

[That's
E[M]CONOMY:]

emcogroup

Designed for your profit



Design to Cost. EMCOTURN E65

CNC turning center for bar stock work
up to Ø 65 (95) mm and chucking work

EMCOTURN E65

[Workpieces]

[Work area]

- Straight chip fall
- Top ergonomics
- Guideways fully covered

[Main spindle]

- High drive performance
- Thermostable design
- Large speed range
- A2-6 spindle connection
- Bar capacity Ø 65 mm

[Tool turret]

- 12 stations VDI 30 axial
- 12 stations driven on request
- Polygonal turning
- Synchronized tapping

[Control unit]

- Cutting-edge digital control technology
- LCD color monitor
- Siemens or Fanuc includes ShopTurn or ManualGuide i

[Machine base]

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



Machine fitted with optional equipment

[Bar loader package]

- Short bar loader
- Parts catcher
- Interface
- Warning light
- Adaptor sleeves



Engraving using cylinder interpolation

Contour milled using cylinder interpolation

Inclined drilling

Shaped teeth

The EMCOTURN E65 gives you the finest European technology at the best possible price. You don't have to go without anything: the EMCOTURN E65 has driven tools with a mighty 5 kW of drive performance, C-axis, bar loader package, your choice of SIEMENS or FANUC control unit, and much, much more. All equipment is of the highest quality, guaranteeing accurate parts and a long machine life.



Screw fitting for hydraulic unit (Tempered steel)



Drilling hammer ram (Tool steel)



Tool holder (Tool steel)



Drive hub (Cast iron)



Hydraulic piston (Case-hardened steel)

EMCOTURN E65 - Big Bore

The EMCOTURN E65 - Big Bore is specially designed for manufacturing steel, aluminum, and plastic workpieces with a diameter of up to 95 mm. This bar capacity provides high levels of machining flexibility combined with extreme accuracy. The EMCO LM 1200 short bar loader permits the fully automated feeding and processing of bar stock measuring up to 1200 mm in length.

[Tool turret]

- 12 stations VDI 30 axial
- If required, all 12 stations can be driven
- Polygonal turning
- Synchronized tapping

[Work area]

- Straight chip fall
- Top ergonomics
- Completely covered guide rails

[Main spindle]

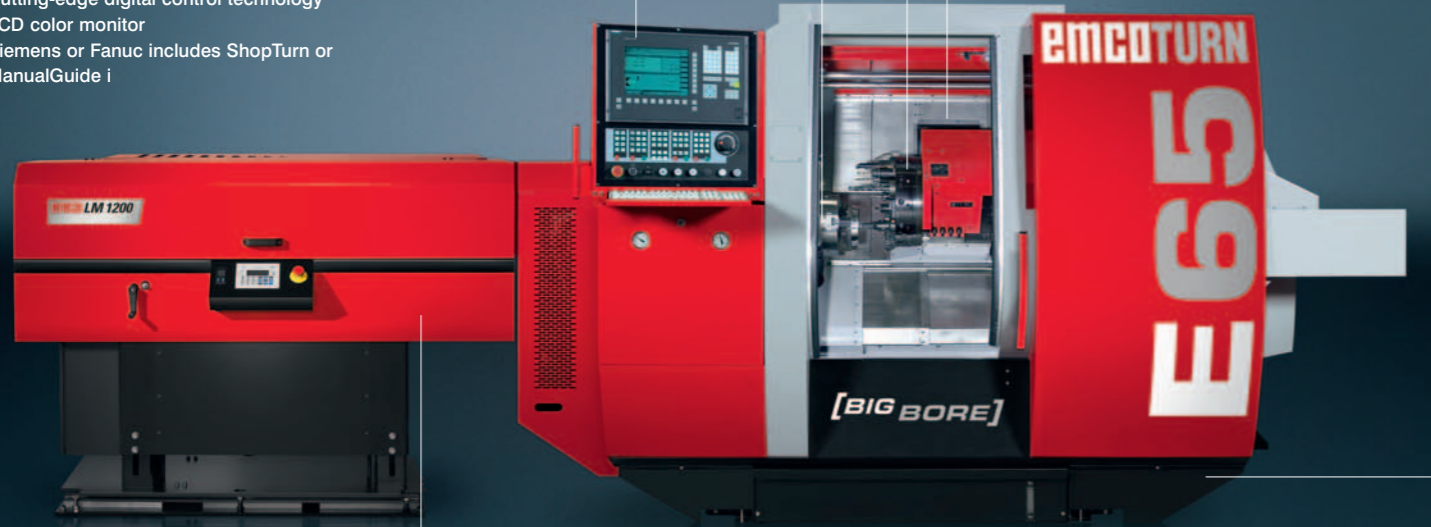
- Extra large bar capacity of \varnothing 95 mm
- Thermo-symmetrical design
- A2-8 spindle nose
- Speed range 0 – 3200 rpm
- Increased torque 250 Nm
- Spindle length 1200 mm

