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Designed for your profit



# EMCOMILL 1200 and 750

3-axis CNC milling machines

**MILLING**  
EMCO-WORLD.COM

# EMCOMILL 1200

The new moving column milling machine EMCOMILL 1200 is an addition to EMCO's product range: the flexible, vertical CNC milling machine for 3-axis milling work has a compact machine layout, a travel of 1200 mm in the X-axis, 610 mm in the Y-axis, the latest control technology, as well as a very attractive price-performance ratio. The solid fixed table and large work area enable the machining of heavy workpieces weighing up to 1500 kg.

## 1 TOOL DRUM

- Tool drum with 30, 40 or 60 stations (chain magazin)
- Quick release with double-gripper

## 2 WORK AREA

- Large machine doors
- Optimum view into the work area
- Protected, elevated guide systems
- Fixed table for high workpiece weights

## 3 MACHINE BASE

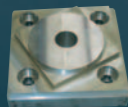
- Machine bed made of a special ribbed welded steel construction

## 4 CONTROL

- Cutting-edge digital control technology
- SIEMENS 828D with ShopMill
- Heidenhain TNC620
- FANUC 0i-MF with Manual Guide i and 3D-graphic
- Colour monitor

## 5 SPINDLE

- Mecanical spindle 12000 rpm
- Water-cooled motor spindle 15000 rpm



Test UNI ISO 10791-7  
(Aluminum)



Tool  
(Steel)



Contour machining  
(Aluminium)



# EMCOMILL 750

With a travel of 750 mm in the X-axis and a maximum workpiece weight of 800 kg, the EMCOMILL 750 is the smaller version of the EMCOMILL 1200. A compact machine design, generous work area and maximum stability are just some of its excellent features.

## 1 TOOL DRUM

- Tool drum with 30, 40 or 60 stations (chain magazin)
- Quick release with double-gripper

## 2 WORK AREA

- Large machine doors
- Optimum view into the work area
- Protected, elevated guide systems
- Fixed table for high workpiece weights

## 3 MACHINE BASE

- Machine bed made of a special ribbed welded steel construction

## 4 CONTROL

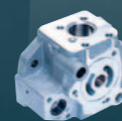
- Cutting-edge digital control technology
- SIEMENS 828D with ShopMill
- Heidenhain TNC620
- FANUC 0i-MF with Manual Guide i and 3D-graphic
- Colour monitor

## 5 SPINDLE

- Mecanical spindle 12000 rpm
- Water-cooled motor spindle 15000 rpm



Bearing housing  
(Steel)



Pump housing  
(Aluminium)



Sliding carriage mount  
(Steel)

