FLOOR TYPE MILLING MACHINES

FBF-S/FBF-M
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 offer 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

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

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 why the metal working industry was established here back in medieval times, with the foundations for the present-day metalworking 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. This tradition of engineering excellence has been a key factor in ensuring that the entire project, from order placement to machine delivery, is implemented without any hitches and provides a competent on-site service covering the machine’s entire lifespan.

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 customer’s needs before and after the sale.

Our aim is to deliver high-quality products to our customers. Sometimes it’s standard product that 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 fact that we can do this is possible because each of our employees respect our company values and are committed to 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 components.

Since all components for the MTE machines are cast, we have a long-standing collaboration with a castings foundry that specialises in machine tool engineering. The depth of production, from the machining of the raw cast to final assembly, is a key factor in the company’s growth and success.

The combinations of mechanical engineering tradition and commitment to innovation, of skilled and highly engaged employees, and of internationally respected partners for large floor type and bed type milling machines, are absolutely critical to helping us develop more than 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

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MTE Spain

Spanish Basque Country

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FBF-S
The FBF-S machine is a stable floor type milling machine for small to medium workpieces with a vertical travel of up to 2,250 mm. It is used for general mechanical engineering applications and, due to its incredibly flexible configuration possibilities, now also for contract manufacturing and for tool and mould making.

The FBF-S series’ strengths – high stability and powerful drive through optional pendulum machining and the combination with NC rotary tables – can also be realised in considerably higher spindle running times.

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**TECHNICAL FEATURES**

**FBF-S**

**TRAVELS**

<table>
<thead>
<tr>
<th>Axis</th>
<th>Travel (mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>X axis (longitudinal)</td>
<td>3,000 – …</td>
</tr>
<tr>
<td>Y axis (cross)</td>
<td>1,200 (1,300)</td>
</tr>
<tr>
<td>Z axis (vertical)</td>
<td>1,500 (2,000)</td>
</tr>
</tbody>
</table>

**SPINDLE**

<table>
<thead>
<tr>
<th>Feature</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Spindle taper</td>
<td>SK50 DIN 69871/AD</td>
</tr>
<tr>
<td>Speed</td>
<td>4000 / (6000)</td>
</tr>
<tr>
<td>Ranges</td>
<td>3</td>
</tr>
<tr>
<td>Power</td>
<td>322 (40)</td>
</tr>
<tr>
<td>Maximum torque</td>
<td>2,050 (6,000 rpm) / 1,085 (6,000 rpm)</td>
</tr>
</tbody>
</table>

**FEEDS**

<table>
<thead>
<tr>
<th>Feed</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maximum feed</td>
<td>25</td>
</tr>
</tbody>
</table>

1 Option.
2 Heidenhain motor.
3 Heidenhain 32 KW and AKF milling head. For further information (combination of other milling heads and power), please feel free to contact us.
4 Option. Heidenhain 32 KW and AKF milling head. For further information (combination of other milling heads and power), please feel free to contact us.

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**FBF-S ENCLOSURE**

**DIMENSIONS**

<table>
<thead>
<tr>
<th>FBF-S (mm)</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
</tr>
</thead>
<tbody>
<tr>
<td>FBF-S 4000</td>
<td>4.100²</td>
<td>8.000</td>
<td>1.600</td>
<td>3.250³</td>
</tr>
<tr>
<td>FBF-S 6000</td>
<td>4.100²</td>
<td>11.050</td>
<td>1.600</td>
<td>3.250³</td>
</tr>
<tr>
<td>FBF-S 8000</td>
<td>4.100²</td>
<td>13.050</td>
<td>1.600</td>
<td>3.250³</td>
</tr>
<tr>
<td>FBF-S 10000</td>
<td>4.100²</td>
<td>16.450</td>
<td>1.600</td>
<td>3.250³</td>
</tr>
</tbody>
</table>

¹ Z= 1.500 and ATC 40 tools / 4.600 with Z= 2.000 and ATC 40 tools / 4.800 with ATC 60 tools.

Machine dimensions change according to the travels of the machine.

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**STANDARD EQUIPMENT**
- Three ranges cooled gearbox
- INA linear guiding system
- Manual milling head 4.000 rpm (MFK)
- Heidenhain CNC (TNC 530 HSCi / TNC 640)
- Heidenhain direct pressurized linear scales
- Electronic handwheel
- Integrated security system (PILZ)
- Operator cabin with CNC control panel
- Perimetral closing according to CE standard
- Automatic lubrication system
- External coolant equipment
- Electrical cabinet cooling unit
- Hydraulic counterbalance system
- Working lights
- Leveling elements
- Air, power and ethernet connectors inside the cabin

**OPTIONAL EQUIPMENT**
- Manual milling head 6.000 rpm (MFK)
- Automatic milling head (4.000/6.000 rpm, 2.5x2.5, 4.000 rpm, 2.5x3.0, 4.000 rpm, 2.5x5.0)
- Direct spindle 4.000 rpm (MFK)
- Different CNC available: Siemens, Fagor, and Fagor
- DIN12800CNC screen
- Second control panel
- Wireless handwheel
- Teleservice
- Random vertical tool changer 26 tools
- Chain type horizontal, vertical tool changer
- Number of tools: 40, 60, 80
- Advanced tool magazine management
- Chip conveyor
- Coolant through the spindle 20/50 bar with filter paper system
- Magnetic drum / Oil based stream with micro-oxygen / Frequency controller for the motor
- Air through the spindle / Through outside nozzles
- Coolant pistols
- Fourth axis rotary tables
- Tools & piece probe (M&H, Heidenhain, and Renishaw)
- Brankamp CMS (Collision Monitoring System)
- NGL Systems
- Pendular working function
- Note: all 6.000 rpm milling heads are cooled. Cooled head optional at 4.000 rpm.

