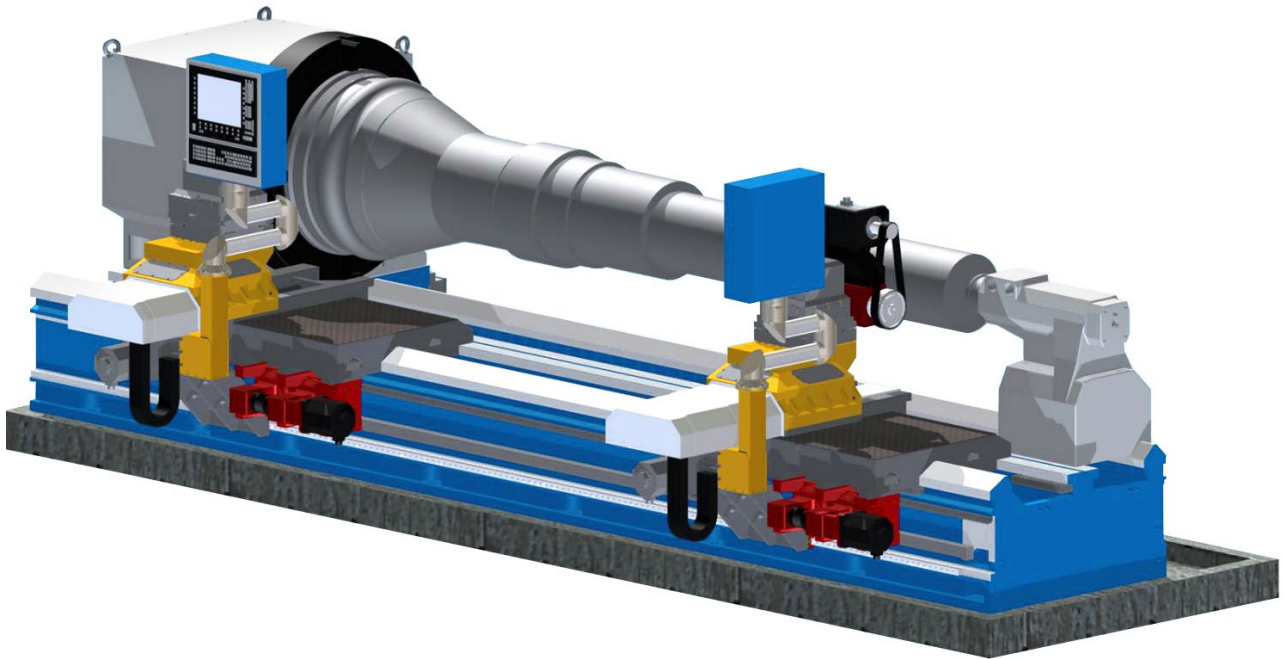


TCM 130 / TCM 155 / TCM 180

CNC CENTRE LATHE



i BASIC PARAMETERS

3-guideway bed	
Max. torque on spindle	17,000 Nm
Max. weight carried between centres	18 tonnes
Turning length	3,000 to 20,000 mm

In their basic version the horizontal centre lathes of the **TCM** series (**TCM 130 / TCM 155 / TCM 180**) – 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 TCM 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 turret, tool attachments, tool and workpiece measuring systems, controlled C axis, workpiece steady rests.

