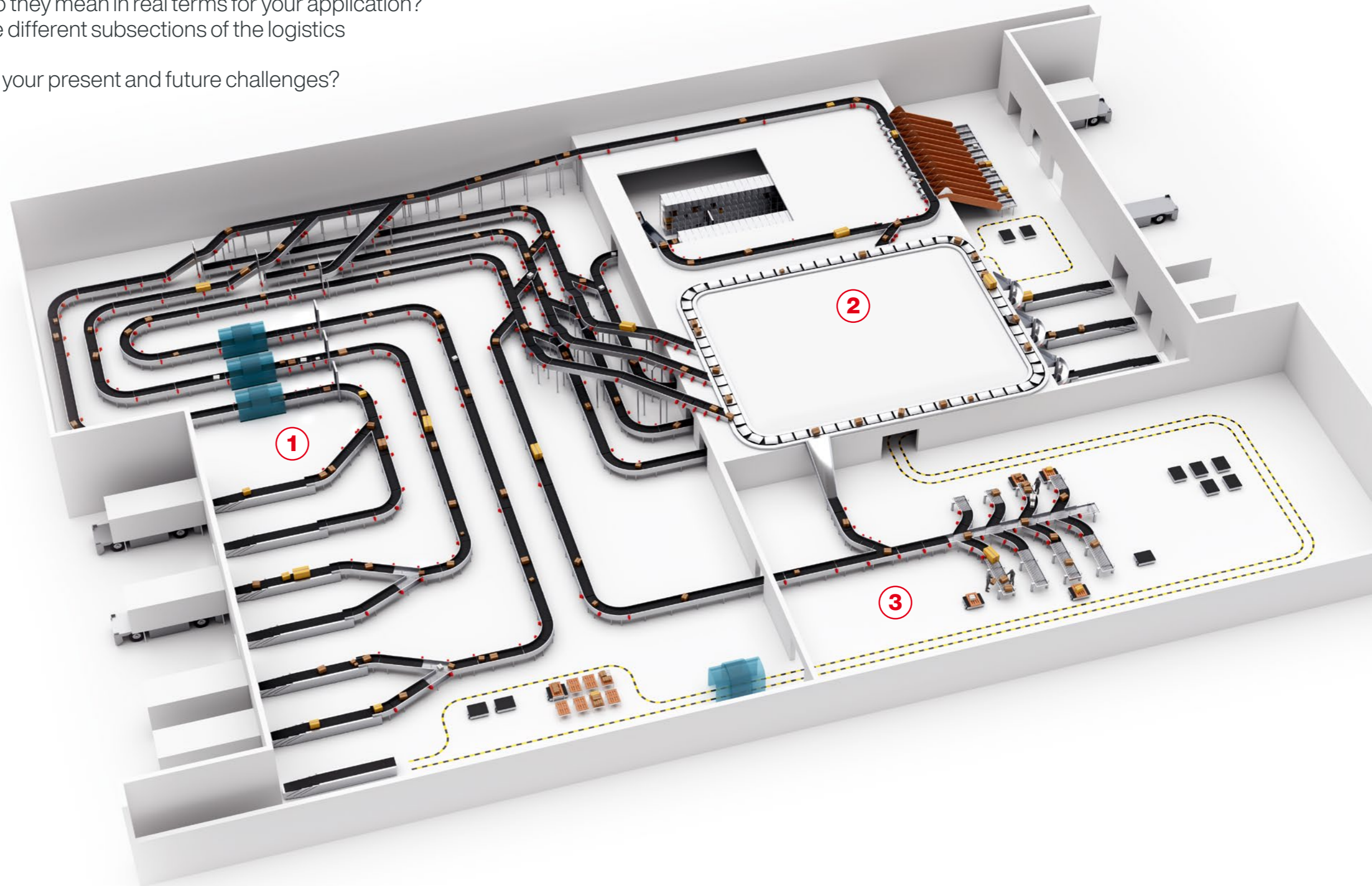# for the logistics industry

Impressive in all areas.

→ The major industry trends – what do they mean in real terms for your application?
→ Which solutions are available for the different subsections of the logistics industry?
→ And how can you use them to meet your present and future challenges?

① **Distribution logistics**

② **Warehouse logistics**

③ **Mobile logistics**

Distribution logistics

Finding the efficient route.

The purpose of distribution logistics is to ensure that goods reach customers in the right way – directly from production or via intermediate distribution stages. To meet increasing demands now and in the future, you need a flexible system design, reliable, energy-efficient components, and a high level of digital networking.
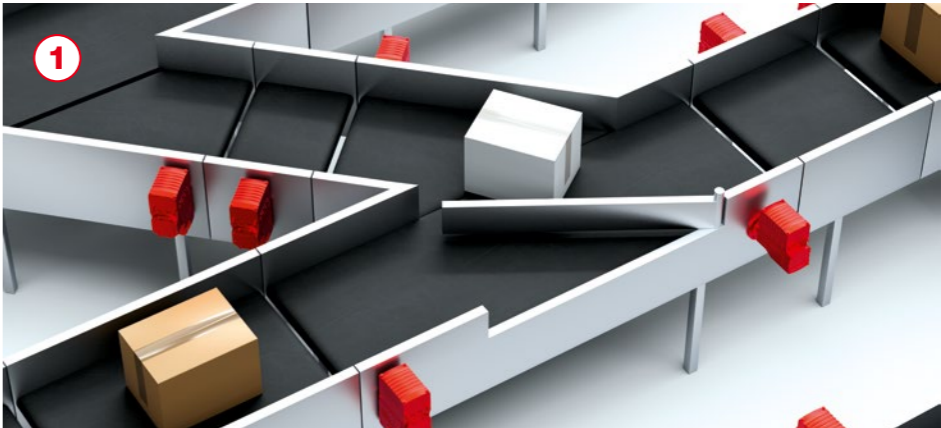
Your challenges:
– CO_2 reduction
– Energy savings
– End-to-end connectivity
– Increasing throughput
– Flexible capacity adjustment
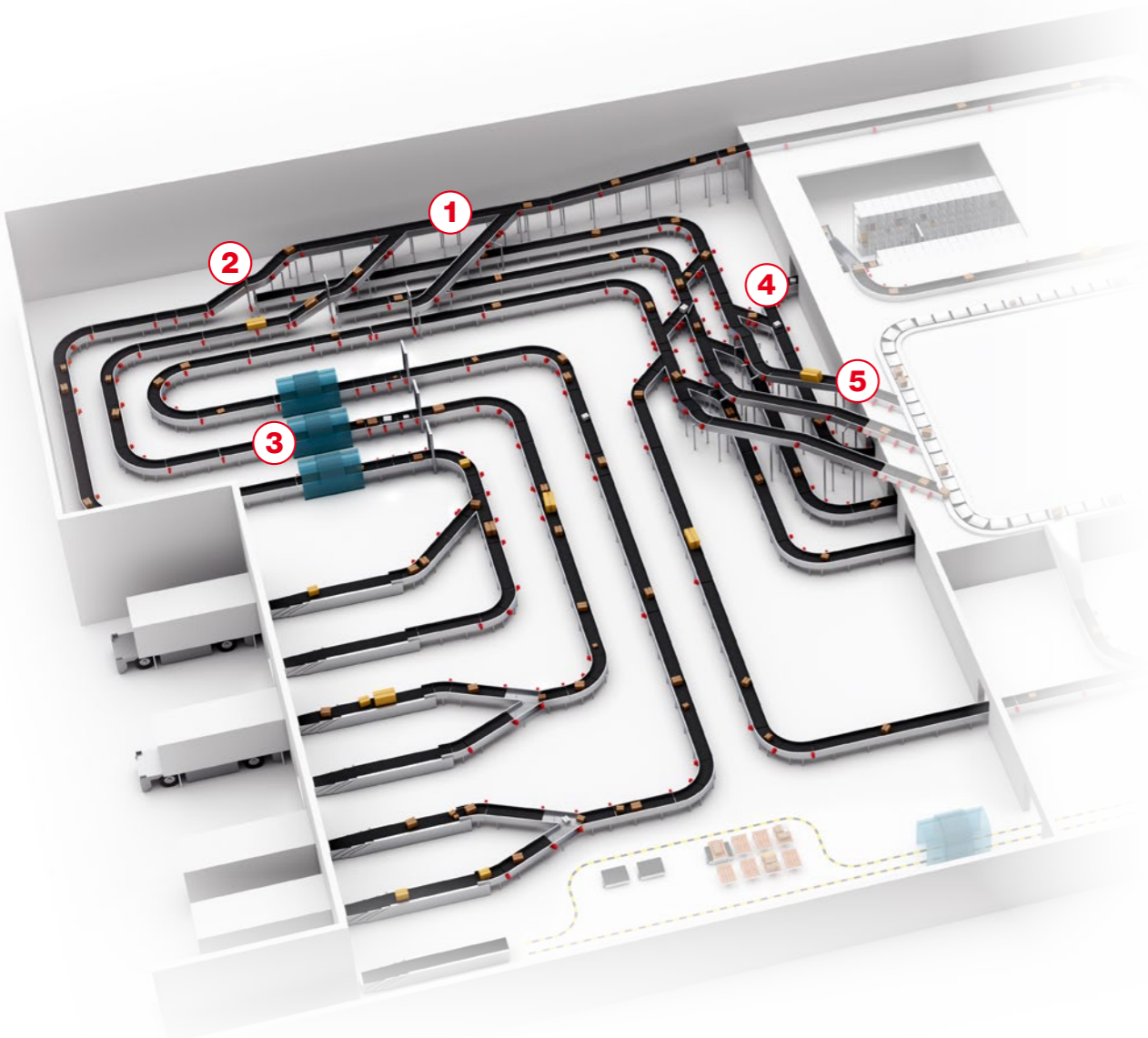
Horizontal switch

The horizontal switch distributes and steers the material being conveyed from the material stream in different directions.

