JOHNFORD

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

BMC-110

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IT'S VERY WELL MADE IN TAIWAN

6/2013

JOHNFORD

Horizontal Boring and Milling Centers

BMC-110 | 130 | 160

Horizontal Boring and Milling Centers

Moving Column Heavy Duty Boring Mills

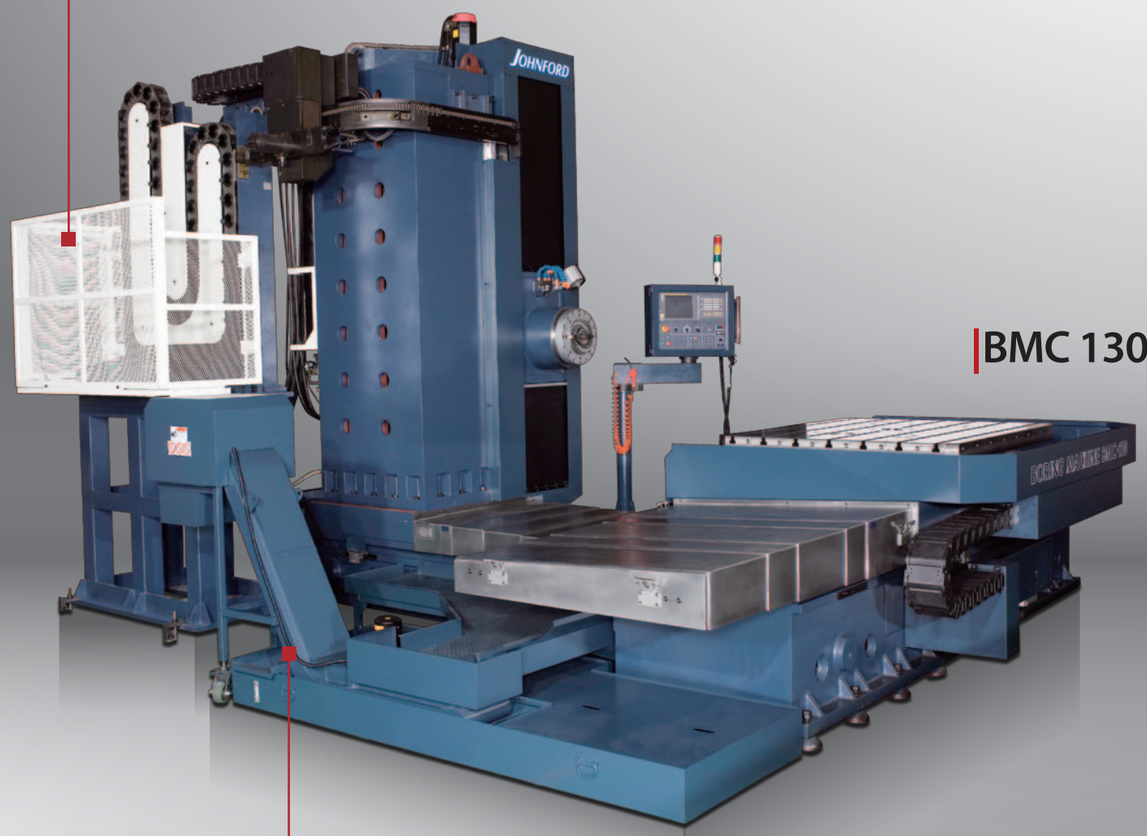
- Full Enclosure Design
- Heavier Work Piece Loading
- No Table Overhang

BMC-110 | 130 | 160

JOHNFORD

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.



BMC 130

Efficient Chip Removal System

A combination of screw type and chain type chip conveyors efficiently remove chips from the work area on all of our BMC series machines.

Heavy Machining for Heavy Industry

Max work piece weight of 25 tons on the BMC-160 to handle the toughest milling and boring jobs.

Powerful Control Options

With the BMC series, Johnford ensures you have a control system you are familiar with systems from **Fanuc**, **Siemens** or **Heidenhain** available.

