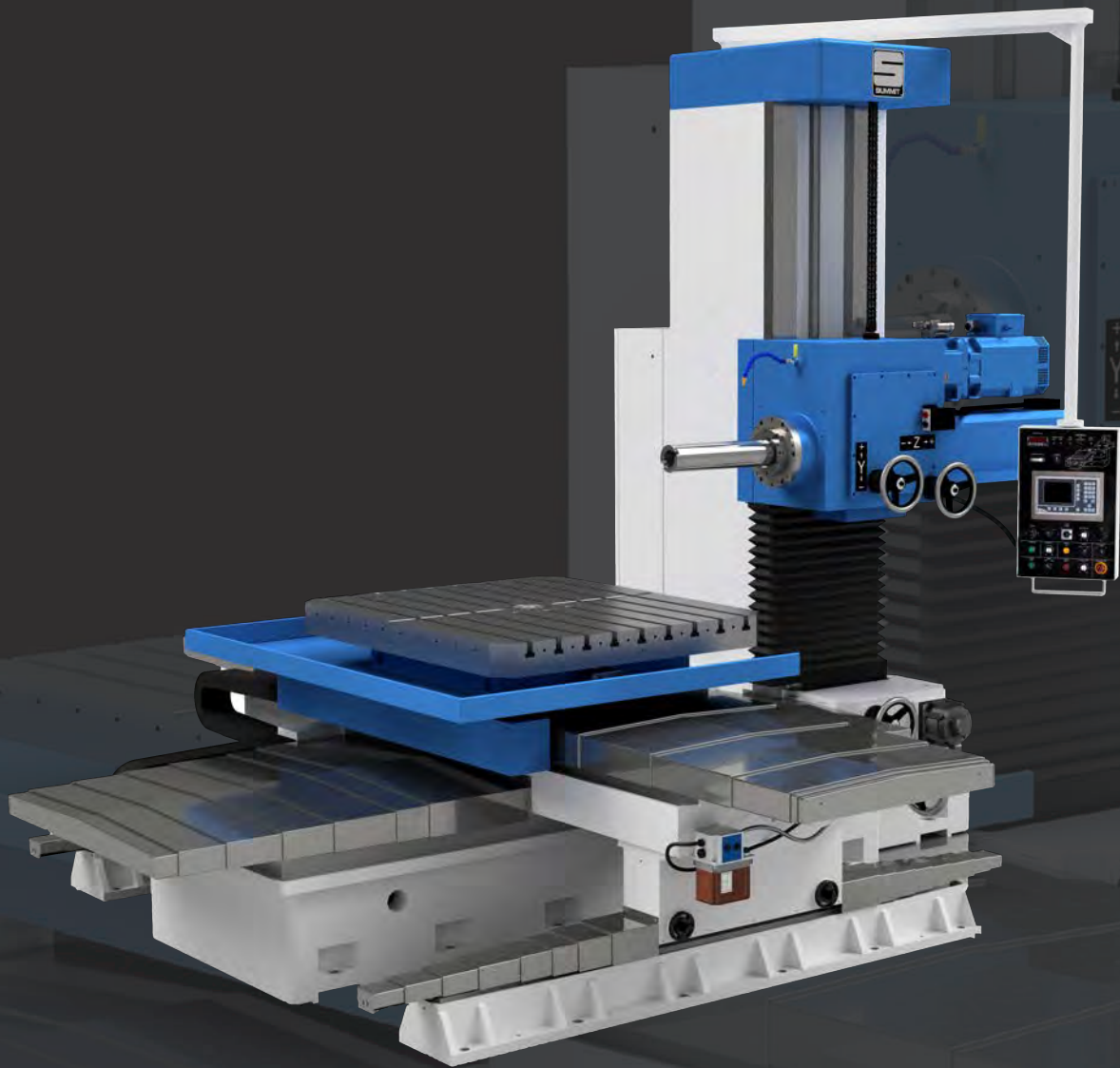


**SUMMIT**  
MACHINE TOOL LLC



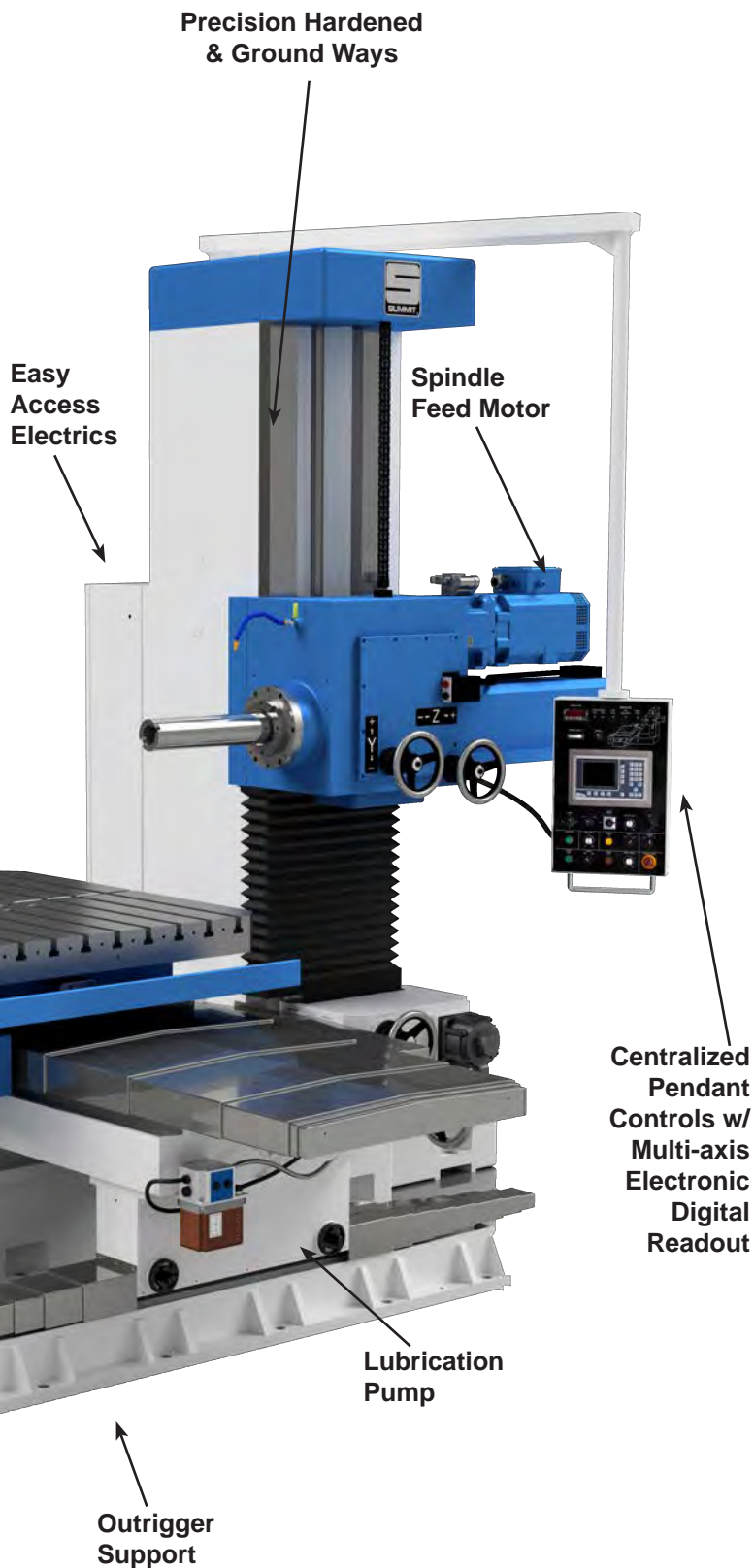
# HORIZONTAL BORING MILL

HBM 110, HBM 110-H & HBM 110-FH

Whenever metal must be machined efficiently and with precision, Summit Horizontal Boring Mills provide a cost effective solution. Summit's series of HBMs incorporate many advanced construction features, utilizing the latest technologies to ensure high performance and to meet the ever increasing demand for greater productivity.

The Summit HBM Models contain more standard features than similar machines on the market, features that make the Summit HBMs versatile, durable, heavyduty and user friendly machine tools for all your machining needs.