[Control unit]

- Cutting-edge digital control technology
- LCD color monitor
- Siemens or Fanuc includes ShopTurn or ManualGuide i

[Machine stand]

- Easy to transport
- Large coolant reservoir
- Easy to clean
- No leveling necessary



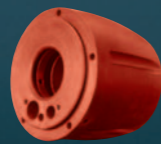
Machine fitted with optional equipment

[Bar loader]

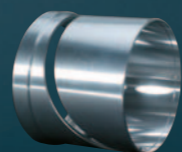
- Fully automated loading of bar stock of up to 1200 mm
- Adapted to the machine's spindle length
- Dry - no need to top up the oil
- Simple to operate and program
- Longitudinal displacement approx. 500 mm



Winch
(Brass)



Compression piece
(Plastic/PA6)



Adjustment sleeve
(Aluminum)

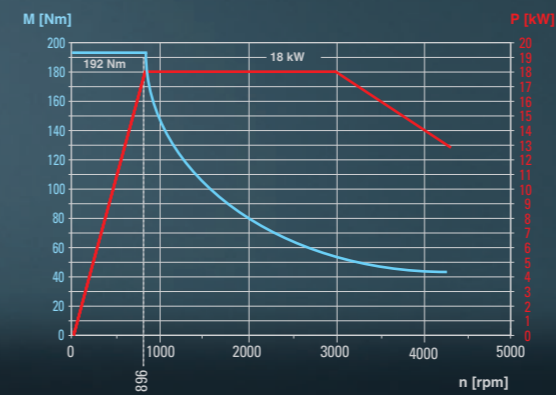
[Engineering]

Highlights

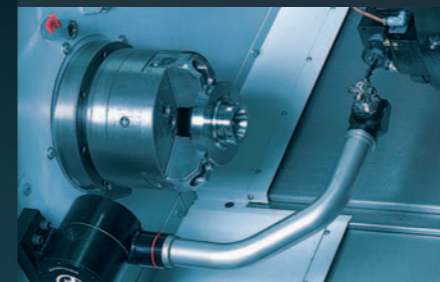
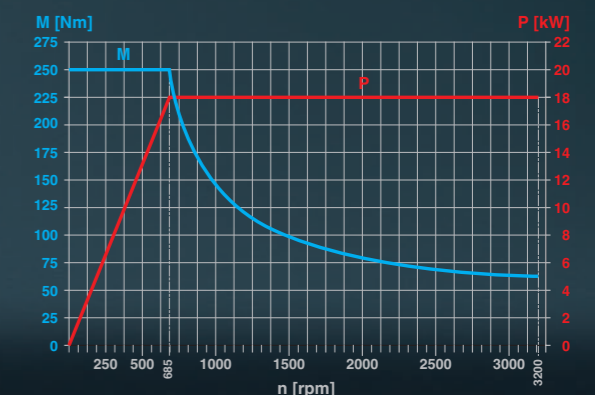
- Extremely solid machine base, optimum thermostability
- Extreme machining precision
- Cutting-edge control technology with SINUMERIK 810D or Fanuc 0iTC with ShopTurn or ManualGuide i
- Made in the Heart of Europe

Power

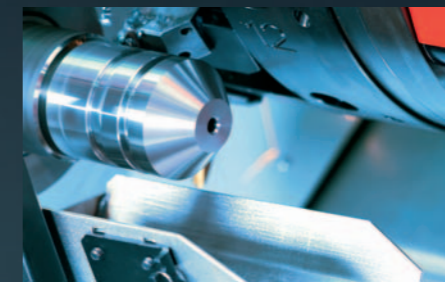
Performance and torque diagram for main spindle
EMCOTURN E65



Performance and torque diagram for main spindle
EMCOTURN E65 - Big Bore



The pull-down tool gauge is mounted in the work area and can be manually swung in to measure the tools.



The finished parts catcher automatically transports the parts cut from the bar stock out of the work area and into a container.

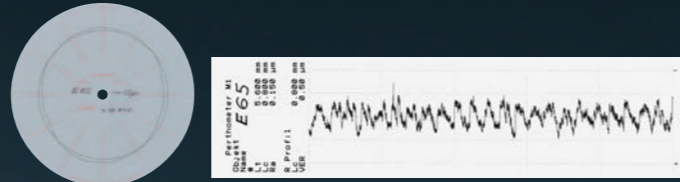


The "M" version of the EMCOTURN E65 enables you to machine workpieces with drilling and milling tools. Polygonal turning and synchronized tapping are also possible.

