



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



BMC-110

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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



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.

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 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)

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.

Optical Scales & Large Diameter Ball Screws

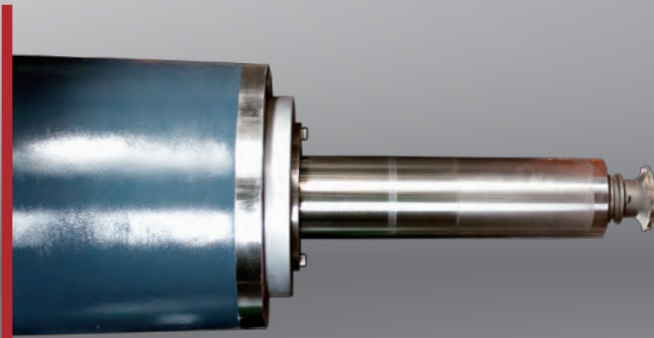
Heidenhain optical scales on all axes deliver high accuracy machining. Coupled with very large diameter ball screws and powerful servos, positional accuracy under loading is guaranteed.

BMC 130

BMC 160

Advanced Structure

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

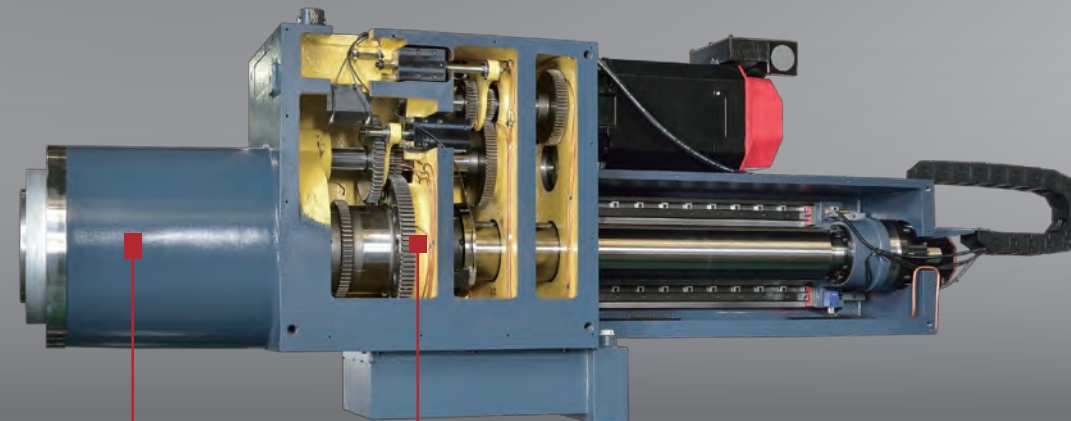


Liquid Cooling

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

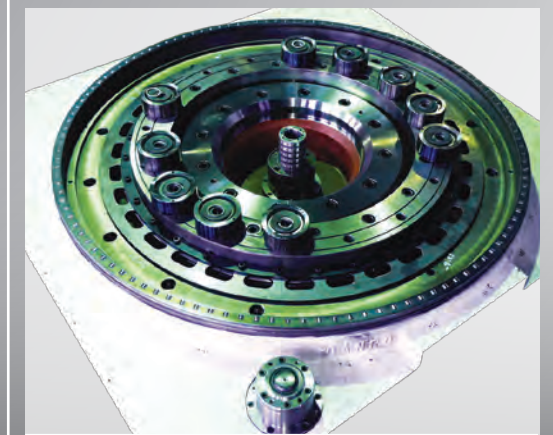
Precision Spindle Ideal for Heavy Cutting

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.

