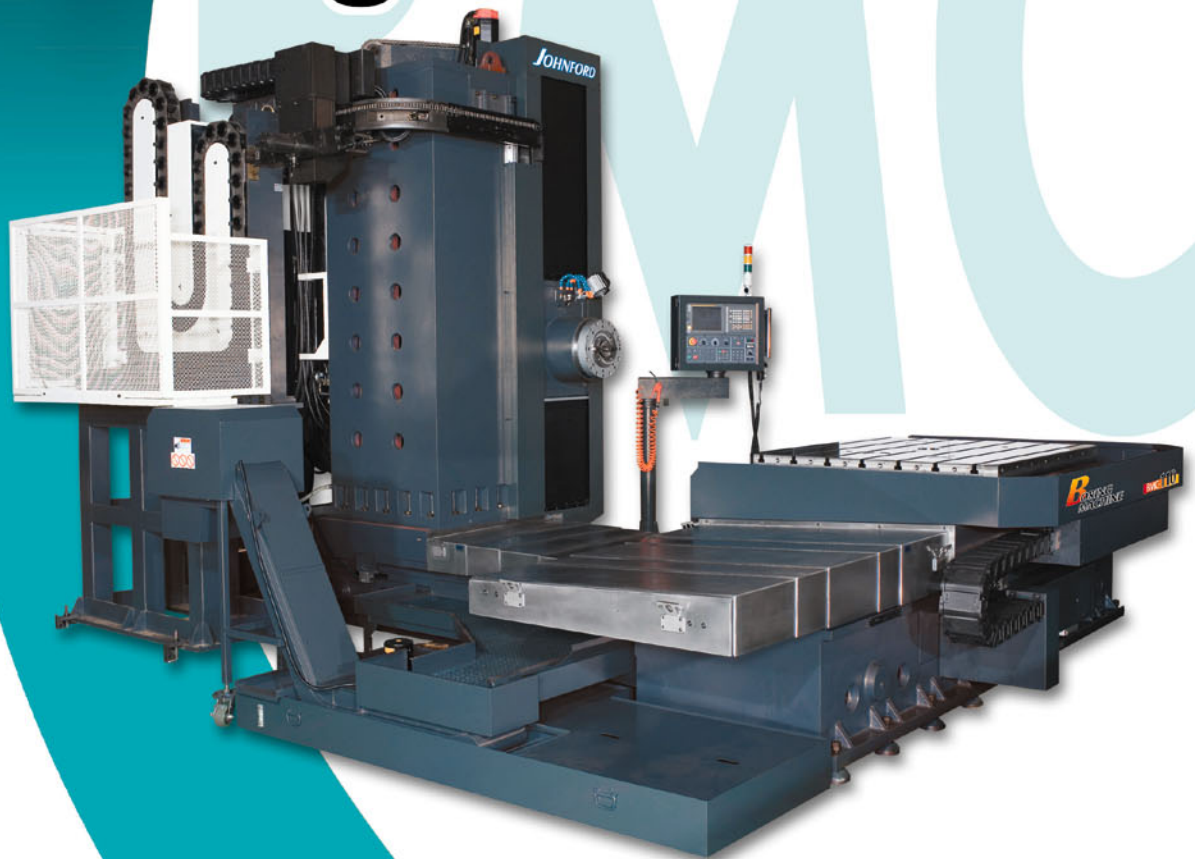




Horizontal Boring and Milling Centers



BMC-110 / 130 / 160

Horizontal Boring and Milling C



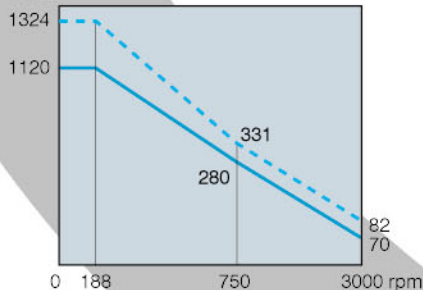
Standard enclosure

- Massive one piece castings
- High-accuracy and high-perf
- Machine a workpiece on the save time for installing and
- Boring, drilling and tapping

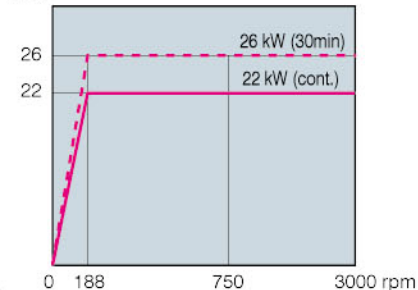
BMC-110/130/160

BMC-110

Spindle Torque (N.m)

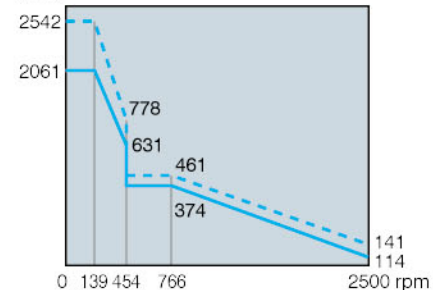


Power (kW)



