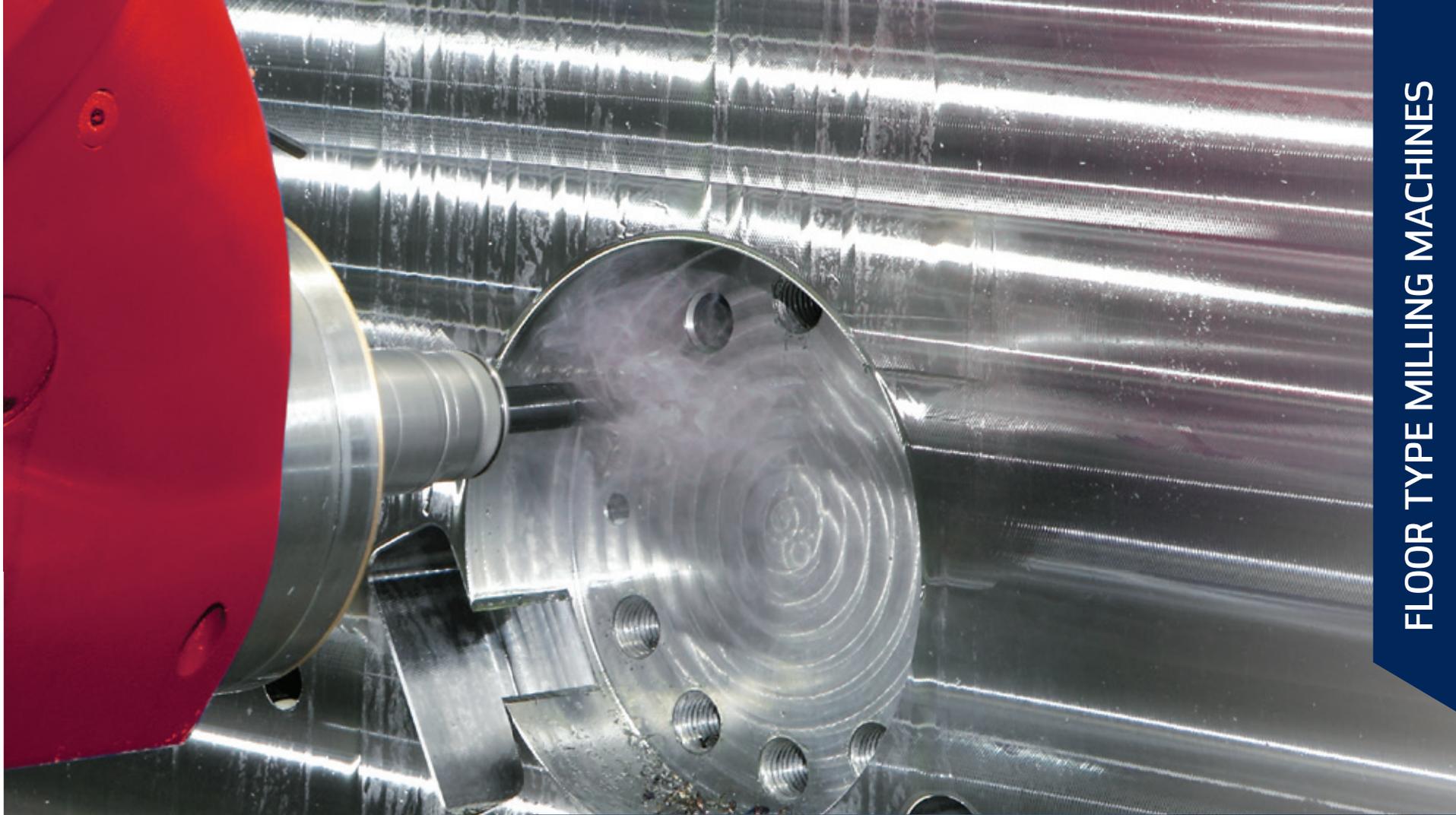


**EMCO**

**FLOOR TYPE MILLING MACHINES**



**ECOMILL**

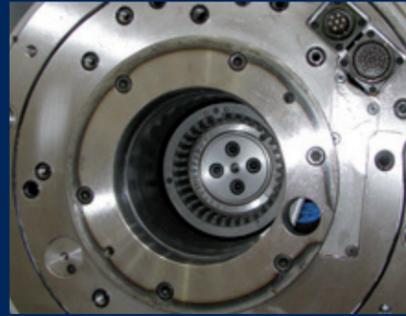


**ECOMILL PLUS**



# MAXIMUM PERFORMANCE AND EFFICIENCY FOR YOUR PRODUCTION

For MECOF a responsible managing of the energies required and used for the most varied of machining processes is important. The goal is the consistent reduction of energy costs by increasing the efficiency of all components involved in the process and process optimization over the entire life cycle of the machine. The ECOMILL model, in the basic configuration only with the universal milling head, offers maximum versatility for processes in various areas of application such as – for example – from general engineering to mold and die.



