

Material handling technology for the modern smart factory

Mobile and rail-guided solutions – AMRs, AGVs, RGVs, bundles, and components



MAXOLUTION – the engineered solution for the smart factory

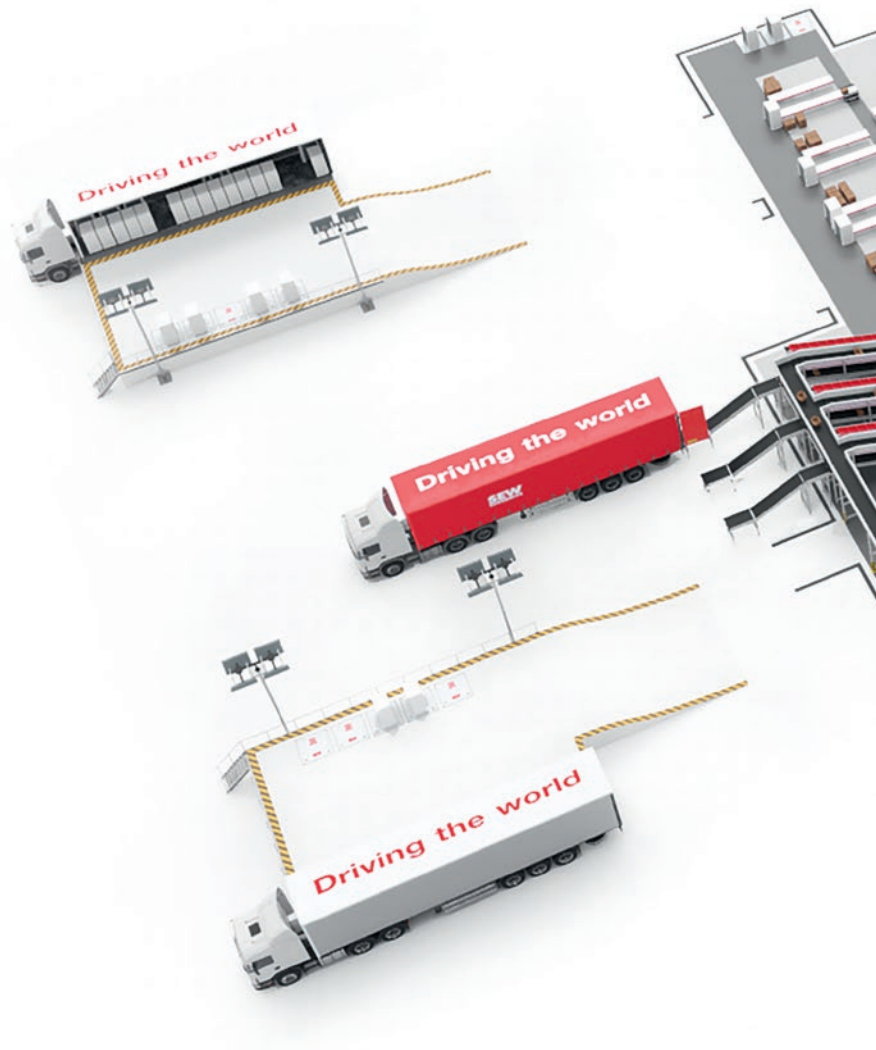
MAXOLUTION® is an SEW-EURODRIVE company that delivers leading edge technology in factory and machine automation. Services range from system design and planning to providing a full range of motion control components and automation controls and software for all areas of the modern automated factory.

Our scalable portfolio includes mobile and autonomous rail- and line-guided transport and assistance systems based on SEW's modular system of innovative hardware and software components.

Did you know? Besides hardware and software, MAXOLUTION System Solutions offers services including planning, conceptual design, visualization analyses, installation, and startup

Many other services for a successful system solution are also available.

- Smart factory process and materials handling technology
- Design planning, startup, and operation phases
- Control of mobile assistance systems (AGVs/AMRs)
- Rail-guided electrified monorail and skidless systems



Modular design for future-proof production expansion

The modular concept for the lean smart factory consists of standardized components and software modules that can be combined to create flexible, expandable material handling solutions. Our global network also means we can deliver these solutions very rapidly.

