

emcogroup

Designed for your profit



MAXXMILL 630

Vertical milling center
for 5-sided machining

MILLING
EMCO-WORLD.COM

Compact vertical milling center

The new CN vertical milling center Maxxmill 630 is capable to mill parts with an edge size of 445 x 445 x 290 mm in just one operation in an efficient and precise way. Its compact design in cast iron and welded steel guarantees the maximum in rigidity and thermosymmetry. Short power flows assure the highest precision and an excellent surface quality of the workpiece.

1 MACHINE BASE

- The machine base consists of welded steel construction, the X-Y slide and the Z-axis are cast iron.

2 TOOL CHANGER

- Tool changer with 30 tool stations

3 SPINDLE

- Mechanical spindle direct drive: 12000 rpm (not permanent)
- Motor spindle: 15000 rpm

4 OPERATING PANEL

- Available with Heidenhain or Siemens control technology
- 90° Swivelling operating panel

5 TABLE

- Swivelling-rotary table

6 CHIP REMOVAL

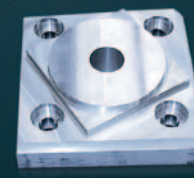
- The chip removal can be handled by an optional available hinge type chip conveyer.



Housing
(Cast steel)



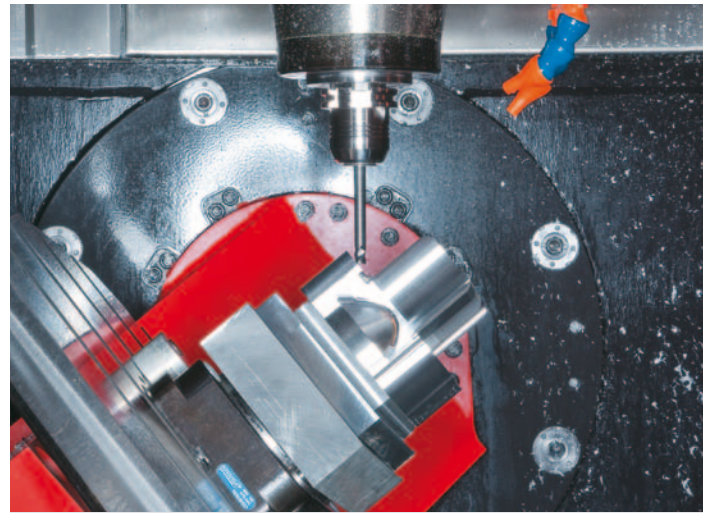
Coupling
(Steel)



Test piece
(Aluminium)



Swivel-rotary table. The swivel-rotary table has a large clamping area of 630 x 500 mm (24.8 x 19.6") and can bear loads of up to 250 kg (551.1 lb). This makes it possible to simply machine workpieces with an edge size of 445 x 445 x 290 mm (17.5 x 17.5 x 11.4"). The special shape of the table allows the spindles to move closer to the table center.



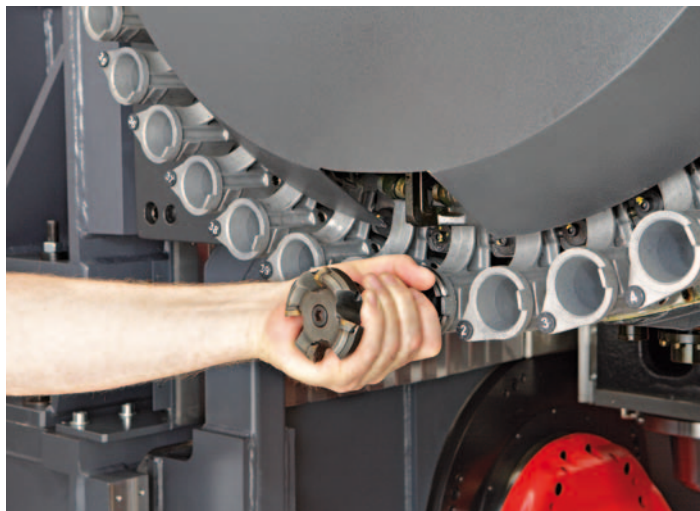
Travel range. With a travel range of +/- 100°, the B axis provides a larger work area than most products from other manufacturers. The C axis can be infinitely rotated by 360°.



The Sinumerik 840D sl incl. Shopmil. The Sinumerik 840D sl incl. Shopmil is a universal and flexible CNC system and offers free contour programming, moving cycles for complex contours, fast reference point setting with touch probe systems, tilting the working plane, cylindrical surface machining, 3-D tool compensation, fast execution through short block processing times.



Heidenhain TNC 620. The TNC 620 is a compact, adaptable control for up to five controlled axes. With its flexible operating concept - workshop-oriented programmability in the HEIDENHAIN plain text dialog or external programming - and its range of services, it is perfectly suited for EMCO milling centers.