Operator Control Platform

The operator control platform moves on the Z-Axis along with the machine. So your operator has maximum visibility and control at all times. (BMC-160 Only)

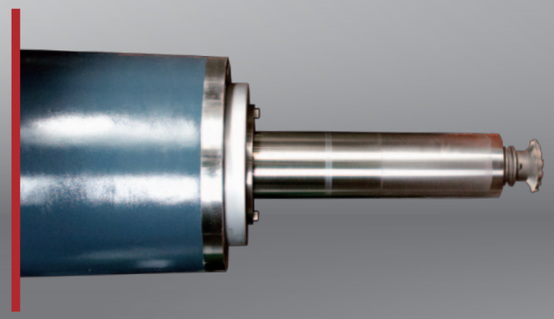
BMC 160

Optical Scales & Large Diameter Ball Screws

Heidenhain optical scales on all axes deliver high accuracy machining. Coupled with very large diameter ball screws and powerful servos, positional accuracy under loading is guaranteed.

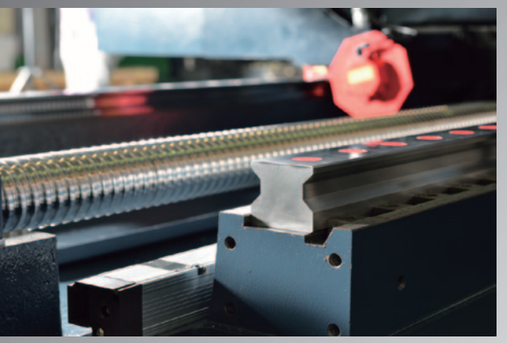
Advanced Structure

The BMC 160 has a solid Meehanite Casting of over **50,000** kg with a 50hp spindle for heavy cutting with precision.



Liquid Cooling

Highest class precision bearings coupled with liquid cooling to reduce thermal expansion deliver maximum precision under loading.

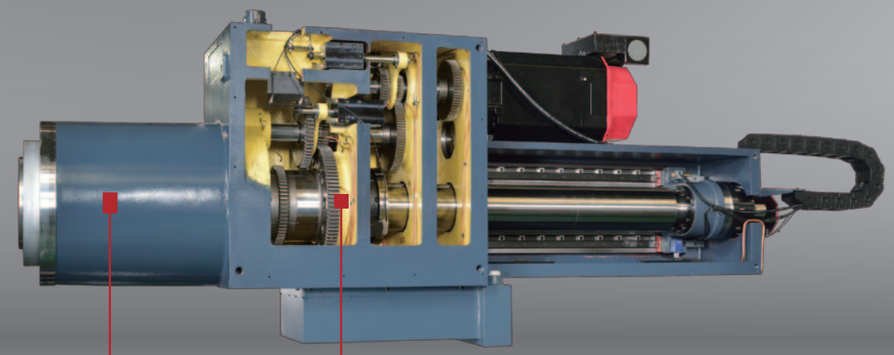


Pre-Tensioned Ball Screws & Powerful Servos

Deliver Smooth positioning accuracy under the heaviest workloads. Optical Scales with a feedback loop guarantee actual positioning for the highest precision.

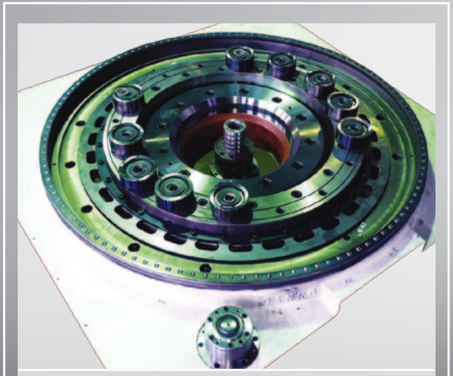
Precision Spindle Ideal for Heavy Cutting

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.



Powerful Transmission

2 - Speed German ZF transmission delivers outstanding torque and cutting performance.
Optional 3 Speed Geared Headstock with neutral available.

