

# TM 125 – foundation-free compact boring mill



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The TM 125 combines the advantages of a machining center with the characteristics of a boring mill. Column and boring spindle allow for large degrees of freedom; the Monolith™ machine bed permits a set-up directly on the floor.

## TM 125 – table-type compact boring mill with Monolith™ bed

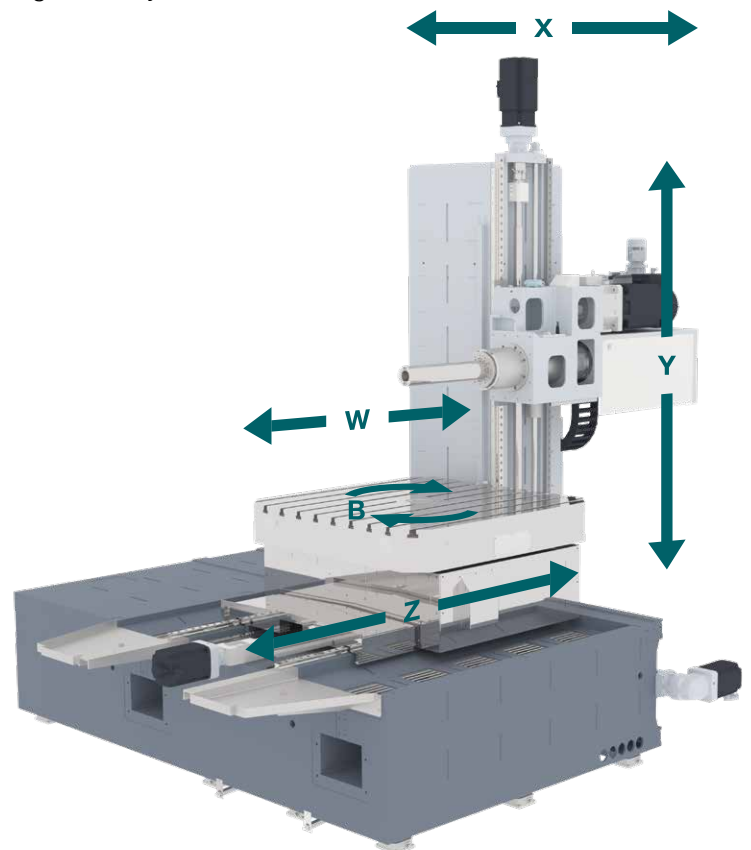
Foundation-free compact boring mill for the effective and cost-efficient machining of workpieces up to 10 t with a set-up area of up to 2,500 × 2,000 × 1,600 mm. It combines the advantages of a table-type boring mill with those of a compact machining center.

### Your advantages at a glance:

- Long travel range and large degrees of freedom for machining
- Inherently rigid, vibration-damping machine bed in Monolith™ design
- Strongly ribbed, torsionally rigid column
- Compact precision roller guideways for highest machining accuracy
- Speeds of up to 6,000 min<sup>-1</sup>; power of up to 34 kW
- Comprehensive equipment for high flexibility
- Working area that is easy to access

### Traversing range

X (column lengthwise)	up to 2,000 mm
Y (vertical)	up to 1,600 mm
Z (table lengthwise)	up to 1,000 mm
W (boring spindle)	up to 600 mm



### Classification

Table-type	T
Monolith™ bed	M
Boring spindle diameter	125 mm

## Machine highlights

### Monolith™ machine bed

produced in a sandwich design with a welded, strongly ribbed upper section, fiber-reinforced high-performance concrete and a steel floor panel with special damping elements. Developed and implemented successfully in roll grinding machines hundreds of times by the sister company Maschinenfabrik Herkules:

- Torsionally rigid and thermostable
- Effective damping of vibrations
- Set-up directly on the floor and small footprint