[Validated quality]

Roundness and surface quality

Material:	Brass (Cu Zn 40 Pb 2)
Cutting tool:	Carbide insert CCGX 09 T3 04-AL
Turning diameter:	ø 55 mm
Cutting speed:	300 m/min
Feed rate:	0.025 mm/rev
Cutting depth:	0.03 mm

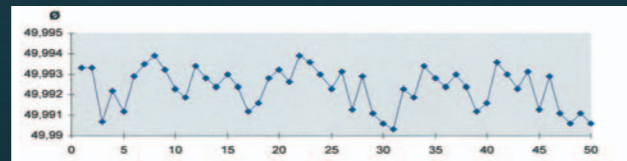


As measured:	
Roundness	0.45 μm
Surface finish:	Ra = 0.15 μm

Repeat accuracy

Material:	Steel - 16 Mn Cr 5
Turning diameter:	ø 50 h6
Tolerance:	16 μm
Spindle speed:	2000 min ⁻¹
Feed rate:	0.08 mm/rev
Cutting depth:	0.2 mm

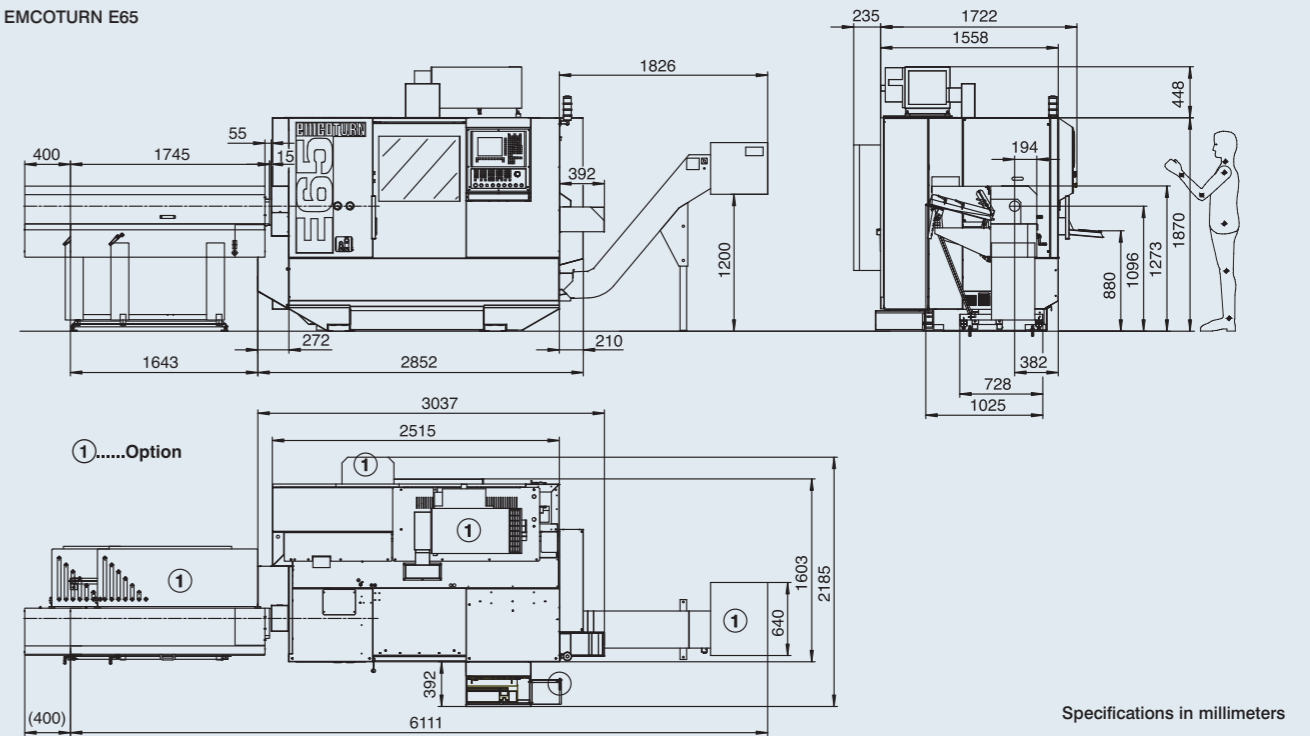
As measured:	
Range:	4 μm
Cm value:	2.70



