

MTE MILLING
MACHINES



LINEAR GUIDEWAYS
BED TYPE MILLING
MACHINES

BT / KT / RT

WE ARE A MID-SIZED COMPANY BECAUSE WE WANT TO BE

We're big enough to develop innovative milling technologies for the challenging global markets and flexible enough, as an owner-managed company, to deliver a highly individual and personal customer experience.

We take the time to get to know you properly so that we can build the perfect machine for you.

YOUR SUCCESS IS OUR INCENTIVE

DESIGN AND CONSTRUCTION

MTE Spain in Itziar



OUR SITES

MAIN PLANT IN SPAIN

MTE's main plant is in Itziar, in the Spanish Basque country between Bilbao and San Sebastian, a region famous for its mechanical engineering tradition. It is a region that has always had extensive iron ore resources and hydro power capacity, which is why the metal working trade became established there back in medieval times, laying the foundations for the present-day tool making and mechanical engineering industry.

Over the decades and centuries this region has developed outstanding competence in the design and construction of high-precision machine tools. The fact that many of our competitors are also located here encourages us all to keep on achieving new levels of performance. The engineers and technicians at our plant make all the core components for the machines - from the machine bed to the milling heads, which we believe are the core competence and know-how in milling machines.

Since all components for the MTE machines are cast, we have a long-standing collaboration with a local foundry that specialises in machine tool engineering. It supplies us with highest quality cast components and makes an important contribution to the stability, dimensional accuracy and precision of our machines. The depth of production, from the machining of the rough cast to final assembly in-house, and our experienced employees' high level of identification with the company, have ensured 20 years of very efficient production and assembly operations with first-rate technical and design quality.

The combinations of mechanical engineering tradition and commitment to innovation, of solid know-how and engaged employees, makes us an internationally respected partner for large floor type and bed type milling machines. This is clearly evident by the fact that we have built more than 1,100 machines - and supplied around 500 of them to German customers.

ANOTHER VERY GOOD INDICATOR OF OUR CUSTOMERS' SATISFACTION IS THAT EACH OF THEM HAS 2.7 MTE MACHINES ON AVERAGE



OUR GERMAN BRANCH

Our sales and service branch for the German speaking market opened at a central location in Germany in 2008. We don't just want to sell milling machines, we want to cater comprehensively to our customers' needs before and after the sale.

Our aim is to deliver first-rate products to our customers. Sometimes a standard product is the perfect choice. At other times, the customer will need a custom-made product that is tailored to their application and space situation. The first thing we do to achieve this aim is to give our customers the best possible advice from the first sales talk on. Then we ensure that the entire project, from order placement to machine delivery, is implemented without any hitches and provide a competent after-sale service covering the machine's entire lifespan.

We are absolutely committed to this aim, and to continuous improvement. To ensure optimum machine availability, we have a well-trained and efficient service team and an excellent spare part service at our Montabaur site. The German market is the international technology and quality benchmark for machine tool engineering.

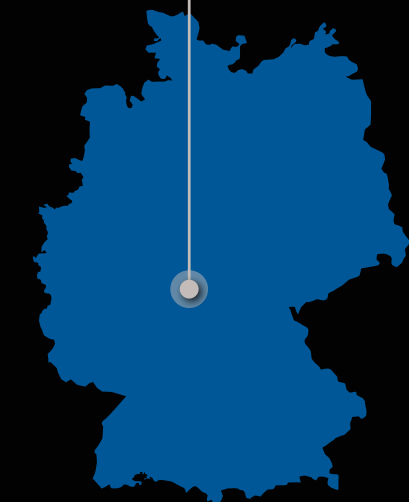
To be successful in this market you have to deliver top-quality products and services, and offer customers individual and flexible solutions for their requirements. Our family-run company's two sites are closely networked, have flat hierarchies, short communication paths and are under single management.

THESE THINGS HAVE HELPED US TO BUILD OUR SUCCESS IN OUR MARKETS OVER THE YEARS.



SALES DEPARTMENT SERVICE

MTE Germany in Montabaur



LINEAR GUIDEWAYS
BED TYPE MILLING
MACHINES

BT

KT

RT

**STANDARD
EQUIPMENT**

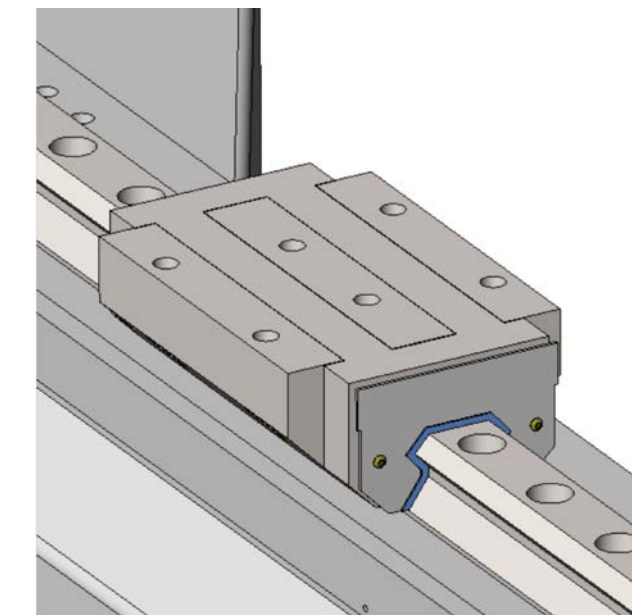
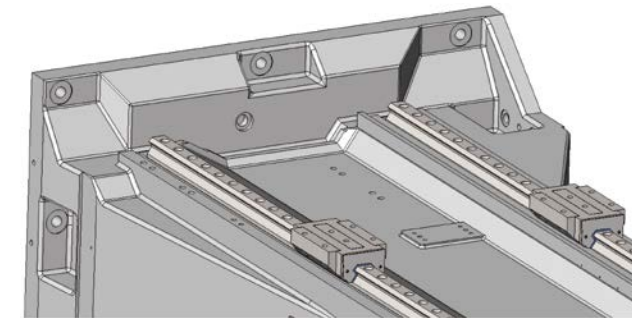
- ▶ Three ranges cooled gearbox
- ▶ INA linear guiding system
- ▶ Manual milling head 4.000 rpm (MFK)
- ▶ Heidenhain CNC iTNC 530 HSCi / TNC 640
- ▶ Heidenhain direct linear scales
- ▶ Electronic handwheel
- ▶ Integrated security system (PILZ)
- ▶ CNC movable panel front-back side of machine
- ▶ Automatic lubrication system
- ▶ Standard enclosure
- ▶ External coolant equipment
- ▶ Electrical cabinet cooling unit
- ▶ Hydraulic counterbalance system
- ▶ Foot pedal
- ▶ Working light
- ▶ Levelling elements

**OPTIONAL
EQUIPMENT**

- ▶ Manual milling head 6.000 rpm (MFK)
- ▶ Automatic milling head 4.000/6.000 rpm 2.5°x2.5° (AFK)
- ▶ Automatic milling head 4.000/6.000 rpm 2.5°x1° (AFK)
- ▶ Automatic stepless milling head 4.000/6.000 rpm 0,001°x0,001° (SFK)¹
- ▶ Direct spindle 4.000 rpm (HFK)
- ▶ Different CNC available: Siemens, Fanuc and Fagor.
- ▶ 19 inches CNC screen
- ▶ Wireless handwheel
- ▶ Pressurized linear scales
- ▶ Teleservice
- ▶ Random vertical tool changer 24 tools
- ▶ Chain type horizontal / vertical tool changer. Number of tools: 40, 60, 80.....
- ▶ Closed enclosure: Open Top / Full Closed
- ▶ Automatic doors for Full Closed enclosures
- ▶ Spin window system
- ▶ Exhaust system
- ▶ Chip conveyors
- ▶ Coolant through the spindle 20/50 bar with filter paper system
- ▶ Magnetic drum / Oil band skimmer + micro-oxygen / Frequency controller for the motor
- ▶ Air through the spindle / Through outside nozzles
- ▶ Coolant pistols
- ▶ Fourth axis rotary tables
- ▶ Tools & piece probes: M&H, Heidenhain and Renishaw
- ▶ Brankamp CMS (Collision Monitoring System)
- ▶ MQL Systems

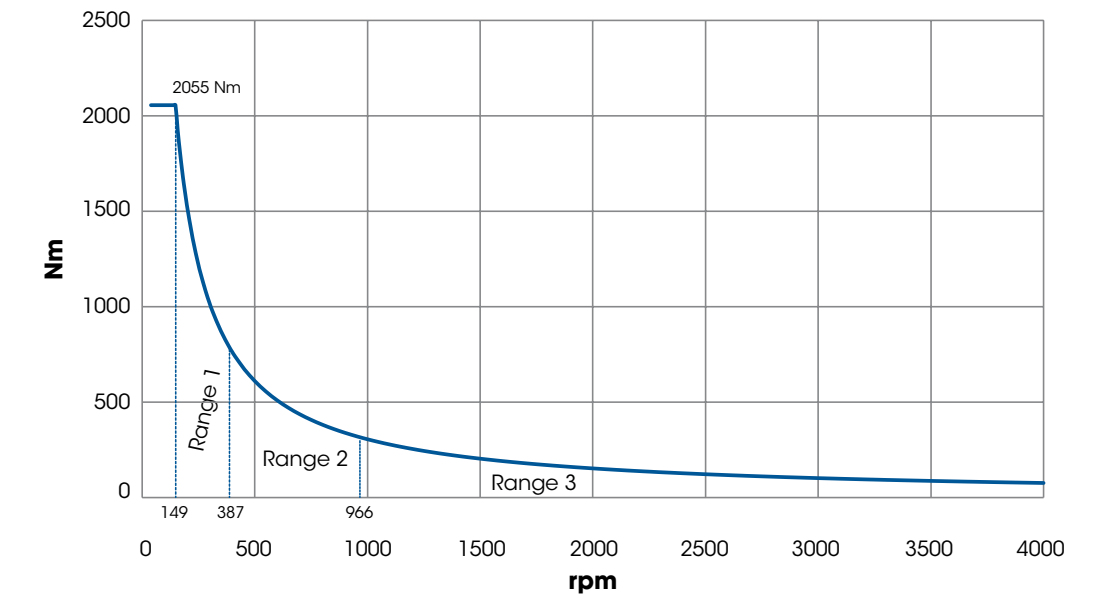
Note: all 6.000 rpm milling heads are cooled. Cooled head optional at 4.000 rpm.
¹ Only for Y= 1.500 RAM.