### Extremely stiff, welded steel column

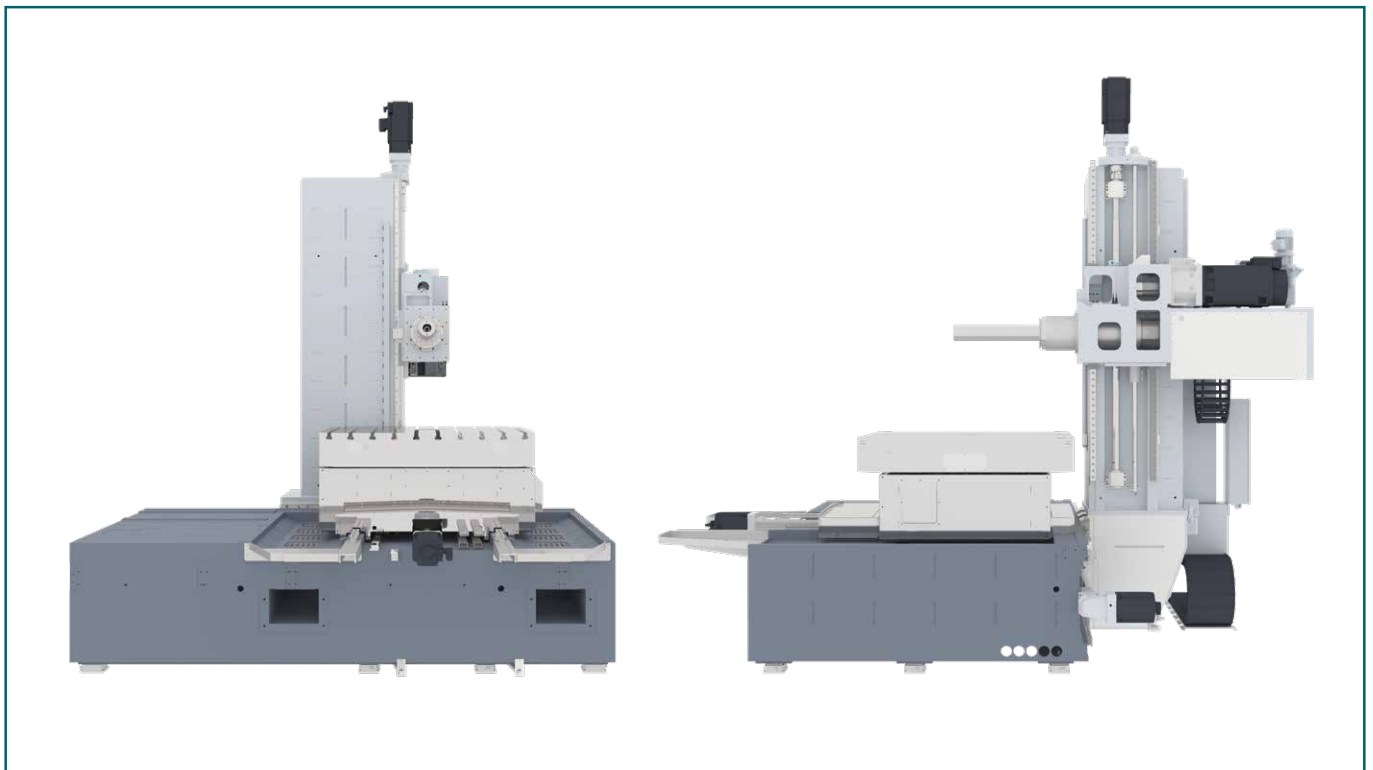
- Strong inner ribbing that prevents bending and torsional deformation
- Preloaded linear compact roller guides and spaciouly dimensioned, preloaded ball screw drives

### Headstock and boring spindle

- Produced in-house to ensure highest quality
- Low wear and high machining quality
- Pulled spindle bearing for highest stiffness
- Boring spindle can traverse over the table center

### Rotary clamping table

- Precise and backlash-free positioning of the workpieces



Inherently rigid Monolith™ machine bed in sandwich design; robust construction of column and boring spindle