BMC-130

Spindle Torque (N.m)



enters



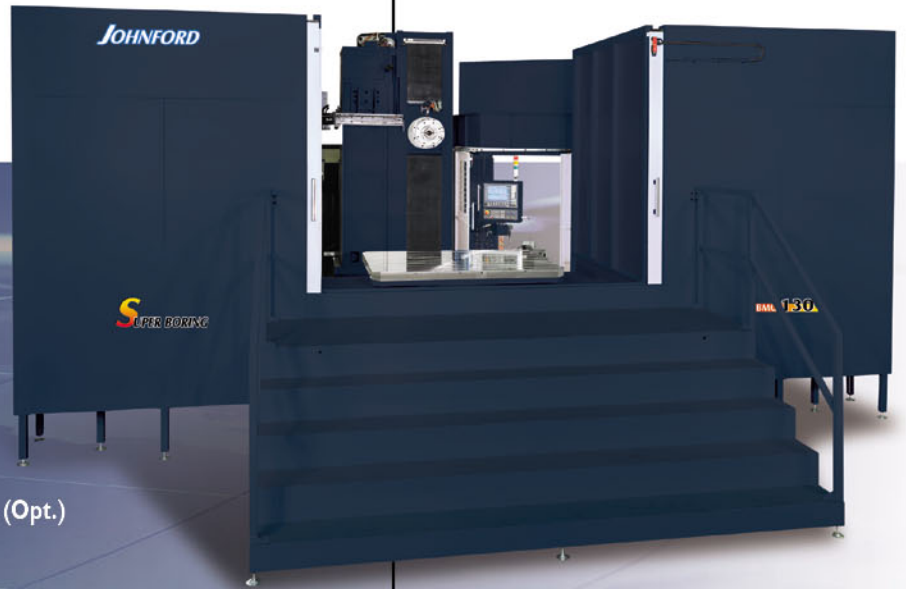
Operate door & table guard
(coolant thru spindle, Opt.)



Fanuc Control

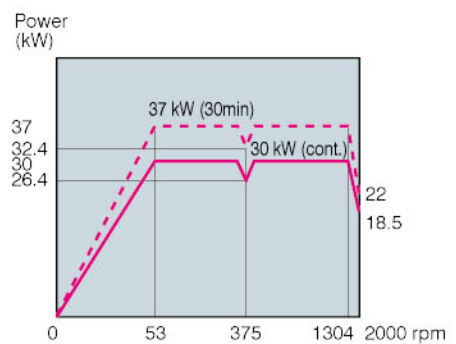
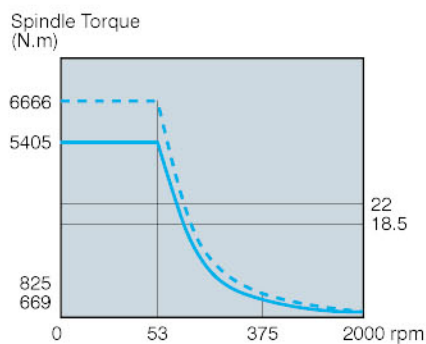
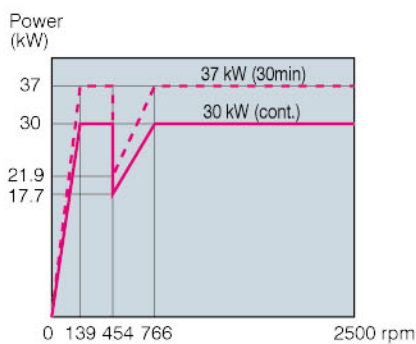
The Fanuc 0i/M-D control is standard and is ideal for general machining applications. For high-speed mold/die, an optional Fanuc 18i/M-B / 31i/M-B control is available.

ormancemachining capability.
rotary table in multi-faces to
setting a workpiece.
are fitted for the BMCs.



Full enclosure (Opt.)

BMC-160



Advanced Structure

← Large table handles big, heavy parts

The BMC large table provides a generous working surface. Maximum workload on the table is impressive.

The BMC-130 and BMC-160 are equipped with roller-type bearings in the B-axis rotary table for both heavy cutting and precision indexing.

← Flexible Indexing Table

Hydraulically powered clamping pads for superior table rigidity at any position.

Precision locating pin

Precision locating holes every 90° for heavy cutting.

