

UFD 140 N

The UFD 140 N Portal Wheel Lathe is CNC double-saddle special-purpose lathe designed for reprofiling of railway rolling stock wheelsets with axle boxes, gears and brake discs, operating in roll-through system.



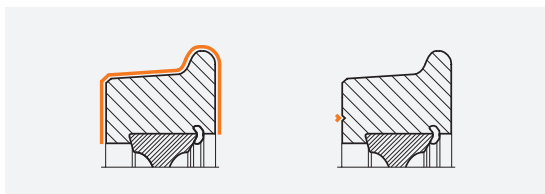
Roll-Through / Friction Roller Drive



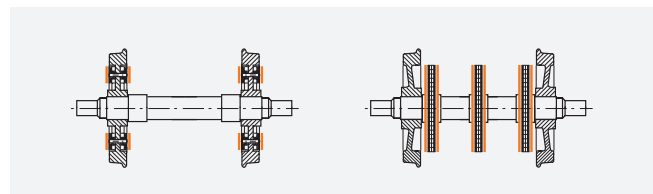
- Machine major body elements made as extremely rigid, heavily ribbed box-type, high-grade grey iron castings providing maximum vibration-damping capabilities during cutting process
- Main drive from six independent friction rollers, powered by AC motors of continuously variable rotation rates providing high productivity and quality of wheelset machining
- Automatic and reliable profile wear measurement using touch-type or laser-based system
- Versatile equipment and wide programming options guarantee precise machining of even unusual wheel profiles
- Multi-track gauge version available
- Roll-through and/or Roll-in Roll-out arrangement

Available Machining Operations

Wheels



Brake discs



TECHNICAL SPECIFICATIONS		UFD 140 N
Wheelset geometry		
Track gauge	mm	1435 ⁽¹⁾
Max. wheel tread diameter (before machining)	mm	1400
Min. wheel tread diameter (after machining)	mm	540
Max. width of wheel rim	mm	150
Min. / Max. length of wheelset axle	mm	1650 / 2600 ^{(2) (3)}
Max. weight of wheelset	×10 kN	5
Machine tool parameters		
Max. chip cross-section (for each saddle)	mm ²	18 ⁽⁴⁾
Max. working feed rate	mm / min	1000
Max. travel rate of saddles	mm / min	5000
Number of main drive motors	pcs	4
Total power of main drive motors	kW	111
Total power installed (standard execution)	kW	185
Machine tool overall dimensions and weight		
Machine tool overall dimensions:		
• Length	mm	3825 ⁽²⁾
• Width	mm	8400 ⁽²⁾
• Height	mm	2840
Workshop floor surface demand	mm	15500 × 6500
Approximate weight of machine tool	×10 kN	40 ⁽²⁾
Machine tool 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 ⁽⁵⁾
Roughness of wheel profile surface after machining, Ra	µm	5 to 12.5
Roughness of brake disc surface after machining, Ra	µm	2.5 to 4.5
⁽¹⁾ – Another track gauge – to be agreed upon. Available double-track gauge version. ⁽²⁾ – For track gauge of 1435 mm and standard execution. ⁽³⁾ – Other length of wheelset axles to be agreed upon. ⁽⁴⁾ – Wheel material – Steel: Hardness ≤ 270 HB, Tensile strength ≤ 950 N/mm ² . ⁽⁵⁾ – Measured with machine tool measuring system or clearance between profile gauge and wheel profile surface.		

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.