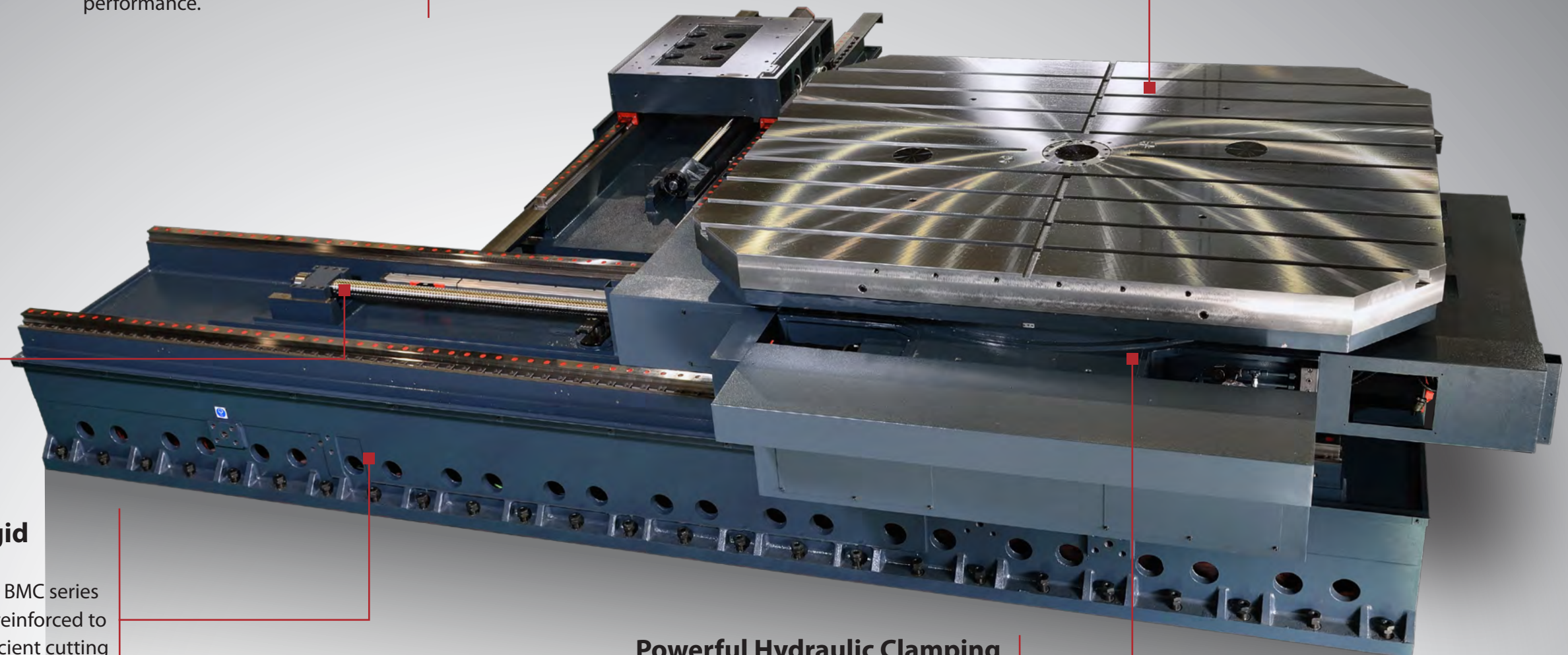


Pre-Tensioned Ball Screws & Powerful Servos

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

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.