Your requirements

– Accurate positioning
– Limited space in the system
– Different sizes and weights depending on the sorted goods
– Control of high breakaway torques
– Lower energy consumption

Our solution

MOVIGEAR® performance
– Compact drive unit with inverter integrated into the motor
– Maximum efficiency (better than IE5)
– Overload capacity up to 300%
➜ For more information, see page 28

MOVIMOT® performance
– Decentralized drive unit with inverter integrated into the motor
– Highly dynamic overload capacity up to 300%
– Cuts energy requirements
➜ For more information, see page 30

MOVIKIT® Positioning Drive
– Preconfigured software module
– Application-specific parameterization with no need for programming know-how
– Suitable for simple to complex positioning tasks
➜ For more information, see page 34

Vertical distributor

The vertical distributor distributes and directs goods in the logistics center to different conveyor levels.

Your requirements

– Accurate positioning
– Different sizes and weights depending on the sorted goods
– Control of high breakaway torques
– High mechanical safety (safe package handling)
– Lower energy consumption

Our solution

MOVIMOT® performance
– Decentralized drive unit with inverter integrated into the motor
– Highly dynamic overload capacity up to 300%
– Cuts energy requirements
➜ For more information, see page 30

MOVIMOT® flexible
– Inverter for installation close to the motor
– Can be combined with a servo gearmotor (CM3C../CMP..)
– Overload capacity up to 300%
➜ For more information, see pages 26 – 27

Mechanical holding brake
– For controlled holding in the event of a voltage failure

MOVIKIT® Positioning Drive
– Preconfigured software module
– Application-specific parameterization with no need for programming know-how
– Suitable for simple to complex positioning tasks
➜ For more information, see page 34

Packet capture and positioning

The most important data of the material to be conveyed is recorded in the packet capture and positioning system area. This includes weight, dimensions of the goods, address data, and subsequent positioning.

③
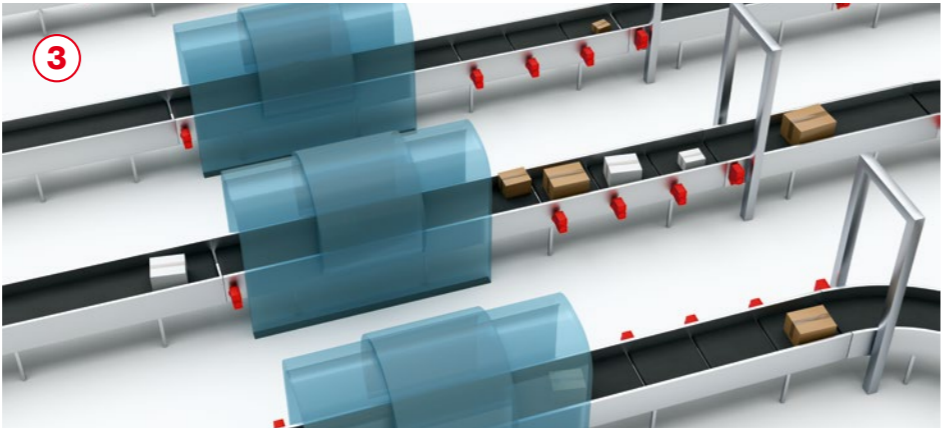
Your requirements

– High connectivity and networking
– Precise positioning of the goods
– Fast response time during the process
– Lower energy consumption

Our solution

MOVIMOT® performance
– Decentralized drive unit with inverter integrated into the motor
– Highly dynamic overload capacity up to 300%
– Cuts energy requirements
➜ For more information, see page 30

MOVI-C® CONTROLLER type UHX65A
– Parameterizable control technology
– Provides data for the cloud
– Supports the determination of CO_2 demand in real time for individual materials to be conveyed
➜ For more information, see page 24

Feed-in

In the feed-in area, all the material to be conveyed and packages are combined and steered to the central main conveyor line.

④

Your requirements

– Different sizes and weights depending on the sorted goods
– Control of high breakaway torques
– Dynamic cycle mode
– Dynamic acceleration for feed-in
– Lower energy consumption despite cycle mode

Our solution

MOVIGEAR® performance
– Compact drive unit with inverter integrated into the motor
– Maximum efficiency (better than IE5)
– Overload capacity up to 300%
➜ For more information, see page 28

MOVIKIT® Positioning Drive
– Preconfigured software module
– Application-specific parameterization with no need for programming know-how
– Suitable for simple to complex positioning tasks
➜ For more information, see page 34

Sorters

Sorters are usually used by package logistics companies and in e-commerce for the assignment of shipments, as well as in airports for the distribution of checked baggage.

⑤

Your requirements

– High throughput
– Low wear
– Maximum energy efficiency in continuous duty
– Short startup times
– Maximum reliability

Our solution

MOVIGEAR® performance
– Compact drive unit with inverter integrated into the motor
– Maximum efficiency (better than IE5)
– Overload capacity up to 300%
➜ For more information, see page 28

MOVIMOT® flexible
– Inverter for installation close to the motor
– Can be combined with a servo gearmotor (CM3C../CMP..)
– Overload capacity up to 300%
– Logistics design for even more performance
➜ For more information, see pages 26 – 27

MOVI-C® CONTROLLER types UHX65A and UHX86A
– Parameterizable control technology
– Provides data for the cloud
– Supports the determination of CO_2 demand in real time for individual materials to be conveyed
➜ For more information, see pages 24 – 25

MOVIMOT® performance ELV
– Extremely compact
– Extremely communicative
– Energy-efficient
– Sustainable
– Cost-optimized
➜ For more information, see page 31

Warehouse logistics

No space for high costs.

A warehouse stores materials, small parts, and finished goods that are waiting to be used in production or delivered to customers. This costs a great deal of space, energy, and time. That is why we need to use the storage space as effectively as possible. Intelligent energy management helps to cut operating costs, and efficient maintenance improves system availability.

Your challenges:
– CO_2 reduction
– Optimized energy management
– Making the most of storage space
– Extremely simple implementation of complex processes
– High system availability
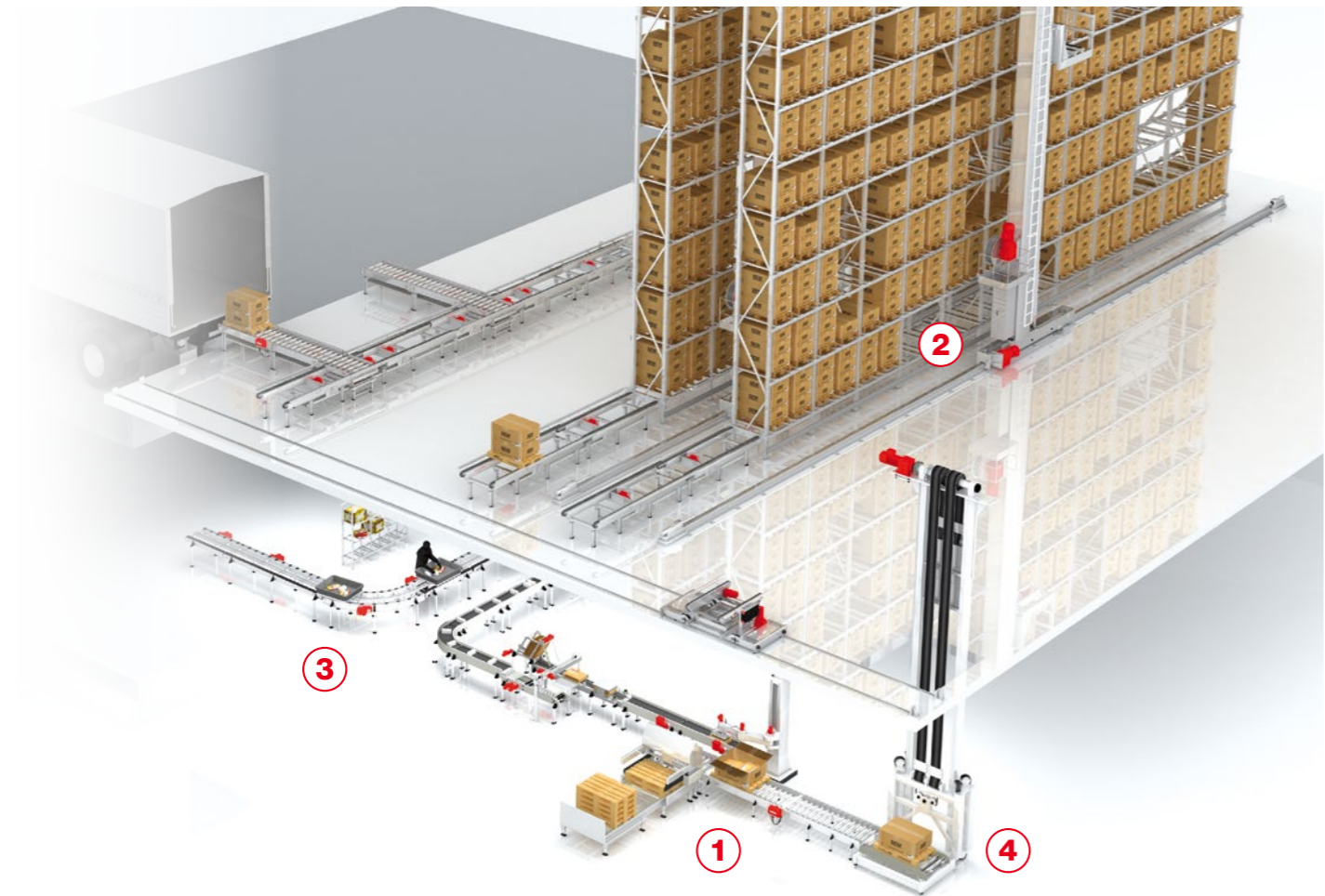
Corner transfer units

Corner transfer units contribute to a high material flow performance in warehouse logistics. They also feature a compact design.