➤ FRICTION
GUIDEWAY DETAIL

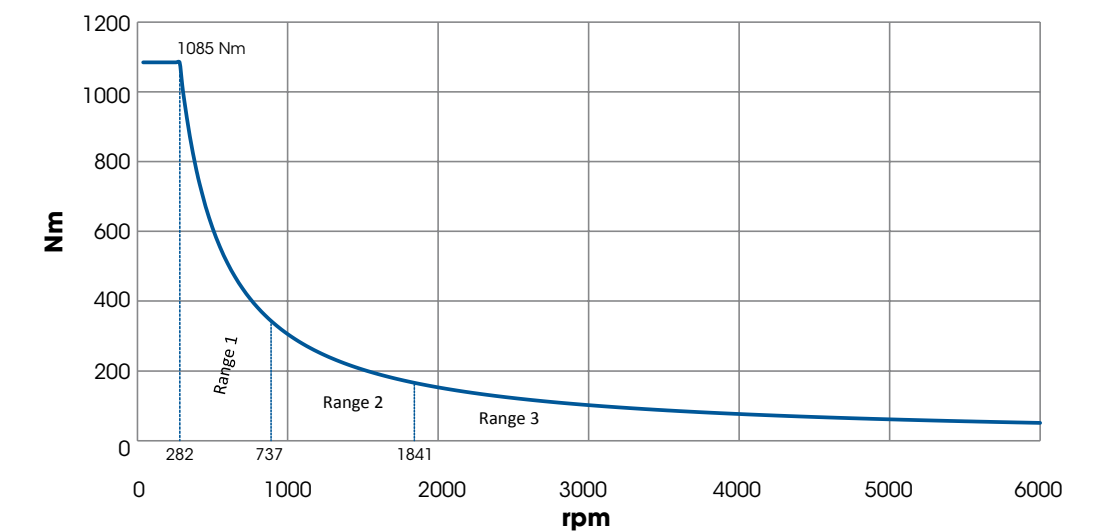


➤ POWER-TORQUE
DIAGRAM

32 kW AFK/MFK 4.000 rpm



32 kW AFK 6.000 rpm



BT

MODELS

2200

3200

4200

5200



*Open Top enclosure (optional)

The **BT series** bed type milling machines feature state-of-the-art, high feed rate cutters and large feed milling heads and are ideally equipped for all applications.

The BT machines' high weight due to their heavy ribbed cast design, the use of INA guidings and the typical MTE oil-cooled 3-speed gear drives makes it highly dynamic, stable and precise.

TECHNICAL FEATURES

BT	2200	3200	4200	5200
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TABLE

Working surface	mm	2.200 x 1.000	3.200 x 1.000	4.200 x 1.000	5.200 x 1.000
T-slots	mm	1x22H7 + 6x22H12 in 140			
Maximum load	kg	7.200	11.000	13.000	15.000

TRAVELS

X axis (longitudinal)	mm	2.000	3.000	4.000	5.000
Y axis (cross)	mm	1.200 (1.300) ¹			
Z axis (vertical)	mm	1.500 (2.000) ¹			

SPINDLE

Spindle taper		SK50 DIN 69871 / AD			
Speed	rpm	4.000 / (6.000) ¹			
Ranges		3			
Power	kW	32 ² (40) ¹			
Maximum torque	Nm	2.050 ³ (4.000 rpm) 1.085 ⁴ (6.000 rpm) ¹			

FEEDS

Maximum feed	m/min	25			
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WEIGHT

Machine weight	kg	20.000	24.000	27.000	30.000
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¹ Option.

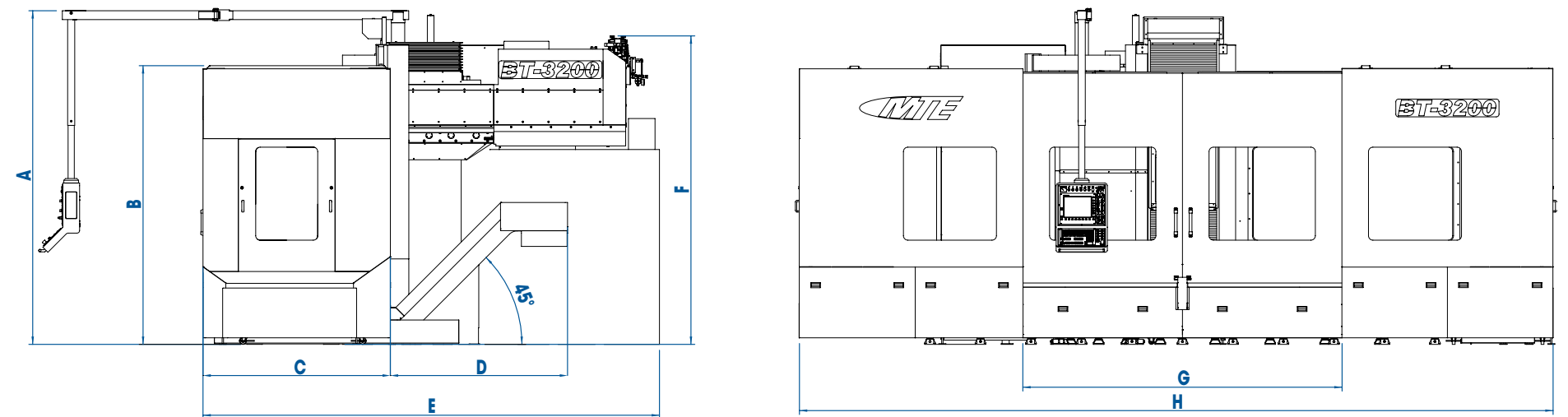
² Heidenhain motor.

³ Heidenhain 32 kW and AFK milling head. For further information (combination of other milling heads and power), please feel free to contact us.

⁴ Option. Heidenhain 32 kW and AFK milling head. For further information (combination of other milling heads and power), please feel free to contact us.

BT OPEN TOP ENCLOSURE

DIMENSIONS



BT OPEN TOP ENCLOSURE (mm)

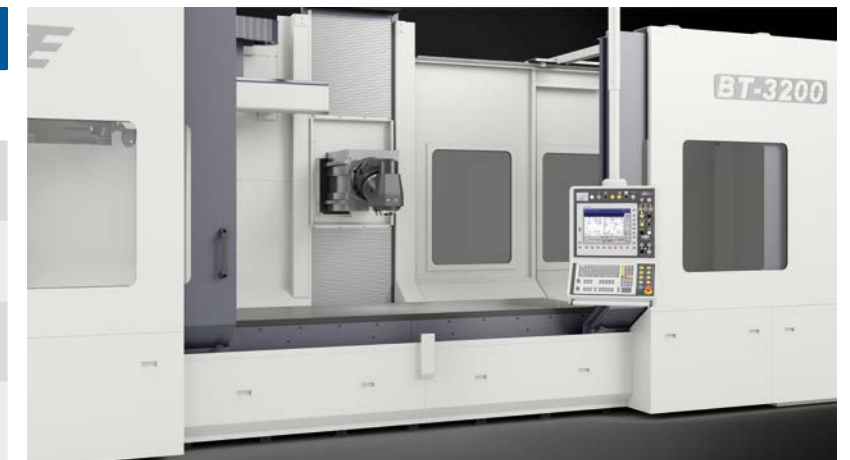
	A	B	C	D	E	F	G	H
BT-2200	3.770 ¹	2.950 ²	2.150	2.050	5.200	3.500 ³	2.600	6.600
BT-3200	3.770 ¹	2.950 ²	2.150	2.050	5.200	3.500 ³	3.600	8.600
BT-4200	3.770 ¹	2.950 ²	2.150	2.050	5.200	3.500 ³	4.600	10.600
BT-5200	3.770 ¹	2.950 ²	2.150	2.050	5.200	3.500 ³	5.600	12.600

Data for Y= 1.200 / Z= 1.500.