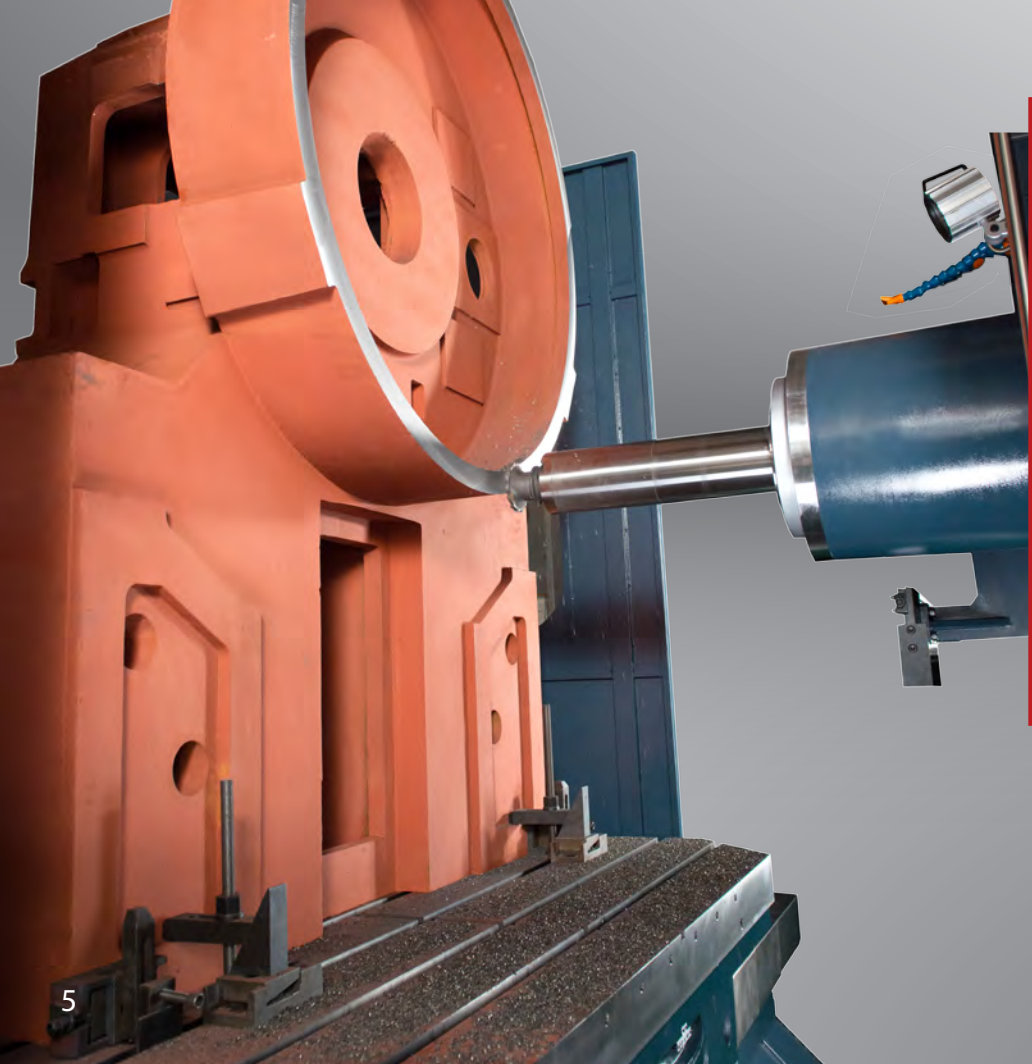
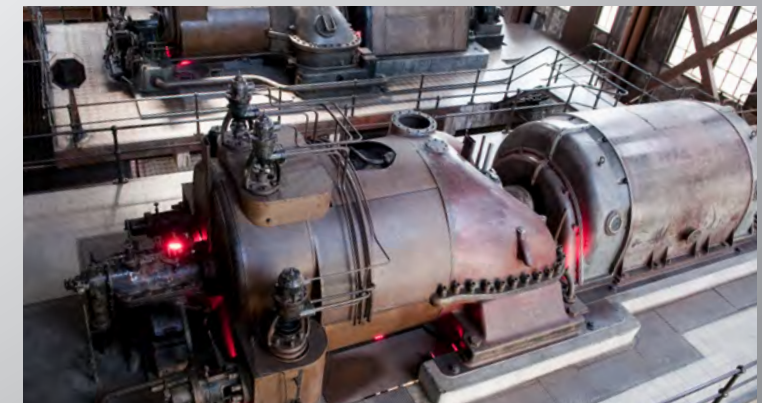
Powerful Hydraulic Clamping

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

Johnford BMC Series

Moving Column Boring Mills

Industry Applications



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 cleanup time and avoiding chip contamination buildup 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.

