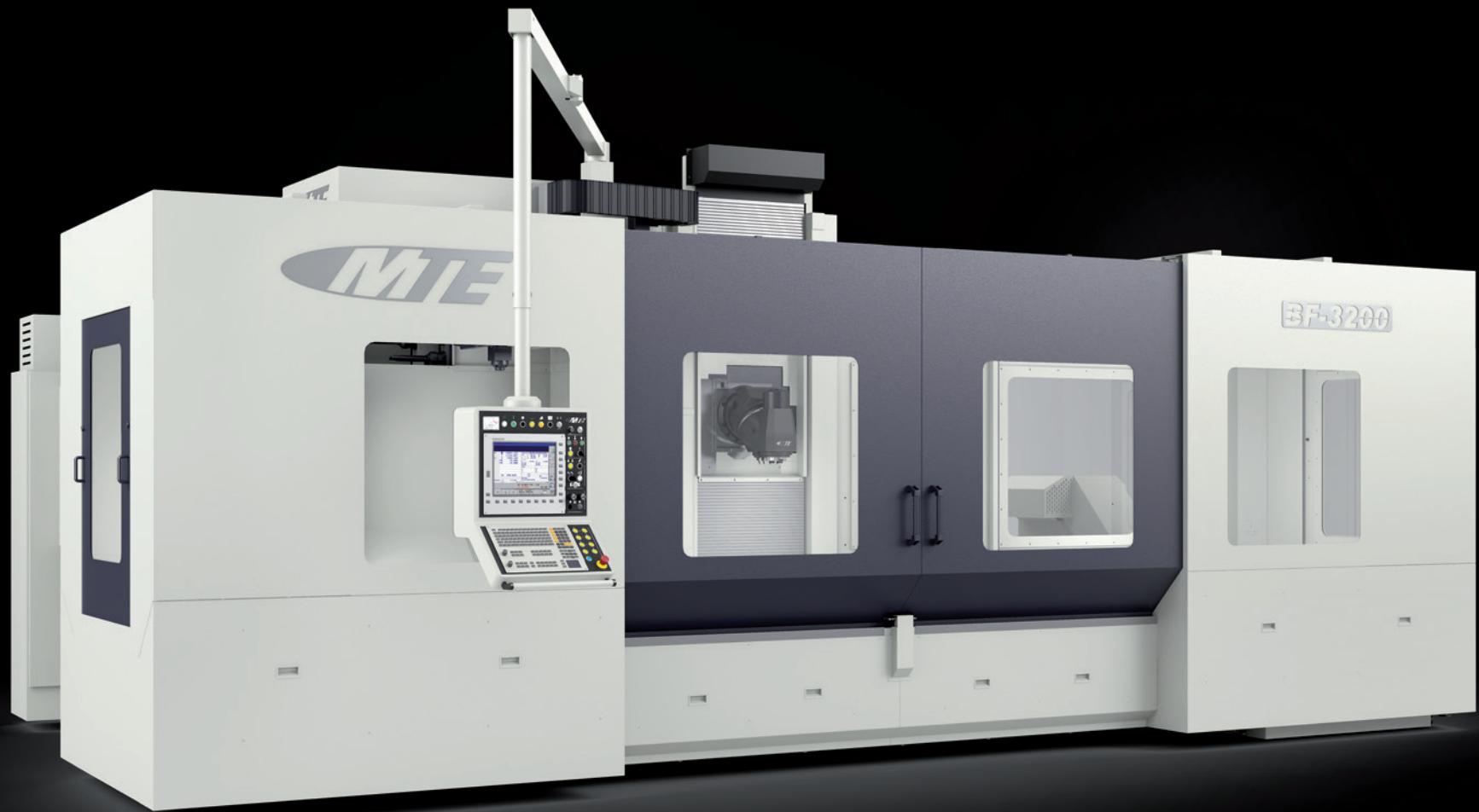


MTE MILLING
MACHINES



FRICION GUIDEWAY
BED TYPE MILLING
MACHINES

K / BF

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.

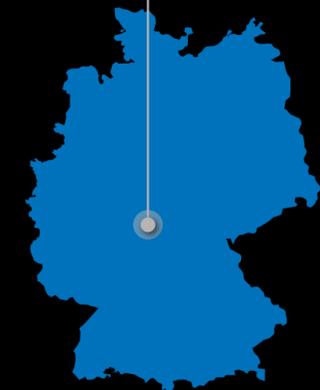
To be successful in this market you have to deliver top-quality products and services, and offer customers individual and flexible solutions for their requirements. Our family-run company's two sites are closely networked, have flat hierarchies, short communication paths and are under single management.