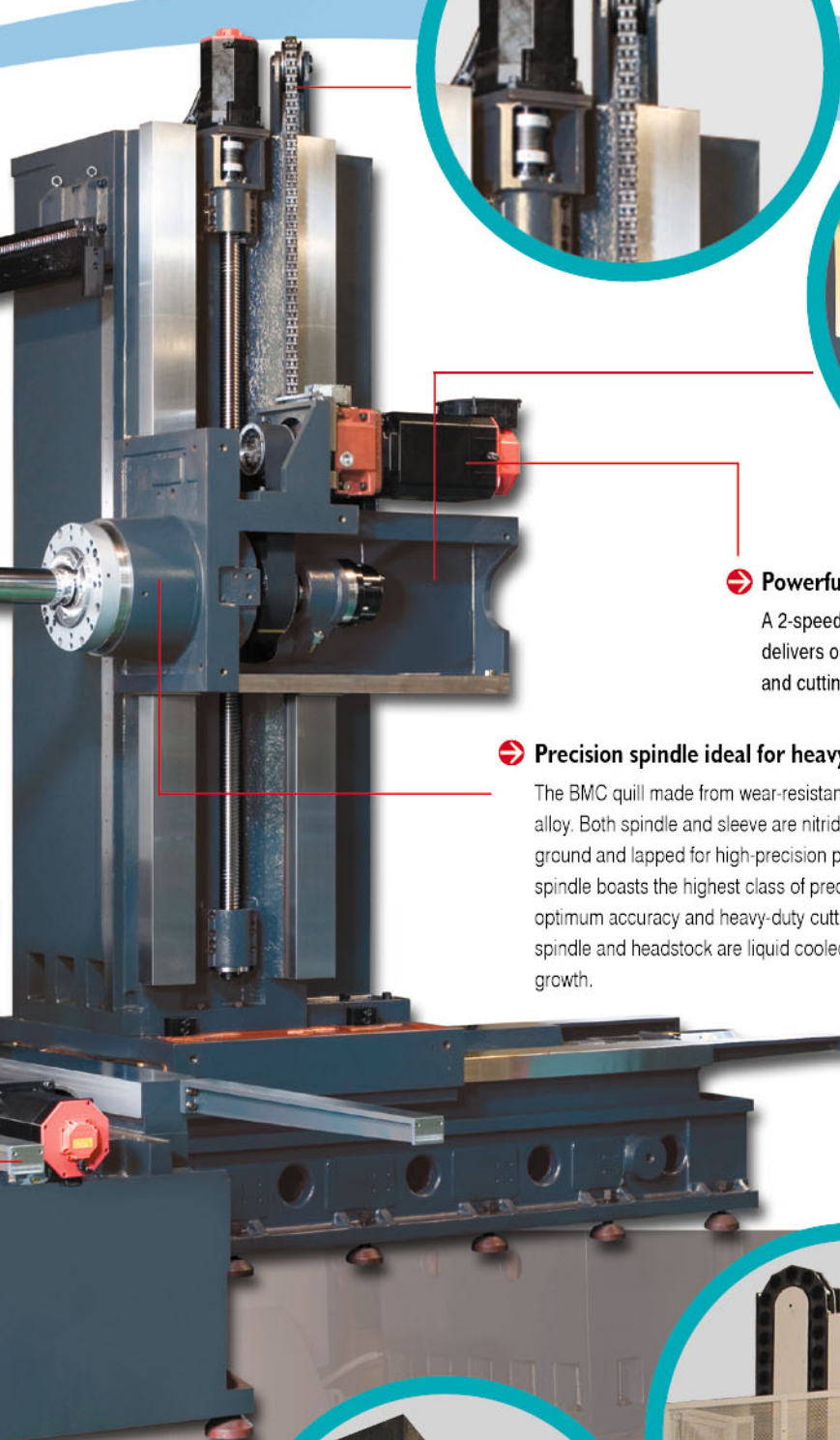
The BMC-110 features a B-axis rotary table, which the turchite-B is used on it, for meeting a heavy cutting on a 7000kg workpiece with powerful clamping.

↑ Linear scales ensure accurate positioning

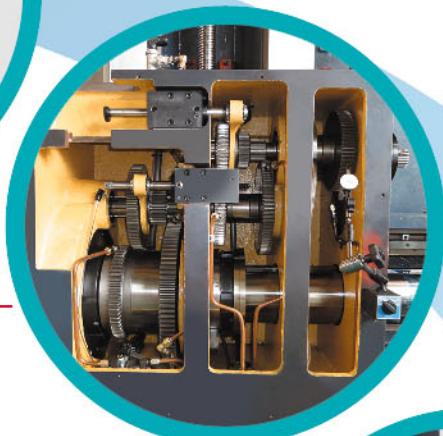
Optional Heidenhain linear scales on all linear axes deliver high accuracy and form a closed-loop feedback control system. Large-diameter, pre-tensioned ballscrews and powerful servomotors further ensure positioning accuracy.

← Standard Chip Removal System

A screw-type conveyor between the table and column discharges into a caterpillar-type conveyor.



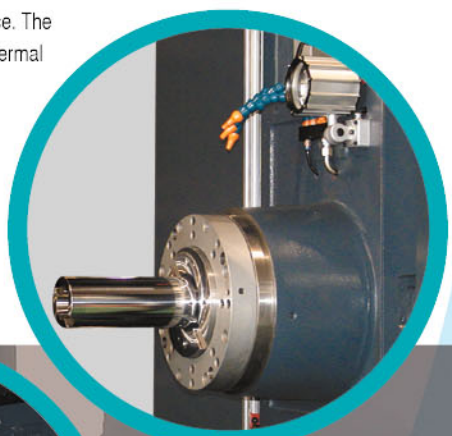
↶ **Hydraulic counterbalance**
The BMC hydraulic counterbalance ensures smooth Y-axis movement.