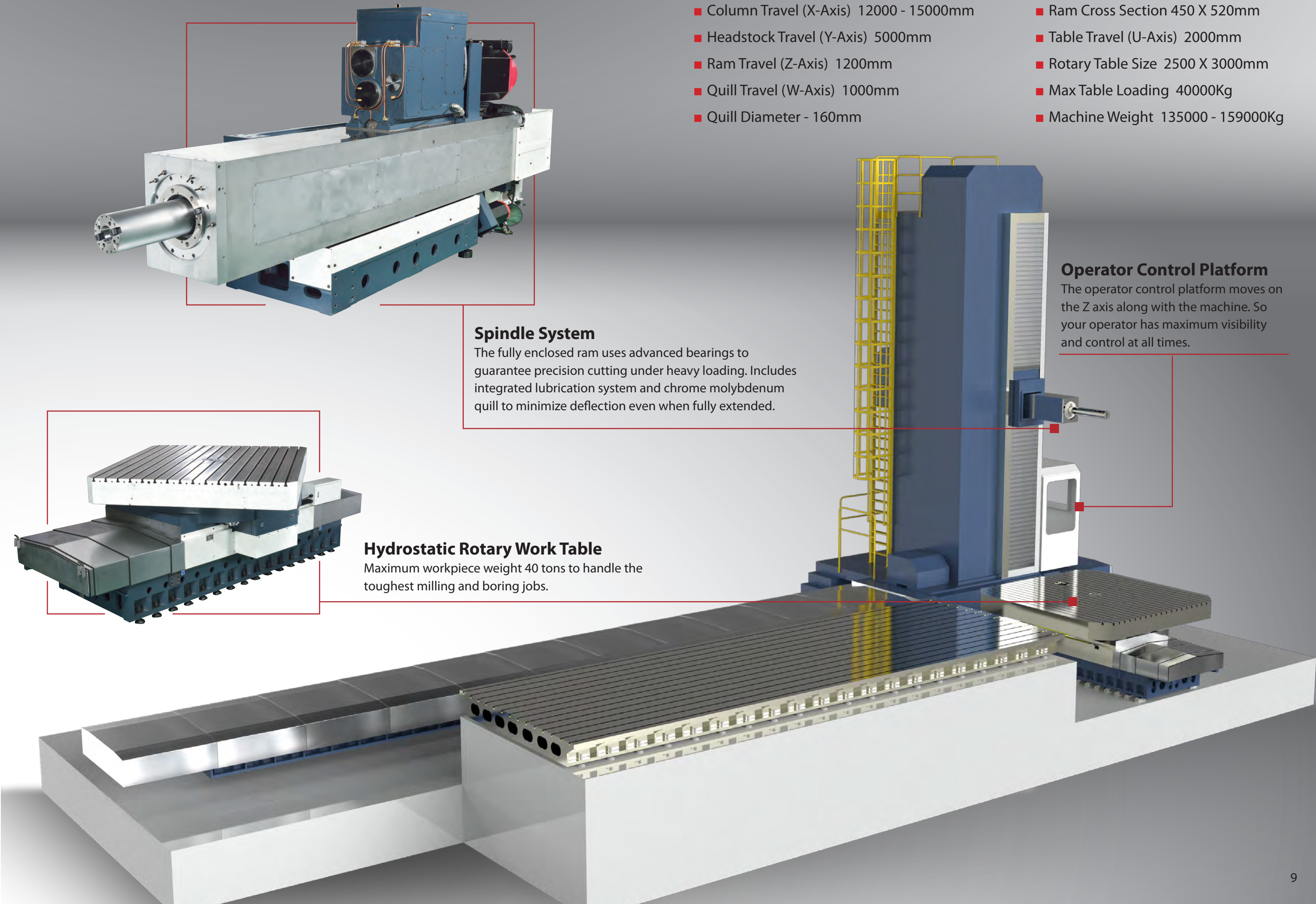
"Fully Supported Through The Cutting Cycle"



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

FBMC 160 Specifications

Table Size (mm)	Length	7,000	8000	9000	10000
	Width	2500			
Table Loading Capacity (kg/m²)		5000			
Rotary Table Size (mm)		2500x3000			
Rotary Table Capacity (kg)		40000			
X Axis Travel (mm)		12000	13000	14000	15000
Y Axis Travel (mm)		3500			
Z Axis Travel (mm)		1200			
W Axis Travel (mm)		1000			
U Axis Travel (mm)		2000			
Ram Cross Section (mm)		450x520			
Spindle Quill Diameter (mm)		Φ160			
Spindle Nose Taper		BT-50			
Spindle Speed (rpm)		10~2200			
Spindle Drive Motor (S1/S6-60%) (kW)		60 / 71			
X / Y / Z / W / U Axis Rapid Traverse Rate (m/min)		X / Y, Z, U / W = 16 / 12 / 6			
X / Y / Z / W / U Axis Cutting Feed Rate (mm/min)		6000			
X / Y / Z / W / U Axis Servo Motor (kW)		X / Y, Z, W, U = 11.3 / 8			
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/cm²)		6			
Dimensions (mm)	L	20300	21300	22300	23300
	W	14350			
	H	5850			
Machine Weight (kg)		135000	143000	151000	159000
Numerical Control Unit		Siemens 840D			



- Column Travel (X-Axis) 12000 - 15000mm
- Headstock Travel (Y-Axis) 5000mm
- Ram Travel (Z-Axis) 1200mm
- Quill Travel (W-Axis) 1000mm
- Quill Diameter - 160mm
- Ram Cross Section 450 X 520mm
- Table Travel (U-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.