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



SALES DEPARTMENT SERVICE

MTE Germany
in Montabaur



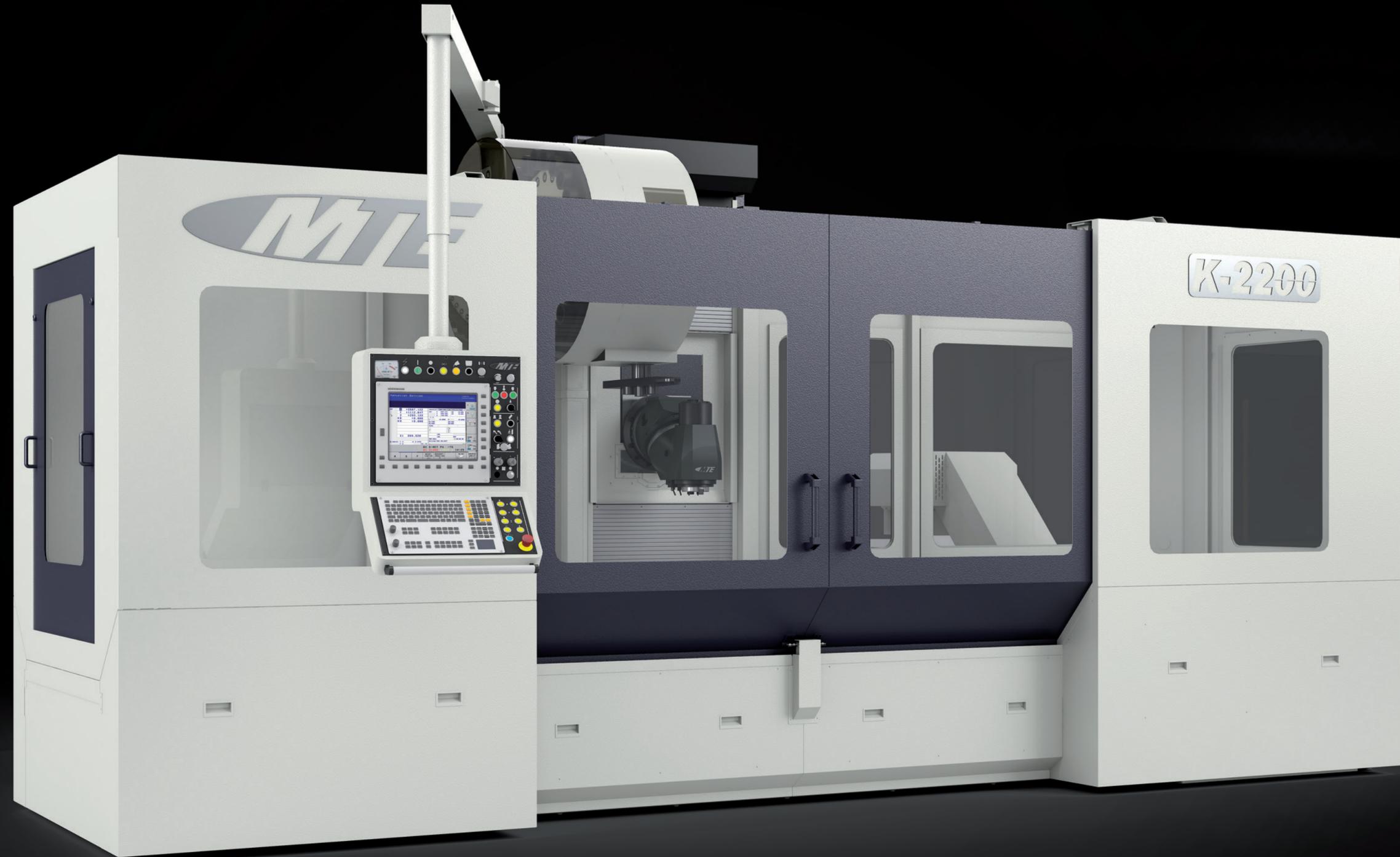
K

MODELS

2200

2700

3200



*Open Top enclosure (optional)

FRICTION GUIDEWAY BED TYPE MILLING MACHINES **K**



The **K series** is used for tool making, and in the mechanical engineering and steel construction industries for processing medium-sized, compact workpieces.

These machines can be fitted with manual or automatically swivelling milling heads, with or without tool changer, with full housing or simple splash guards for protruding workpieces. We can build your K series bed type milling machine to your precise individual specifications.

TECHNICAL FEATURES

	K	2200	2700	3200
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TABLE

Working surface	mm	2.200 x 850	2.700 x 850	3.200 x 850
T-slots	mm	1x22H7 + 4 x 22H12 in 160		
Maximum load	kg	4.500	6.000	7.000

TRAVELS

X axis (longitudinal)	mm	2.000	2.500	3.000
Y axis (cross)	mm	1.000		
Z axis (vertical)	mm	1.100		

SPINDLE

Spindle taper		SK50 DIN 69871 / AD		
Speed	rpm	4.000 / (6.000) ¹		
Ranges		2		
Power	kW	24 ²		
Maximum torque	Nm	1.020 ³ (4.000 rpm) 555 ⁴ (6.000 rpm) ¹		

FEEDS

Maximum feed	m/min	15		
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WEIGHT

Machine weight	kg	13.000	15.000	17.000
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¹ Option.

² Heidenhain motor.

³ Heidenhain motor and AFK milling head.

⁴ Option. Heidenhain motor and AFK milling head.

MTE reserves the right to modify the design and technical features shown in this catalogue without notice.

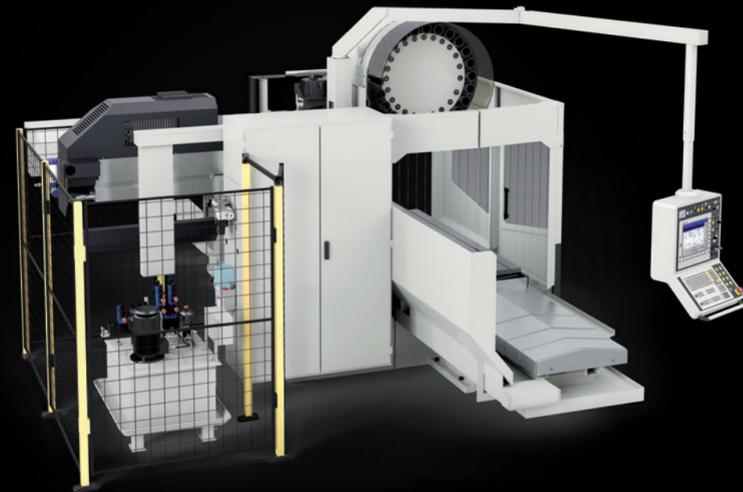
STANDARD EQUIPMENT

- ▶ Two ranges gearbox
- ▶ 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
- ▶ Hydraulic counterbalance system
- ▶ Foot pedal
- ▶ Working light