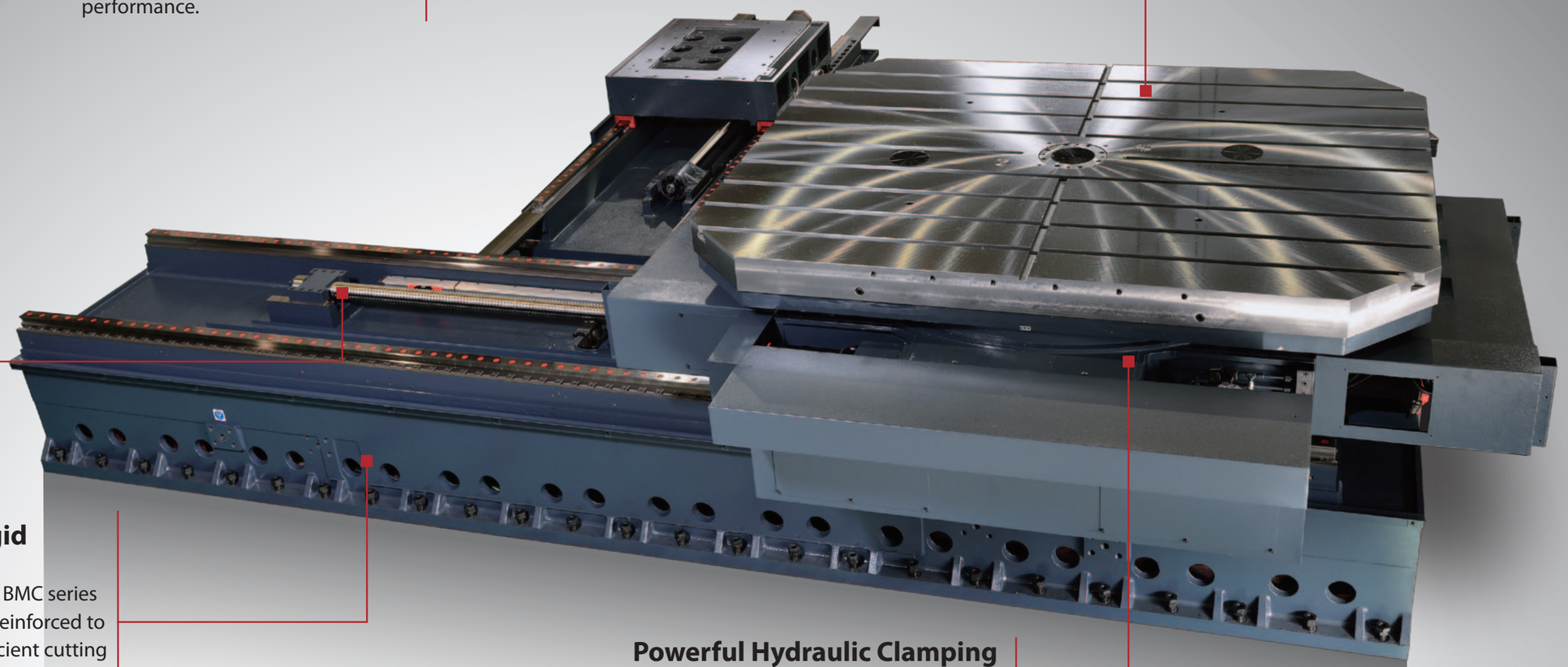


Versatile Indexing Table

The BMC Series features a Turcite B coated B-Axis rotary table with 0.001 degree indexing accuracy. B-Axis rotary scale is standard.

Precision Locating Pins

Locating pins every 90 degrees for heavy cutting.



