

Automation & Industry 4.0

Modern manufacturing and logistics environments are increasingly characterised by automation, Industry 4.0 and digital transformation. The networking of machines, systems and processes requires powerful, adaptable components that can be seamlessly integrated into automated systems. Particularly in conjunction with autonomous mobile robots (AMRs) and automated guided vehicles (AGVs), the demands on conveyor technology, conveyor rollers and transport solutions are constantly increasing.

Industry-specific challenges in industrial automation

Whether in the electrical industry, mechanical engineering or automated intralogistics, today's systems must not only be reliable and durable, but also modular, intelligently networkable and precisely controllable.

Challenges such as:

- flexible material transfers between humans, machines and robots,
- ergonomic height adjustment for workstations,
- high system availability thanks to robust, low-maintenance components,
- seamless system integration in smart factory environments, and
- compact conveyor solutions for limited space require well-designed technical components for internal material flow.

AMR & AGV

Autonomous mobile robots (AMR) and automated guided vehicles (AGV) have established themselves as key technologies in modern intralogistics and production systems. In smart factories and smart warehouses, they enable flexible, highly automated material distribution around the clock, error-free and adaptively. The challenge, however, is to integrate these systems seamlessly into existing plant structures and work processes.

As an experienced supplier of conveyor technology components for Industry 4.0, we offer robust, low-maintenance and tailor-made solutions that efficiently organise the material flow between AMR or AGV systems and manual or automated workstations. Our products are individually customisable, compatible with various vehicle types and suitable for different container and pallet formats.

Our additions to AMR and AGV:

- **Powered buffer tracks:** Flat roller conveyors with protective covers, ideal for temporary storage of pallets, mesh boxes or containers. Perfectly integrable into AMR routes, with optional automated or manual transfer.
- **Pallet circulation track with ball roller table and lid gripper:** Ideal as an intelligent material buffer between production and logistics. The two-lane circulation track enables autonomous transfers by AMR and AGV vehicles, especially for plastic boxes and small load carriers.
- **Driven loading elements (front or side):** For precise feeding of conveyed goods into existing lines and as a link to your existing conveyor system. These modules ensure safe and precisely positioned material transfer, even in limited space – crucial for compact, highly automated layouts.
- **Manual roller conveyors as buffer sections:** Maintenance-free standard solutions for manual loading and as ergonomic transfer stations. Can be combined with a lift table module for optimum working height and direct connection to AGV systems.
- **Hydraulic loading element:** Lifts parked pallets and automatically transfers them to a powered roller conveyor – particularly space-saving and suitable for narrow production areas or fully automated goods receiving areas.
- **U-trolleys (suitable for tugger trains):** Robust, flexible transport solutions for Euro and industrial pallets. With a load capacity of up to 1000 kg and ergonomic pallet pick-up, they form the interface between manual order picking and automated vehicles.
- **U-shaped lift table (HTCU):** Specially developed for seamless integration with AGV/AMR systems as well as pedestrian stackers or pallet trucks. With load capacities of up to 1500 kg and a usable lift of 775 mm, it is ideal for automated lifting processes in pallet cycles.
- **Multi-track material station with gravity roller conveyors:** Designed as a space-saving buffer solution under pallet racks – ideal for the interaction of autonomous conveyor technology, manual picking and intermediate storage in high-density logistics areas.
- **Chip container:** The AGV or AMR transports the adapted chip container from the processing area to the collection point.
- **Transport trolleys for AGVs:** We develop customised multi-level trolleys that are specially adapted for use with AMRs and AGVs. These transport trolleys are also available in a route-compatible design.

Our supplementary components for AMRs, AGVs and other autonomous transport systems increase throughput, improve process reliability and reduce manual intervention. Thanks to our consistent focus on compatibility, robustness and modularity, our conveyor technology system solutions meet the highest requirements of modern industrial automation.

Electrical industry & system integrators

In the electrical industry and among system integrators, flexibility, modularity and precision are paramount. Production lines must be able to adapt quickly to new requirements, while components must offer a long service life and high reliability.

Our solutions:

- **Lifting tables for ergonomic assembly processes:** Can be integrated into assembly lines, ideal for height-adjustable adaptation in component manufacturing or assembly.
- **Transport equipment for internal material flow:** For smooth internal transport between production cells and intermediate storage areas.
- **Conveyor technology components for electrical equipment manufacturers:** Modularly configurable for fast system integration, whether roller conveyors, drive stations or deflection units.
- **Conveyor rollers for sensitive electronics manufacturing:** Low running noise, high concentricity and antistatic options – especially suitable for ESD-sensitive applications.

Mechanical engineering & automotive industry

The automotive industry and general mechanical engineering rely on highly automated processes in which reliability, cycle accuracy and load capacity are key requirements. Every downtime is costly here – the components used must therefore be robust and low-maintenance.

Our solutions:

- **Heavy-duty lift tables for assembly and testing stations:** With high load capacity and precise lifting technology for car body parts, assemblies or machine components.
- **Modular conveyor technology components for automated conveyor lines:** Roller conveyors, transfer elements and drive units – for flexible production lines with high cycle rates.
- **Conveyor rollers for high loads and continuous operation:** Available in steel, stainless steel or plastic – with optional bearing seals and damping elements.
- **Special conveyor rollers with brush attachments:** Conveyor rollers with fine brushes to protect sensitive car parts during transport.
- **Industrial wheels and castors for mobile systems:** For high loads, with smooth-running bearings and made of temperature-resistant materials.
- **Heavy-duty trailers for internal transport solutions:** Ideal for transporting heavy loads on company premises – also available with drawbar eyes, steering axles and adapted to different requirements.

Our conveyor system solutions for machine builders combine high load-bearing capacity with the ability to integrate into existing production lines and plant control systems – whether in new buildings **or retrofits**.

Your advantages at a glance

Robust, low-maintenance conveyor technology for automation solutions

Precise controllers for Industry 4.0 applications

Optimally matched components for AMR and AGV systems

Scalable solutions for system integrators, plant manufacturers and logistics centres

Technical advice and individual system configuration

Contact us, our experts will be happy to advise you!