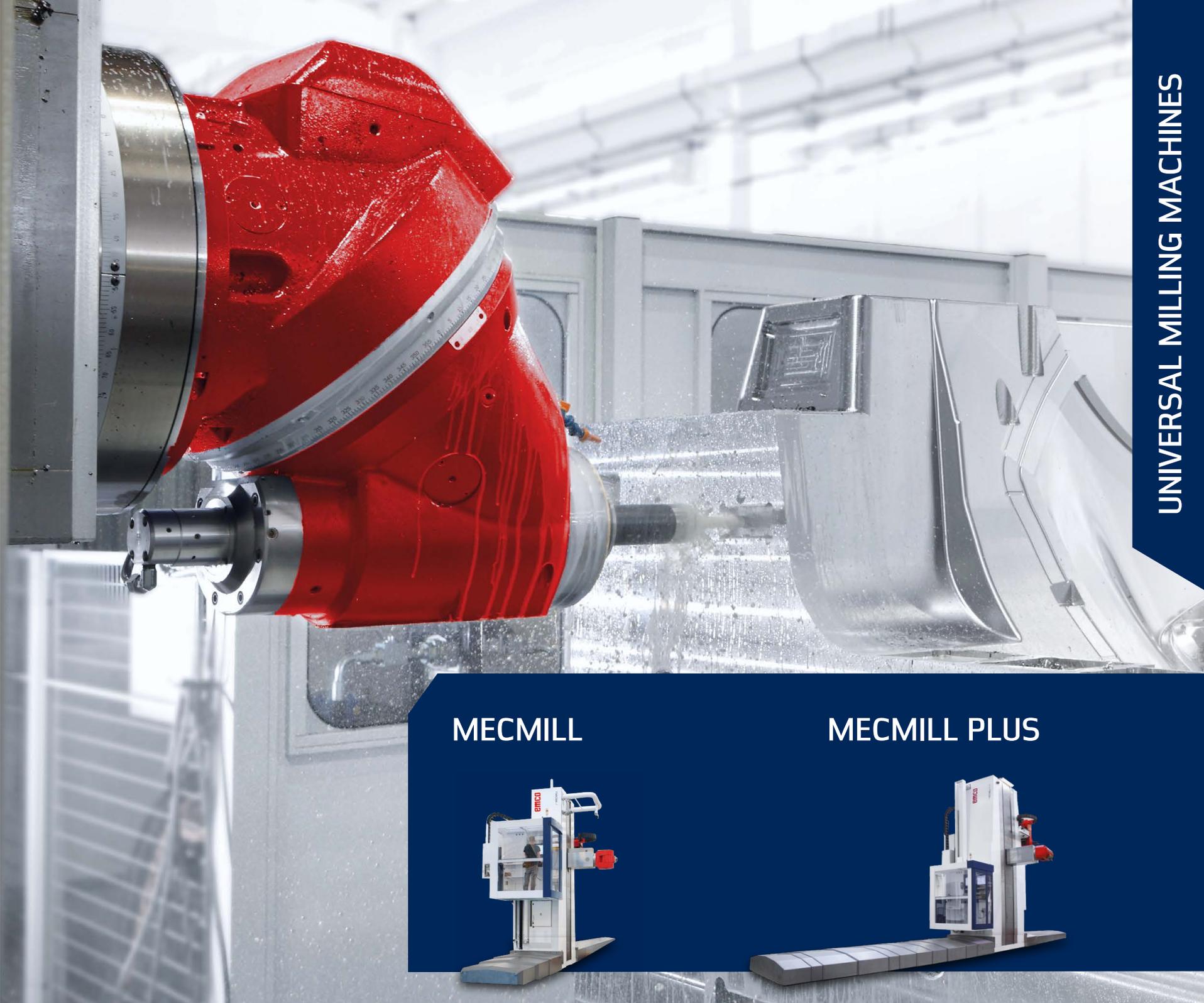


EMCO

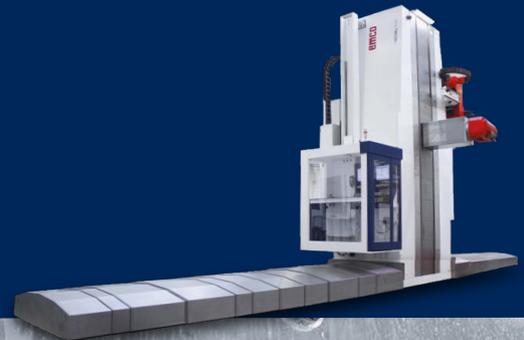


UNIVERSAL MILLING MACHINES

MECMILL



MECMILL PLUS



MULTITASKING FOR LARGE MACHINING OPERATIONS

The MECMILL series was designed for today's growing need for a multitasking machining centre. Thanks to its modular configuration and automatic head changer, it knows no limits. The most diverse rotary tables on the market can be mounted in front of the machine, as well as a wide range of turning tables, which can also have a cross travel if required. A variety of accessories, such as turning heads and special-size head holders, complete the mill/turn configuration for even the most demanding customers.



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.



