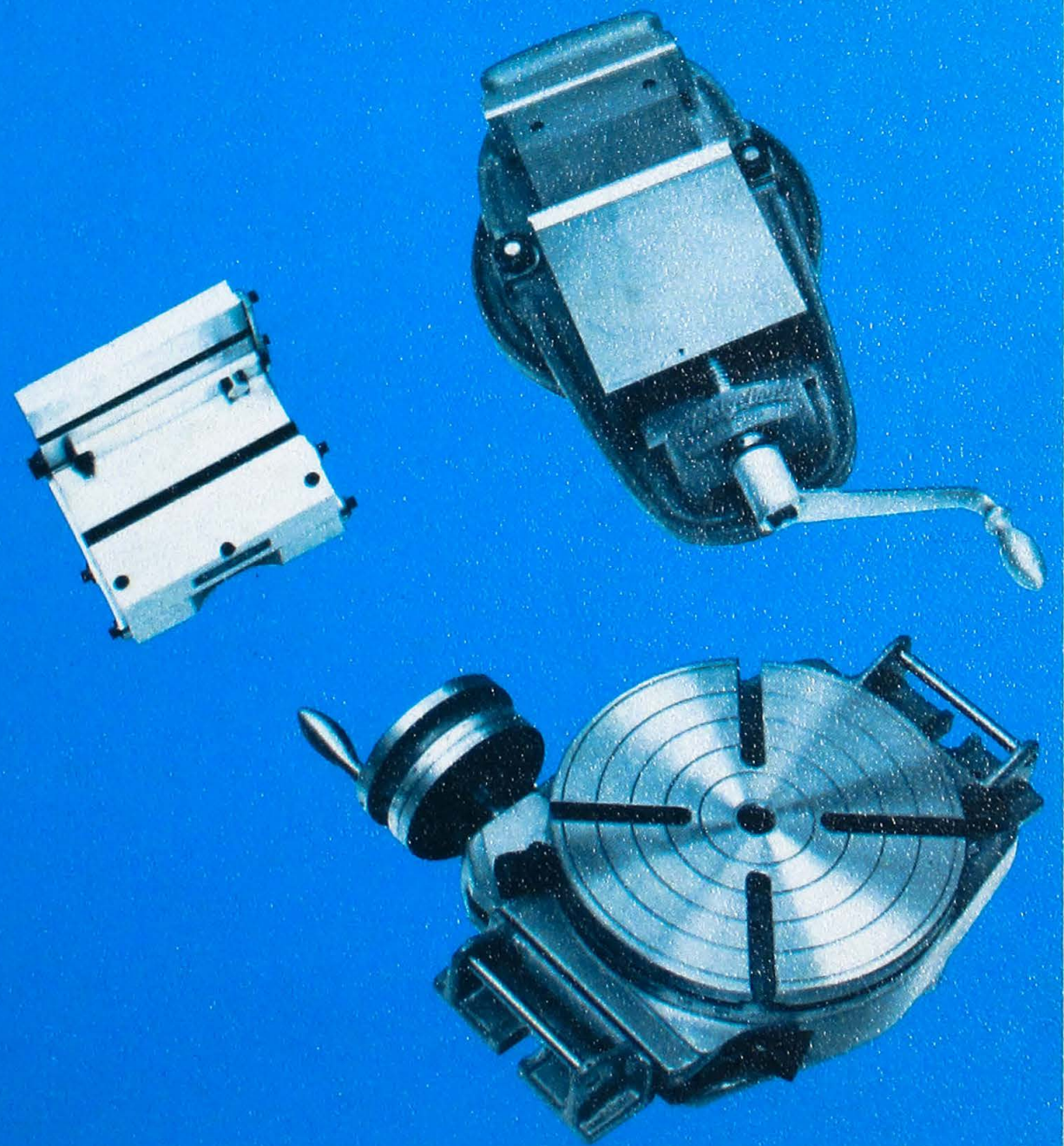


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## Attachments and Accessories for Bridgeport Machines





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Specifications, accessories, and machine appearance are subject to change without notice; machines shipped may differ in some details from those shown.  
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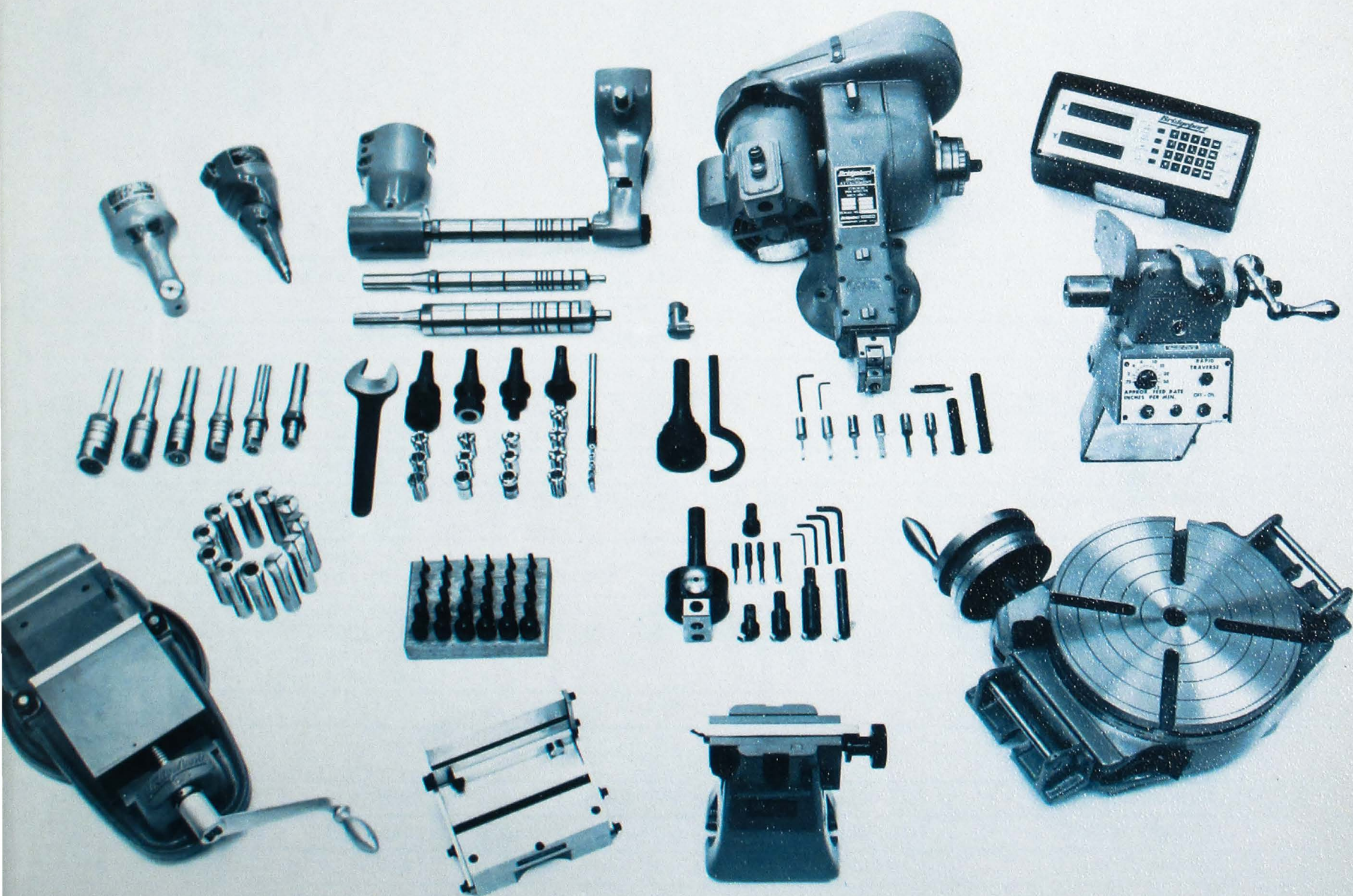
## Introduction

Bridgeport attachments and accessories extend the capabilities of your Bridgeport machine. Attachments and accessories are not luxuries, they are practical devices and instruments to help you attain maximum dollar value from the production of your machine.

Through the use of proper attachments and accessories your Bridgeport can do almost every job in your shop. Increased production rates, higher quality parts,

greater machine flexibility, even doing jobs that normally could not be done — these added values can be yours with Bridgeport accessories. Most attachments and accessories can be used with both Series I and Series II Bridgeport standard machines.

Your Bridgeport dealer can help you select the attachments and accessories you need. And you can add to your capabilities as the need arises.





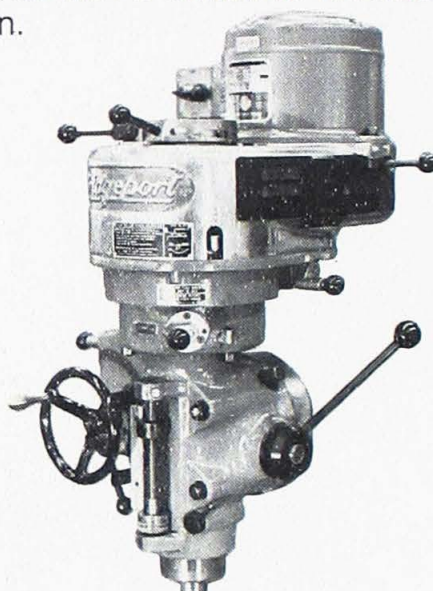
# Milling Machine Attachments and Accessories

## Heads for Series I

Bridgeport heads were designed to do a specific job, to meet a definite need. And they do the job — extremely well. Don't overlook how other heads may add expanded profitability to your machine. They can be used as replacements of heads on machines, mounted on the rear of the ram of Series I, on duplicators for multiple head machining and for special applications. The heads can be equipped with metric quill stop micrometer and scale. (See page 6 for information on mounting adapters.)

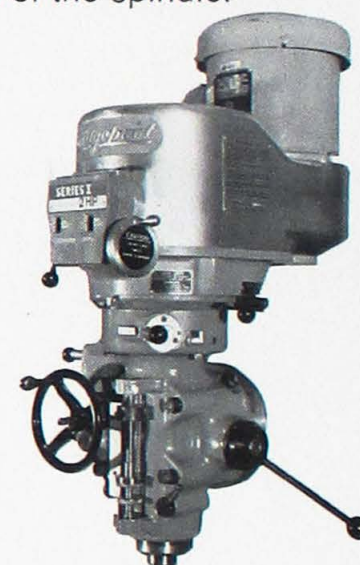
### Model J

The 1 and 1½ hp Model J milling, drilling and boring heads provide unmatched dollar value for power and accuracy. They are equipped with power down-feed and power up-feed and offer extreme sensitivity provided by a counter-balanced quill and spindle. A separate lever allows rapid manual movement of the quill up or down; small movement is obtained through a separate hand wheel and angular positioning through an integral worm and gear. Model J features include positive quill lock; switch to reverse spindle rotation; micrometer depth stop graduated in thousandths on inch machines and .02mm on metric machines; back-gearied spindle drive for maximum use of power; and positive two-way power feed tripping mechanism. The J head is equipped with a switch to reverse spindle rotation.



### Model 2J

This 2 hp (1.5kW), variable speed milling, drilling and boring head is now more powerful than ever. Among its outstanding features are: infinitely variable speeds from 60 to 4200 rpm; power down-feed and up-feed; counter-balanced quill and spindle; angular positioning obtained through an integral worm and gear; positive quill lock; micrometer depth stop graduated in thousandths on inch machines and .02mm on metric machines; positive two-way power feed tripping mechanism. A separate lever-controlled manual feed provides for rapid movement of quill while small movement is controlled by means of a separate hand wheel. The 2J is equipped with a switch to reverse spindle rotation. The patented flow-through air cooling system minimizes distortion of the spindle.



Specifications	Model J		Model 2J
	1800 RPM	3600 RPM	
Code #	2190015	2190016	255000
Rating-hp (kW)	1 (.75 kW)	1 (.75kW) 1½ (1.13kW)	2.0 (1.5kW)
Drilling capacity manual power feed	¾ (19) dia. ⅜ (9) dia.	¾ (19) dia. ⅜ (9) dia.	¾ (19) dia. ⅜ (9) dia.
Quill travel	5 (127)	5 (127)	5 (127)
Quill power feed rate *	.0015 (.04), .003 (.08), .006 (.15)/rev.		.0015 (.04), .003 (.08), .006 (.15)/rev.
Spindle	R-8 Taper Bridgeport Quick Change		R-8 Taper Bridgeport Quick Change
Spindle speeds-rpm	80, 135, 210, 325, 660, 1115, 1750, 2720	160, 270, 440, 660, 1320, 2200, 3600, 5440	Infinitely variable— 60 to 4200 Back gear—60 to 500 Direct drive—500 to 4200
Stroke			
Stroke per min.			
Overall height	27¼ (699)	27¼ (699)	32 (813)
Overall depth	19 (483)	19 (483)	21¾ (552)
Overall width	18 (457)	18 (457)	18 (457)
Cooling			Pat.flow-through air cooling

\*Quill power feed is standard on J & 2J heads; optional on 4J head.

All dimensions in inches (metrics in parenthesis)



### Model M

The ½ hp (.38kW) Model M is a production head for light-to-medium type of work. Its counter-balanced quill and spindle make it an extremely accurate unit for precision drilling and light cuts. This versatile tool can be used at all angles without changing the work setup. When mounted with a swivel adapter, the Model M provides angle settings in both planes. The spindle has six splines and is driven by a pulley mounted on separate ball bearings. Features include: positive quill lock; rack and pinion feed for drilling and boring; micrometer depth stop graduated in thousandths on inch machines and .02mm on metric machines; and four-bolt mounting for rigidity. (Also available with metric quill stop micrometer and scale.)



### Model E

The ⅓ hp (.25kW) Model E vertical shaping head forms intricate shapes, extruded dies, and complex patterns. The Model E uses a vertical tool motion to shape and can be placed at a right angle or at any vertical or compound angle to the table. This means you can produce shapes normally requiring special machinery or broaching. The Model E head allows work in blind holes where broaches cannot be used, cuts gear teeth and racks and makes sharp internal corners. Strokes from 0"-4" (0-102mm) can be dialed in increments of ⅛" (3mm). The Model E shaping head can also be fitted to the rear of the ram, and thus it is always available for work by merely swinging it 180° to position it over the table. A shaping tool set is also available (see page 12 under Tooling).



## Head for Series II

### Model 4J

Designed to meet the requirements of the Bridgeport Series II, this milling, drilling and boring head is rated at 4 hp (3kW) continuous. It is a giant among heads of this type, able to easily take on virtually any job in your shop—with power to spare. The reserve power means reduced wear, longer life and minimal service problems, yet a counter-balanced quill and spindle provide extreme sensitivity. Infinitely variable spindle speeds from 50 to 450 rpm and 450 to 3500 rpm, a 5" (127mm) quill travel, and the patented flow-through air cooling system which minimizes distortion of the spindle, all give you the best machine head. The conveniently located spindle motor load meter helps to optimize performance. The head features an adjustable micrometer depth stop, graduated in thousandths on inch machines and .02mm on metric machines; and an optional power quill up and down feed.



Model M			Model E		Model 4J	Specifications
2 Morse Taper	7 B&S Taper	B-3 Taper	Standard Speed	Slow Speed		
2200020	2200017	2200018	2240005	2240045	2172000	Code #
½ (.38kW)	½ (.38kW)	½ (.38kW)	⅓ (.25kW)	⅓ (.25kW)	4 (2.98kW)	Rating-hp (kW)
½ (12)	½ (12)	½ (12)			1¼ (32) dia. ¾ (19) dia.	Drilling capacity (manual) (power feed)
3½ (89)	3½ (89)	3½ (89)			5 (127)	Quill travel
					⅙-2½ ipm (1.6-63mm/min.) optional power downfeed	Quill power feed rate*
					No. 40 Amer. Std. Taper Bridgeport Quick Change	Spindle
1200 rpm motor— 275, 425, 700, 1050, 2100, 4250					Infinitely variable— Low range—50 to 450 High range—450 to 3500	Spindle speeds-rpm
			0-4 (0-102)	0-4 (0-102)		Stroke
			70, 100, 145, 205, 295, 420	35, 50, 70 100, 145, 210		Stroke per min.
21¾ (552)	21¾ (552)	21¾ (552)	20⅜ (529)	20⅜ (529)	44 (1118)	Overall height
17 (432)	17 (432)	17 (432)	17⅞ (443)	17⅞ (443)	32 (813)	Overall depth
12⅝ (321)	12⅝ (321)	12⅝ (321)	8⅞ (206)	8⅞ (206)	19 (483)	Overall width
					Pat. flow-through air cooling	Cooling

All dimensions in inches (metrics in parenthesis)



# Milling Machine Attachments and Accessories

## Power down-feed

Code #2175100  
Power down-feed for Series II, 4J head is a reliable, compact attachment for feeding the quill at controlled and accurate rates. Operates on 110V AC power with a potentiometer control of quill feed rate. Up-off-down switch controls feed direction. Up-down feeds are infinitely variable between .2-2.5 ipm (5 to 64mm/min.). Pilot light indicates control is operative.