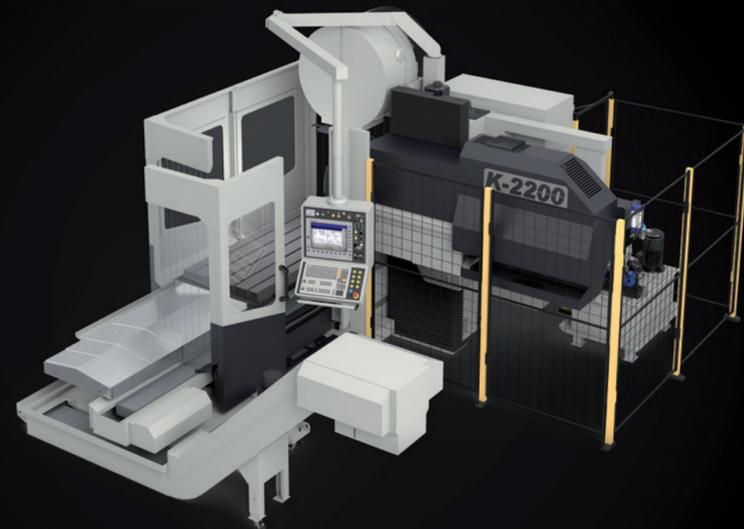
OPTIONAL EQUIPMENT

- ▶ 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 rpm 2.5°x1° (AFK)
- ▶ 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
- ▶ 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
- ▶ Electrical cabinet cooling unit
- ▶ Fourth axis rotary tables
- ▶ Tools & piece probes: M&H, Heidenhain and Renishaw
- ▶ Brankamp CMS (Collision Monitoring System)
- ▶ MQL system

Note: all 6.000 rpm milling heads are cooled. Cooled head optional at 4.000 rpm.



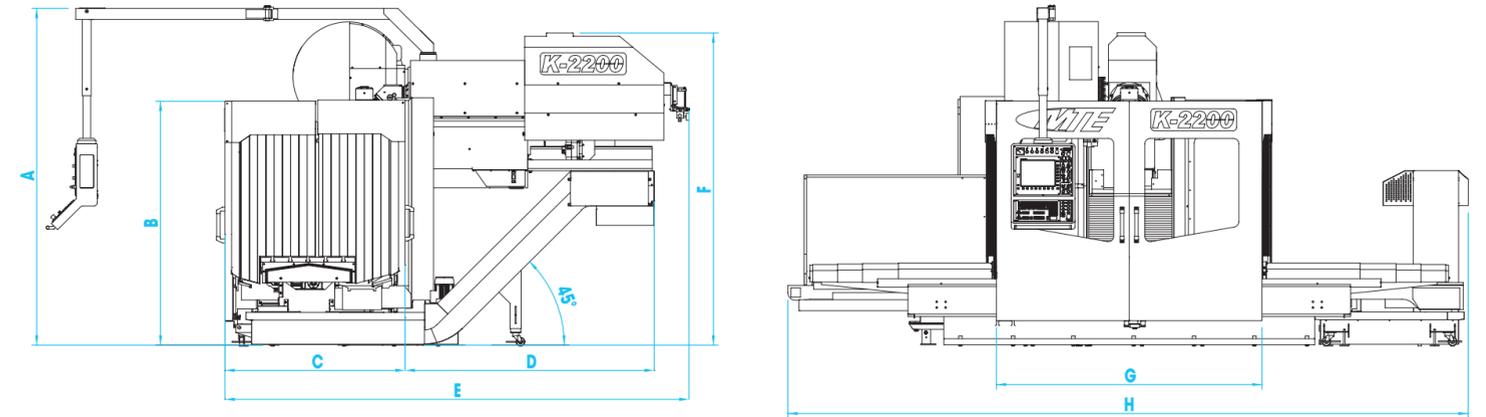
K model with standard enclosure. Side view



K model with standard enclosure. Backside view

> K STANDARD ENCLOSURE

DIMENSIONS

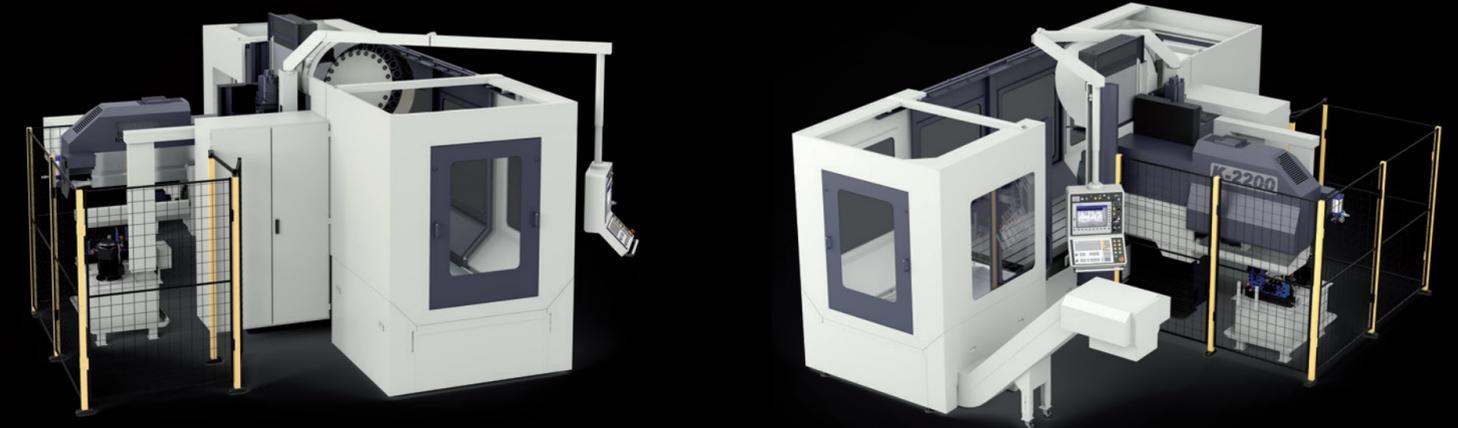
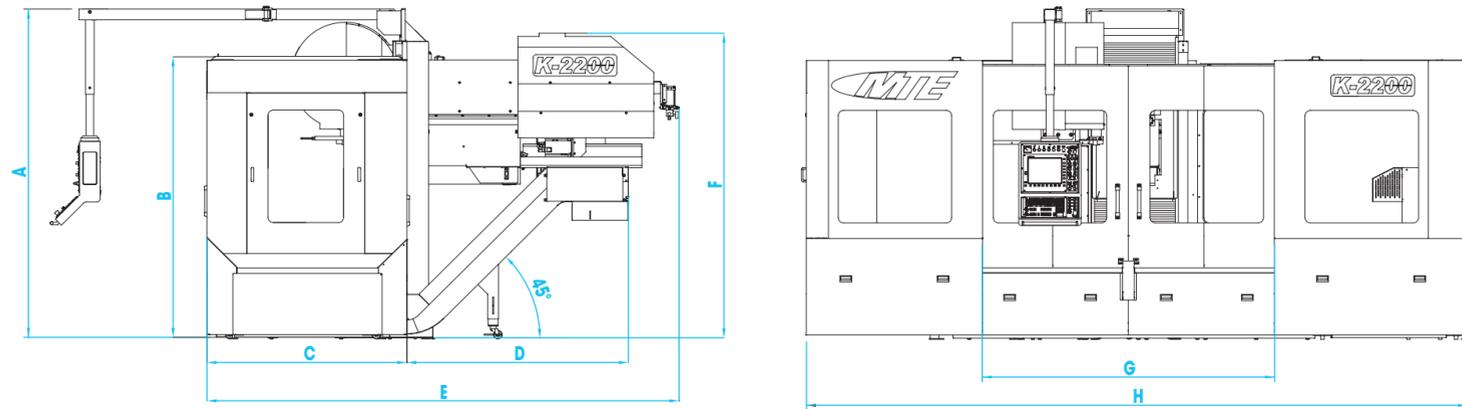