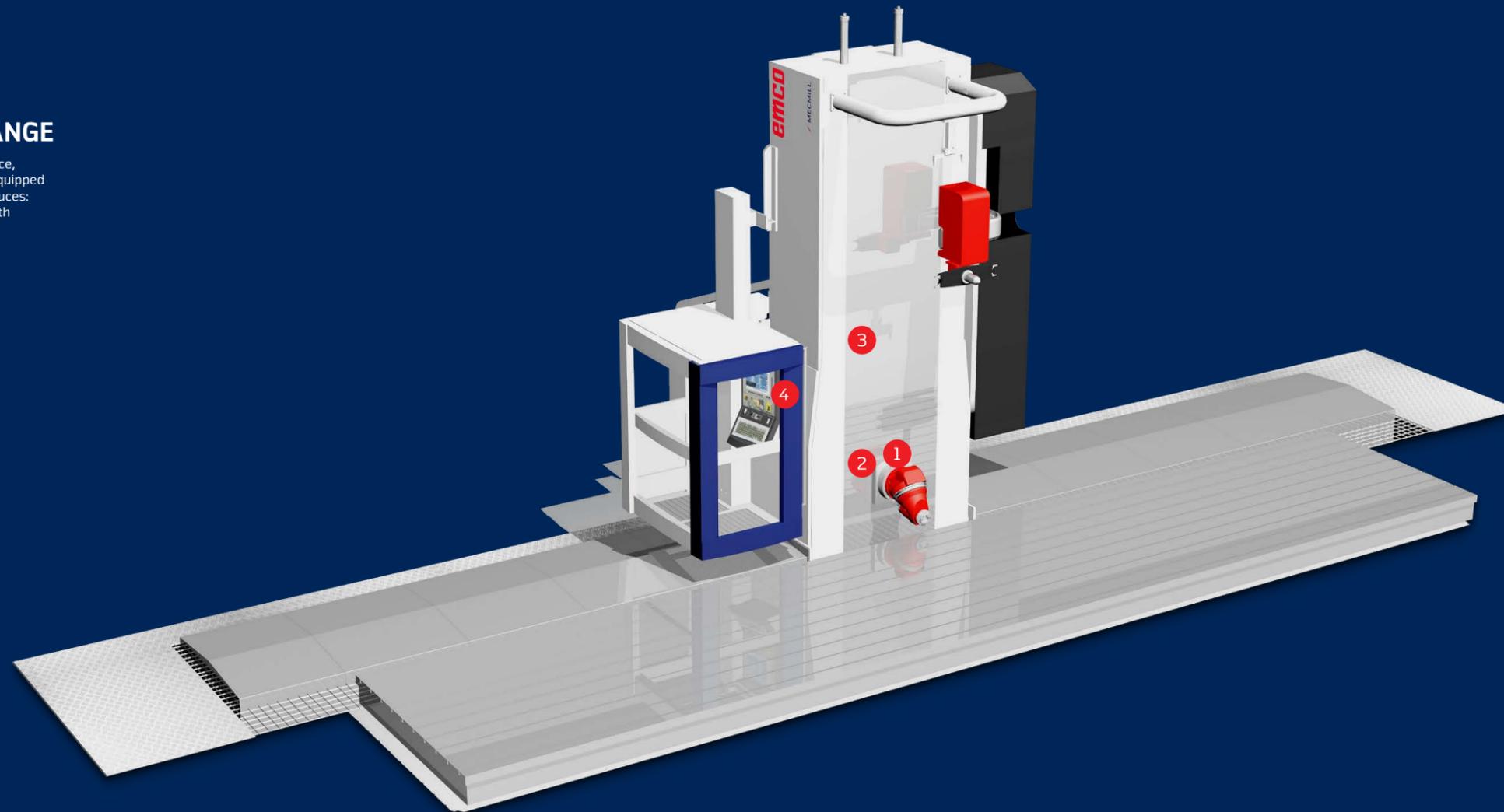
1 DIRECT DRIVE SPINDLE

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



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.

4 NUMERICAL CONTROL

/ Sinumerik ONE
/ Heidenhain TNC7
/ Heidenhain TNC640

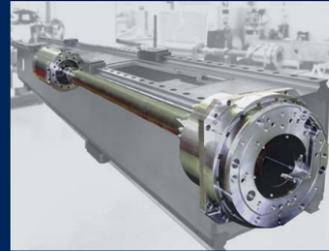
FLEXIBLE, MODULAR: MULTI-TALENT FOR BIG TASKS

Created on the basis of the same requirements as the MECMILL, the MECMILL PLUS also has an extremely flexible configuration to adapt to the varied demands of the market: from the modular configuration that can reach 5000 mm axis travel in vertical to 20000 mm and more in horizontal. Great accuracy and repeatability is offered by the electro-welded steel structure and the box-in-box design of ram and column. Large machining volumes allow the placement of large components or smaller parts that can be milled, drilled, threaded or turned. All this thanks to generously sized floor plates and/or rotary tables with the possibility of working in 'pendulum' mode thanks to the separation of tooling spaces by protective screens, for agile and continuous production.



