

emcogroup

Designed for your profit



Design to Cost. EMCOTURN E25

CNC turning center for bar stock work up to
Ø 25 mm (1") and also chucking work

TURNING
EMCO-WORLD.COM

EMCOTURN E25

Uncompromising quality right down to the last detail at a very reasonable price. With an extremely solid machine base, a thermosymmetric spindle headstock, high-precision spindle bearings, preloaded roller guideways in all axes, a fast tool turret and your choice of Sinumerik 828D or Fanuc 0i TF – with dialogue programming.

1 WORK AREA

- Large travel range
- Free chip fall
- Best ergonomics

2 MAIN SPINDLE

- High power
- Thermostable construction
- Large range of speeds
- Bar capacity Ø 25 mm (1")

3 TOOL CHANGER

- 12 positions VDI 16 axial
- With 6 driven positions on request
- Polygonal turning
- Synchronised tapping

4 EMCO LM800

- Bar diameter 6 – 25 mm (2.6 – 1")
- Bar length 100 – 600 (800) mm (3.9 – 23.6" (31.5"))
- Material storage 23 bars of Ø 25 mm (1")
- Length 1200 mm (47.4")
- Width 1100 mm (43.3")
- Weight approx. 330 kg (727.5 lb)

5 CONTROL

- Cutting-edge digital control technology
- Sinumerik 828D or Fanuc 0i TF includes ShopTurn or ManualGuide i
- Colour LCD monitor

6 MACHINE STAND

- Small footprint
- Easy transport
- Easy installation
- Lateral opening for chip conveyor

7 FINISHED PARTS CONTAINER

- Amply dimensioned
- Pull-out design
- Excellent accessibility

8 COOLANT TANK

- Can be pulled out towards the front
- Extremely easy to clean
- Fill level sight glass
- Swivelling coolant pump



Photo shows machine with options



Fitting
(Stainless steel)



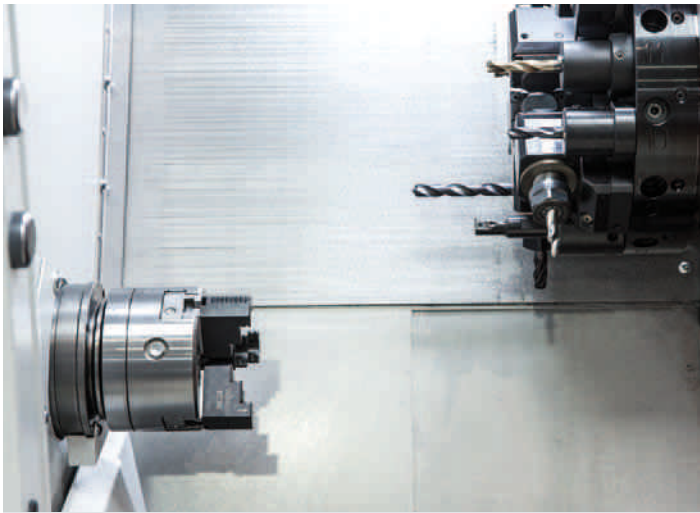
Ring
(Gold)



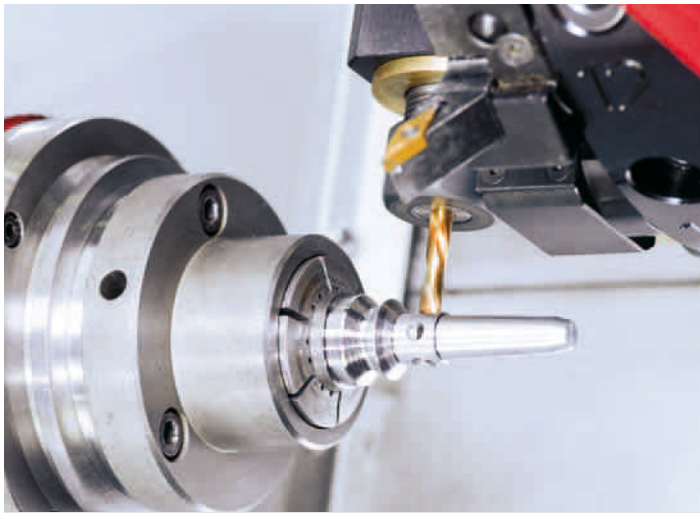
Valve cap
(Stainless steel)