K STANDARD ENCLOSURE (mm)								
	A	B	C	D	E	F	G	H
K-2200	3.100	2.250	1.650	2.200	4.200	2.850	2.400	6.350
K-2700	3.100	2.250	1.650	2.200	4.200	2.850	2.400	7.350
K-3200	3.100	2.250	1.650	2.200	4.200	2.850	2.900	8.350



> OPEN TOP ENCLOSURE

DIMENSIONS



K OPEN TOP ENCLOSURE (mm)								
	A	B	C	D	E	F	G	H
K-2200	3.100	2.600	1.850	2.050	4.400	2.850	2.700	6.150
K-2700	3.100	2.600	1.850	2.050	4.400	2.850	3.200	7.150
K-3200	3.100	2.600	1.850	2.050	4.400	2.850	3.200	8.150

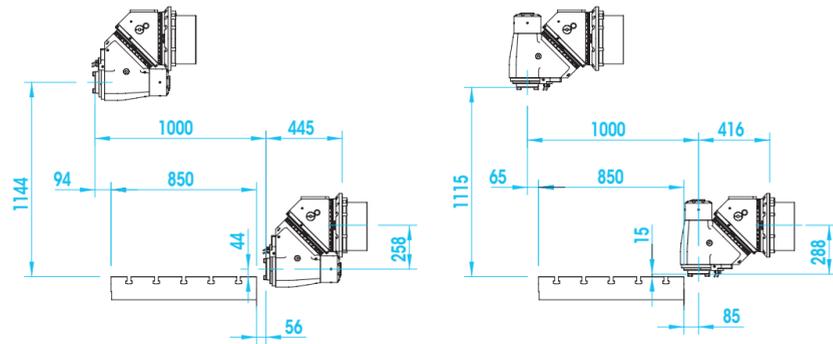
¹ + 500 mm. with Full Closed enclosure.



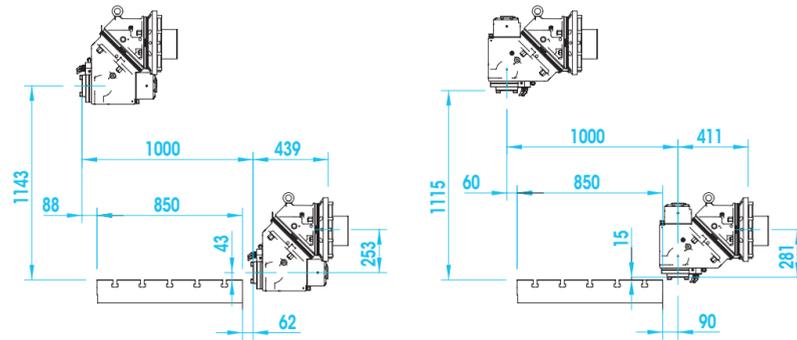
K Open Top model

MILLING HEADS

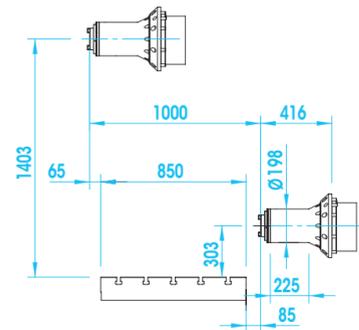
AUTOMATIC MILLING HEAD (AFK) 2,5°x2,5° (4.000/6.000 rpm) / 1x2,5° (4.000 rpm)



MANUAL MILLING HEAD 4.000/6.000 rpm (MFK)

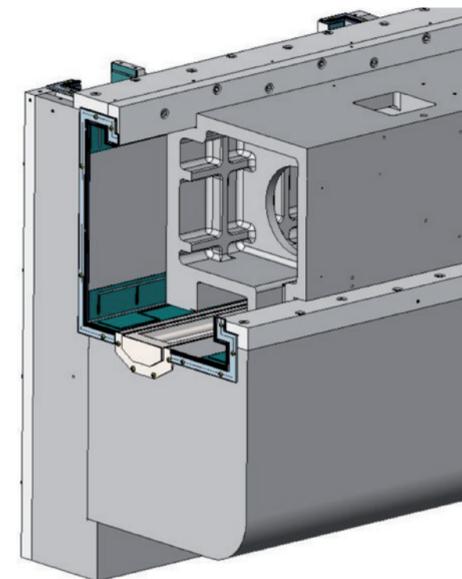
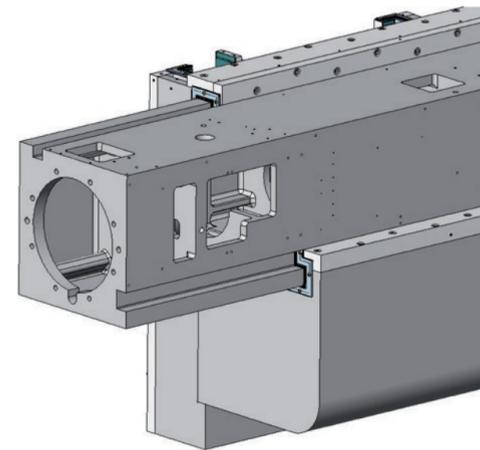