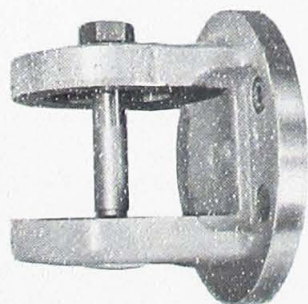
## Mounting adapters

Two types of adapters are available for mounting J, 2J, M, E and 4J on Bridgeport milling machines and special purpose machines.

Toggle adapters

M head mounting on rear of Series I V-Ram — Code #2060061

E shaper head mounting on rear of Series I V-Ram — Code #2240105



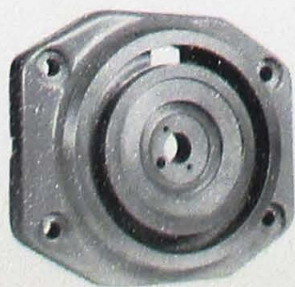
Swivel plate adapters

J, and 2J head mounting on Series I T-Ram and special machines — Code #2100113

J, and 2J head mounting on Series II T-Ram and special machines — Code #2115667

4J head mounting on Series II T-Ram and special machines — Code #2151769

M head mounting on Series I T-Ram and special machines — Code #2100105

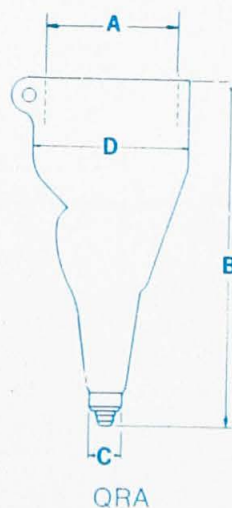


## Attachments for heads

Bridgeport has developed attachments which allow you to get the maximum use and versatility from Bridgeport heads. With Bridgeport head attachments, you can do jobs that normally would require special machinery.

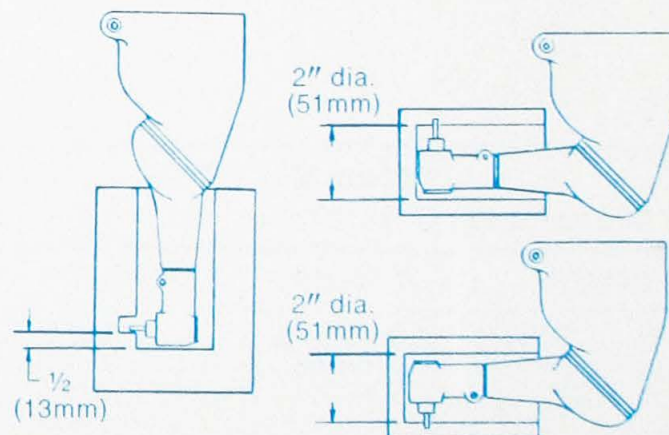
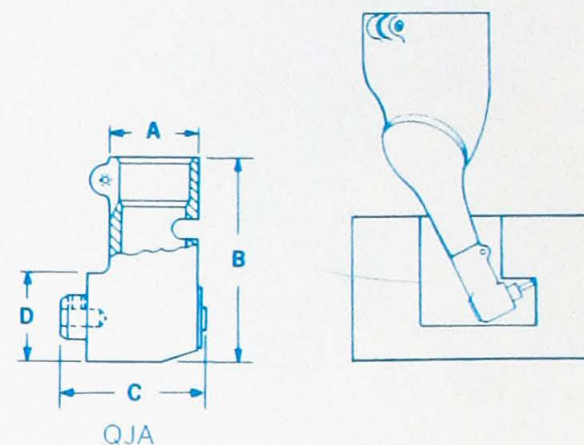
### Quillmaster

Permits use of small tools at any compound angle with Model M, Model 2J and Model J heads. Supplements the right angle attachments described on this page. High speed and rigidity allow the use of small end mills. Any corner with a small radius can be finish milled or cherried to a degree of sharpness not possible by any other method. The Quillmaster is available with 1/8" (3mm) collet and 3/16" (5mm) solid end mill holder in addition to the 3/16" (5mm) spring collet furnished. Rotational speed is increased 50% by Quillmaster attachments which permit efficient use of small end mills.



### QRA

A right-angle attachment for the Quillmaster, the QRA can operate in a confined space or hole only 2" (51mm) in diameter, and can operate effectively within 1/2" (13mm) of the wall of the workpiece. QRA operates with equal ease on the inside or outside of irregularly shaped pieces or castings. QRA is a self-contained unit, featuring permanently lubricated bearings and gear housing.



### Quillmaster

### QRA

Specifications	M, T heads	2J, J heads	
Code #	1453501	1453500	1453502
A	2 5/8 (65)	3 3/8 (86)	1 (25)
B	9 (229)	9 (229)	2 5/8 (59)
C	1 3/8 (21)	1 3/8 (21)	1 5/8 (41)
D	3 1/8 (79)	4 1/4 (108)	1 (25)
E			
Drilling capacity	3/16 (5)	3/16 (5)	
Min. working space			2 (51)
Collet no.			
Speed reduction			
End mill capacity			3/16 shank (5)



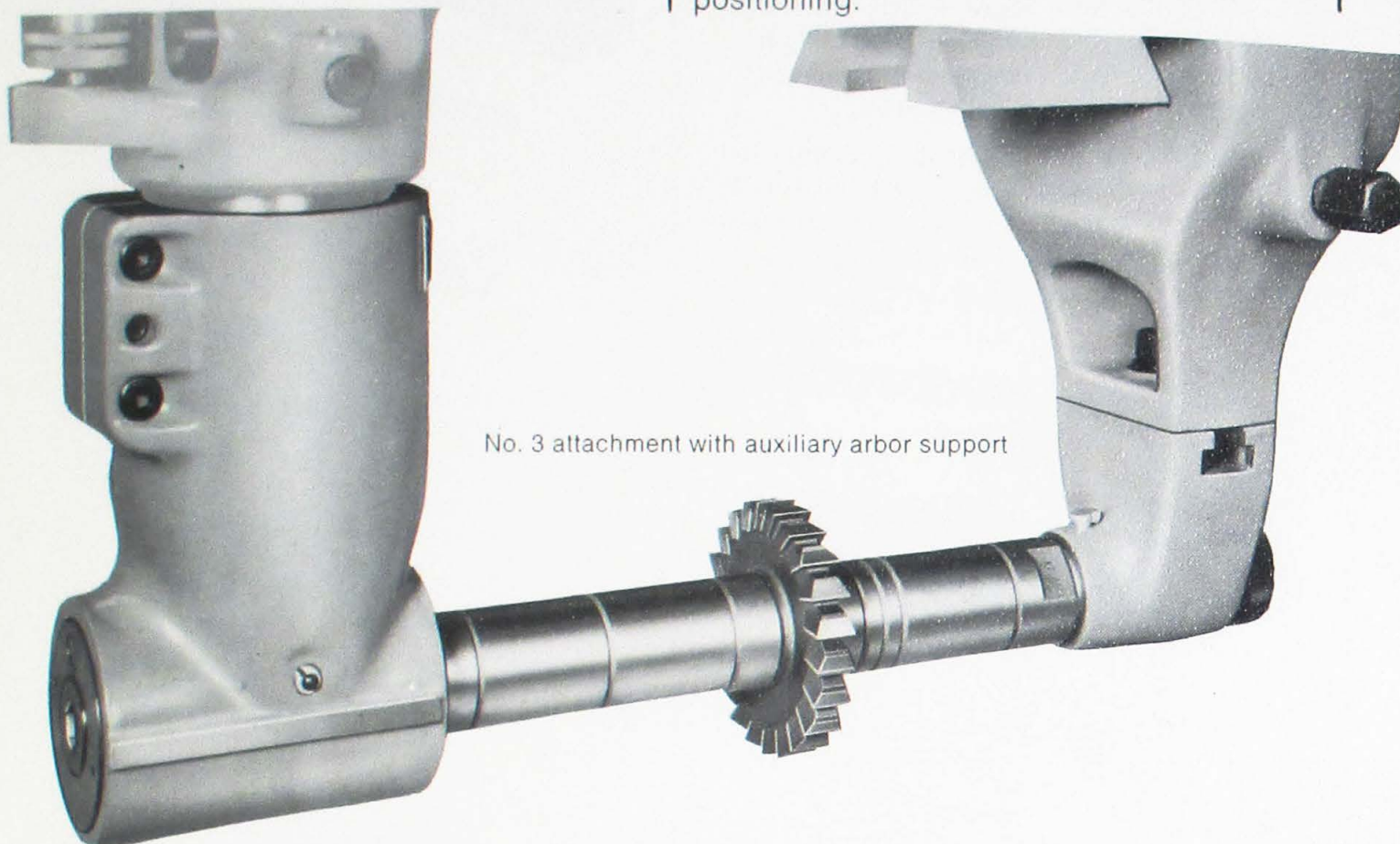
## Right angle attachments

To expand the versatility of the Model 2J and Model J heads, Bridgeport has developed two right angle attachments. Both units are designed to simplify right angle work by reducing the need for special tooling and elaborate fixturing. They are ideal for milling out pockets and cavities.

Cutter spindle and driving spindle are mounted in their own anti-friction bearings. Mounting on the proper head is simple and

quick, minimizing setup time required for right angle work. The attachments are slipped easily on the quill of the head. The driving shaft is held captive by means of a collet and spindle drawbar; then the right angle attachment clamping screw is tightened to hold the unit firmly to the quill. The No. 3 and No. 4 attachments are for use on Model 2J and J heads, and have aligning pads for quick and easy reference and positioning.

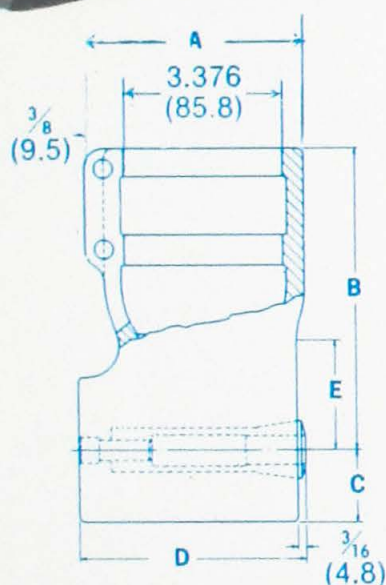
No. 3 attachment will accommodate the standard R-8 collets used with the Model 2J and Model J heads; the No. 4 attachment accepts N-2 collets. These units are made with preloaded ball bearings; hardened and lapped spiral bevel gears lubricated by grease. An auxiliary arbor support is available for use with the No. 3 attachment to increase its versatility in horizontal machining operations.



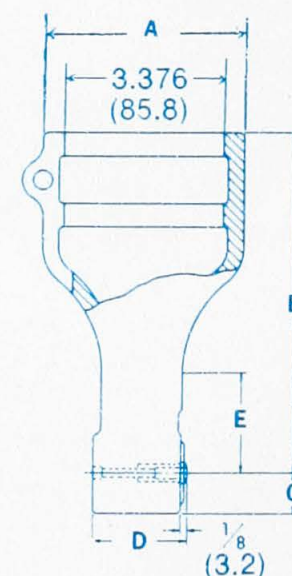
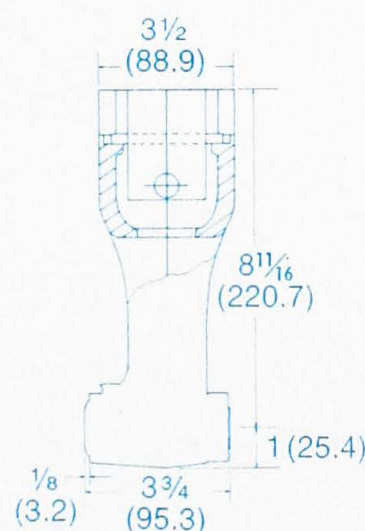
No. 3 attachment with auxiliary arbor support



No. 4 attachment



No. 3



No. 4

### Right Angle Attachments

Specifications	No. 3	No. 4
Code #	2320007	2320009
A	4 1/4 (108)	4 1/4 (108)
B	6 5/8 (168)	7 3/2 (185)
C	1 1/6 (40)	2 7/32 (21)
D	4 13/16 (122)	1 31/32 (50)
E	2 3/8 (60)	2 3/6 (56)
Drilling capacity	1/8 - 3/4 (3-19)	1/16 - 1/4 (2-6)
Min. working space	5 3/4 (146)	2 5/8 (67)
Collet No.	R-8	N-2
Speed reduction	4 to 3	2 to 1
End mill capacity		

All dimensions in inches (metrics in parenthesis)



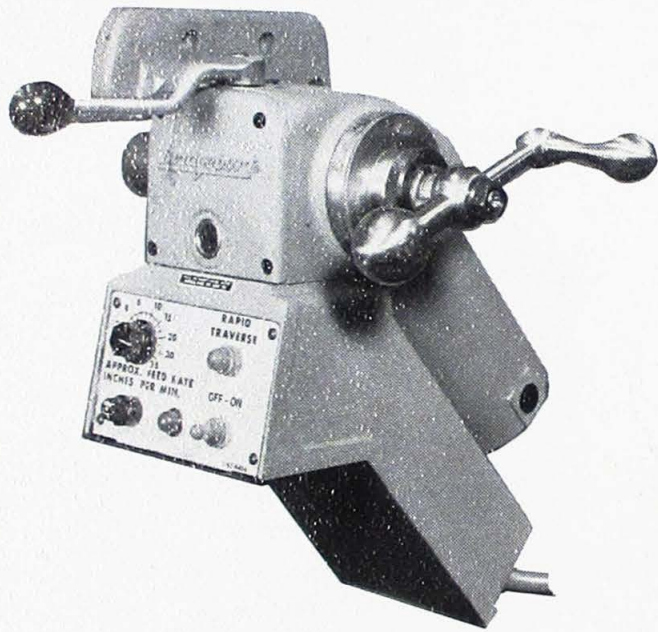
# Milling Machine Attachments and Accessories

## Milling machine attachments

The comprehensive group of attachments for Series I and Series II can add to their versatility, flexibility and most of all productivity — more parts per machine per hour for lower per part cost.

### Infinitely variable power feed

Table power feed units reduce operator fatigue. Feeds for both Series I and Series II Special models are infinitely variable, permitting optimized feedrate resulting in longer tool life. The optional Series I unit fits any table length up to 48 in. (1219mm). It is powered by a DC motor, has a solid state control with a mechanical drive, an on-off pilot light, rapid traverse jog button and a potentiometer regulated feed. This unit is standard on the Series II Special machine with the High Torque unit as an option.



**Series I 6F Unit Power Feed**

Specifications	36" (914mm)	42" (1067mm)	48" (1219mm)
Code #	2630001	2636450	2636452
Overall height		11 (279)	
Overall depth		17 (432)	
Overall width		11 1/4 (286)	
Table feed (infinitely variable)	.75-35 ipm (19-889mm/min)		
Table rapid traverse	45 ipm (1143mm/min)		

### Hi Torque Power Feed

	42" table	48" table
Code #	2636451	2636453
Overall height	11 (279)	
Overall depth	17 (432)	
Overall width	11 1/4 (286)	
Table feed (infinitely variable)	.3-15 ipm (8-38 mm/min)	
Table rapid traverse	15 ipm (381 mm/min)	

## Plain and swivel vises

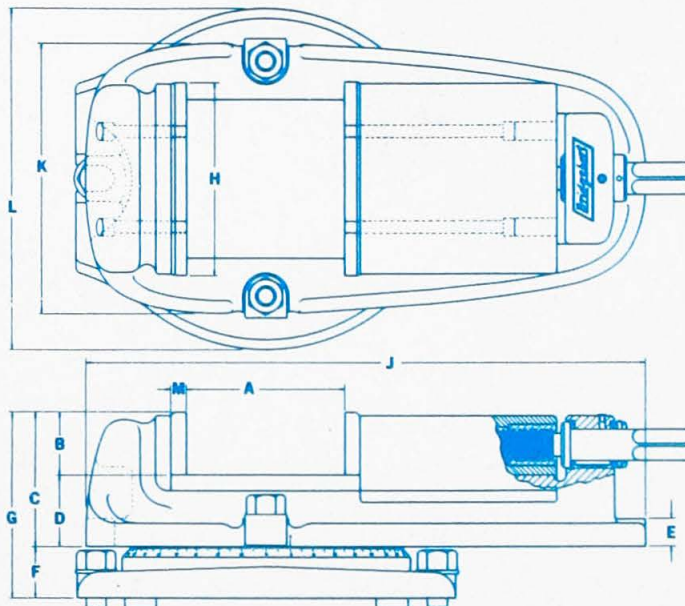
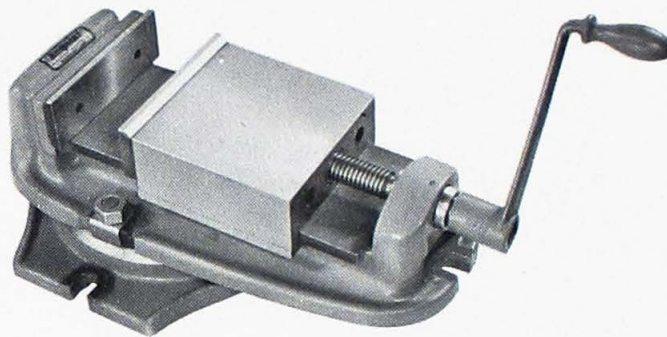
Plain — Code # 2530003

Swivel — Code # 2530001

Built rigidly and accurately of gray iron, with jaws of heat treated alloy steel ground to a precision fit. A large coolant trough is an integral part of the base. Alloy steel lead screw and a bronze lead screw nut, with provisions for lubrication, are standard on all Bridgeport plain and swivel vises.