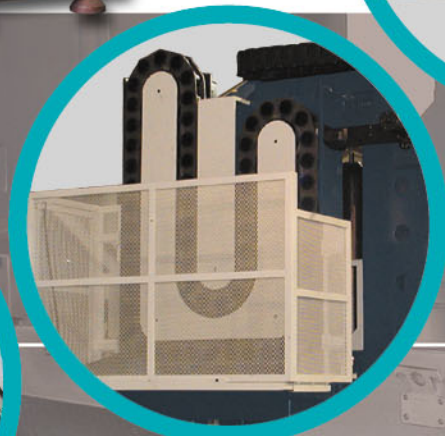
↶ **4-Speed geared headstock (Opt.) (including N-step)**



↷ **Powerful transmission**
A 2-speed ZF transmission delivers outstanding torque and cutting performance.



↷ **Precision spindle ideal for heavy cutting**
The BMC quill made from wear-resistant chrome-moly steel alloy. Both spindle and sleeve are nitride hardened and then ground and lapped for high-precision performance. The spindle boasts the highest class of precision bearings for optimum accuracy and heavy-duty cutting performance. The spindle and headstock are liquid cooled to mitigate thermal growth.



↶ ↷ **Tool Magazine / ATC**
The heavy-duty arm-type ATC is separated from the machine for easy maintenance. The ATC holds 60 tools as standard. Larger tool changers are also available.

Powerful — Rigid — Great Value

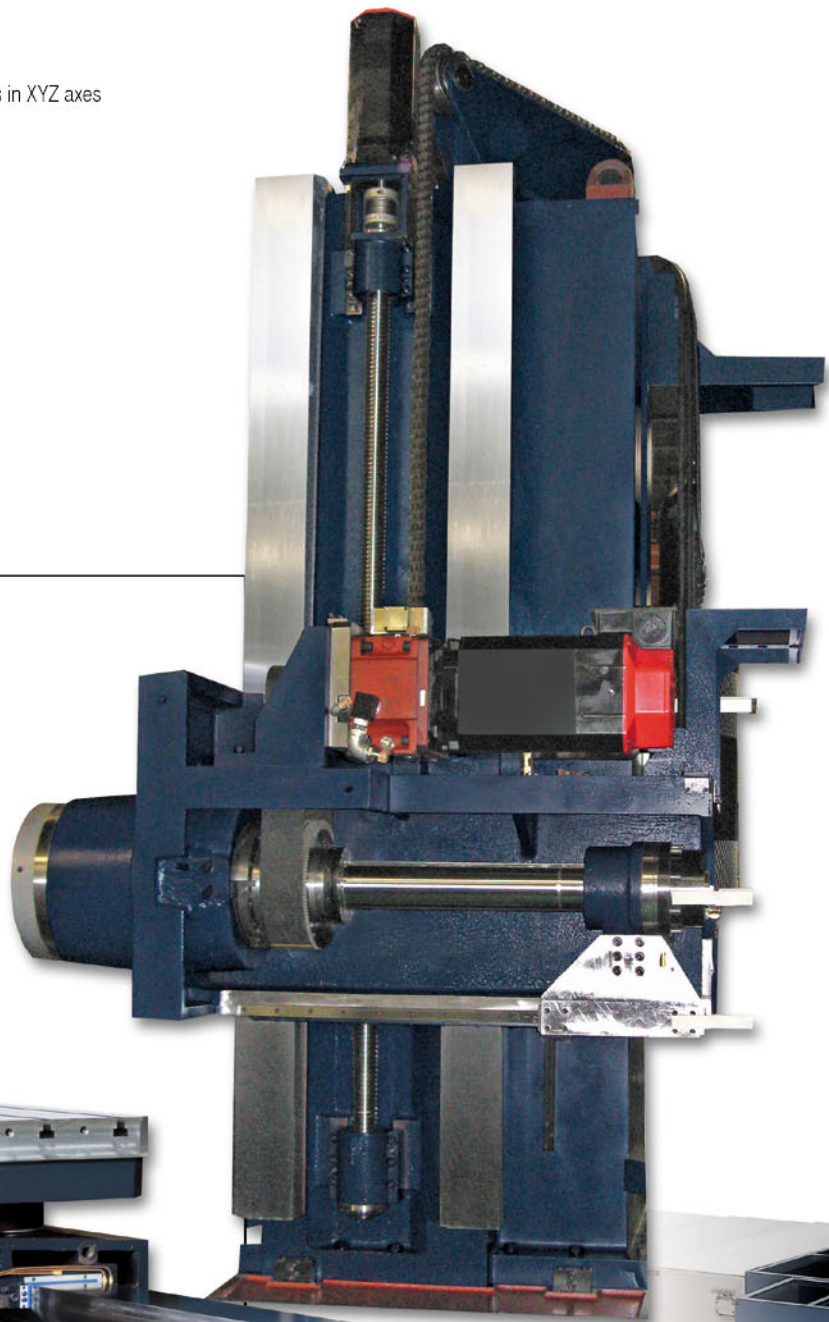
Johnford delivers the **NEW BMC series**, the heaviest horizontal boring mill in its class. This powerful workhorse weights in at a hefty Meehanite cast iron. The BMC series **outstanding rigidity and accuracy at a great price.**

