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**Your profit**

# MAXXMILL 400

5-axis performance for small workpieces.

**MILLING**  
EMCO-WORLD.COM

# Compact vertical

## 1 MACHINE BED

- Machine bed and slide systems made of solid welded steel and cast iron components

## 2 TOOL MAGAZINE

- Tool changer with 20 (30, 50) ISO30, 30 (50) HSK-A40 tool stations

## 3 SPINDLE

- Mechanical spindle direct drive: 12000 rpm
- Water-cooled motor spindle: 24000 rpm



# al milling centre

MAXXMILL 400 is the ideal vertical milling centre for complex 5-axis machining of small workpieces in small or medium quantities. Is suited for perfectly tool and mould making, mechanical, precision and medical engineering, optical industry, contract manufacturing and further education facilities.



#### 4 CONTROL

- State-of-the-art control technology from Siemens - Siemens 840D sl or Heidenhain - TNC 620/TNC 640

#### 5 CONTROL PANEL

- Ergonomically positioned and swivelling control panel

#### 6 TABLE

- Massive swivel-rotary table with  $\varnothing$  400 mm

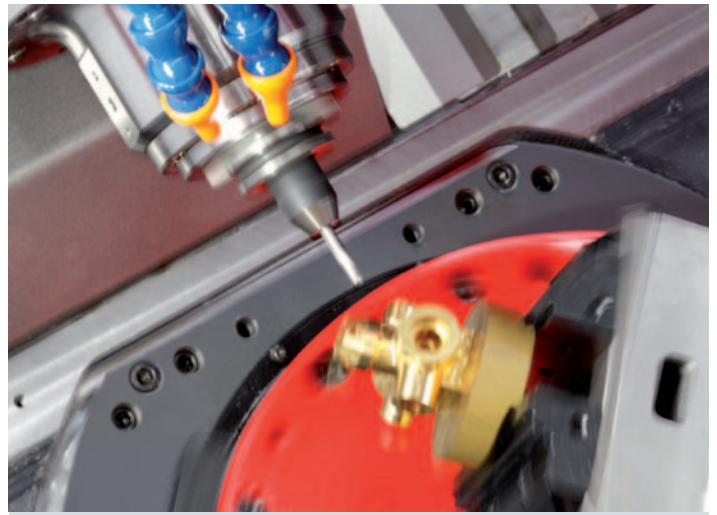
#### 7 CHIP REMOVAL

- The chips can be removed by an optional available hinge type chip conveyer

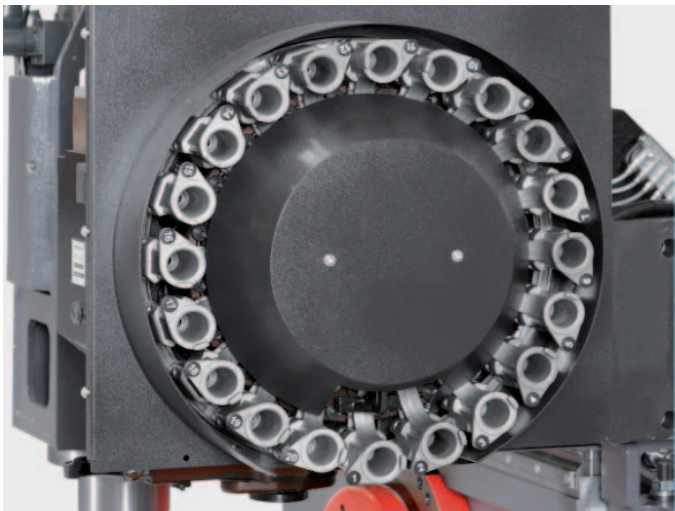




**Swivel-rotary table.** The swivel-rotary table has a flexible clamping surface with a diameter of 400 mm and can be loaded with 80 kg. A workpiece with a maximum edge length of 250 x 250 x 225 mm can be processed on 5 sides with optimum results.



