



emco TURN 420 MC *plus*

Dual CNC lathe for
simultaneous complete
machining of two parts



emco

innovative machine tools



SINUMERIK 840D with EMCO specials –
i.e. function buttons with LEDs as
backlighting



Twice as nice: 2 main spindles, 2 counter-spindles,
2 tool turrets for 2 fully machined finished parts



Swivel-mounted control and large toughened-glass window

Workspace. The workspace is designed for simultaneous machining of two parts without interruption and without collisions. Ample space is provided to allow chips to drop and for coolant return. Preloaded roller guides contribute to the high rapid traverse speeds and maximum precision - without any slip-stick effect and keeping lubricant consumption to a minimum. The impressive digital drives produce dynamic performance in both the main spindle and the X- and Z-axes.

Automation. The parts catcher, too, is a dual assembly. It discharges the parts separately for each spindle, in order to ensure that all parts are paired with the appropriate measuring and correction data.

Control. The ET 420MC^{plus} is controlled by a SIEMENS 840D. Programming is just the same as on any CNC lathe. Only one program is generated. The program for the second workpiece is simply transferred to the bottom system by means of a selector switch – no additional programming is necessary.



Valve slide
(stainless steel)



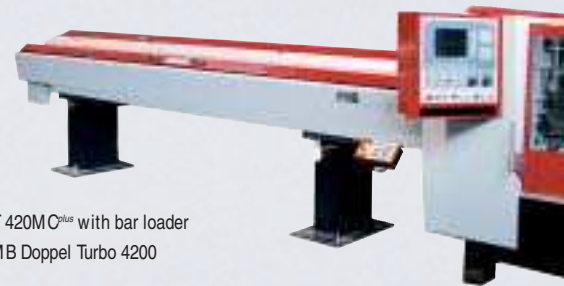
pneumatic piston valve
(case hardened steel)



Drive wheels
(case hardened steel)



Injection nozzle elements
(case hardened steel)

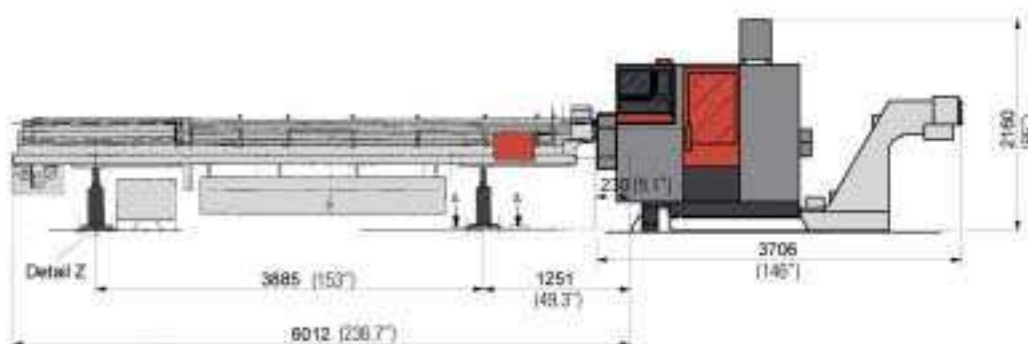


ET 420MC^{plus} with bar loader
RMB Doppel Turbo 4200

Highlights

- new-generation derivative from the ET 425
- high rapid-traverse rates in X/Z/Z2
- linear roller for all axes
- Counter-spindle positioning with NC-axis
- excellent accessibility to the workarea
- State-of-the-art SIEMENS 840D control
- new machine design
- TRANSMIT milling software

