

# 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

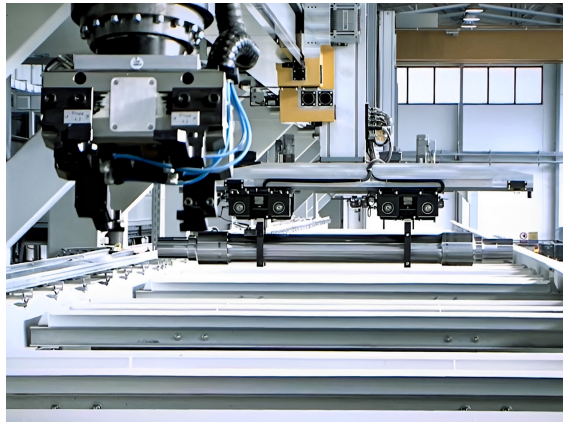
1 × Feed unit for bundle of axle

2 × Transfer stations for  
finished axles

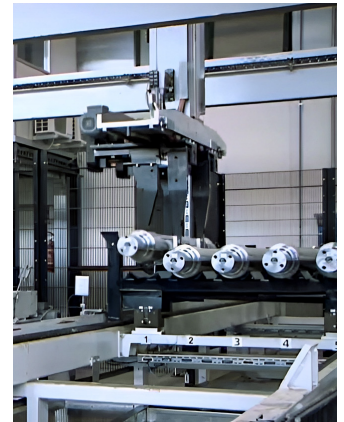
10 × buffer stations

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*



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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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Güdel is an internationally active Swiss industrial company founded in 1954. As one of the world's leading suppliers of industrial automation solutions, Güdel offers its customers everything from a single source: from high-precision machine components to customized automation solutions for use in markets such as automotive, railway, logistics, composite and machine tools.

Güdel technology is characterized by innovation, modularity, and quality. Güdel employs around 1,000 people at over 20 locations worldwide. The group of companies has been owned by the founding family since its inception.