The swivel model permits quick setup for angular milling and diagonal cutting. It can be rotated a full 360 degrees. The swivel base is graduated in degrees around its periphery in 10 minute increments.

The plain model (without base) has opposed keyways in its base which permits positive mounting on the table of the miller with jaws either parallel or at right angles to the table of the machine.

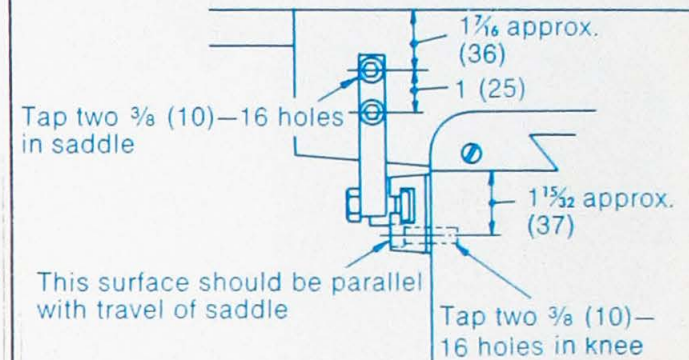
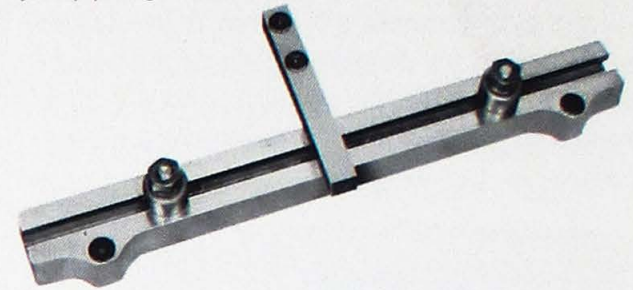


Specifications	Inch	Metric
A Jaws Open	5	(127)
B	2	(51)
C	4 1/4	(108)
D	2 1/4	(57)
E	7/8	(22)
F*	1 5/8	(41)
G*	5 7/8	(149)
H	6 1/8	(156)
J	17 5/8	(448)
K	8 1/2	(216)
L*	10 1/16	(271)
M	1/2	(13)

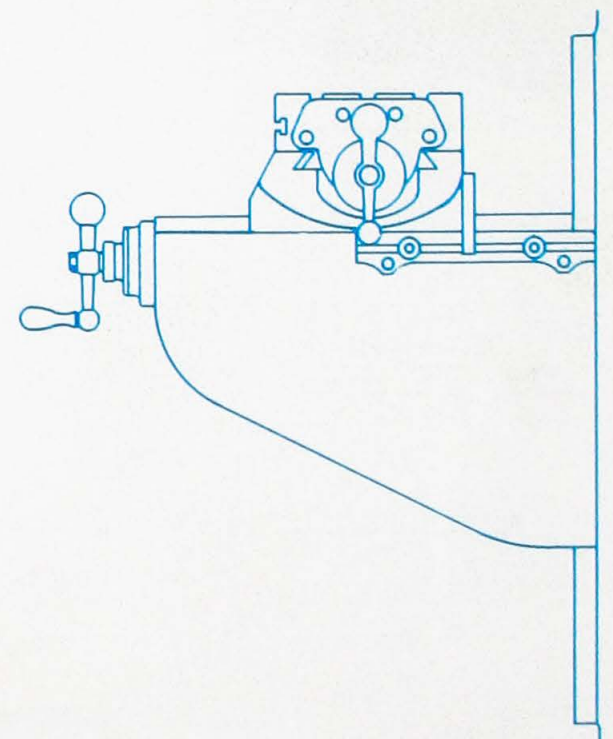
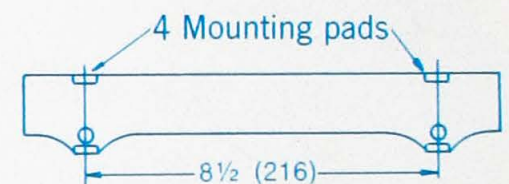
\*Swivel model only.

## Cross travel stop — Code # 2290001

Adjustments allow you to limit the amount of table cross travel to predetermined distances. Selected settings assure positive stop. Easily mounted on either side of knee by tapping 4 holes.



This surface should be parallel with travel of saddle



All dimensions in inches (metrics in parenthesis)



### Lubrication systems—Code #1413200

One-shot lubrication systems are standard on Series I machines. Available as a replacement Bridgeport offers an automatic central lubrication system which provides metered lubrication automatically. Precise control makes possible minute uniform oil flow to some bearing surfaces and uniform greater amounts to others. A lubricant saver and a guarantee of no-worry lubrication.



### Work lights

Straight prong plug—Code #1062590

Twist prong plug—Code #1152588

Work lights for all Bridgeport Series I and Series II machines are available with straight three-prong plugs for direct plant lighting circuits and twist plugs for use with machines with electrical controls.



### Riser blocks

Used to obtain clearance for very large workpieces, riser blocks extend the height range of the Bridgeport Series I miller 4" (102mm) or 7" (178mm). Riser blocks for Series II millers are available in 6" (152mm) heights. Blocks are easily mounted to the column of the machine with four bolts.

(The Series II miller is also available with a 6" (152mm) higher column.)

Series I

4" (102mm) Tool room miller—  
Code #2580000

7" (178mm) Tool room miller—  
Code #2580001

4" (102mm) Series I duplicating—  
Code #2580004

7" (178mm) Series I duplicating—  
Code #2580005

Series II

6" (152mm) Standard tool room miller—  
Code #2151765

6" (152mm) Rigid Ram machine—  
Code #2151218

6" (152mm) Series II T-Ram—  
Code #2151052





# Milling Machine Attachments and Accessories

## Coolant systems

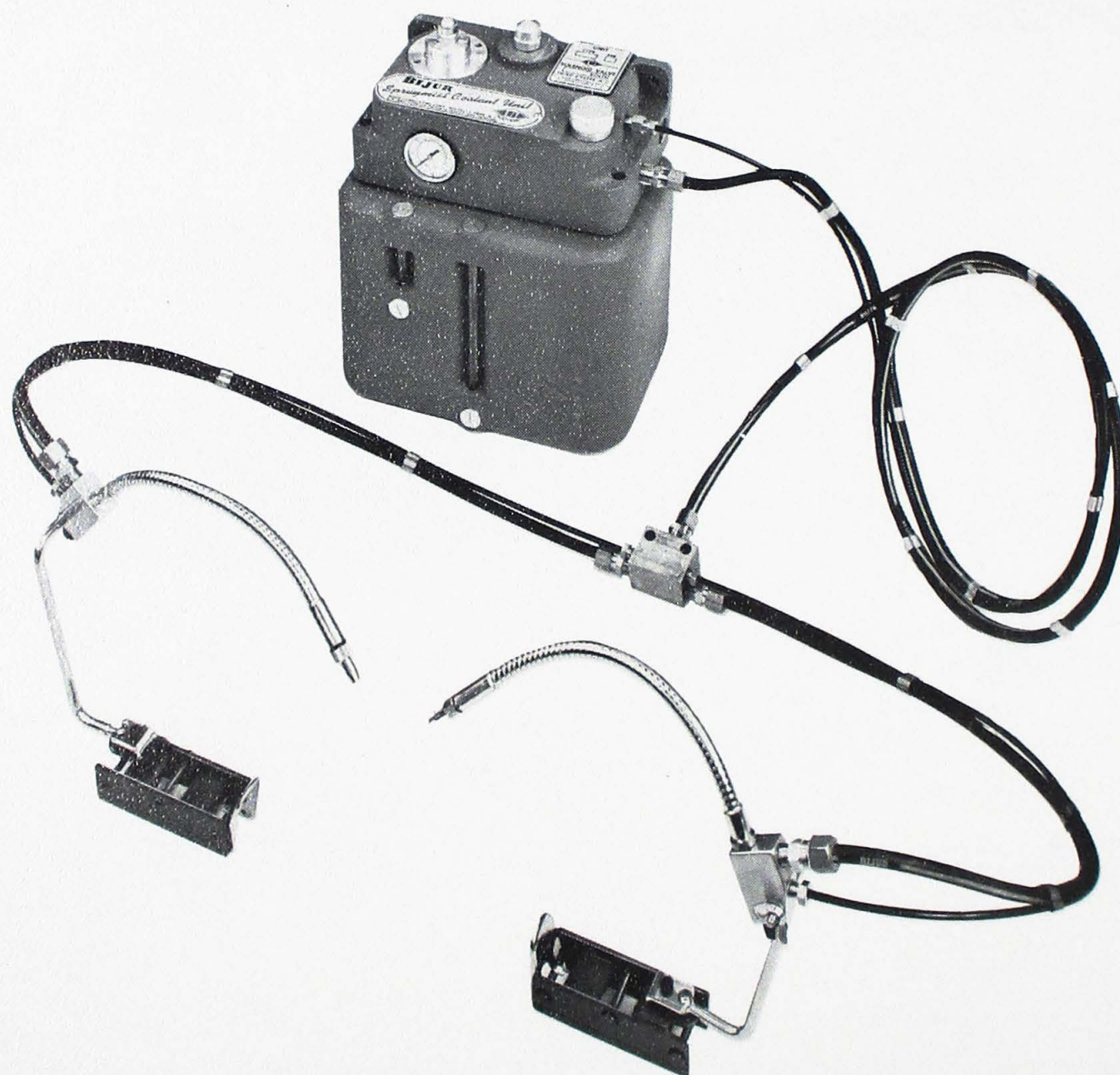
A variety of systems are available to meet production needs. Installation is simple and quick.

### Mist coolant

These units serve all Series I and II machines and the Grinder. They consist of a coolant tank, pump-motor and a combination of nozzles which provide a pressurized spray of coolant precisely where required for effective heat dissipation. All units are machine mounted.

Two sizes of mist tanks are available, 1 gallon (2560067) and 5 gallon (2560068). These are both 115 volt, single phase and can be either 50 or 60 hertz. The nozzle assembly is ordered separately by the number required.

No. Nozzles	Code #
1	2560076
2	2560077
3	2560078
4	2560007
6	2560008
8	2560009



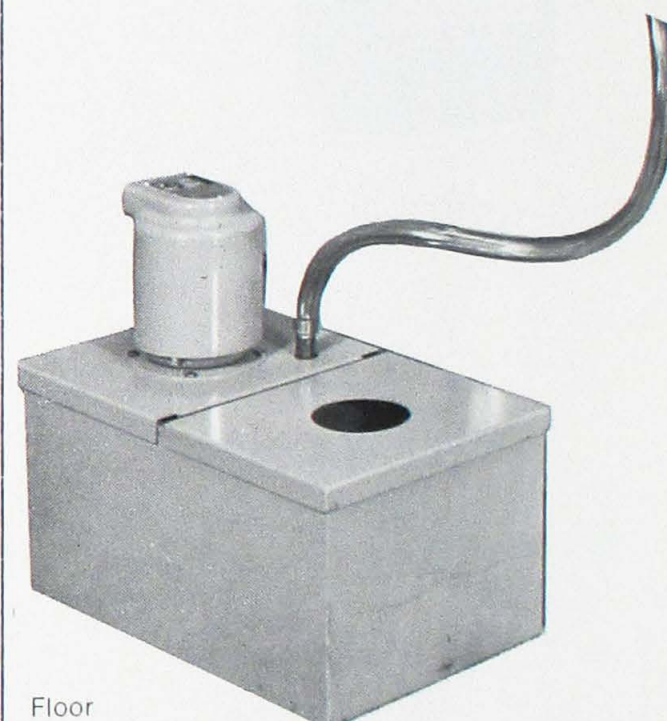
### Flood coolant

There are two types of flood coolant tanks, floor mounted and column mounted. Each can be ordered in 50 or 60 Hz.

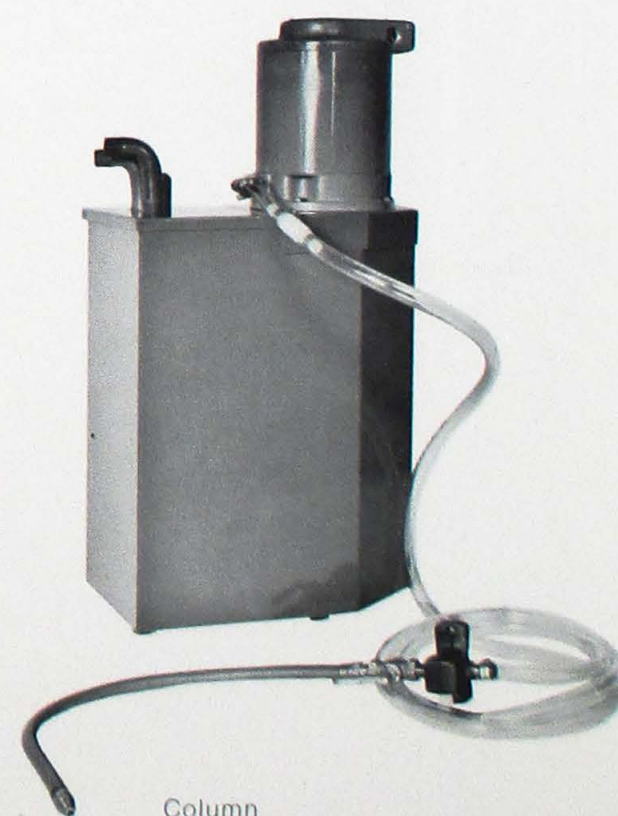
	Code #
Floor Tank 115V Single Phase 60 Hz —	2560065
Column Tank 115V Single Phase 60 Hz —	2560066
Floor Tank 115V Single Phase 50 Hz —	2560079
Column Tank 115V Single Phase 50 Hz —	2560080

The nozzle assemblies are ordered separately by the number of nozzles required and the number of nozzles per head.

