

**[That's
E[M]CONOMY:]**

emco industrial
training

Designed for your profit



Power and flexibility. CONCEPT TURN 250

**Training reality with
industrial performance**

Concept TURN 250

Uncompromising quality right down to the last bolt, at an unbeatable price. With an extremely solid machine base, a thermosymmetric headstock, high-precision spindle bearing, pre-stressed guideways in all axes and a fast tool turret. And the interchangeable EMCO WinNC control unit to top it all off.

[Main spindle]

- High performance
- Thermostable construction
- Large speed range
- Bar clearance dia. 25 mm (1")
- Through-hole clamping cylinder



[Working area]

- Unobstructed chip fall
- Best ergonomics
- Human protection from chips and coolant
- Large safety-glass door

[Tool changer]

- 12 positions VDI16 axial
- With 6 driven tools for milling operations
- Internal coolant supply
- Synchronised thread cutting

[Control unit]

- Modern digital AC control technology
- Colour LCD flat screen
- MOC: integrated PC
- WinNC concept: all established NC control units on one machine

[Guideways]

- In the X and Z axes
- Free of play
- Non-wearing
- High speed



[Machine stand]

- Small footprint
- Easy transport with forklift
- Large coolant reservoir
- Easy to clean
- No levelling necessary



[Workpieces]



Tensile test
(brass)



Fitting
(stainless steel)



Ring
(gold)



Valve cap
(stainless steel)



Plug
(stainless steel)

[Technical]

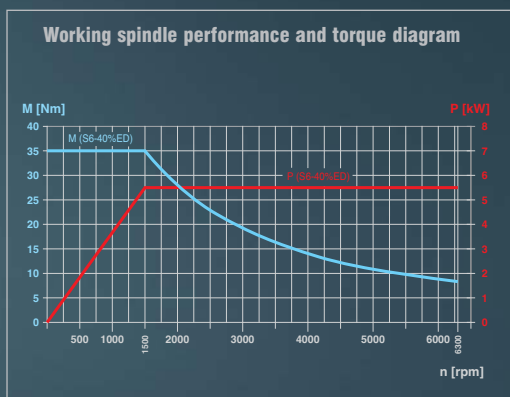
Highlights

- Extremely solid machine base, Top thermostability
- Highest precision
- Very compact construction
- Interchangeable WinNC control units
- Change between the WinNCs within 1 minute
- Best European machining quality

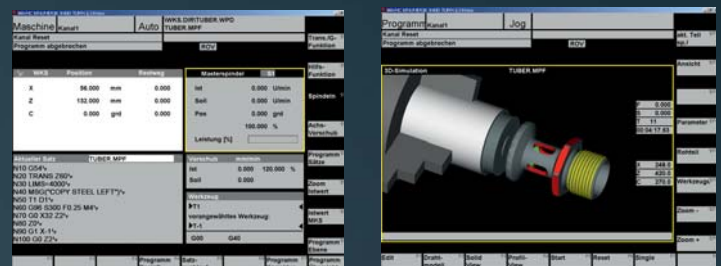
Options

- Bar loader
- Chip conveyor
- 3-jaw chuck dia. 95 mm (3.7")
- Collet chuck 385 E
- Automatic door
- Integration into FMS and CIM systems using DNC and robotic interface
- Attractive tool packages for the TC and TCM versions

Power



Programming



Simple to program and better surveillance thanks to the 3D view. EMCO WinNC controls and 3D view. Program and simulate. Training compliant and in industrial format.

Control

The interchangeable control unit.

Our interchangeable control unit concept is one of its kind. You can use all contemporary industrial controls on just one machine. You change to another control system by calling up the applicable software and simply swapping the keyboard.