DIRECT SPINDLE HEAD 4.000 rpm (HFK-225)



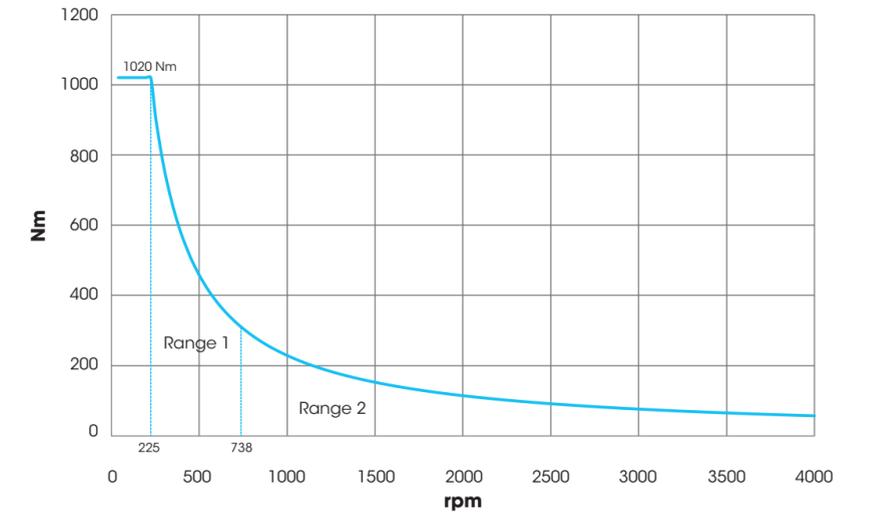
Dimensions in mm.