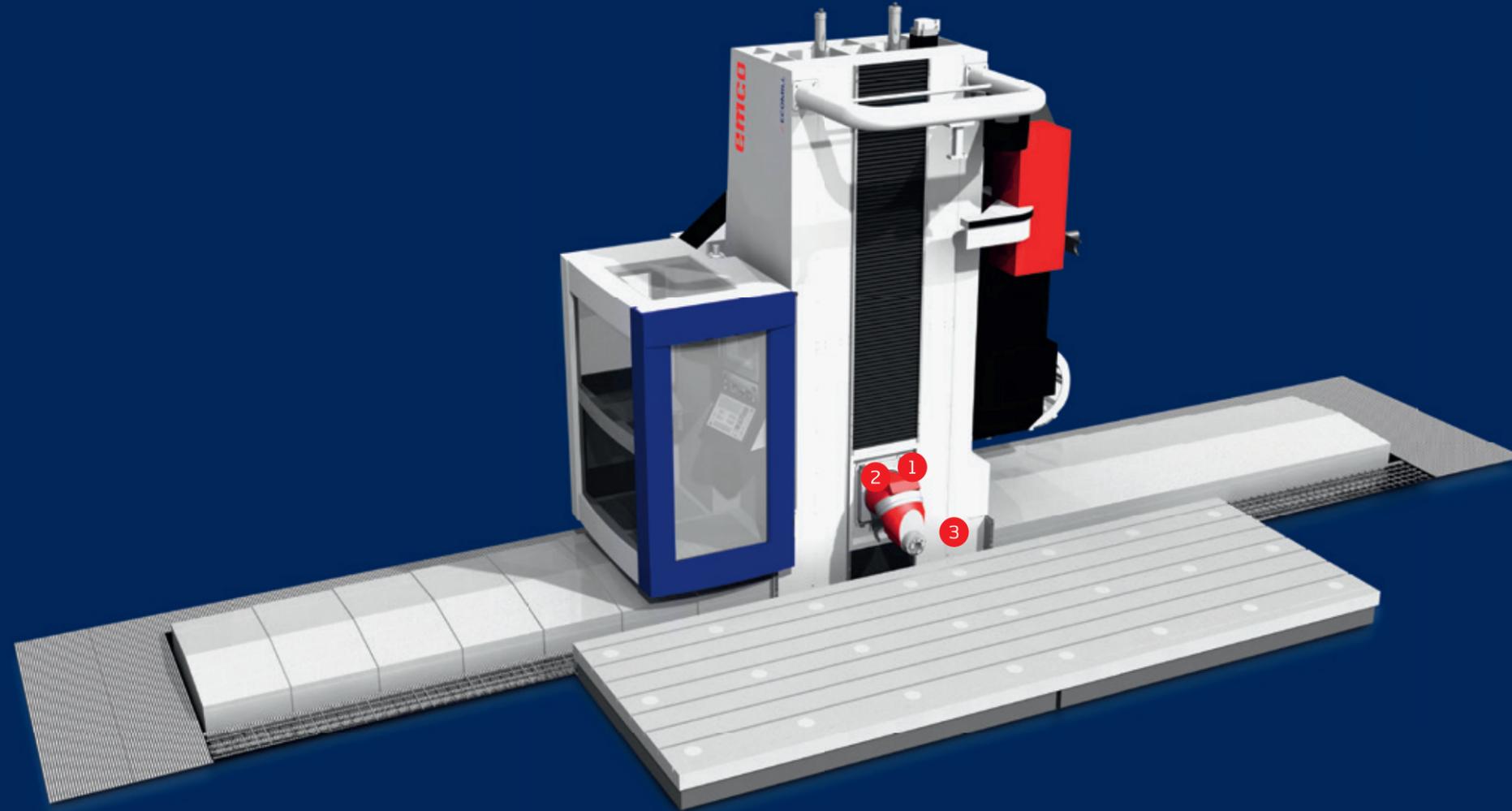
## 1 ROTARY PLATFORM

/ Rotary platform with 360.000 positions managed by the numerical control



## 2 RAM SADDLE

/ Box-in-box structure for the highest geometric and thermal stability



## 3 MACHINE COLUMN

/ Box-in-box structure in electro-welded steel with heavily ribbed structure, resistant to deflection and torsion as well as vibration insensitive.

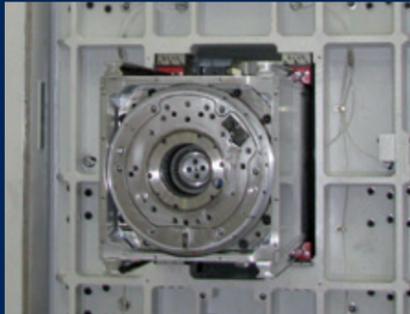
# MULTITASKING FOR GREATER FLEXIBILITY

Like the ECOMILL also the ECOMILL PLUS has been designed with FEM software for structural analysis. It offers excellent weight distribution that enables a high degree of rigidity and dynamic performance. Multi-purpose equipment: different interchangeable milling heads, from mechanical to high-speed spindles, meet the most demanding customer requirements. The configuration is rounded off by a large selection of options such as an automatic tool changer with up to 120 pockets, an automatic milling head changer, rotary tables in various sizes and turning capabilities.