Your requirements

– Easy-to-implement and easy-to-use software solutions
– High performance with high flexibility
– Reduction of installation and start-up costs
– Condition recording/monitoring

Our solution

MOVIKIT® software modules
– Application-specific parameterization with no need for programming know-how
– Simple implementation of complex processes
– Lower startup costs
➜ For more information, see page 34

Automation solutions can also be decentralized with MOVI-C®
– Make multi-axis technology scalable
– Offer an integrated digital motor interface for data provision
– Enable predictive maintenance
– Reduce installation costs
➜ For more information, see page 22

Storage/retrieval system

Nowadays, storage/retrieval systems are an integral part of efficient internal logistics. Storage/retrieval systems do more than just providing an automated way of placing materials and goods onto racks and picking them again – they can also help with processes associated with warehousing.

Your requirements

– Economical storage
– Low energy consumption
– High operational reliability
– Quick startup

Our solution

MOVIKIT® StackerCrane
– Preconfigured software module
– Application-specific parameterization with no need for programming know-how
– Shortens startup for complex processes
➜ For more information, see page 35

Power and Energy Solutions
– Efficient grid output and energy management
– Intelligent energy distribution, recovery, and storage
– Increases the power supply quality
➜ For more information, see page 33

MOVISAFE® CSA31A
– Safety card for integrated safety technology
– Enables bufferless bearings
– Optimizes the utilization of the storage capacity
➜ For more information, see page 32

Roller, chain, and belt conveyors

In order to optimize the increasingly complex material flow, stationary materials handling technology must also be more reliable, more modular, more sustainable, and even easier to use.

Your requirements

– Energy savings
– Safety
– Networking
– Low installation and startup costs
– Condition recording and monitoring

Our solution

Prefabricated cable
– Single-cable solution with simplified pluggability
– Reduces installation time and effort
– Facilitates service
➜ For more information, see page 36

Automation solutions can also be decentralized with MOVI-C®
– Make multi-axis technology scalable
– Offer an integrated digital motor interface for data provision
– Enable predictive maintenance
– Reduce installation costs
➜ For more information, see page 22

Lifting station

Lifting stations are equipped with a powerful lift, which makes it possible to bridge height differences between different conveyor levels in materials handling technology in a space-saving way.

Your requirements

– Ensuring safety for people and machines
– Energy management
– Smoothing of the load profile
– Possibility of local buffering of the regenerative energy

Our solution

MOVIKIT® Positioning Drive
– Preconfigured software module
– Application-specific parameterization with no need for programming know-how
– Suitable for simple to complex positioning tasks
➜ For more information, see page 34

Power and Energy Solutions
– Efficient grid output and energy management
– Intelligent energy distribution, recovery, and storage
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➜ For more information, see page 33

Automation solutions with MOVI-C®
– Make multi-axis technology scalable
– Offer an integrated digital motor interface for data provision
– Enable predictive maintenance
– Reduce installation costs
➜ For more information, see page 22

Palletizers

Modern palletizers are increasingly using new robot technologies that expand on or replace traditional systems.

Your requirements

– High throughput
– Energy management
– Extremely simple implementation of solutions
– Low noise level

Our solution

MOVIMOT® performance
– Decentralized drive unit with inverter integrated into the motor
– Highly dynamic overload capacity up to 300%
– Cuts energy requirements
➜ For more information, see page 30

MOVIKIT® Robotics
– Preconfigured software module
– Ideally suited for integration into high-performance tripod and delta robot technologies
– Packages and products can be aligned flush, precisely, and carefully to protect the material
➜ For more information, see page 34

Automation solutions with MOVI-C®
– Make multi-axis technology scalable
– Reduce installation costs and start-up time
– Enable predictive maintenance
➜ For more information, see page 22
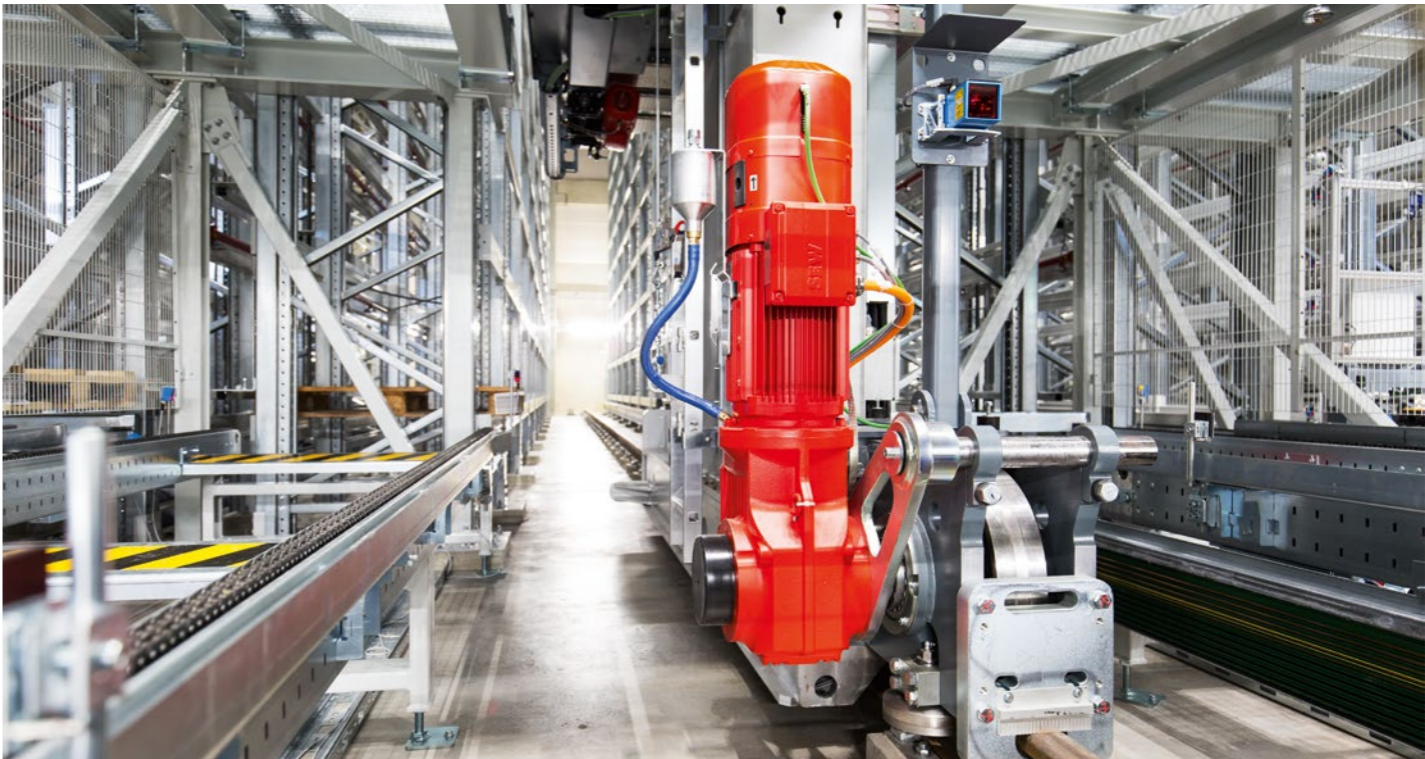
Mobile logistics

Intelligence on wheels

Particularly when capacity requirements are changing constantly, flexible solutions are vital. Logistics solutions need to adapt to all the challenges: Different levels of capacity utilization, goods in all shapes and sizes, and customized transport routes. Mobile transport systems with a high degree of flexibility and individual design options in the logistics processes are in demand. An innovative modular technology system consisting of scalable, configurable hardware and software solutions plays a key role in this.

