

[That's
E[M]CONOMY:]

emco industrial
training

Designed for your profit



Not just training: Real Action! 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 thermo-symmetric headstock, high-precision spindle bearing, prestressed guideways in all axes and a fast tool turret. And the interchangeable EMCO WinNC control unit to top it all off.

[Work area]

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

[Tool turret]

- 12 positions VD116 axial
- With 6 driven tools for milling operations
- Internal coolant supply
- Synchronized thread cutting

[Main spindle]

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

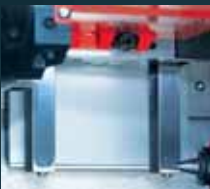


[Control unit]

- Modern digital AC control technology
- Color 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

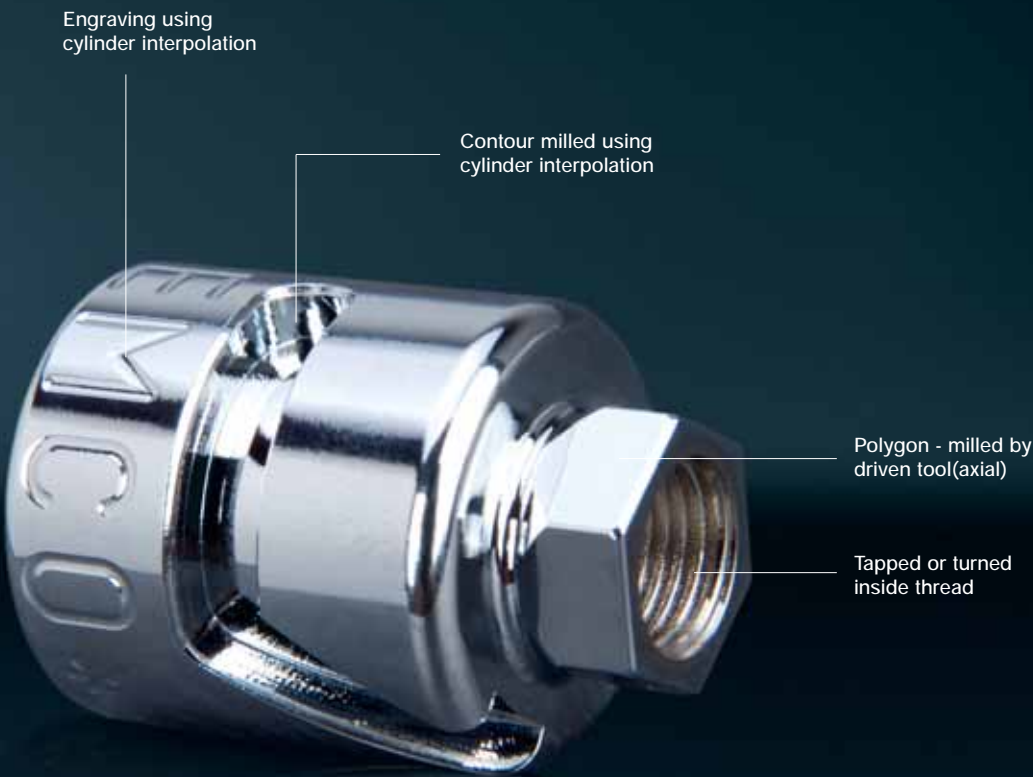


[Machine base]

- Small footprint
- Easy to transport
- Large coolant reservoir
- Easy to clean



[Workpieces]



Tensile test
(Brass)



Fitting
(Stainless steel)



Ring
(Gold)



Valve cap
(Stainless steel)



Plug
(Stainless steel)

[Engineering]

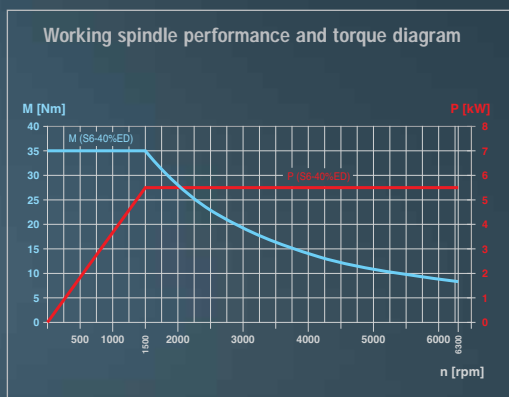
Highlights

- Extremely solid machine base, top thermostability
- Highest precision
- Compact construction
- USB and Ethernet interface integrated
- Servo motor technology in all axes
- Made in the Heart of Europe

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

Performance



[The interchangeable control]

The unique concept of the interchangeable control can be fitted to all Concept machines. In doing so, the user is trained on all CNC industry controls that are common on the market.

The result: All CNC technicians can be applied more flexibly. And this is a decisive plus: for qualified employees as well as for the business.