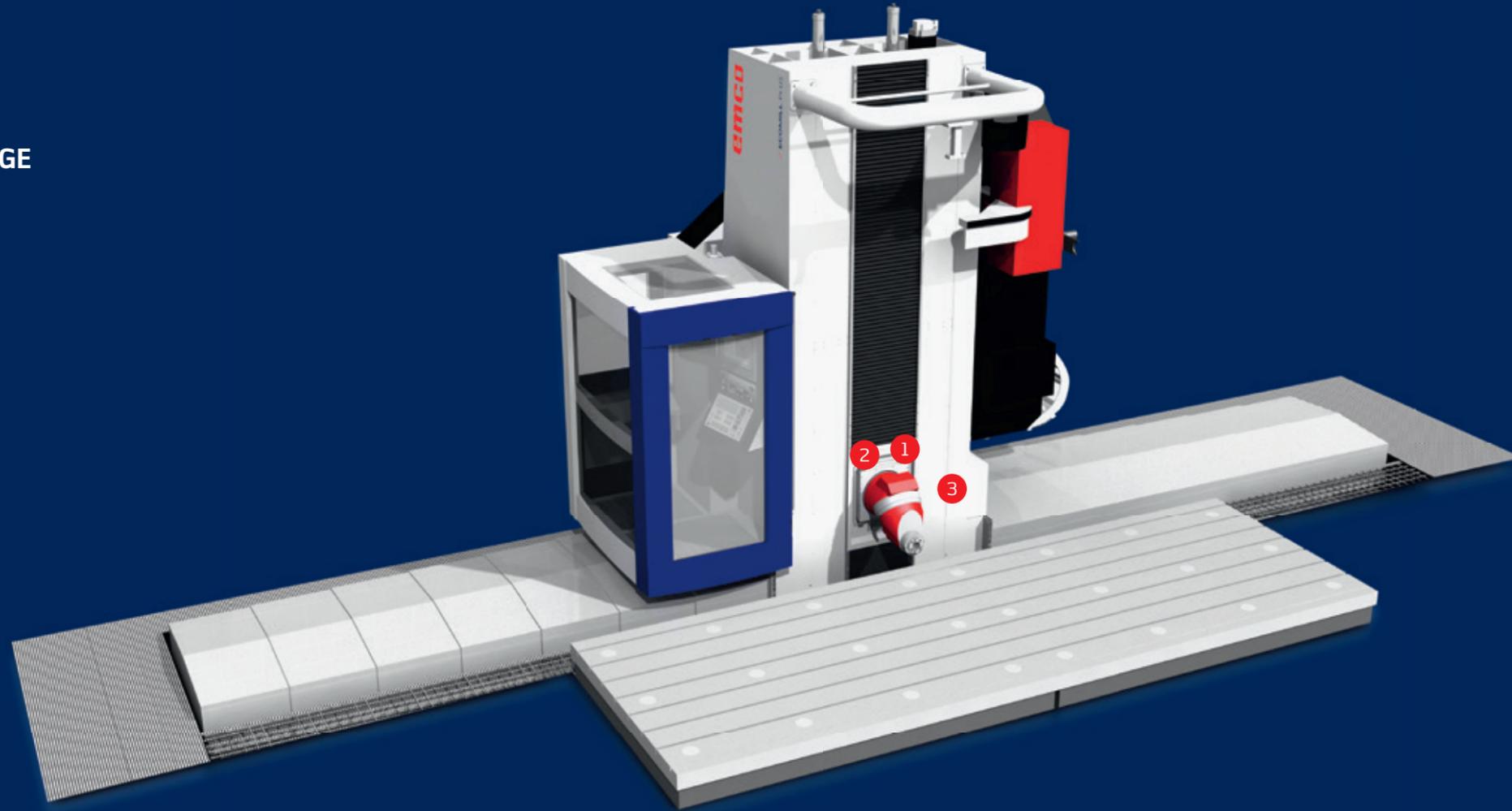
## 1 INTERFACE FOR HEAD CHANGE

/ Thanks to the flexibility of the head change interface, which is installed on the ram, the machine can be equipped with all the interchangeable heads that Mecof produces: from those with continuous positioning to those with 5 simultaneous axes.



## 2 RAM SADDLE

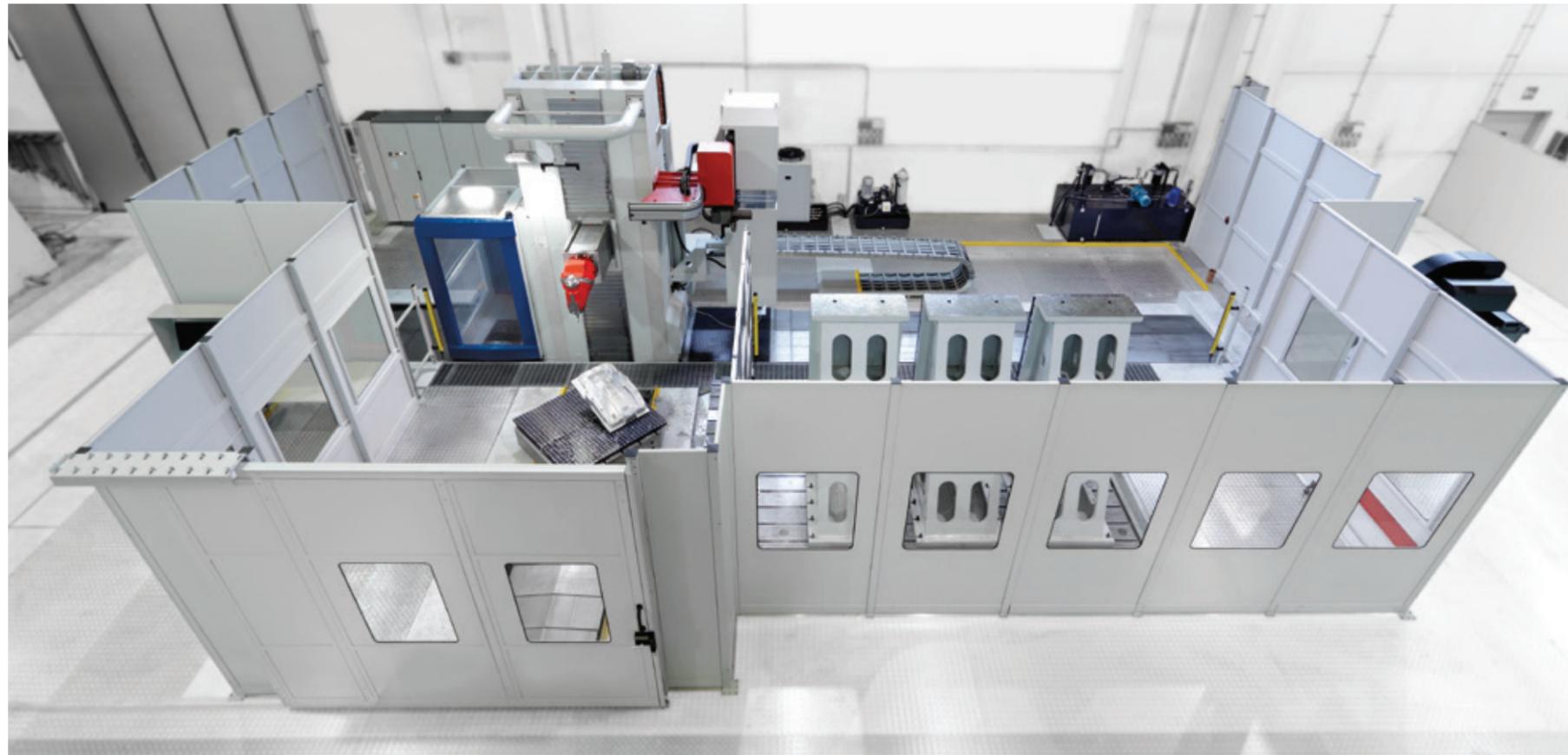
/ Box-in-box structure for the highest geometric and thermal stability