¹ 3.270 for Z= 1.000 / 4.270 for Z= 2000.

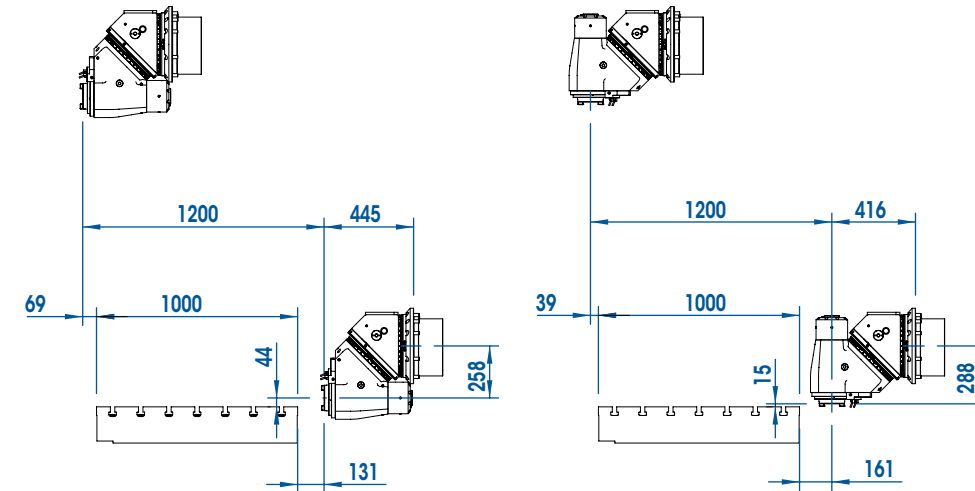
² 2.950 for Z= 1.000 / 3.450 for Z= 2000; with Full Closed enclosure + 250 mm. for Z= 1.000 and + 500 mm. for Z= 1.500 and Z= 2.000.

³ 3.000 for Z= 1.000 / 4.000 for Z= 2000

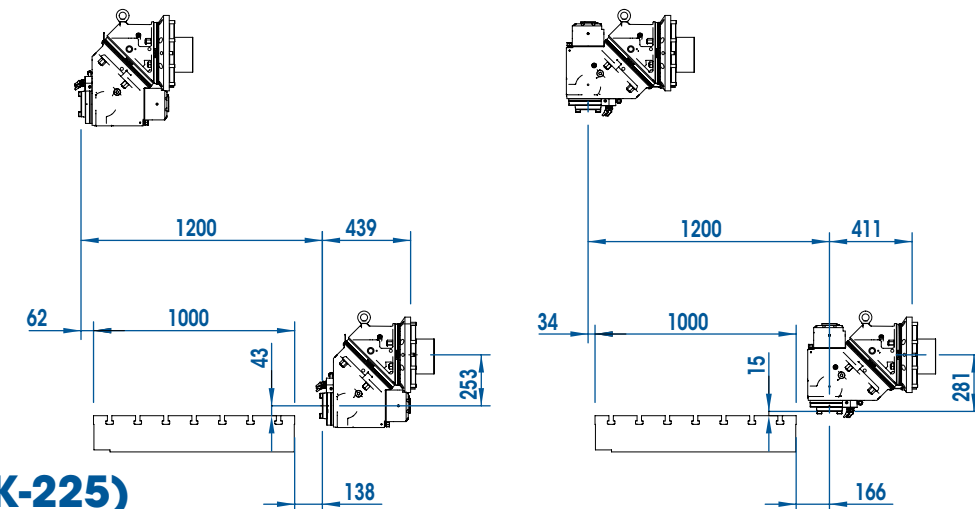


MILLING HEADS

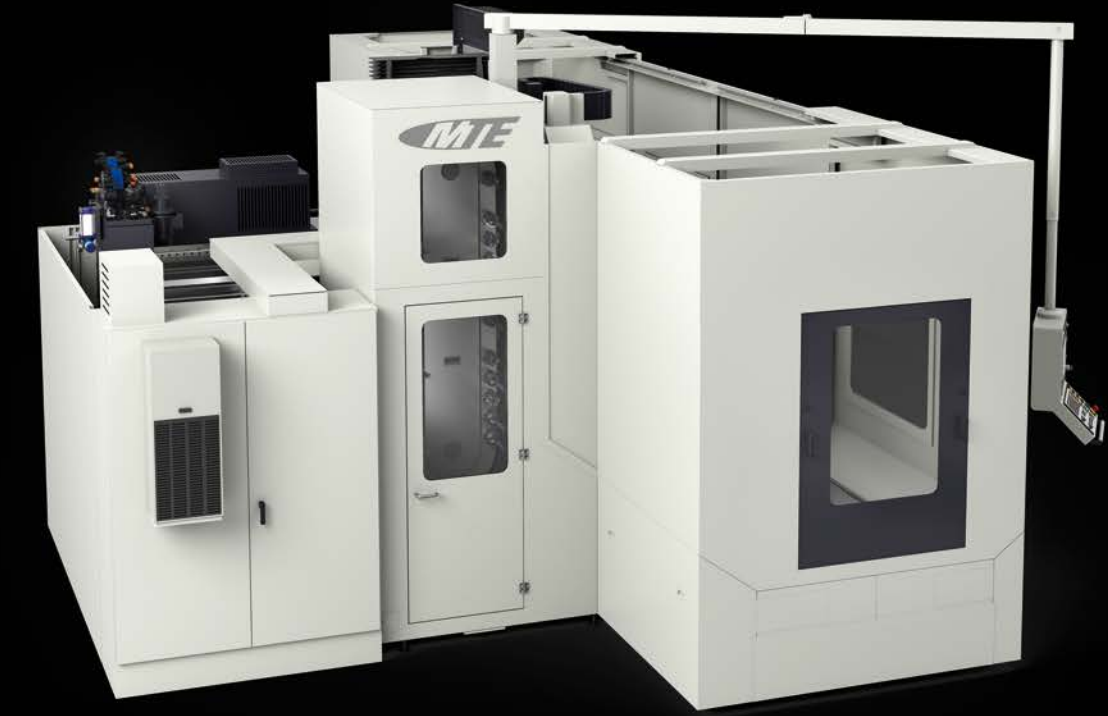
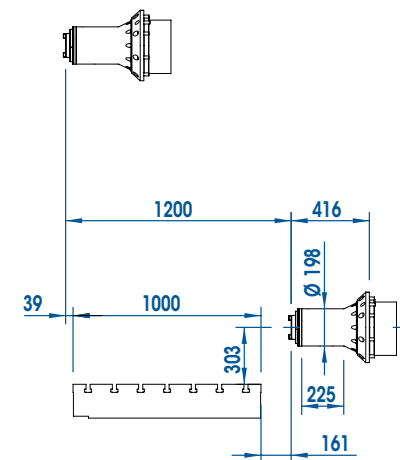
AUTOMATIC MILLING HEAD (AFK) 2,5°x2,5° (4.000/6.000 rpm) / 1x2,5° (4.000/6.000 rpm)



MANUAL MILLING HEAD 4.000/6.000 rpm (MFK)



DIRECT SPINDLE HEAD 4.000 rpm (HFK-225)



BT Open Top model. Side view



BT Open Top model. Backside view

KT

MODELS

3200

4200

5200



*Open Top enclosure (optional)

LINEAR GUIDEWAYS BED TYPE MILLING MACHINES **KT** >



The **KT series** is the BT series' big sister. It shares the same attributes and advantages, but is considerably larger.

This additional larger-dimensioned series was necessary to realise longer traverses of up to 1.500 mm with even more powerful drives, yet with constant stability.

TECHNICAL FEATURES

KT		3200	4200	5200
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TABLE

Working surface	mm	3.200 x 1.200 (1.400) ¹	4.200 x 1.200 (1.400) ¹	5.200 x 1.200 (1.400) ¹
T-slots	mm	1x22H7 + 6x22H12 in 160		
Maximum load	kg	11.000	14.000	17.000

TRAVELS

X axis (longitudinal)	mm	3.000	4.000	5.000
Y axis (cross)	mm	1.500		
Z axis (vertical)	mm	1.500 (2.000) ¹		

SPINDLE

Spindle taper		SK50 DIN 69871 / AD		
Speed	rpm	4.000 / (6.000) ¹		
Ranges		3		
Power	kW	32 ² (40) ¹		
Maximum torque	Nm	2.050 ³ (4.000 rpm) 1.085 ⁴ (6.000 rpm) ¹		

FEEDS

Maximum feed	m/min	25		
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WEIGHT