Super Heavy Super Rigid Meehanite Structure

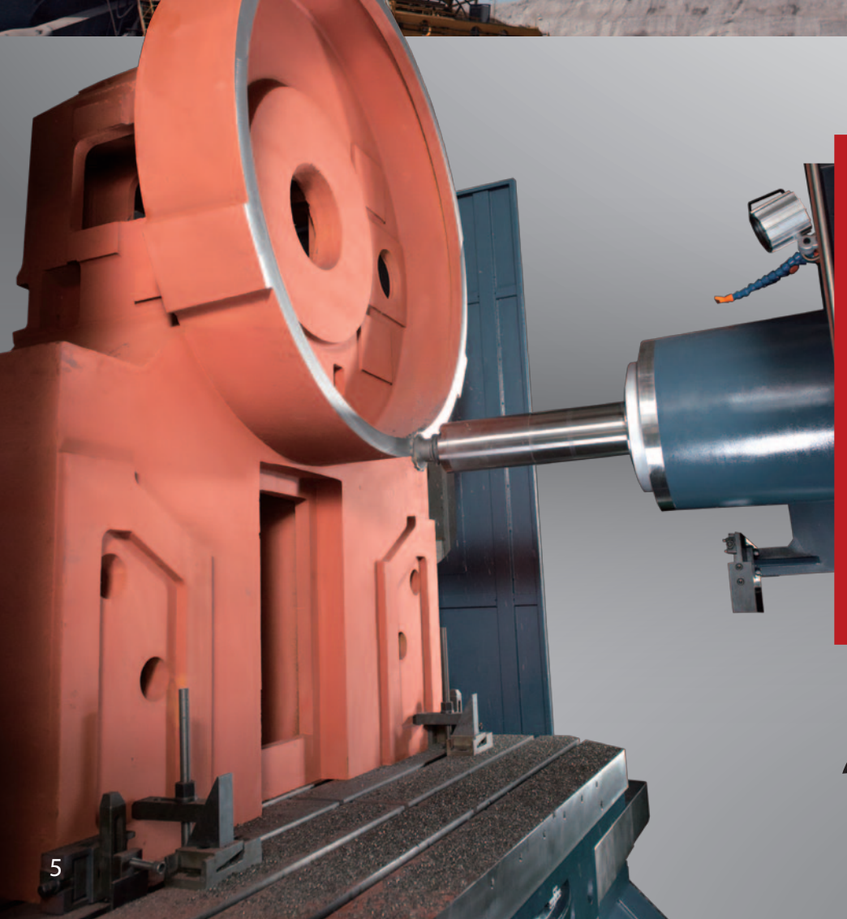
The Meehanite structure on the BMC series machines is heavily ribbed and reinforced to provide superb stability and efficient cutting with a great surface finish on the largest work pieces.

Powerful Hydraulic Clamping

To ensure positional accuracy and rigidity under heavy loading of workpieces up to 25,000 kg

Johnford BMC Series

Moving Column Boring Mills



Heavier Machining

The moving column design for the BMC series delivers heavier work piece capability with table loads of up to 25 tons for the BMC-160, making this boring mill perfect for heavy industry large work piece applications. You get the machining capabilities of a floor type boring mill with greater machining versatility, using less space in your workshop.

"Greater Machining Versatility"

Cleaner Working

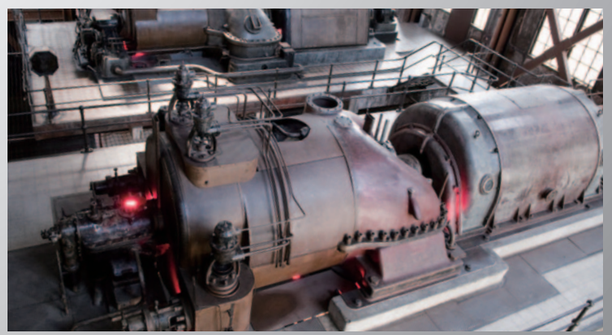
As the column is moving Johnford can provide full enclosures for the BMC series machines. So unlike older moving table designs your chips are fully contained and efficiently removed, reducing your clean up time and avoiding chip contamination build up in the work area.

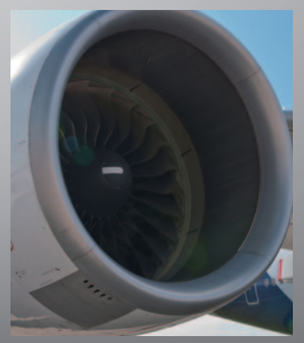
Maximum Stability

There is no worktable overhang on the BMC series moving column designs, so your large work pieces are fully supported through the cutting cycle to maintain precision and deliver heavier work piece loading capabilities.