**Swivel range.** With +/- 100° swivel range the B-axis provides a larger work area compared with the products from other manufacturers. The C-axis can be rotated by 360° without limitation.

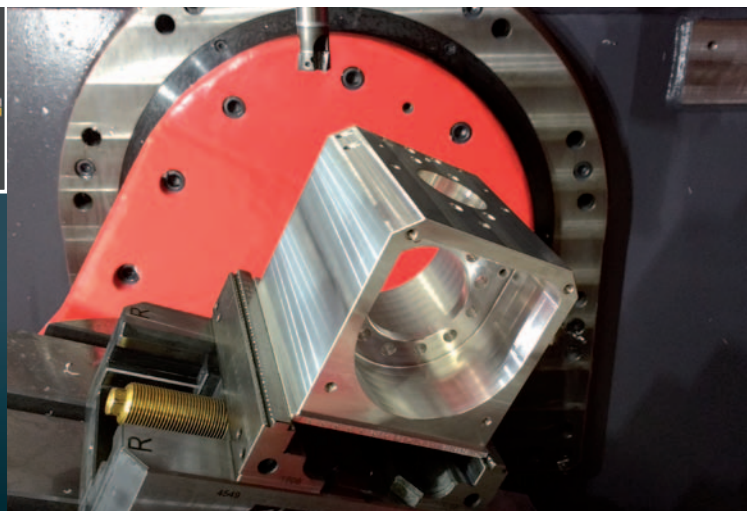


**Tool magazine.** The tool magazine is equipped with 20 (optionally 30) ISO 30 tool stations. A chain magazine with 50 ISO30/HSK-A40 stations is also available as an option.

## MAXMILL 400: Technical



**Maxmill 400 with Sinutrain.** Includes beside to the machine and 18 licenses for SinuTrain and Sinumerik Operate, 20 users for EMCO Campus and accessories ready for use. The illustration of the operator panel front, machine control panel and user interface correspond to the original design, which allows for real operation. The user interface corresponds to the original SINUMERIK Operate interface. The simulation is identical with the real control. The full functionality of SINUMERIK Operate on SINUMERIK 840D sl/828D is available.





**Heidenhain TNC 620.** The latest control offers beside the milling operations also combined milling and turning operations. It is particularly suitable for Mill-Turn, HSC- and 5 axis operations at machines up to 18 axes (available only in the torque version).

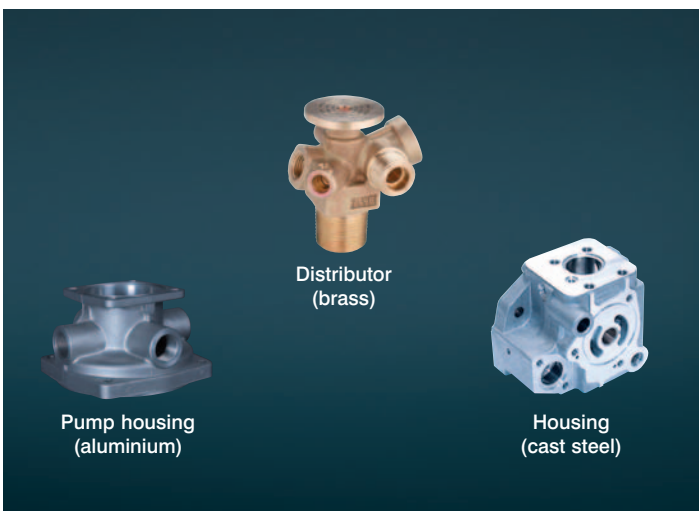


**Sinumerik 840D sl inkl. Shopmill.** Sinumerik 840D sl inkl. Shopmill: The Sinumerik 840D sl inkl. Shopmill is a universal and flexible CNC system and offers free contour programming, Moving cycles for complex contours, fast reference point setting with touch probe systems, tilting the working plane,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