Machine weight	kg	30.000	32.000	35.000
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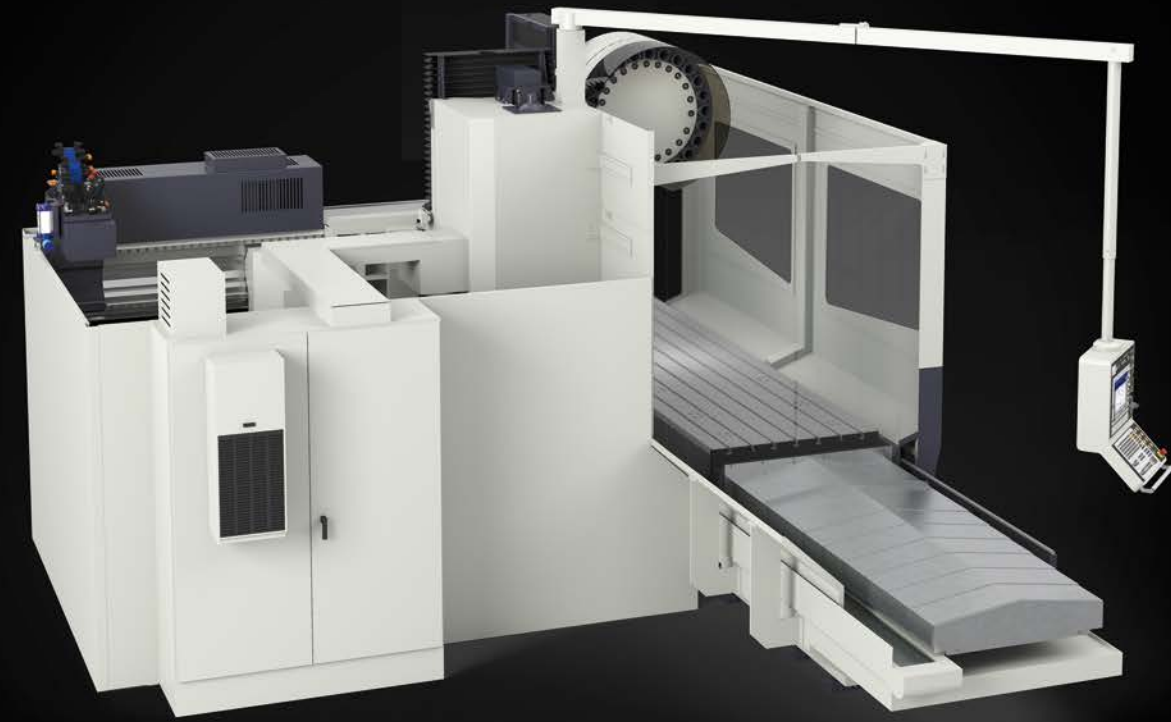
¹ Option.

² Heidenhain motor.

³ Heidenhain 32 kW and AFK milling head. For further information (combination of other milling heads and power), please feel free to contact us.

⁴ Option. Heidenhain 32 kW and AFK milling head. For further information (combination of other milling heads and power), please feel free to contact us.

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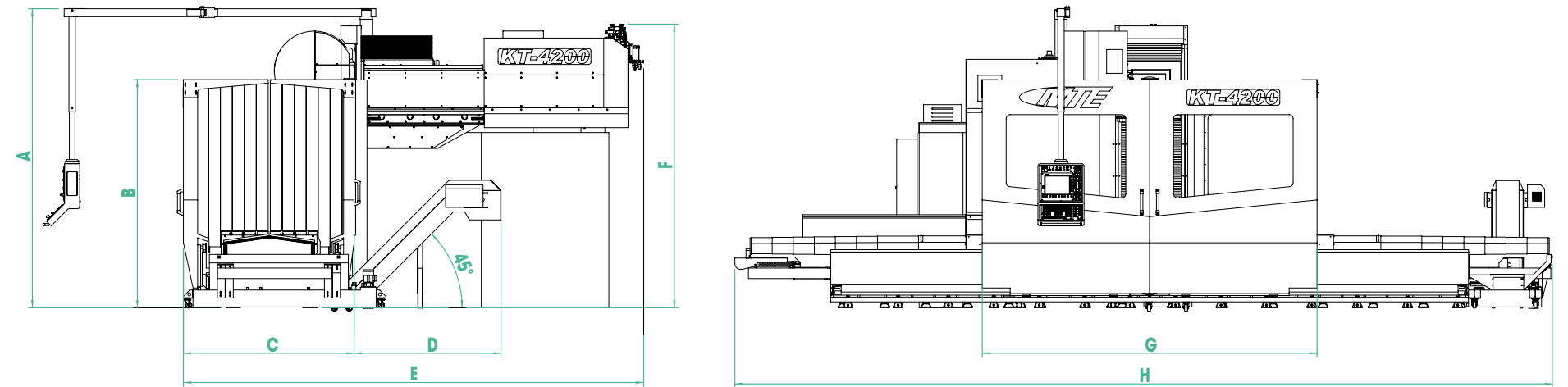
KT model with standard enclosure Side view



KT model with standard enclosure Backside view

> STANDARD ENCLOSURE

DIMENSIONS



KT STANDARD ENCLOSURE (mm)								
	A	B	C	D	E	F	G	H
KT-3200	3.650 ¹	2.650 ²	2.150	2.200	5.800 ³	3.600 ⁴	3.200	8.300
KT-4200	3.650 ¹	2.650 ²	2.150	2.200	5.800 ³	3.600 ⁴	4.200	10.300
KT-5200	3.650 ¹	2.650 ²	2.150	2.200	5.800 ³	3.600 ⁴	4.200	12.300

Data for Z= 1.500, 1.200 mm. table width and AFK milling head.

¹ 4.150 for Z= 2.000.

² 3.150 for Z= 2.000; + 500 mm. with Full Closed enclosure.

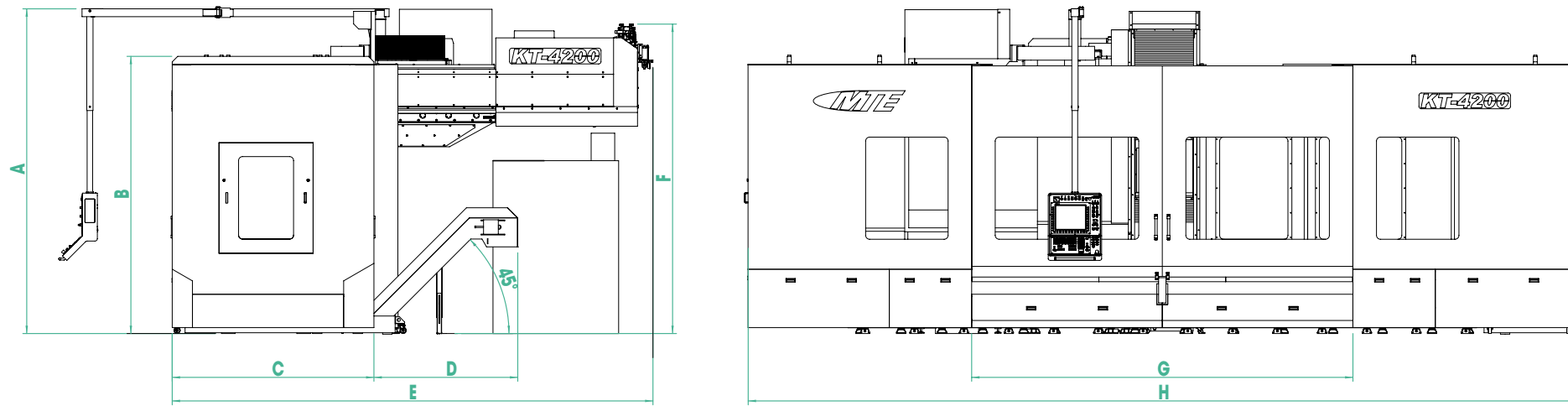
³ 6.100 with SFK milling head and 50 bed-column spacer.

⁴ 4.100 for Z= 2.000.



> OPEN TOP ENCLOSURE

DIMENSIONS



KT OPEN TOP ENCLOSURE (mm)								
	A	B	C	D	E	F	G	H
KT-3200	3.650 ¹	2.950 ²	2.600	2.050	6.150 ³	3.500 ⁴	3.850	8.600
KT-4200	3.650 ¹	2.950 ²	2.600	2.050	6.150 ³	3.500 ⁴	4.580	10.600
KT-5200	3.650 ¹	2.950 ²	2.600	2.050	6.150 ³	3.500 ⁴	5.850	12.600

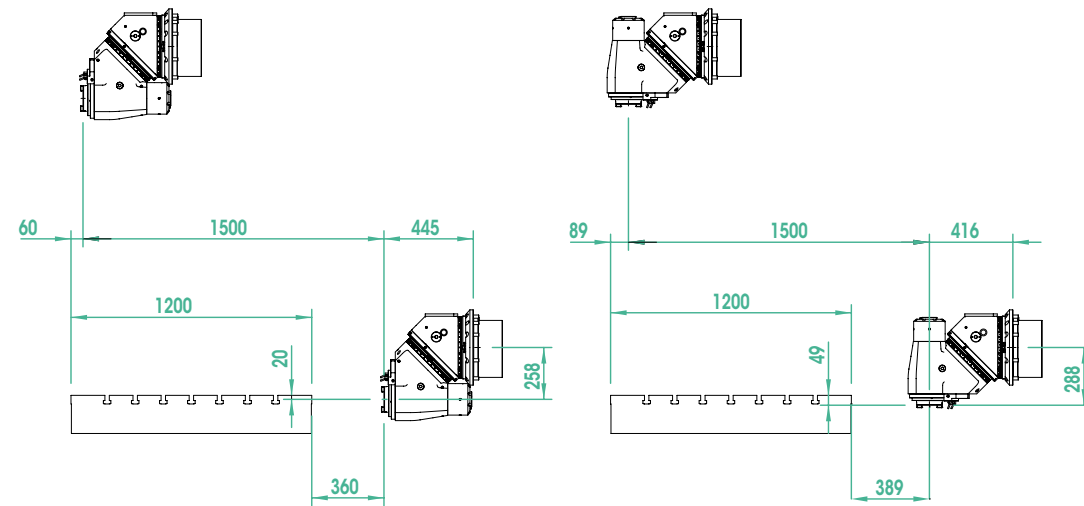


Data for Z= 1.500, table width 1.200 mm. and AFK milling head.
¹ 4.150 for Z= 2.000.
² 3.450 for Z= 2.000; + 500 mm. Full Closed enclosure.
³ 6.450 with SFK milling head and 50 bed-column spacer.
⁴ 4.000 for Z= 2.000 mm.