# Machine construction

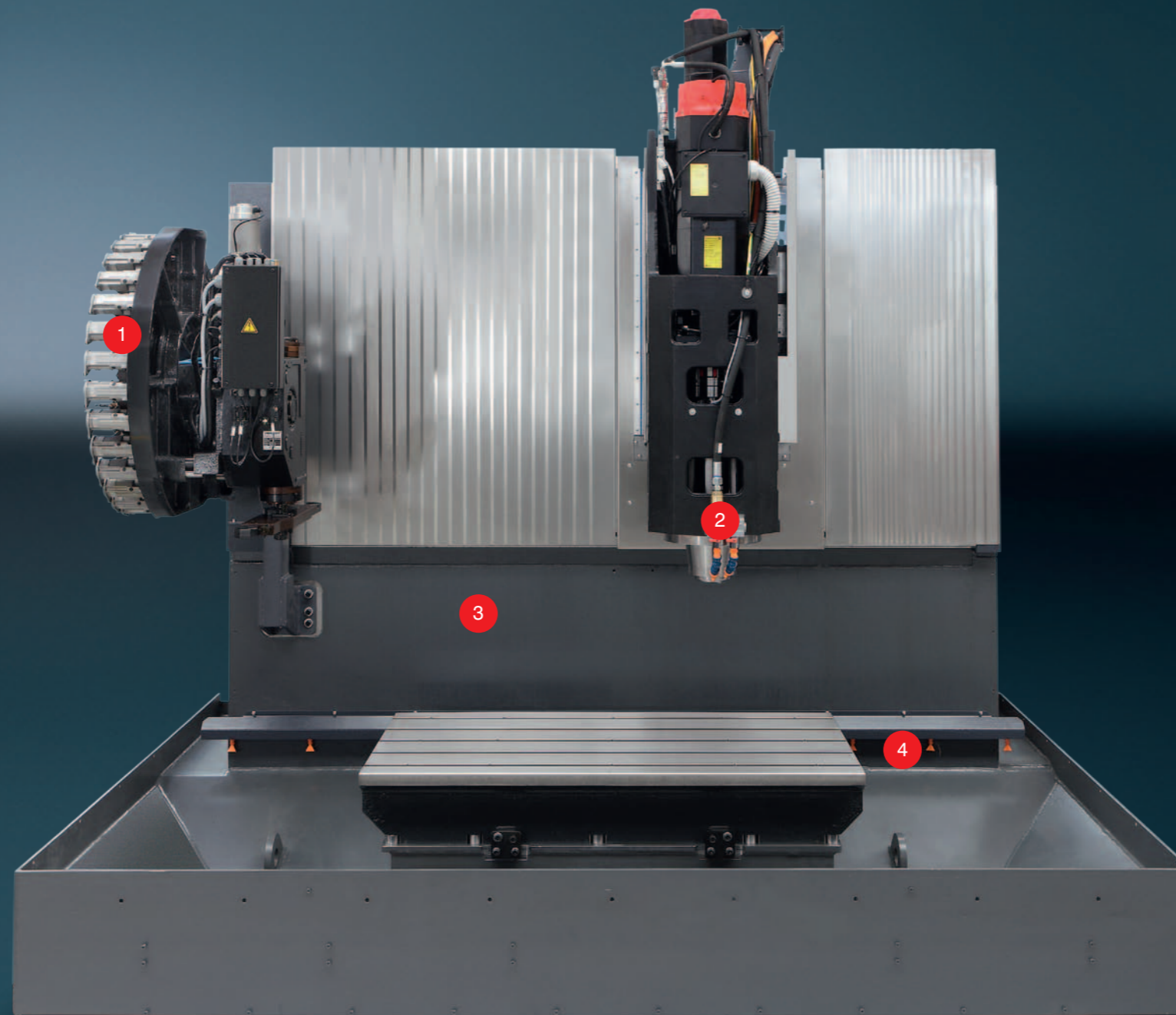
The new Emcomill 1200 and EMCOMILL 750 series is designed as a moving column milling machine. The machine bed consists of a special ribbed welded steel construction. The X-slide is made from welded steel; the Y- and X-slides are made from a stress-free mould.

