

# Bridgeport Series I



The Bridgeport Series I Standard Mill is the original milling, drilling and boring machine. The Bridgeport Series I Knee Mill is the most popular mill ever made with over 370,000 machines built over the past 70-plus years.

## 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 Hardinge-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. The "bargain" imitators can't say that. 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. Also, 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.

## Series I 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.

## Bridgeport's 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 the first of a two-part polyurethane coating to seal the castings. Painting before machining builds the depth of gloss, which is required of all Series I machines. The last process prior to skidding for shipment is to spray a final finish coat of the best polyurethane coating available.

## Accessories & Repair Parts

Hardinge & Bridgeport are the only certified sellers of Series I accessories and repair parts. We have thousands of accessories and repair parts in stock and ready for immediate shipment to support our customers. For more information please contact Hardinge & Bridgeport by calling 800-843-8801 or visit [www.kneemills.com](http://www.kneemills.com) to order documentation, accessories, repair parts and more!



## SERIES I

### Range

Table Travel (X-Axis, end of table to end of saddle)	
without Power Feed	31 in. (787mm)
with Power Feed	30 in. (762mm)
Saddle Travel (Y-Axis)	12 in. (305mm)
Quill Travel	5 in. (127mm)
Knee Travel (Z-Axis)*	16 in. (406mm)
Ram Travel	12 in. (305mm)
Throat Distance (min.)	6.75 in. (171mm)
Throat Distance (max.)	18.75 in. (476mm)
Table to Spindle Nose Gage Line	
(min.)	2.5 in. (64mm)
(max.)	18.25 in. (463mm)

### Table

Overall Size	49 x 9 in. (1245 x 299mm)
Working Surface	49 x 9 in. (1245 x 229mm)
T-slots Centers	3 @ 2.5 in. (64mm)
T-slot Size	0.625 in. (16mm)
Height above Floor (max.)	47.25 in. (1200mm)
Weight of Workpiece (max.)	750 lbs. (340kg)

### Spindle (2J Head)

AC Power Rating	
(30 min. duty cycle)	3 HP (2.2 kW)
(continuous)	2 HP (1.5 kW)
Spindle Taper	R-8
Tooling	R-8 Collets

### Optional Spindle Taper

Spindle Taper	#30 ISO
Tool Holder	Erickson Quick-Change #30 ISO

### Speed Range

High (infinitely variable)	500 – 4200 RPM @ 60 Hz
Low	60 – 500 RPM @ 60 Hz
Power Quill Feed (3)	0.0015 in./rev (0.038mm)
	0.003 in./rev (0.076mm)
	0.006 in./rev (0.152mm)

### Drilling Capacity

Power Quill Feed	3/8 in. (9.5mm)
Milling Capacity (mild steel)	2 CI/min.
Boring Range (mild steel)	6 in. dia. (152mm)
Spindle Diameter	1.875 in. (48mm)
Quill Diameter	3.375 in. (86mm)

### Positioning

Feedrate Range (X,Y)	0.50-35 ipm (13-889mm/min)
Minimum Increment	0.0001 in. (0.003mm)

### Space and Weight

Floor Area	8.3 x 7.8 ft. (2.53 x 2.4m)
Height	87 in. (2.21m)
Net Weight	1930 lb. (875kg)
Shipping Weight	2075 lb. (941kg)

### Power

Input Power	208/230/460 volts
	3 phase, 50/60 cycle
Power Capacity	4kVA

### Standard Features

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

### Optional Features

2 or 3-Axis Digital Readout  
 Power Drawbar for R-8 or #30 Quick-Change Spindle  
 Worklight  
 Electrics—NFPA/NEMA-12 Standards, UL listed



# Bridgeport®

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\* Knee travel reduced by 1 in. (25.4mm) with Flood Coolant