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FBF-S FLOOR TYPE MILLING MACHINES
MILLING HEADS

AUTOMATIC MILLING HEAD (AFK) 2.5°x2.5° / 1x2.5° (4.000/6.000 rpm)

DIRECT SPINDLE HEAD 4.000 rpm

Dimensions in mm.

LINEAR GUIDEWAY DETAIL

POWER-TORQUE DIAGRAM

32 kW AFK/MFK 4.000 rpm

32 kW AFK 6.000 rpm
FBF-M

FLOOR TYPE MILLING MACHINES
TECHNICAL FEATURES

FBF-M

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</tr>
<tr>
<td>Ranges</td>
<td>3</td>
</tr>
<tr>
<td>Power (kW)</td>
<td>32 (40)</td>
</tr>
<tr>
<td>Maximum torque (Nm)</td>
<td>2,050 (4,000 rpm)</td>
</tr>
</tbody>
</table>

FEEDS

| Maximum feed (m/min) | 25 |

Option.

Heidenhain motor.

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

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

The FBF-M series with its extremely stable design is predominantly used for mechanical engineering applications, and for the processing of medium-sized and heavy workpieces with a vertical travel of up to 3,000 mm. The series has fully automatic head-changer systems with up to 4 different milling heads, automatic tool-changing tables and tool changers, as well as optional shuttle machining, offering practical and maximum flexibility in the high-precision processing of extremely complex workpieces. In some cases the machine is even used to process complex large tool moulds in high strength-to-density ratio materials.

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FBF-M ENCLOSURE

DIMENSIONS

FBF-M (mm)

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<th>C</th>
<th>D</th>
</tr>
</thead>
<tbody>
<tr>
<td>FBF-M 6000</td>
<td>5.750</td>
<td>11.900</td>
<td>1.600</td>
<td>3.900</td>
</tr>
<tr>
<td>FBF-M 8000</td>
<td>5.750</td>
<td>14.000</td>
<td>1.600</td>
<td>3.900</td>
</tr>
<tr>
<td>FBF-M 10000</td>
<td>5.750</td>
<td>16.200</td>
<td>1.600</td>
<td>3.900</td>
</tr>
<tr>
<td>FBF-M 12000</td>
<td>5.750</td>
<td>18.400</td>
<td>1.600</td>
<td>3.900</td>
</tr>
</tbody>
</table>

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

The dimensions change according to the travels of the machine.

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- INA linear guiding system
- Manual milling head 4.000 rpm (MKH)
- Heidenhain CNC (TNC 530 HSC) / TNC 640
- Heidenhain direct pressurized linear scales
- Electronic handwheel
- Integrated security system (PLZ)
- Operator cabin with CNC control panel
- Perimetal closing according to CE standard
- Automatic lubrication system
- External coolant equipment
- Electrical cabinet cooling unit
- Hydraulic counterbalance system
- Working lights
- Leveling elements
- Air, power and ethernet connectors inside the cabin

OPTIONAL EQUIPMENT
- Manual milling head 6.000 rpm (MKH)
- Automatic milling head 4.000/6.000 rpm 2.5° x 2.5° (AFK)
- Automatic milling head 4.000/6.000 rpm 2.5° x 1° (AFK)
- Automatic continuous milling head 4.000/6.000 rpm 0.001° x 0.001° (SFK)
- 19 inches CNC screen
- Different CNC available: Siemens, Fanuc and Fagor
- Manual milling head 6.000 rpm (MFK)
- Automatic turning head 4.000/6.000 rpm 2.5° x 2.5° (AFK)
- Automatic turning head 4.000/6.000 rpm 2.5° x 1° (AFK)
- Automatic continuous turning head 4.000/6.000 rpm 0.001° x 0.001° (SFK)
- Direct spindle 4.000 rpm (HFK)
- Different CNC available: Siemens, Fanuc and Fagor
- Operator cabin with CNC control panel
- Perimetal closing according to CE standard
- Automatic lubrication system
- External coolant equipment
- Electrical cabinet cooling unit
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- Leveling elements
- Air, power and ethernet connectors inside the cabin
MILLING HEADS

AUTOMATIC MILLING HEAD (AFK) 2.5°x2.5° / 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)

Dimensions in mm.

1. 35 mm. more with automatic head change system.
2. 24 mm. more with automatic head change system.
3. 34 mm. more with automatic head change system.

LINEAR GUIDEWAY DETAIL

POWER-TORQUE DIAGRAM

32 kW AFK/MFK 4.000 rpm

32 kW AFK 6.000 rpm