1 DRUM MAGAZINE

2 SPINDLE

3 MACHINE BASE

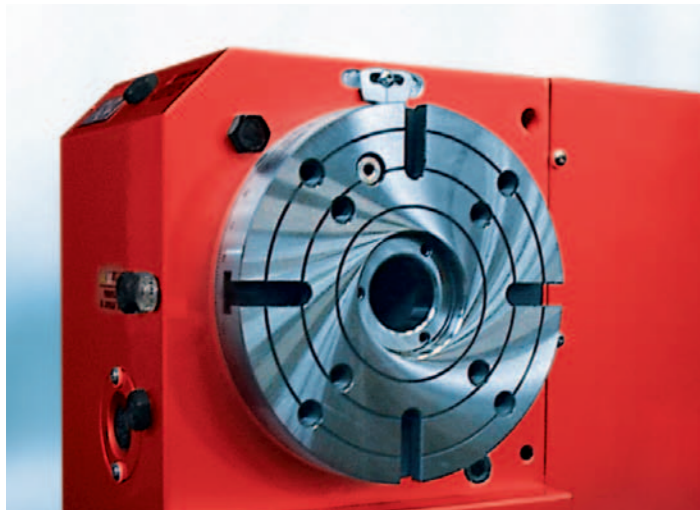
4 CHIP FLUSHING SYSTEM



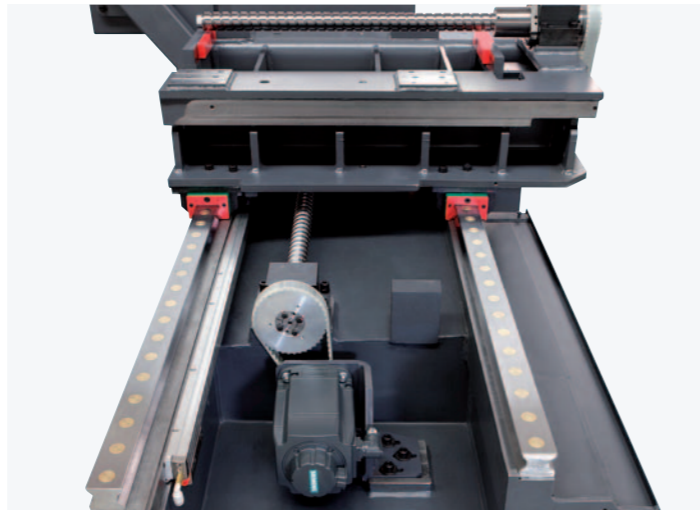
4 MACHINING TABLE

■ Cast iron fixed table with T-grooves, dimensions 1340 x 650 mm, on which clamping systems can be installed. Due to the rigid table automation solutions with robot or pallet changer can be perfectly integrated. Large-dimension workpieces with a total weight of up to 1500 kg can be machined, achieving high accuracy thanks to the moving column technology.





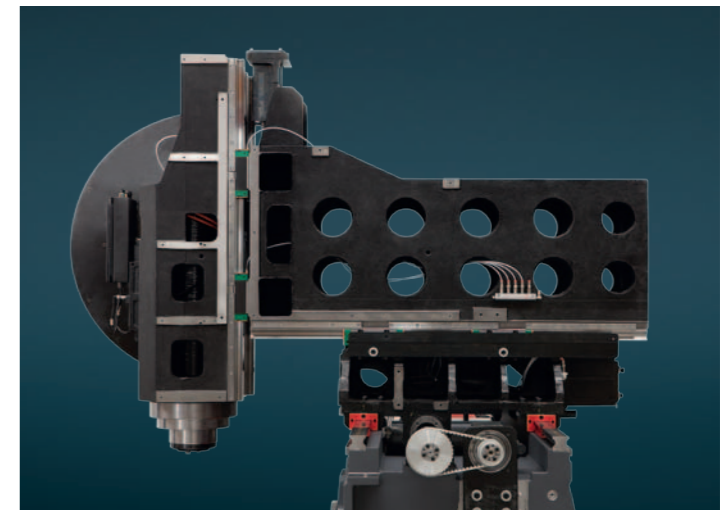
As a 4<sup>th</sup> axis, a rotary table with a diameter of 200 mm is available, offering up to 0.001° precise resolution and NC-interpolation.



The grease-lubricated (central) ballscrews and linear roller guides (45 mm in the X- and Y-axis, 35 mm in the Z-axis) provide high resistance to mechanical strains and at the same time high displacement speed with no vibrations and fluid motions.



The side tool magazine door allows fast loading and unloading, as well as control and cleaning of the tools.



**Massive structure.** The carriage, slide and machining head are made of cast iron for maximum stability and best workpiece finishing. Cast components are optimized by means of FEM analysis, which means that these components are lightweight and stable at the same time.

