

FP-7 & ZP-7

Automated gantry systems for the safe handling of hot railway wheels during heat treatment



FP-7 with 4 carriages pick up 4 glowing wheels

Customer

Leading manufacturer in railroad and rail vehicle construction

Industry

Rail vehicle construction / heavy industry

Application

Loading and unloading of heat treatment furnaces and hardening machines for railway wheels

Technology

**2 × FP-7 3-axis gantry
2 × ZP-7 Linear axis
6 × Special gripper for hot wheels
1 × Servomotor wheel gripper
2 × 4-fold lifting tables controls**

Location

India

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

Single-variety stack formation for efficient onward conveying

Max. Workpiece weight

725 kg

Max. Workpiece temperature

950 °C

Güdel Technology

1x FP-7 with 1x wide-span bridge,
moving support and
4 independently moving carriages

2 × ZP-7 Linear axis

6 × Special gripper hot wheels

1 × Servomotor wheel gripper

2 × 4-fold lifting tables

4 Control areas

Safety enclosure

Assembly & commissioning



FP-7 with 4 hot wheel grippers



Wheel station for stack formation



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product details

Safe handling under extreme conditions

When forging and heat treating railway wheels, every second counts. Only precise handling within tight time windows keeps process temperatures constant and ensures product quality. Güdel's gantry systems reliably grip the red-hot wheels, withstand extreme radiant heat, and ensure a continuous material flow – even under the toughest conditions.

One FP-7 serves four hardening machines

The 3-axis gantry simultaneously removes the heated wheels at the exit of the heating furnace. Each wheel is placed in the corresponding hardening machine in less than 30 seconds. After hardening, the system automatically transports the wheels to the next heat treatment furnace with precise positioning.

Two ZP-7 for heat treatment up to final stacking

The two linear gantries handle the loading and unloading of the heat treatment furnaces. Supported by quadruple lifting tables, a synchronous material flow is ensured. At the end of the line, the wheels are sorted by type and prepared for transport – safely, efficiently, and traceably.

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automation on track

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.