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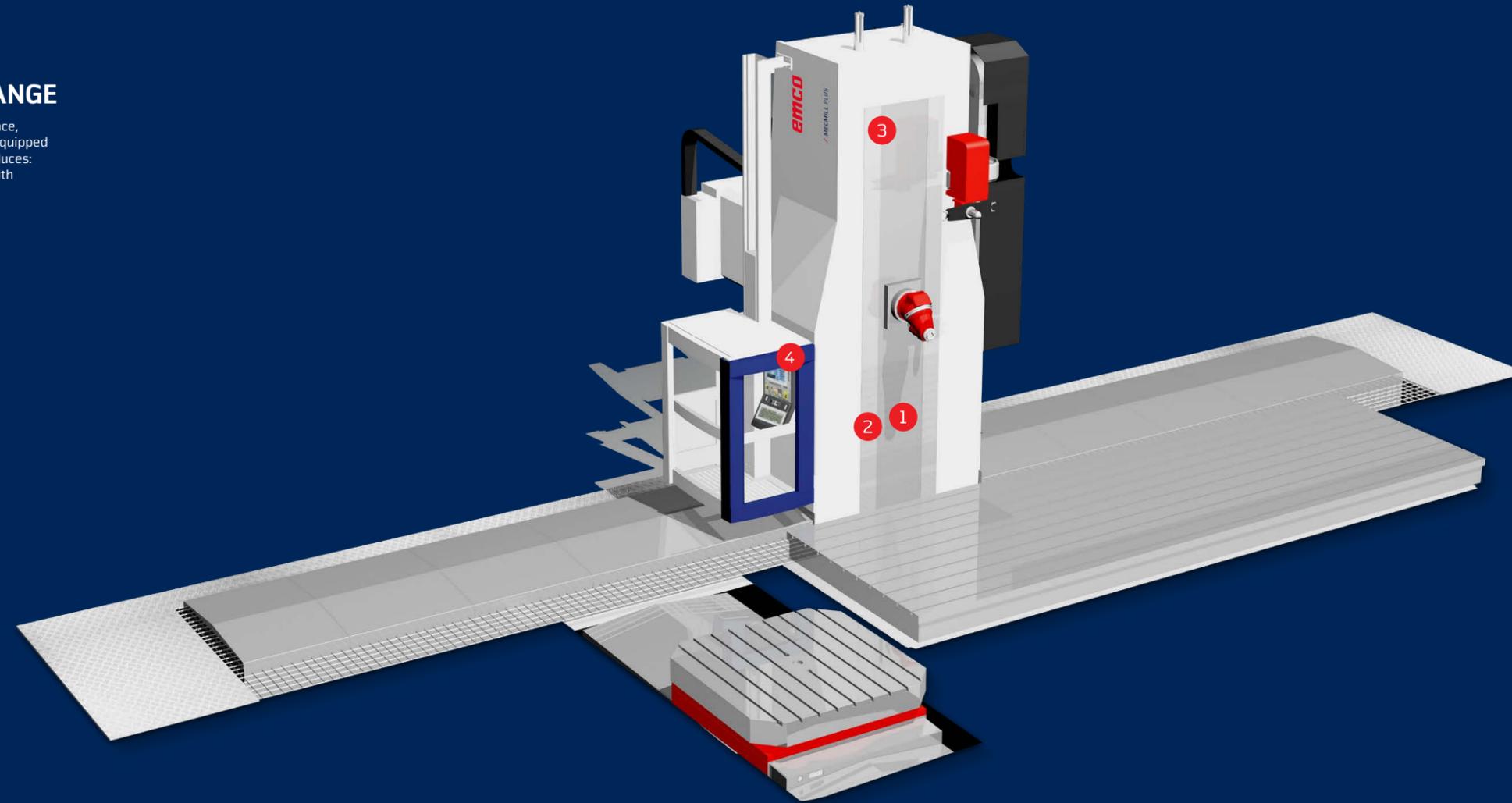
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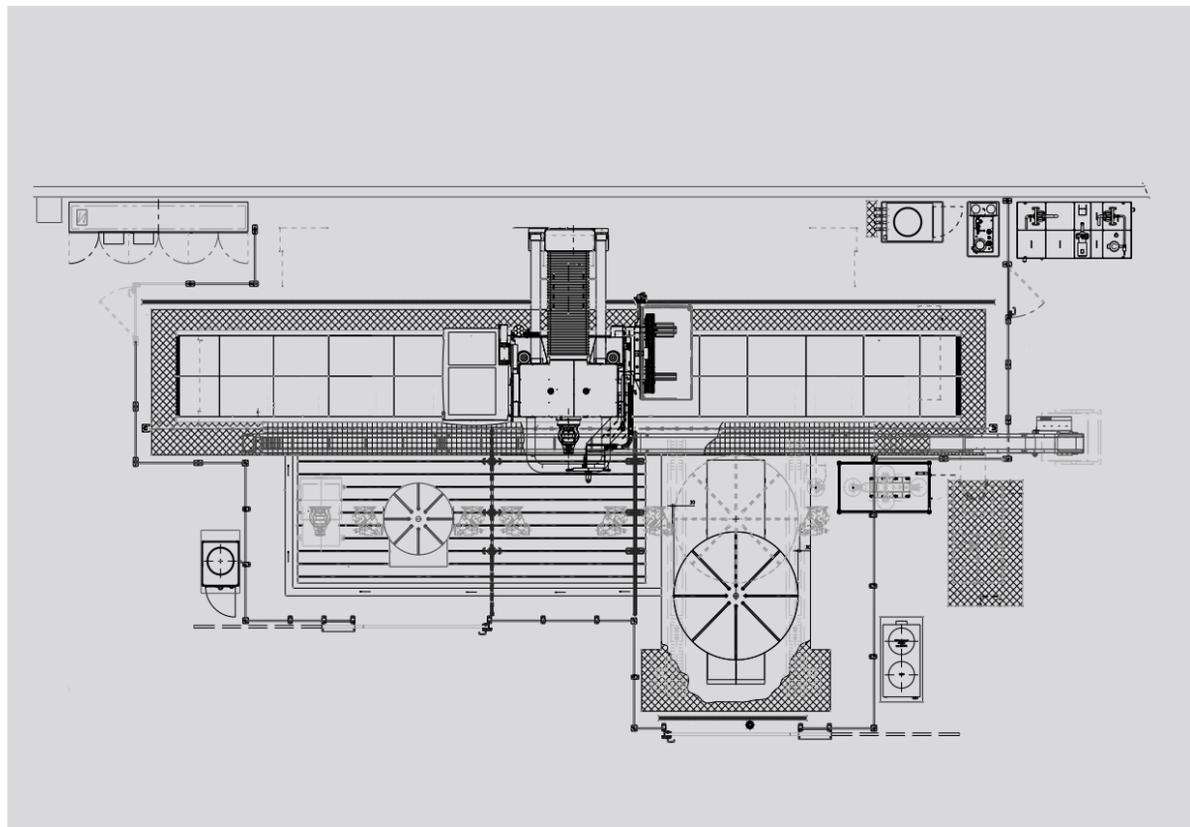
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TECHNICAL HIGHLIGHTS



Example layout of a multitasking solution based on a milling/turning application.
Turning table with 150 rpm, plate diameter 3000 mm, load capacity of 20 tonnes and a traversing axis of 1500 mm.
Additional turning table with 260 rpm, plate diameter 1400 mm and load capacity of 3 tonnes.



