

[E[M]CONOMY]
means:

emco industrial
training

Designed for your profit



Small Volume. Great Performance. CONCEPT TURN 105

CNC training with
industrial performance

Concept TURN 105

The PC-controlled 2-axis turning machine with table format not only easily fulfils all basic requirements for technical education and training but also manifests the finest technology: All precision components of the Concept TURN 105 such as headstock, slide, tool system, and tailstock are installed on a rigid, vibration-damping, gray cast-iron inclined bed. Generously sized motors ensure high feed forces and acceleration values. Pre-stressed, backlash-free circulating-ball spindles and an optimum guide ratio for the slides ensure stability and precision. The control for the Concept TURN 105 is connected via PC, on which the interchangeable WinNC control from EMCO can be installed.

[Work area]

- Fully enclosed work area
- Large safety glass window in door
- Generous view of working area
- All-round protection against chips
- Best ergonomics

[Main drive]

- Infinitely variable main drive
- Three-phase asynchronous motor

[Machine base]

- With extensible drawer
- Provides space for PC tower

[Tool turret]

- Disk-type turret
- 8 stations

[Swivel table]

- Extensible drawer for PC keyboard
- Arranged ergonomically

[Tailstock]

- Pneumatic tailstock
- Quill diameter 35 mm

Machine with optional equipment



Door knob

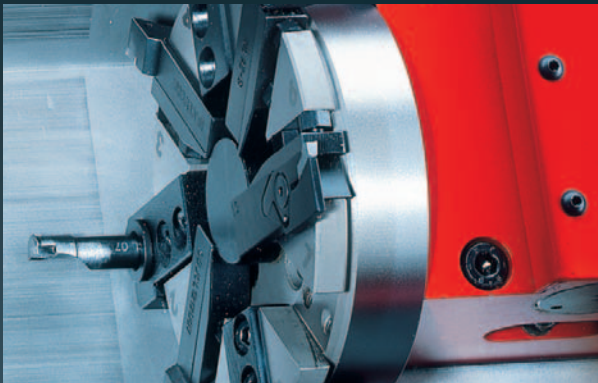


Hose nozzle



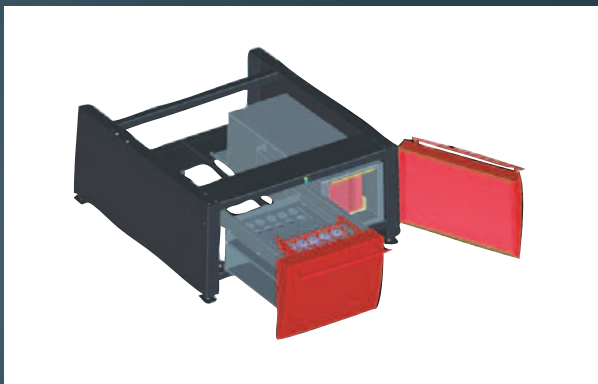
Ball pin

[Engineering]



Highlights

- Stable, gray cast-iron inclined-bed construction
- Three-point support for machine bed
- Hardened guideways
- Central lubrication system
- 8-station tool changer
- Fully enclosed work area
- Control EMCO EASY CYCLE integrable
- Made in the Heart of Europe



Options

- Extensive tool range
- Pneumatic tailstock
- USB control keyboard with TFT display
- Robotics interface for integration with FFS and CIM systems
- Automatic clamping device
- Minimum quantity lubrication
- Coolant system
- Machine base with swivel table

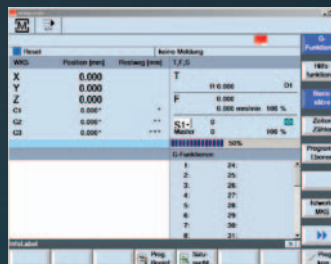
[The interchangeable control]

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.

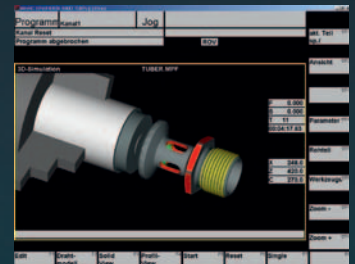
The result: All CNC technicians can be applied more flexibly. And this is a decisive plus: for qualified employees as well as for the business.