The conversion to another control system is carried out within a minute by calling up the respective software and by simply replacing the controller specific keyboard module

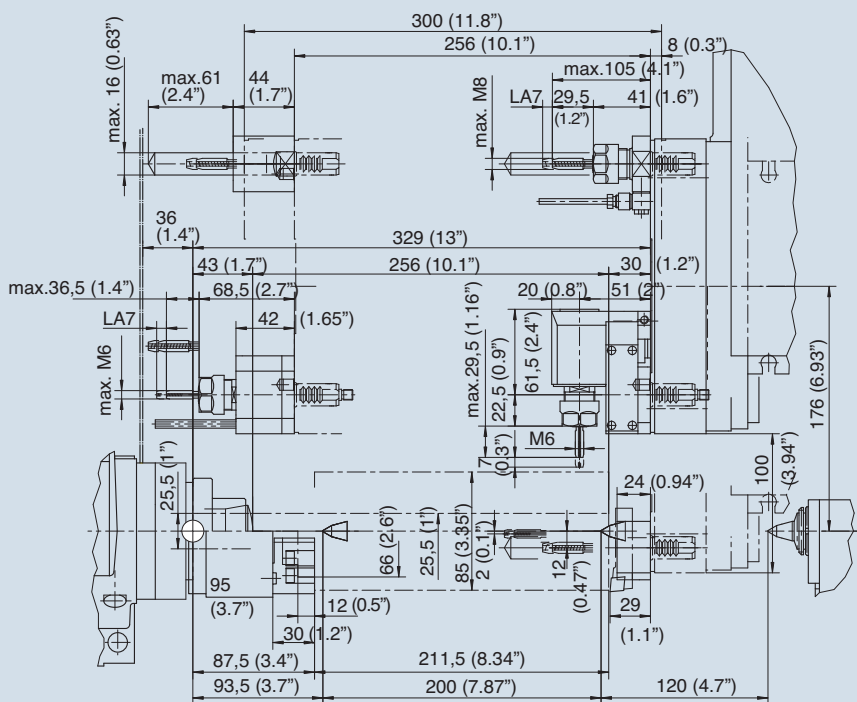


Simple to program using the EMCO WinNC control units



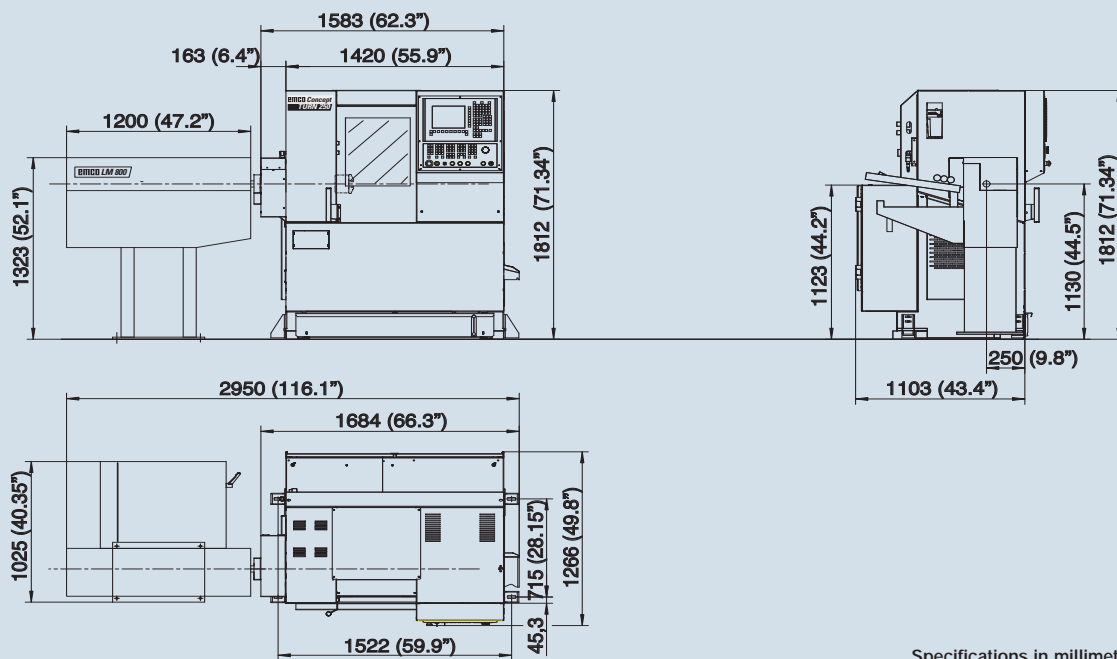
Simulation suitable for training using Win3D-View

Work area



Specifications in millimeters (inches)

Machine layout



Specifications in millimeters (inches)

[Technical data]

CONCEPT TURN 250

Work 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 axis	
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 motion speed 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)

Feed drives	
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 WinNC control units

Siemens 810D/840D	Siemens 810
Siemens 820	GE FANUC Series 0
GE FANUC Series 21	EMCOTRONIC TM02
FAGOR 8055	

EMCO LM800

Bar length	100 – 600 mm (3.9 – 23.6")
Bar diameter	6 – 25 mm (2.6 – 1")
Material storage	23 bars of Ø 25 mm (1")
Length	1200 mm (47.4")
Width	1150 mm (43.3")
Weight	approx. 190 kg (418.9 lb)