No. Heads	Nozz/Head	Code #
1	1	2560069
2	1	2560070
3	1	2560071
4	1	2560072
1	2	2560073
2	2	2560074



Floor



Column



## Electrical controls

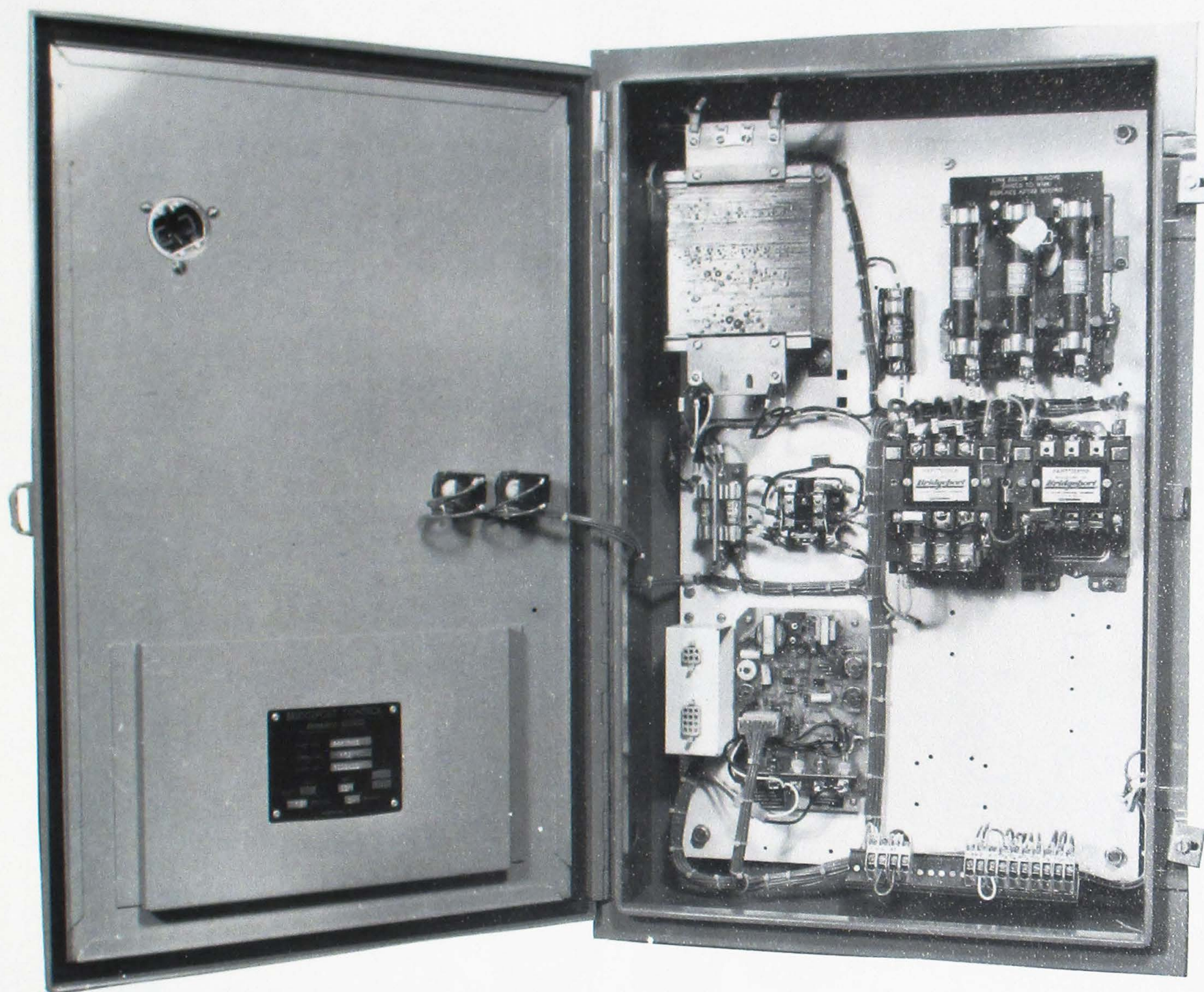
Bridgeport offers an integral, complete electrical distribution system for column mounting.

### Features:

- Designed for special applications.
- Designed for new machines and field retrofiting. For retrofiting please check your dealer for exact model.
- All components are mounted in a special NEMA 12 enclosure.
- Operators' controls operate on 110 Volt

AC and are located in a conveniently placed push button station.

- Units are available in most voltages and frequencies.
- System includes, as standard, a fusible disconnect switch — when enclosure door is opened all power is cut off.



### Electrical Control Panels

Designed to meet the intent of the National Fire Protection Association's Specification NFPA-79, this typical NEMA 12 enclosure provides ample space to locate controls for milling head motors, cherrying or shaper head motors,

operator's control station, digital readout system, central automatic lubrication, and flood or mist coolant systems, table power feed, hydraulic power unit, etc. as well as receptacles for standard or special power take-off cables.



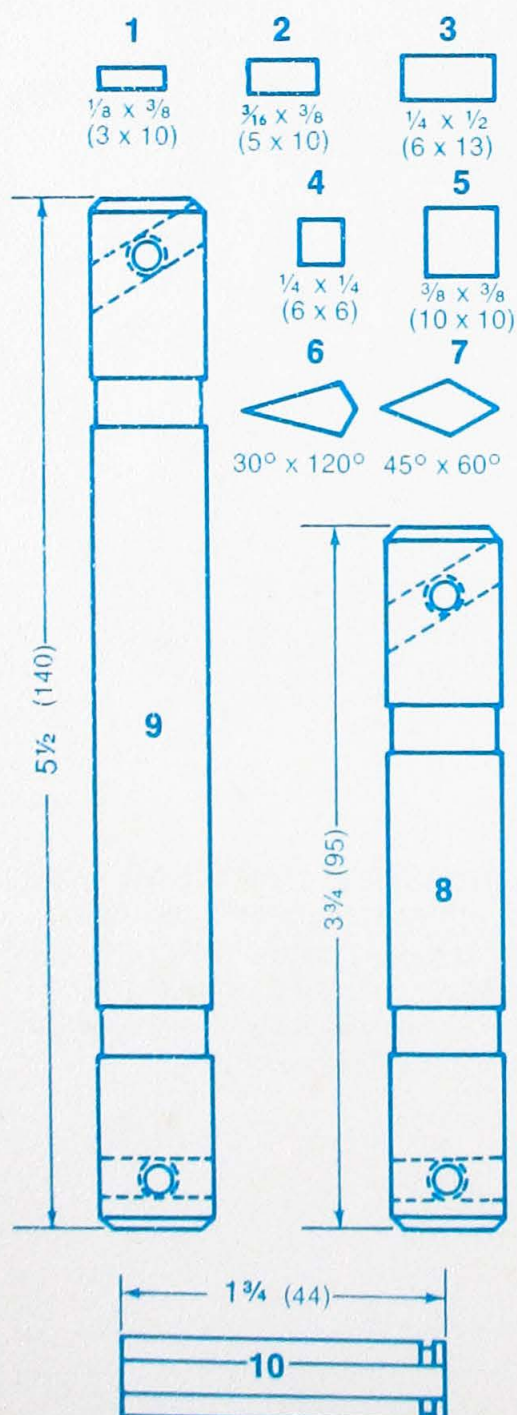
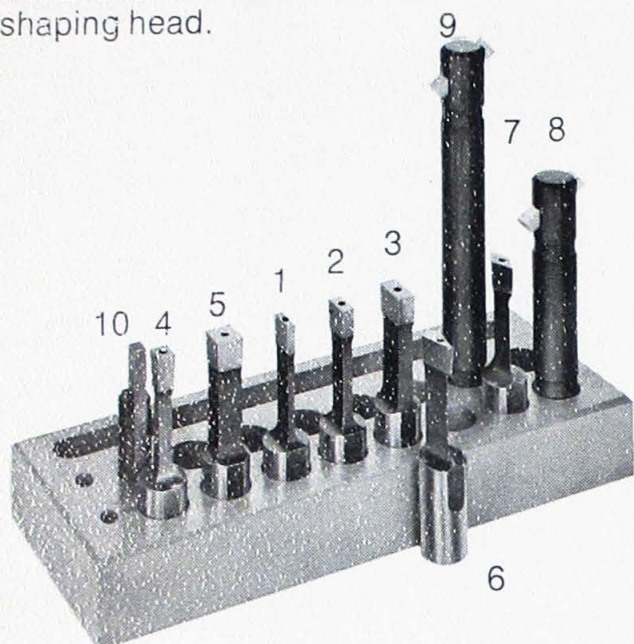
# Milling Machine Attachments and Accessories

## Tooling and tooling aids

Maximum efficiency of any machine tool often is determined by the proper tooling. Bridgeport Machines has developed a full line of quality tools and tooling aids. Although developed primarily for the Bridgeport, many of these can be used with other milling machines.

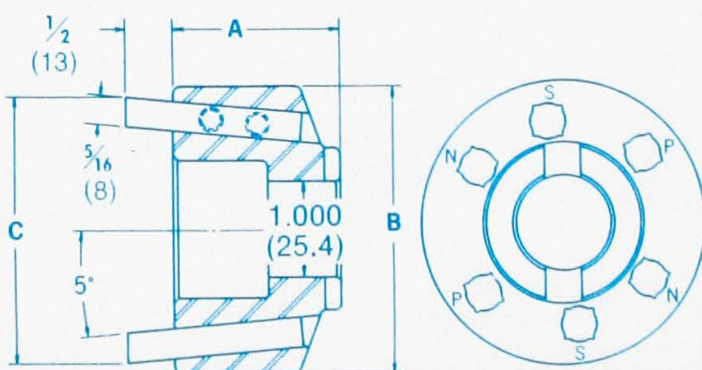
### Shaping tool set— Code # 2240094

Convenient package consists of seven shaped tools and three standard tool bit holders for use with the Model E vertical shaping head.



## Fly cutters

Produce a gleaming surface finish in a quick pass. Accommodate  $\frac{5}{16}$ " (8mm) square tool bits, singly or in pairs, when used with a No. 3 shell mill holder (see page 17). Tool bits may be set at 5 degrees positive rake, 5 degrees negative rake, or at zero rake. Bits are inserted in diametrically opposed broached holes.



Specifications	FC3	FC4
Code #	2310000	2310002
A	1 3/4 (44)	1 3/4 (44)
B	3 (76)	4" (102)
C	2 3/4 (70)	3 3/4 (95)
Without Shank	2310001	2310003

## Quick change tooling

Bridgeport offers a complete line of quick change tooling for both Series I and Series II machines. Designed to permit fast tooling changes during production to speed operations, quick change tooling is available with #30 taper holders for Series I machines and #40 taper holders for Series II machines.

As available, collets marked in both inch and metric sizes.

Quick change tooling for both Series I and Series II machines includes:

- Bridgeport quick change spindle
- Drill & end mill chucks
- Drill extension chucks
- Non-pullout end mill collets
- Floating reamer holders
- Tenthset boring heads
- Tenthset boring bars
- Morse taper adapters
- Jacobs taper adapters
- Shell mill adapters
- End mill adapters
- Tap holders
- Preset fixture

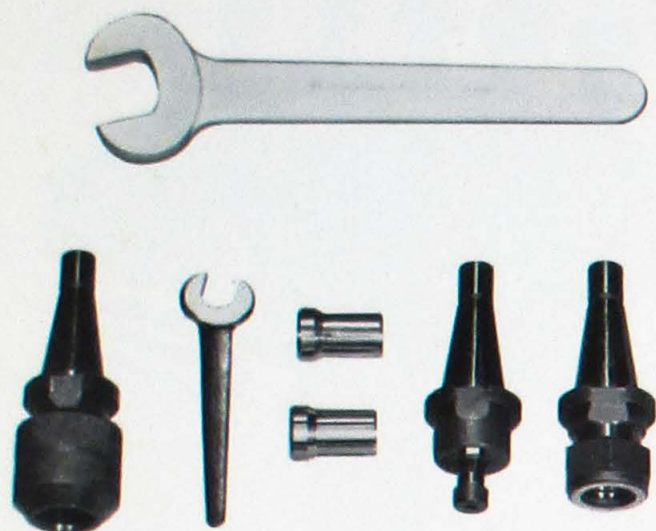
In addition, Series II also offers:

- Spade blade holders
- Spade blades



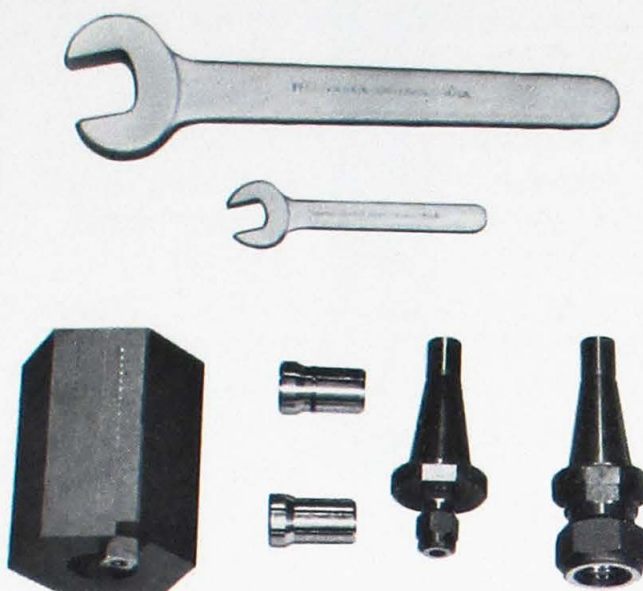


**Bridgeport recommended quick change tooling packages**



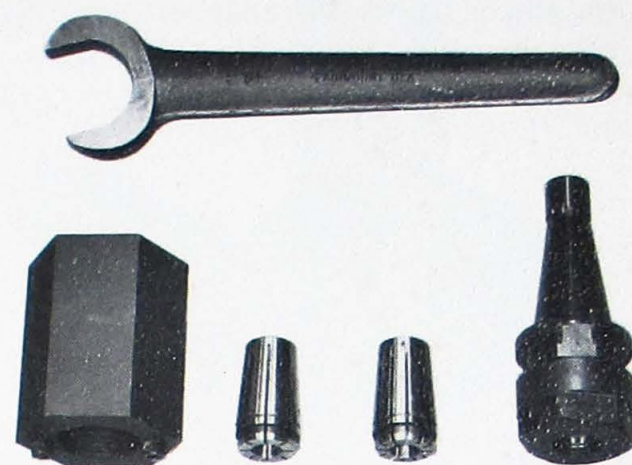
**Series I w/J and 2J head—Code # 1570003**

- 2 collet chucks
- 14 collets ranging in size from  $\frac{1}{8}$ " to  $\frac{3}{4}$ " (3mm to 19mm)
- 1 tool extension chuck
- 4 non-pullout end mill collets  $\frac{3}{8}$ " (10mm),  $\frac{1}{2}$ " (13mm),  $\frac{5}{8}$ " (16mm),  $\frac{3}{4}$ " (19mm)
- 1 1" (25mm) end mill adapter
- 1  $\frac{1}{2}$ " (13mm) pilot shell mill adapter
- 2 open end wrenches  $\frac{1}{4}$ " (17mm) and  $1\frac{1}{2}$ " (38mm)



**Series I (#30 taper)—Code # 1570550**

- 6 drill & end mill chucks, range  $\frac{1}{4}$ " to  $\frac{3}{4}$ " (6mm to 19mm)
- 14 collets ranging in size from  $\frac{1}{4}$ " to  $\frac{3}{4}$ " (6mm to 19mm)
- 4 non-pullout end mill collets  $\frac{3}{8}$ " (10mm),  $\frac{1}{2}$ " (13mm),  $\frac{5}{8}$ " (16mm),  $\frac{3}{4}$ " (19mm)
- 2 drill chucks ranging from  $\frac{1}{8}$ " to  $\frac{1}{4}$ " (3mm to 6mm)
- 5 collets ranging in size from  $\frac{1}{8}$ " to  $\frac{1}{4}$ " (3mm to 6mm)
- 2 open end wrenches  $\frac{1}{4}$ " (17mm) and  $1\frac{1}{2}$ " (38mm)
- 1 locking fixture for chucks



**Series II (#40 taper)—Code # 1572500**

- 9 drill and end mill chucks, range  $\frac{3}{8}$ " to 1" (5mm to 25mm)
- 13 collets ranging in size from  $\frac{3}{8}$ " to 1" (5mm to 25mm)
- 4 non-pullout end mill collets  $\frac{3}{8}$ " (10mm),  $\frac{1}{2}$ " (13mm),  $\frac{5}{8}$ " (16mm),  $\frac{3}{4}$ " (19mm)
- 1 open end wrench  $2\frac{1}{4}$ " (57mm) hex
- 1 locking fixture



**Series II w/4J head—Code # 1572003**

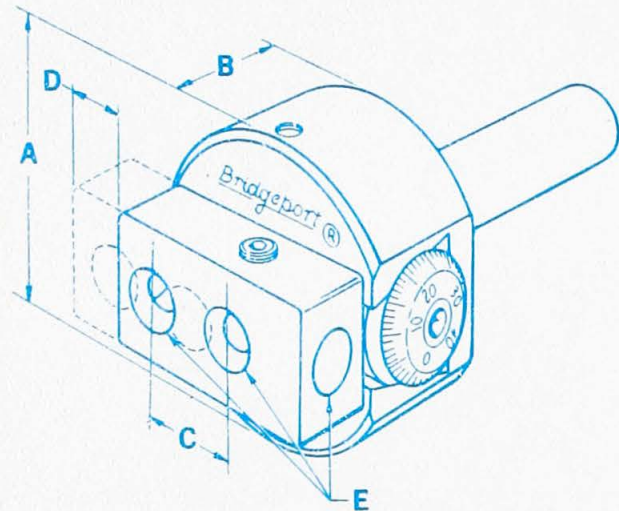
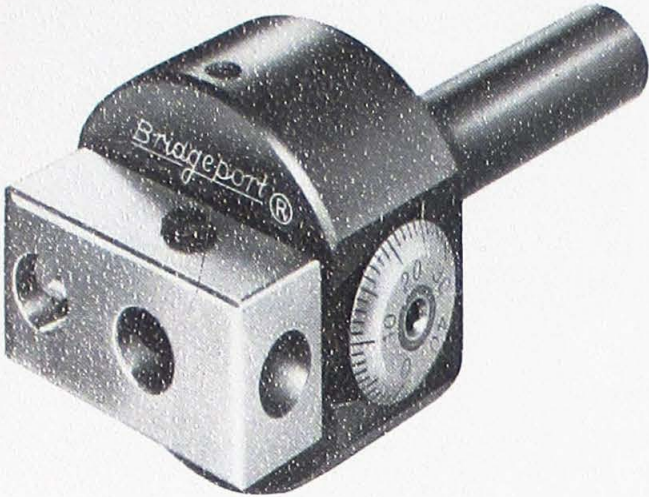
- 4 drill and end mill chucks
- 11 collets ranging in size from  $\frac{3}{8}$ " to 1" (10mm to 25mm)
- 5 non-pullout end mill collets  $\frac{3}{8}$ " (10mm),  $\frac{1}{2}$ " (13mm),  $\frac{5}{8}$ " (16mm),  $\frac{3}{4}$ " (19mm), 1" (25mm)
- 1  $1\frac{1}{4}$ " (32mm) end mill adapter
- 2 drill extension chucks
- 9 collets ranging in size from  $\frac{1}{8}$ " to  $\frac{3}{8}$ " (3mm to 10mm)
- 1 locking fixture
- 2 open end wrenches  $\frac{3}{4}$ " (19mm) and  $2\frac{1}{4}$ " (57mm)



# Milling Machine Attachments and Accessories

## Boring heads

Two models of boring heads, for use with M, J, 2J, and 4J heads, convert a Bridgeport milling machine into an accurate boring machine. Models are available reading in thousandths of an inch or hundredths of a mm. All heads are supplied with the necessary wrenches, mounting block and container.