Hydrostatic Rotary Work Table

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

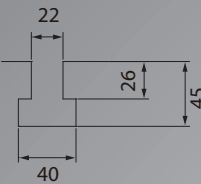
Operator Control Platform

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

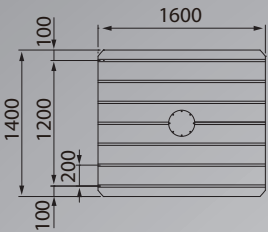
Dimensions

BMC-110

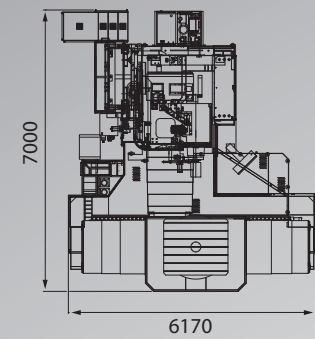
T-Slot



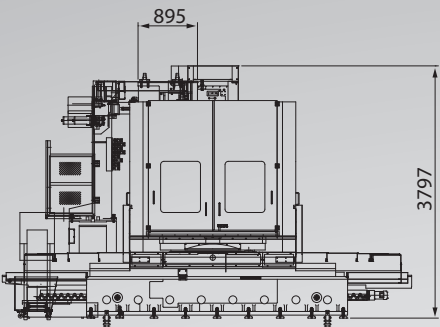
Table



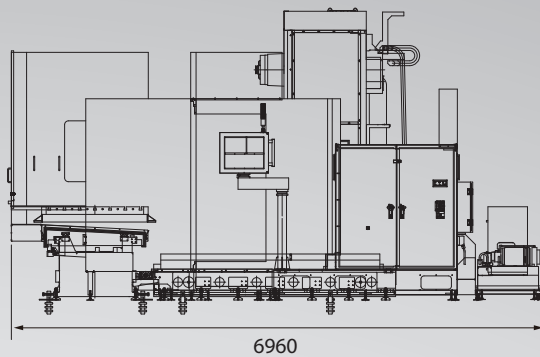
Top View
(Floor Space Required)



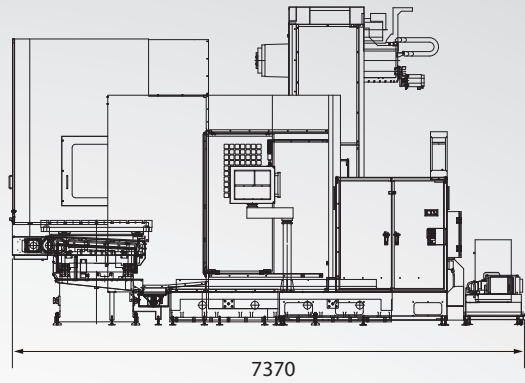
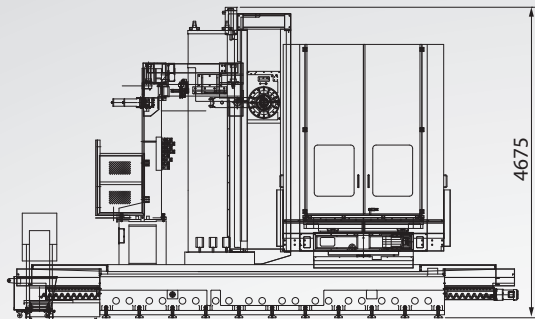
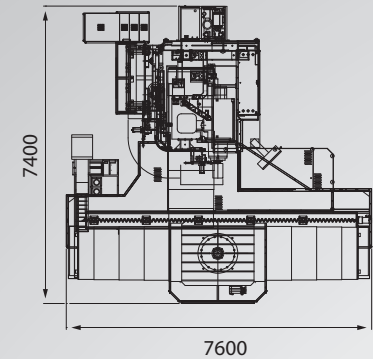
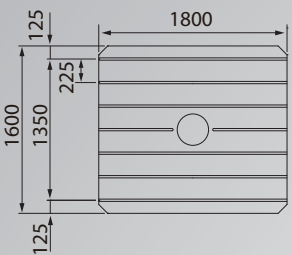
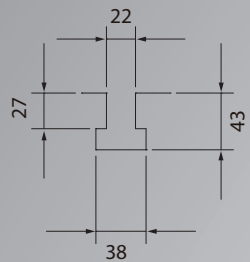
Front View



