

# ***Bridgeport***® **SERIES 1 KNEE MILL**

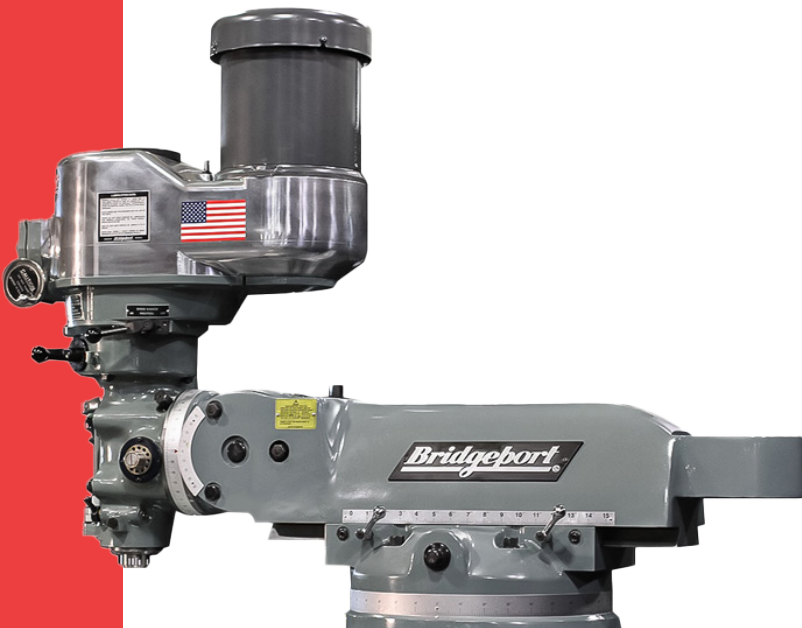
The **Bridgeport Series 1** is the ***original*** milling, drilling, and boring machine that revolutionized an industry. With more than 400,000 machines built and sold worldwide, Bridgeport Machine Tools continues to be the industry leader for milling machines.

## **PATENTED 2J HEAD**

The unique and patented 2J headstock is engineered with a super-efficient air-flow system to keep the headstock, bearings, belts, and pulleys cool and running at optimal temperatures. This maintains accuracy and extends the life of the bearings, belts, and all headstock components for minimal maintenance and downtime.

## **HAND-SCRAPED WAYS**

Through a precise hand-scraping process, each surface of our knee mills is meticulously fitted and aligned, guaranteeing accuracy and longevity. This craftsmanship enhances wear resistance and allows for smooth, friction-free movement, ensuring performance and durability.



## **BUILT THE BRIDGEPORT WAY**

The long-term reliability of the Series I Knee Mill is the result of rigorous engineering, quality components, and the craftsmanship that goes into the fit and finish of every machine. All Bridgeport Series I knee mill are fully inspected and tested to ensure superior operation and performance.