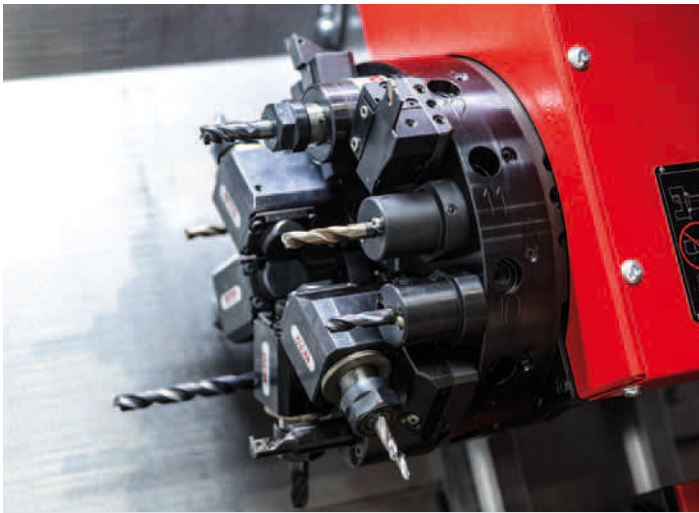
Plug
(Stainless steel)



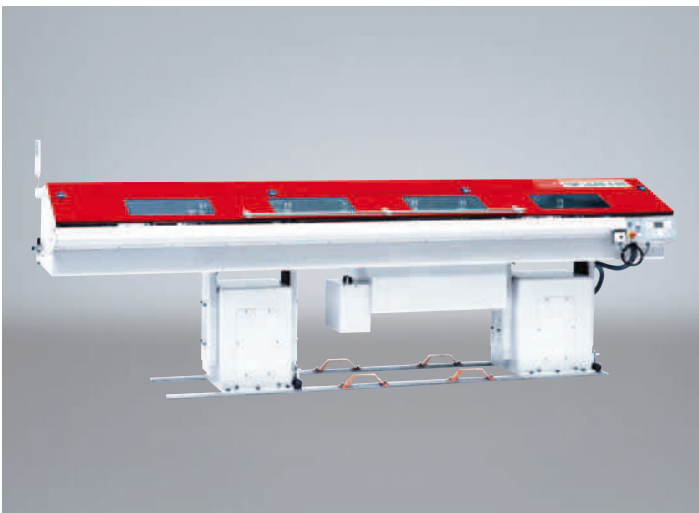
3-jaw power chuck. Thanks to the KFD-HS 95/3 power chuck, the EMCOTURN E25 is also capable of processing flange parts. With a passage of 26 mm, shaft parts can be clamped without replacing the clamping device by a collet chuck.



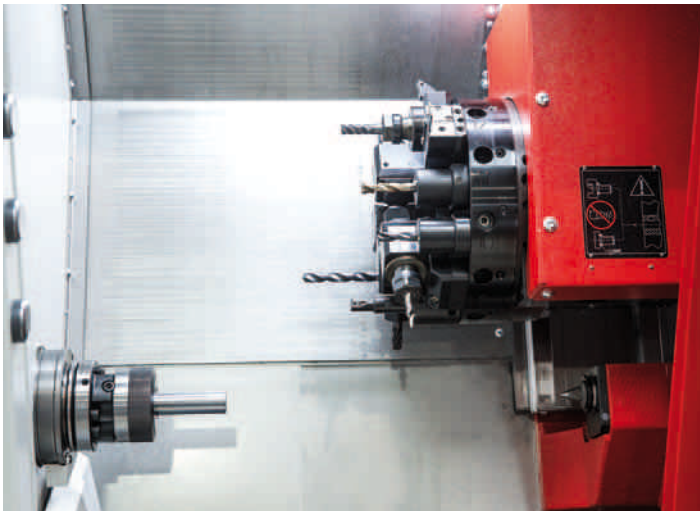
Pull-type collet chuck. The compact collet chuck for 5C (385E) collets ensures collision-free processing of small parts.



