TRB 115 / TRB 135 / TRB 155

CENTRE LATHES

BASIC PARAMETERS

Max. torque on spindle	13,600 Nm
Max. weight of workpiece between centres	9 tonnes
Turning length	2,000 to 18,000 mm

In their basic version the **TRB** series horizontal centre lathes **(TRB 115 / TRB 135 / TRB 155)** – thanks to the innovative mechanical solutions and the advanced control systems – are the multi-purpose lathes that guarantees efficient rough and finish machining.

PURPOSE

The TRB series lathes are designed for workpiece machining in the range of turning in accordance with their specifications, especially for machining of large-size shafts. When delivered with special equipment they can operate as horizontal machining centres with turning, drilling and milling capabilities. They can be equipped with an automatic tool head, tool and workpiece measuring system, controlled C axis, workpiece steady rest.

CONTROL SYSTEM

The application of the state-of-the-art CNC system allows for automatic, precise and efficient workpiece machining according to the programme.

MAIN FEATURES

- Machine tool construction based on a rigid bed with hardened guideways
- Bed and headstock bodies made from high-grade cast iron of enhanced mechanical properties
- Carriage travels along two guideways that guarantee precise guidance
- Spindle rested on bearings of increased accuracy class
- A wide variety of optional equipment that expands the machine tool capabilities
- All shafts and gears are carburized, hardened and ground

STANDARD EXECUTION

- Swing over bed Ø 1,150 mm (TRB 115)
- Turning length 2,000 to 8,000 mm, every 1,000 mm
- Power of main drive motor of 40 kW (continuous operation)
- Range of continuously variable spindle rotation rates 1 to 900 rpm
- Power supply 3 × 400 V / 50 Hz
- SIEMENS SINUMERIK 840 D sl CNC system
- Automatic 8-position turret
- Ball screw and nut transmissions for X- and Z-axis travels for turning length up to 4,000 mm; backlash-free rack-and-pinion transmission for Z-axis travel for turning length of 5,000 to 8,000 mm
- Automatic change of range of headstock rotation rates
- Central lubrication system controlled by CNC
- Chip conveyor
- 2.6-Bar tool cooling system (for automatic turrets only)
- Lighting of working zone
- 4-jaw chuck Ø 1,600 mm
- Tailstock with quill Ø 190 mm with spindle with Morse no. 6 taper, clamping force indicator, workpiece extension compensation, with automatic quill stroke, travel along bed
- Operator cabin
- Control panel
- Dead centre with Morse no. 6 taper - 1 pc
- Adjusting wedges for leveling and foundation bolts
- CE mark
- Operations and maintenance manuals
- CNC operation and programming documentation

OPTIONAL EXECUTION

- Swing over bed Ø 1,350 mm (TCM 135)
- Turning length 9,000 to 18,000 mm every 1,000 mm (with Z-axis travel drive by backlash-free rack-and-pinion and partial machining zone guards)
- Tailstock with quill Ø 190 mm with spindle, clamping force indicator, workpiece elongation compensation, with automatic quill travel, travel along bed
- Tailstock with quill Ø 190 mm with spindle, clamping force indicator, workpiece elongation compensation, with automatic quill travel, travel along bed, quill clamping and clamping against bed
- Tool holder with 1 quick-change tool
- Tool holder with 4 quick-change tools
- Automatic 8-position turret with live tools and controlled C axis by main drive motor
- Automatic 8-position turret with live tools, Y axis and controlled C axis by main drive motor
- Automatic turret with 8 positions in vertical plane
- Spindle bore Ø 300 mm
- Spindle bore Ø 420 mm
- Linear measuring scales for X and Z axis
- Tool measuring system
- Workpiece measuring system
- Chip container
- Air conditioning for the electrical cabinet
- Other according to agreement

ADDITIONAL EQUIPMENT

- Roller steady rest Ø 50 to 450 mm
- Roller steady rest Ø 450 to 750 mm
- Roller steady rest Ø 450 to 950 mm
- 3-jaw self-centering chucks with manual fixing according to customer needs (Ø 400 mm, Ø 500 mm,Ø 630 mm, Ø 800 mm)
- 4-jaw independent chuck according to customer needs (Ø 500 mm, Ø 630 mm, Ø 800 mm, Ø 1,000 mm, Ø 1,250 mm) – TRB 135 only
- Hydraulic chucks according to customer needs (Ø 630 mm, Ø 800 mm)
- Boring clamp Ø 130 / 1,000 mm
- Boring clamp Ø 160 / 1,250 mm
- Boring clamp Ø 200 / 1,500 mm
- Burnishing attachment
- Reducing sleeve Ø 120 / Morse no. 6 taper
- Dead centre with Morse no. 6 taper
- Bed inspection bridge
- Spindle test shaft

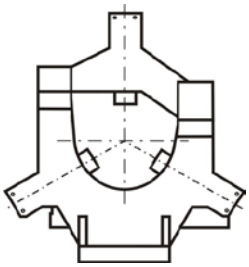
BASIC TECHNICAL SPECIFICATIONS

TECHNICAL SPECIFICATIONS (TRB SERIES)				
Model		**TRB 115**	**TRB 135 ***	**TRB 155 ***
Machine tool code				
Swing over bed	Ø mm	1,150	1,350	1,550
Swing over carriage	Ø mm	700	900	1,100
Distance between centres (every 1,000 mm)	mm		2,000 to 18,000	
Max. weight of workpiece clamped in: • chuck • centres • centres + 1 steady rest • centres + 2 steady rests	 kg kg kg kg		 2,000 9,000 12,000 15,000	
Headstock				
Spindle bore diameter	Ø mm	150	300 *	420 *
Range of continuously variable rotation rates	rpm	1 to 900	2 to 450 *	2 to 315 *
Spindle nose	size	A1-15	A1-20 *	A2-20 *
Power of main drive motor	kW		40/ 60 *	
Max. torque on spindle	Nm		10,000 / 13,000 *	
Carriage				
Longitudinal travel	mm		2,200 for 2,000 mm turning length, every 1,000 mm	
Crosswise travel	mm		700	
Rapid travel in X axis	mm/min		4,000	
Rapid travel in Z axis	mm/min		4,000	
Tailstock				
Quill diameter	Ø mm		190	
Quill stroke	mm		300	
Internal taper	size		Morse no. 6	
Machine tool overall dimensions and weight, approx.				
Length	mm		3,900 + turning length	
Width	mm		2,850	
Height	mm		2,500	
Weight (for 2,000 mm of turning length)	kg	10,000		10,800
Increase in weight for 1,000 mm of turning length	kg		1,100	
* optional execution				

STEADY RESTS

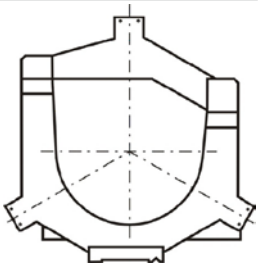
ROLLER STEADY REST:
Ø 50 to 450 mm

- Installed on the bed
- Fixing to the bed: Manual
- Setting of quills: Manual



ROLLER STEADY REST:
Ø 450 to 750 mm

- Installed on the bed
- Fixing to the bed: Manual
- Setting of quills: Manual



ROLLER STEADY REST:
Ø 450 to 950 mm

- Installed on the bed
- Fixing to the bed: Manual
- Setting of quills: Manual