Specifications	No. 1	No. 2
A	2 1/4 (57)	3 3/8 (86)
B	1 1/4 (32)	1 3/4 (44)
C	3/4 (19)	1 1/8 (30)
D adjustment	3/8 (10)	1/2 (13)
E tool size	3/8 (10)	5/8 (16)

	Inch Code #	Metric Code #
#1 head (no shank)	2350000	2350042
#30 quick change Shank for #1 head	2350137	
#40 quick change Shank for #1 head	2355033	
#2 head (no shank)	2350009	2350040
#30 quick change Shank for # 2 head	2350138	
#40 quick change Shank for #2 head	2350032	

## Boring head tools and shanks

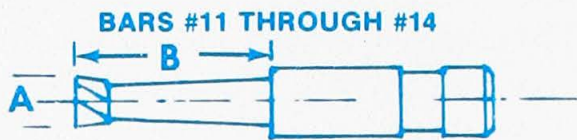
Head No. 1 accommodates 3/8 (10mm) diameter boring tools and Head No. 2 accepts 5/8" (16mm) tools. Boring head shanks, designed specifically for use with your Bridgeport, are available for both the No. 1 and No. 2 heads. When ordering, please specify the model you require.

Complete set of tools for #1 Boring Head—  
Code #2350001 Contains boring heads #11 through #15 and (1) tool bit.

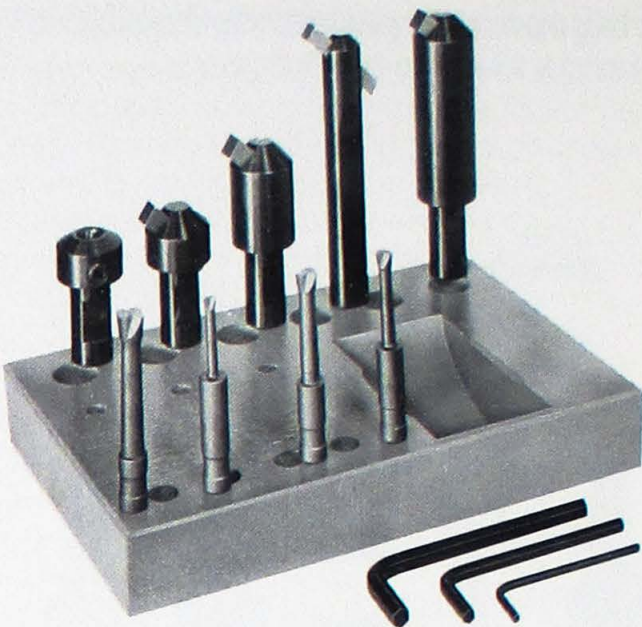
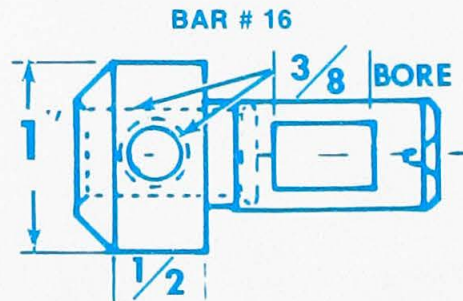
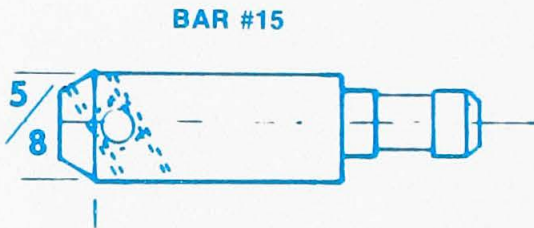
Complete set of tools for #2 Boring Head—  
Code #2350010 Contains boring bars #11 through #20 and (4) tool bits.

#1 Boring Head R8 Shank —  
Code #2350060

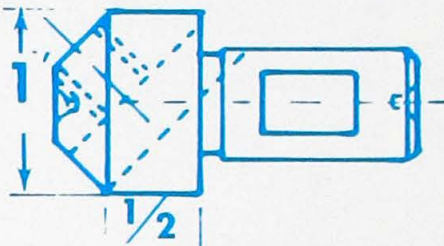
#2 Boring Head R8 Shank —  
Code #2350067



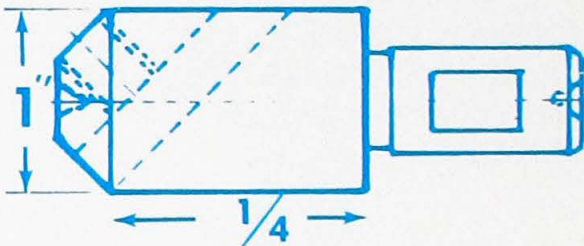
#	DIM A	DIM B
11	3/16	1-1/16
12	1/4	1-9/32
13	5/16	1-1/2
14	3/8	1-27/32



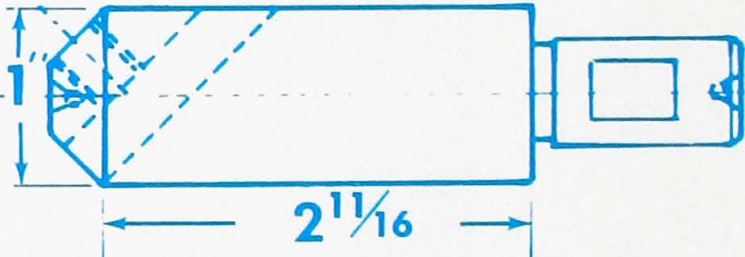
BAR #17



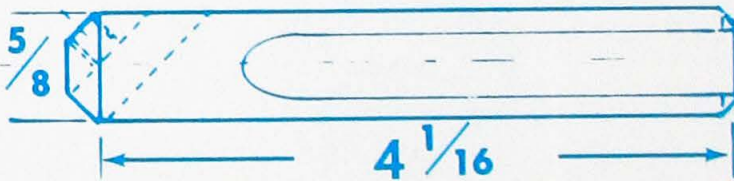
BAR #18



BAR #19



BAR #20

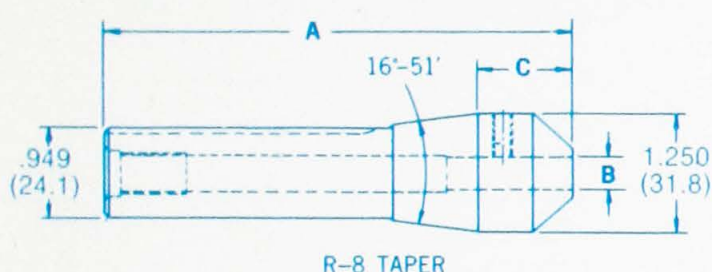




## End mill holders

Allow the use of larger shank cutters for greater tool reach. Holders are made with R-8 taper, for use with Model 2J and J heads.

End mill holders for the 4J head are listed under quick change tooling on page 12.

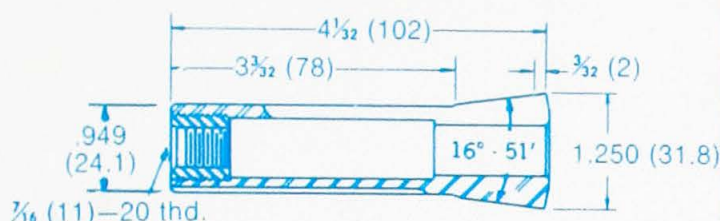


Specifications	EH-3	EH-6	EH-8
Code #	2360002	2360005	2360006
A	5 $\frac{3}{16}$ (132)	5 (127)	5 $\frac{3}{16}$ (148)
B	$\frac{3}{16}$ (5)	$\frac{3}{8}$ (10)	$\frac{1}{2}$ (13)
C	1 $\frac{1}{32}$ (29)	$\frac{3}{32}$ (25)	1 $\frac{1}{32}$ (29)

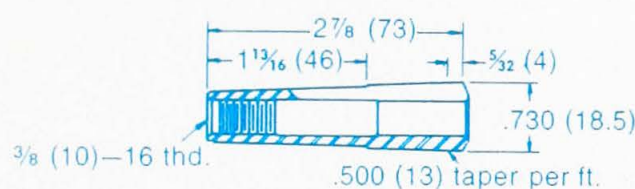
Specifications	EH-10	EH-12
Code #	2360007	2360008
A	5 $\frac{5}{16}$ (141)	6 $\frac{1}{16}$ (170)
B	$\frac{5}{8}$ (16)	$\frac{3}{4}$ (19)
C	1 $\frac{1}{32}$ (39)	2 $\frac{1}{32}$ (67)

Specifications	EH-14	EH-16
Code #	2360009	2360010
A	6 $\frac{21}{32}$ (169)	6 $\frac{15}{16}$ (176)
B	$\frac{7}{8}$ (22)	1 (25)
C	2 $\frac{5}{8}$ (67)	2 $\frac{21}{32}$ (74)

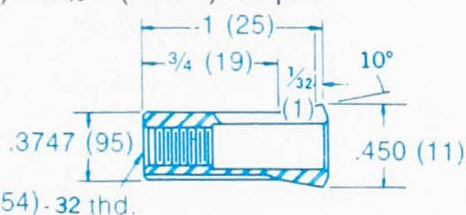
## Collets



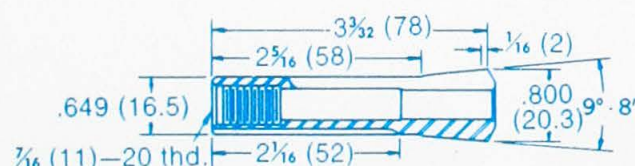
**R-8 Collet**—Code # 2490000-50  
For use with Model J and 2J heads, No. 3 Right-Angle Attachment. Holds tools from  $\frac{1}{8}$ " through  $\frac{3}{4}$ " (3mm through 19mm) in  $\frac{1}{16}$ " (2mm) steps.



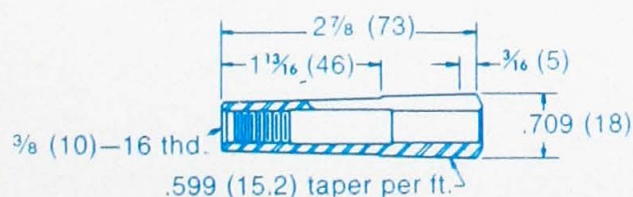
**NO. 7 B&S Collet**—Code # 2491001-29  
For use with Model M and T heads. Holds tools from  $\frac{1}{16}$ " through  $\frac{1}{2}$ " (2mm through 13mm) in  $\frac{1}{16}$ " (2mm) steps.



**N-2 Collet**—Code # 2497001-29  
For use with Bridgeport No. 2 and No. 4 Right-Angle Attachments. Holds tools from  $\frac{1}{16}$ " through  $\frac{1}{4}$ " (2mm through 6mm) in  $\frac{1}{16}$ " (2mm) steps.



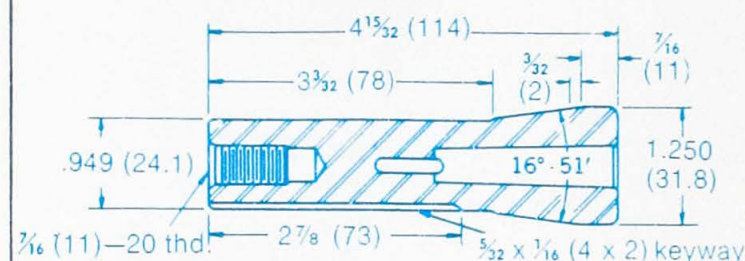
**B-3 Collet**—Code # 2493001-29  
For use with Model T head. Holds tools from  $\frac{1}{16}$ " through  $\frac{1}{2}$ " (2mm through 13mm) in  $\frac{1}{16}$ " (2mm) steps.



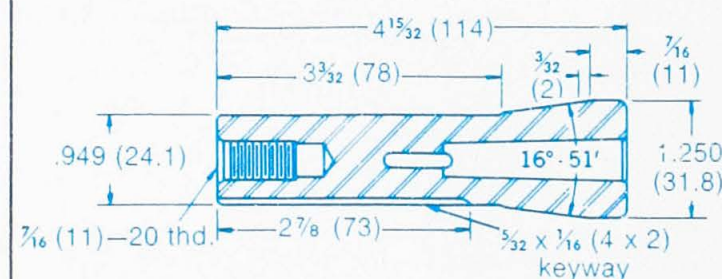
**NO. 2 Morse Collet**—Code # 2492001-29  
For use with Model M and T heads. Holds tools from  $\frac{1}{16}$ " through  $\frac{1}{4}$ " (2mm through 6mm) in  $\frac{1}{16}$ " (2mm) steps.

## Adapters

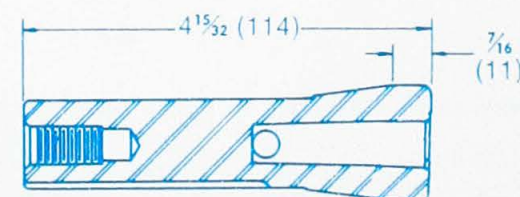
For use with tapered shank end mills and drills.



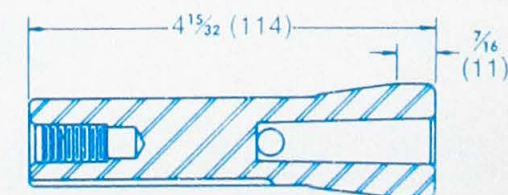
**M-1 Adapter**—Code # 2330023  
R-8 taper, for use with Model J and 2J heads, No. 3 Right-Angle Attachment. Takes No. 1 Morse Taper.



**M-2 Adapter**—Code # 2330024  
R-8 taper, for use with Model J and 2J heads, No. 3 Right-Angle Attachment. Takes No. 2 Morse Taper.



**BS-5 Adapter**—Code # 2330027  
R-8 taper, for use with Model J and 2J heads, No. 3 Right-Angle Attachment. Takes No. 5 B&S Taper.



**BS-7 Adapter**—Code # 2330028  
R-8 Taper, for use with Model J and 2J heads, No. 3 Right-Angle Attachment. Takes No. 7 B&S Taper.

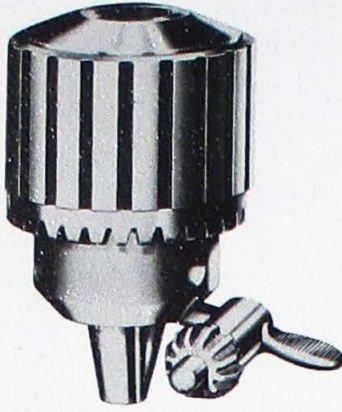


# Milling Machine Attachments and Accessories

## Chucks

### Plain bearing chuck

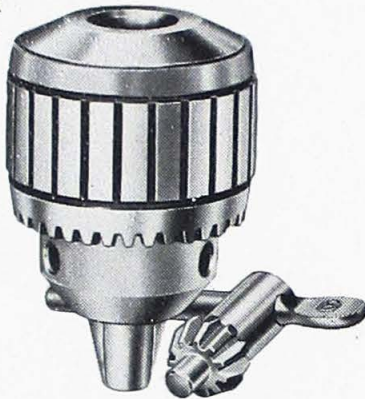
Used throughout the world on standard drilling equipment.