"Fully Supported Through The Cutting Cycle"

Industry Applications



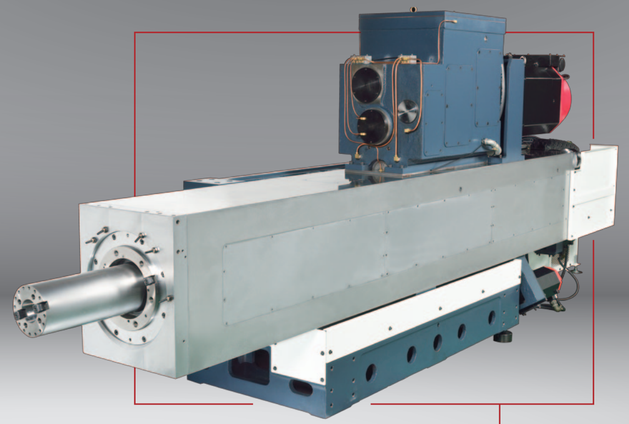


- Mining
- Oil & Gas
- Agriculture
- Aerospace
- Power Generation
- Transportation

FBMC 160 Specifications

Table Size (mm)	Length	7000	8000	9000	10000
	Width	2500			
Table Loading Capacity (kg / m^2)		5000			
Rotary Table Size (mm)		2500x3000			
Rotary Table Capacity (kg)		40000			
X Axis Travel (mm)		12000	13000	14000	15000
Y Axis Travel (mm)		3500~5000			
Z Axis Travel (mm)		1200			
W Axis Travel (mm)		1000			
V Axis Travel (mm)		2000			
Ram Cross Section (mm)		450 x 520			
Spindle Quill Diameter (mm)		Φ160			
Spindle Nose Taper		BT - 50			
Spindle Speed (rpm)		10~2200			
Spindle Drive Motor (S1 / S6 - 60%) (kW)		60 / 75			
X / Y / Z / W / V Axis Rapid Traverse Rate (m / min)		X / Y, Z, V / W = 16 / 12 / 6			
X / Y / Z / W / V Axis Cutting Feed Rate (mm / min)		1~ 6000			
X / Y / Z / W / V Axis Servo Motor (kW)		X / Y / Z, W, V = 9 / 6 /7			
ATC	Type of Tool Shank	BT - 50			
	Tool Storage Capacity	60 Tools			
	Max Tool Dia. (mm)	Φ250			
	Max Tool Length (mm)	400			
	Max Tool Mass (kg)	25			
	Max.Tool Dia. Of Full Setting (mm)	Φ125			
	Tool Selection	Bi - Direction Random Type, Shortest Path			
Pressure Pneumatic (kg / cm^2)		6			
Dimensions (mm)	L	20300	21300	22300	23300
	W	14350			
	H	5850~7350mm			
Machine Weight (kg)		135000	143000	151000	159000
Numerical Control Unit		Fanuc-31iMB			

Specifications Subject to Change without Prior Notice.



- Column Travel (X-Axis) 12000 - 15000mm
- Headstock Travel (Y-Axis) 3500~5000mm
- Ram Travel (Z-Axis) 1200mm
- Quill Travel (W-Axis) 1000mm
- Quill Diameter 160mm
- Ram Cross Section 450 X 520mm
- Table Travel (V-Axis) 2000mm
- Rotary Table Size 2500 X 3000mm
- Max Table Loading 40000kg
- Machine Weight 135000 - 159000kg