# Highlights

## Highlights

- 5-axis machining in a single set-up
- Optional swiveling-rotary table for the 5-axis simultaneous engineering with high dynamic torque drive
- Top thermostability
- Top machining precision
- Modern moving column concept
- Massive swivel-rotary table with  $\varnothing$  400 mm 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 24000 rpm, chain magazine with 50 positions ISO30 / HSK-A40, etc.
- Optimal chip removal
- Attractive price-performance ratio
- Made in the Heart of Europe



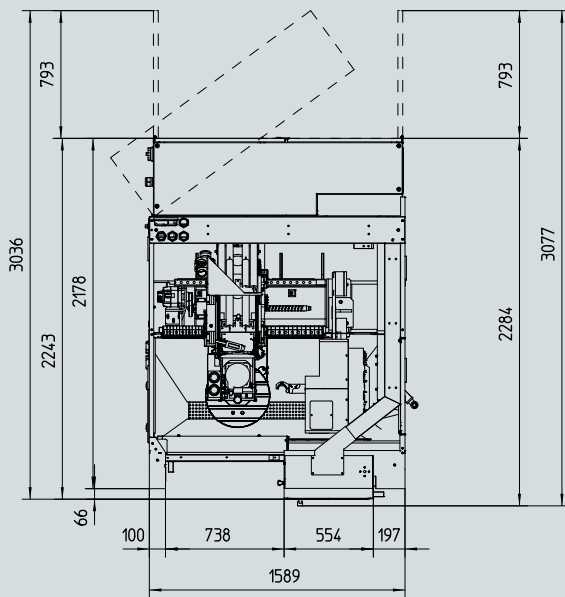
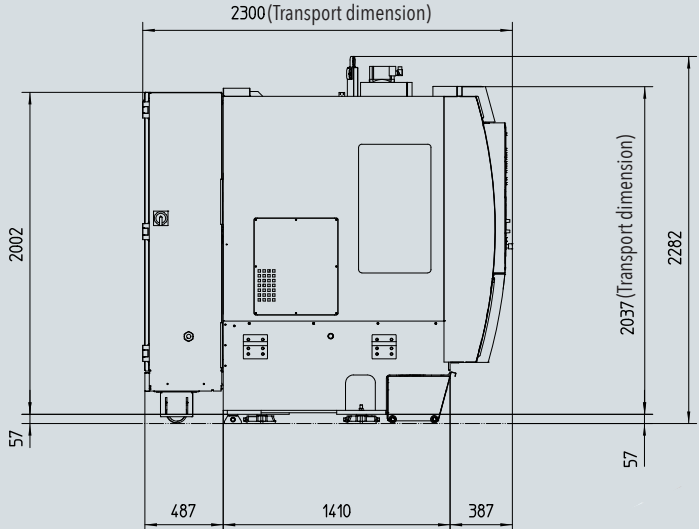
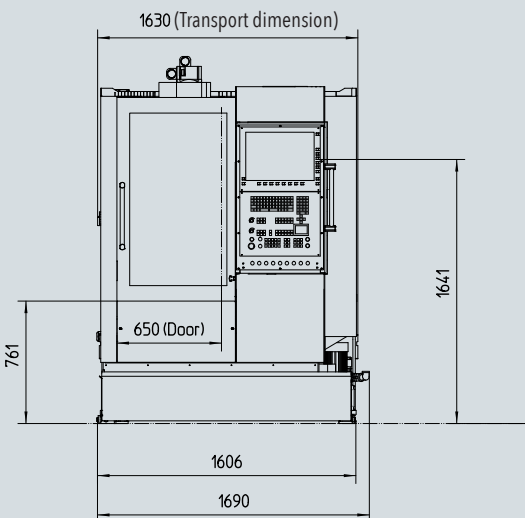
Pump housing  
(aluminium)

Distributor  
(brass)