The combination of state of the art mechanical and electrical engineering ensures that the operation of Summit HBMs is the most efficient and cost effective way of increasing productivity and keeping your company on the cutting edge of machining technology.



# HB SERIES HORIZONTAL BORING MILLS



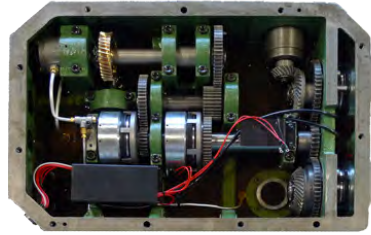
## MACHINE FEATURES & BENEFITS



### Control Panel

The control panel is pendant-mounted for ease of operation and availability. The panel contains the Newall Electronic Digital Redout for measurement of all linear axis movement. The 4 axis DRO is Inch/metric switch-

able and has several functions for ease of operation. Spindle speed and axis feed are controlled from the pendant by push buttons, rheostats and axis selection Joystick switches. LEDs indicate axis condition (clamped/unclamped and over limit travel). Spindle load is indicated by a load meter.



### Feed and Rapid Traverse

The feed gearbox distributes feeds to the X, Y & W axes through heavyduty precision hardened and ground gears and shafts. In addition to feed distribution, this gearbox also provides rapid traverse motion which is supplied by a large 4 HP servo motor. The gearbox is lubricated by a constant pressure gear pump to guard against damage and can be easily accessed for quick maintenance.

### Facing Head

FH Model with integrated Facing Head.



### Electrics & Drives

Summit utilizes only state of the art programmable logic electronics to ensure long, reliable operation. Components are installed in a centralized, column-mounted, fully accessible cabinet for ease of maintenance. Each load circuit is provided with fused

or thermally-monitored overload devices to ensure complete protection of major components. These devices are fully integrated into the control circuit to provide warning lights and/or suspend machine operation as necessary.

### Centralized Lubrication System

Lubrication of the HBM is achieved through independent, centralized lube systems for each of the major machine sections. Individual self-contained pumping units provide proper lubrication for the spindle drive gearbox, the feed gearbox, the headstock ways and the table/saddle assembly. The lubrication oil is distributed through specially calibrated metering units to ensure precise lubrication amounts to all critical components.



### Way Surfaces

The way surfaces on the HBM 110 are hardened and precision ground cast iron square sections that are extremely wide to give the ultimate in support anywhere along the travels of the machine.

### Outrigger

The Summit HBMs are designed with independent outriggers to support the saddle and table throughout the travel of the X and W axes. This allows maximum support of the work piece even on odd shapes and off center loads.



### Hydraulics

The independent hydraulic system features state-of-the-art components for reliable, continuous service.

### Ball Screws

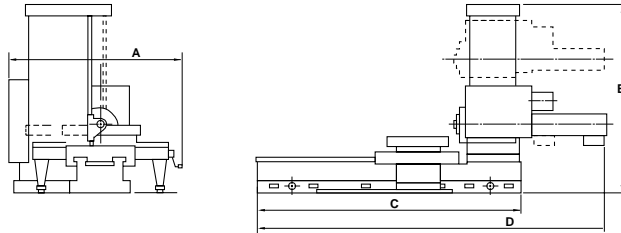
Axis travel is accomplished by movement of the ball screw and preloaded ball nuts for smooth precise movement. (X and W axis)

### Way Covers

The way surfaces and ball screws are protected by steel telescoping way covers to keep contamination away from these precision components.

# DIMENSIONS AND SPECIFICATIONS

## HBM 110-H, HBM 110 & HBM 110-FH



### Horizontal Boring Mill Dimensions

MODEL	A	B	C	D
<b>HBM 110</b>	163"	126"	137"	175"
<b>HBM 110H</b>	183"	143"	150"	213"
<b>HBM 110-FH</b>	183"	143"	150"	213"