Spindle System

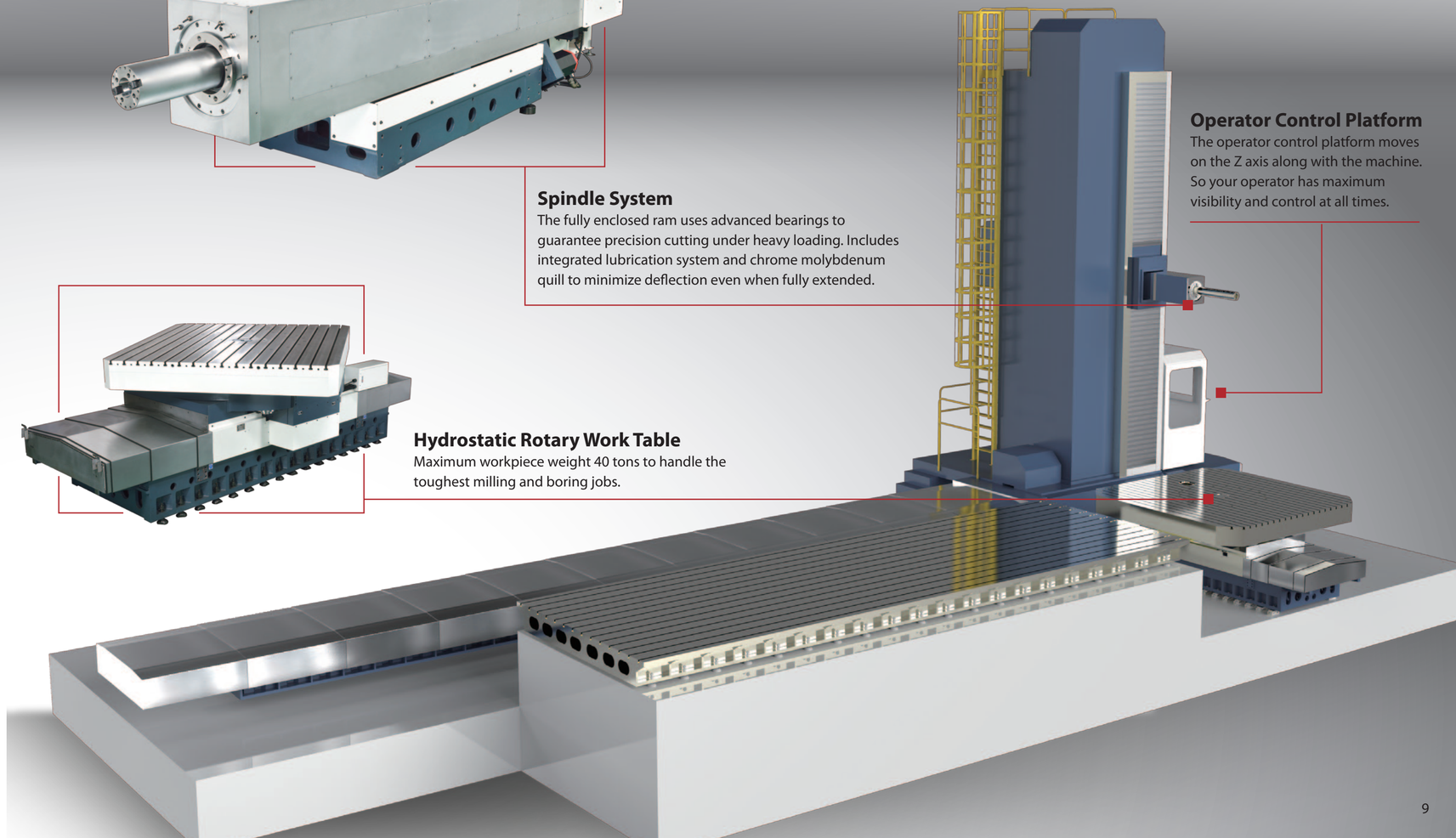
The fully enclosed ram uses advanced bearings to guarantee precision cutting under heavy loading. Includes integrated lubrication system and chrome molybdenum quill to minimize deflection even when fully extended.

Operator Control Platform

The operator control platform moves on the Z axis along with the machine. So your operator has maximum visibility and control at all times.

Hydrostatic Rotary Work Table

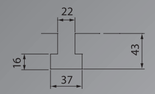
Maximum workpiece weight 40 tons to handle the toughest milling and boring jobs.



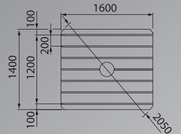
Dimensions

BMC-110

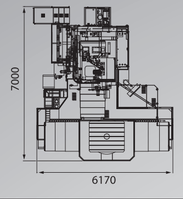
T-Slot



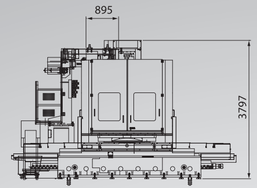
Table



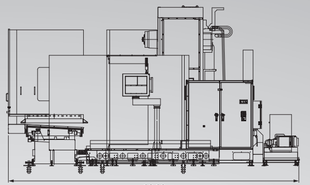
Top View (Floor Space Required)