Turning head for supporting a special boring bar: 120 mm diameter, length up to 1500 mm for turning operations up to 1000 mm depth.



Universal milling head for turning operations. Spindle clamping torque 1.000 Nm

Application fields - machining results:

- / General engineering
- / Energy
- / Mold and die
- / Automotive
- / Aerospace
- / Railway
- / Oil and gas
- / Earthmoving
- / Naval
- / Defense



Opposite machines - Master and slave machine with master and slave CNC. The milling center is equipped with SANT-anticollision software.

TECHNICAL HIGHLIGHTS



POMO and POVT Operator platform with vertical (up to 2500 mm) and cross travel (up to 800 mm).



THE SINUMERIK ONE

The Sinumerik ONE, the digital native CNC, with Operate user interface is ergonomically located on the operator cabinet and can be swivelled approx. 90°, USB and a 230 volt outlet on the side are included in the standard version as well as a robust monitor 22" touchscreen for industrial use. Available highlights: Shopmill/machining cycles, Machining simulation, Tool management, EMCO Diagnostics, and many others.



THE HEIDENHAIN TNC7

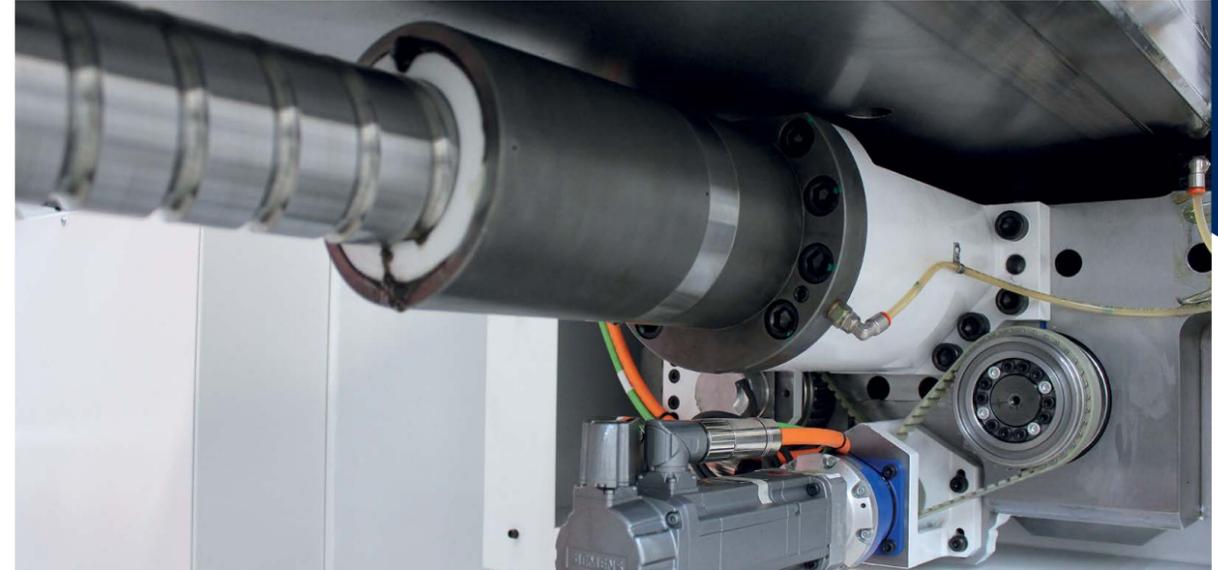
The Heidenhain TNC7, with a new customizable user interface and smart functions is ergonomically located on the operator cabinet. It can be swivelled approx. 90°, USB and a 230 volt outlet on the side are included in the standard version as well as a robust monitor 24" touchscreen for industrial use.



Full automatic head changing system up to 4 heads storage

HIGHLIGHTS

- / High dynamics and precision thanks to milling heads with torque motors
- / Machine ready for Industry 4.0
- / 25 ° undercut on the fork type milling heads with high-speed spindle
- / Direct drive technology on all mechanical 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



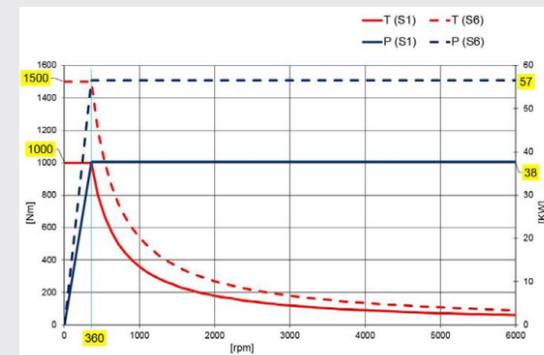
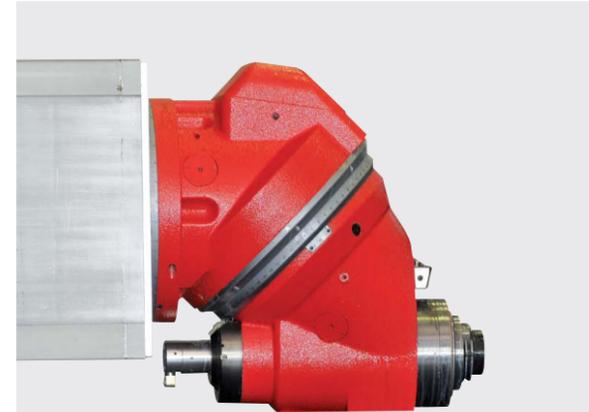
WONDER B.R.A. BALANCING RAM ASSET

The automatic electromechanical device counterbalances the ram drop. It is controlled by the machine's numerical control and it can be adjusted according to the different milling heads installed. The system improves the geometric accuracy, straightness and parallelism of the ram during vertical and cross axis movement.