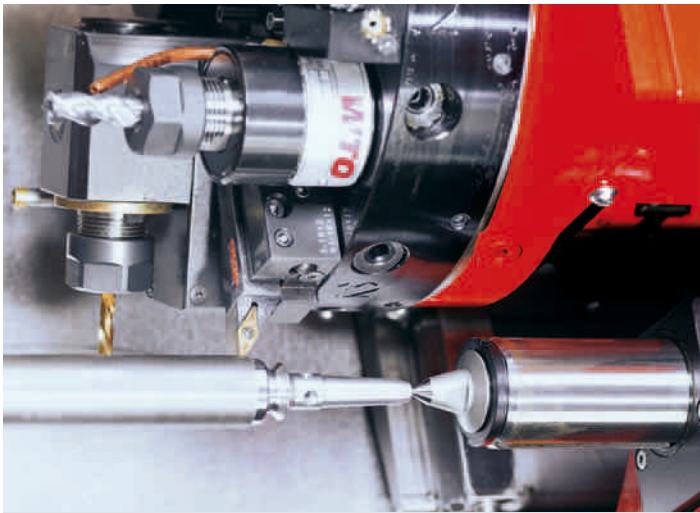
Tool changer. With 12 stationary and up to 6 driven tools, the EMCOTURN E25 offers an astonishing cutting performance – with top precision.



EMCO TOP LOAD 4-25/3200. For the automated loading of bar stock in lengths of up to 3200 mm. Thanks to a patented steady rest guidance system, the loader can be retooled within 2-3 minutes.



Push-type collet chuck. This collet chuck allows pushing bar material forwards without retraction. It has been designed for the use of DIN collets (148E).



Tailstock. Long workpieces can be supported by the tailstock, which allows for high-precision processing. The tailstock is positioned and clamped by hand. The quill with 120 mm stroke is activated automatically via M-functions.

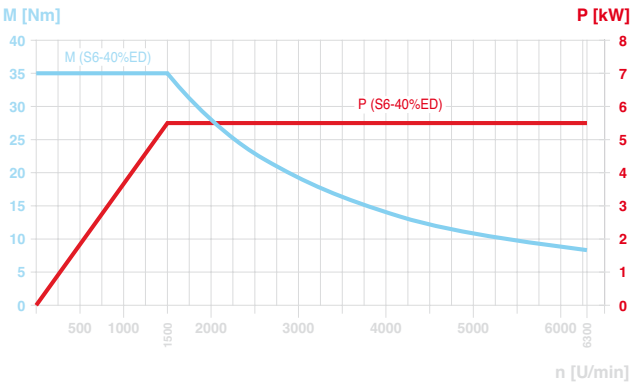
EMCOTURN E25 Technical Highlights

Highlights

- Stable machine bed
- Pre-tensioned linear guides
- Maximum thermostability
- Best machining precision
- Most compact machine construction
- State-of-the art Siemens or Fanuc control technology
- Made in the Heart of Europe

Performance and torque diagram

MAIN SPINDLE



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 35 mm
Cutting speed:	300 m/min
Feedrate:	0.025 mm/rev
Cutting depth:	0.03 mm

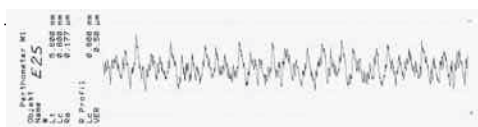
REPEATABILITY

Material:	Steel – 16 Mn Cr 5
Turning diameter:	ø 35 g6
Tolerance:	16 µm
Spindle speed:	2000 rpm
Feedrate:	0,08 mm/rev
Cutting depth:	0.2 mm

Long term machining accuracy: 4 µm

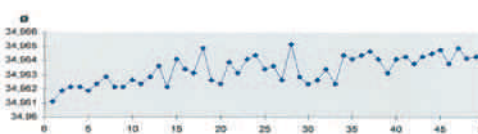
As measured:

Roundness:	0,5 µm
Surface finish:	Ra = 0,177 µm



As measured:

Variation:	4 µm
Cm-value:	2,62



Workpieces

1 ENGRAVING USING
CYLINDER INTERPOLATION

2 CONTOUR MILLED USING
CYLINDER INTERPOLATION

3 POLYGON TURNING OR
PROFILE MILLING WITH
C-AXIS INTERPOLATION

4 TAPPED OR WHIRLED INSIDE
THREAD



Tensile test
(Brass)



Fitting
(Stainless steel)



Ring
(Gold)

