

UDA 125 N

The UDA 125 N Portal Wheel Lathe is CNC double-saddle special-purpose lathe designed for reprofiling of wheels and discs used in rail vehicles. The machine tool is provided with either radial or axial wheelset clamping system and it ensures machining of solid (monoblock) wheels and wheels with tyres of both used and new wheelsets.



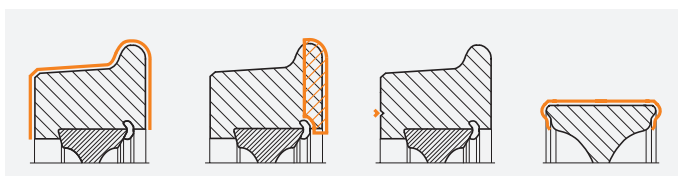
Roll-Through / Radial or Axial Clamping



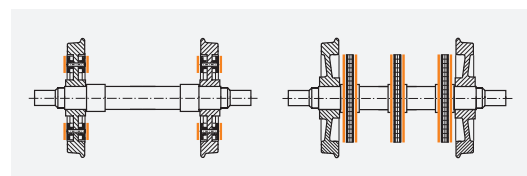
- Machine main structure made in form of portal as extremely rigid, heavily ribbed box-type, high-grade grey iron casting providing maximum vibration-damping capabilities during cutting process
- Main drive powered by two AC motors of continuously variable rotation rates providing high productivity and quality of wheelset machining
- Automatic and reliable profile wear measurement using touch-type measuring heads
- Versatile equipment and wide programming options guarantee precise machining of even unusual wheel profiles
- Multi-track gauge version available
- Two versions of wheelset clamping
- Roll-through and/or Roll-in Roll-out arrangement

Available Machining Operations

Wheels



Brake discs



TECHNICAL SPECIFICATIONS
UDA 125 N
Wheelset geometry

Track gauge	mm	1435 ⁽¹⁾	
Wheelset clamping system ⁽²⁾		Radial	Axial
Max. wheel tread diameter (before machining)	mm	1250	1200
Min. wheel tread diameter (after machining)	mm	660	770
Max. width of wheel rim	mm	145	
Min. / Max. length of wheelset axle	mm	1645 / 2370 ^{(3) (4)}	
Max. weight of wheelset	×10 kN	4.5	

Machine tool parameters

Max. chip cross-section (for each saddle)	mm ²	12 ⁽⁵⁾	
Max. working feed rate	mm / min	1000	
Max. travel rate of saddles	mm / min	3000	
Max. rate of continuously variable rotation of main drive:			
• Profile machining	rpm	45	
• Brake discs facing	rpm	70	
Number of main drive motors	pcs	2	
Power of each main drive motor	kW	40	
Total power installed (standard execution)	kW	140	

Machine tool overall dimensions and weight

Machine tool overall dimensions:

• Length	mm	3825	
• Width	mm	8400 ⁽³⁾	
• Height	mm	2840 ⁽³⁾	
Workshop floor surface demand	mm	15500 × 6500	
Approximate weight of machine tool	×10 kN	36 ⁽³⁾	

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 ⁽⁶⁾	
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	

⁽¹⁾ – Another track gauge to be agreed upon. Multi-gauge version available.

⁽²⁾ – Range of clamping diameter – to be selected by Purchaser.

⁽³⁾ – For track gauge of 1435 mm and standard execution.

⁽⁴⁾ – Other length of wheelset axles to be agreed upon.

⁽⁵⁾ – Wheel material – Steel: Hardness ≤ 210 HB, Tensile strength ≤ 850 N/mm².

⁽⁶⁾ – 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.