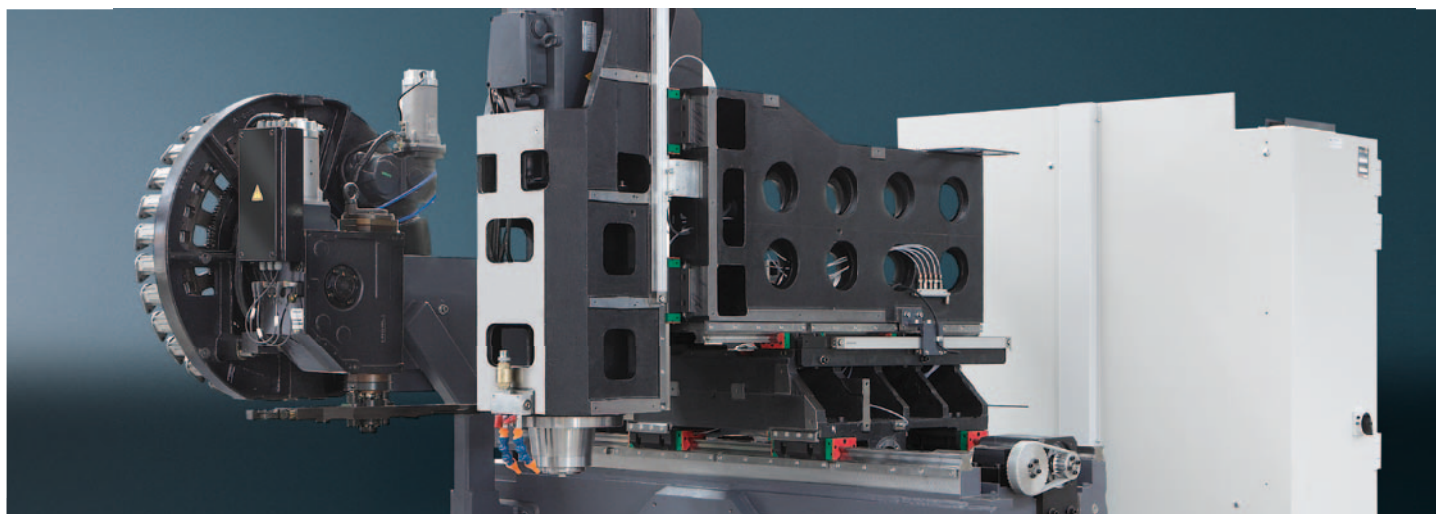


Tool changer. The tool changer is a drum magazine for 30 tools. The tools are managed according to the variable tool stationcoding principle (random), which means that tools are always deposited in the first free magazine station for time reasons.

MAXXMILL 630 Technical Highlights

Highlights

- 5-sided machining in a single set-up
- Top thermostability
- Top machining precision
- Modern moving column concept
- Massive swivel-rotary table with 630 x 500 mm (24.8 x 19.6") provides high stability and precision
- Compact machine design
- Cutting-edge control technology from Siemens or Heidenhain
- Extensive options such as water-cooled motor spindle with 15000 rpm
- Optimal chip removal
- Attractive price-performance ratio
- Made in the Heart of Europe

