

ZP-6 Linear Gantry

Automated linear gantry for machining and testing railway axles – efficient and flexible



Customer

Leading manufacturer in railway and rail vehicle construction

Industry

Rail vehicle construction / Heavy industry

Application

Automated machining and inspection line for railway axles

Technology

**ZP-6 Linear Gantry
Servomotor axle gripper
Gripper for tool change
Feed unit for bundle of axle
Control**

Location

Italy

Customer Benefit

Safe handling in restricted time frames

Process reliability in hot and dirty environment

Employee protection and a more ergonomic environment

Fully automated process from hardening to final stacking

Production time per axle

23 Min.

Axle per year

12 000

No. of Axle types

17

Güdel Technology

1 × ZP-6 Linear Gantry
with 2 Carriages

2 × servomotor-driven
axle gripper

Tool Change:
1 × Gripper, 1 × Carriages

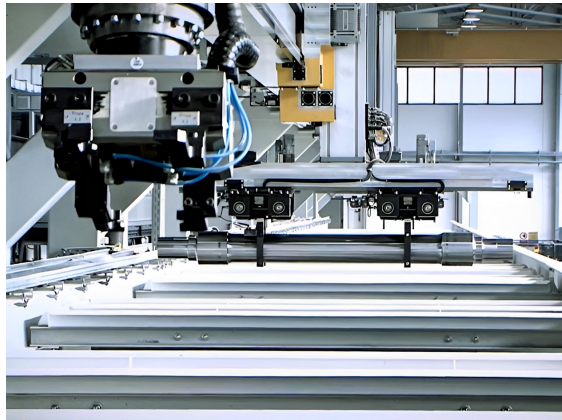
1 × Feed unit for bundle of axle

2 × Transfer stations for
finished axles

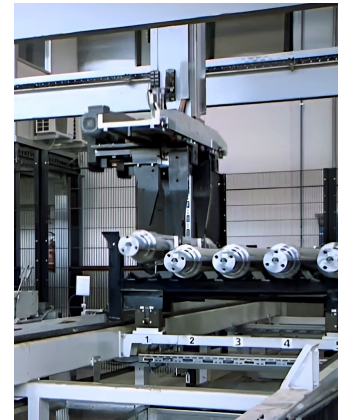
10 × buffer stations

Safety enclosure

4 Control areas, assembly &
commissioning



Güdel gantry with additional axle gripper for machine loading



Güdel Gantry places a finished axle on a transport pallet



Scan QR code for
product details

Efficient chaining for maximum utilization

The manufacture of railway axles requires maximum precision and seamless coordination of numerous machining and testing processes. To increase throughput, quality, and occupational safety, the manufacturer relies on a highly automated linear gantry from Güdel, which links all stations together and ensures a continuous flow of material.

Linear Gantry for processing and testing

A ZP-6 with two carriages handles the loading and unloading of eleven machining and testing machines. These include turning, drilling, milling, ultrasonic testing, and magnetic particle testing. During production, the axles are completely machined in just 23 minutes. This enables production of up to 12 000 axles annually across 17 types.

Flexible for different axle

The servomotor-adjustable axle grippers adapt flexibly to different axle lengths and diameters without interrupting the production flow. The system is supported by buffer stations and automated transfers, which keep the cycle time of the entire line stable. Güdel supports the customer throughout the entire life cycle of the plant – from commissioning and ongoing operation to modernization.

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automation on track

Güdel is an international Swiss industrial company founded in 1954. As a world-leading provider of industrial automation solutions, Güdel is a one-stop shop for its customers, offering everything from high-precision machine components to turnkey automation solutions in the automotive, rail, logistics and machine tool markets.

Innovation, quality and modularity: these define Güdel's technology. The Güdel Group, which has been family-owned since it was founded, employs around 1 000 people at more than 20 locations worldwide.