

LOSYCO

ONE-PIECE FLOW ON LOXRAIL®



Individual solutions for streamlined production

LOXRAIL®-SYSTEMS



OUR PORTFOLIO

We design, build, and install entire assembly lines as turnkey solutions including

- rail-based transport technology
- trolleys/transport platforms
- drive systems and automation
- and a suitable operating and safety concept

We design each system to perfectly fit your particular plant's requirements, material flows, and the available space:

- track layouts with optional junctions and return lines for trolleys
- individual trolleys with customized shapes and sizes to accommodate different kinds of manufactured parts
- optional tailored parts carriers
- automated solutions for moving trolleys and assemblies through the line
- integration of machine and system controls for fully automatic operation

YOUR BENEFITS

Flush with the floor:

- no tripping hazards, no impairment of production processes
- forklifts, pallet trucks, rolling shelves can pass unhindered

Flexible handling:

- easy reversal of direction
- junctions for longitudinal and transverse travel
- for changing the direction of travel in the assembly line and for removing parts from the assembly process

Low rolling friction:

- smooth-running roller profile of wheelsets enables manual propulsion
- energy-efficient drives with low power consumption

Robust, fail-safe, low-maintenance construction:

- rugged rails made of precision steel
- easy-to-clean rails
- dirt-tolerant without immediate functional restriction

Scalable automation:

- motorized solutions with integrated control
- interfaces for integration in the plant control system
- safety concepts according to plant specifications

Investments in manufacturing logistics pay off directly for industries that have conventionally been employing box assembly for the most part. We have developed the LOXrail® system for efficient transport in order to facilitate the transition to flow production methods and as an easier and more cost-efficient solution than comparable conveyor systems.

Our special LOXrail® rails, which are flush with the floor, allow for assembly-line production of industrial goods and machines weighing several tons. This allows for significant efficiency gains even with small and medium quantities through reduced costs, faster turnaround, increased throughput, and improved process and material planning.

Our toolkit comprises various components and solutions that allow us to flexibly adapt the layout of the rail network to the production flow: switches, junctions, or special steering platforms. We integrate the LOXrail® system into existing plant topographies with little effort. Loads can be moved on standard trolleys or customer-specific transport platforms, which are either designed for fully manual operation or feature one of various available drive concepts.

IS FLOW PRODUCTION A BENEFIT IN YOUR INDUSTRY?

Flow production has been used to make industrial manufacturing more efficient for more than a hundred years. Originating in the automotive industry, it has been adopted in more and more mechanical engineering sectors.

Main advantages of flow production are

- reduced inventories of raw materials and semi-finished products
- accurate scheduling and on-time delivery
- significant reduction in lead times
- significantly increased productivity per area

We supply transport technology for flow assembly in these sectors:

- Machine tool industry
- Production of construction machinery and pallet trucks
- Transformer production
- Automotive industry, rail and road vehicle assembly
- Agricultural machinery industry
- Wind turbine production
- Modular building manufacturers
- Aircraft manufacturing



Source: © Ersa GmbH

BESPOKE SPECIFICATIONS

Stable base: LOXrail® floor rail system

- intra-logistics floor rail system
- two rail sizes for different load ranges:
 - LOXrail®25 for payloads up to 10 tons
 - LOXrail®40 for payloads up to 40 tons and more
- hardened steel (optionally stainless steel) rails sit in an aluminum holding frame
- rails are tightly fixed in the aluminum profile on one side, allowing for quicker installation and reduced maintenance effort



Drive solution for cyclic production

We implement assembly lines with automatic cyclic movement based on a drive system installed below the floor. The drive concept consists of a tow conveyor spanning the entire length of the line and a drive unit installed at the end of the line.

For optimal production timing:

- stroke length is adjusted to the distance between stations
- travel speeds can be freely defined from ultraslow continuous flow to pulse operation at $v=4 - 8$ m/min
- nominal loads are adapted to line requirements
- pulse times and line routing are adapted to the number of assembly stations
- additional safety devices such as light curtains or signals are available as options for enhanced occupational safety requirements

Setting your production in motion: transport trolleys

- We offer standard trolleys and tailored transport platforms for your products
- We ensure load capacities adapted to the goods transported
- We design optional superstructures or component-specific carriers for optimized ergonomics and occupational safety
- Our trolleys and transport platforms can be used as mobile workstations
- We manage to design very low-height trolleys that hardly change the working height
- Our trolley design ensures easy access to the transported workpieces and assemblies from all sides



Beyond the end of line: trolley return concepts

- We design trolleys for rail-bound or rail-independent return
- Special undercarriages enable trolleys to be returned using existing passageways on the factory floor
- Our trolleys are designed for return by crane or (manual) pallet jack by default