Your challenges:
– High degree of flexibility
– Rapid capacity adjustment
– High system availability
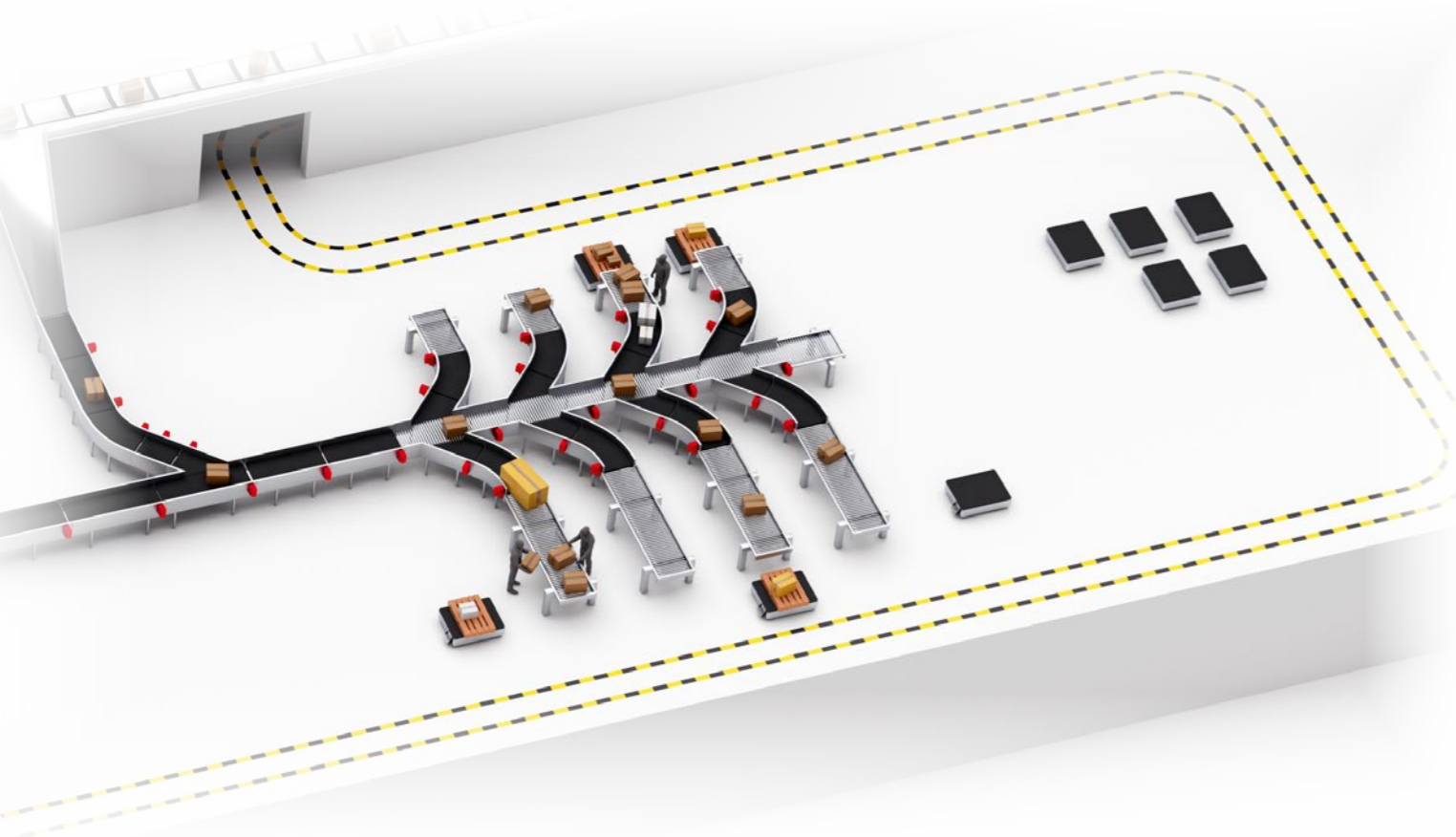
Container/pallet transport

In the field of container and pallet transport, a flexible interlinking of system parts and an adaptable supply of production and processing machines are essential. In addition, it is necessary to handle a varying amount of transported goods reliably.

Your requirements

– High degree of automation
– Sufficient freedom for production planning
– Rapid changeability of systems and system processes
– Reduction of the cycle times when accepting and delivering the goods
– Flexible track guidance and motion sequences
– Excellent personnel safety

Our solution

MAXO-MS-LA015
– MAXOLUTION® logistics automated guided vehicle with lifting device
– Performs logistics tasks autonomously and cooperatively
– Dynamic route planning in cooperation with neighboring vehicles
– Implements loose interlinking of process modules
– Safe station detection via QR code
– VDA 5050 interoperable communication interface

MOVITRANS® spot
– Point-based contactless energy transfer enables free and autonomous travel in the room
– Wear-free and position-tolerant charging
– Integrated storage systems can be configured according to energy requirements
– Easily adaptable to changing system tasks using system modules
➔ For more information, see page 37

Frame transport

When transporting frames, different loads and materials to be conveyed with different shapes and dimensions have to be handled in a mobile and flexible manner.

Your requirements

– Load identification to distinguish between different goods
– Reduction of traffic volume
– Flexible acceptance or transfer points
– Interaction between manual and automated transport

Our solution

MAXO-MS-RA006
– Logistics automated guided vehicle especially for frames
– Compact and wide-ranging driving style
– Dynamic route planning in cooperation with neighboring vehicles
– Contour navigation (natural navigation) via LaserSlam or laser parking
– 3D object detection for collision avoidance via camera system
– VDA 5050 interoperable communication interface

MOVITRANS® line
– Inductive linear energy transfer allows for flexible use
– Wear-free and low-maintenance
– Integrated storage systems can be configured according to energy requirements
– Easily adaptable to changing system tasks using system modules
➔ For more information, see page 37

Life Cycle Services

Perfect, fully comprehensive service

SEW-EURODRIVE offers you services that span the entire system life cycle, from planning through maintenance to modernization. Every aspect is covered by one and the same supplier – a company that has more than 90 years of experience in drive and automation technology and is always close at hand.

We would be glad to put together a customized service package for you – completely tailored to your needs and scalable at any time.

Your most important aims:
– Needs-based modernization
– Reduction of downtimes
– Fully comprehensive maintenance management

CDM® – Complete Drive Management:
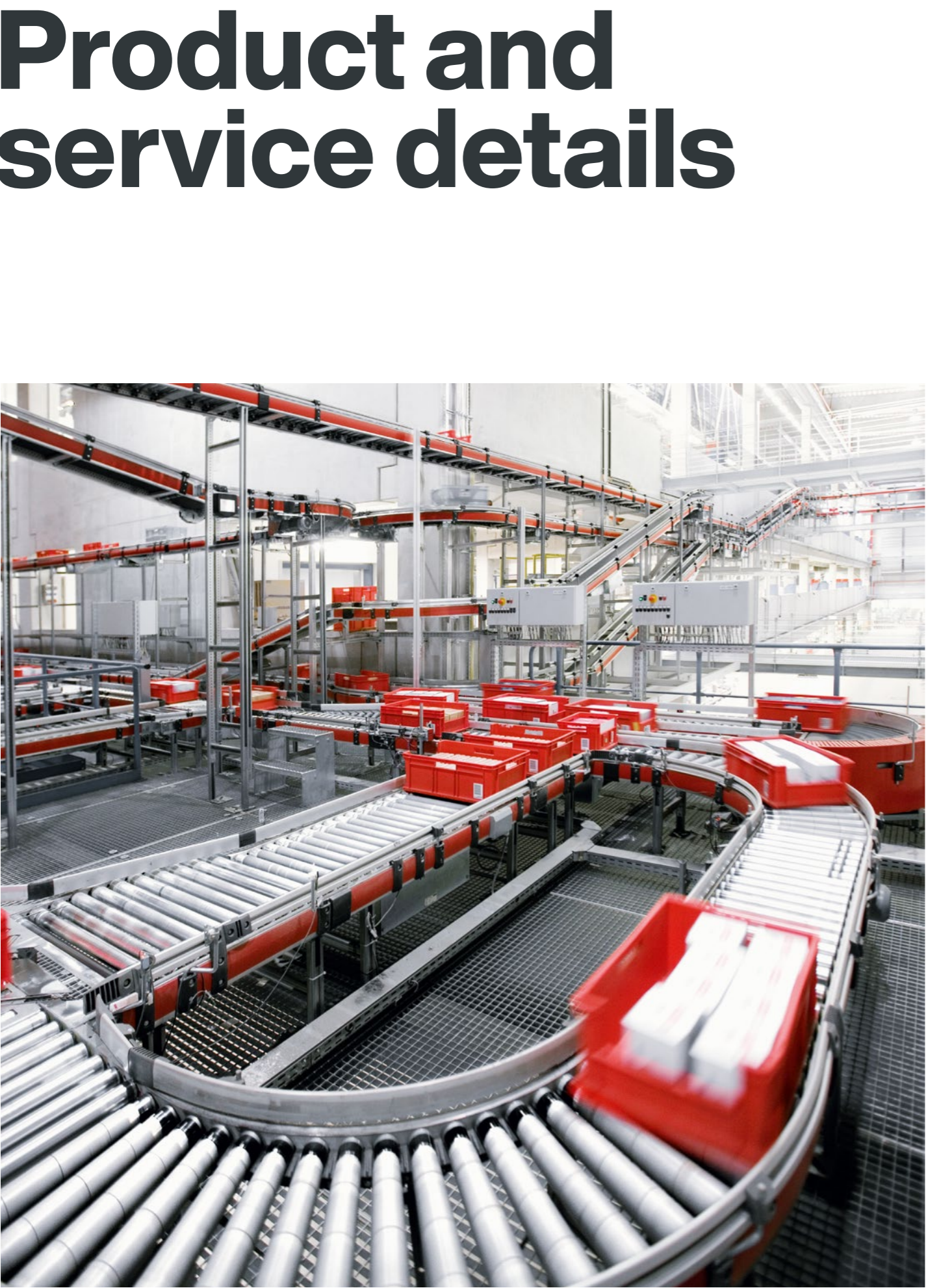Your drive technology in the best hands

Correct maintenance and care of the drive technology have a decisive influence on the reliability and availability of the system. However, keeping an eye on all the components and taking the right measures at the right time is very time-consuming.