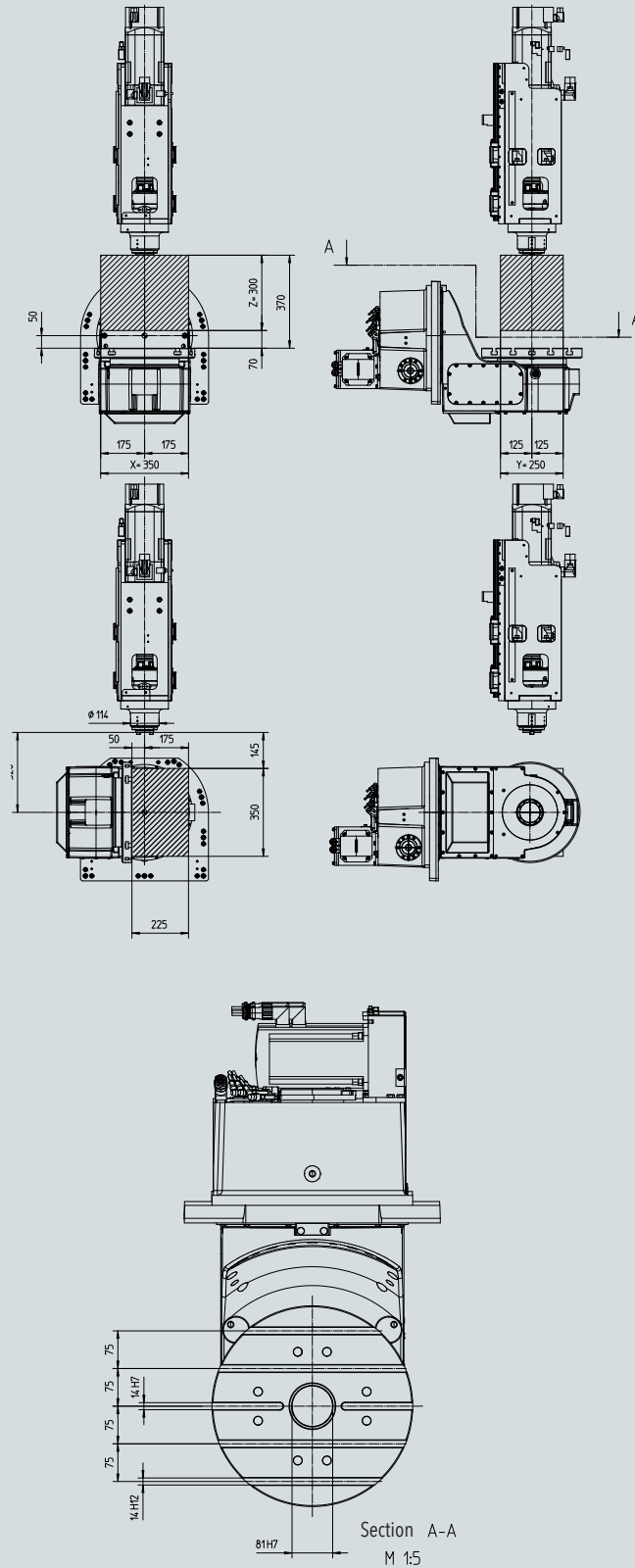
Housing  
(cast steel)

Workpieces of 250 x 250 x 225 mm with a weight of up to 80 kg can be machined with the MaxxMill 400 in one setting on 5 sides.