Installation plan ET 420M C^{plus} with bar loader FM B Doppel Turbo 4200



Technical Data	EMCO TURN 420 MC ^{plus}
Workspace	
Swing above slide	Ø160 mm (6.3")
Main spindle to counter-spindle	408 mm (16.1")
Max. turning diameter	Ø100 mm (3.9")
Max. part length	600 mm (23.6")
Max. bar-stock diameter	26 mm (1.0")
Travel	
Travel in X/Z	78 mm (3.1")
Travel in Y	210 mm (8.3")
Main spindle	
Speed range	0 – 5000 rpm
Max. Torque at spindle	38 Nm (28.0 ft/lbs)
Spindle adapter	Ø70 h5
Spindle bearing (inside diameter at front)	Ø60 mm (2.4")
Spindle bore	Ø38 mm (1.5")
Counter-spindle	
Speed range	0 – 5000 rpm
Torque at spindle	38 Nm (28.0 ft/lbs)
Spindle adapter	Ø70 h5
Spindle bearing (inside diameter)	Ø60 mm (2.4")
Partially hollow clamp with chuck/jaws for dia. Ø26 mm (1")	approx. 100 mm (3.9")
Travel (Z2)	233 mm (9.2")
C-axis	
Resolution of rotary axis	0,001°
Rapid traverse	1000 rpm
Spindle positioning, all 4 spindles	3°
Drive power	
Main spindle and counter-spindle	9 kW (12 hp) cont.
Tool changer	
Number of tool stations	2 x 12
VDI shaft (DIN 69880)	VDI 16
Tool cross-section for square-shank tools	16x16 mm (0.6x0.6")
Shank diameter for boring bars	25 mm (1")
Turret indexing time	0.4 sec
Driven tools	
Speed range	0 – 5000 rpm
Max. Torque	3 Nm (2.2 ft/lbs)
Max. Drive power	1,6 kW (2.2 hp)
Number of driven tools	2x4
Feed drives	
Rapid traverse X/Z; X1/Z1	12/20 m/min (472/787 ipm)
Feed in X	3000 N (674 lbs)
Feed in Z	3000 N (674 lbs)
Acceleration time for 0 to rapid traverse X/Z	0.1 sec
Coolant system	
Tank capacity	200 Liter (53 gal)
Pump power (optional)	0,57 (2,2) kW (0.8 (3) hp)
Power consumption	
Connected load	15 kVA
Supply pressure	6 bar (87 PSI)
Supply rate	300 l/h (79 gpm)
Dimensions	
Height of centers above floor, top/bottom	1179/1030 mm (46.4/40.6")
Machine height	2200 mm (86.6")
Footprint (without chip conveyor) W x D	2200 (86.6")x1386 mm (54.5")
Total weight (without chip conveyor)	approx. 2600 kg (5730 lbs)
Safety devices	CE-compliant

EMCO, the
full-system
industrial supplier

EMCO Concept,
the system for
industrial training

**System production
line**



EMCO MAGDEBURG M VT 160

**CNC lathes and
milling machines with
interchangeable control
unit concept**



EMCO CONCEPT TURN/MILL 55

**Modular CNC
turning and milling centers**



EMCO HYPERTURN 665M C



EMCO CONCEPT TURN/MILL 105

CNC turning centers



EMCO MAXXTURN 95



EMCO CONCEPT TURN/MILL 155

CNC large dimension lathes



EMCO TURN 900



EMCO CONCEPT TURN 345/MILL 300

**FAM UP CNC
maching centers**

Vertical milling centers

**Conventional
lathes**



EMCO MAT-20D



EMCO FAM UP M C-Line/M CX-Line

**Precision lathes
with cycle control**



EMCO MAT-E300

With integrated pallet changer



EMCO FAM UP M CP-Line

Milling machines



EMCO MILL FB-5

**Movable column milling
machines**



EMCO FAM UP M MV-Line

awarded by:



innovative machine tools

AUSTRIA
EMCO MAIER Ges.m.b.H.
Salzburger Straße 80
A-5400 Hallein-Taxach
Phone ++43-6245-891-0
Fax ++43-6245-86965
email: info@emco.at

GERMANY
EMCO MAIER GmbH & Co. KG
Gottlieb-Daimler-Straße 15
D-74385 Fleidelsheim
Phone ++49-7144-8242-0
Fax ++49-7144-8242-10
email: info@emco-maier.de

ITALY
EMCO ITALIA SRL
Via Magenta 41
20010 S. Giorgio Su Legnano (MI)
Phone ++39-0331-418111
Fax ++39-0331-405996
email: info@emco.it

USA
EMCO MAIER Corp.
2841 Charter Street
Columbus OH 43228
Phone ++1-614-771 59 91
Fax ++1-614-771 59 90
email: info@emco-maier-usa.com
Internet: www.emco-maier-usa.com

ASIA
EMCO ASIA-Pacific
Mr. Kurt Raissig
German Districtcentre #03-04
No. 3 Toh Tuck Link
Singapore 596228
Phone ++65-6468 3602
Fax ++65-6468 3045
email: kraissig@emco-maier.com.sg