Model No.	Code #	Capacity in.	Taper mount	Uses key
32	1402924	0 - 3/8 (0-10)	#2 JT	K32
36	1402927	3/8 - 3/4 (5-19)	#3 JT	K4

### Ball bearing chuck

Designed for heavy duty drilling and features extremely good accuracy.



Model No.	Code #	Capacity in.	Taper mount	Uses key
11N	1402919	0 - 3/8 (0-10)	#2 JT	K32
14N	1402920	0 - 1/2 (0-13)	#3 JT	K3
16N	1402921	1/8 - 5/8 (3-16)	#3 JT	K4
18N	1402922	1/8 - 3/4 (3-19)	#4 JT	K4
20N	1402923	3/8 - 1 (10-25)	#5 JT	K5

### Keyless chuck

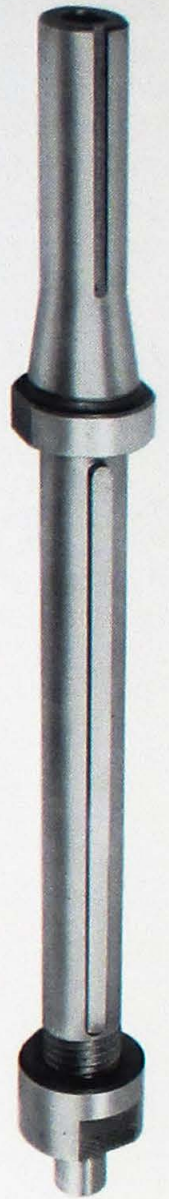
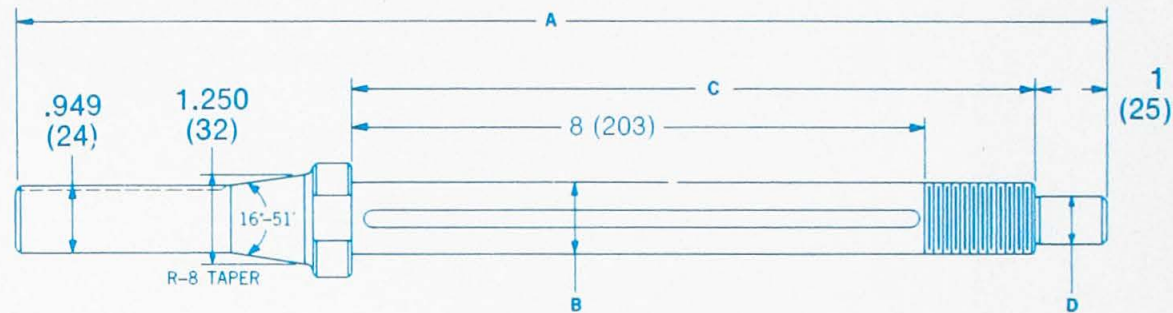
Offers excellent gripping power and extremely high accuracy.



Model No.	Code #	Capacity	Taper mount
65 J1	1402903	0 - 1/4 (0-6)	#2 JT
130 J6	1402906	1/32 - 1/2 (1-13)	#6 JT
160 J6	1402907	1/8 - 5/8 (3-16)	#6 JT

## Arbors

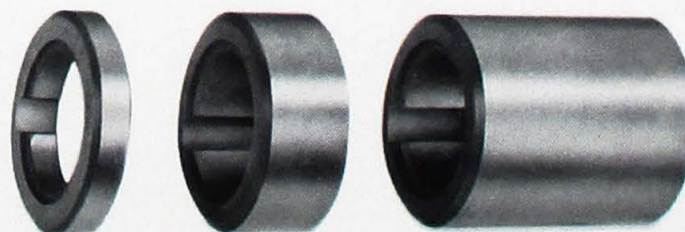
Permits use of Model 2J or Model J head in a vertical position for cutting slots or side milling. Arbors allow use of slitting saws, side mills or alternate tooth milling cutters. On gang jobs it is suggested that the Bridgeport-designed arbor support be used to obtain maximum rigidity. Arbors are heat treated and ground. Spacers are ground parallel and square with the bore of the spacer. All arbors are provided with wrench flats on the shoulders to facilitate mounting or removal of arbor nut.



## Specifications

	Code #	Thread direction	A	B	C	D
SAR-12-P	2470083	Right	14 29/32 (379)	3/4 (19)	9 3/32 (236)	1/2 (13)
SAL-12-P	2470084	Left	14 29/32 (379)	3/4 (19)	9 3/32 (236)	1/2 (13)
SAR-14-P	2470085	Right	15 1/32 (382)	7/8 (22)	9 13/32 (239)	11/16 (17)
SAL-14-P	2470086	Left	15 1/32 (382)	7/8 (22)	9 13/32 (239)	11/16 (17)
SAR-16-P	2470087	Right	15 1/32 (387)	1 (25)	9 17/32 (242)	11/16 (17)
SAL-16-P	2470088	Left	15 1/32 (387)	1 (25)	9 17/32 (242)	11/16 (17)
SAR-20-P	2470089	Right	15 15/32 (393)	1 1/4 (32)	9 21/32 (245)	11/16 (17)
SAL-20-P	2470090	Left	15 15/32 (393)	1 1/4 (32)	9 21/32 (245)	11/16 (17)

## Spacers for use with Bridgeport Arbors

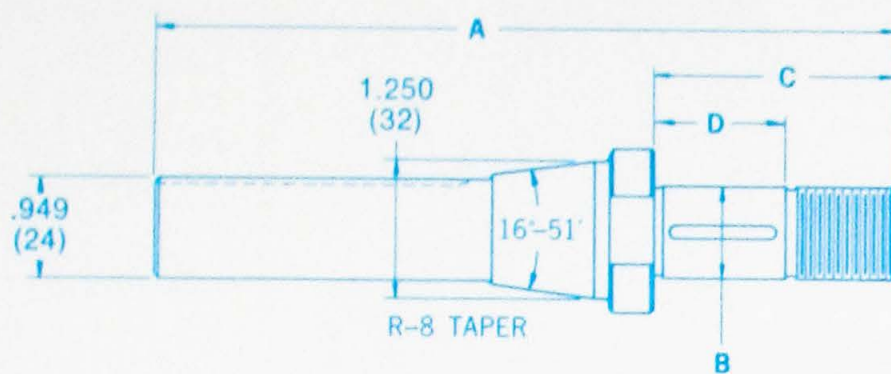


	Code #	I.D.	Length
SA-124	2470067	3/4 (19)	2 (51)
SA-122	2470053	3/4 (19)	5/8 (16)
SA-123	2470054	3/4 (19)	3/8 (8)
SA-144	2470068	7/8 (22)	2 (51)
SA-142	2470055	7/8 (22)	5/8 (16)
SA-143	2470056	7/8 (22)	3/8 (8)
SA-164	2470069	1 (25)	2 (51)
SA-162	2470057	1 (25)	3/4 (19)
SA-163	2470058	1 (25)	3/8 (8)
SA-204	2470070	1 1/4 (32)	2 (51)
SA-202	2470059	1 1/4 (32)	3/4 (19)
SA-203	2470060	1 1/4 (32)	3/8 (10)

All dimensions in inches (metrics in parenthesis)



Stub arbors



Specifications

	Code #	Thread direction	A	B	C	D
SAR-8	2470071	Right	6 (152)	1/2 (13)	1 3/8 (35)	2 3/32 (18)
SAL-8	2470072	Left	6 (152)	1/2 (13)	1 3/8 (35)	2 3/32 (18)
SAR-10	2470073	Right	6 5/8 (160)	5/8 (16)	1 3/4 (44)	3 1/32 (25)
SAL-10	2470074	Left	6 5/8 (160)	5/8 (16)	1 3/4 (44)	3 1/32 (25)
SAR-12	2470075	Right	6 3/4 (172)	3/4 (19)	2 1/8 (54)	1 7/32 (31)
SAL-12	2470076	Left	6 3/4 (172)	3/4 (19)	2 1/8 (54)	1 7/32 (31)
SAR-14	2470077	Right	6 7/8 (175)	7/8 (22)	2 1/4 (57)	1 7/32 (31)
SAL-14	2470078	Left	6 7/8 (175)	7/8 (22)	2 1/4 (57)	1 7/32 (31)
SAR-16	2470079	Right	7 3/8 (183)	1 (25)	2 1/2 (64)	1 11/32 (34)
SAL-16	2470080	Left	7 3/8 (183)	1 (25)	2 1/2 (64)	1 11/32 (34)
SAR-20	2470081	Right	7 1/2 (192)	1 1/4 (32)	2 3/4 (70)	1 15/32 (37)
SAL-20	2470082	Left	7 1/2 (192)	1 1/4 (32)	2 3/4 (70)	1 15/32 (37)



Spacers for use with Bridgeport Stub Arbors.

	Code #	I.D.	Length
SA-82	2470049	1/2 (13)	3/8 (10)
SA-83	2470050	1/2 (13)	3/16 (5)
SA-102	2470051	5/8 (16)	1/2 (13)
SA-103	2470052	5/8 (16)	1/4 (6)
SA-124	2470067	3/4 (19)	2 (51)
SA-122	2470053	3/4 (19)	5/8 (16)
SA-123	2470054	3/4 (19)	5/16 (8)
SA-144	2470068	7/8 (22)	2 (51)
SA-142	2470055	7/8 (22)	5/8 (16)
SA-143	2470056	7/8 (22)	3/16 (8)
SA-164	2470069	1 (25)	2 (51)
SA-162	2470057	1 (25)	3/4 (19)
SA-163	2470058	1 (25)	5/16 (8)
SA-204	2470070	1 1/4 (32)	2 (51)
SA-202	2470059	1 1/4 (32)	3/4 (19)
SA-203	2470060	1 1/4 (32)	3/8 (10)

All dimensions in inches (metrics in parenthesis)

Shell mill holders

Extend tooling capability to shell end mills for face and side milling in one operation. No. 3 holder may also be used with flycutters (see page 12). Holder is furnished with R-8 taper for use with Bridgeport Model 2J and Model J heads; wrench furnished.

Shell mill holders for the 4J head are listed under quick change tooling on page 12.



Pilot diameter .500" (12.7mm)—  
Code # 2300000  
Pilot diameter .750" (19.1mm)—  
Code # 2300001  
Pilot diameter 1.000" (25.4mm)—  
Code # 2300002

Arbor screw



End mill wrench



	Code #
Arbor screw for .500" pilot	2300009
Arbor screw for .750" pilot	2300010
Arbor screw for 1.000" pilot	2300011
Wrench for .500 pilot	2300006
Wrench for .750 pilot	2300007
Wrench for 1.000 pilot	2300008



# Milling Machine Attachments and Accessories

## Metric conversion kits

### Milling Heads

Kit includes:

- (1) Millimeter quill stop scale
- (1) Millimeter quill stop nut
- (1) Millimeter quill stop screw
- (1) Locking nut

for M heads — Code #2204000

for J heads — Code #2184000

for 2J heads — Code #2184000

for 4J heads — Code #2173000

### Machine Basics

Kits consisting of:

Leadscrews, nuts and dials  
are available for most Bridgeports.

The following kits cover most  
machine production.

Series I Machines

36" (914mm) manual feed table—

Code #2064001

42" (1067mm) manual feed table—

Code #2064002

48" (1219mm) manual feed table—

Code #2064003

36" (914mm) power feed equipment—

Code #2064004

42" (1067mm) power feed equipment—

Code #2064005

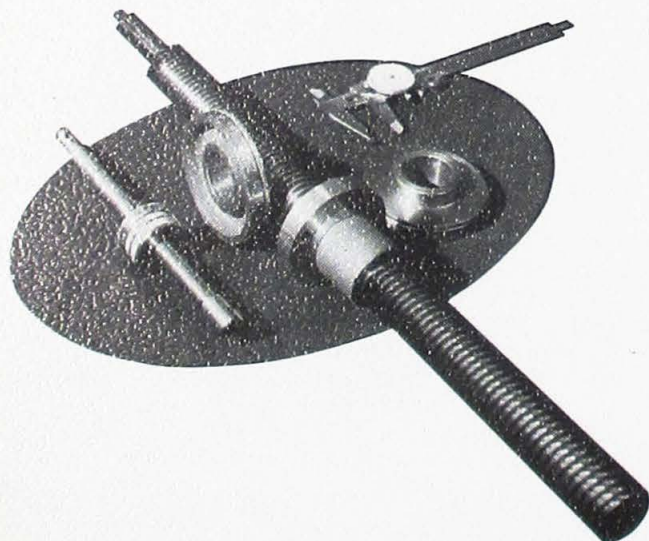
48" (1219mm) power feed equipment—

Code #2064006

Series II Machines

For manual and power feed machines—

Code #2153000



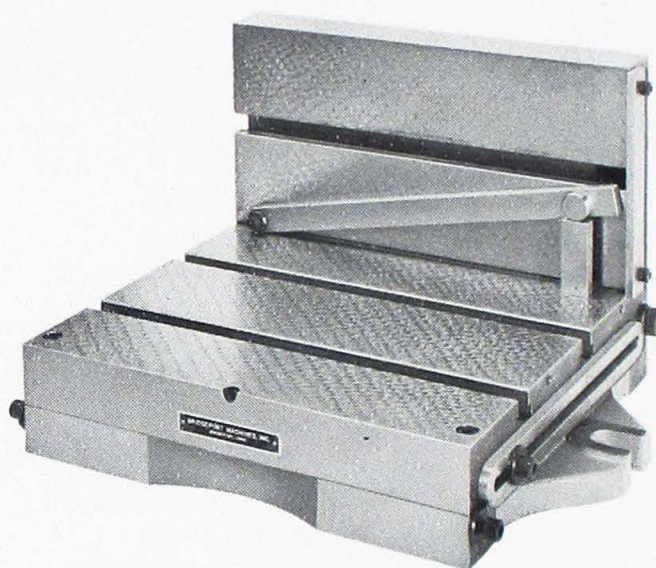
## Combination sine tables

### 5" (127mm) or 10" (254mm)

These tables permit rapid setting of compound angles and allow for fast proofing of work. Once mounted, the workpiece and sine table may be considered integral and moved as a unit through other operations, inspection, or to other locations.

By tightening two screws through the base, the table becomes a solid angleplate with sine bar which may be detached or moved to the horizontal surface for plain angle or compound angle setups.

The tables are guaranteed to be flat and square within .001" (.025mm) and parallel within .002" (.05mm). Rigidly constructed with T-slots for 1/2" (13mm) T-bolts or T-nuts, adjustable side supports, and hinge bolts for tightening to assure stability.



Specifications	5" (127mm)	10" (254mm)
Code #	1445341	1445343
Horizontal working surface	5x7 (127x178)	10x12 (254x305)
Vertical working surface	3 1/2 x 7 (89x178)	6x12 (152x305)

## Plain sine tables

### 5" (127mm) or 10" (254mm)

Plain angles are set quickly and accurately with either of these tables. They permit moving a complete setup to inspection or for secondary operations on another machine and back to the Bridgeport without removing the workpiece.

Both tables are guaranteed to be flat and square within .001" (.025mm) and parallel within .002" (.05mm). Sine tables are rigidly constructed with T-slots for 1/2" (13mm) T-bolts or T-nuts, adjustable side supports, and hinge bolts for tightening to assure stability.

Example. To set an 11 1/2° angle with the 10" (254mm) sine table, first find the sine of an 11 1/2° angle which is .19937. Multiply .19937 by 10. The result is 1.9937. Use a gage block of 1.9937 and place under sine bar of table. This gives a correct setting of 11 1/2°. (For the 5" table (127mm), multiply the sine figure by 5.)



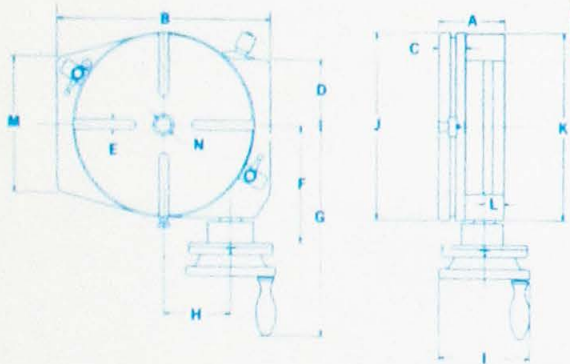
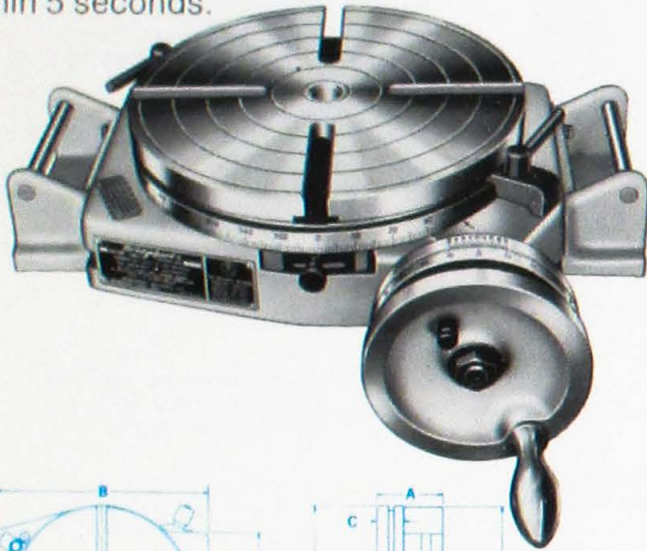
Specifications	5" (127mm)	10" (254mm)
Code #	1445340	1445342
Working surface	6 3/8 x 7 (162x178)	11 1/2 x 12 (292x305)



## Rotary table

Permits turning workpiece in the horizontal position precisely through degrees, minutes and seconds by means of manual control and computation.