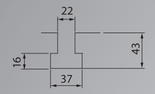
Front View

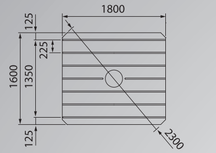


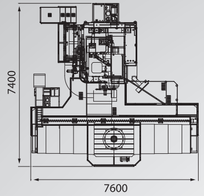
Side View

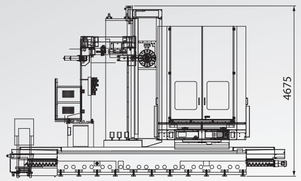


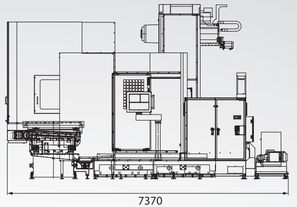
BMC-130



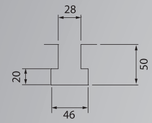


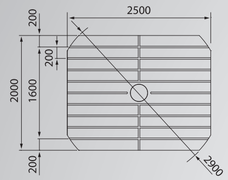


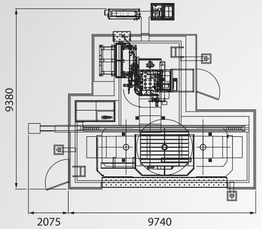


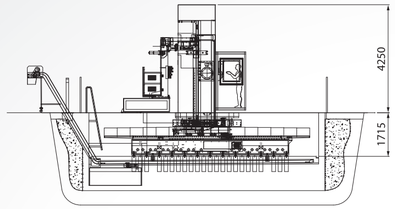


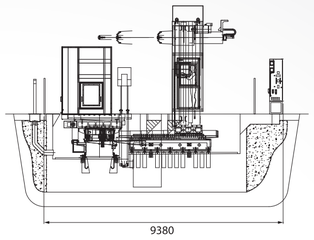
BMC-160





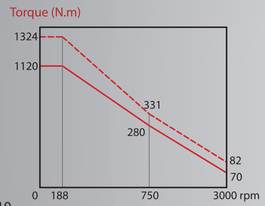


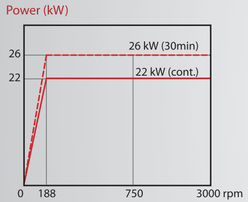




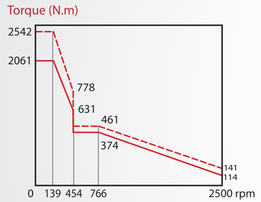
Spindle Torque Power Chart

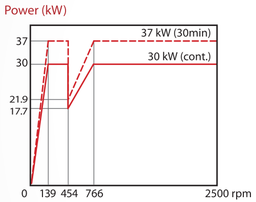
BMC-110



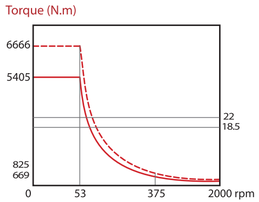


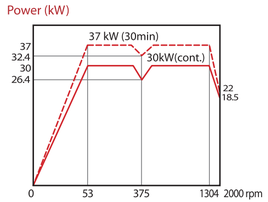
BMC-130





BMC-160





Specifications

Model		BMC-110	BMC-130	BMC-160
Table Size (mm)		1400×1600 (55″× 63″)	1800×1600 (70.9″× 63″)	2000×2500 (78.7″× 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 / 3 (Opt.)	3
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 (m / 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. Tool Weight (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 (110000 lb)

Specifications Subject to Change Without Prior Notice.

Standard Accessories:

1. Coolant Unit
2. Spindle Air Blast
3. Spindle & Gear Box Cooler
4. 0.001 Degree B-Axis Rotary Table (Precision Locating Holes At Every 90°)
5. Chip Conveyor & Chip Bucket
6. Lubrication With Alarm
7. Cycle Finish Light (M30) / Working Lamp
8. Coolant-Through Spindle (300 PSI)
9. Fanuc (31i-MB) Controller
10. Leveling Bolts And Pads
11. Operation Box
12. Heat Exchanger
13. Rigid Tapping
14. Hydraulic Unit
15. Linear Scale

Optional Accessories:

1. Contact Tool Setting System
2. Workpiece Measuring System
3. High-Pressure Coolant-through Spindle(1000 PSI)
4. 80 / 120 Tool ATC
5. Angle Plates
6. Spindle Extension Sleeve
7. Angle Milling Head
8. Universal Milling Head
9. Facing Head With Telescopic Tool Holder