With CDM®, SEW-EURODRIVE takes over the entire management of your drive technology, capturing all the installed components as well as those in stock. We optimize your warehousing and the range of variants and define binding response scenarios for the provision of spare components. With the complete documentation of the technology and maintenance measures, you have access to all the information at all times and comply with your legal requirements.

Throughout every stage, we offer the ideal service

Orientation

Personal consulting
– Application and industry expertise
– Information sharing at innovation level
– Rules and regulations
– Current and future trends
– Knowledge transfer

Planning and Engineering

– Operating and maintenance concepts
– Energy consulting
– Engineering
– Concept development
– Project planning and design
– Safety-related consulting
– Training
– Variant management

Procurement and Delivery

– Barcode labels (DriveTag)
– Electronic data interchange (EDI)
– Electronic delivery notification
– Electronic billing
– Delivery service

Installation and Startup

– Application programming
– Startup
– Installation consulting

Use

– CDM® – Complete Drive Management
– Condition monitoring
– Express assembly
– Examination with an inspection scope
– Energy management
– Spare part service
– Pick-Up and Delivery Service
– Inspection and maintenance
– Quick Check
– Production monitoring
– Remote service
– Repairs
– Thermography
– 24h Service Hotline
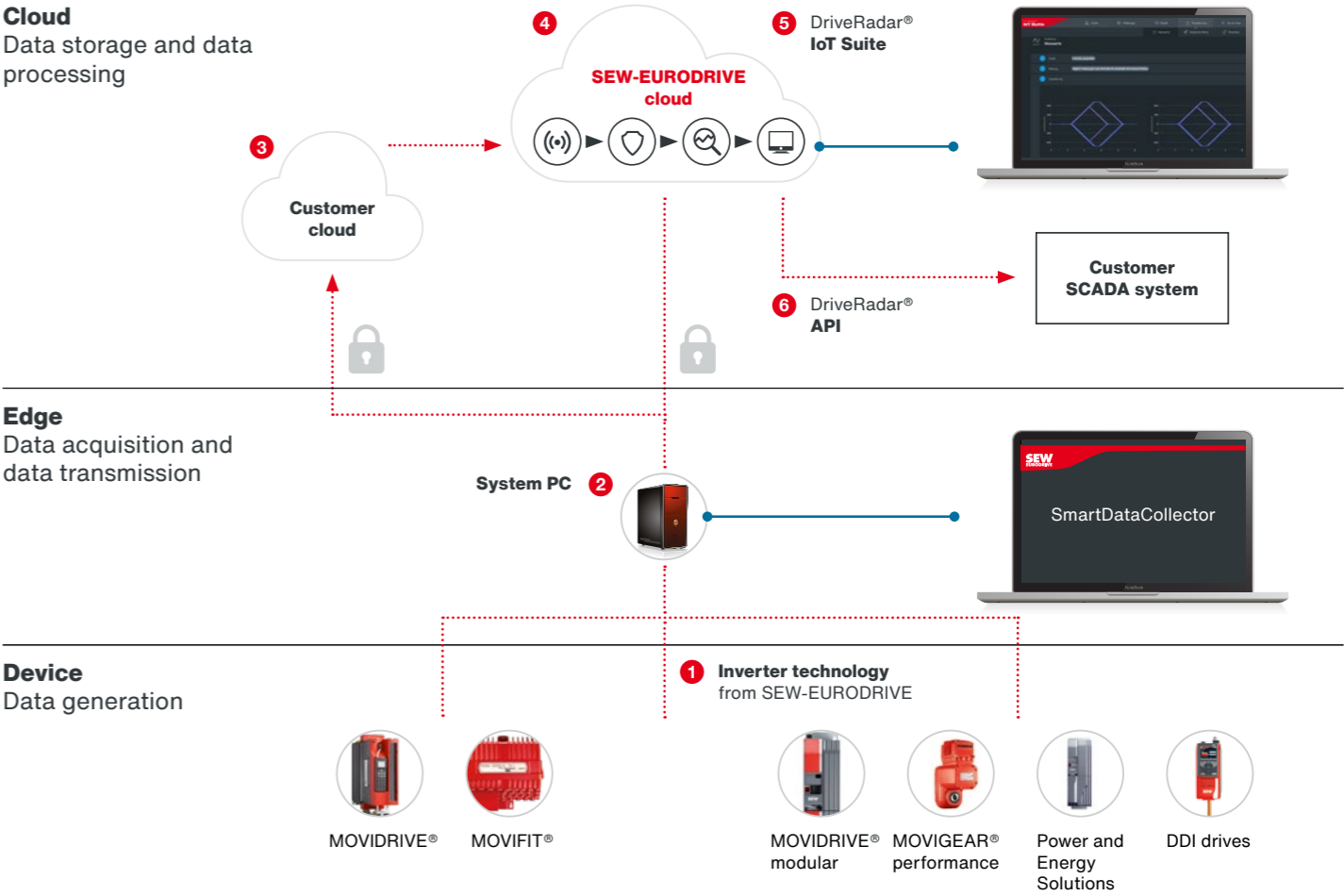
Modernization

– Retrofit service

Our all-round carefree service reduces your storage and maintenance costs and improves the availability of your system. You have maximum flexibility: Simply select the right service package and add individual services if necessary. You determine just how much service you want.

– Improves system availability
– Reduces idling times
– Reducing storage and maintenance costs

Product and service details

DriveRadar® IoT Suite for applications

Cloud
Data storage and data processing

Edge
Data acquisition and data transmission

Device
Data generation

SEW-EURODRIVE cloud

Customer cloud

④ ⑤ DriveRadar® IoT Suite

⑥ DriveRadar® API

Customer SCADA system

System PC ② SmartDataCollector

① Inverter technology from SEW-EURODRIVE

MOVIDRIVE®   MOVIFIT®   MOVIDRIVE® modular   MOVIGEAR® performance   Power and Energy Solutions   DDI drives

→ Effective monitoring

Early warning in the event of critical changes in condition and abnormal operating characteristics.

→ Quick implementation!

Simple retrofitting without additional sensors and suitable for old and new systems alike.

→ Increased productivity!

Prevention of unscheduled idle states thanks to transparency about the condition and operating performance of the drive technology, machinery, and systems.

→ Gentle on resources!

Optimal utilization of the service life of components and systems, and early identification of increased energy consumption.

① Data generation in inverters from SEW-EURODRIVE

② Data acquisition and data transmission with the DriveRadar® SmartDataCollector software

③ Optional use of a customer cloud as a proxy (forwarding of measured values)

④ Data processing, preparation (scaling, standardizing), analysis

⑤ DriveRadar® IoT Suite for applications

⑥ DriveRadar® API / interface (optional)

MOVI-C®: Automation with system

→ Simple, standardized, or customized

To help ensure a quick startup, MOVIKIT® offers you a large number of parameterizable software modules for the controller. They can be expanded in the convenient programming environment to include custom logic.

→ An all-rounder

MOVISUITE® is a software for planning, startup, operation, and diagnostics that saves users time and money thanks to its optimized user-friendliness.

→ One inverter system for all needs

MOVI-C® is the all-in-one automation toolkit from SEW-EURODRIVE. SEW-EURODRIVE offers flexible components for single-axis automation right through to module automation applications – one manufacturer, one end-to-end solution.

→ Modular

MOVI-C® offers a complete, end-to-end modular automation system. The individual components can be used to create solutions tailored to your requirements and bus topologies.

Overview of the technology

The MOVI-C® modular automation system is the all-in-one solution for automation tasks. Regardless of whether you are implementing single-axis or multi-axis applications based on standards, or whether you want to implement individual and/or highly complex motion control applications – MOVI-C® can help you do all that and gives you the scope to ideally automate new projects.

Designed for industrial use
The devices and software have been designed with special attention to the requirements for efficient startup, maintenance, and troubleshooting. The components meet all requirements and standards regarding industrial use.

New control modes
Newly developed and optimized control modes to support asynchronous and synchronous motors both with and without encoders on all devices ensure excellent performance, while also maintaining a high degree of flexibility.

State-of-the-art fieldbus systems
Having a variety of fieldbus protocols available is essential when it comes to flexibly integrating solutions into existing infrastructures. MOVI-C® supports all the latest standard fieldbus protocols.

Integrated, digital motor interface
The integrated, digital motor interface allows for extremely robust and high-performance data transmission – well equipped for both current and future motor functions. It opens up a whole host of new possibilities when used in conjunction with electronic nameplates or integrated and expandable diagnostic units on the motor.

Energy efficiency
In addition to the inverters, which have been streamlined for efficient energy conversion, the devices in the Power and Energy Solutions series offer a wide range of options for storing energy and releasing it again effectively when required. This helps to reduce energy spikes and to increase availability, for example.