## Options

### Automatic tool change

- Tool magazine in different versions with up to 250 tools
- Tool gripper SK 50 or HSK 100, others on request
- Changing cycles for heavy tools, tool taper cleaning

### Compact cooling units

- External cooling at the headstock with 80 l / 8 bar
- Internal cooling through the middle of the boring spindle / optionally through the milling head spindle with up to 70 bar
- Paper band filter and coolant circulation with timer switch
- Extraction device / connection for central extraction device

### Work area protection / CE-approved operation

- Operator panel swiveling into working area, option: angled desk design
- Full enclosure

### Process optimization

- Tool life monitoring
- Tool breakage monitoring
- Automatic identification of tools
- Torque monitoring
- Data recording
- Remote touch probe
- Pick-up-station for milling units
- Automatic exchange of high performance milling heads
- Automatic pallet changer
- Pallet magazine in different versions for two or more pallets

### CNC controls

- Siemens 840 D sl
- Heidenhain TNC 640
- Fanuc 31i

// Further options are available on request.



UC-L40 – lateral milling head

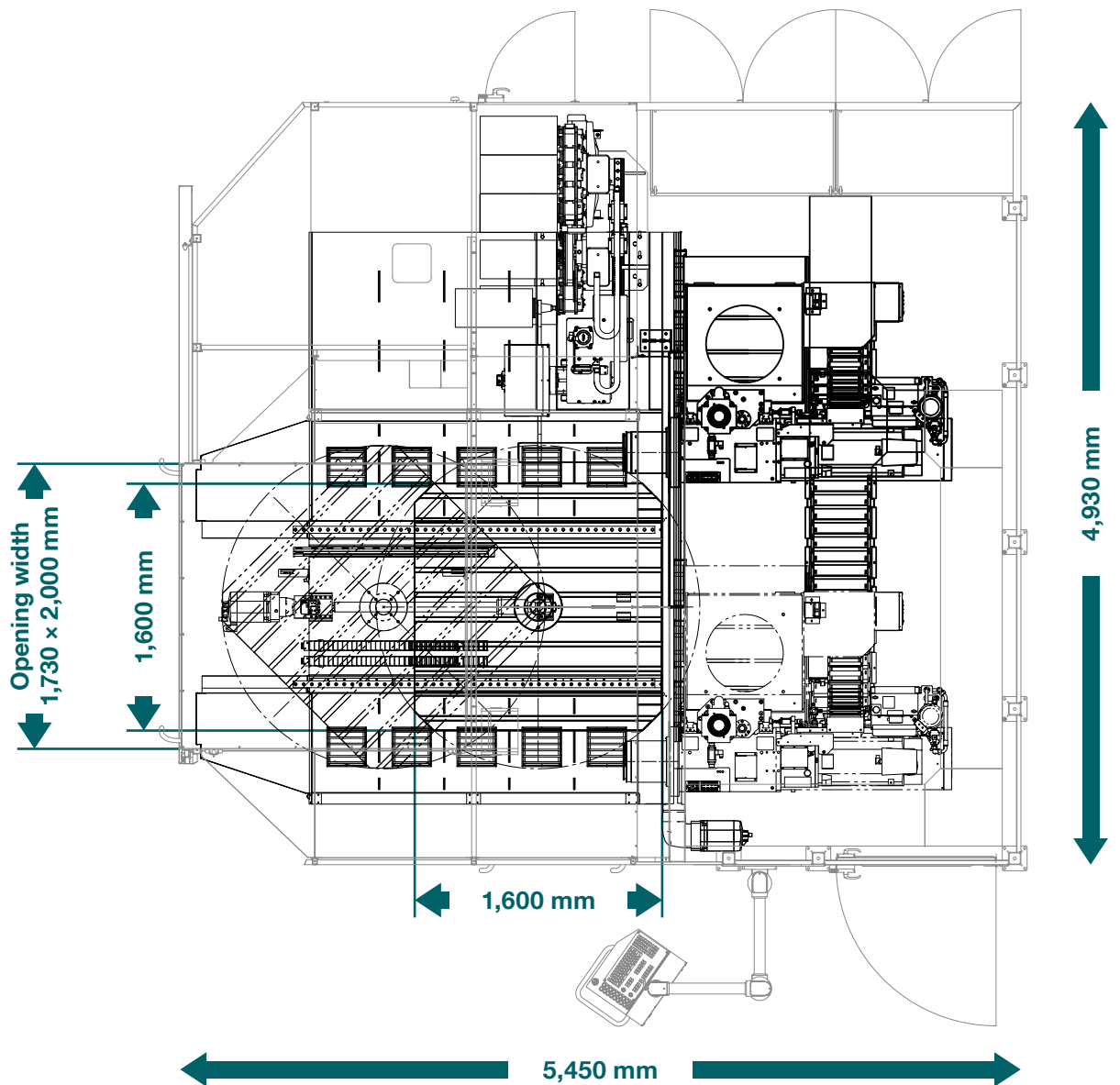
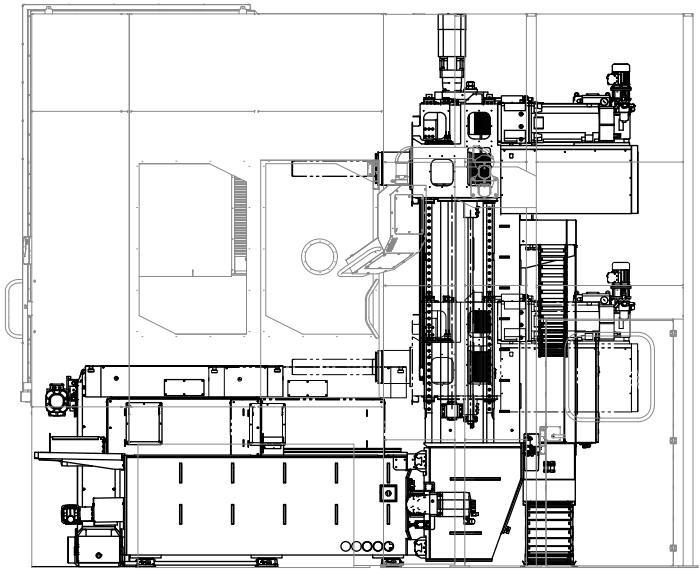
## Equipment