MECMILL MILLING HEADS

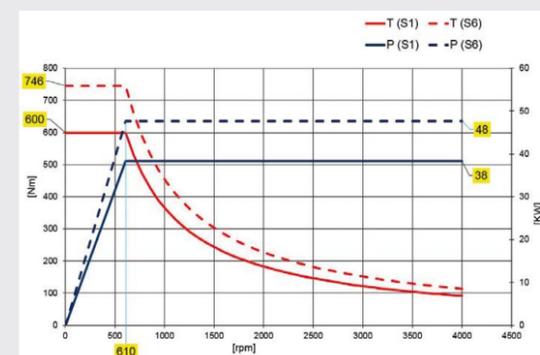
Universal milling head with automatic millesimal positioning

General engineering - energy - mold and die - automotive - aerospace - railway - oil and gas - earthmoving - naval - defense



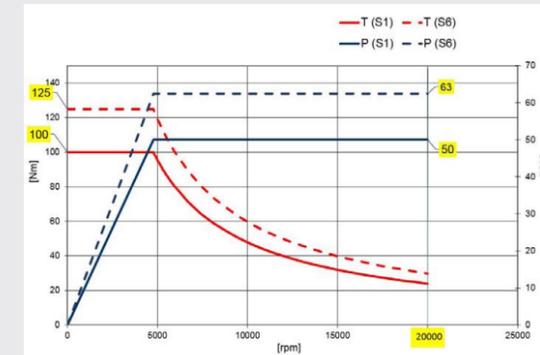
Milling head with horizontal spindle

General engineering - energy - mold and die - automotive - railway - oil and gas - earthmoving - naval - defense



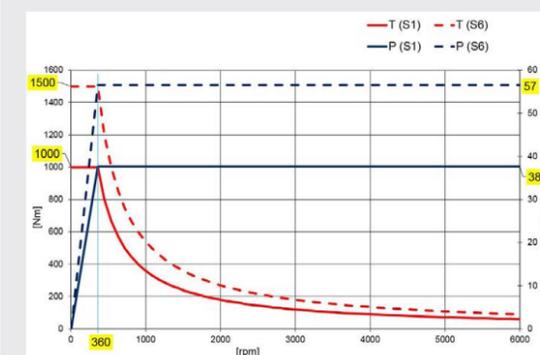
Fork type milling head with high-speed spindle (SPAZIO 21)

Mold and die - automotive - aerospace - defense



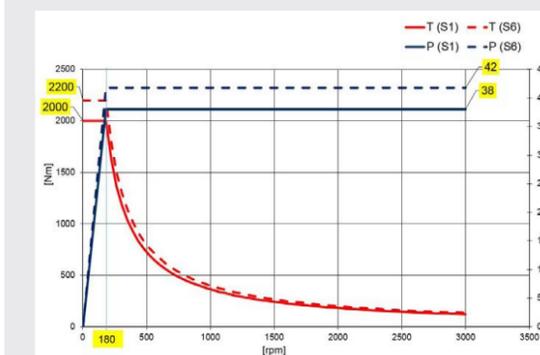
Universal milling head with automatic millesimal positioning and torque motors

General engineering - energy - mold and die - automotive - aerospace - earthmoving - defense



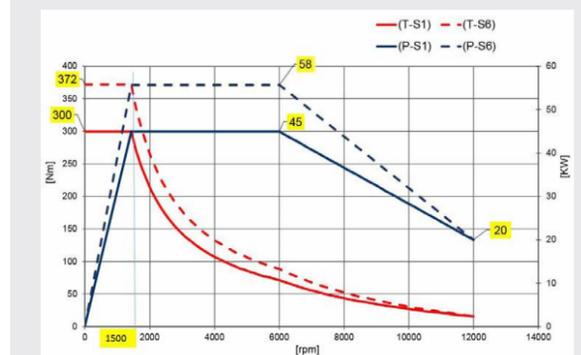
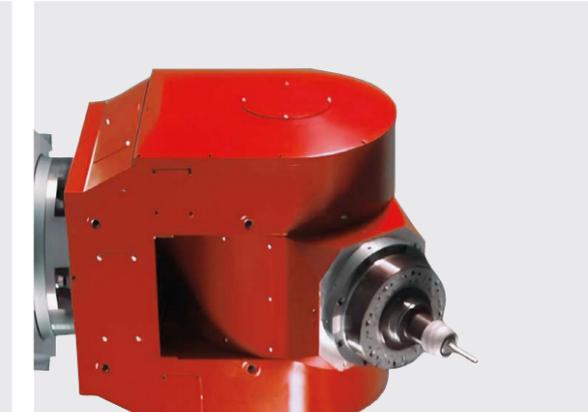
Milling head with offset spindle up to 2000 Nm

General engineering - energy - mold and die - automotive - railway - oil and gas - earthmoving - naval - defense



Fork type milling head with high-speed spindle (SPAZIO 20)