Integrated safety technology
The inverters in the MOVIDRIVE® range come with integrated safety functions – even the basic devices. Higher-level safety functions can be incorporated by inserting option cards.
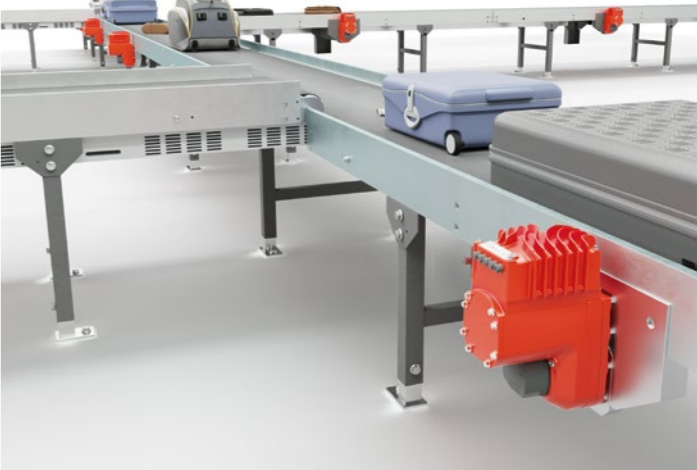
MOVI-C® CONTROLLER
type UHX65A

→ Multimaster-capable and flexible!

Mixed PROFINET IO or EtherNet/IP™ topologies can be implemented in one device with EtherCAT®.

→ Scalable and accomplished!

Available in 1-, 2-, or 4-core variants for demanding applications. Higher-level controller and motion control combined in one device.

→ Open!

Windows/high-level language environment and high-performance controller for motion control tasks in one device. EtherCAT® and PROFINET IO/EtherNet/IP™ sensors in parallel.

→ Customized!

Perfectly coordinated with the extensive portfolio for decentralized and control cabinet drive technology from SEW-EURODRIVE, making it possible to implement any specific customer requests.

Hardware version for PROFINET IO controller	SEW-EURODRIVE part number	Device variant
	28272854	UHX65A-M-04-N0 (4 cores)
	28272862	UHX65A-M-02-N0 (2 cores)
	28272870	UHX65A-M-01-N0 (1 cores)

With the MOVI-C® CONTROLLER type UHX65A-M, SEW-EURODRIVE has added the integrated functions of a PROFINET IO controller or EtherNet/IP™ scanner to the versatile controller of the "progressive" performance class. Use the high-performance EtherCAT® fieldbus for the most challenging motion control tasks and, at the same time, read out corresponding sensors and control actuators as a PROFINET IO or EtherNet/IP™ master. Gain flexibility and choice in the hardware you can use for complex applications, without losing the previous advantages of the UHX65A controller platform.

MOVI-C® CONTROLLER
type UHX86A

→ Networked!

High-grade, application-specific networking, both at fieldbus level and through the multi-purpose operating system.

→ User-friendly!

An end-to-end engineering environment for programming the process sequence via transparent PROFIsafe routing. CFast™ card for rapid replacement of devices without a PC.

→ Robust and high-performance!

Less hardware means less potential for failure – one top-quality device made by SEW-EURODRIVE that combines IPC and PLC.

→ Scalable!

Processor and hard disk scalable for IoT applications. Prepared for future integrated function modules.

CPU technology	Ethernet interfaces	System bus	Additional interfaces
Intel Core™ Celeron, i3, 25 W, passive cooling	– 2 for RTOS – 2 for GPOS	– EtherCAT® master – SBus^PLUS master	– PROFINET I/O controller – EtherNet/IPT™ scanner – PROFINET device – EtherNet/IP™ adapter – Modbus TCP
Intel Core™ i3, i7, 45 W, active cooling			

Discover the new MOVI-C® CONTROLLER type UHX86A. This is an intelligent and future-proof controller that offers functional safety and a versatile operating system for your customer applications. Perfectly matched to the components of the MOVI-C® modular automation system, it expands our controller portfolio in the high-end motion control area. Thanks to numerous fieldbus and network interfaces, it enables seamless communication with higher, lower, and parallel levels, so meeting the requirements of Industry 4.0 and IoT applications.
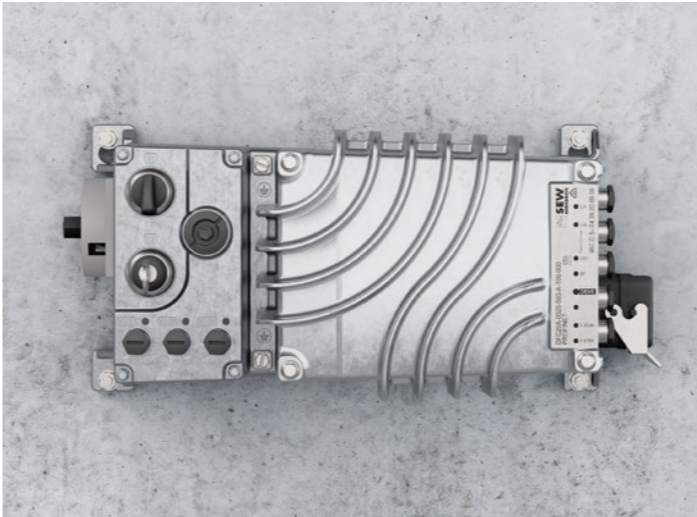
MOVIMOT® flexible

→ Versatile!

All types of synchronous and asynchronous motors can be controlled. Optional motor encoders or mechanical brakes can be adapted.

→ Intelligent!

Information from the electronic nameplate, braking data, and diagnostic data are transmitted directly to the inverter.

→ Simple!

The intelligent, digital connection using a standardized hybrid cable makes it possible to supply power and also transmit data between the decentralized inverter and motor.

→ Safe!

Integrated STO (Safe Torque Off) safety function to PL e. Binary control or option of control via PROFINET/PROFIsafe.

	Size	Nominal output current	Type designation
	Size 1 without cooling fins	2.0 A	D.C/DSI...-0020..
		2.5 A	D.C/DSI...-0025..
		3.2 A	D.C/DSI...-0032..
	Size 1 with cooling fins	4.0 A	D.C/DSI...-0040..
		5.5 A	D.C/DSI...-0055..
	Size 2 without fan	7.0 A	D.C/DSI...-0070..
		9.5 A	D.C/DSI...-0095..
	Size 2 with fan	12.5 A	D.C/DSI...-0125..
		16.0 A	D.C/DSI...-0160..

MOVIMOT® flexible in logistics design

→ Flexible!

Every motor, every controller – regardless of the supplier. The MOVIMOT® flexible logistics variant is the ideal solution for your retrofit and adapts flexibly.

→ Future-proof!

The flexible MOVIMOT® logistics variant as part of the MOVI-C® inverter portfolio is compatible with all old and new motor technologies up to IE5.

→ Intuitive!

From the standardized connections to the easily accessible front module, the logistics variant impresses with its simple installation and user-friendly manual operation.

→ Reliable!

Thousands of MOVIMOT® flexible sold and tested in various applications ensure reliable and long-term operation.

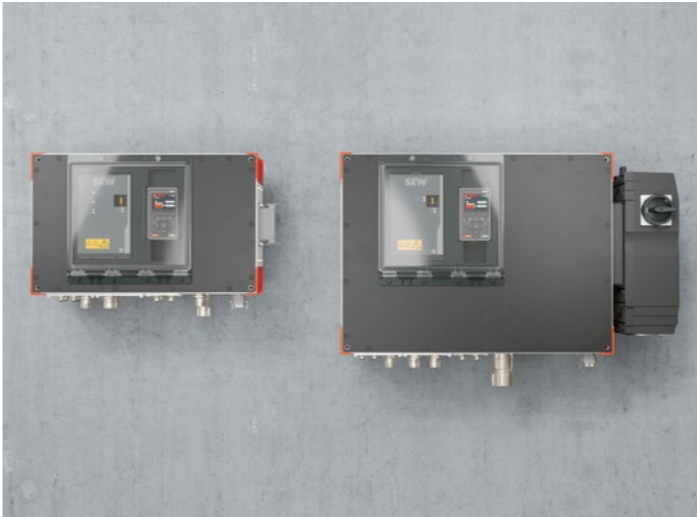| On-site operation	Diagnostics	Motor technology	Connection technology	AS-Interface
– Manual self-control – CW-0-CCW	– Status LEDs for DIs – Technical connection for keypads	– Compatible with all standard asynchronous motors and synchronous motors	– Resilient – Single-cable technology	– Supports various ASi protocols – Compatible with third-party and previous SEW-EURODRIVE DC-AC inverters

MOVIGEAR® performance

→ Compact!

Nominal power of 0.8 – 2.1 kW and peak power of up to 6.3 kW, fully integrated, up to 50% lighter than conventional drive solutions.

→ Universal!

The number of variants is reduced thanks to optimal dimensioning based on a large speed range and an impressive overload capacity of up to 300% for the nominal torque.

→ Efficient!

Motor energy efficiency class IE5 to IEC TS 60034-30-2 and system power loss up to 50% lower than IES2 in accordance with IEC 61800-9-2.

→ Low noise!

75% quieter than typical AC motors and hygienic convection cooling without fan.

MOVIPRO® technology

→ Powerful!