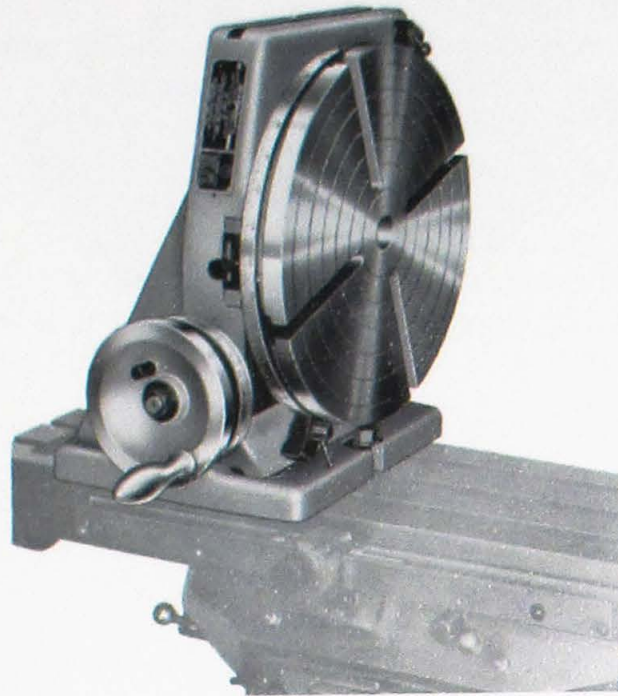
Three optional rotary table accessories have been developed to provide greater flexibility and ease of operation. Dividing attachment consists of a furnished chart and indexing device which allow rapid and accurate computation of indexing for degrees and minutes of workpiece rotation. The right angle plate allows you to work in the vertical position. The tailstock supports long workpieces between centers for greater accuracy. Tables are of minimum heights — 4½" (114mm) — to permit maximum daylight. They are available in 12" (305mm) and 15" (381mm) diameter models. Accuracy is within 30 seconds of arc through a complete rotation of the table which is graduated by degrees. An adjustable dial on the hand wheel reads directly to each minute. A Vernier plate permits direct reading to within 5 seconds.



Specifications	RT-12	RT-15
Code #	2520001	2520002
A	4¼ (108)	4¼ (108)
B	14 (356)	17 (432)
C	1¾ (44)	1¾ (44)
D	4¼ (108)	5¾ (146)
E	5/8 (16)	5/8 (16)
F	7/16 (192)	9/16 (230)
G	13 11/16 (348)	14 1/16 (357)
H	4 3/8 (111)	4 3/8 (111)
I	5 7/8 (149)	5 7/8 (149)
J	12 (305)	15 (381)
K	11 7/8 (302)	14 7/8 (378)
L	1¼ (32)	1¼ (32)
M	8¾ (222)	10 (254)
N	1 (25)	1 (25)

All dimensions in inches (metrics in parenthesis)

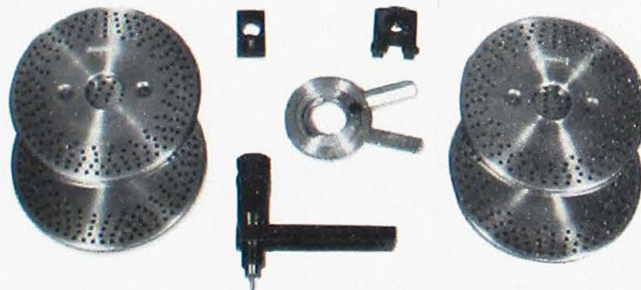
## Attachments for rotary tables



Right angle bracket for 12" (305mm) table  
— Code # 2520066  
Right angle bracket for 15" (381mm) table  
— Code # 2520101



Tail stock with center for 12" (305mm) table  
— Code # 2520003  
Tail stock with center for 15" (381mm) table  
— Code # 2520004

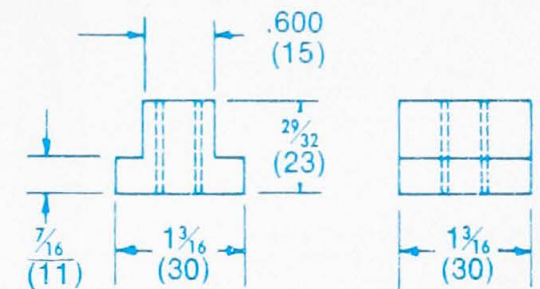
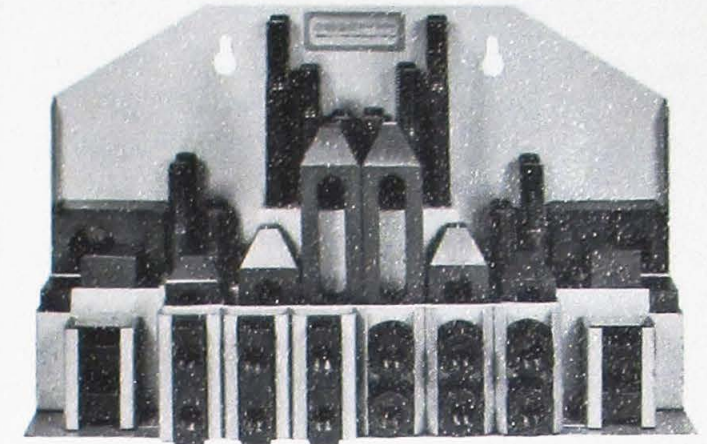


#1 plate for indexing attachment 159 holes  
— Code # 2520551  
#2 plate for indexing attachment 166 holes  
— Code # 2520552  
#3 plate for indexing attachment 186 holes  
— Code # 2520553  
#4 plate for indexing attachment 201 holes  
— Code # 2520554  
#5 plate for indexing attachment 383 holes  
— Code # 2520555  
#6 plate for indexing attachment 403 holes  
— Code # 2520556  
Indexing attachment (no plates)  
— Code # 2520006

## Hold down nut and bolt set

The quick, sure, convenient way to hold down work. This handy set is complete for holding all standard workpieces and comes in a sturdy container with notched holes to allow mounting on or near your Bridgeport. Same set fits Series I and Series II tables.

Two sets are available; Set A — Code # 1511820 with step clamps and step blocks is illustrated. Set B — Code # 2510000.



### Set contents

Set A	Set B	part	thread	length
4	4	Stud	½ (13)-13	3 (76)
4	4	Stud	½ (13)-13	4 (102)
4	4	Stud	½ (13)-13	5 (127)
4	4	Stud	½ (13)-13	6 (152)
4	4	Stud	½ (13)-13	7 (178)
4	4	Stud	½ (13)-13	8 (203)
6	4	Flange nut	½ (13)-13	
4	4	Nut couplers	½ (13)-13	
6	4	"T" slot nut	1 (25)-13	1 1/8 (30)
1	1	Holder		
	4	Strap clamp	size ¾x1½ (19x38)	6 (152)
1 PR		Step clamp	½ x 1/8 (13x3)	2½ (64)
1 PR		Step clamp	¾x1¼ (19x32)	4 (102)
1 PR		Step clamp	7/8 x 1¼ (22x32)	6 (152)
2 PR		Step block	¾x1½ (19x38)	
2 PR		Step block	1 1/8 x 2½ (29x64)	
2 PR		Step block	2½ x 6 (64x152)	



# Milling Machine Attachments and Accessories

## Digital readout

The Bridgeport position readout system is a versatile 2 axis (X and Y) design with  $\pm .0005"$  (.01mm) resolution. It consists of two transducer assemblies, one each for the longitudinal axis and the cross axis, and a dual readout panel with a digital display for each axis. The system reads in metrics and can be changed from metric to inches without loss of information.

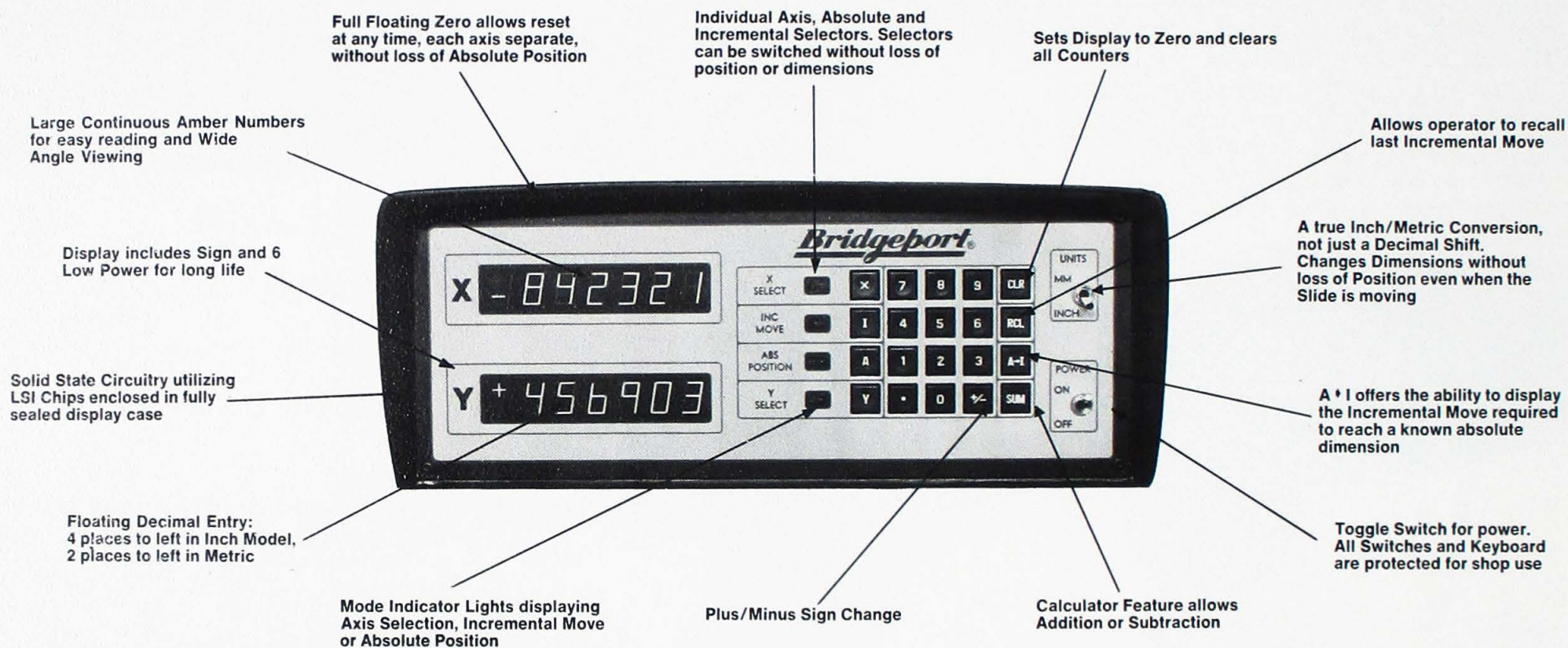
Each transducer assembly contains a precision scale, a lifetime solid state light source, and solid state solar cell sensors. These are all contained in a rugged sealed housing which is simple to install, and

very tolerant of machine variations and machine wear. A barrier seal effectively protects against cast iron dust as well as liquid splatter or oil mist.

The control unit mounts on the column and contains the operator's keyboard and a separate display for each axis. The axis display shows the directional sign (+ or -), a decimal point and 6 digits. The gas discharge displays are the continuous segment type and are amber in color for ease of reading and wide angle viewing.

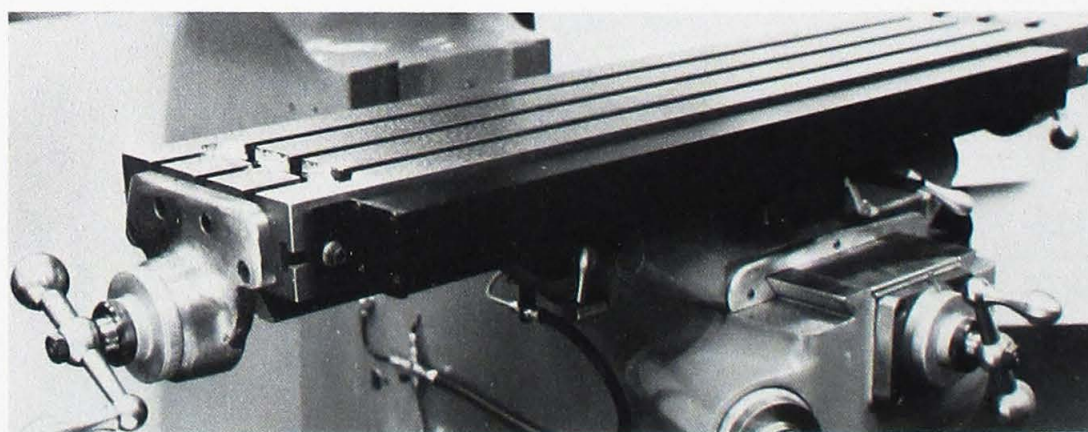
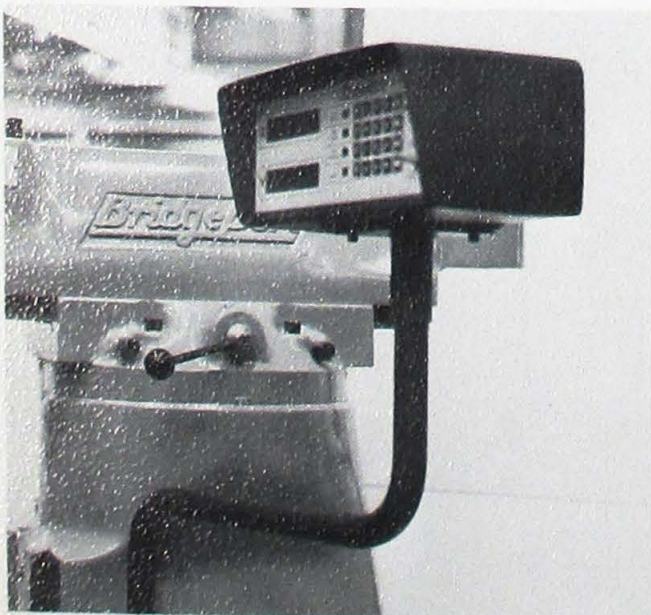
## Specifications

Resolution	$\pm .0005$ in. ( $\pm 0.01$ mm)
Repeatability	$\pm .0005$ in. ( $\pm 0.01$ mm)
Power required	12-15 Watts maximum
Input	115 volts $\pm 10\%$
Optimum temperature range	40°-120°F (4.4°-48.8°C)
Dimensions (Control unit)	12 $\frac{3}{4}$ x 5 x 5 $\frac{3}{4}$ in. (324 x 127 x 146mm)
Weight (Control unit)	15 lbs. (6.8 kg)

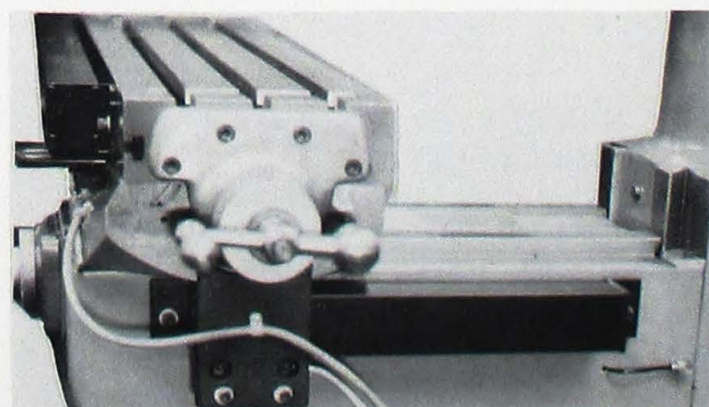


## Mounting

DRO control unit is mounted on the machine column while the transducer assemblies are mounted on the table, saddle or knee. Installation is fast and simple. All mounting hardware is supplied.



x-axis transducer



y-axis transducer

Series I, 42" Trans. 2812200  
 Series I, 48" Trans. 2812201  
 Series I, 42" Power Feed 2812202  
 Series I, 48" Power Feed 2812203  
 Series II, Std. & Special 2812204

## Code #

2812200  
 2812201  
 2812202  
 2812203  
 2812204

## More information

Manuals covering installation, operation and maintenance of the Bridgeport Digital Readout System are available. They can be obtained from your nearest Bridgeport dealer.



