

# WT1 80

## HORIZONTAL DEEP DRILLING LATHES

### BASIC PARAMETERS

Max. torque on spindle	5,600 Nm
Max. weight carried between centres	10 tonnes
Max. length of the drilled holes	2,000 mm
Max. diameter of drilled holes	220 mm

The **WT1 80** horizontal deep drilling lathe is a machine tool based on the TRB 93 horizontal lathe equipped with devices that facilitate drilling and machining of deep holes with the use of highly-efficient, specialized tools.

### PURPOSE

The WT1 80 horizontal deep drilling lathe is designed for deep hole drilling, external and internal turning, reaming and contour thread cutting.

### 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
- Bed and headstock bodies made from high-grade cast iron of enhanced mechanical properties
- Carriage travels along two V-block guideways that guarantee precise guidance
- Bed and carriage guideways hardened to 50 HRC
- Longitudinal and cross-wise travels along two guideways lined with an anti-friction material and assisted by central lubrication system
- Spindle rested on bearings of increased accuracy class
- All shafts and gears carburized, hardened and ground
- Drilling tool coolant supply head on an independent floor
- Drilling carriage with tool bar clamp with sleeves for different diameters
- Dampening rests for the tool bars to compensate for vibrations during drilling
- Tool liquid cooling system for drilling with a 2,500 l tank

### STANDARD EXECUTION

- Swing over bed  $\varnothing$  930 mm
- Max. drilling length 2,000 mm
- Spindle bore  $\varnothing$  95 mm
- Power of main drive motor 30 kW
- Range of spindle rotation rates 4 to 800 rpm
- Power supply 3x400V / 50 Hz
- SIEMENS SINUMERIK 840D sl CNC system
- Automatic 4-position turret
- Travels for turning and drilling by ball screw and nut transmissions
- Automatic change of range of headstock rotation rates
- Central lubrication system controlled by CNC
- Drilling tailstock with fixed tool
- Tool coolant head carriage with housing
- Turning tool cooling system
- Drilling tool cooling system with a 2,500-l tank
- Tailstock with quill  $\varnothing$  130 mm with Morse no. 6 taper
- Dead centre with Morse no. 6 taper - 1 pcs
- Control panel movable along the entire length of the machine tool
- Chip disposal system
- Adjusting wedges for leveling and foundation bolts
- CE mark
- Operations and maintenance manual
- CNC operation and programming documentation

### OPTIONAL EXECUTION

- CNC system GE FANUC Oi-TD with Manual Guide with basic turning functionality
- Tool holder with 1 quick-change tool
- Tool holder with 4 quick-change tools
- Automatic 8-position turret
- Linear measuring scales for Z and X axes
- Other according to additional arrangements



#### ADDITIONAL EQUIPMENT

- Roller steady rest  $\varnothing$  40 to 400 mm
- Roller steady rest  $\varnothing$  400 to 600 mm
- Dampening rests for tool bars
- 3-jaw self-centering chucks with manual fixing ( $\varnothing$  400 mm;  $\varnothing$  500 mm;  $\varnothing$  630 mm;  $\varnothing$  800mm)
- 4-jaw independent chucks ( $\varnothing$  500 mm;  $\varnothing$  630 mm;  $\varnothing$  800 mm)
- Hydraulic chucks ( $\varnothing$  500 mm,  $\varnothing$  630 mm,  $\varnothing$  800 mm)
- Pneumatic chucks ( $\varnothing$  500 mm,  $\varnothing$  630 mm,  $\varnothing$  800 mm)
- Boring clamp  $\varnothing$  130/1,000 mm
- Boring clamp  $\varnothing$  160/1,250 mm
- Spindle reduction sleeve 105 / Morse no. 6 taper
- Dead centre with Morse no. 6 taper
- Live centre with Morse no. 6 taper
- Toolholders
- Bed inspection bridge
- Spindle test shaft



## BASIC TECHNICAL SPECIFICATIONS

TECHNICAL SPECIFICATIONS WT1 80		
Model	WT1 80	
<b>Machine tool code</b>		
Range of diameters of drilled holes	Ø mm	50 to 220
Max. length of drilled holes	mm	2,000
Swing over bed	Ø mm	930
Swing over carriage	Ø mm	570
Max. distance between centres	mm	4,000
Max. weight of workpiece:		
• clamped in centres	kg	6,000
• with 1 steady rest	kg	7,600
• with 2 steady rests	kg	10,000
• clamped in chuck	kg	1,000
<b>Headstock</b>		
Spindle bore diameter	Ø mm	95
Spindle nose	size	A1-11
Range of continuously variable rotation rates	rpm	4-800
Number of ranges of rotation rates	quantity	2
Power of main drive motor	kW	30
Max. torque on spindle	Nm	4,600
<b>Carriage</b>		
Rapid travel in X and Z axes	mm/min	4,000
Crosswise travel	mm	580
Size of X-axis travel drive ball screw	mm	40x5
Tool system	Automatic 4-pos. turret	
<b>Tailstock</b>		
Quill diameter	Ø mm	130
Quill stroke	mm	270
Internal taper	size	Morse no. 6
<b>Drilling tailstock with fixed tool</b>		
Longitudinal travel	mm	Drilling length
Max. axial force	N	40,000
Rapid travel	mm/min	4,000
<b>Drilling tailstock with live tool</b>		
Spindle bore diameter	Ø mm	200
Spindle nose	size	A1-15
Range of continuously variable rotation rates	rpm	4 to 550
Number of ranges of rotation rates	quantity	2
Power of main drive motor	kW	30
Max. torque on spindle	Nm	5,600
Max. axial force	N	40,000
Rapid travel	mm/min	4,000
Range of feed rate	mm/min	3 to 1,000
<b>Machine tool overall dimensions and weight, approx.</b>		
Length	mm	9,720
Width with hydraulic system	mm	4,800
Height	mm	2,200
Weight for 2,000-mm turning length	kg	18,400
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