## Highlights

- High-performance milling spindles
- Flexible tool system
- Large work area with wide machine doors
- Solid fixed table for workpiece weights up to 1500 kg
- State-of-the-art control technology from Siemens, Heidenain, Fanuc
- Large number of options
- Best price-performance ratio
- Made in the Heart of Europe

# EMCOMILL 1200 und 750

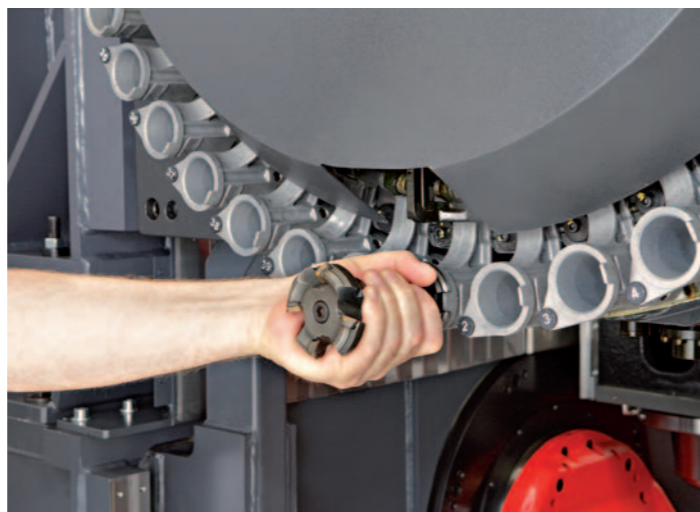
## Technical Highlights

## Options

- Tool magazine with 40 or 60 stations
- Tool holder BT40, HSK-A63, ISO 40 DIN 69871/69872
- 4<sup>th</sup> axis
- Glass scales in all axes
- Handwheel
- Alarm status lamp
- Control cabinet cooling unit
- Automatic tool measuring
- Coolant and air through the spindle
- Bandpass filters with high pressure pumps

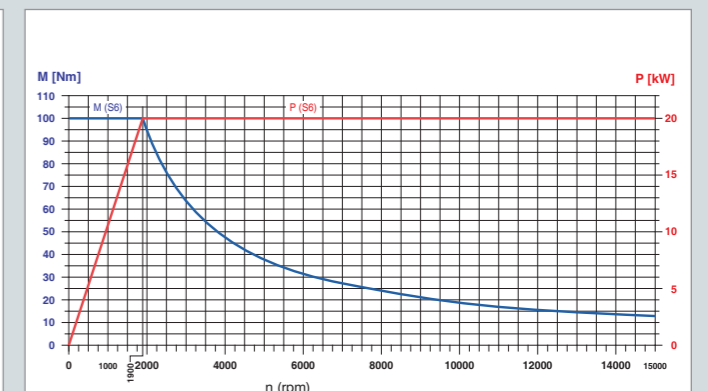
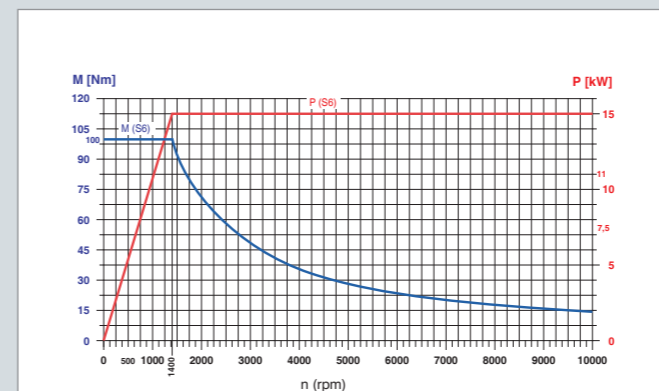


High-performance spindle ISO 40 DIN 69871 / ISO 7388/2 type B. Option: ISO 40 DIN 69871 / DIN 69872, BT40, HSK-A63 (only for motor spindle)

