

simultaneous complete machining of two parts





EM COTURN 420M C Plus

Earns twice as much.

The ET $420 \text{M C}^{\textit{plus}}$ – two machines in one. Two main spindles, two counter-spindles, and two tool systems, allows the ET $420 \text{M C}^{\textit{plus}}$ to machine two parts at the same time in each cycle. However you want to look at it, invest once and double your production rate or cut your runtimes in half. Twice as much output, but just the same input: the ET $420 \text{M C}^{\textit{plus}}$ is just as easy to operate as a conventional CNC lathe.

Control

- SINUM ERIK 840D
- LCD color monitor
- optional teleservice,
 Ethernet connectivity,
 disk drive and PC keyboard

Tool turrets (top and bottom)

- VDI quick-change system
- 2x4 driven tools
- no alignment of tool holders
- for use on both spindles

Main spindles (2x) - wide speed range - Caxis - 3° spindle indexing

Counter-spindles (2x)

- wide speed range
- C-axis
- 3° spindle indexing
- NC servo drive for travel
- short transfer times

Machine enclosure

- all-round protection against flying chips
- 100 % coolant retention
- large toughened-glass window in door
- clear view into the workspace

- bar-stock diameter 26 mm (1.0")

- built-in buttons for operator convenience

Workspace

- good size
- straight chip drop
- superb ergonomics
- guideways 100 % covered
- optimum lighting

with driven tools without driven tools without driven tools



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.

A utom ation. 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 420M Cplus 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.



Injection nozzle elements (case hardened steel)

Highlights

- new-generation derivative from the ET 425
- high rapid-traverse rates in X/Z/Z2
- linear roller for all axes

backlighting

- Counter-spindle positioning with NC-axis
- excellent accessibility to the workarea
- State-of-the-art SIEM ENS 840D control
- new machine design
- TRANSMIT milling software

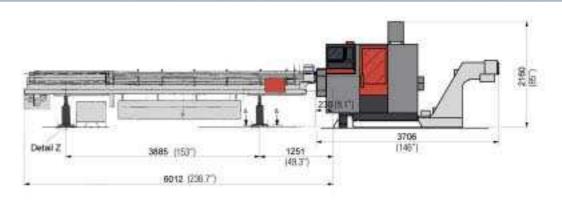


Drive wheels (case hardened steel) Valve slide

pneumatic piston valve (case hardened steel)

(stainless steel)

Installation plan ET 420M C Plus with bar loader FM B Doppel Turbo 4200



		EM CO, the	EM CO Concept,
Technical Data	EMCOTURN 420 M C plus	full-system	the system for
Waykanaa		industrial supplier	industrial training
Workspace	G100 (0.0!!)		
Swing above slide	Ø160 mm (6.3")		
Main spindle to counter-spindle	408 mm (16.1")	System production	CNC lathes and
Max. turning diameter	Ø100 mm (3.9")	line	milling machines with
Max. part length	600 mm (23.6")	and the same	interchangeable control unit concept
Max. bar-stock diameter	26 mm (1.0")	ET.	
Travel		100 100 2	. 93
Travel in X/Z	78 mm (3.1")	1	BERT HELD
Travel in Y	210 mm (8.3")	EIIICO M AGDEBURG M VT 160	EMICO CONCEPT TURN/MILL 55
Main spindle		M odular CNC	
Speed range	0 – 5 000 rpm	turning and milling centers	
Max. Torque at spindle	38 Nm (28.0 ft/lbs)	- Among a special and a specia	
Spindle adapter	Ø70 h5	11000000000000000000000000000000000000	EMICO CONCEPT TURN/MILL 105
Spindle bearing (inside diameter at front)	Ø60 mm (2.4")		GIIIGU CONCEPT TORIN/INTLE 105
Spindle bore	Ø38 mm (1.5")	THIRD LIVE FOTUEN COLUMN	
Counter-spindle		EMICO HYPERTURN 665M C ^{olus}	TOTAL PROPERTY.
Speed range	0 – 5000 rpm	CNC turning centers	
Torque at spindle	38 Nm (28.0 ft/lbs)	The second of	
Spindle adapter	Ø70 h5		EIIICO CONCEPT TURN/MILL 155
Spindle bearing (inside diameter)	Ø60 mm (2.4")		(4)
Partially hollow clamp with chuck/jaws for dia. Ø 26 mm (1")			AND DESCRIPTION OF THE PERSON NAMED IN COLUMN
Travel (Z2)	233 mm (9.2")	EMICO MAXXTURN 95	
C-axis	200 11111 (0.2.)	CNC large dimension lathe	as a s
Resolution of rotary axis	0,001°		EITICU CONCEPT TURN 345/MILL 300
Rapid traverse	1 000 rpm	(B4	
Spindle positioning, all 4 spindles	3°	18 SM	FAM UP CNC
Drive power	3		machining centers
	0 kW (10 hp) cont	EMICO TURN 900	Vertical milling centers
Main spindle and counter-spindle	9 kW (12 hp) cont.	Conventional	
Tool changer	0 10	lathes	The state of the state of
Number of tool stations	2 x 12	Ex la section of the	
VDI shaft (DIN 69880)	VDI 16		
Tool cross-section for square-shank tools	16x16 mm (0.6x0.6")	EMIGO MAT-20D	EIIIGO FAM UP M C-Line/M CX-Line
Shank diameter for boring bars	25 mm (1")		
Turret indexing time	0.4 sec	Precision lathes	With integrated pallet changer
Driven tools		w ith cycle control	and a
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	EMICO MAT-E300	EMICO FAM UP M CP-Line
Feed drives			M ovable column m illing
Rapid traverse X/Z; X1/Z1	12/20 m/min (472/787 ipm)	M illing machines	machines
Feed in X	3 000 N (674 lbs)	15 E	DISPERSION DE
Feed in Z	3 000 N (674 lbs)		19 mg
Acceleration time for 0 to rapid traverse X/Z	0.1 sec		
Coolant system		emgo Mill FB-5	EIIIGO FAM UP M M V-Line
Tank capacity	200 Liter (53 gal)	anda mile i b	and rand mm v Line
Pump power (optional)	0,57 (2,2) kW (0.8 (3) hp)		
Pow er consumption		awarded by:	
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	1 179/1 030 mm (46.4/40.6")		
Machine height	2 200 mm (86.6")		
Footprint (without chip conveyor) W x D	2200 (86.6") x 1 386 mm (54.5")		
Total weight (without chip conveyor)	approx. 2600 kg (5730 lbs)		
Safety devices	CE-compliant		
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