

The Bridgeport Series I Standard Mill is the original milling, drilling and boring machine. The Bridgeport Series I Knee Mill is the most popular knee mill ever made with 400,000 machines built since selling the first one.

BUILT THE BRIDGEPORT WAY

The long-term reliability of a Series I mill is the result of its design features, the quality of its components, and the craftsmanship of its hand-scraped ways and precision ground fits. Every Bridgeport knee mill is built as though we're going to use it ourselves. That's why the resale value of a Bridgeport mill remains consistently high. Our competitive prices are a result of our higher volume—not from building a cheaper machine. Rigidity starts with the main frame components of a machine, and for this reason, the strength and damping qualities of gray cast iron was chosen.

PATENTED 2J HEAD

The unique and patented air cooling system of the "2J" head ensures that any heat buildup in the spindle bearings, belt or quill area is kept to an absolute minimum. This is achieved by air being drawn into the belt housing and past the spindle bearings by the rotation of the drive belt. It is then exhausted out of the head assembly at the top of the casting. Distortion and inaccuracy due to excessive heat rise is kept to a minimum by maintaining the operating temperature within 20 degrees Fahrenheit of ambient temperature. This also results in increased belt and bearing life, as well as more consistent accuracy. With no external cooling fans, vibration is reduced and the ongoing maintenance or threat of a fan failure is eliminated. Fans also frequently require a step-down transformer if the machine is wired for power greater than 110 Volts.

SIGNATURE PAINTING PROCESS

Castings are fully inspected, shot blasted, annealed and oxide coated, totally free from rust and contamination. They are then spray filled, sanded and painted with part polyurethane coating to seal the castings. Painting before machining builds the depth of gloss, which is required of all Series I machines.

SERIES 1 ONE-SHOT LUBRICATION

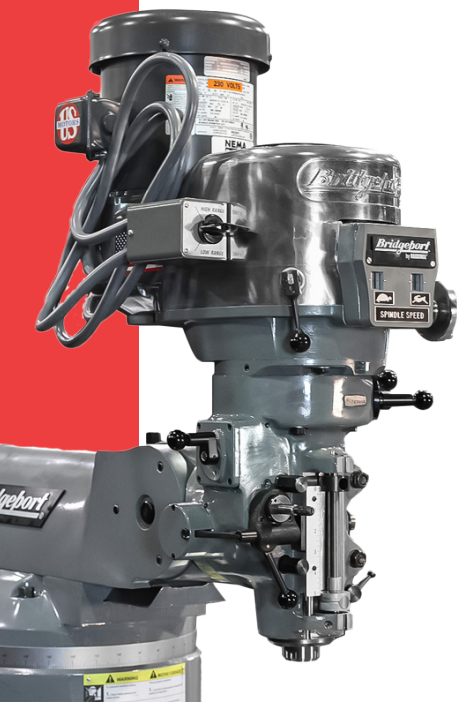
Adequate lubrication ensures a long accurate life for the machine. It also reduces maintenance and makes the machine more sensitive and easier for the operator to use. A metered, centralized system lubricates all of the ways and screw assemblies of the machine. Operation of the system by a single lever saves the operator time and makes it easy to always provide the correct amount of oil, predetermined by a series of metering valves built into the system. Many competitive systems do not meter lubrication, which allows the oil to flow to the point of least resistance. Thus one sliding member may receive more oil than another, possibly causing excessive wear to the area that is not getting properly lubricated. An optional Automatic Lubrication System is also available.

HAND-SCRAPED WAYS

All alignment ways and gibs are completely hand-scraped to within tenths of a thousandth. This ensures optimum machine geometry, rigidity and accuracy.



SPECIFICATIONS

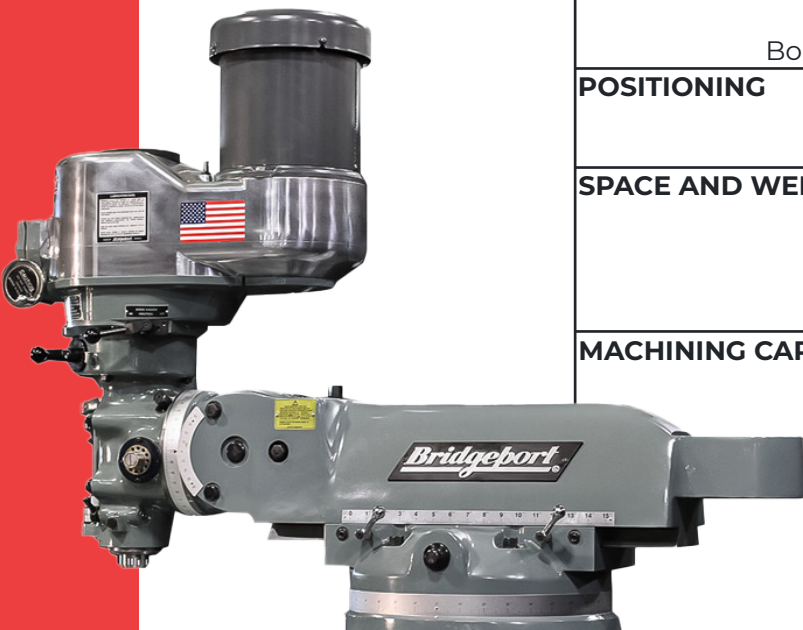


Standard Features

- 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



SERIES 1 SERIES 1 CNC

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

CNC ENHANCEMENT OPTION

ACU-RITE® MillPWR^{G2}



2 or 3 Axis CNC Control

Bridgeport CNC Knee Mills:

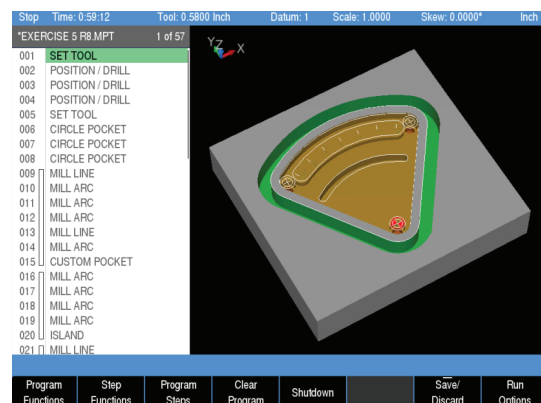
Our CNC knee mills feature the ACU-RITE® MillPWR^{G2} control with shop floor programming that allows the operator to generate part programs quickly and efficiently through the use of easy-to-understand conversational style prompts. The ACU-RITE® control package comes with an all-digital control and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

The ACU-RITE® MillPWR^{G2} 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^{G2}

- Precision ground and hardened ball screws
- Powerful Servo motors assemblies
- Closed loop feedback using ACU-RITE® precision glass scales with (1 μ 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





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