- Exchangeable single lateral milling head UC-L40 with 5,000 min<sup>-1</sup>, 1,000 Nm and internal / external cooling, manufactured within the group of companies
- Integrated Capto interface combined with a turning table for all turning operations
- Universal milling head UC-U 25 with NC-positioning

Optimize your machining process: we can optionally integrate a 3D measuring probe including measurement cycles for automatic measurement of workpieces or a 3D table touch probe system for tool breakage control and tool measurement.

// Further options are available on request.

# Layout of a TM 125



# Technical data

## TM 125

### Boring spindle

Diameter	mm	125
Drive power, max. (S6)	kW	34
Torque, max. (S6)	Nm	1,660
Speed range, continuous, max.	min <sup>-1</sup>	6,000

### Clamping table

Size of clamping table	mm	1,600 × 1,600	1,600 × 2,000
Table load, max.	kg	10,000	

### High-speed rotary table

Size of table (round)	mm	Ø 1,500
Table load, max.	kg	3,000

### Traverses

	Axes		
Column lengthwise	X	mm	2,000
Headstock vertical	Y	mm	1,600
Table longitudinal	Z	mm	1,000
Boring spindle axial	W	mm	600

### Axis speed

Traversing speed of all axes	mm/min	30,000
Speed range table	min <sup>-1</sup>	10
Speed range high-speed rotary table	min <sup>-1</sup>	250

### Automatic tool change

Number of tools in magazine		60
Tool diameter, max.	mm	250
Tool length, max.	mm	500
Tool weight, max.	kg	35