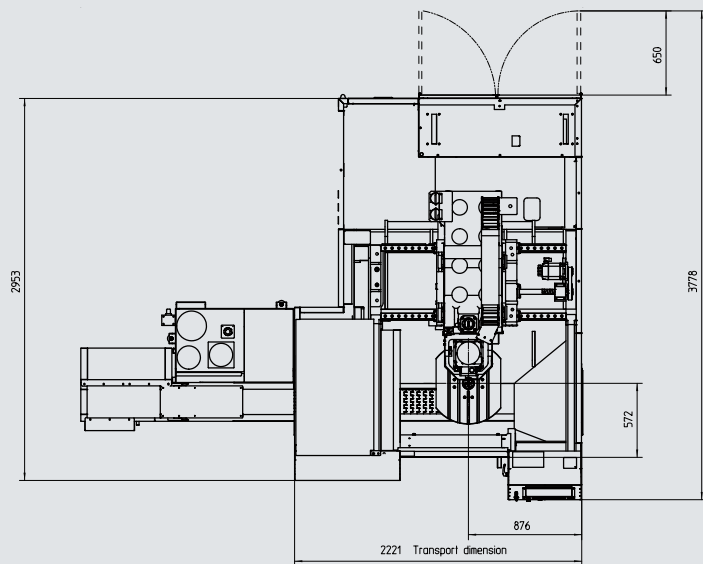
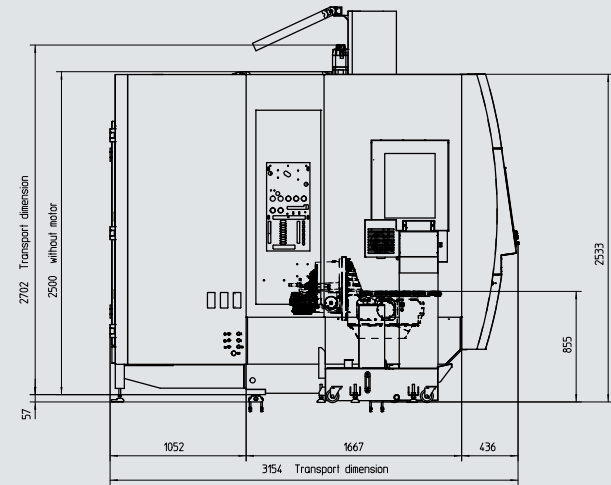
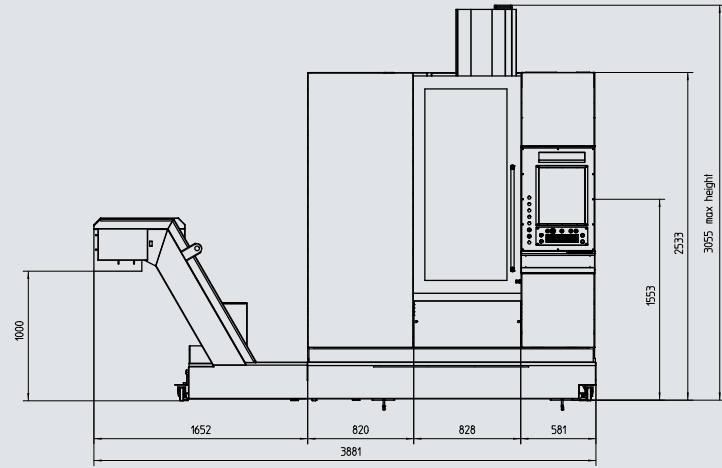


Massive structure. The carriage, slide and machining head are made of cast iron for maximum stability and best finishing of the workpiece.

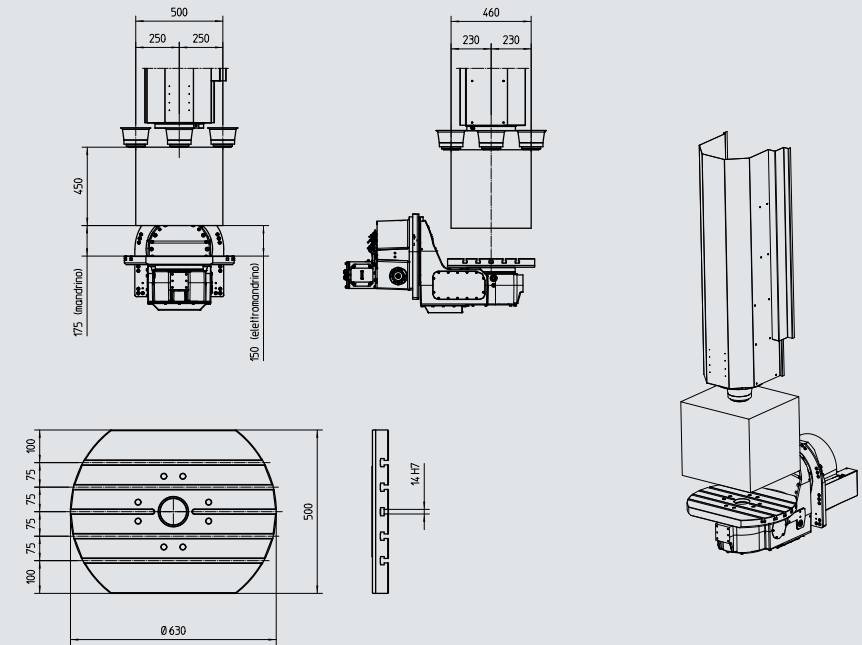


The direct drive on the Z-axis stands for highest accuracy and prevents any play of pulleys or belts.