The following WinNC control units can be installed on the machine:

- SIEMENS 840D
- SIEMENS 810D
- SIEMENS 820
- SIEMENS 810
- GE FANUC Series 21
- GE FANUC Series 0
- FAGOR 8055
- EMCOTRONIC TM02
- More in development



Concept TURN 250 applications



With a bar capacity of 25 mm (1") the Concept TURN 250 is the ideal lathe for machining small parts.

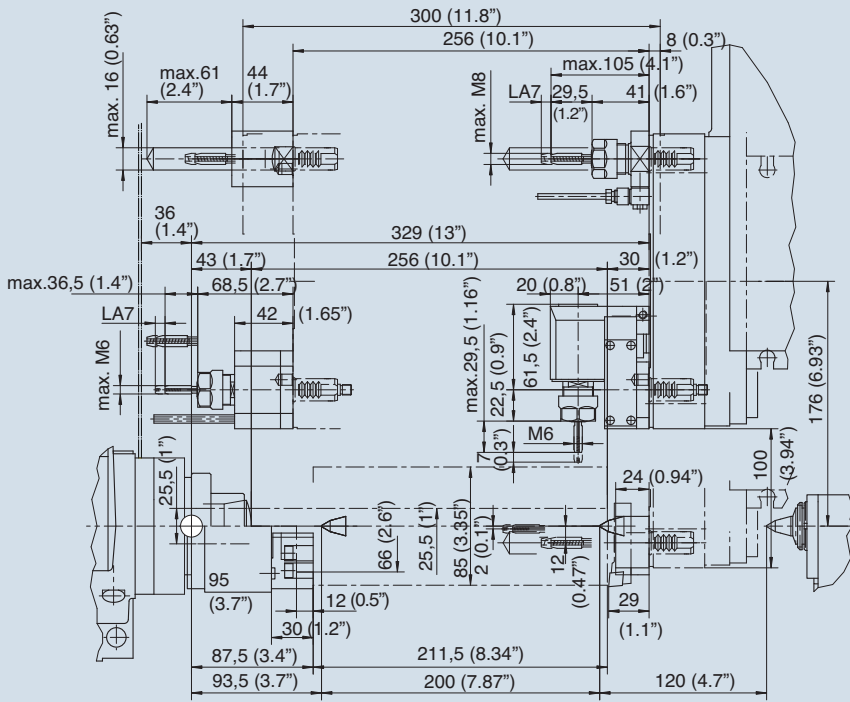


With 12 stationary and up to 6 driven tools, the Concept TURN 250 offers an astonishing cutting performance – and that with top precision.



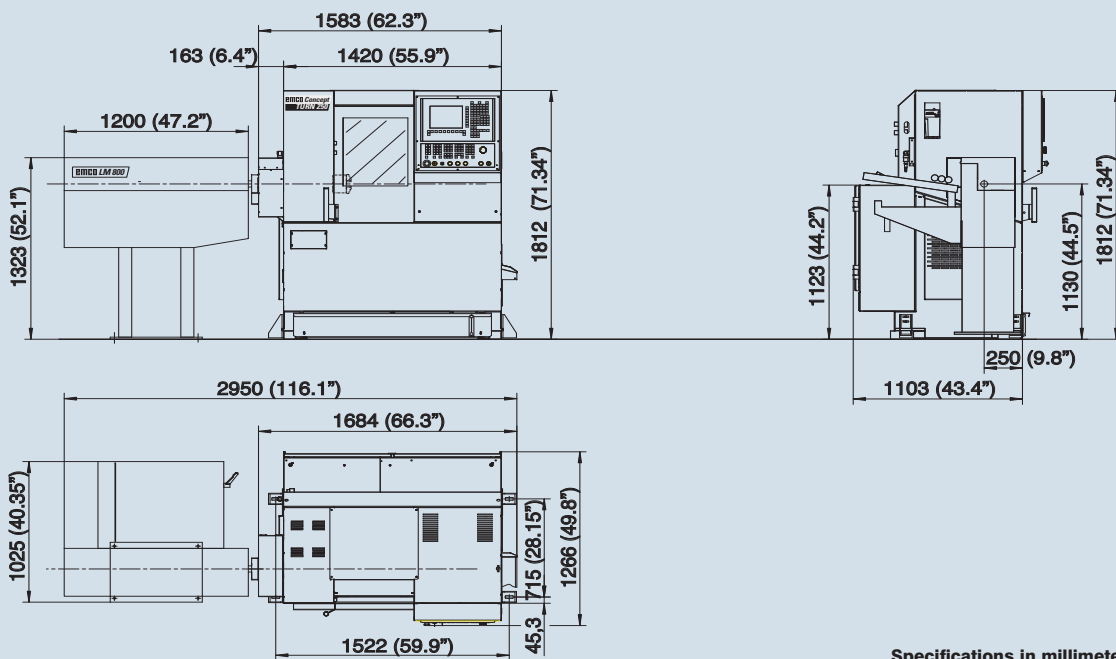
Simple CIM and FMS integration. For robot-controlled loading and remote control. Ideal for mechatronics training.