FRICTION GUIDEWAY DETAIL

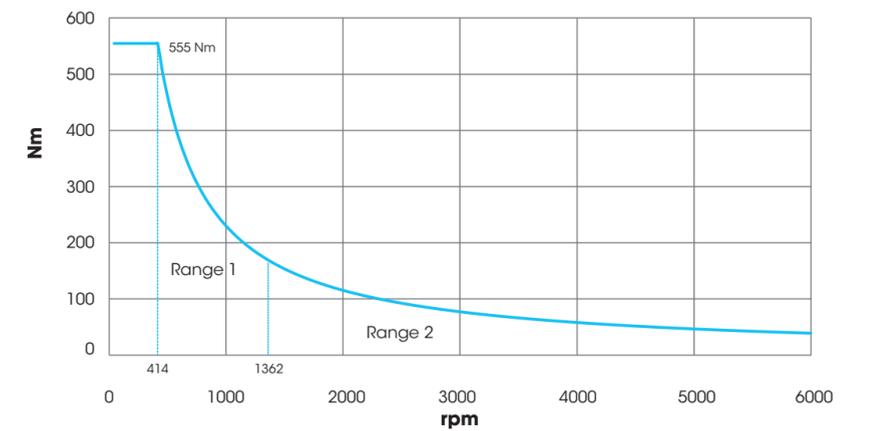


POWER-TORQUE DIAGRAM

24 kW AFK/MFK 4.000 rpm



24 kW AFK 6.000 rpm



BF

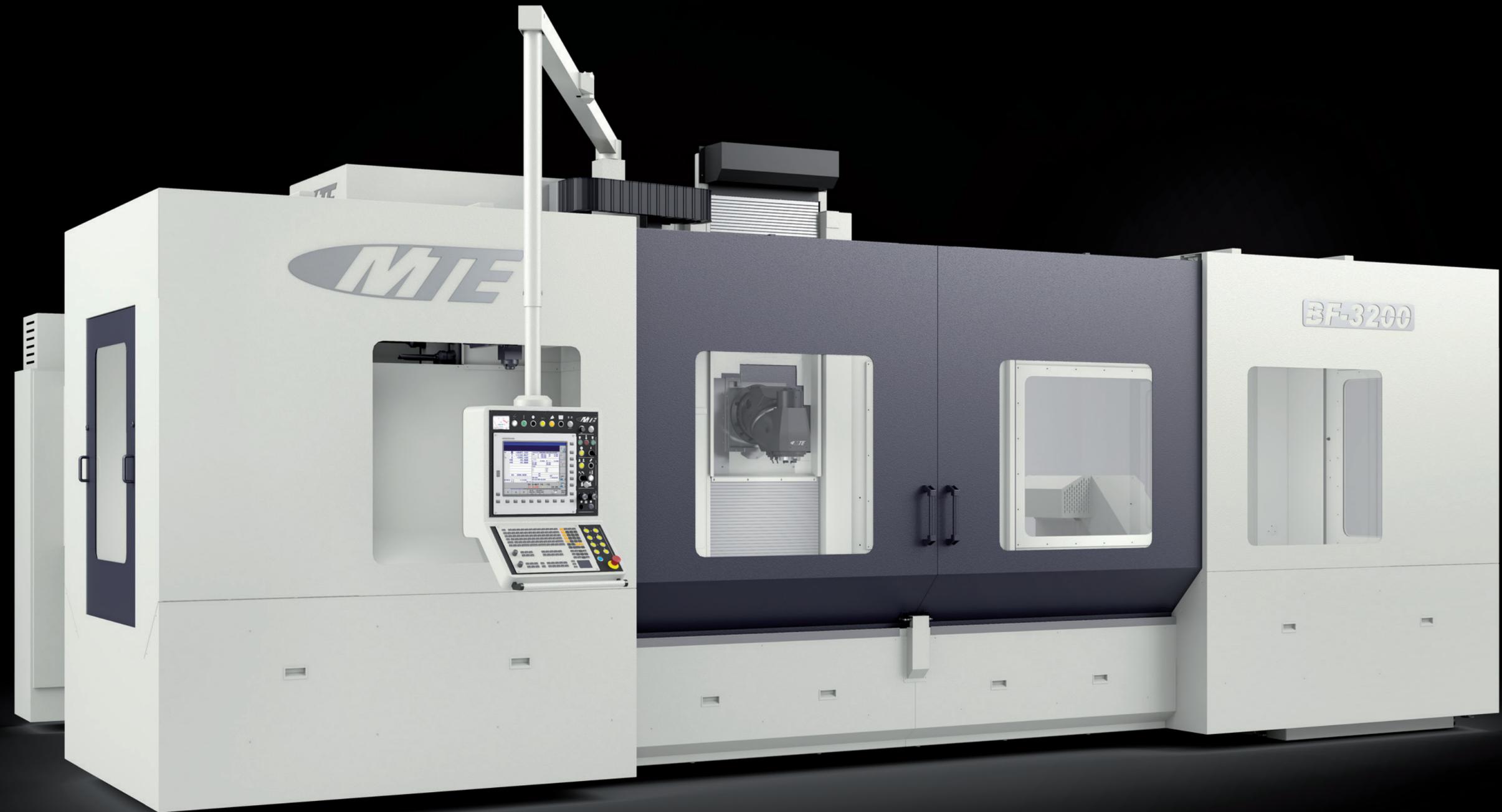
MODELS

2200

3200

4200

5200



*Open Top enclosure (optional)

FRICTION GUIDEWAY BED TYPE MILLING MACHINES **BF** >



The **BF series** is suitable for universal applications. And we are not just saying that. They can be used for heavy machining operations in tool making, mould making and mechanical engineering. At the same time, the BF has proven to be ideal for processing fragile welded constructions.

In both areas of application the BF series machines offer generously dimensioned flat guides and optimum vibration damping.

TECHNICAL FEATURES

BF	2200	3200	4200	5200
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TABLE

Working surface	mm	2.200 x 1.000 (1.200) ¹	3.200 x 1.000 (1.200) ¹	4.200 x 1.000 (1.200) ¹	5.200 x 1.000 (1.200) ¹
T-slots	mm	1x22H7 + 6x22H12 in 140 (160) ²			
Maximum load	kg	7.000	11.000	12.000	13.000

TRAVELS

X axis (longitudinal)	mm	2.000	3.000	4.000	5.000
Y axis (cross)	mm	1.000 (1.200) ¹ (1.300) ¹			
Z axis (vertical)	mm	1.000 (1.500) ¹ (2.000) ¹			

SPINDLE

Spindle taper		SK50 DIN 69871 / AD			
Speed	rpm	4.000 / (6.000) ¹			
Ranges		3			
Power	kW	32 ³			
Maximum torque	Nm	2.050 ⁴ (4.000 rpm) 1.085 ⁵ (6.000 rpm) ¹			

FEEDS

Maximum feed	m/min	15			
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WEIGHT

Machine weight	kg	24.000	26.000	28.000	30.000
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¹ Option.

² Option. 1.200 mm. table width.

³ Heidenhain motor.

⁴ Heidenhain motor and AFK milling head.

⁵ Option. Heidenhain motor and AFK milling head.

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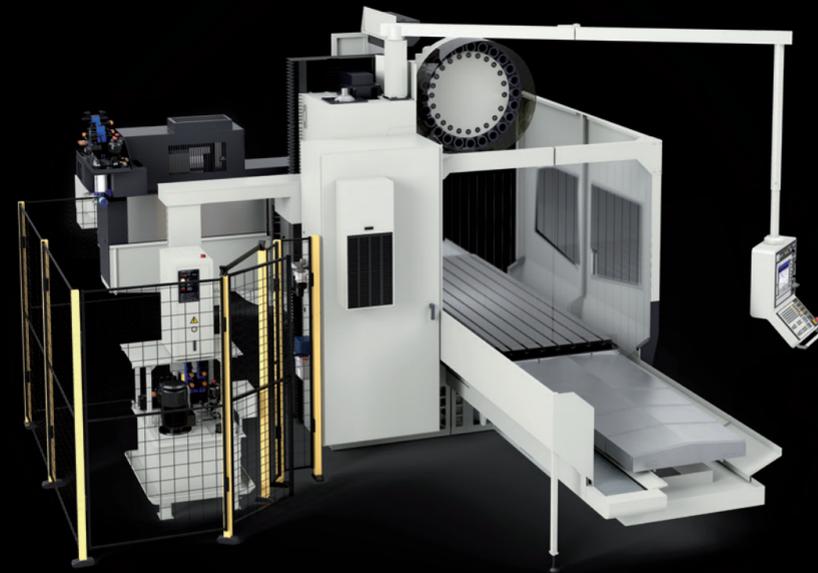
STANDARD EQUIPMENT

- ▶ Three ranges cooled gearbox
- ▶ 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
- ▶ Hydraulic counterbalance system
- ▶ Foot pedal
- ▶ Working light

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)
- ▶ 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 systems
- ▶ 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
- ▶ Electrical cabinet cooling unit
- ▶ 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.