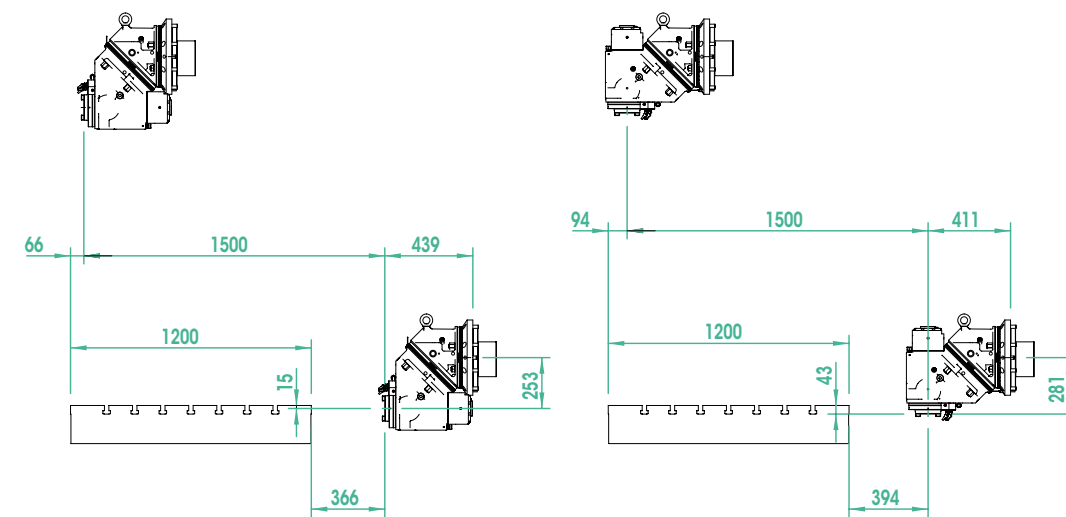
MILLING HEADS

AUTOMATIC MILLING HEAD (AFK) 2,5°x2,5° (4.000/6.000 rpm) / 1x2,5° (4.000/6.000 rpm)



Dimensions with 1.200 mm. table width and without bed-column spacer.

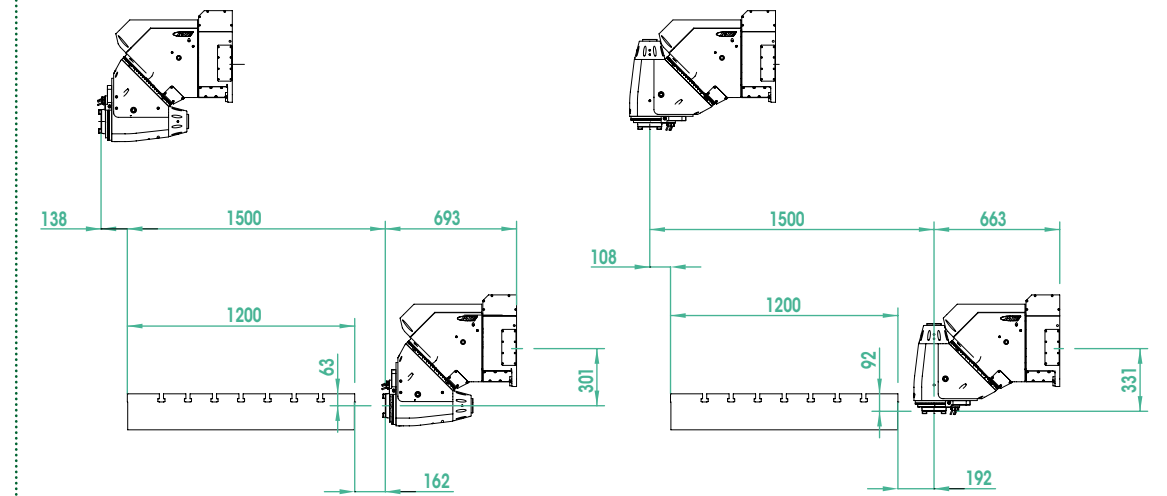
MANUAL MILLING HEAD 4.000/6.000 rpm (MFK)



Dimensions with 1.200 mm. table width and without bed-column spacer.

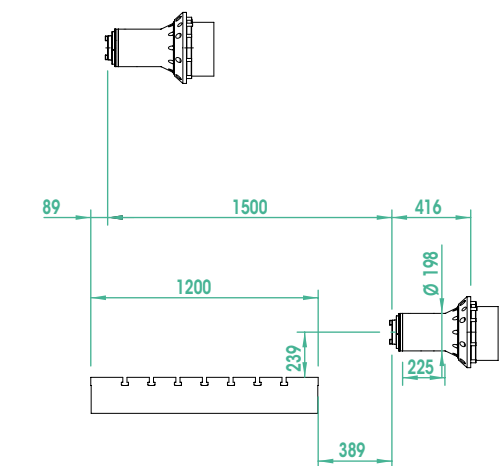
MILLING HEADS

AUTOMATIC STEPLESS MILLING HEAD (SFK) 0,001x0,001° (4.000/6.000 rpm)



Dimensions with 1.200 mm. table width and 50 mm. bed-column spacer.

DIRECT SPINDLE HEAD 4.000 rpm (HFK-225)



Dimensions with 1.200 mm. table width and without bed-column spacer.