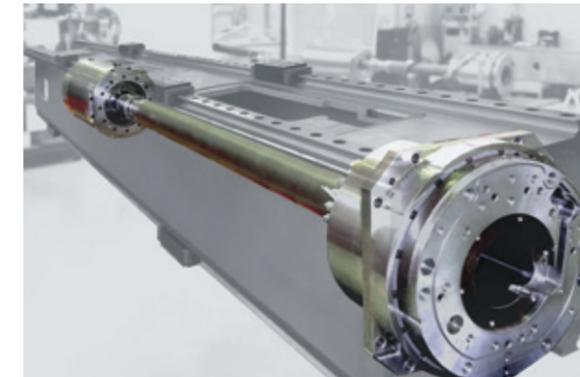
## 3 MACHINE COLUMN

/ Box-in-box structure in electro-welded steel with heavily ribbed structure, resistant to deflection and torsion as well as being insensitive to vibrations.

# TECHNICAL HIGHLIGHTS

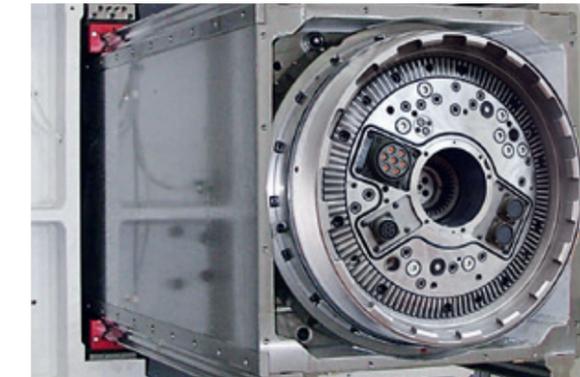


Example of installation in compliance with CE regulations



## DIRECT DRIVE SPINDLE

Direct drive transmission ensures high reliability and long-life of the machine spindle line



## RAM

The generous ram cross-sections of 520 mm x 450 mm for the ECOMILL and 585 mm x 500 mm for the ECOMILL PLUS mean high moments of resistance against deflection, which in combination with the four guides of the box-in-box system guarantee maximum rigidity and precision.



Mechanical machining for general engineering



Mechanical machining of an injection mold for car bumper



Mechanical machining of a mold by an automatic milling head 6000 rpm

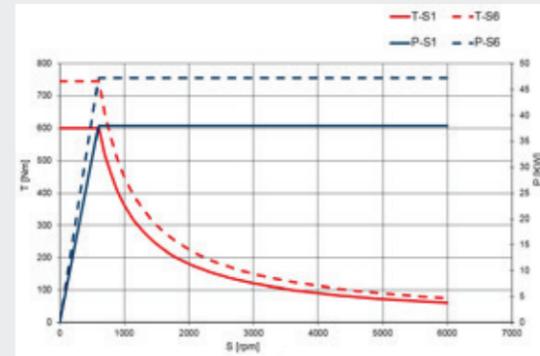
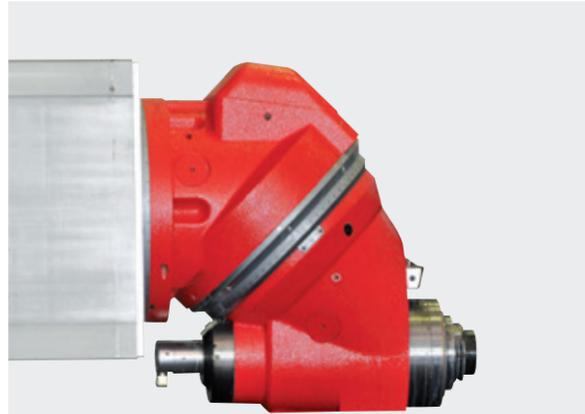
## HIGHLIGHTS

- / High dynamics and precision thanks to milling heads with torque motors
- / Machine ready for Industry 4.0
- / 15 ° undercut on the universal milling head with high-speed spindle
- / Direct drive technology on all milling heads and a wide range of applicable heads with high-speed spindle
- / Automatic tool changer installed on the column up to 120 pockets or automatic tower tool changer up to 203 pockets
- / Machine configuration according to customer's requirement