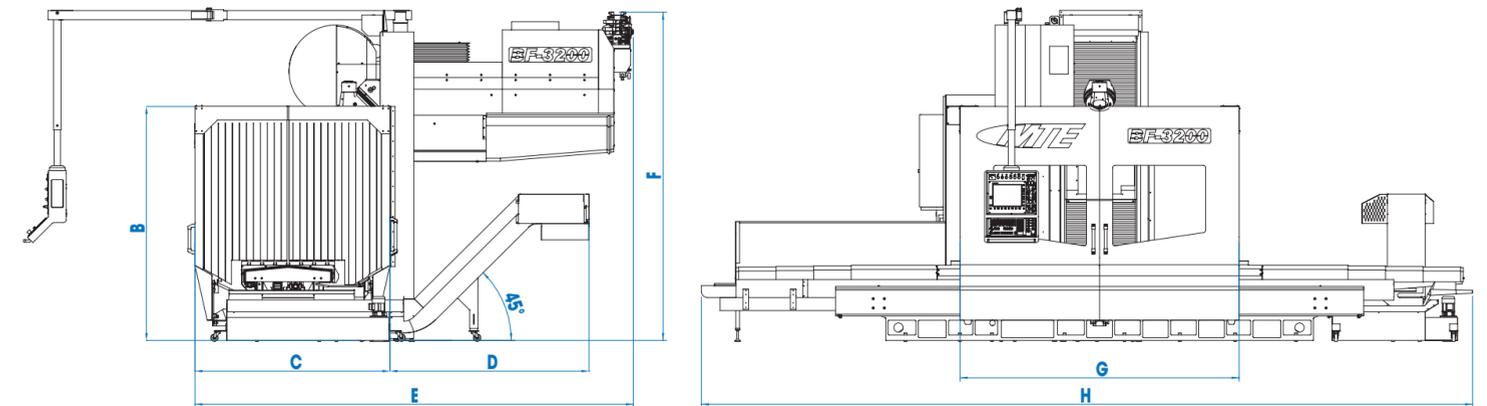
BF model with standard enclosure. Side view



BF model with standard enclosure. Backside view

> BF STANDARD ENCLOSURE

DIMENSIONS



BF STANDARD ENCLOSURE (mm)								
	A	B	C	D	E	F	G	H
BF-2200	3.600 ¹	2.550 ²	2.100	2.200	4.750	3.550 ³	2.300	6.150
BF-3200	3.600 ¹	2.550 ²	2.100	2.200	4.750	3.550 ³	3.300	8.300
BF-4200	3.600 ¹	2.550 ²	2.100	2.200	4.750	3.550 ³	3.300	10.050
BF-5200	3.600 ¹	2.550 ²	2.100	2.200	4.750	3.550 ³	3.300	12.200

Data for Y= 1.200 / Z= 1.500, 1.000 mm. table width and 150 mm. bed-column spacer.

¹ 3.100 for Z= 1.000 / 4.100 for Z= 2.000.

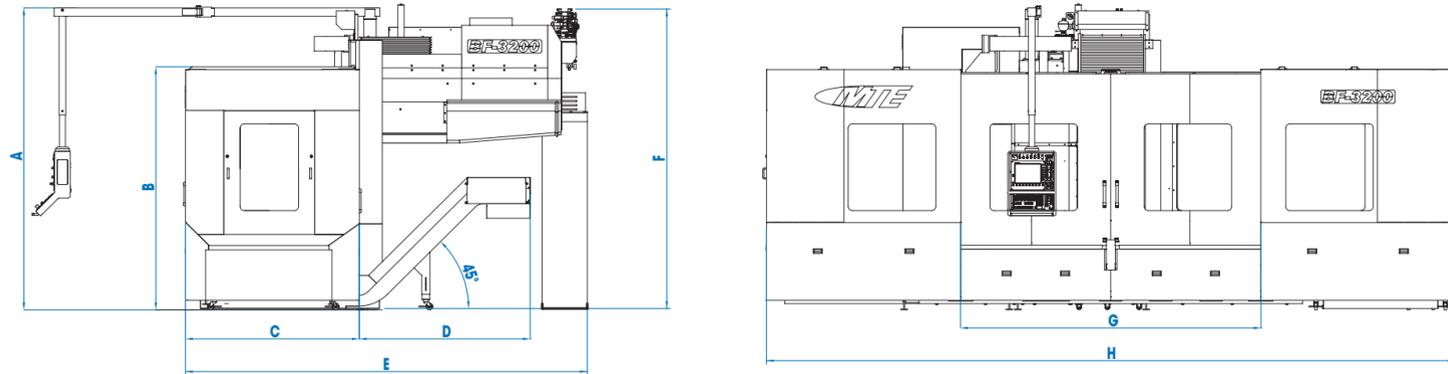
² 2.550 for Z= 1.000 / 3.050 for Z= 2.000.

³ 3.050 for Z= 1.000 / 4.050 for Z= 2.000.



> OPEN TOP ENCLOSURE

DIMENSIONS



BF OPEN TOP ENCLOSURE (mm)								
	A	B	C	D	E	F	G	H
BF-2200	3.600 ¹	2.850 ²	2.100	2.050	4.750	3.550 ³	2.600	6.400
BF-3200	3.600 ¹	2.850 ²	2.100	2.050	4.750	3.550 ³	3.600	8.400
BF-4200	3.600 ¹	2.850 ²	2.100	2.050	4.750	3.550 ³	4.600	10.400
BF-5200	3.600 ¹	2.850 ²	2.100	2.050	4.750	3.550 ³	5.600	12.400



Data for Y= 1.200 / Z= 1.500, 1.000 mm. table width and 150 mm. bed-column spacer.

¹ 3.100 for Z= 1.000 / 4.100 for Z= 2.000.

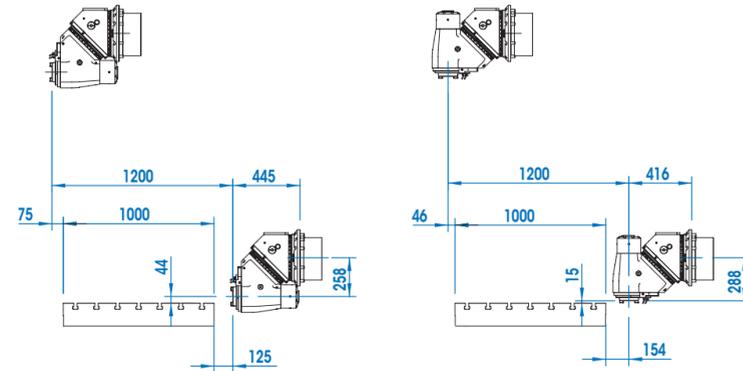
² 2.850 for Z= 1.000 / 3.350 for Z= 2.000; with Full Closed enclosure + 250 mm. for Z= 1.000 and + 500 mm. for Z= 1.500 and Z= 2.000.

³ 3.050 for Z= 1.000 / 4.050 for Z= 2.000.