Long term machining accuracy: 4 μm

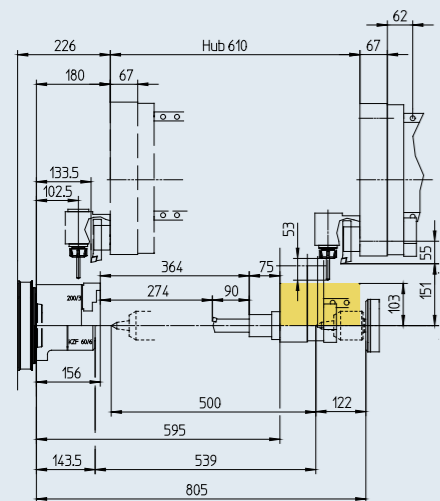
Installation plan

EMCOTURN E65



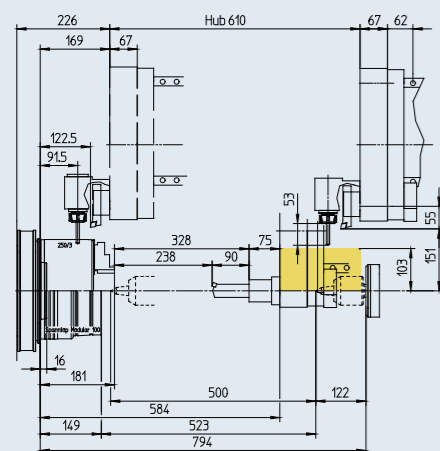
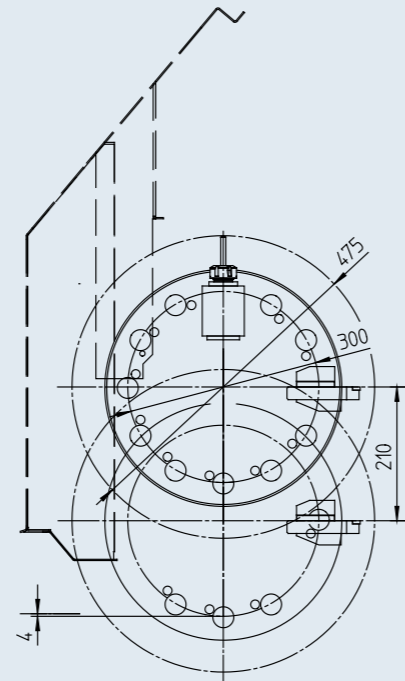
Specifications in millimeters

