EISENMANN

INVERTED POWER AND FREE FLOOR CONVEYOR
EFFICIENT, VERSATILE AND CLEAN

THE INVERTED POWER & FREE SYSTEM FOR GROUND-BASED CONVEYING TASKS OF LIGHT LOADS IN THE COATING PROCESS.

The best of all worlds

This system combines the advantages of floor-mounted circular conveyors, multi-track spindle conveyors and skid conveyors with the benefits of conventional overhead power and free conveyors. Although it is extremely versatile, it requires fewer drives and control components. The compact dual-rail system can be integrated within or adjacent to coating lines, and saves space and electricity. For higher workpiece arrangements and larger loads, a rail bracket is added and the goods carrier is force centred on the outrigger. This optimizes the positional accuracy, e.g. for automatic coating processes.

Variable operating modes and speeds

The functional fast transfer from chain to chain increases the flexibility of painting plants compared to plants with conventional circular conveyors, as different conveying speeds are possible depending on the process and transport tasks. Buffer sections can be implemented using the accumulation function. Moreover, switches can be deployed for merging or diverting carriers, for overtaking, sorting, or directing a specified number of carriers to a particular destination. It is also able to create flexible buffers, or time windows for rinsing during application. Additionally, the system allows specified carriers to make repeated circuits, while others can be sent directly to defined process steps.

Oil-free operation – even at high temperatures

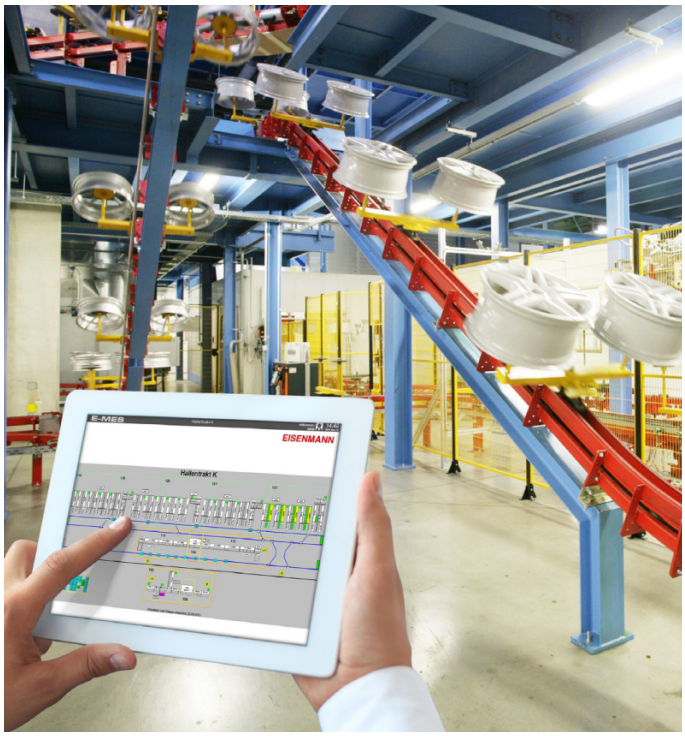
The inverted power and free system was developed with wet and powder coating lines in mind. The design of the chains, in conjunction with the use of special materials, and special lubricants for the bearings, guarantees oil-free, low-maintenance operation – even in high-temperature conditions.

Low-noise operation

A further advantage of this system is low-noise operation – particularly when compared with skid conveyors. Noise levels were reduced by using fixed chain dogs. All components required for power and free movements are incorporated into the carrier trolley.

Turning device saves space

A special device integrated in the carrier makes it possible to make 90° turns. This is especially useful for long components, such as bumpers. These can be turned sideways, and then buffered within a far smaller space, then turned lengthwise in preparation for painting. The components can be turned automatically either during transfer or when stationary, as needed.



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Eco-friendly compact design
The system is of compact design, with low height and width, taking up far less space than a skid system. Moreover, the low dead weight of the trolleys helps to reduce electricity consumption.

High process reliability and extremely low maintenance
The inverted power and free system uses proven standard components, and many are identical. This ensures high process stability, and greatly reduces maintenance overhead and spare parts inventory.

Advantages at a glance
- All required conveying functions such as distributing, sorting, dosing, feeding and discharging, fast and slow transport as well as buffering can be realized in one system
- Compact design and 90-degree turning saves electricity and space
- More efficient coating through rapid transfer and flexible operating modes
- High process reliability and low maintenance through standardized components, fewer drives, and sensors
- Reliable applications at high temperatures and clean environment thanks to oil-free chains and S conveyors placed below
- Low-noise operation through enclosed chain rail and fixed pusher dogs
- Design and system width can be individually adapted to the workpiece dimensions by means of lateral extension arms on the standard rail

Technical data	
Overall height	600 mm
Width without outrigger	180 mm
Width with outrigger	300/400 mm or individual
Speed	0,5 - 12 m/Min.

Inverted power & free conveyor with individually designed outrigger.

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