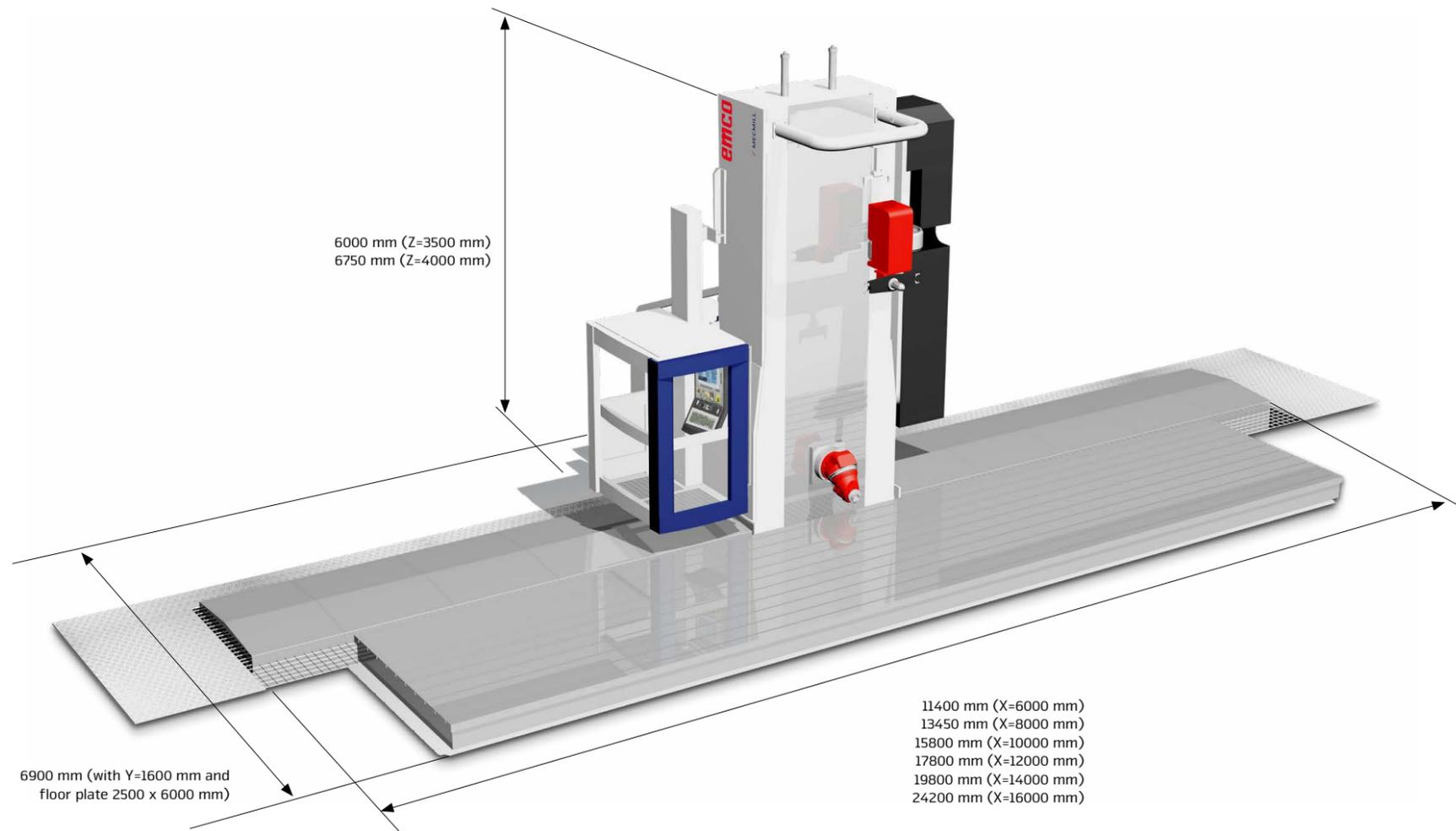
Energy - mold and die - automotive - aerospace - defense