# SPECIFICATIONS



## SERIES 1    SERIES 1 CNC

<b>X-Axis Table Travel</b>	Without Power Feed	36" (914mm)	N/A
	With Power Feed	33" (838mm)	33" (838mm)
<b>Y-Axis Travel</b>	Without Power Feed	12" (306mm)	
	With Power Feed	12" (306mm)	
<b>Quill Travel</b>		5" (127mm)	
<b>Knee Travel</b>		16" (406mm)	
<b>Ram Travel</b>		12" (306mm)	
<b>Throat Distance</b>	Min.	6.75" (171mm)	
	Max.	18.25" (463mm)	
<b>Table to Spindle Nose</b>	Min.	2.5" (64mm)	
	Max.	18.25" (463mm)	
<b>TABLE</b>	Overall Size	9" x 49" (299 x 1245mm)	
	Working Surface	9" x 49" (299 x 1245mm)	
	Number of T-Slots	3	
	T-Slot Centers	2.5" (64mm)	
	T-Slot Size	0.0625" (16mm)	
<b>Height Above Floor Max.</b>		47.25" (1200mm)	
<b>Weight of Workpiece Max.</b>		750 lbs. (340kgs)	
<b>SPINDLE CONSTRUCTION</b>			
	Spindle Diameter	1.875" (48mm)	
	Quill Diameter	3.375" (86mm)	
<b>SPINDLE MOTOR HP</b>			
	30 Min. Duty Rated	3 Hp	
	Continuous	2 Hp	
<b>SPINDLE TAPER</b>			
	Standard	R-8	
	Optional	NMTB30	
<b>SPINDLE SPEED RANGE</b>			
	Low Range	60 - 500 RPM	
	High Range	500 - 4200 RPM	
<b>QUILL FEED RANGE (3)</b>	Range #1	<b>and 2 Axis CNC</b>	<b>3 Axis CNC</b>
	Range #2	0.0015"/rev	Program Range
	Range #3	0.003"/rev	0 - 100 IPM
		0.006"/rev	-
<b>MACHINING CAPABILITIES</b>			
	Power Quill Feed Drilling (mild steel)	3/8" (9.5mm)	
	Milling (mild steel)	2 CI/min.	
	Boring Range (mild steel)	6" Dia. (152mm)	
<b>POSITIONING</b>			
	Feedrate Range	N/A	0 - 100 IPM
	Min. Increment	N/A	0.0001"
<b>SPACE AND WEIGHT</b>			
	Floor Area	84" x 120" (2140 x 3048mm)	
	Height	87" (2210mm)	
	Net Weight	1930 lbs. (875kgs)	
	Shipping Weight	2075 lbs. (941kgs)	
<b>MACHINING CAPACITIES</b>			
	Input Power	208/230/460 3 phase 50/60 cycle	208/230/460 3 phase 50/60 cycle 110/1/60 for control
	Power Capacity	4 KVA	4 KVA/15 Amp CTRL

### Standard Features

- One-Shot Lubrication System
- Chrome-Plated Ways and Gibs
- Color—Machine Tool Gray

### Optional Features

- 2 or 3-Axis Digital Readout
- Pneumatic Power Drawbar
- Worklight
- Electrics—NFPA/NEMA-12 Standards, NTRL listed

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*"If you need a machine and don't buy it, then you will ultimately find you have paid for it but don't have it"*

— Henry Ford

# CNC ENHANCEMENT OPTION - Optional

## ACU-RITE® MillPWR<sup>G2</sup>



## 2 or 3 Axis CNC Control

### Bridgeport CNC Knee Mills:

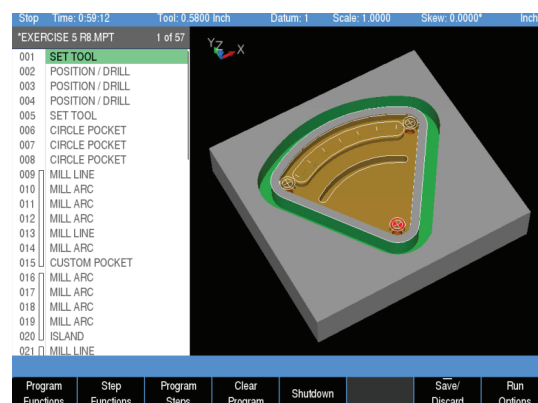
Our CNC knee mills feature the ACU-RITE® MillPWR<sup>G2</sup> control with shop floor programming that allows the operator to generate part programs quickly and efficiently through the use of easy-to-understand conversational style prompts. The ACU-RITE® control package comes with an all-digital control and drives, offering exceptional value and reliability.