You'll get excellent value with the BMC series horizontal boring mill, plus a load of **standard features** other builders charge as options:

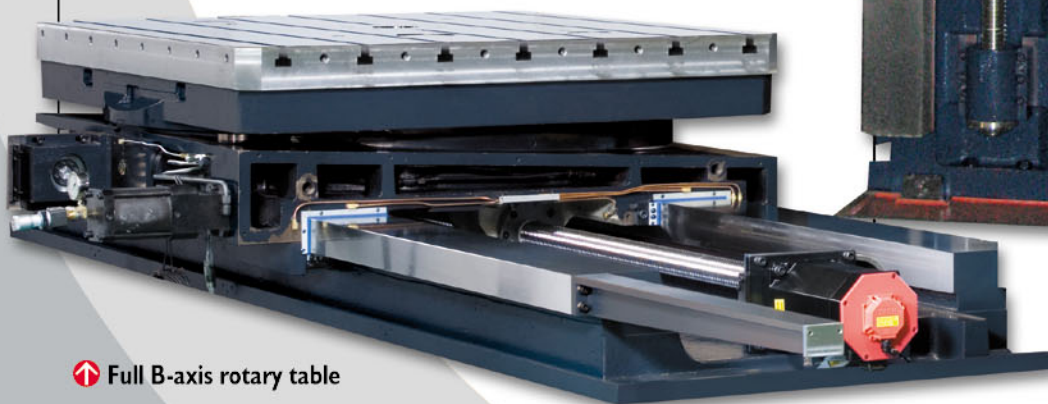
- Precision ground and induction hardened box ways in XYZ axes
- Heidenhain linear scales on XYZ axes
- Full B-axis rotary table
- 300 PSI coolant-through spindle (Opt.)
- 60 tool arm-type ATC (80 and 120 tools optional)
- Chip removal system
- Standard table guarding (full enclosure opt.)

➔ Moving column / rotary table design

Get more versatility from your horizontal boring mill! The BMC series features a moving column for the Z-axis and a moving table for the X-axis only. This design delivers superior rigidity, accuracy, and full support of the table over the complete X-axis travel.



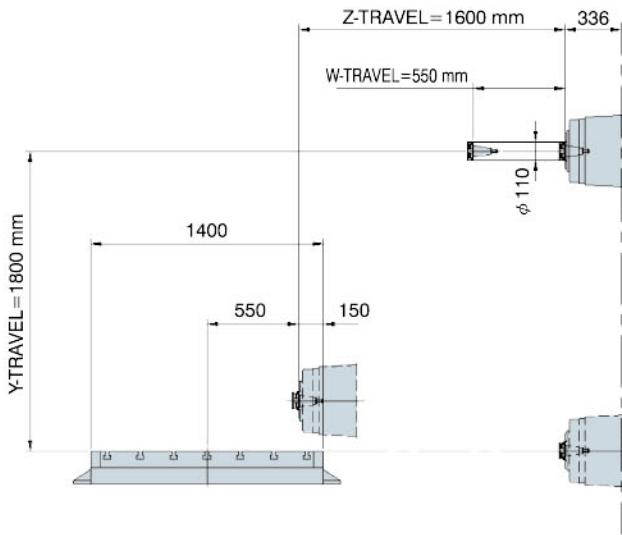
➔ Moving column delivers Z-axis movement