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



Simple to program using the EMCO WinNC control units



Simulation suitable for training using Win3D-View

[Technical data]



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CONCEPT TURN 105

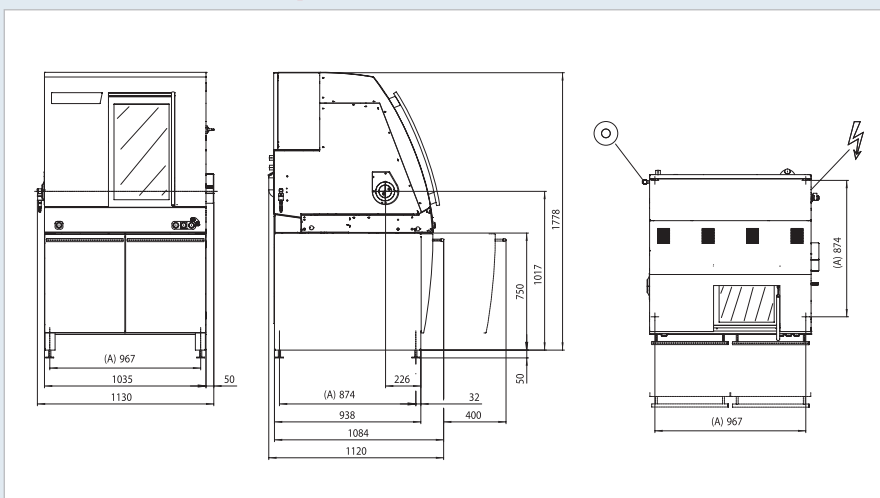
Work area	
Swing over bed	180 mm (7.09")
Swing over cross slide	75 mm (2.95")
Distance between spindle noses	236 mm (9.29")
Max. turning diameter	75 mm (2.95")
Max. part length	121 mm (4.76")
Max. bar-stock diameter	20 mm (0.79")
Height of centers	90 mm (4.76")
Travel	
Travel in X	55 mm (2.17")
Travel in Z	172 mm (3.54")
Main spindle	
Speed range	150 – 4000 rpm
Max. torque	14 Nm
Spindle diameter at front bearing	45 mm (1.77")
Spindle bore	20.5 mm (0.81")
Main motor	
Drive power	1.9 kW / 2.6hp
Feed drives	
Rapid motion speed X/Z	5 m/min (196.85 ipm)
Feed force X/Z	2000 N
Work feed X/Z	0 – 5 m/min
Positioning variation Ps (acc. VDI 3441) in X/Z	5 µm (0.0002")
Tool turret	
No. of tool stations	8
Tool-cross section	12 x 12 mm (0.5 x 0.5")
Shank diameter for boring bars	16 mm (0.63")
Turret indexing time (T1/T2/T3=45°/180°/315°)	1.4 / 3.5 / 5.5 s

Tailstock	
Quill stroke	120 mm (4.72")
Quill diameter	35 mm (1.38")
Coolant system (option)	
Tank capacity	35 l
flow volume	15 l/min
Pump power	0.5 bar
Dimensions	
Height of center above floor	267 mm (10.51")
Dimensions W x D x H (40.55 x 44.69 x 43.31")	1135 x 1100 x 1030 mm
Total weight	350 kg

EMCO WinNC control types

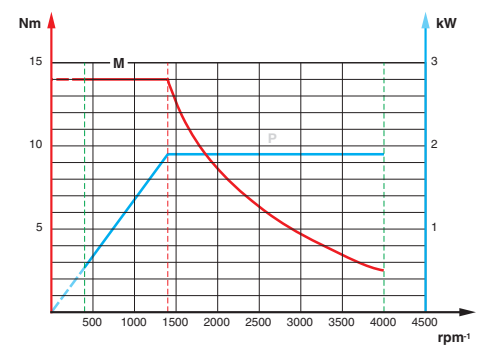
Sinumerik Operate 840D sl/828D	FANUC Series 31i
Sinumerik 810D/840D	FANUC Series 21
Sinumerik 820	FANUC Series 0
Sinumerik 810	Emcotronic TM02
EMCO EASY CYCLE	CAMConcept
FAGOR 8055 MC	

Machine layout



Power

Performance and torque diagram for main spindle



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