# Installation plan



# Work area



# MAXMILL 400

## Technical data

### Travel and tolerances

|  |                               |
|--|-------------------------------|
| Travel in X<br>(without 100 mm extra distance for tool change) | 350 mm (13.8")                |
| Travel in Y  | 250 mm (9.8")                 |
| Travel in Z  | 300 mm (11.8")                |
| Distance spindle nose - table<br>(min. - max. / screw table)   | 70 / 370 mm<br>(2.8 / 14.6")  |
| Distance spindle nose - table<br>(min. - max. / torque table)  | 150 - 450 mm<br>(5.9 x 17.7") |
| Swivel range B-axis  | +/-100°                       |
| Range of rotation C-axis (rotary table)                        | 0 - 360°                      |

### Feed

|                                      |                            |
|--------------------------------------|----------------------------|
| Rapid motion speed X-Y-Z-axis        | 30 m/min (1181.1 ipm)      |
| Max. rotational speed B-axis         | 20 rpm                     |
| Max. rotational speed C-axis         | 25 rpm                     |
| Max. rotational speed B-axis, Torque | 100 rpm                    |
| Max. rotational speed C-axis, Torque | 200 rpm                    |
| Max. feed force X-axis               | 3000 N (674.4 lbs)         |
| Max. feed force Y-axis               | 3000 N (674.4 lbs)         |
| Max. feed force Z-axis               | 3000 N (674.4 lbs)         |
| Max. acceleration X-Y-Z-axis         | 4 / 3 / 3 m/s <sup>2</sup> |

### Swivel-rotary table

|   |                |
|---|----------------|
| Table diameter  | 400 mm (15.7") |
| Table-floor distance                                      | 860 mm (33.8") |
| Number of T-grooves                                       | 5              |
| Groove spacing  | 75 mm (2.9")   |
| Groove wide   | 14 mm (0.55")  |
| Max. permissible workpiece weight<br>(evenly distributed) | 80 kg (176 lb) |

### Main spindle (mechanical spindle)

|                   |                             |
|-------------------|-----------------------------|
| Spindle speed     | 50 - 12000 rpm              |
| Maximum torque    | 33 Nm (S6)<br>(30.2 ft/lbs) |
| Maximum power     | 7 kW (S6) (9.4 hp)          |
| Tool taper ISO 30 | DIN 69871                   |
| Pull studs        | DIN 69872/A                 |
| Drive             | direct drive                |

### Main spindle (motor spindle)

|                |                     |
|----------------|---------------------|
| Spindle speed  | 50 - 24000 rpm      |
| Maximum torque | 38 Nm (27.9 ft/lbs) |
| Maximum power  | 16 kW (21.5 hp)     |
| Tool taper     | HSK-A40             |

### Tool magazine

|   |  |
|---|--|
| Number of tool stations                           | 20 (30, 50) ISO 30<br>(50) HSK-A40 30          |
| Tool changing type                                | S - arm  |
| Tool management                                   | random   |
| Tool changing time (tool - tool)                  | 2 sec.   |
| Max. tool diameter                                | 63 mm (2.5")                                   |
| Max. tool diameter<br>(without neighbouring tool) | 100 mm (3.9")                                  |
| Max. tool length                                  | 200 mm (7.9")                                  |
| Max. tool weight                                  | 5 kg (11.0 lb)                                 |
| Total tool weight supported by the magazine       | 60 / 70 / 100 kg<br>(132.3 / 154.3 / 220.5 lb) |

### Coolant

|                              |                         |
|------------------------------|-------------------------|
| Tank capacity                | 120 l (31.7 gal)        |
| Standard pump pressure       | 2 bar (29.0 PSI)        |
| Max. operating rate at 2 bar | 40 l/min (10.6 gal/min) |

### Pneumatics

|                      |                  |
|----------------------|------------------|
| Min. pressure supply | 6 bar (87.1 PSI) |
| Min. volume capacity | 200 NI/min       |

### Lubrication system

|                   |                           |
|-------------------|---------------------------|
| Spindle           | Grease                    |
| Caged roller ways | Oil / central lubrication |
| Ball screws       | Oil / central lubrication |

### Dimensions

|                   |                                      |
|-------------------|--------------------------------------|
| Total height      | 2300 mm (90.6")                      |
| Floor space L x D | 1630 x 2300 mm<br>(64.2 x 90.6")     |
| Weight            | 3300 bzw. 3700<br>(7.275 / 8.157 lb) |