With a nominal power of up to 30 kW, the system offers optimum power and efficiency, ideal for demanding applications in various areas of application.

→ Scalable and safe!

Customized solutions for safe stop, motion, and positioning functions as well as optionally integrated safe brake control.

→ End-to-end!

Identical platform for the control cabinet technology enables seamless integration.

→ Flexible!

The connection of various motor technologies and encoders opens up a wide range of possible applications and flexible solutions for various areas of application.

MOVIGEAR® performance	MGF..2-C	MGF..4-C	MGF..4-C/XT
Weight kg	16	26	28
Torque class Nm	200	400	400
Nominal power kW	0.8	1.5	2.1
Output speed range min⁻¹	0.9 – 593	0.9 – 566	0.9 – 566
Connection voltage V	380 – 500 V at 50/60 Hz	380 – 500 V at 50/60 Hz	400 – 500 V at 50/60 Hz
Diameter of hollow shafts mm	20 / 25 / 30 / 35 / 40	30 / 35 / 40	30 / 35 / 40

MOVIPRO® technology	MPX22A..		MPX23A..	
Size	Size 2 Short heat sink	Size 2E Long heat sink	Size 3 Heat sink without active cooling	Size 3E Heat sink with active cooling
Nominal output current A	5.5 / 7 / 9.5	12.5 / 16	24 / 32	46 / 62
Performance class kW	2.2 / 3 / 4	5.5 / 7.5	11 / 15	22 / 30
Dimensions W × H × D (mm) without interface box	480 × 300 × 162	480 × 300 × 202	570 × 420 × 202	570 × 420 × 209
Dimensions W × H × D (mm) with interface box	620 × 364 × 180	620 × 364 × 220	720 × 420 × 220	720 × 420 × 227

MOVIMOT® performance

→ High overload capacity!

An overload capacity of up to 300% optimizes the drive's capacity utilization and reduces the nominal connected load.

→ Environmentally friendly!

Low-noise operation without fan plus a motor energy efficiency class ≥ IE4 to IEC TS 60034-30-2.

→ Precise!

Highly dynamic, with a large speed range and optional positioning using a multi-turn absolute encoder.

→ Cost-effective!

Direct wiring via terminals or quick and easy installation using optional plug connectors and the MOVILINK® DDI digital interface.

MOVIMOT® performance	CM3C80S 0020	CM3C80S 0025	CM3C80S 0032	CM3C80S 0040	CM3C80M 0040	CM3C80M 0055
Inverter assignment A	2.0	2.5	3.2	4.0	4.0	5.5
Nominal torque Nm	3.6	4.5	5.7	7.2	8.0	9.0
Nominal speed min^{-1}	2000	2000	2000	2000	2000	2000
Nominal power kW	0.75	0.94	1.19	1.51	1.68	1.88
Overload capacity %	300	300	300	300	300	300
Speed setting range without encoder	1:40	1:40	1:40	1:40	1:40	1:40
Speed setting range with encoder (EZ2Z/AZ2Z)	1:2000	1:2000	1:2000	1:2000	1:2000	1:2000
Motor efficiency	≥ IE5	≥ IE5	≥ IE5	≥ IE5	≥ IE5	≥ IE5

MOVIMOT® performance ELV

→ Compact!

Thanks to its small size and low weight, the MOVIMOT® performance ELV is the perfect choice for highly integrated systems.

→ Communicative!

The integrated Ethernet-based interface enables vertical and horizontal communication, thus opening up end-to-end networking.

→ Energy-efficient!

Compact design and DC energy recovery ensure a high degree of efficiency.

→ Cost-optimized!

The M12 plugs and globally available standard cable reduce your installation costs.

DCA63S	DCA63M	DCA63L
180 W	272 W	356 W
0.43 Nm	0.65 Nm	0.85 Nm
4000 min^{-1}	4000 min^{-1}	4000 min^{-1}
2.05 kg	2.35 kg	2.65 kg

F.02/F.03 parallel-shaft helical gear unit	W.02/W.03 SPIROPLAN® right-angle gear unit	PNZ63A planetary gear units	KNZ63A right-angle gear units
– 2 sizes, 3-stage, solid shaft or hollow shaft	– 2 sizes, 1-stage, solid shaft or hollow shaft	– 1- or 2-stage	– 2- or 3-stage
– 5 reduction ratios, i = 6 – 48	– 5 reduction ratios, i = 6 – 48	– 3 reduction ratios, i = 5 / 15 / 45	– 3 reduction ratios, i = 17 / 54 / 84.8

MOVISAFE® CSA31A

→ Flexible

Supports a wide range of encoder concepts – from the simplest TTL/sin/cos encoder through to a combination with a huge variety of distance encoders.

→ User-friendly

Simple startup and parameterization using the start-up wizard. The parameters still can be taken over from the inverter in the safety section.

→ End-to-end

Parameterization is identical for all safety cards, 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.

Power and Energy Solutions

→ Scalable!

Distributed DC and AC infrastructure in any combination

→ Lower costs!

– Auto-configuring components
– Strongly reduced peak power demand of the application
– Reduction of energy costs thanks to storage capacitors in the DC link

→ Reliable!

– High availability of individual production cells
– Uninterrupted system operation in the event of a power failure
– Reduced harmonic load in the supply system

→ Flexible!

Faster changes in the factory layout

Hardware	CSB21A	CSB31A	CSS21A	CSS31A	CSA31A
Safe inputs	4	4	4	4	4
Safe outputs	–	2	2	2	2
Safe stop functions	STO, SS1-t	STO, SS1-t, SBC	STO, SS1-t, SBC	STO, SS1-t, SBC	STO, SS1-t, SBC
Safe motion functions	–	–	SOS, SS1-r, SS2, SLS, SSR, SLA, SSM, SDI	SOS, SS1-r, SS2, SLS, SSR, SLA, SSM, SDI	SOS, SS1-r, SS2, SLS, SSR, SLA, SSM, SDI
Safe positioning functions	–	–	SLI	SLI	SLI, SLP, SCA
Safe communication	PROFIsafe, Safety over EtherCAT®	PROFIsafe, Safety over EtherCAT®	PROFIsafe, Safety over EtherCAT®	PROFIsafe, Safety over EtherCAT®	PROFIsafe, Safety over EtherCAT®
Process value via safe communication	–	–	Speed	Speed	Speed, position, SCA status
Additional multi-encoder input	–	Yes (non-FS)	–	Yes (non-FS)	Yes (FS)
Encoder for functional safety	–	–	FS motor encoder	FS motor encoder	Motor encoder (sin/cos) + SSI

MDP92 power supply module with controlled DC link voltage

– Nominal line voltage: 3 × AC 200 – 500 V
– Controlled DC link voltage: DC 0 – 800 V
– Nominal power: 25 kW
– Overload capacity: 160%

MDS switched-mode power supply module with AC and DC supply

– Input voltage: 1 × AC 200 V – 3 × AC 500 V or DC 150 – 800 V
– Nominal output voltage: DC 24 V
– Nominal output current: 22.5 A

MDC capacitor module DC link energy module

– Voltage range: DC 0 – 800 V
– Typical energy content: 2 kWs
– Connection via DC bus
– Option for parallel connection

LSUM DLC storage module Energy cabinet with DLC modules

– Voltage range: DC 0 – 800 V
– Energy content up to: 3000 kWs
– Options for both parallel and series connection

MOVIKIT® software modules

→ Flexible!

Available for everything from simple drive functions through to complex motion control functions.

→ Cost-effective!

Parameterizing instead of programming – saves time and money.

→ Saves time!

MOVIKIT® software modules shorten startup times.

→ User-friendly!

Hardware-independent operation, with intuitive implementation after just a short time.

MOVIKIT® software modules are preconfigured software elements for implementing motion and drive tasks. Our range includes everything from simple drive functions such as speed control and positioning through to complex motion control functions such as electronic cam and robot control.
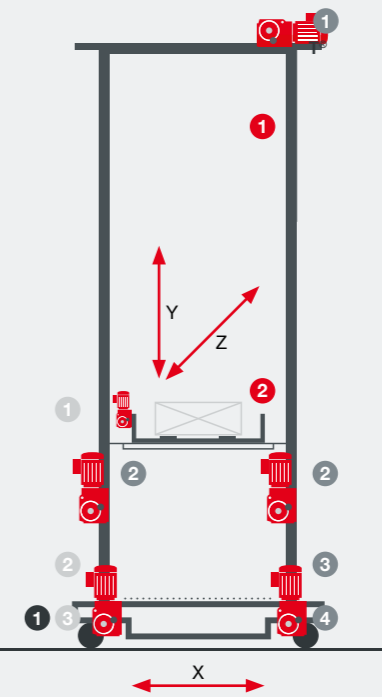
To ensure the MOVIKIT® software modules can be used in both control cabinet and decentralized installations, they are available for both controller scenarios.

AutomationFramework: Software modules with PackML compatibility

Robotics: Software modules for robot control

Motion: Software modules for standardized closed-loop and open-loop motion control with MOVI-C® CONTROLLER / MOVI-C® FIELD CONTROLLER

StackerCrane: Software modules for storage/retrieval systems

Communication: Software modules offering a variety of communication services

MultiAxisController: Software modules for centrally controlling up to four axes

Power and Energy Solutions: Software modules for energy management

Visualization: Software modules for the graphical depiction of controller data

Drive: Software modules for positioning applications without controllers from SEW-EURODRIVE

MultiMotion: Software modules for universal closed-loop and open-loop motion control of interpolating axes

SingleAxis: Software modules for speed/positioning mode

MOVIKIT® StackerCrane

→ Optimized for drive technology from SEW-EURODRIVE!