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

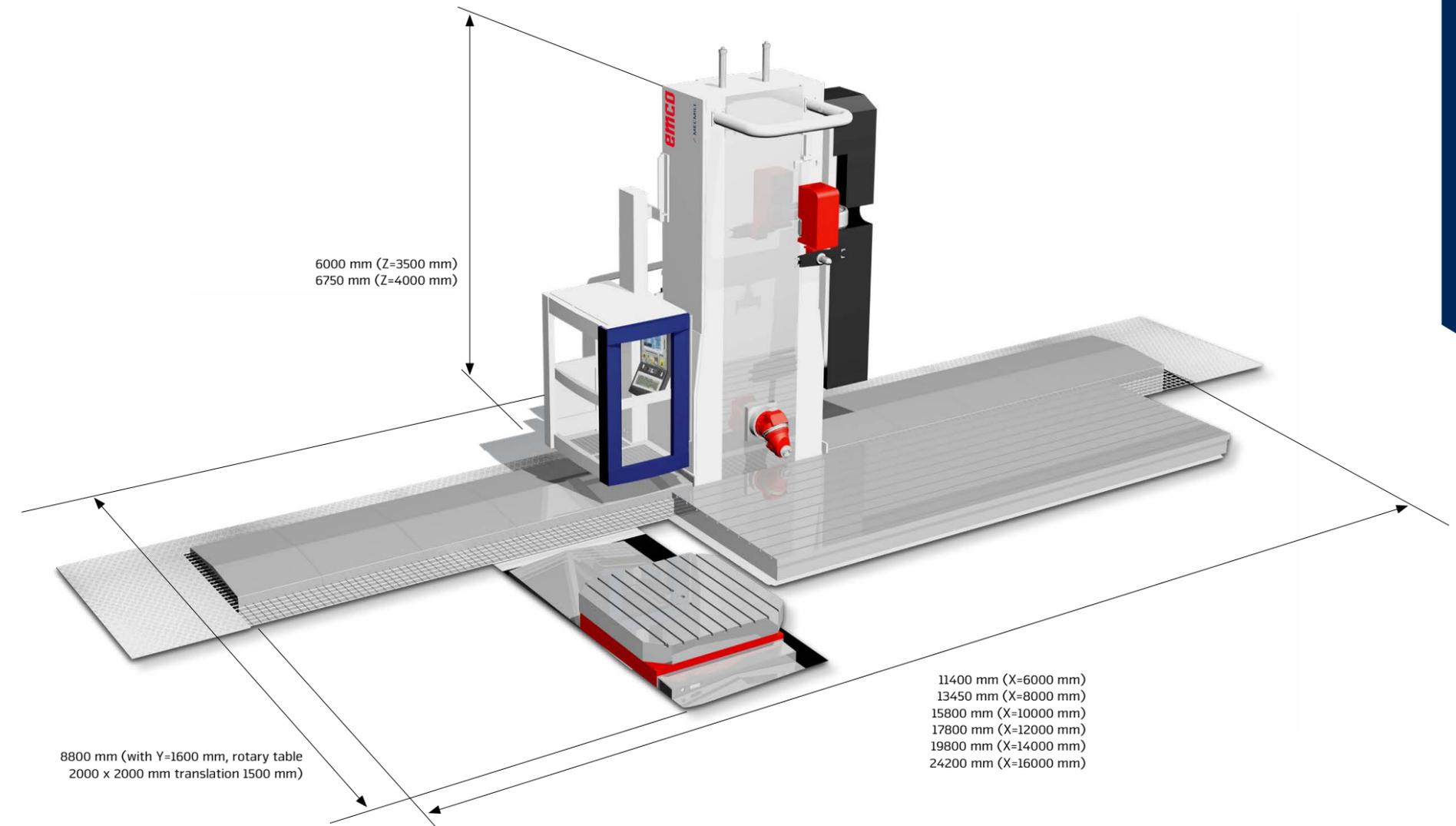
MACHINE OVERALL DIMENSIONS

MECMILL with floor plate



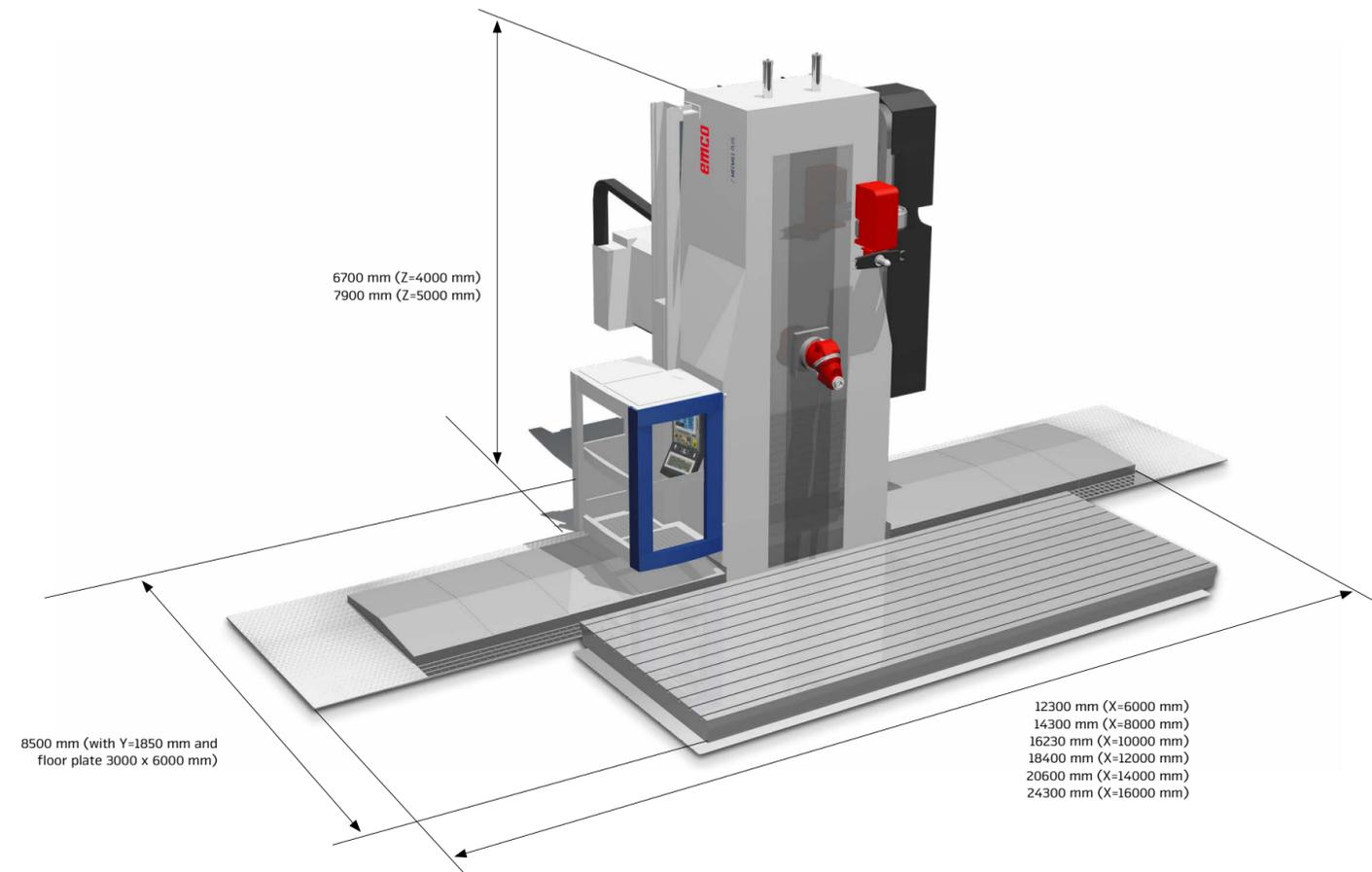
MACHINE OVERALL DIMENSIONS

MECMILL with floor plate and rotary table



MACHINE OVERALL DIMENSIONS

MECMILL PLUS with floor plate



TECHNICAL DATA

Linear axes	MECMILL	MECMILL PLUS
Longitudinal axis travel	6000 - 16000 mm	6000 - 16000 mm
Cross axis travel	1600 mm	1600 - 1850 mm
Vertical axis travel	3500 - 4000 mm	4000 - 5000 mm
RAM dimensions	500 x 500 mm	550 x 600 mm
Feedrate	30 m/min	25 m/min
Spindle motor		
Standard	40 kW 1200 Nm	40 kW 1200 Nm
Optional		50 kW 1500 Nm
Tool/workpiece cooling system		
Low pressure	28 l/min, 6 bar	28 l/min; 6 bar
High pressure (through the spindle)	20 l/min, 20/40/60 / 80 bar	20 l/min; 20/40/60 / 80 bar
Options		
Universal milling head with automatic millesimal positioning	6000 + 8000 rpm	6000 + 8000 rpm
Milling head with offset spindle	3000 rpm	3000 rpm
Fork type milling head with high-speed spindle	24000 rpm	24000 rpm
Automatic tool magazine	40 / 60 / 80 / 100 / 120 / 203 pockets	40 / 60 / 80 / 100 / 120 / 203 pockets
Automatic head magazine	2 / 3 / 4 pockets	2 / 3 / 4 pockets