Work area



Specifications in millimeters (inches)

Machine layout



Specifications in millimeters (inches)

[Technical data]

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CONCEPT TURN 250

Working area	
Swing over bed	Ø 250 mm (9.8")
Swing over cross slide	Ø 85 mm (3.35")
Maximum distance between centers	405 mm (15.9")
Maximum turning diameter	Ø 85 mm (3.35")
Maximum turning length	255 mm (10.04")
Maximum bar-stock diameter	Ø 25.5 mm (1")
Travel	
Travel in X	100 mm (3.94")
Travel in Z	300 mm (11.8")
Main spindle	
Speed range	60 – 6300 rpm
Spindle torque	35 Nm (25.8 ft/lbs)
Spindle nose	Ø 70 h5
Spindle bearing (inner diameter at front)	Ø 50 mm (2")
Spindle bore	Ø 30 mm (1.2")
C axes	
Resolution	0.01°
Rapid motion speed	1000 rpm
Main motor	
Drive performance	5.5 kW (7.4 hp)
Tool turret	
Number of tool positions	12
Tool holding shaft in accordance with VDI (DIN 69880)	16
Tool cross-section for square tools	12 x 12 mm (0.47 x 0.47")
Shank diameter for boring bars	16 mm (0.63")
Turret indexing time	1.0 sec
Driven tools	
Number of stations	0 resp. 6
Drive performance	1.2 kW (1.6 hp)
Maximum torque	4 Nm (2.95 ft/lbs)
Speed range	200 – 6000 rpm

Feed drives	
Rapid traverse X/Z	15/15 m/min (590.6/590.6 ipm)
Feed force in the X/Z axis	3000/3000 N (674.4/786.8 lbs)
Time from 0 to rapid motion	0.1 sec
Position variation Ps (in accordance with VDI 3441) in X/Z	0.004/0.004 mm (0.0002/0.0002")
Tailstock	
Quill stroke	120 mm (4.7")
Quill diameter (live center integrated)	Ø 35 mm (1.4")
Quill thrust	800 – 2500 N (179.8 – 562 lbs)
Coolant system	
Tank volume	140 Liter (37.03 gal)
Pump performance	0.57 kW (0.76 hp)
Dimensions	
Height of spindle center	1131 mm (44.5")
Machine height	1820 mm (71.65")
Required space for machine L x D	1700 x 1270 mm (66.9 x 50")
Total weight	1100 kg (2425.06 lb)

EMCO LM800

Bar length	100 – 600 mm (3.9 – 23.6")
Bar diameter	6 – 25 mm (2.6 – 1")
Material storage	13 bars of Ø 25 mm (1")
Length	1200 mm (47.4")
Width	1150 mm (43.3")
Weight	approx. 190 kg (418.9 lb)



EN4552 - 03/08 Subject to change due to technical progress. Errors and omissions excepted.

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