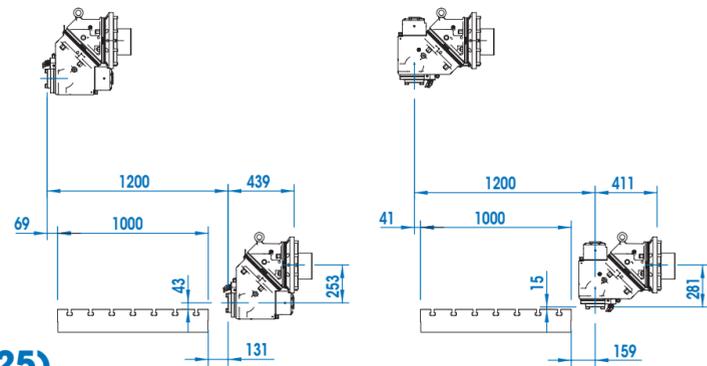


MILLING HEADS

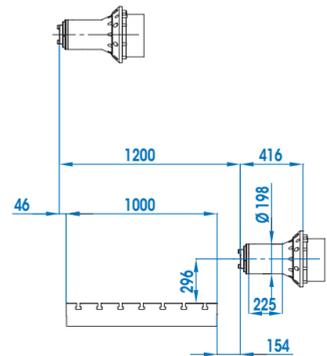
AUTOMATIC MILLING HEAD (AFK) 2,5°x2,5° (4.000/6.000 rpm) / 1x2,5° (4.000/6.000 rpm)



MANUAL MILLING HEAD 4.000/6.000 rpm (MFK)

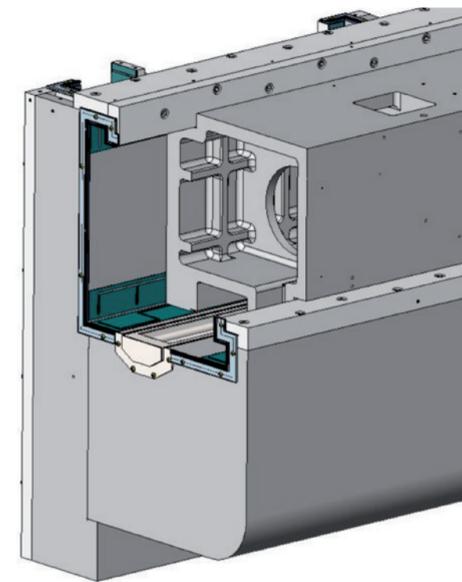
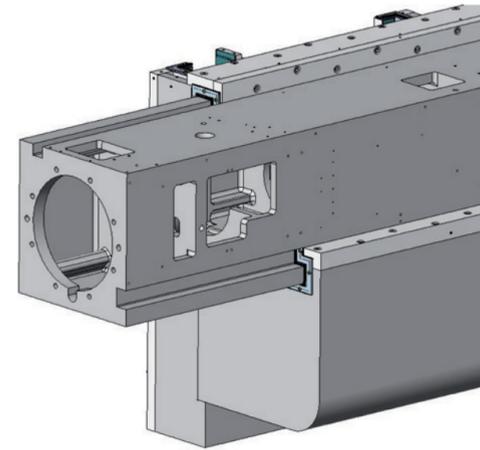


DIRECT SPINDLE HEAD 4.000 rpm (HFK-225)



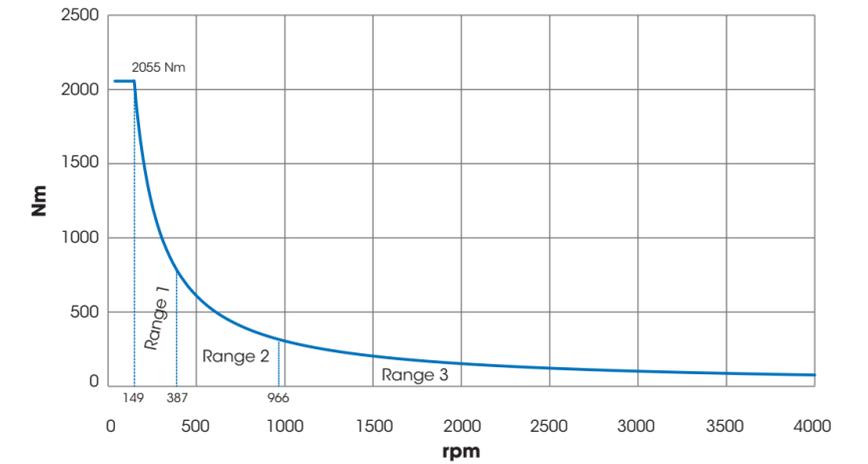
Dimensions with Y= 1.200, 1.000 mm. table width and 150 mm. bed-column spacer. Dimensions in mm.

FRICTION GUIDEWAY DETAIL

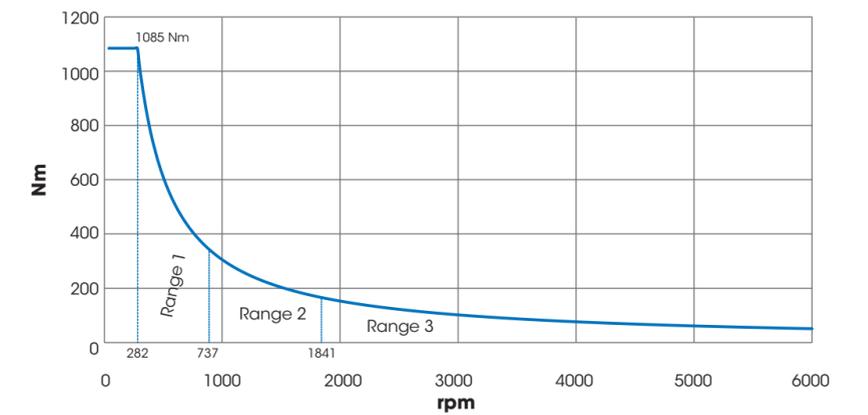


POWER-TORQUE DIAGRAM

32 kW AFK/MFK 4.000 rpm



32 kW AFK 6.000 rpm





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