Universal milling head with automatic millesimal positioning

	MECMILL	MECMILL PLUS
Power S1/S6	38 / 57 kW	38 / 57 kW - 50 / 61 kW
Torque S1/S6	1000 / 1500 Nm	1000 / 1500 Nm - 1500 / 1800 Nm
Rotation speed	15 + 6000 rpm	15 + 6000 rpm - 15 + 5000 rpm
Tool taper standard	ISO 50 DIN 69871	ISO 50 DIN 69871
Option	BIG PLUS	BIG PLUS
Option	HSK-100-A DIN 69893	HSK-100-A DIN 69893

High-speed spindle 50 / 63 kW

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

High-speed spindle 45 / 58 kW

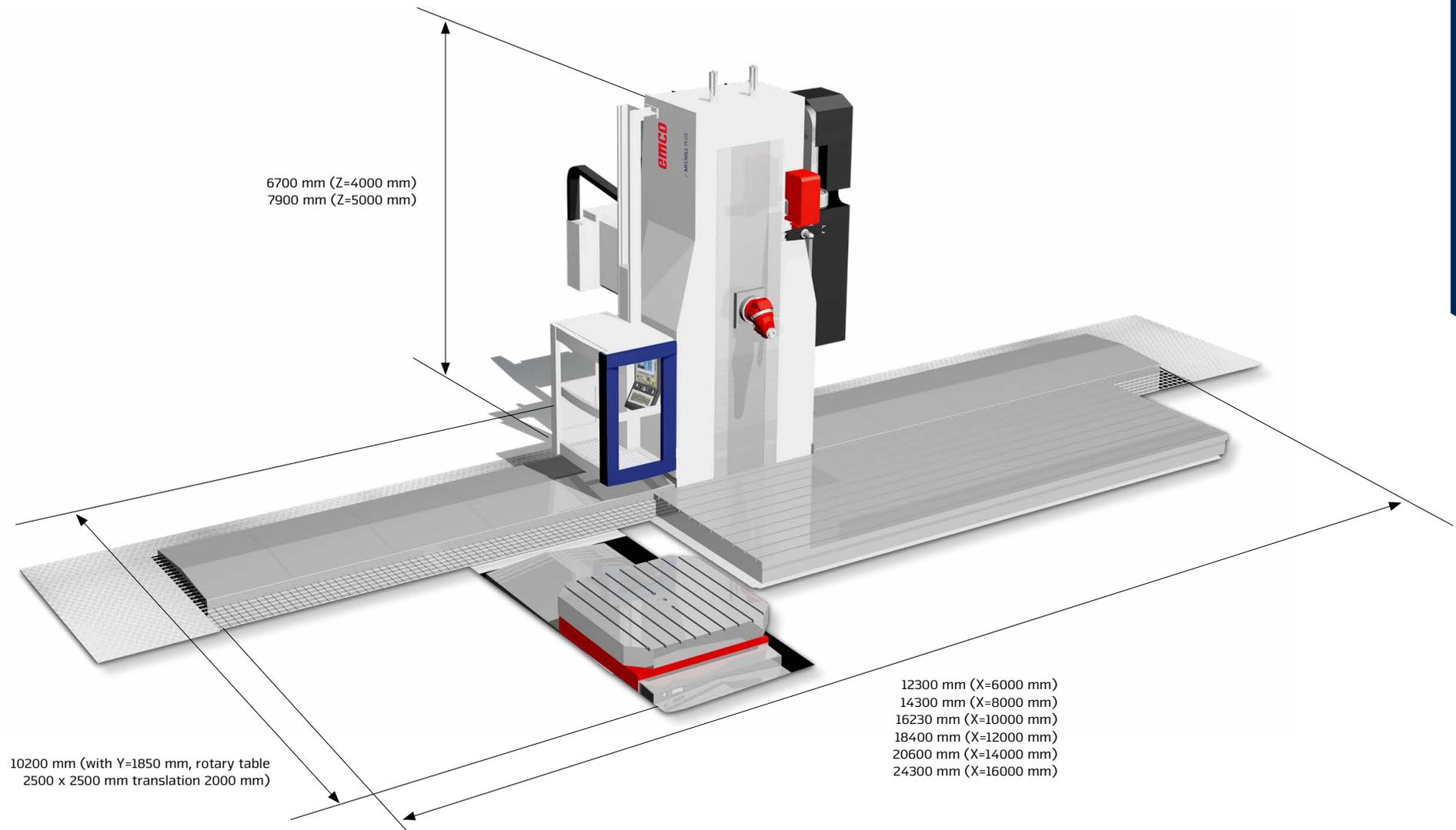
	MECMILL	MECMILL PLUS
Power S1 / S6	45 / 58 kW	45 / 58 kW
Torque S1 / S6	300 / 372 Nm	300 / 372 Nm
Rotation speed	12000 rpm	12000 rpm
Tool taper	HSK 100-A	HSK 100-A

High-speed spindle 42 / 55 kW

	MECMILL	MECMILL PLUS
Power S1 / S6	42 / 55 kW	42 / 55 kW
Torque S1 / S6	67 / 87.5 Nm	67 / 87.5 Nm
Rotation speed	24000 rpm	24000 rpm
Tool taper	HSK 63-A	HSK 63-A

MACHINE OVERALL DIMENSIONS

MECMILL PLUS with floor plate
and rotary table



beyond standard /

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