Monorail system

Rail-guided vehicles for production and parts delivery automation

AGVs/AMRs

Line-guided or free navigation vehicles for production and parts delivery automation

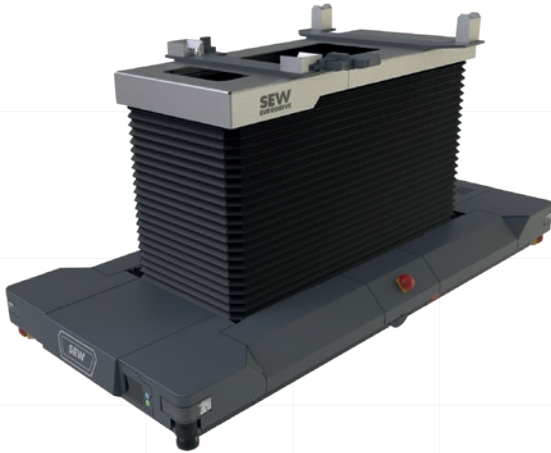
ASRS

Automated Storage and Retrieval System to automate picking and optimize your footprint

→ Discover MAXOLUTION®
System Solutions



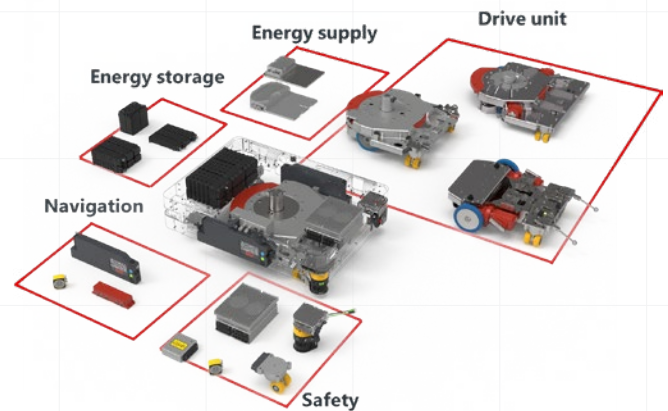
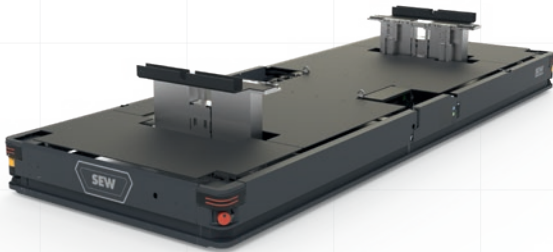
AGVs / AMRs / Drive packages



> Full vehicle fleets

Our mobile, autonomous assistance systems benefit from intelligent vehicle software utilizing a standard VDA 5050 interface, contactless, inductive energy transfer, and 5G or WLAN communication - a perfect fit for your fleet and logistics management.

- Assembly assistants
- Pallet and rack transport
- Production transport
- Vehicle transport/assembly



> Engineered drive bundles

Each travel bundle is based on perfectly coordinated components for select tasks. Use individual or combined function groups. Predefined software modules simplify setup.

- Travel, braking, positioning
- Predefined software modules for guidance
- Coordinated components and cables
- Coordinated mechanical/electrical components

> Modular technology systems

The MAXOLUTION® modular technology system is the backbone of our automation solutions for our mobile systems such as electrified monorail, skilnet, line guided, and free navigation systems.

- Drive components
- Control interfaces
- Software function blocks
- Coordinated mechanical/electrical components

Track-guided systems



➤ Electrified monorail systems (EMS)

SEW's EMS technology has been powering production facilities for over 15 years. Simple part delivery of small boxes to handling heavy duty industrial machinery.

- Assembly assistants
- Pallet and rack transport
- Production transport
- Vehicle transport/assembly



➤ Rail guided carts - RGCs

No overhead space? Mount your EMS on the floor. SEW utilizes the same proven EMS technology with our RGCs.

- Assembly assistants
- Pallet and rack transport
- Production transport
- Vehicle transport/assembly



➤ Line-guided AGVs

Perfect for a congested or highly dynamic environment, line guidance via tape, inductive cable is a great solution to keep your vehicle on the right track.

- Assembly assistants
- Pallet and rack transport
- Production transport
- Vehicle transport/assembly



➤ Skillet conveyors

Popular in the automotive industry, SEW's solutions work in both greenfield and brownfield applications. Dynamically change the height of your platform for ergonomics and production needs.