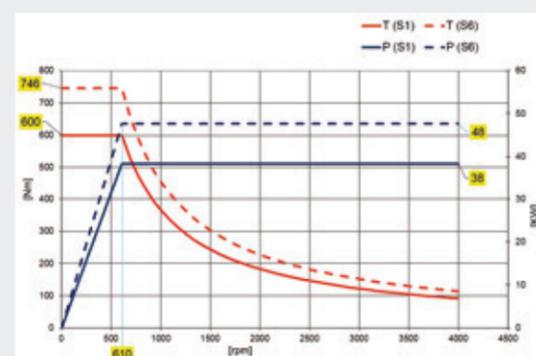
# ECOMILL MILLING HEADS

# ECOMILL PLUS MILLING HEADS

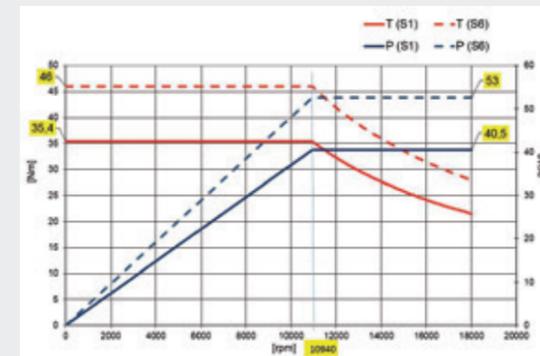
Universal milling head with automatic millesimal positioning



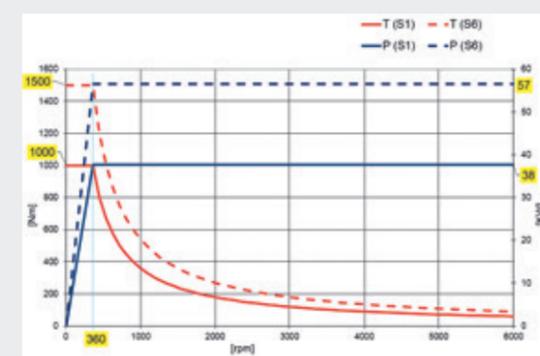
Milling head with horizontal spindle



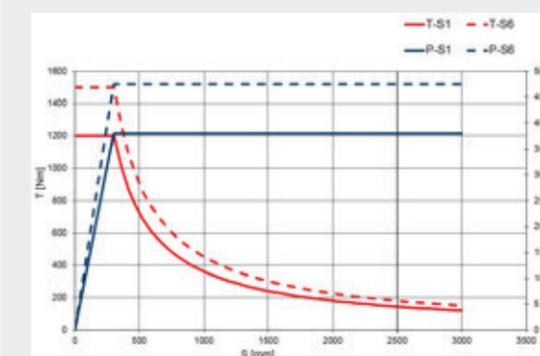
High speed spindle with special support



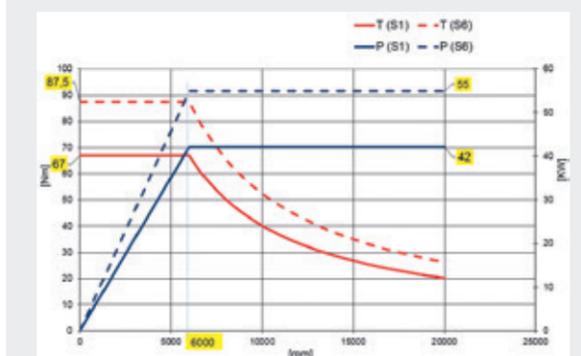
Universal milling head with automatic millesimal positioning