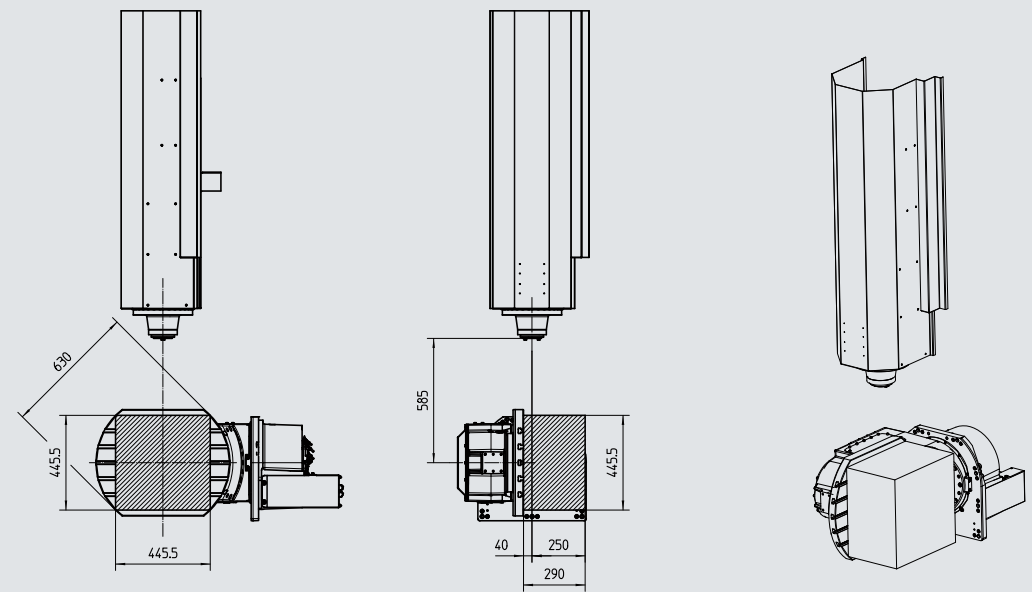
Installation plan



Work area



Work area



MAXXMILL 630

Technical data

Travel and tolerances

Travel in X (without 100 mm extra distance for tool change)	500 mm (19.6")
Travel in Y	460 mm (18.1")
Travel in Z	450 mm (17.7")
Distance spindle nose - table (min. - max. / mechanical spindle)	175 / 675 mm (6.8 / 26.5")
Distance spindle nose - table (min. - max. / motor spindle)	150 / 650 mm (5.9 / 25.5")
Swivel range B-axis	+/-100°
Range of rotation C-axis (rotary table)	0 – 360°
Positioning accuracy P according to VDI 3441*	8 µm
Positioning repeatability Ps according to VDI 3441 *	3 µm
Positioning accuracy B axis (tilting – with motor encoder)	20 sec.
Positioning accuracy C axis (table – with motor encoder)	10 sec.

Feed

Rapid motion speed X-Y-Z axis	30 m/min (1181.1 ipm)
Max. rotational speed B axis	16 rpm
Max. rotational speed C axis	20 rpm
Max. feed force X axis	5000 N (1124 lbs)
Max. feed force Y axis	5000 N (1124 lbs)
Max. feed force Z axis	5000 N (1124 lbs)
Max. acceleration X-Y-Z axis	3 m/s ²

Tilting table

Clamping area	630 x 500 mm (24.8 x 19.6")
Table-floor distance	855 mm (33.7")
Slot number	5
Distance between two T-slots	75 mm (2.9")
Max. workpiece weight (equally distributed)	200 kg (440.9 lb)

Main spindle (mechanical spindle)

Speed range	50 – 12000 rpm (not permanent)
Maximum spindle torque	100 Nm (73.8 ft/lbs)
Maximum spindle power	15 kW (20.1hp)
Tool taper	ISO 40 DIN 69871

Main spindle (mechanical spindle)

Pull stud	ISO 7388/2 Type B
Drive	Direct with coupling

Main spindle (motor spindle)

Speed range	50 – 15000 rpm
Maximum spindle torque	100 Nm (73.8 ft/lbs)
Maximum spindle power	20 kW (26.8 hp)

Tool magazine

Number of tool stations	30
Tool changing type	with changing arm
Tool management	Random
Tool changing time (tool-tool)	2 sec.
Max. tool diameter	80 mm (3.1")
Max. tool diameter (without neighbouring tools)	125 mm (4.9")
Max. tool length	250 mm (9.8")
Max. tool weight	8 kg (17.6 lb)
Total tool weight supported by the magazine	100 kg (220.5 lb)

Coolant tank

Tank capacity	200 l (52.8 gal)
Standard pump pressure	2 bar (29.0 PSI)
Max. capacity at 2 bar	40 l/min (10.6 gal/min)

Pneumatic supply

Min. pressure supply	6 bar (79.8 PSI)
Min. capacity required	200 NI/min

Lubrication

Spindle	Grease
Caged roller ways	Grease

Dimensions

Total height	3060 mm (120.4")
Dimensions L x D without chip conveyer	2500 x 3120 mm (98.4 x 122.8")
Weight	4800 kg (10582.2 lb)

* Values measured at a temperature of 22°C, with the machine mounted on the floor. Machine, with linear scales - pitch compensated with laser, and motor encoders in the rotary axis.