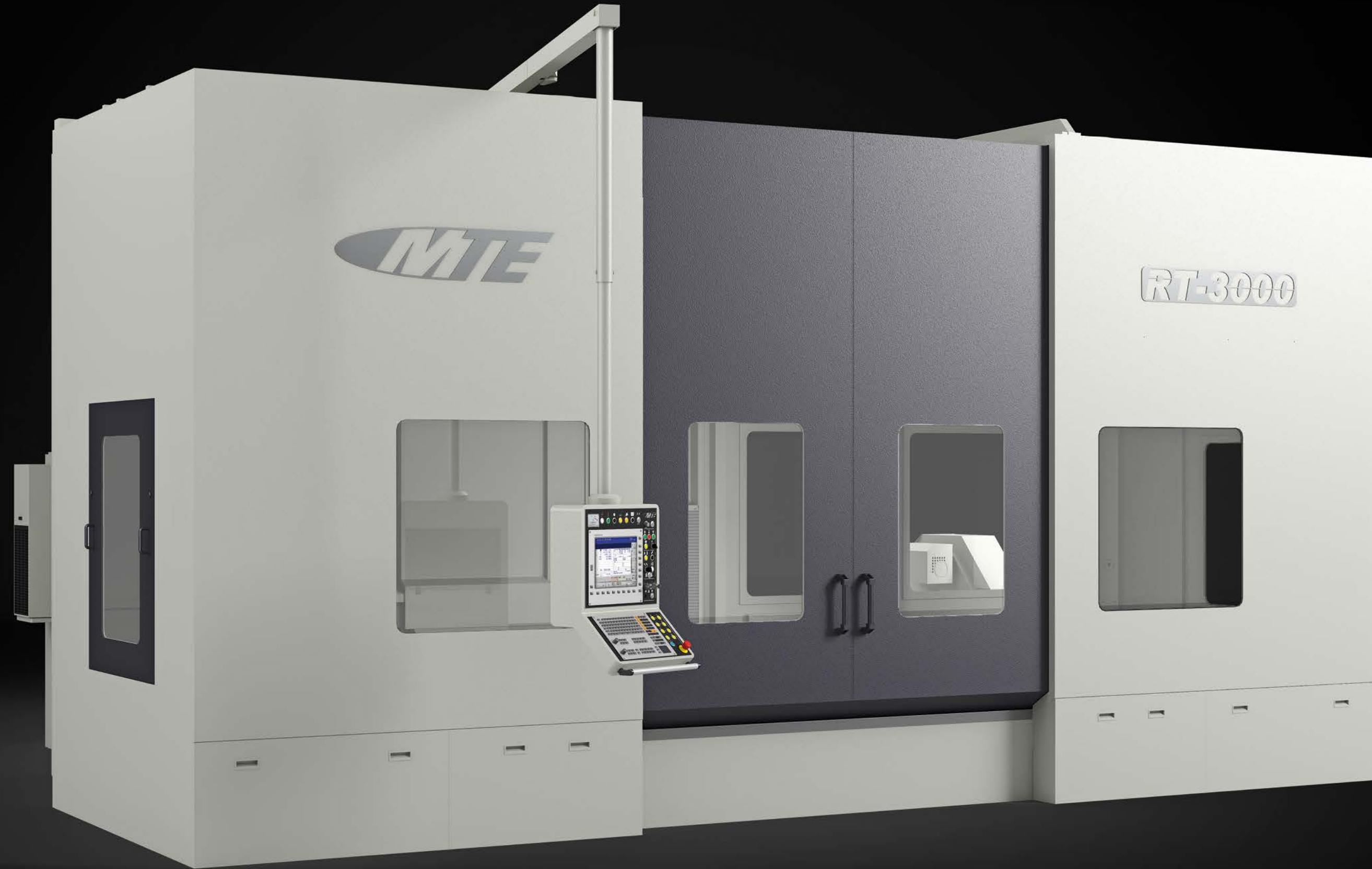
RT

MODELS

2000

2500

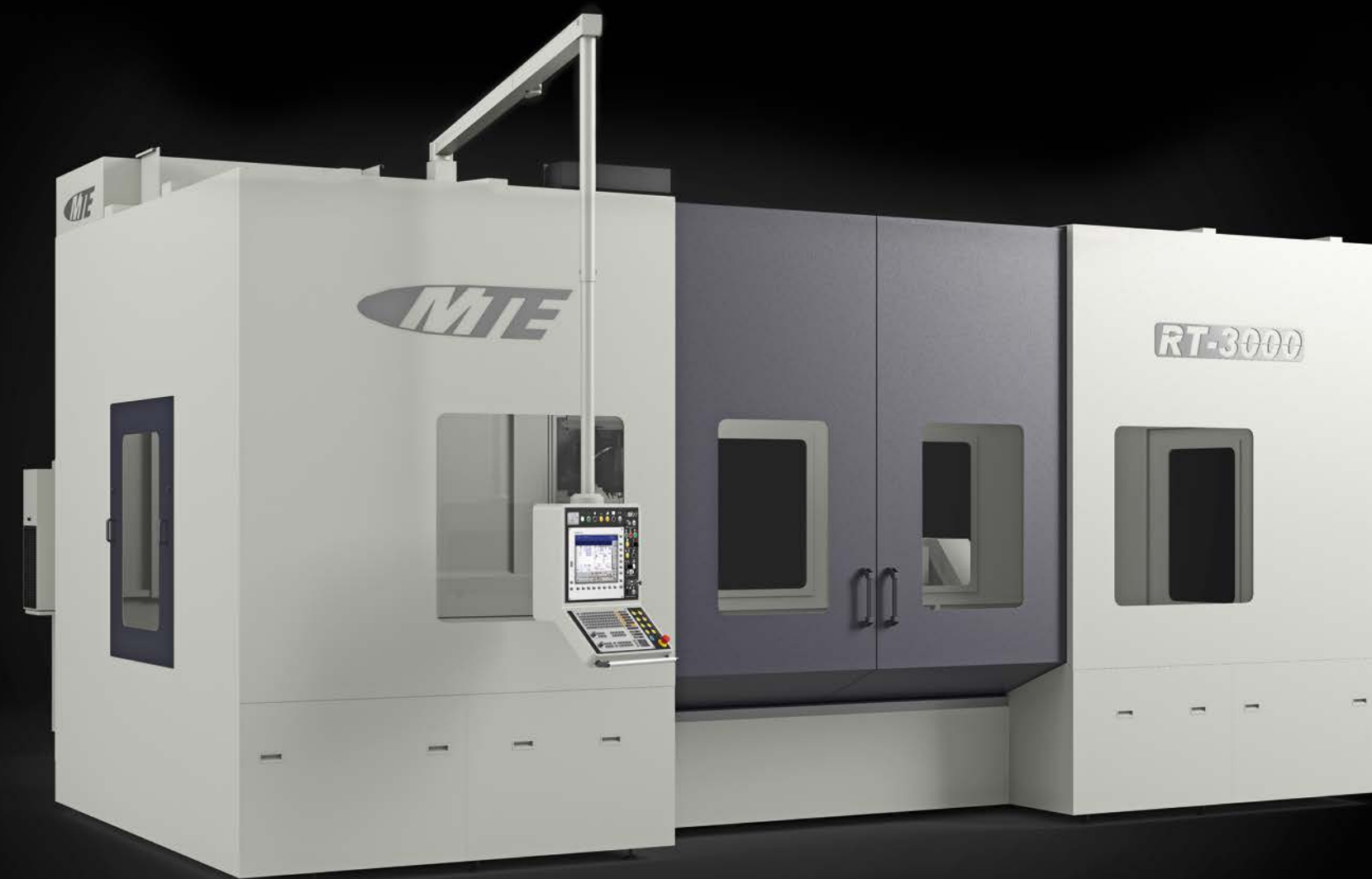
3000



*Closed Top enclosure (optional)

LINEAR GUIDEWAYS INTEGRATED ROTARY TABLE BED TYPE MILLING MACHINES

RT



RT Open Top model

The **RT bed type** milling machine unites all the advantages of a traditional table type boring mill with those of a milling machine.

The combination of a highly stable built-in NC rotary table with an automatically swivelling milling head makes it possible, in addition to regular drill centre machining operations, to make complex workpieces with five sides and all conceivable angle positions in a single set-up with up to 5 processing axes.

TECHNICAL FEATURES

RT	2000	2500	3000
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NC ROTARY TABLE

Working surface	mm	1.050 x 1.050 / 1.250 x 1.500 / 1.400 x 1.600		
T-slots	mm	1x22H7 + 6x22H12 in 125		
Maximum load	kg	8.000 - 15.000		

TRAVELS

X axis (longitudinal)	mm	2.000	2.500	3.000
Y axis (cross)	mm	1.200 (1.500) ¹		
Z axis (vertical)	mm	1.500 (2.000) ¹		

SPINDLE

Spindle taper		SK50 DIN 69871 / AD		
Speed	rpm	4.000 / (6.000) ¹		
Ranges		3		
Power	kW	32 ² (40) ¹		
Maximum torque	Nm	2.050 ³ (4.000 rpm) 1.085 ⁴ (6.000 rpm) ¹		

FEEDS

Maximum feed	m/min	25		
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WEIGHT

Machine weight	kg	25.000	28.000	30.000
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¹ Option.

² Heidenhain motor.

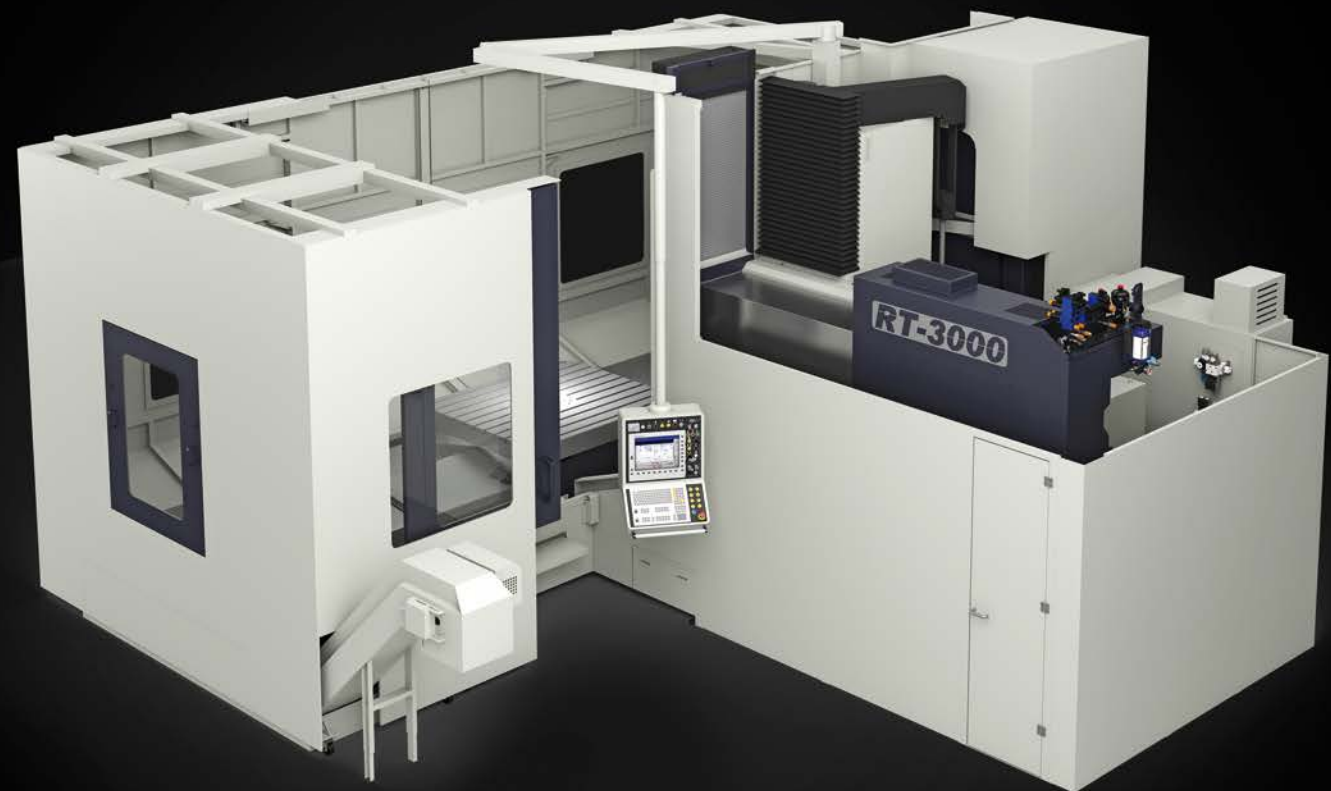
³ Heidenhain 32 kW and AFK milling head. For further information (combination of other milling heads and power), please feel free to contact us.

