

[ 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 fulfills 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

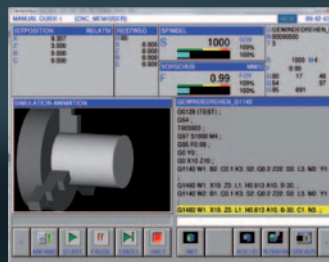
## [The interchangeable control]

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.

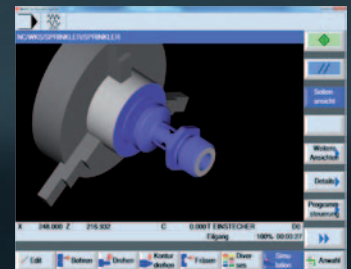
The result: All CNC technicians can be applied more flexibly. And this is a decisive plus: for qualified employees as well as for the business.



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



Simple to program using the EMCO WinNC control units



Simulation suitable for training using Win3D-View

## [Easy2control: New operating concept]

Optional it is possible to equip the machine with the latest Software of the interchangeable control, with which control specific and machine keyboards of the WinNC can be displayed on a 16:9 Full-HD screen – Easy2control.

The different Panels for machine, control and quick access can be switched via tabs.

The buttons and rotary knobs can either be operated by using the mouse or in case a Full HD touchscreen is used directly on the keys and switches on the monitor.

To operate the software on the Concept machine a license dongle and a small machine control panel - „Easy2operate“ – is required.



Easy2control mit Easy2operate

# [Technical data]

## 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	1135 x 1100 x 1030 mm (40.55 x 44.69 x 43.31")
Total weight	350 kg

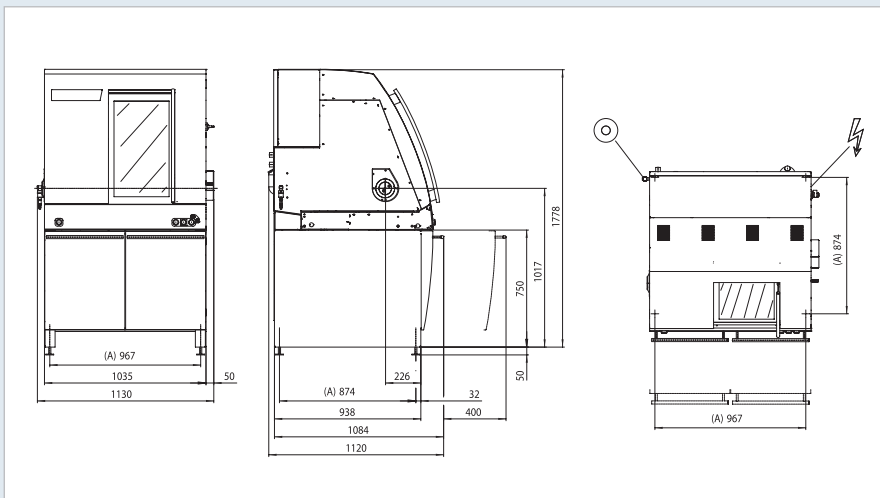
### EMCO WinNC control types

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	

### User Interface for Easy2control

Sinumerik Operate 840D sl / 828D	FANUC Series 31i
Siemens 810D / 840D	FAGOR 8055 TC

## Machine layout



## Power