SPECIFICATIONS	HBM 110		HBM 110-H		HBM 110-FH	
	STANDARD	METRIC	STANDARD	METRIC	STANDARD	METRIC
<b>SPINDLE</b>						
Diameter of Spindle	4.3"	110mm	4.3"	110mm		
Taper of Spindle	#50		#50			
Number of Spindle Speeds	Infinitely Variable		Infinitely Variable			
Spindle Speed Range	20-1000 RPM		20-1500 RPM			
<b>TRAVELS</b>						
Vertical Travel - Y Axis	39.4"	1000mm	55.1"	1400mm	54.7"	1390mm
Cross Travel of Table - X Axis	63"	1600mm	70.8"	1800mm		
Saddle Travel - W Axis	49.2"	1250mm	55.1"	1400mm		
Spindle Travel - Z Axis	15.7"	400mm	21.6"	550mm	18.9"	480mm
<b>FEEDS</b>						
Number of Feeds	Infinitely Variable		Infinitely Variable			
Feed range	0 - 37.4 IPM	0 - 950mm/min	.118 - 37.4 IPM	3 - 950mm/min		
Rapid Traverse (X, Y & W)	110 IPM	2800mm/min	110 IPM	2800mm/min		
<b>TABLE</b>						
Size of Table	31.5" x 39.4"	800 x 1000mm	47.2" x 55.1"	1200 x 1400mm		
Maximum Workpiece Weight	5,500 lbs.	2,500 kg	11,000 lbs.	5,000 kg		
Table Height From Floor	46.7"	1185mm	45.7"	1160mm		
Table T-Slot Width (7)	.875"	22mm	.875"	22mm		
Rotation	Manual		Manual			
Increment	1 degree		1 degree			
<b>Facing Head</b>						
Diameter					26"	
Slide Travel					-1.18"-5.9"	
Spindle Speeds (No) Range 2					(Inf. Var.) 0-200 RPM	
<b>COLUMN</b>						
Width of Ways	4.5"				115mm	
Number of ways			2			
Width Across Ways	21.5"				550mm	
<b>BASE</b>						
Width of Ways	5.75"				146mm	
Number of ways			2			
Width Across Ways	36.5"				927mm	
<b>MAIN DRIVE MOTOR</b>						
	20 HP				15kw	
<b>AXIS FEED MOTOR (X, Y &amp; W)</b>						
	3.9 HP				2.9kw	
<b>SPINDLE FEED MOTOR (Z)</b>						
	1.75 HP				1.3kw	
<b>ELECTRICS</b>						
					220/3/60	
<b>DIMENSIONS (L X W X H)</b>						
	175" x 163" x 126"	4445 x 3915 x 3200mm	213" x 183" x 143"	5410 x 4650 x 3630mm		
<b>WEIGHT (approx.)</b>						
	27,500 lbs.	12,500 kg	35,200 lbs.	16,000 kg		

### STANDARD FEATURES

- Heavily Ribbed Closed Grain Cast Iron Construction, Heat Treated And Stress Relieved
- Hardened And Precision Ground Ways
- Tapered Roller Bearing Headstock
- Limit Switches On All Axes
- Easy Access Programmable Electrics
- Built-In Manual Rotary Table
- Air Operated Power Draw Bar
- Precision Hardened And Ground Gears
- Central Pendant Control
- Multi-Axis Electronic Digital Readout
- Inch/Metric Switchable Readout
- Automatic Timed Lubrication System
- Coolant System
- Steel Telescoping Way Covers On X And W Axis
- Hydraulic Axis Clamping
- Rapid Traverse
- Ballscrews On X, W & Z Axis

### OPTIONAL EQUIPMENT

- Right Angle Milling Attachment
- Universal Milling Attachment
- Spindle Support
- Transformer for Other Than 220/3/60
- Easy Access Programmable Electrics
- Installation Assistance
- Facing Head (Std on HBM 110-FH)

**WARRANTY:** A copy of Summit Machine Tool LLC's standard written warranty is attached to each Summit Machine. Call or write to Summit for a copy or for further information concerning Summit's standard warranty. All purchases are subject to Summit's standard written warranty. Specifications are subject to change without notice.

**POINT OF OPERATION GUARDING** is the responsibility of the end user. For information contact your local OSHA office.

01/2018

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**FOR MORE INFORMATION CALL 1-800-654-3262**

**WWW.SUMMITMACHINETOOL.COM**