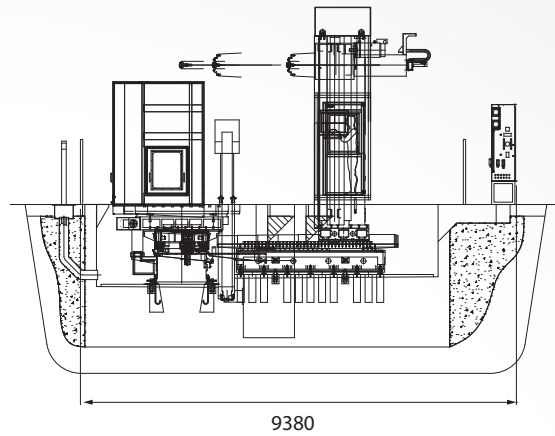
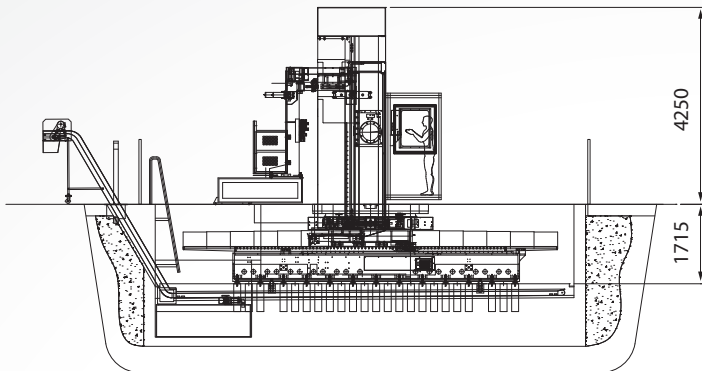
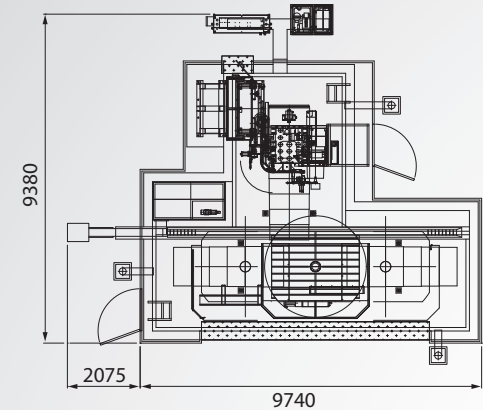
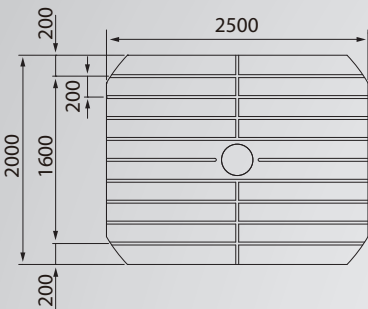
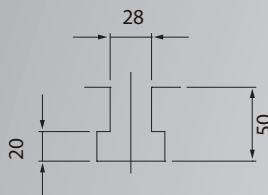
Side View