➔ Full B-axis rotary table

Working Range

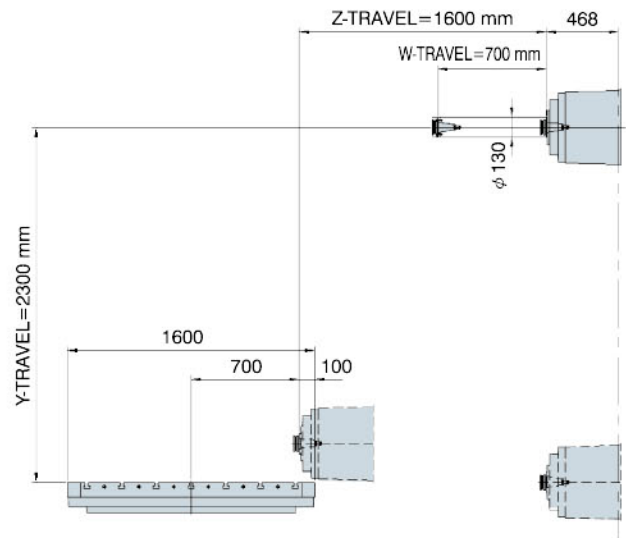
BMC-110



Unit: mm

Size	Model	Y	Z	W
BMC-110		1800	1600	550

BMC-130

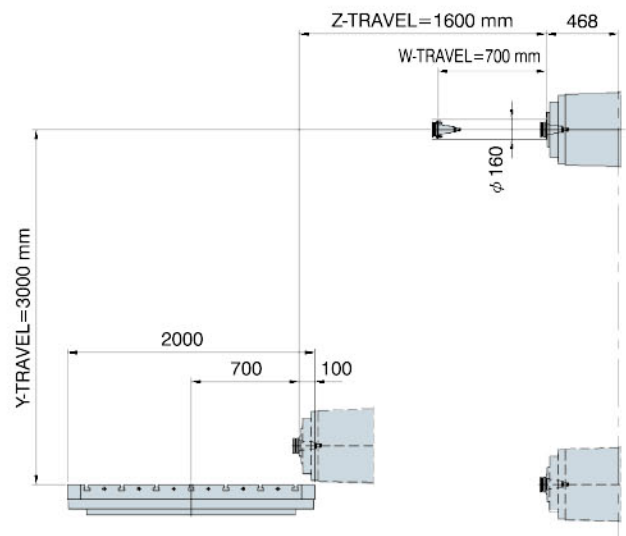


Unit: mm

Size	Model	Y	Z	W
BMC-130		2300	1600	700



BMC-160

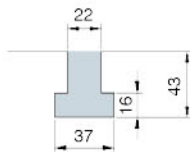


Unit: mm

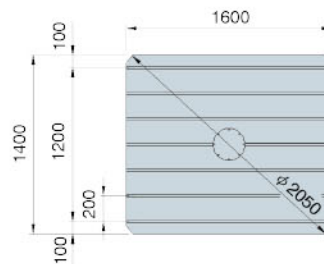
Size	Model	Y	Z	W
BMC-160		3000	1600	700

Dimensions

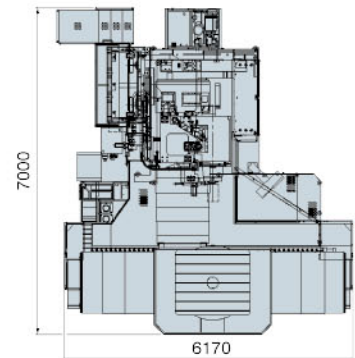
BMC-110



T-slot

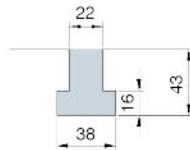


Table

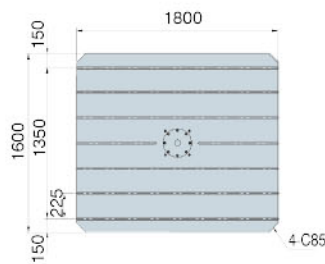


Top View (floor space required)

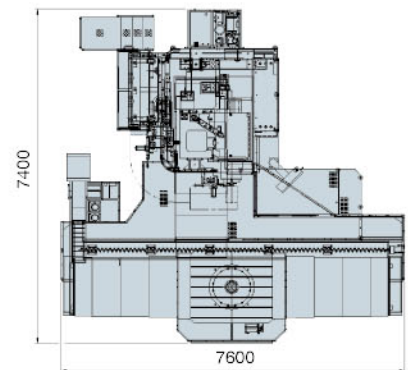
BMC-130



T-slot



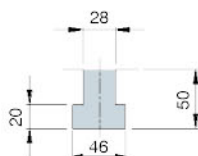
Table



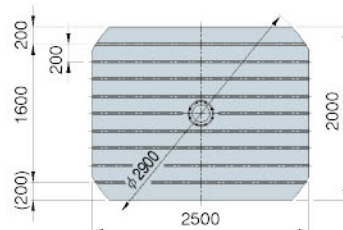
Top View (floor space required)

BMC-160

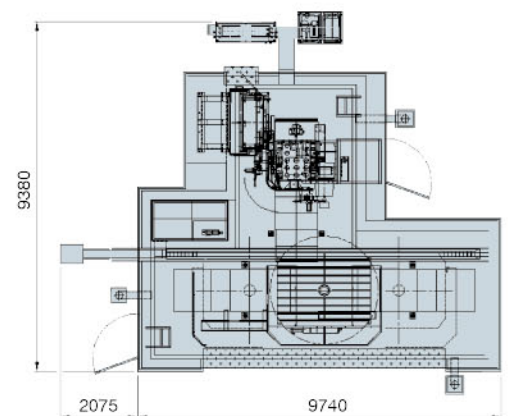
* Table has the same line with floor, Opt.