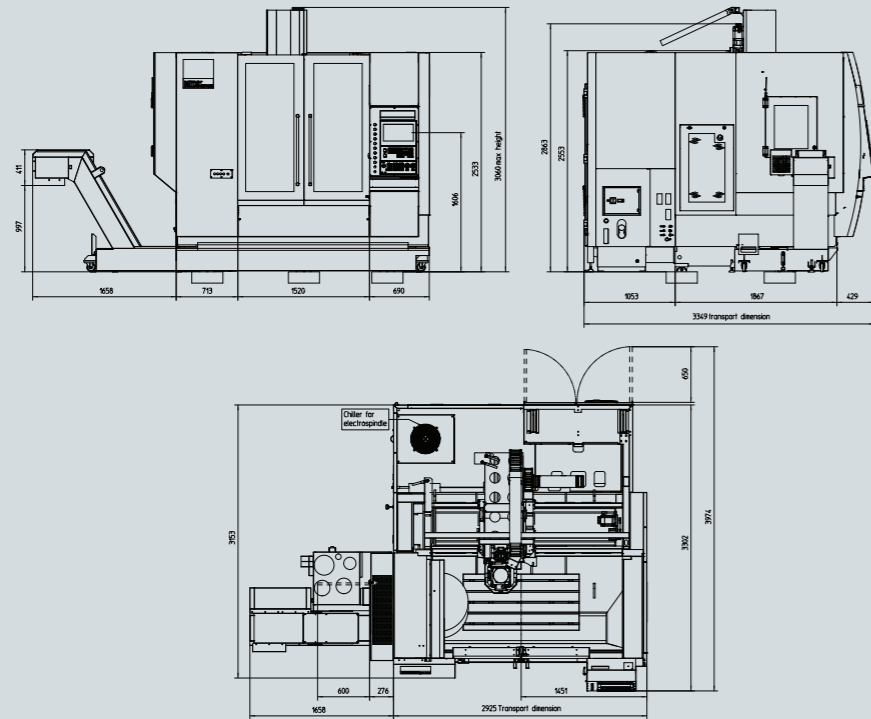


The tool magazine has 30 stations (40/60 as option). The tool management with random tool selection uses a double-gripper that allows to make a pre-search of the tool during the machining cycle. Alternatively it is possible to utilise the tool magazine with a fixed place for big-dimensioned tools, leaving the two adjacent stations free.

