

TECHNICAL DATASHEET

CNC-BED MILLING MACHINE

manufacturer	MTE
type	BF 4200
control	HEIDENHAIN iTNC 530 HSCI
built	2009



Travels

X-axis (longitudinal)	4.000 mm
Y-axis (cross)	1.200 mm
Z-axis (vertical)	2.000 mm

Clamping table

Clamping surface	4.200 x 1.000 mm
Max. workpiece weight	13.000 kg

Feeds

X-, Y- and Z-axis, stepless	2 - 12.000	mm/min.
Rapid feed X / Y / Z	15	m/min

Universal Milling Head

Swiveling area front/back level	2,5/1°
Power on 100% ED	30 kW
Speed, stepless	40-3.000 Min-1
Gear steps	3
Tool taper	SK 50 – DIN 69871-A

Automatic Tool Changer ATC

Tool places	40	Places
Tool diam. max.	125/240	mm
Tool length max.	350	mm
Tool weight max.	20	kg
Changing positions	Horizontal/vertical	

Guides, drive and measuring systems

- All axis drives with digital drives manufacturer HEIDENHAIN
- Direct measuring systems for X,Y, and Z axis manufacturer HEIDENHAIN
- X-, Y- and Z-axis guidance using high-precision linear guides for maximum precision and dynamics, counter guide coated with Turcite B
- Precision ball screw with preloaded nuts in X-, Y- and Z-axis

Coolant Equipment with Chip conveyor

- Coolant outlet, switchable from coolant to air, at the front of the milling head via manually swivelling nozzles
- Internal coolant supply through the spindle centre.
- Tank volume approx. 400 l
- Normal coolant supply 25l/min 5 bar
- High pressure pump for internal cooling 20 l/min 20 bar
- Coolant tank incl. paper-belt filter system
- Hinged belt chip conveyor, 2 longitudinal conveyors in the machine, 1 cross conveyor on the right side

CNC-control HEIDENHAIN iTNC 530 M

Digital numerical sequence control, including digital drive control, hard disk memory, TFT - color screen,

machining cycles:

Standard drilling and milling cycles, deep drilling, tapping with and without compensation chuck, milling of slots, rectangular and circular pockets, rectangular and circular tenons, boring, drilling-milling (helical path), line-off, drilling patterns, head tilting, backward tilting, shifting and/or rotation of the coordinate system, mirroring, dimensional factor also axis-specific, Linear interpolation on 3 axes, circular interpolation on 2 axes and on 3 axes with rotated working plane, tilt working plane.

HR 410 - Electronic handwheel for operation of all axes.

Measurement, weight

Floor space required	ca. 10,4 x 5,8	m
Machine height	ca. 4,2	m
Machine weight	ca. 21.500	kg

Electrical supply data

Power total	40	kW
Operating voltage	400	V
Operating frequency	50	Hz

Equipment

- Machine bed, column and vertical saddle as welded steel construction, annealed with low tension
- Milling slider as welded steel construction
- Universal milling head, positioning via Hirth toothing, front level 2.5°, back level 1°.
- Oil cooling unit for cooling the milling head
- Thermal compensation of Y-Axis through CNC
- Spindle drive 30 kW
- Automatic gear with 3 gear steps
- Spindle speed max. 3.000 min⁻¹
- Axle drives by means of precision ball screws and digital servo motors
- Measuring touch probe M&H with radio transmission
- CNC control HEIDENHAIN iTNC 530M incl. digital drive technology
- Portable electric handwheel HEIDENHAIN HR 410
- Swiveling operating panel for machine operation in front of the machine
- Automatic tool changer with 40 magazine positions, change position horizontal/vertical
- Coolant system with external shower ring and IKZ through the spindle
- 2 pc. chip conveyor in the working area, ejection on the right back side
- Precision flat guides in all axes, counter guide coated with Turcite B
- Precision ball screws in all axes
- Hydraulic counterbalance in the vertical axis

- Telescopic steel cover of the X-axis
- Milling slides closed at the top and bottom of the vertical axis with link aprons
- Vertical guide covered at the top and bottom with bellows
- Working area enclosure closed on all sides.
The manual sliding doors at the front of the machine can be opened along the entire length of the clamping table.
Safety fencing for the rear machine area with two secured access doors.
- Control cabinet air conditioning
- hydraulic system
- work area lighting
- exhaust system make FILTERMIST, FX 5002
- Painting beige/blue
- Approx. operating hours: Control 19.000 h, machine 15.950 h, program run 4.700 h

Machine is prepared for connection of a 4th axis!