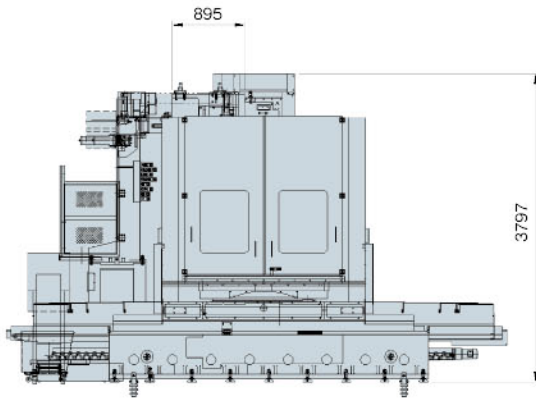
T-slot



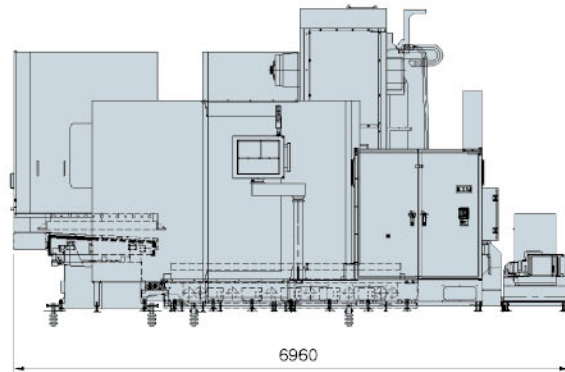
Table



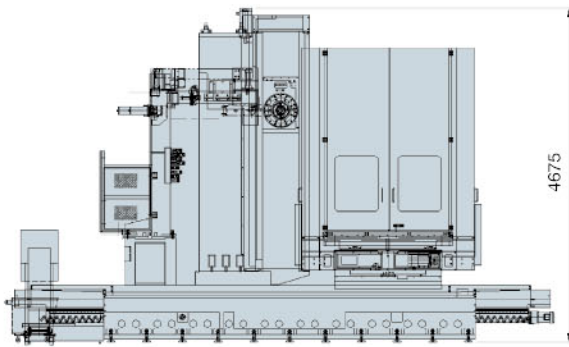
Top View (floor space required)