- Assembly assistants
- Vehicle transport/assembly

Contactless energy transfer

MOVITRANS® is SEW-EURODRIVE's contactless energy transfer system used for spot or line charging of AGVs, AMRs, and overhead monorail power. The energy transfer is via an air gap which makes the electromagnetic connection entirely maintenance-free and wear-free. This energy supply enables high speeds of more than 10 m/s

MOVITRANS®

> spot



Mobile components

- Charging power **up to 11 kW** per pick-up

Stationary components

- Decentralized supply up to **8 kW at 50 kHz**
- Magneto resistor can be installed **in or on the ground**
- **Heavy-duty design** available

MOVITRANS®

> line



Mobile components

- Charging power **from 1 to 4 kW** per pick-up

Stationary components

- Decentralized supply up to **14/16 kW at 50/25 kHz**, connected load up to **48 kW** possible (parallel connection of multiple devices)
- **Line cable** or **wedge-shaped cable solution**
- **Quick, easy, and open installation** of wedge-shaped cables
- Can be installed **in ground or overhead**
- **Inductive conductor** can be used for both **charging** and **navigating** (measuring accuracy +/- 2 mm)

Connected vehicle software

SEW-EURODRIVE's software solution for AGV systems includes startup and parameterization software, modular vehicle software, an intelligent fleet manager, and standardized interfaces to higher-level and peripheral systems. Communication takes place via the simple and lightweight MQTT network protocol which manages and administers all data traffic.



➤ **MAXOLUTION® connected** Software portfolio for the factory of the future

Fleet Manager

Guidance control system and transport order management

Track Designer

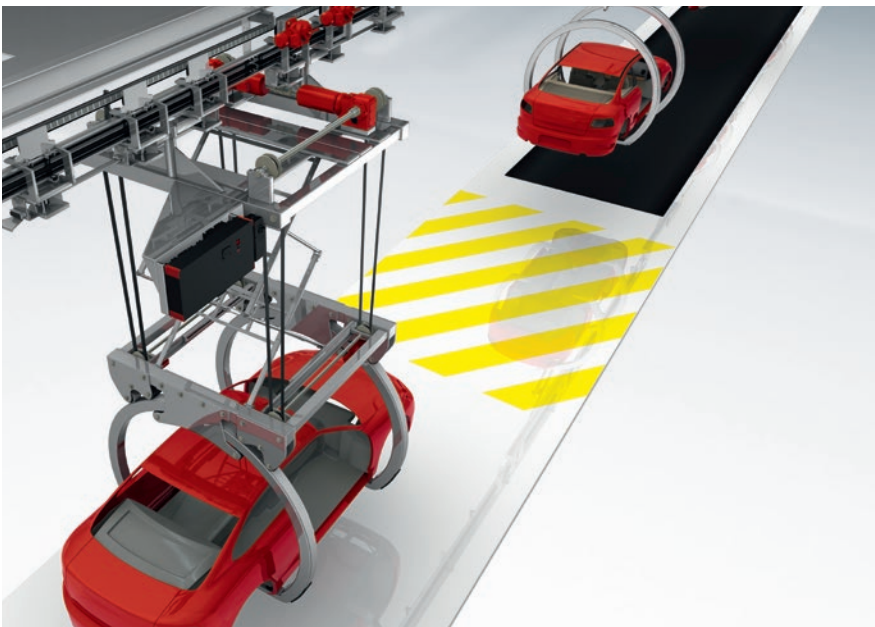
Parameterization of travel sections and transfer scenarios

Vehicle software

Control of automated guided vehicle systems

Functional safety in the factory

Minimize operational risks by utilizing functional safety features and components. SEW-EURODRIVE's functional safety options support all of the key motion functions such as safe limited speed (SLS), safe direction of rotation (SDI), safe operating stop (SOS) and position-dependent functions such as safely limited increment (SLI) and safety limit position (SLP). The safety functions can be implemented independently or controlled with safe fieldbuses.



Under the MAXOLUTION® brand, SEW-EURODRIVE delivers customized solutions for cutting-edge materials handling technology for all areas of the modern automated factory. Our scalable portfolio includes mobile and autonomous rail- and line-guided mobile transport and assistance systems.



→ Discover MAXOLUTION®
System Solutions on the web

MAXOLUTION®
AN SEW-EURODRIVE COMPANY

MAXOLUTION, LLC
220 Finch Rd.
Wellford, SC 29385
P 864-949-3254
www.sewmaxolution.com