

UFB 125 N

ROLL-IN ROLL-OUT / FRICTION ROLLER DRIVE



BASIC SPECIFICATIONS

Range of wheel tread diameters:	600 to 1,250 mm
Maximum wheelset weight:	5,000 kg
Range of adjustable track gauges:	1,000 to 1,676 mm

PURPOSE

The **UFB 125 N** Abovefloor Wheel Lathe is a CNC double-saddle special-purpose lathe designed for reprofiling of wheels used in rail vehicles. The machine tool ensures productive machining of solid (monoblock) wheels and wheels with tyres of both used and new wheelsets.

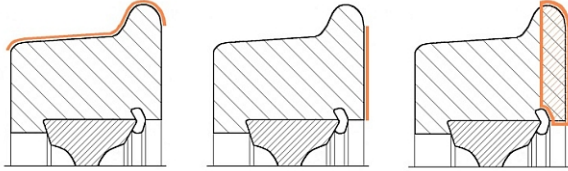
The wheelsets can be provided with outboard axle boxes, gears installed between the wheels, or brake discs.

The wheelset is rolled onto the built-in wheelset elevator along rails and automatically centred and clamped between the centres and the friction drive rollers; three rollers are attached to each wheel.

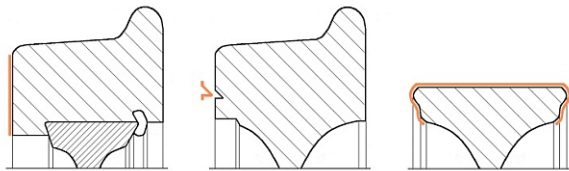
The main drive is powered by six AC motors of continuously variable rotation rates and digitally controlled in master / slave system.

The UFB 125 N Abovefloor Wheel Lathe is capable of performing the following operations:-

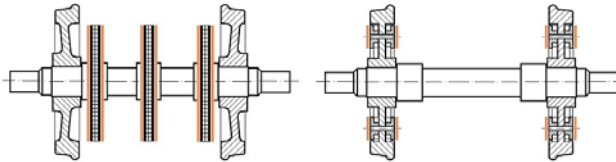
- Turning of wheel profile according to technological program.
- Wheel rim inner facing.
- Turning of tyre in order to remove retaining ring.



- Wheel rim outer facing.
- Turning of limit machining groove.
- Turning of wheel centre.



- Axle-mounted brake disc facing.
- Wheel-mounted brake disc facing.



MAIN FEATURES

- Major body elements made as extremely rigid, heavily ribbed box-type high-grade iron castings guaranteeing the best dumping of vibrations produced during cutting process.
- Main drive from six friction rollers individually powered by AC motors of continuously variable rotation rates and digitally controlled in master / slave system.
- Automatic and reliable profile wear measurement using touch-type measuring heads (laser-based measurement as option).
- Productive machining of narrowed (economical) wheel profiles.
- Operation in roll-in roll-out system.
- Versatile equipment and wide programming capabilities facilitate easy machining of unusual wheel profiles.
- Adjustable track gauge in the range of 1,000 to 1,676 mm.

 **STANDARD EXECUTION**

- Base, two tailstocks each with 60 / 90 deg. centre and three drives with friction rollers.
- Saddles and quick change compound cutter for wheel profile machining with cassettes and cutting plates.
- Touch-type wheel wear measuring heads.
- Wheelset elevator and centring device.
- Six (6) AC motors of continuously variable rotation rates with digital controllers for main drive.
- Four (4) AC motors of continuously variable rotation rates with digital controllers for feed drives.
- Latest SIEMENS SINUMERIK 840D sl computer numerical control system with PLC.
- Anti-slip system for friction drive.
- Control panel.
- Fault diagnostics with text messages in user's language and Help function.
- Program for machining of one type of basic or economical wheel profile.
- Profile gauge and master gauge for one type of basic wheel profile.
- HMI screen pages – operator guidance during machining process.
- Electrical equipment and control cabinet.
- Hydraulic power system.
- Lubrication system.
- Chip covers, chip chute and chip conveyor.
- Full enclosure of machine tool.
- Lighting of working zone.
- Spanners for machine tool operation and installation.
- Equipment for setting and fixing the machine tool on foundation.
- Calibration wheelset for machine tool measuring system.
- Operation and Maintenance Manuals.
- Stack light and buzzer indicating machine tool working condition.
- CE mark and EC declaration of conformity.

**ADDITIONAL EQUIPMENT**

- Special centres.
- Device holding outboard axle boxes.
- Device holding wheelset axle-mounted gearbox.
- Cutters for wheel rim outer facing.
- Device and cutters for axle-mounted and wheel-mounted brake disc facing.
- Device for wheel centre machining.
- Touch screen for main control panel.
- Additional programs for machining of basic and economical profiles.
- Wheelset database.
- Laser measuring heads for scanning of wheel profile.
- Equipment for tool retraction in case of power failure.
- Equipment for monitoring of profile cutters wear condition.
- Equipment for calibration of cutting tools.
- Mechanical chip crusher and chip bin.
- Dust and fume extraction system.
- CCTV system for monitoring of machining process.
- Wheelset turn table.
- Other upon request.


TECHNICAL SPECIFICATIONS

MODEL	UFB 125 N	
Wheelset geometry		
Track gauge ⁽¹⁾	mm	1,000 to 1,676 mm
Max. wheel tread diameter before machining	mm	1,250
Min. wheel tread diameter after machining	mm	600
Max. width of wheel rim	mm	150
Min. / max length of wheelset axle	mm	1,215 / 2,840
Max. weight of wheelset ⁽²⁾	× 10 kN	5
Machine tool parameters		
Max. chip cross-section ⁽³⁾	mm ²	2 × 10
Max. travel rate of saddles	mm/min	5,000
Max. continuously variable cutting speed for wheel profiling	m/min	130
Power of main drive motors	kW	6 × 12
Total power installed (standard execution)	kW	110
Machine tool overall dimensions and weight ⁽³⁾		
Machine tool overall dimensions:-		
Length	mm	7,700
Width	mm	4,500
Height	mm	2,480
Workshop floor surface demand	mm	12,000 × 4,700
Machine tool weight	× 10 kN	25
Machining accuracies		
Difference in diameters between two wheels of the same wheelset	mm	≤0.15
Radial run-out of wheel tread	mm	≤0.10
Axial run-out of wheel inner faces	mm	≤0.10
Accuracy of profile machining	mm	≤0.15
Roughness of wheel profile surface after machining, Ra	µm	5 to 20
Roughness of brake disc surface after machining, Ra	µm	2.5 to 3.2
<small>(1) To be agreed upon. Adjustable track gauge in the range of 1,000 to 1,676 mm available. (2) Other length of wheelset axles to be agreed upon. (3) Wheel material: steel of hardness ≤270 HB and tensile strength Rm ≤950 N/mm². (4) For standard execution.</small>		

Some of the above data can be altered to meet the customer requirements.

Above data are subject to change due to product development, without prior notice.