Milling head with offset spindle up to 2000 Nm

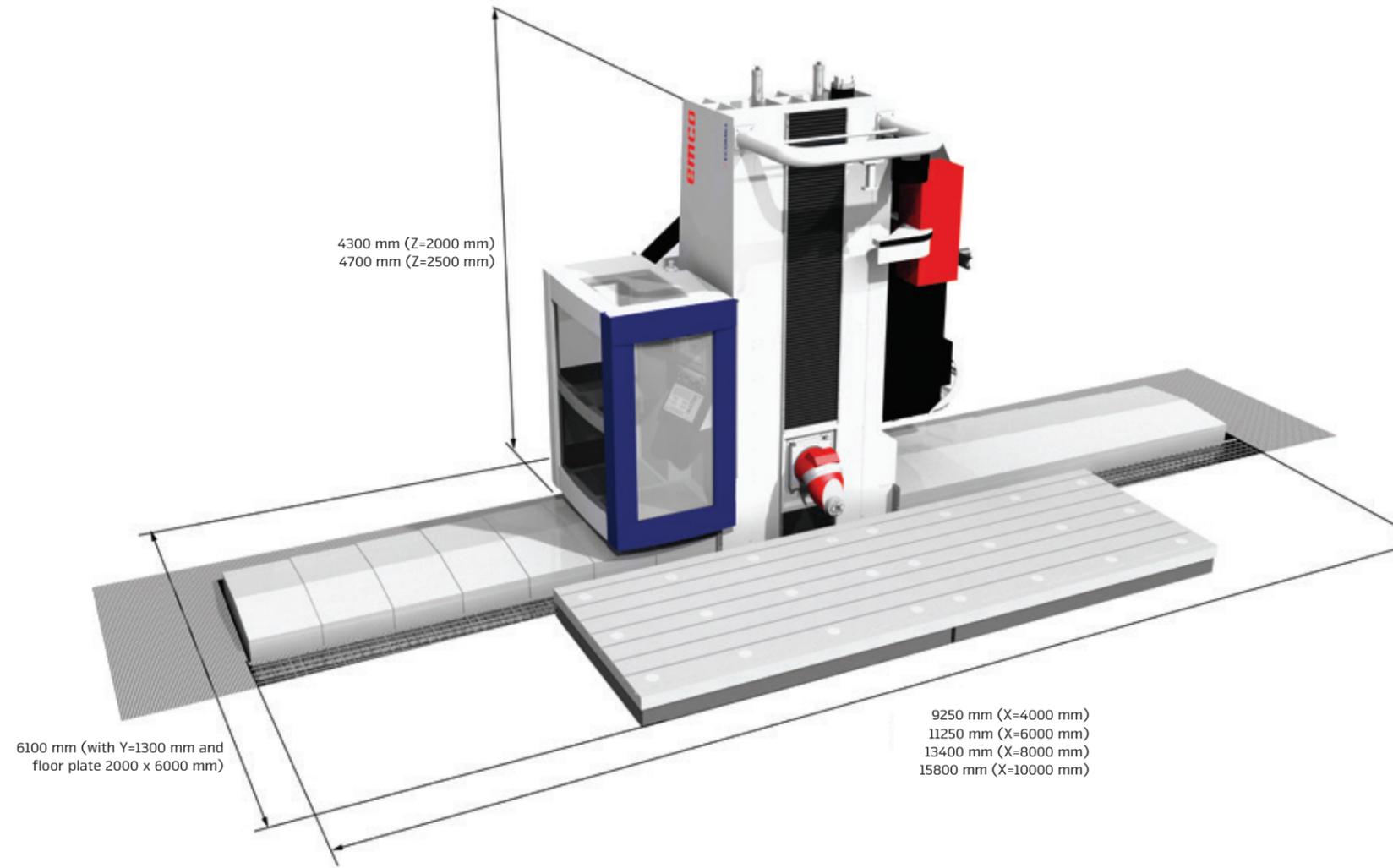


Universal milling head with high-speed spindle

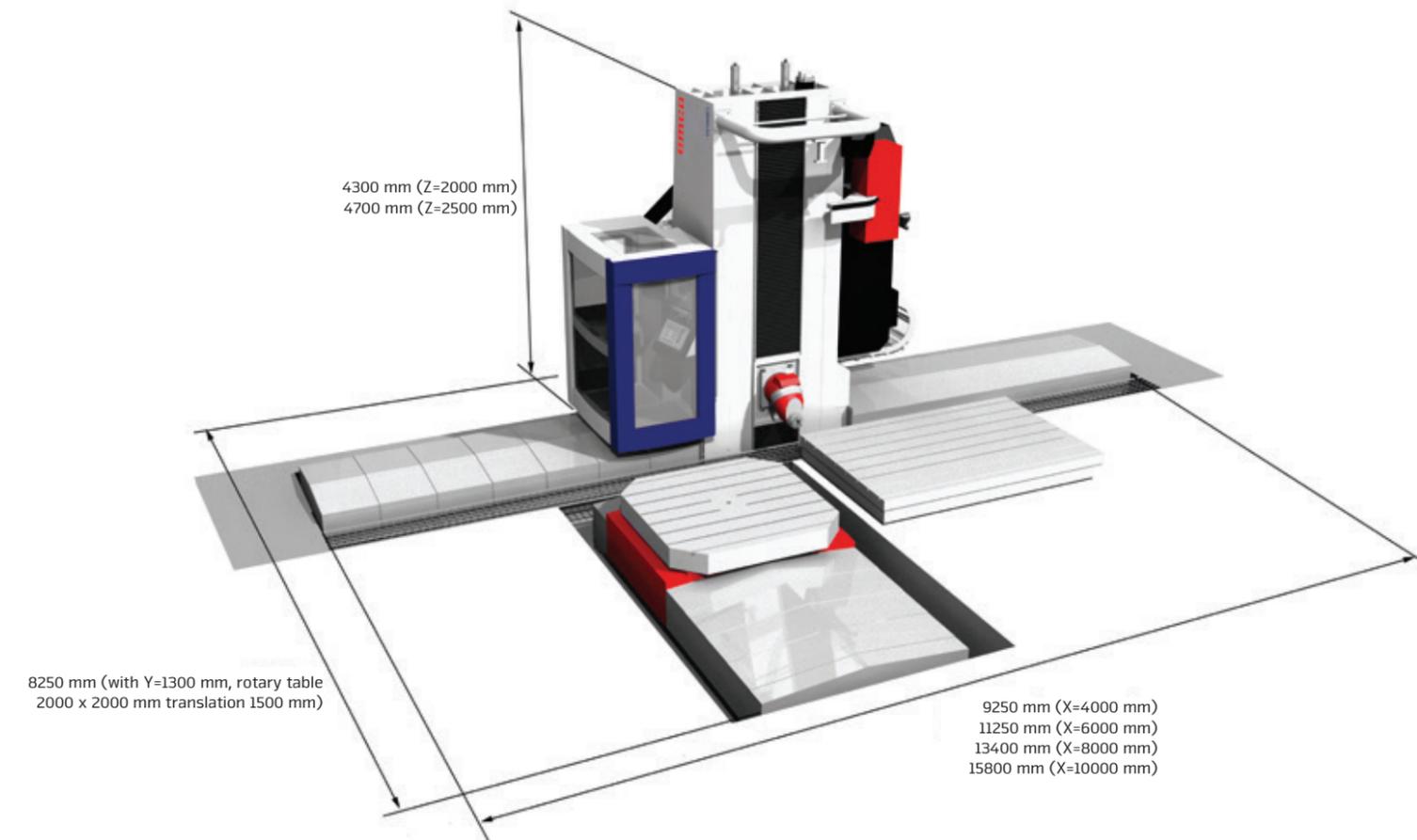


All milling heads are air/oil lubricated and liquid cooled.