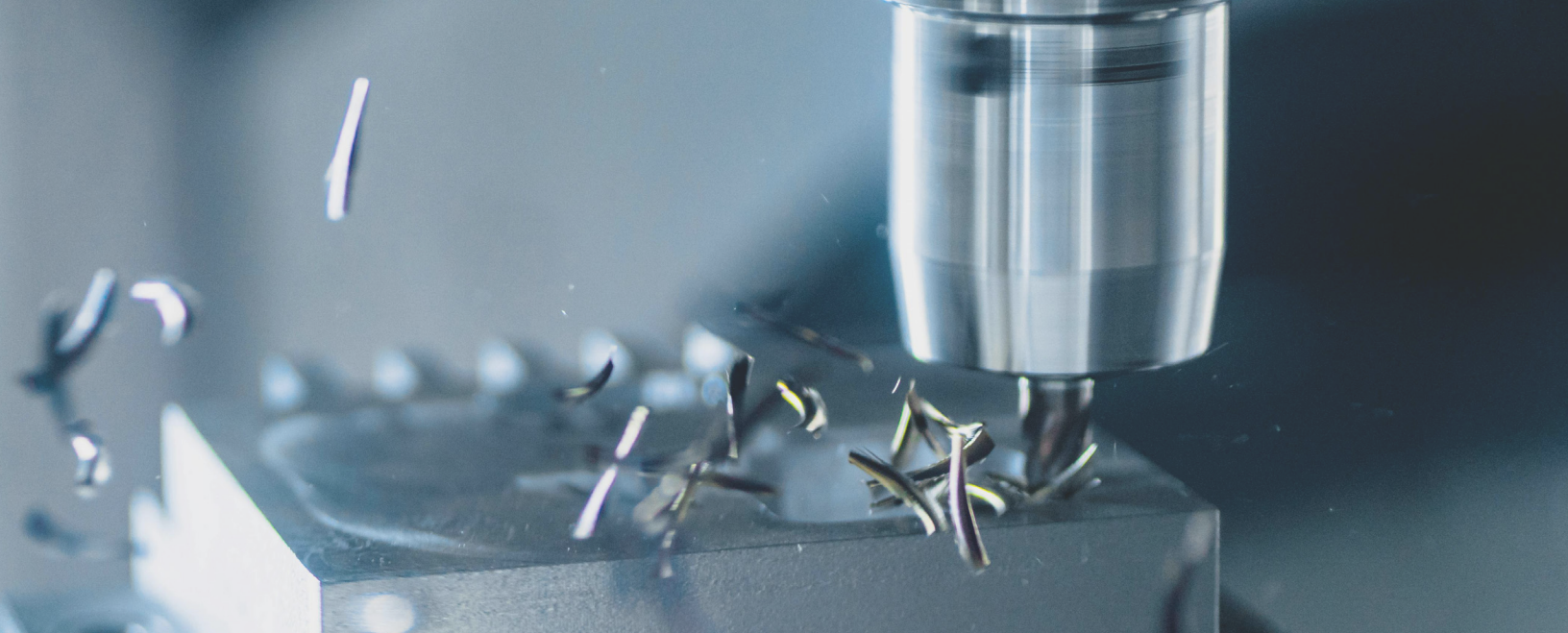
The ACU-RITE® MillPWR<sup>G2</sup> is one of the most user-friendly controls in the industry today and incorporates many standard features to increase your productivity...

- 2 or 3 axes control/4 axes readout optional
- Conversational menu-prompted programming
- Position-Trac™: Quickly find workpiece and zero after power loss
- 3-D tactile-feel with color keypad
- ACU-RITE® precision glass scales for better accuracy, repeatability, high-resolution, closed loop feedback and proven reliability
- Jog control: One axis or two axes simultaneously
- Remote stop/go switch with hand-held switch
- Engrave: Alphanumeric references into part
- Tool offset compensation
- Tool library
- Hard key milling functions: Select routine functions (lines, arcs, rectangles, circles, etc.)
- Bolthole calculations:
  - Full and partial circles
  - Linear row/column
  - Rectangle frame
  - Rectangle array
- Mirror/Repeat/Rotate
- Custom pocket
- Skew: Save time aligning parts
- DXF file input
- Travel limits: Within software
- Teach position
- Edit capabilities
- Reference tables
- Bend
- Explode
- Feed rate override
- Math functions:
  - Standard
  - Trigonometry
  - Geometry
  - RPM

## Hardware Features of the ACU-RITE® MillPWR<sup>G2</sup>

- Precision ground and hardened ball screws
- Powerful Servo motors assemblies
- Closed loop feedback using ACU-RITE® precision glass scales with (1  $\mu\text{m}/0.00004$  resolution)
- 10" flat panel, color, LCD display
- Large internal part program storage capacity
- RS-232 port for downloading from an offline source
- Remote Stop/Go switch
- USB and Ethernet
- Maximum table feed rate of 100 IPM





**DISTRIBUTOR INFORMATION:**



*Providing Solutions*

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