⁴ Option. Heidenhain 32 kW and AFK milling head. For further information (combination of other milling heads and power), please feel free to contact us.

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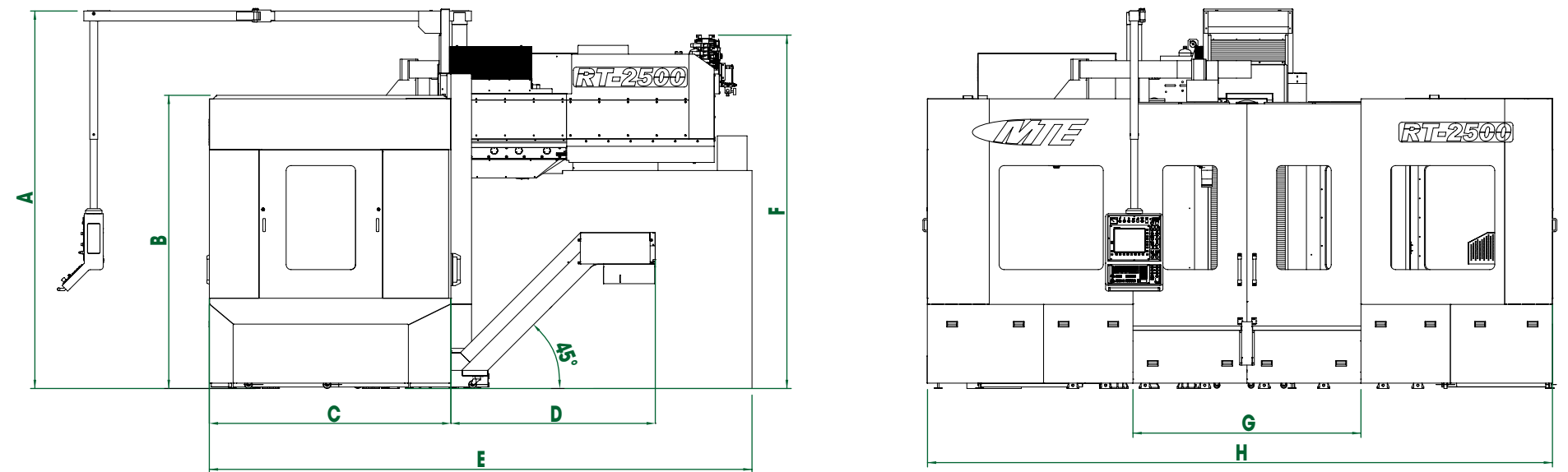
RT Open Top model. Side view



RT Open Top model. Backside view

> OPEN TOP ENCLOSURE RT (Y1200)

DIMENSIONS



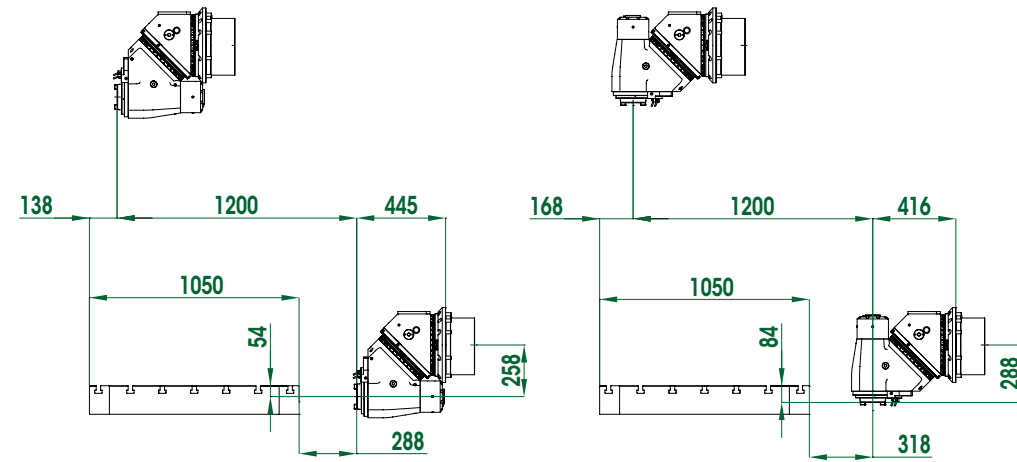
RT (Y1200) OPEN TOP ENCLOSURE (mm)								
	A	B	C	D	E	F	G	H
RT-2000	3.850 ¹	2.950 ²	2.450	2.050	5.500	3.550 ³	2.300	5.350
RT-2500	3.850 ¹	2.950 ²	2.450	2.050	5.500	3.550 ³	2.300	6.350
RT-3000	3.850 ¹	2.950 ²	2.450	2.050	5.500	3.550 ³	2.600	7.350

Data for Z= 1.500.
¹ 4.350 for Z= 2.000.
² 3.450 for Z= 2.000; + 500 mm. with Full Closed enclosure.
³ 4.050 for Z= 2.000.

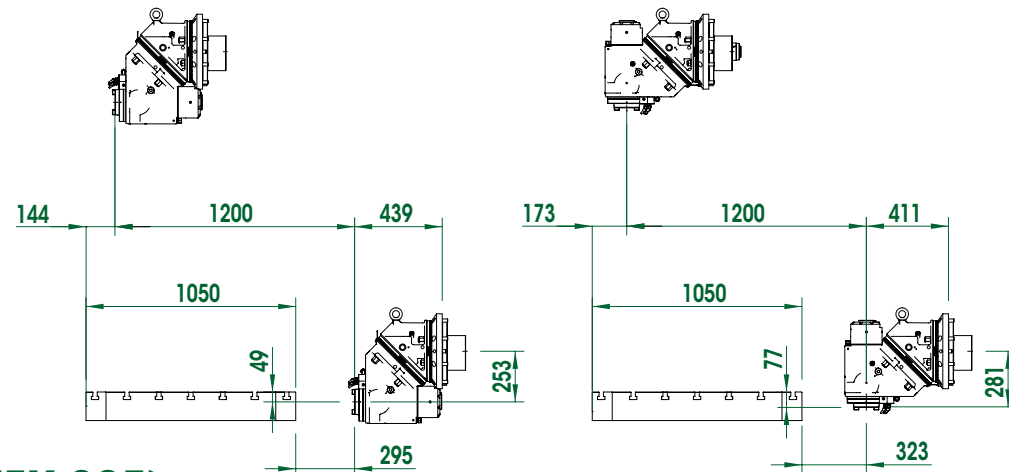


MILLING HEADS. RT Y1200

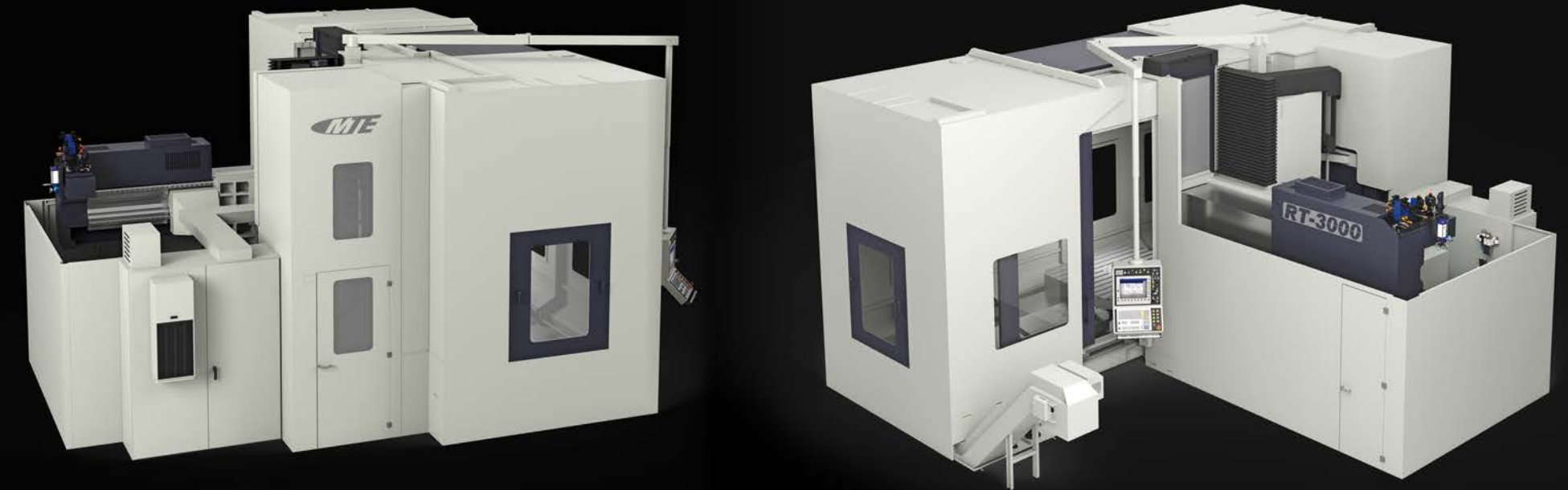
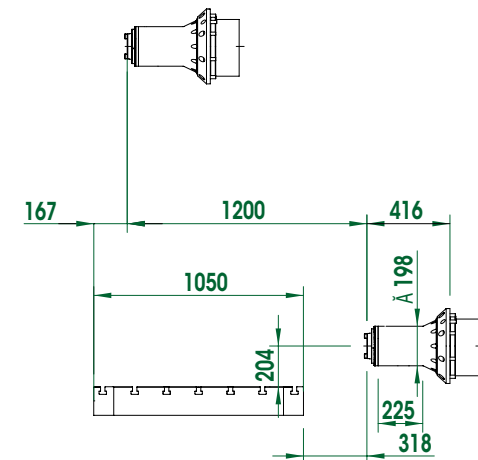
AUTOMATIC MILLING HEAD (AFK) 2,5°x2,5° (4.000/6.000 rpm) / 1x2,5° (4.000/6.000 rpm)