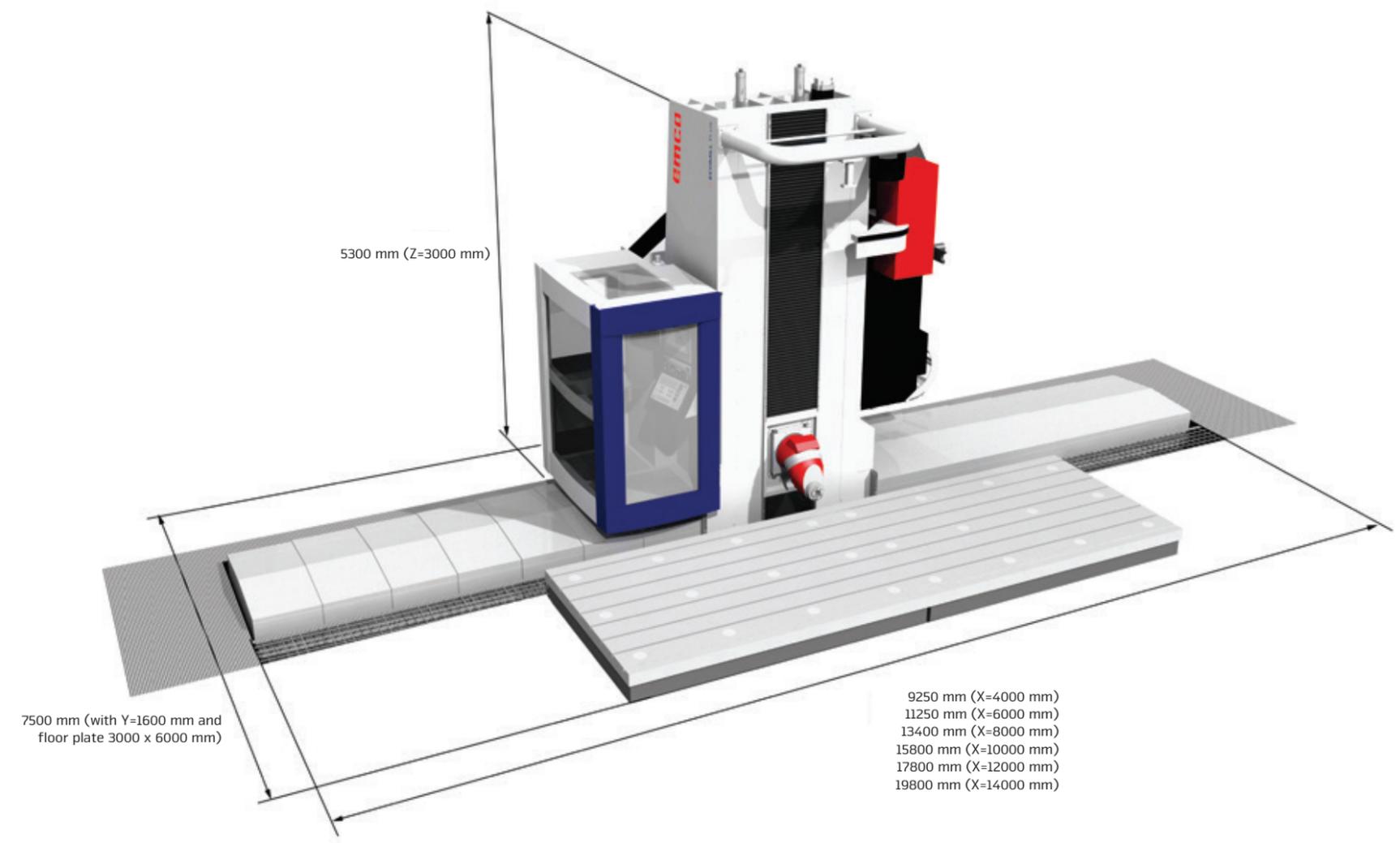
# ECOMILL MACHINE OVERALL DIMENSIONS



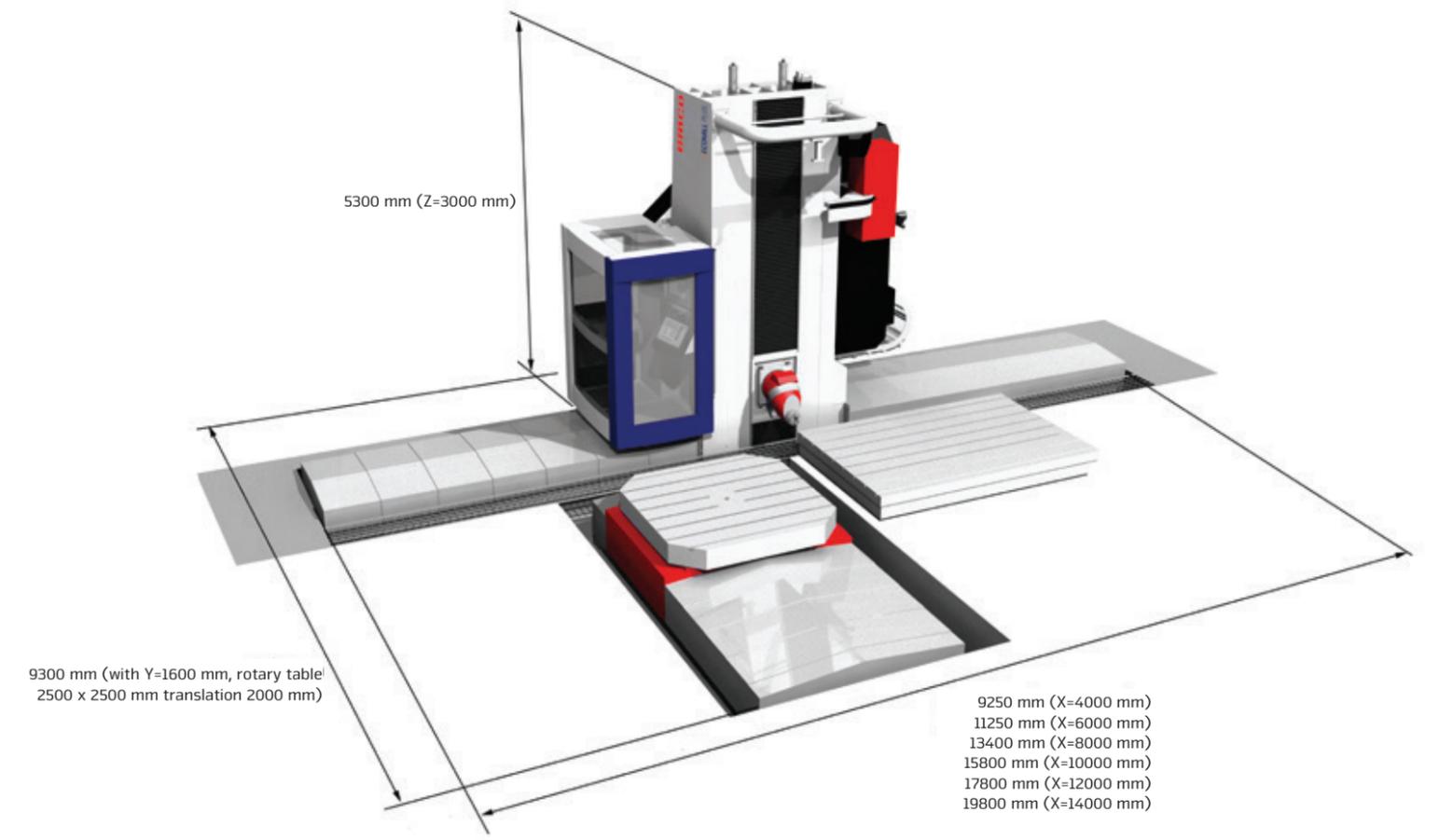
# ECOMILL MACHINE OVERALL DIMENSIONS



# ECOMILL PLUS MACHINE OVERALL DIMENSIONS



# ECOMILL PLUS MACHINE OVERALL DIMENSIONS



# TECHNICAL DATA

Linear axes	ECOMILL	ECOMILL PLUS
Longitudinal axis travel	4000 – 10000 mm	4000 – 14000 mm
Cross axis travel	1300 mm	1600 mm
Vertical axis travel	2000 / 2500 mm	3000 mm
Feedrate	30 m/min	30 m/min
<b>Numerical control</b>		
Heidenhain	TNC 640 HSCI	TNC 640 HSCI
Siemens	840D SL	840D SL
<b>Spindle motor</b>		
Standard	60 kW, 600 Nm	60 kW, 600 Nm
Optional		40 kW, 1200 Nm
<b>Tool/workpiece cooling system</b>		
Low pressure	28 l/min, 6 bar	28 l/min, 6 bar
High pressure (through the spindle)	20 l/min, 20 / 40 / 60 bar	20 l/min, 20/40/60 bar
<b>Options</b>		
Universal milling head with automatic millesimal positioning	6000 + 8000 rpm	6000 + 8000 rpm
Milling head with offset spindle	3000 rpm	3000 rpm
Universal milling head with torque motors and high speed spindle	-	24000 rpm