Coordinated with SEW-EURODRIVE hardware. From gear unit and motor to drive technology, energy management, and control technology.

→ Quick startup!

Preconfigured software modules that can be taken into operation easily by means of configuration and diagnostics via graphical user interfaces.

→ Straightforward operation and diagnostics!

The integrated process data monitor makes the standardized process data profile easy to operate.

→ Intelligent power supply!

Regenerative power supply modules or storage solutions can be incorporated in project planning and used as required, depending on the application.

MultiMotion
1 Energy-optimized XY operation
2 Electrical braking if an encoder fault occurs
3 Emergency mode/deactivation of external encoder

MOVIKIT® Custom CurveDrive
1 SRS units with cornering ability

MultiAxisController
1 Top drive for vibration damping on the mast
2 Rope elongation compensation, even in a load transfer scenario
2 Auto-leveling: Anti-skew, even in the event of a fault
3 Anti-slip control
4 Combined encoder evaluation with increased position control loop gain

Motion add-on AntiSway
1 TowerSway anti-sway control thanks to intelligent travel profiles
2 BellySway anti-sway control for LHDs

Digital motor integration DRN../DR2.. motors

→ **Automatic identification!**

The motor transmits its data to the inverter, which sets its parameters accordingly. In the event of a replacement, the change of motor is detected and a release is requested.

→ **Protective function!**

The thermal motor protection status is permanently monitored. Any changes or the reaching of threshold values trigger the safety functions programmed in the inverter.

→ **Brakes**

Switching the brake voltage on and off, measuring the resistance based on temperature detection, using the timing of switching to detect wear, and triggering safety functions when threshold values are reached.

→ **Operation**

Sensor technology on the motor and/or gear unit records operating data for digitalized transfer. A timestamp makes it possible to work out operating times and to forward this information for monitoring purposes.
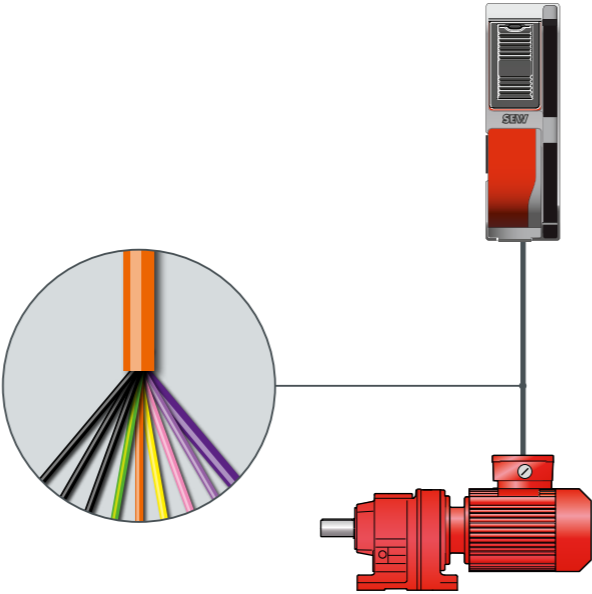
Basic functions
– Auto startup
– Motor identification data
– Encoder connection data
– Thermal motor protection

Brake function group
– Control
– Wear
– Temperature

Operation function group
– Vibration of the motor and/or gear unit
– Oil change display
– Functional safety
– Motor operating hours

MOVITRANS® inductive charging system

→ **Scalable!**

Charging while traveling or during load transfer; different charging strategies and power ratings are possible depending on the application and requirements.

→ **Contactless!**

Dispense with ground contact entirely, make the routes traversable, and transfer the energy maintenance-free and wear-free.

→ **Ground clearance!**

High ground clearance for automated guided vehicles thanks to the air gap between the line cable and pick-up.

→ **Availability!**

Use contactless energy transfer with MOVITRANS®, because it offers extremely high availability.

Stationary components
System frequency 25 kHz or 50 kHz

❶ TES31A decentralized supply unit
– Power: 8 kW or 16 kW
  (up to 48 kW in parallel connection)
– Line voltage V_{line}: 3 × AC 380 – 500 ±10%

❷ TCS31A compensation box
Adjustable compensation for track lengths of 0 to 25 m

❸ Field plate
– Inductive point-based charging with high power ratings of up to 11 kW
– System frequency B: 50 kHz
– Can be installed in the ground or above ground

Cable in wedge-shaped design
– Inductive linear energy transfer
– Suitable for currents of up to 60 A
– Energy transfer on the move
– Installation possible as open and cast routing in the floor or on top of it in installation plates

Circular conductor
– Installation cast into the floor
– Not sensitive to poor ambient conditions

❹ Installation plates
– MOVITRANS® can be installed without damaging the floor.
– The surfaces can be assembled and disassembled quickly using a jigsaw system based on a groove-and-tongue connection of the installation plates. This increases the flexibility and adaptability of your factory.

Retrofit service

→ Ensuring the availability of system and spare parts

by using current and available drive technology components

→ Prevention of production shut-downs

thanks to planned retrofitting measures and fast, efficient startup performed by SEW-EURODRIVE specialists

→ Reduced energy costs

through ideal project planning and the use of energy-efficient drive technology components

→ Optimization of the production processes

by increasing the level of automation and using cutting-edge control and drive technology components
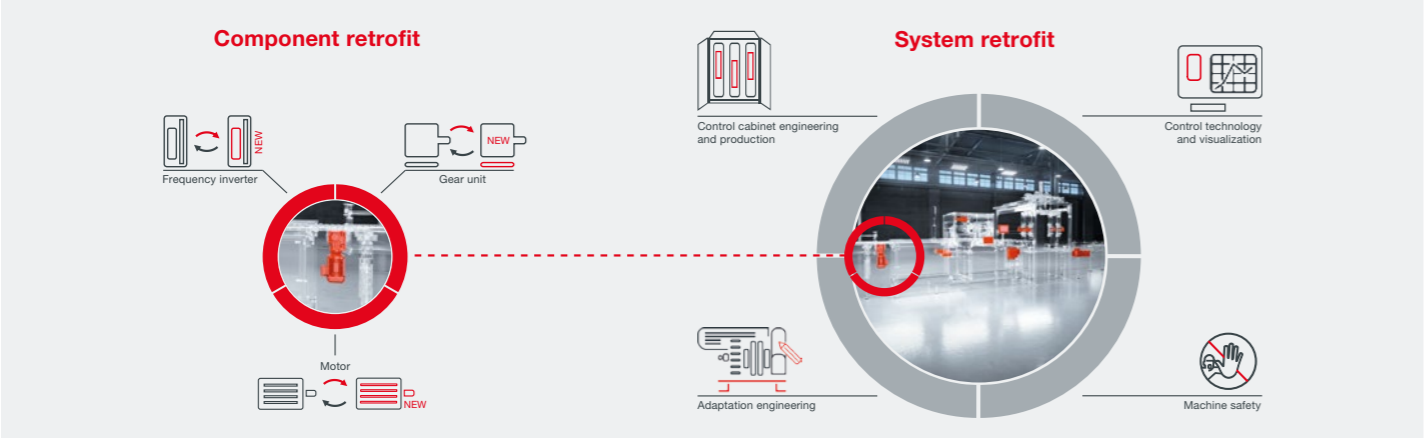
Component retrofit:
Replacement of drive technology components
– Analysis of the current situation and condition
– Project planning and design
– Adaptation engineering of electrical and mechanical components
– Replacement of drive components and drive-related periphery
– Startup

System retrofit:
Modernization of an entire system
– Control cabinet engineering and production
– Adaptation engineering of the system and application
– Automation and application programming
– Project management
– Technical safety consulting and machine safety evaluation
– Conversion of the mechanical periphery of the application and system
– Floor installation of MOVITRANS® systems
– System acceptance

Quick Check

→ 12-month SEW-EURODRIVE functional warranty

on all drive components that are checked and found to be OK (excluding sealing elements)

→ Compliance with standards and internal requirements

especially audits, by providing evidence and documentation to show that maintenance measures have been performed

→ Greater operational reliability

through on-site condition assessments, early detection of damage, and specific recommended courses of action

→ Improvement of the system availability

through the preventive inspection of the drive components in an existing system

– Inspection of the mounting position of the drive technology
– Visual inspection for oil leaks, check of the oil level and all sealing points on the gear unit, e.g. oil seal
– Measurement of the degree of pollution of the gear oils used
– Acoustic check of the running noise of the gear unit and motor bearing systems
– Check of the terminal box (condition, ingress of oil/water, seals, screw fittings) and inspection of the wiring on the terminal board

– Brake wear check, plus functional test (mechanical and electrical) of the brake
– Visual inspection for damage and for correct installation of mounted drive electronics (e.g. MOVIMOT®, MOVIGEAR®) and servo drive technology (including motor feedback systems)
– Visual inspection of add-on parts (e.g. belt pulleys, sprockets, couplings, etc.) for superficial damage, missing or insufficient protective covers, oil leaks

Further information is available at:
https://www.sew-eurodrive.de/industries/logistics/logistics.html