MANUAL MILLING HEAD 4.000/6.000 rpm (MFK)

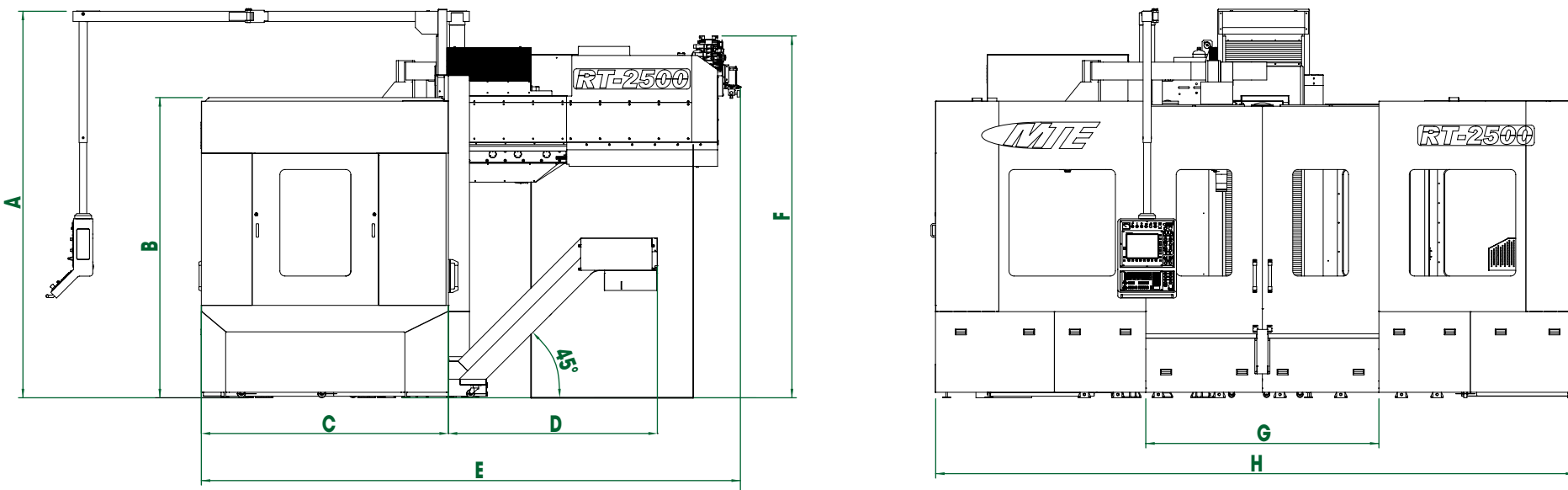


DIRECT SPINDLE HEAD 4.000 rpm (HFK-225)



> OPEN TOP ENCLOSURE RT (Y1500)

DIMENSIONS



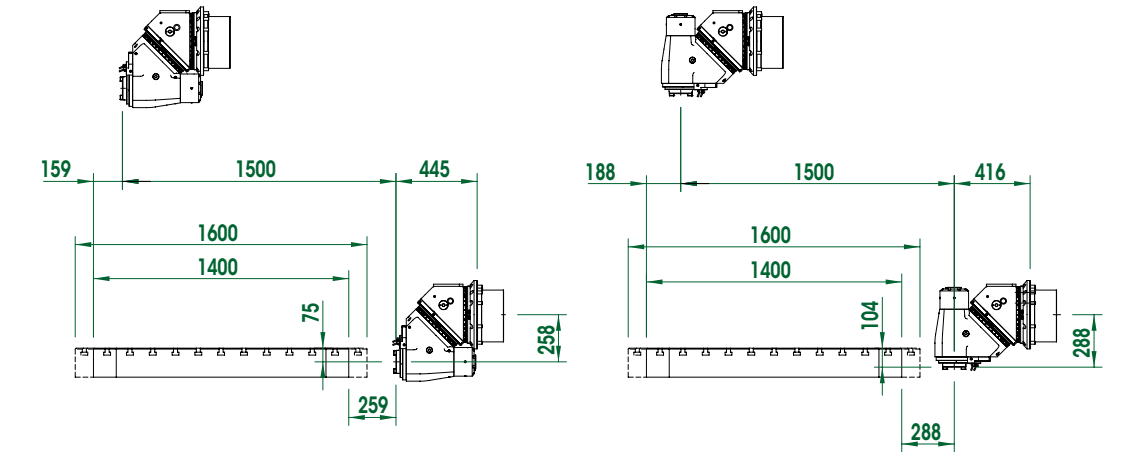
RT (Y1500) OPEN TOP ENCLOSURE (mm)								
	A	B	C	D	E	F	G	H
RT-2000	3.800 ¹	2.950 ²	2.650	2.050	6.200 ³	3.650 ⁴	2.300	5.500
RT-2500	3.800 ¹	2.950 ²	2.650	2.050	6.200 ³	3.650 ⁴	2.300	6.500
RT-3000	3.800 ¹	2.950 ²	2.650	2.050	6.200 ³	3.650 ⁴	2.600	7.500



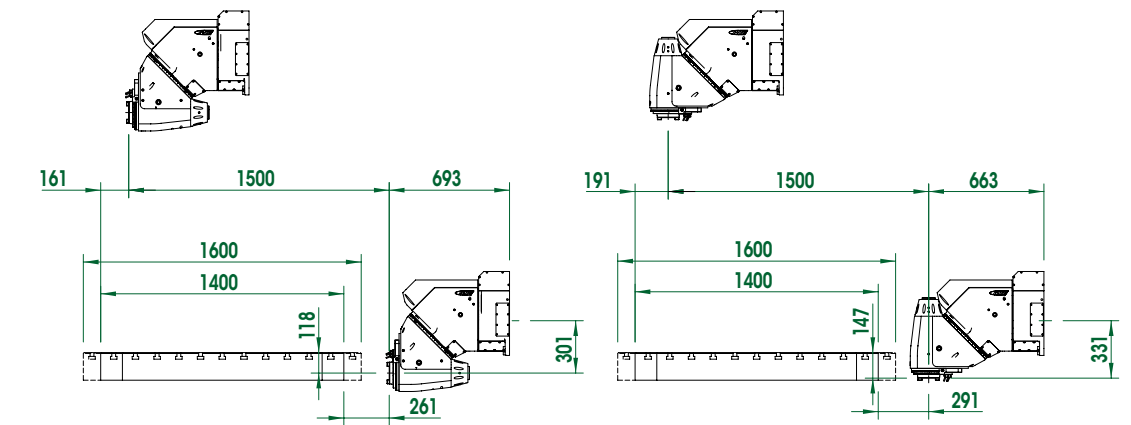
Data for Z= 1.500 and AFK milling head.
¹ 4.300 for Z= 2.000.
² 3.425 for Z= 2.000; + 500 mm. with Full Closed enclosure.
³ 6.500 with SFK head and 250 mm. bed-column spacer.
⁴ 4.150 for Z= 2.000.

> MILLING HEADS. RT Y1500

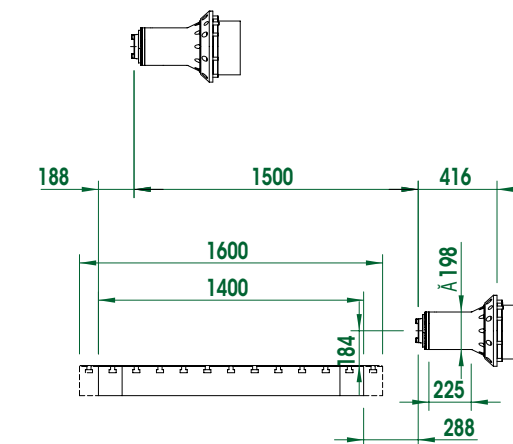
AUTOMATIC MILLING HEAD (AFK) 2,5°x2,5° (4.000/6.000 rpm) / 1x2,5° (4.000/6.000 rpm)



AUTOMATIC STEPLESS MILLING HEAD (SFK) / 0,001x0,001° (4.000/6.000 rpm)



DIRECT SPINDLE HEAD 4.000 rpm (HFK-225)





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