High speed spindle in special support for universal milling head	18000 rpm	-
Automatic tool magazine	40 / 60 / 80 pockets	40 / 60 / 80 / 100 / 120 pockets
Automatic head magazine	-	2 / 3 pockets

Universal milling head with automatic millesimal positioning	ECOMILL	ECOMILL PLUS
Power S1/S6	38 / 48 kW	38 / 48 kW – 38 / 57 kW
Torque S1/S6	600 / 750 Nm	600 / 750 Nm – 1000 / 1500 Nm
Rotation speed	15 + 8000 rpm	15 + 8000 rpm
Tool taper standard	ISO 50 DIN 69871	ISO 50 DIN 69871
Option	BIG PLUS	BIG PLUS
Option	HSK-A100 DIN 69893	HSK-A100 DIN 69893

## High-speed spindle 50 / 63 kW

Power S1 / S6	-	50 / 63 kW
Torque S1 / S6	-	100 / 125 Nm
Rotation speed	-	12000 / 20000 rpm
Tool taper	-	HSK-A100 / HSK-A63

## High-speed spindle 42 / 55 kW

Power S1 / S6	-	42 / 55 kW
Torque S1 / S6	-	67 / 87.5 Nm
Rotation speed	-	24000 rpm
Tool taper	-	HSK-A63

## High-speed spindle 40,5 / 53 kW

Power S1 / S6	40,5 / 53 kW	-
Torque S1 / S6	35,4 / 46 Nm	-
Rotation speed	18000 rpm	-
Tool taper	HSK-A63	-

beyond standard /

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