BMC-130

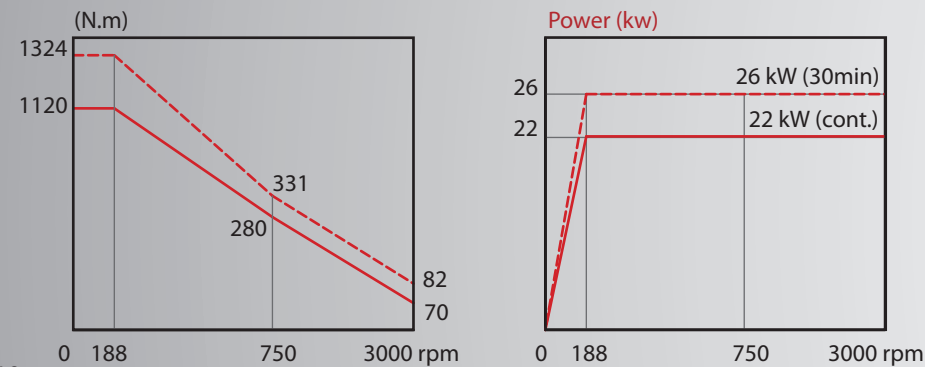


BMC-160

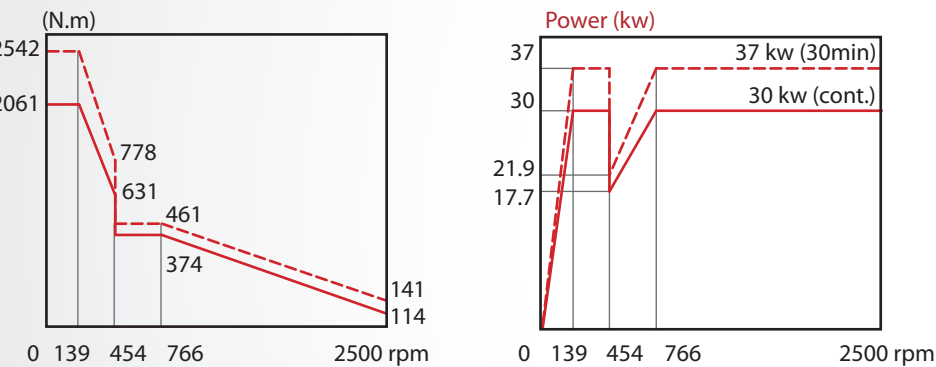


Spindle Torque

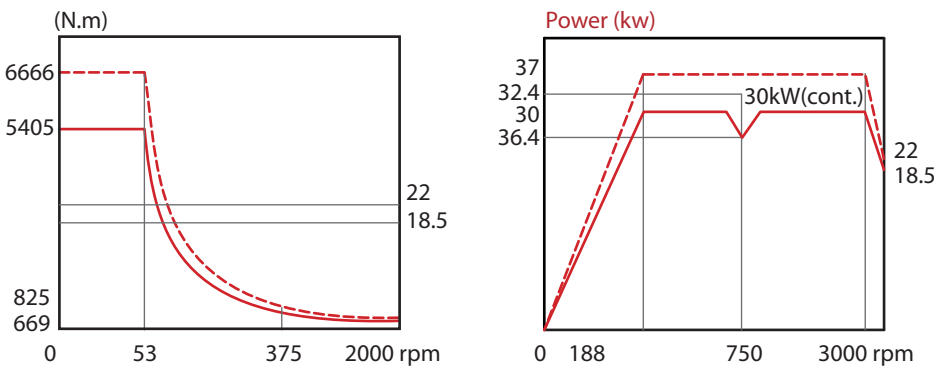
BMC-110



BMC-130



BMC-160



Specifications

Model		BMC-110	BMC-130	BMC-160
Table Size (mm)		140×1600 (55"×63")	1800×1600 (70.9"× 63")	2000×2500 (78.7"×98.4")
Table Travel (mm)		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. 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 (11000 lb)

Specifications Subject to Change Without Prior Notice.

Standard Accessories:

- Coolant Unit
- Spindle Air Blast
- Spindle & Gear Box Cooler
- 0.001 Degree B-Axis Rotary Table (Precision Locating Holes At Every 90°)
- Chip Conveyor & Chip Bucket
- Lubrication With Alarm
- Cycle Finish Light (M30)/ Working Lamp
- Coolant-Through Spindle (300 PSI)
- Fanuc (31iBM) Controller

- Leveling Bolts And Pads
- Operation Box
- Heat Exchanger
- Rigid Tapping
- Hydraulic Unit
- Linear Scale

Optional Accessories:

- Contact Tool Setting System
- Workpiece Measuring System
- High-Pressure Coolant-through Spindle(1000 PSI)
- 80/ 120 Tool ATC
- Angle Plates
- Spindle Extension Sleeve
- Angle Milling Head
- Universal Milling Head
- Facing Head With Telescopic Tool Holder