Work area



EMCOTURN E65

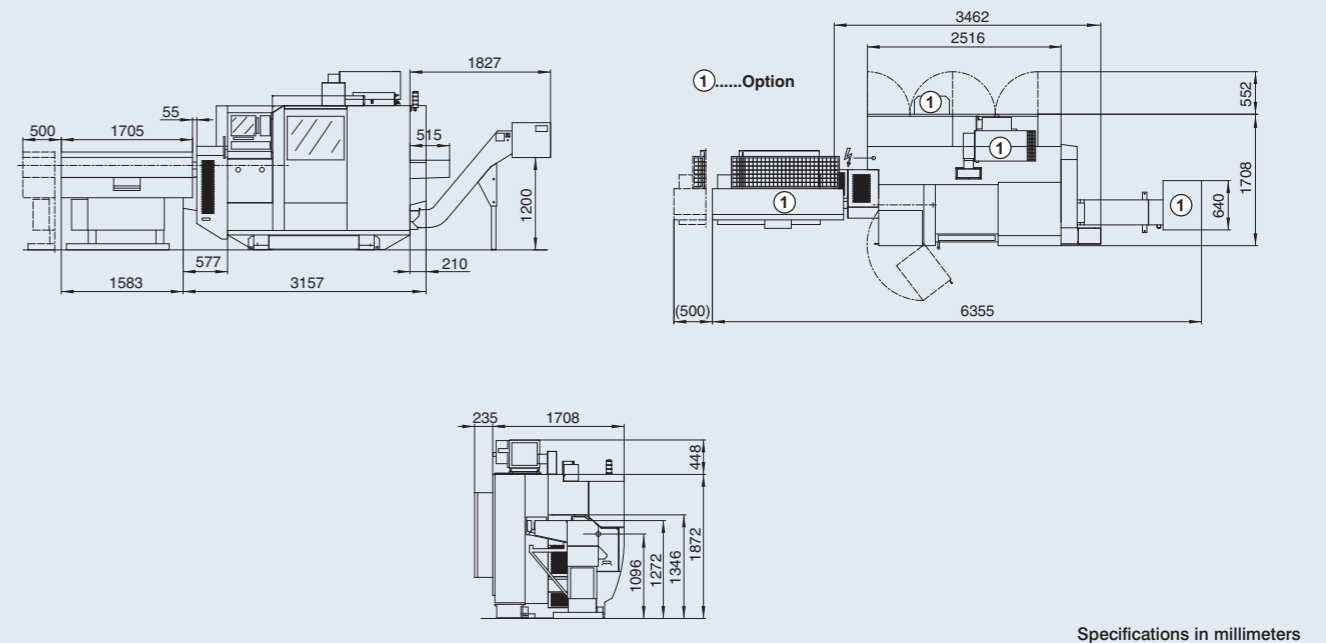
Turret clearance



EMCOTURN E65 - Big Bore

Installation plan

EMCOTURN E65 - Big Bore



Specifications in millimeters

[Technical data]



Designed for your profit

EMCOTURN E65 / E65 - Big Bore

Work area	E65	E65 - Big Bore
Swing over bed	Ø 540 mm (21.3")	Ø 600 mm (23.6")
Swing over cross slide	Ø 360 mm (14.2")	
Distance (spindle nose-center)	680 mm (26.8")	669 mm (26.4")
Maximum turning diameter	Ø 310 mm (12.2")	
Maximum part length	520 mm (20.5")	
Maximum bar stock diameter	Ø 65 mm (2.5")	Ø 95 mm (3.7")
Travel		
Travel in X	210 mm (8.3")	
Travel in Z	610 mm (24")	
Main spindle		
Speed range	0 – 4200 rpm	0 – 3200 rpm
Drive performance	18 kW (24.1 hp)	
Spindle torque	192 Nm (141.5 ft/lbs)	250 Nm (184 ft/lbs)
Spindle nose DIN 55026	A2-6	A2-8
Spindle bearing (inner diameter at front)	Ø 100 mm (3.9")	160 mm (6.3")
Spindle bore	Ø 73 mm (2.9")	Ø 106 mm (4.2")
C axis		
Resolution	0.001°	
Rapid motion speed	1000 rpm	
Spindle indexing (disc brake)	0.01°	
Tool turret		
Number of tool positions	12	
Tool holding shaft in accordance with VDI (DIN 69880)	30 mm (1.2")	
Tool cross-section for square tools	20 x 20 mm (0.8 x 0.8")	
Shank diameter for boring bars	Ø 32 mm (1.3")	
Turret indexing time	0.2 sec.	
Driven tools DIN 5480		
Speed range	0 – 5000 rpm	
Torque	20 Nm (14.7 ft/lbs)	
Drive performance	5 kW (6.7 hp)	
Number of driven stations	12	
Feed drives		
Rapid motion speed	24 m/min (944.9 ipm)	
Feed force in X/Z axis	5000/7000 N (1124/1573.6 lbs)	
Time from 0 to rapid motion	0.2 sec.	

Feed drives	E65	E65 - Big Bore
Position variation Ps in accordance with VDI 3441 in X/Z	0.003/0.0035 mm (0.00012/0.00014")	
Automatic tailstock		
Tailstock travel	500 mm (19.7")	
Maximum thrust	8000 N (1798.4 lbs)	
Traverse speed	approx. 20 m/min (787.4 ipm)	
Inside taper for mounting the live centre	MT 4	
Coolant system		
Tank volume	230 liters (60.7 gal)	
Pump performance at 3.5 bar (optional 10 bar)	0.57 (2.2) kW (0.76 (3) hp)	
Volume pumped at 3.5 bar/1 bar	15/65 l/min (4/17 gal/min)	
Hydraulic unit		
Multiple circuit hydraulics for clamping device	max. 50 bar (725.2 PSI)	
Dimensions and weight		
Height of centers above floor	1100 mm (43.3")	
Overall height	1880 mm (74")	
Required space for machine L x D (without chip conveyor)	2852 x 1722 mm (112.3 x 67.8")	3157 x 1722 mm (124.3 x 67.8")
Total weight	4300 kg (9460 lb)	4500 kg (9921 lb)

EMCO COMPACT LOAD E65 / LM 1200

	E65	LM 1200
Bar length	150 – 1100 mm (5.9 – 43.3")	150 – 1200 mm (5.9 – 43.3")
Bar diameter	Ø 8 – 65 mm (0.3 – 2.6")	Ø 8 – 95 mm (0.3"–3.7")
Material storage (bar stock / Ø)	10/65 mm (0.4/2.6")	
Length	1700 mm (67")	
Width	1100 mm (43.3")	
Height (spindle center)	1097 mm (43.2")	1100 mm (43.3")
Weight	approx. 500 kg (1102.3 lb)	



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