☐ CONTROL SYSTEM

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

MAIN FEATURES

- Machine tool construction based on a rigid bed with hardened guideways
- 3-guideway bed, headstock body 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 \varnothing 1,300 mm (TCF 130)
- Turning length 3,000 to 8,000 mm, every 1,000 mm
- Power of main drive motor of 60 kW (continuous operation)
- Spindle bore \varnothing 140 mm
- Range of continuously variable spindle rotation rates 4 to 710 rpm
- Power supply 3 \times 400 V / 50 Hz
- SIEMENS SINUMERIK 840 D sl CNC system
- Automatic 4-position turret
- Ball screw and nut transmissions for X- and Z-axis travels for turning length up to 5,000 mm; backlash-free rack-and-pinion transmission for Z-axis travel for turning length of 6,000 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 \varnothing 1,600 mm
- Tailstock with quill \varnothing 240 mm with tool spindle, clamping force indicator, workpiece extension compensation, with automatic quill stroke, travel along bed, automatic clamping against bed
- Operator cabin
- Control panel
- Dead centre - 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 \varnothing 1,550 mm (TCM 155)
- Swing over bed \varnothing 1,800 mm (TCE 180)
- Turning length 9,000 to 20,000 mm every 1,000 mm (with Z-axis travel drive by backlash-free rack and pinion-and-partial machining zone guards)
- Additional carriage
- Tailstock with quill \varnothing 240 mm with spindle, clamping force indicator, workpiece elongation compensation, with automatic quill travel, travel along bed, and quill clamping against bed
- Tool holder with 1 quick-change tool
- Automatic 8-position turret with live tools and controlled C axis by main drive motor
- Options for live tools – to be agreed upon
- Automatic 8-position turret with live tools, Y axis and controlled C axis by main drive motor
- Options for live tools – to be agreed upon
- Automatic turret with 8 positions in vertical plane
- 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 \varnothing 50 to 450 mm
- Roller steady rest \varnothing 450 to 750 mm
- Roller steady rest \varnothing 450 to 950 mm
- 3-jaw self-centering chuck with manual fixing according to customer needs (\varnothing 630 mm, \varnothing 800 mm)
- 4-jaw independent chuck according to customer needs (\varnothing 800 mm, \varnothing 1000 mm, \varnothing 1250 mm)
- Hydraulic chuck according to customer needs (\varnothing 630 mm, \varnothing 800 mm)
- Pneumatic chuck according to customer needs (\varnothing 630 mm, \varnothing 800 mm)
- Boring clamp \varnothing 130/1,000 mm
- Boring clamp \varnothing 160/1,250 mm
- Boring clamp \varnothing 200/1,500 mm
- Dead centre
- Tool holders according to customer needs
- Bed inspection bridge
- Spindle test shaft


BASIC TECHNICAL SPECIFICATIONS

TECHNICAL SPECIFICATIONS (TCM SERIES)				
Model		TCM 130	TCM 155 *	TCM 180 *
Swing over bed	Ø mm	1,300	1,550*	1,800*
Swing over carriage	Ø mm	1,100	1,300*	1,550*
Distance between centres (every 1,000 mm)	mm	3,000 to 20,000		
Max. weight of workpiece clamped in:				
• centres	kg	18,000		
• centres + 1 rest	kg	22,000		
• centres + 2 rests	kg	26,000		
• chuck	kg	2,000		
Headstock				
Spindle bore diameter	Ø mm	140		
Spindle nose	size	A1-15		
Range of continuously variable rotation rates	rpm	4 to 710		
Number of ranges of headstock rotation rates	Q-ty	4		
Power of main drive motor	kW	60		
Max. torque on spindle	Nm	17,000		
Carriage				
Rapid travel in X and Z axis	mm/min	5,000		
Longitudinal travel	mm	3,200 for 3,000 mm turning length, every 1,000		
Crosswise travel	mm	700	700+250*	700+250*
X-axis ball screw size	Ø x pitch mm	63x10		
Z-axis ball screw diameter (3,000 to 5,000 mm of turning length)	Ø x pitch mm	80x16		
Z-axis drive for 6,000 to 20,000 mm of turning length		Rack-and-pinion, backlash-free*		
Tool system		Automatic turret with 4 pos./other*		
Tailstock				
Quill diameter	Ø mm	240		
Quill stroke	mm	200		
	mm	70H7		
Machine tool overall dimensions and weight, approx.				
Length	mm	2,900 + turning length		
Width	mm	3,300		
Height	mm	2,500		
Weight (for 3,000 mm of turning length)	kg	17,000	17,800	18,600
Increase in weight for 1,000 mm of turning length	kg	ca. 1,900		
Control system		SIEMENS SINUMERIK 840D sl / GE FANUC 0i-TD*		
* optional execution		All Rights Reserved		