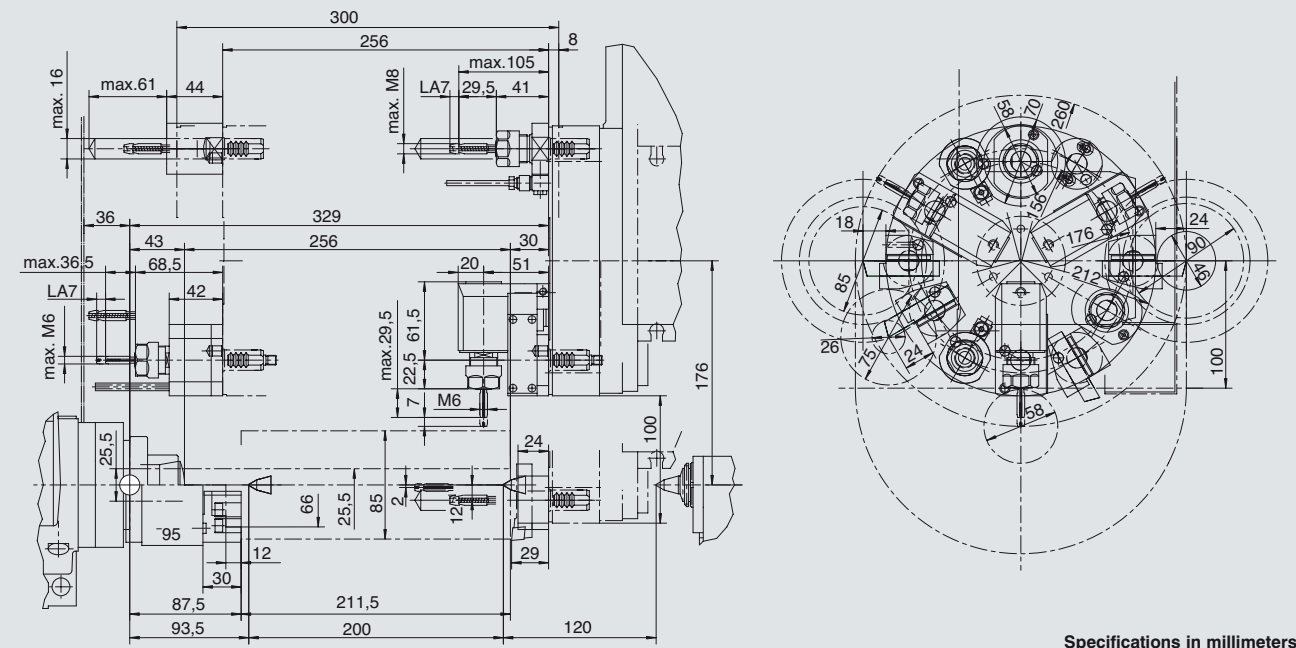


Valve cap
(Stainless steel)

