

FP-7 & ZP-7

Automated gantry systems for machining and testing railway wheels with maximum utilization



Customer

Leading manufacturer in railroad and rail vehicle construction

Industry

Rail vehicle construction / heavy industry

Application

Automated processing and testing line for railway wheels

Technology

**2 × FP-7 3-axis gantry
2 × ZP-7 Linear axis
10 × Servomotor wheel gripper
5 × Tilting tables with chain conveyor control**

Location

India

Customer Benefit

Safe handling in restricted time frames
Process reliability in heat and dirt

Employee protection and a more ergonomic environment

Fully automated process from hardening to final stacking

Production time per wheel

< 4 Min.

Wheels per year

100 000

Max. Workpiece weight

1 000 kg

The gripper holds the wheel in front of the forged text reading station

Güdel Technologie

2 × FP-7 3-axis gantry, Turning and drilling machines

2 × ZP-7 Linear axis, marking, washing, testing

10 × wheel grippers up to 1000 kg workpiece weight

5 × tilting tables with chain conveyor

20 storage spaces, sorted stacking

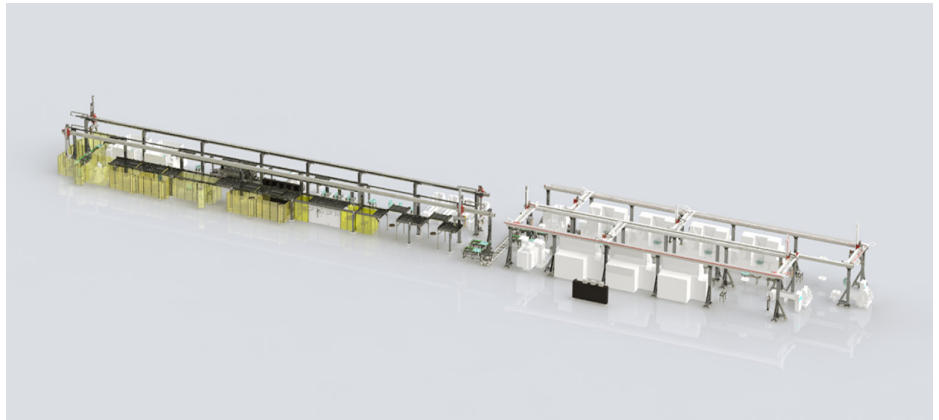
Floor conveyor systems for material flow

Reading and marking systems, traceability

4 control areas, protective housing, assembly



Scan QR code for product details



Layout of the wheel line automation

Safe interlinking for maximum productivity

The production of railway wheels includes forging, heat treatment, mechanical processing and testing. For high throughput and complete traceability, Güdel combines these steps with highly automated interlinking technology – reliable, precise and efficient. The complete line was assembled and put into operation, including protective equipment for maximum safety.

Area gantries for turning and drilling machines

The two FP-7s operate seven lathes and two drills. During machining, they turn the wheels are rotated 180° so that both sides are fully processed. The number stamped during forging is read automatically and ensures the exact allocation of the raw parts. Two wheel types can run through the line in parallel without interrupting the production flow.

Linear gantries for the test line

The ZP-7s links the test line, in which marking, washing, painting and six test processes take place. 5 tilting tables with chain conveyors ensure a smooth material flow between the stations. At the end of the line, the wheels are arranged in stacks according to type, prepared for onward transportation and stored in a traceable manner until delivery. This results in a finished wheel in less than four minutes – up to 100 000 per year.

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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 1000 people at more than 20 locations worldwide.