## Power

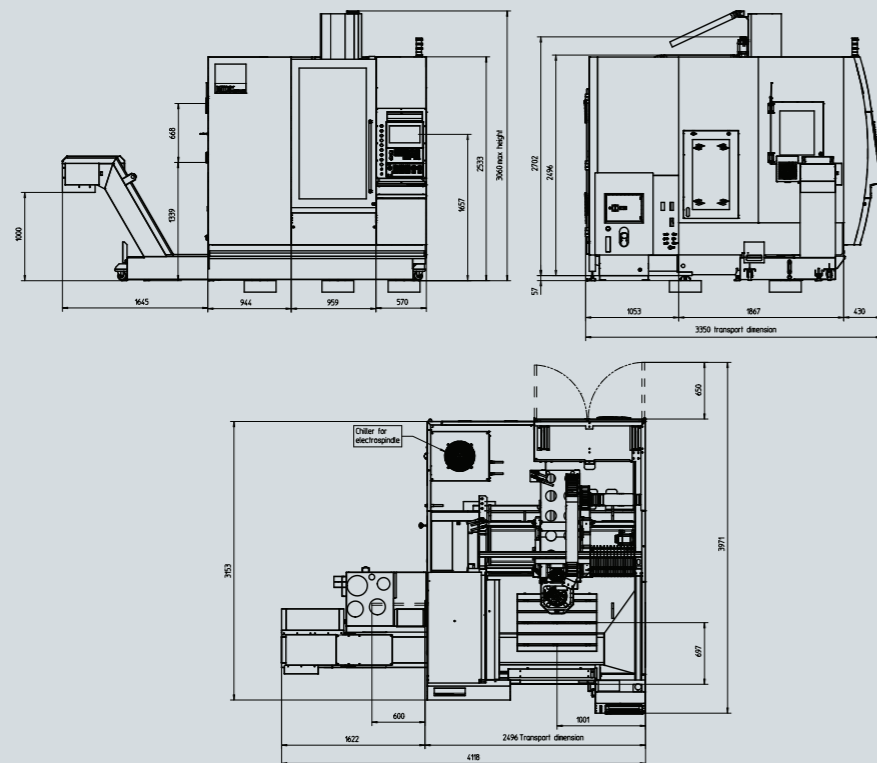


# Installation plans EMCOMILL 1200



Details in millimeters

# Installation plans EMCOMILL 750



Details in millimeters

## EMCOMILL 1200 und 750 Technical data

Work area	EMCOMILL 750	EMCOMILL 1200
Travel in X - axis	750 mm (29.5")	1200 mm (47.2")
Travel in Y - axis	610 mm (24")	610 mm (24")
Travel in Z - axis	500 mm (19.7")	500 mm (19.7")
Min./max. motor spindle nose-table distance (Mechanical spindle)	175 / 675 mm (6,9 / 26,6")	175 / 675 mm (6,9 / 26,6")
Min./max. motor spindle nose-table distance (Motor spindle)	150 / 650 mm (5,9 / 25,6")	150 / 650 mm (5,9 / 25,6")
<b>Table</b>		
Table dimensions length / width	900 / 650 mm (35,4 / 25,6")	1340 / 650 mm (52,8 / 24,8")
T-grooves: number, width, spacing	5 x 18 x 125 mm (0.2 x 0.71 x 4.92")	5 x 18 x 125 mm (0.2 x 0.71 x 4.92")
Max. table load	800 kg (1763.68 lb)	1500 kg (3306.93 lb)
Distance table surface / floor	790 mm (31.1")	800 mm (31.5")
<b>Main spindle (mechanical spindle)</b>		
Speed range	50 – 12000 rpm	50 – 12000 rpm
Torque (S6)	100 Nm (73.8 ft/lbs)	100 Nm (73.8 ft/lbs)
Spindle motor power (S6)	15 kW (20.1 hp)	15 kW (20.1 hp)
Tool holder (DIN 69871)	ISO40 (BT40, HSK-A63)	ISO40 (BT40, HSK-A63)
Drive	Direct drive	Direct drive
<b>Main spindle (motor spindle)</b>		
Speed range	50 – 15000 rpm	50 – 15000 rpm
Torque S6	100 Nm (73.8 ft/lbs)	100 Nm (73.8 ft/lbs)
Spindle motor power S1 / S6	20 kW (26.8 hp)	20 kW (26.8 hp)
Tool holder (DIN 69871)	ISO (BT40, HSK-A63)	ISO (BT40, HSK-A63)
<b>Tool change</b>		
Number of tool stations	30 (40/60)	30 (40/60)
Tool change time (tool / tool)	2 sec	2 sec
Max. tool diameter	80 mm (3.1")	80 mm (3.1")
Max. tool diameter (with empty station)	125 mm (4.9")	125 mm (4.9")
Max. tool length	250 mm (9.8")	250 mm (9.8")
Max. tool weight	8 kg (17.6 hp)	8 kg (17.6 hp)
<b>Axes</b>		
Rapid motion speed in X, Y, Z	30 m/min (1181.1 ipm)	30 m/min (1181.1 ipm)
Feed force in X, Y, Z	5000 N (1124 lbs)	5000 N (1124 lbs)
Axis acceleration in X, Y, Z	3 m/s <sup>2</sup>	3 m/s <sup>2</sup>
<b>General data</b>		
Power supply	20 kVA	20 kVA
Overall height	3060 mm (120,5")	3060 mm (120,5")
Installation area W x D (without chip conveyor, with tank)	2770 x 3350 mm (109,1 / 131,9")	3200 x 3350 mm (126 / 131,9")
Total weight of the machine	7500 kg (16543,7 lbs)	10000 kg (22046,23 lbs)
Compressed air required	6 bar	6 bar