# Duplicator Accessories

## Power table feed and pick feed assembly for 1D manual die sinking machine

This combination provides an automated program which institutes machine feed along the table (x axis) until table limit micro-switch actuates hydraulic cross feed (y axis). Upon completion of cross pick x axis movement is started.

Retrofit device provides a similar program to that offered by Synchro-Trace units for a small dollar investment. More productivity with less help — machine can operate unattended for hours.



Table	Inch	Metric
42" (1067mm)	Code #2420024	Code #2420025
48" (1219mm)	Code #2420026	Code #2420027

## Vertical pick feed — Code #2983787

A down-feed "pick" control is an ideal addition to 3D tracing systems which can be factory installed or retrofitted.

Positive pick from .001" (.025mm) to 1" (25mm) on inch machines and .02mm to 25mm on metric machines, with push button control for ease of use for the operator. It improves the tracer finish on dies, molds and contoured parts.



## Tracing stylus sets for hydraulic duplicators



Square end — .375" (9.5mm) Shank [30 stylii from .125" (3.2mm) to 1.062" (27.0mm) diameter] — Code #2988176

Ball end — 0.375" (9.5mm) Shank [30 stylii from .125" (3.2mm) to 1.062" (27.0mm) diameter] — Code #2988175

## Template tables

Extension tables to be mounted on machine work table to support lightweight templates. Extension makes more of machine table available for mounting multiple pieces or large work pieces. Necessary for duplicators with more than one cutting head.



Series I template table 9"x30"  
(229mmx762mm) — Code #2120001  
Series II template table 12"x35"  
(305mmx889mm) — Code #2115036

## Spare parts kits

### Milling Heads

The following kits consist of running parts which normally receive wear during the normal operation of our milling heads. Included are drive belts, brake shoes, counterbalance springs, spindle bearings and other basically useful items for:

M heads — Code #2203000

J heads, 1 HP — Code #2193000

J heads, 1½ HP — Code #2183000

2J heads, 2 HP — Code #2553000

4J heads — Code #2171000

### Series I Machines

Kit consists of way wipers, cross and longitudinal leadscrew nuts.

Nuts — Code #2062000

### Series II Machines

Kit consists of way wipers — Code #2151000



# Bridgeport's Services

## Training Aids

Bridgeport Machines has developed training aids which are available to our customers. Your Bridgeport dealer can assist you in your training requirements.

## Videotapes

Produced by Bridgeport to explain machines, accessories and attachments, and special techniques.

## Schools and Seminars

Special educational sessions are given at our plant in Bridgeport and are available to Bridgeport customers under certain conditions. We have training areas which include a classroom (below), a large machine shop and a demonstration room with machines, workpieces and accessories on display.

### Standard courses

Regularly scheduled courses in operation and maintenance of our products are given in factory training facilities. Courses available include detailed "how-to" sessions with expert Bridgeport instructors. NC courses include:

**NC Operation and Manual Programming** course for Bridgeport NC users provides the necessary knowledge for planning, programming, setting up and running Bridgeport's NC millers. This course will supply all the information needed to use Bridgeport NC machines effectively and efficiently, plus many tips and shortcuts developed in our years of experience with the machines.

**Computer-assisted Programming** in the APT Language for Users is designed for Bridgeport NC users with computer facilities or time share terminals. It is devoted to programming with the com-





puter in the APT language and use of the Bridgeport post-processor. Students will use the computer to produce a tape, and Bridgeport NC machines to prove the tape. Students must have experience in manual programming, and APT computer programming.

Separate schools are conducted specializing in specific advanced features of the machine. These features are cutter compensation theory, and the extended use of loops and macros.

**NC Maintenance** A course for maintenance and service personnel which offers a thorough examination of how Bridgeport NC equipment works, how it interfaces with the machine, and how to diagnose problems in this system.

## Manuals and Bulletins

### Manuals

Operator's manuals are available for Bridgeport machines. These are normally supplied at the time of machine delivery. Should you require an extra manual, they may be purchased from your Bridgeport dealer.

Code #1040001 (M-105)  
Series I Operation and Maintenance  
Code #1040005 (M-112)  
180 Duplicator Operation and Maintenance  
Code #1040006 (M-101)  
Series II Operation and Maintenance  
Code #1040052 (M-306)  
Pivot Type Attachments  
Code #1040053 (D-520)  
Control-path Operators Manual  
Code #1040054 (D-550)  
Synchro-Trace Operation and Maintenance  
Code #1040068 (M-107)  
Series II Synchro — Trace O&M Manual

Operator's manuals are also available for all numerical control products.

## Sales and Service

Bridgeport's extensive network of dealers maintain a stock of spare parts for the convenience of Bridgeport users. Bridgeport dealer sales and service personnel are factory trained and welcome the opportunity to be of service to you and your company for all your Bridgeport requirements.

Behind every dealer is Bridgeport's factory stock of spare parts, and experienced engineers and service personnel to fully support the dealer's local service to you.

With this combination of dealer / manufacturer support and broad product line, you can be confident in your selection of the best Bridgeport product for your specific requirement; and of getting the fullest use of your Bridgeport machines and accessories.

Dealers are located in every industrial area so that Bridgeport customers are assured of prompt service.



# Bridgeport Dealers

## Alabama

Modern Machinery Associates  
1824 29th Ave. South  
Birmingham 35209  
205-870-8946

## Alaska

Star Machinery Company  
E. 328 Sprague Ave.  
Spokane, Wash. 99202  
509-747-6121

## Arizona

Machinery Sales Company  
2941 E. Washington St.  
Phoenix 85034  
602-273-1245

## Arkansas

MARSUCO  
4801 So. Wheeler  
Fort Smith 72901  
501-646-1691

## MARSUCO

6201 Murray St.  
Little Rock 72209  
501-565-0931

## California — Northern

BHS Machinery Company  
717 Airport Blvd.  
So. San Francisco 94083  
415-583-8101

## California — Southern

Machinery Sales Company  
2838 Leonis Blvd.  
Los Angeles 90058  
213-588-8111

## Colorado

Richard Ives Company  
1220 South Lipan St.  
Denver 80223  
303-744-1205

## Connecticut

Gilbert & Richards, Inc.  
70 State St.  
North Haven 06473  
203-239-4646

## Delaware

Lemuel R. Lance, Inc.  
Philadelphia Industrial Park  
10400 Drummond Rd.  
Philadelphia, PA 19154  
215-824-3400

## Florida

R. O. Deaderick Company, Inc.  
4066 N.E. 5th Ave.  
Ft. Lauderdale 33334  
305-563-5723

## Florida — Western

Modern Machinery Associates  
1824 29th Ave. South  
Birmingham, Ala. 35209  
205-870-8946

## Georgia

R. O. Deaderick Company, Inc.  
45 Technology Parkway  
Norcross 30092  
404-448-2793

## Hawaii

C & F Machinery Corp.  
656 Queen St.  
Honolulu 96813  
808-524-1033

## Idaho

Richard Ives Company  
1220 South Lipan St.  
Denver, Col. 80223  
303-744-1205

## Illinois — Northern

Bridgeport Sales/Service Center  
6039 South Oak Park Ave.  
Chicago 60638  
312-586-7500

## Illinois — Southern

Hartwig, Inc.  
1452 Warson Road N.  
St. Louis, Mo. 63132  
314-426-5300

## Indiana

W. W. Siegrist Machinery  
Company, Inc.  
1139 Shelby St.  
Indianapolis 46203  
317-632-3468

## Indiana — Northern

Bridgeport Sales/Service Center  
6039 South Oak Park Ave.  
Chicago, Illinois 60638  
312-586-7500

## Iowa

The Satterlee Co.  
280 Prospect Pl., S.W.  
Cedar Rapids 52404  
319-366-7778

## Iowa — Western

Fuchs Machinery & Supply, Inc.  
3400 Highway 75 North  
Sioux City 51105  
712-252-3874

## Kansas

Ernst-Eichman Machinery Corp.  
15541 West 110th St.  
Lenexa 66215  
913-492-2770

Ernst-Eichman Machinery Corp.  
1970 S. West St.  
Wichita 67213  
316-943-0278

## Kentucky

C. H. Gosiger Machinery Company  
212 Eiler Ave.  
Louisville 40214  
502-368-6574

## Louisiana

Oliver H. Van Horn Company, Inc.  
6301 Choctaw Drive  
Baton Rouge 70815  
504-355-2531

Oliver H. Van Horn Company, Inc.  
4100 Euphrosine St.  
New Orleans 70150  
504-821-4100

Oliver H. Van Horn Company, Inc.  
302 Montgomery St.  
Shreveport 71107  
318-222-2173

## Maine

The Robert E. Morris Company  
160 Wells Ave.  
Newton Centre, Mass. 02159  
617-964-1500

## Maryland

Krize Machine Tool Company, Inc.  
P.O. Box 5761, Milford Ind'l Rd.  
Baltimore 21208  
301-484-4222

## Massachusetts — Eastern

The Robert E. Morris Company  
160 Wells Ave.  
Newton Centre 02159  
617-964-1500

## Massachusetts — Western

Gilbert & Richards, Inc.  
70 State St.  
North Haven, CT 06473  
203-239-4646

## Michigan

National Sales Engineering Corp.  
35455 Schoolcraft Rd.  
Livonia 48150  
313-591-3030

## Minnesota

The Satterlee Company  
2200 E. Franklin Ave.  
Minneapolis 55404  
612-370-2511

The Satterlee Company  
2202 West 1st St.  
Duluth 55806  
218-727-8454

## Mississippi

Oliver H. Van Horn Company, Inc.  
451 Gallatin St.  
Jackson 39206  
601-354-4321

## Missouri — Eastern

Hartwig, Inc.  
1452 Warson Road N.  
St. Louis, Mo. 63132  
314-426-5300

## Missouri — Western

Ernst-Eichman Machinery Corp.  
15541 West 110th St.  
Lenexa 66215  
913-492-2770

## Montana

Richard Ives Company  
2381 South 3270 West  
Salt Lake City, Utah 84119  
801-973-2688

## Nebraska

Fuchs Machinery & Supply, Inc.  
2401 No. 11th Street  
Omaha 68110  
402-341-7050

Fuchs Machinery & Supply, Inc.  
1919 Cornhusker Highway  
Lincoln 68521  
402-477-4455

Fuchs Machinery & Supply, Inc.  
3554 W. Stolley Park Road  
Grand Island 68801  
308-384-1141

## Nevada — Northern

BHS Machinery Company  
717 Airport Blvd.  
So. San Francisco, CA 94083  
415-761-0130

## Nevada — Southern

Machinery Sales Company  
2838 Leonis Blvd.  
Los Angeles, Cal. 90058  
213-588-8111

## New Hampshire

The Robert E. Morris Company  
160 Wells Ave.  
Newton Centre, Mass. 02159  
617-964-1500

## New Jersey — Northern

The Wallace Machine Tool  
Company, Inc.  
600 Hollister Rd.  
Teterboro 07608  
201-288-2400

## New Jersey — Southern

Lemuel R. Lance, Inc.  
Philadelphia Industrial Park  
10400 Drummond Rd.  
Philadelphia, PA 19154  
215-824-3400

## New Mexico

Taylor-Simpkins Inc.  
2701-B Pan American Freeway N.E.  
Albuquerque 87125  
505-345-7956

## New York —

### Southern & Long Island

The Wallace Machine Tool  
Company, Inc.  
600 Hollister Rd.  
Teterboro, N.J. 07608  
212-732-2080

## New York — Upstate

R. H. Britton Machinery Sales Inc.  
7500 Victor Mendon Rd.  
Victor, N.Y. 14564  
716-924-9335

R. H. Britton Machinery Sales Inc.  
6399 E. Molloy Rd.  
E. Syracuse 13057  
315-437-3309

## North Carolina

Jeffreys Engineering  
& Equipment Company  
2507 South Elm St.  
Greensboro 27420  
919-274-6364

## North Dakota

The Satterlee Company  
2202 West 1st St.  
Duluth, Minn. 55806  
218-727-8454

## Ohio — Northeastern

Garco Machinery, Inc.  
6670 Beta Drive  
Mayfield Village, Ohio 44143  
216-473-0050

## Ohio — Northwestern

Ohio National Sales Inc.  
350 Holland Road  
Maumee 43537  
419-866-9363

## Ohio — Southwestern

C. H. Gosiger Machinery Company  
108 McDonough St.  
Dayton 45402  
513-228-5174

## Oklahoma

MARSUCO  
4228 Royal Ave.  
Oklahoma City 73108  
405-942-8795

## MARSUCO

1050 E. Archer St.  
Tulsa 74101  
918-584-5271

## Oregon

Star Machinery Company  
3461 N.W. Yeon Ave.  
Portland 97210  
503-226-3011

## Pennsylvania — Eastern

Lemuel R. Lance, Inc.  
Philadelphia Industrial Park  
10400 Drummond Rd.  
Philadelphia 19154  
215-824-3400

## Pennsylvania — Southwestern

Tri-State Machinery Company  
535 McNeilly Rd.  
Pittsburgh 15226  
412-344-6500

## Pennsylvania — Western

Boldt Machinery & Tools, Inc.  
4803 Pittsburgh Ave.  
Erie 16509  
814-833-9836

## Rhode Island

The Robert E. Morris Company  
160 Wells Ave.  
Newton Centre, Mass. 02159  
617-964-1500

## South Carolina

Jeffreys Engineering  
& Equipment Company  
2507 South Elm St.  
Greensboro, N.C. 27420  
919-274-6364

## South Dakota

The Satterlee Company  
2200 E. Franklin Ave.  
Minneapolis, Minn. 55404  
612-370-2511

## Tennessee

R. O. Deaderick Company, Inc.  
423 Depot N.W.  
Knoxville 37901  
615-524-2537

## Texas — Northern

Marsuco/Van Horn  
451 South Main St.  
Ft. Worth 76101  
817-335-4484

## Texas — Southern

Rex Supply Corporation  
3101 Longhorn Blvd.  
Austin 78759  
512-837-0333

Rex Supply Corporation  
3715 Harrisburg Blvd.  
Houston 77001  
713-222-2251

Rex Supply Corporation  
6021 Rittiman Plaza  
San Antonio 78118  
512-828-1408

Rex Supply Corporation  
4528 Baldwin  
Corpus Christi, Texas 78408  
512-883-9353

## Texas — El Paso County

Taylor-Simpkins Inc.  
2126 Texas  
El Paso 79923  
915-533-9536

## Utah

Richard Ives Company  
2381 South 3270 West  
Salt Lake City 84119  
801-973-2688

## Vermont

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160 Wells Ave.  
Newton Centre, Mass. 02159  
617-964-1500

## Virginia

Jeffreys Engineering  
& Equipment Company  
2507 South Elm St.  
Greensboro, N.C. 27420  
919-274-6364

## Washington

Star Machinery Company  
241 So. Lander St.  
Seattle 98124  
206-623-0760

Star Machinery Company  
E. 328 Sprague Ave.  
Spokane 99202  
509-747-6121

## West Virginia

Tri-State Machinery Company  
535 McNeilly Rd.  
Pittsburgh, PA 15226  
412-344-6500

## Wisconsin

Bridgeport Sales/Service Center  
3401 W. Lincoln Ave.  
Milwaukee 53215  
414-384-1166

## Wisconsin — Western

The Satterlee Company  
2200 E. Franklin Ave.  
Minneapolis, Minn. 55404  
612-370-2511

## Wyoming

Richard Ives Company  
1220 South Lipan St.  
Denver, Col. 80223  
303-744-1205

## Canada — Alberta

A. C. Wickman, Limited  
#2-9750-51 Ave.  
Edmonton, T6E 0A5  
403-434-5095

## Canada — British Columbia

A. C. Wickman, Ltd.  
7679 Edmonds St.  
Burnaby V3N 1B9  
604-524-8744

## Canada — Ontario

A. C. Wickman, Limited  
605 James St. North  
Hamilton L8L 1J9  
416-845-1342

A. C. Wickman, Limited  
1425 The Queensway  
Toronto M8Z 1T4  
416-259-2311

A. C. Wickman, Limited  
411 Riverside Dr. E.  
Windsor N9A 2S9  
519-253-1841

## Canada — Quebec

A. C. Wickman, Limited  
Grand Terminal Bldg. R. 280  
7800 Cote de Liesse Rd.  
Montreal H4T 1G1  
514-731-8247

## Mexico

Leon Weill, S.A.  
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## Puerto Rico

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## Bridgeport Machines

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