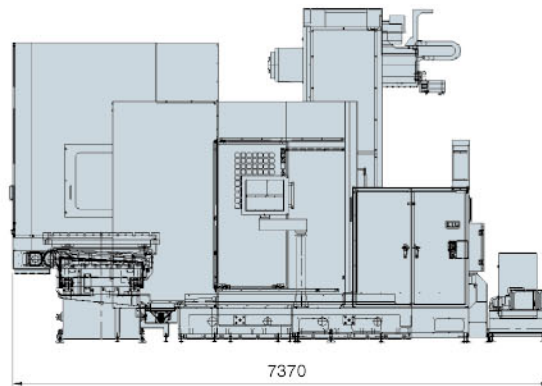
Front View



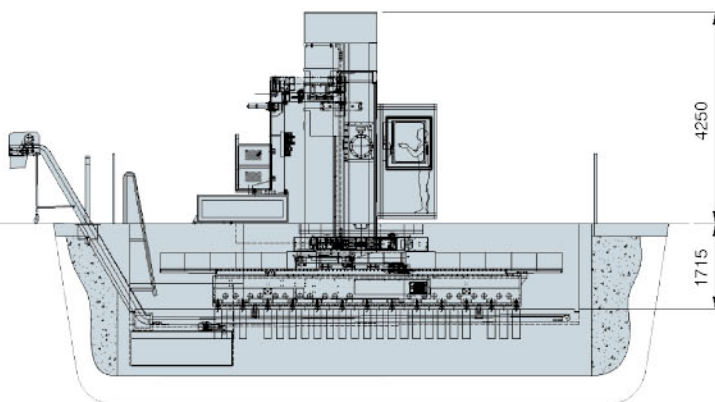
Side View



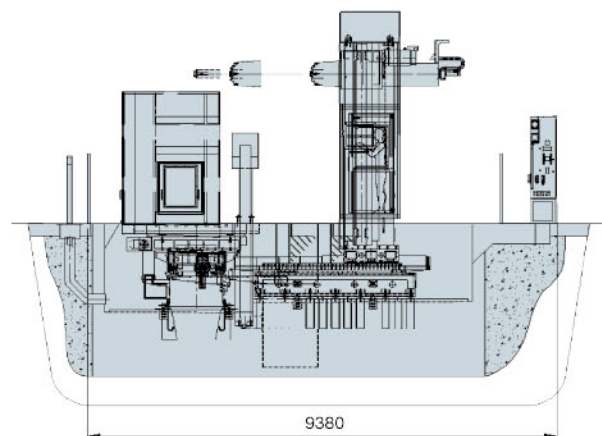
Front View



Side View



Front View



Side View

Specifications

Item	Model	BMC-110	BMC-130	BMC-160
Table size (mm)		1400 x 1600 (55" x 63")	1800 x 1600 (70.9" x 63")	2000 x 2500 (78.7" x 98.4")
Table load capacity (kg)		7000 (15400 lb)	15000 (33000 lb)	25000 (55000 lb)
X axis travel (mm)		2000 (78.7")	3000 (118")	4000 (157.4")
Y axis travel (mm)		1800 (70.8")	2300 (90.5")	3000 (118.1")
Z axis travel (mm)		1600 (63")		
W axis travel (mm)		550 (21.7")	700 (27.5")	
Spindle nose to table center (mm)		550 ~ 2150 (21.7" ~ 84.7")	700 ~ 2300 (27.5" ~ 90.5")	
Spindle center to table top (mm)		0 ~ 1800 (0 ~ 70.9")	0 ~ 2300 (0 ~ 90.5")	0 ~ 3000 (0 ~ 118.1")
Boring spindle diameter (mm)		φ 110 (4.3")	φ 130 (5.1")	φ 160 (6.29")
Spindle taper		No. 50		
Spindle speed (rpm)		5 ~ 3000	0 ~ 2500	0 ~ 2000
Spindle speed, step (s)		2	2 / 4 (Opt.)	4
Spindle motor (Cont./30min) (kW)		22 / 26	30 / 37	
X-Y-Z-W rapid traverse (m/min)		12 - 12 - 12 - 6		
X-Y-Z-W cutting feed (mm/min)		6		
Table revolution (B Axis) (rpm)		4		
ATC	Tool magazine capacity	60		
	Max. tool diameter	φ 125		
	Max. tool length (mm)	400 (15.7")		
	Max. toolweight (kg)	25 (55 lb)		
	Tool selection	Bi-direction Random Type Shortest Path		
Dimensions	Length (mm)	6880 (207.9")	7100 (279.5")	9600 (378")
	Width (mm)	5600 (220.5")	7200 (283.5")	11600 (456.7")
	Height (mm)	4020 (158.3")	4800 (189")	6000 (236.2")
Machine weight (kg)		27000 (59400 lb)	33000 (72600 lb)	50000 (11000 lb)

■ Specifications Subject To Change Without Prior Notice.

Standard Accessories:

- Coolant unit
- Spindle air blast
- Spindle and gear box cooler
- 0.001 degree B-axis rotary table
(Precision locating holes at every 90°)
- Operation box
- Heat exchanger
- Chip conveyor & chip bucket
- Lubrication with alarm
- Cycle finish light (M30) / Working lamp
- Rigid tapping
- Hydraulic unit
- Leveling bolts and pads
- Fanuc (0i/MD) controller

Optional Accessories:

- Contact tool setting system
- Workpiece measuring system
- High-pressure coolant-through spindle (1000 PSI)
- 80 / 120 tools ATC
- Angle plates
- Spindle extension sleeve
- Angle milling head
- Universal milling head
- Facing head with telescopic tool holder
- Linear scale
- Coolant-through spindle (300PSI)
- FANUC (31/MB) Controller

CNC Control Specs

■ CNC system type

O: Std. △: Opt. -: Nil

Type	Model	BMC-110	BMC-130	BMC-160
FANUC 0i/MD			○	
FANUC 31i/MB			△	
Heidenhain i/TNC530 HSCI			△	
Siemens 840D			△	
Siemens 828D			△	

■ Fanuc specifications

O: Std. △: Opt. -: Nil

	Item	Specifications	0iMD	31iMB	
Display unit	8.4" color LCD		○	-	
	10.4" color LCD		△	○	
	Data Server with 2GB CF card		△	△	
Function	AICC II		△	○	
	High speed processing		-	△	
	Conversational programming with graphic function	Manual guide 0i	0iMD	○	-
		Manual guide i	31iMB / 0iMD (10.4" LCD)	△	○
NC program memory	1280 meter (about 512 KB)		○	○	

■ Siemens specifications

O: Std. △: Opt. -: Nil

	Item	Specifications	828D	840D	
Operation Panel	10.4" color LCD		○	○	
	15.1" color LCD		-	△	
	Machine panel MCP483C		○	○	
	TCU without hard disk		CF card	○	○
		PCU 50 with hard disk		-	△
	Ethernet		○	○	
Function	ShopMill programming		△	△	
	Automatic residual material detection		△	△	
	Universal interpolator NURBS		○	○	
	Spline interpolation for 3 - axes		△	△	

■ Heidenhain specifications

O: Std. △: Opt. -: Nil

	Item	Specifications	iTNC530 HSCI MC6222
Display unit	Visual display unit 15" TFT display		○
Function	Main computer (MC6222)	0.5 ms block processing time	○
	NC programming memory	21GB on SSDR	○
Software option 1	<ul style="list-style-type: none"> • Cylindrical surface interpolation • Feed rate in mm/min • Tilting the working plane • Circular interpolation in 3 axes with tilted working plane • HSC path control with special nominal-position value filters 		△
Software option 2	<p>3-D machining</p> <ul style="list-style-type: none"> • Motion control with minimum jerk • 3-D tool compensation through surface normal vectors • TCPM: Tool center point management • Keeping the tool normal to the contour • Tool radius compensation normal to the tool direction • Manual traverse in the active tool-axis system <p>Interpolation</p> <ul style="list-style-type: none"> • Linear in 5 axes (Subject to export permit) • Spline: execution of splines (3° degree polynomial) 		△



**Whatever You Need
for Milling and Turning
We Offer the Best.**



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