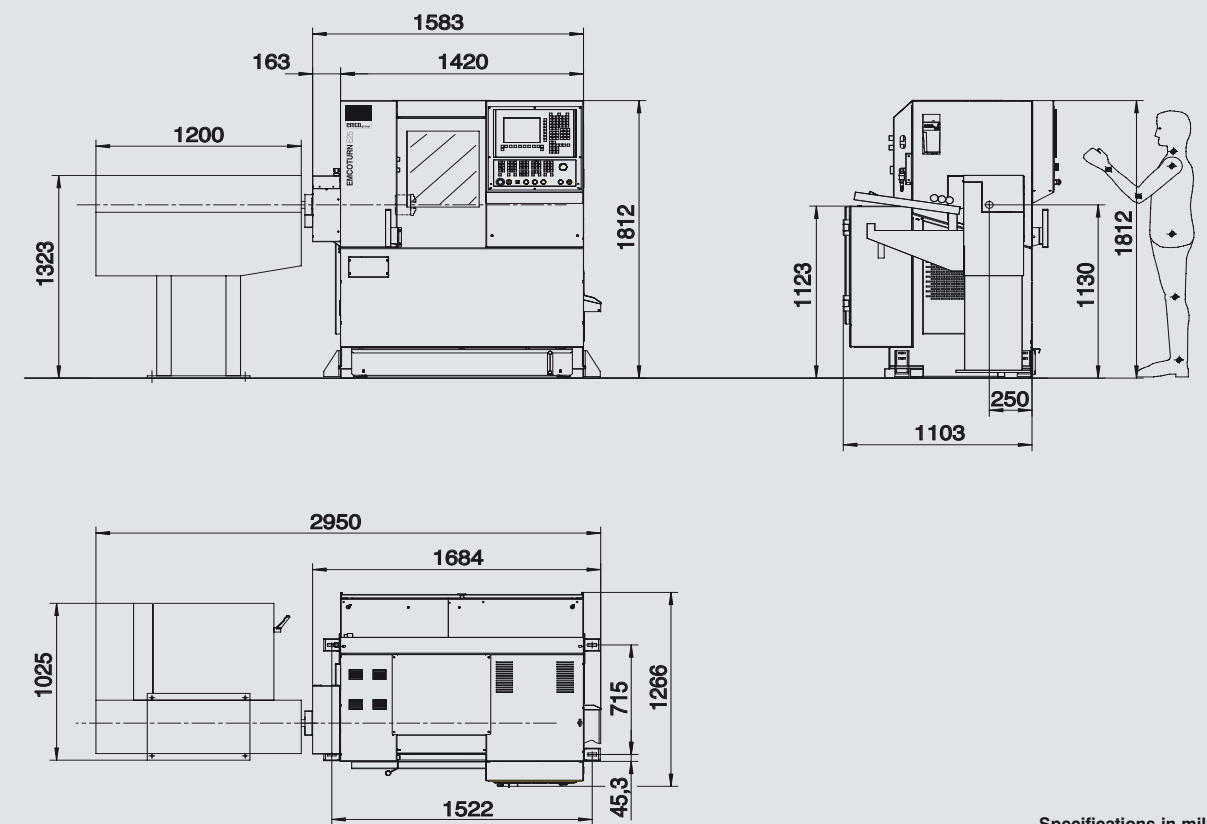


Plug
(Stainless steel)

Work area EMCOTURN E25



Machine layout EMCOTURN E25 with LM800



EMCOTURN E25

Technical Data

Work area

Swing over bed	Ø 250 mm (9.8")
Swing over cross slide	Ø 85 mm (3.35")
Maximum distance between centers	405 mm (15.9")
Maximum turning diameter	Ø 85 mm (3.35")
Maximum turning length	255 mm (10.04")
Maximum bar-stock diameter	Ø 25.5 mm (1")

Travel

Travel in X	100 mm (3.94")
Travel in Z	300 mm (11.8")

Main spindle

Speed range	60 – 6300 rpm
Drive performance	5.5 kW (7.4 hp)
Spindle torque	35 Nm (25.8 ft/lbs)
Spindle nose	Ø 70 h5
Spindle bearing (inner diameter at front)	50 mm (2")
Spindle bore	30 mm (1.2")

C-axis

Resolution	0.001°
Rapid motion speed	1000 rpm
Spindle indexing	3°

Tool turret

Number of tool positions	12
Tool holding shaft in accordance with VDI (DIN 69880)	VDI 16
Tool cross-section for square tools	12 x 12 mm (0.47 x 0.47")
Shank diameter for boring bars	Ø 16 mm (0.63")

Driven tools DIN 5480

Number of stations	6
Drive performance	1.2 KW (1.6 hp)
Maximum torque	4 Nm (2.95 ft/lbs)
Speed range	0 – 6000 rpm

Feed drives

Rapid traverse X / Z	15 / 24 m/min (590.55 / 944.9 ipm)
Feed force in the X / Z axis	3000 / 3500 N (674.4 / 786.8 lbs)
Positioning scatter Ps (according VDI 3441) X / Z	2 / 2 µm*

Tailstock

Quill stroke	120 mm (4.7")
Quill thrust	800 – 2500 N (179.8 – 562 lbs)
Quill diameter (live center integrated)	35 mm (1.4")
Quill bore taper	integrated live-centre

Coolant system

Tank volume	140 liters (37.03 gal)
Pump performance (optional)	3,5 (8) bar

Dimensions and weight

Height of spindle center	1131 mm (44.5")
Machine height	1820 mm (71.65")
Required space for machine L x D	1700 x 1270 mm (66.9 x 50")
Total weight	1100 kg (2425.06 lb)

EMCO LM800

Bar length	100 – 600 (800) mm (3.9 – 23.6" (31.5"))
Bar diameter	6 – 25 mm (2.6 – 1")
Material storage	23 bars of Ø 25 mm (1")
Length	1200 mm (47.4")
Width	1100 mm (43.3")
Weight	approx. 330 kg (727.5 lb)

Safety devices

CE compliant

* For machines including laser measurement and pitch error compensation