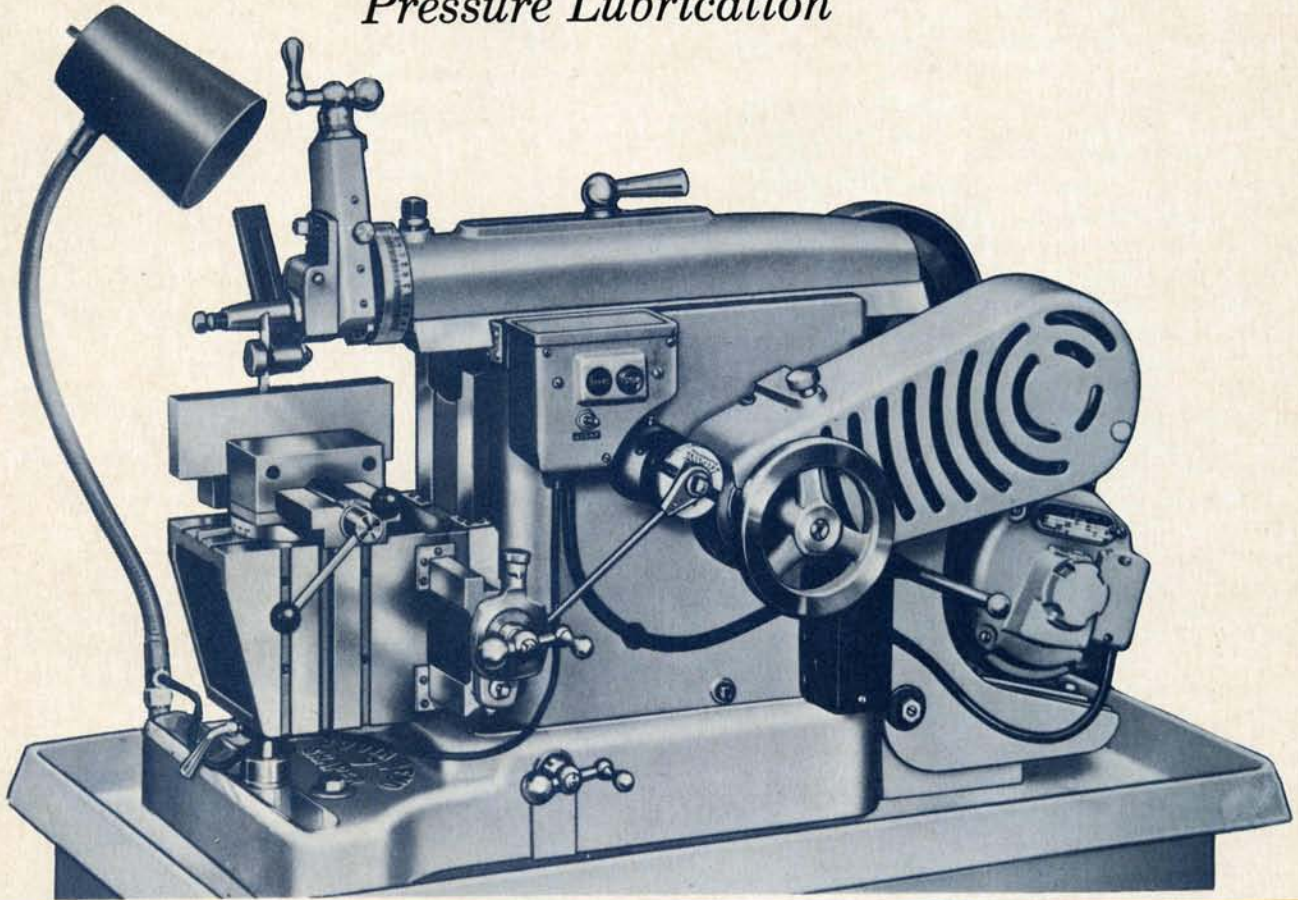


# 7"

## 7" SOUTH BEND PRECISION BENCH SHAPERS

THE ONLY 7" SHAPER WITH  
*Pressure Lubrication*



South Bend 7" Bench Shapers are precision engineered and sturdily constructed to give you a lifetime of rapid accurate machining. The ease of setting up work, high operating speeds and the low power consumption, keep costs to a bare minimum.

Pressure lubrication is provided by an automatic pump which circulates oil from a large reservoir in the base of the shaper to the ram dovetail, bull gear and pinion, pinion shaft and rocker arm shaft.

Look for these quality features: Tool head locks in any position—rugged clapper bar is also adjustable, guards on all belts and pulleys—quick-acting belt tension release, rocker arm is graduated for accurate stroke adjustment, bearing surface on base for adjustable table support, machining clutch teeth with rotary indexing table, machining of flat surfaces on shaft with indexing head. Also tool head swivels to any angle and

has 3½" diameter mounting with graduations 0 to 90° right and left.

Motor required is ½ h.p., 1725 r.p.m., and is mounted on a cradle at the back of the shaper. Power is transmitted by V-belts. A quick acting belt tension release is provided for easy shifting of the belt to change speeds. All V-belts and pulleys are enclosed in substantial metal guards. If shaper is ordered without motor, specify voltage, phase, and cycle of motor to be used so that correct wiring can be supplied.

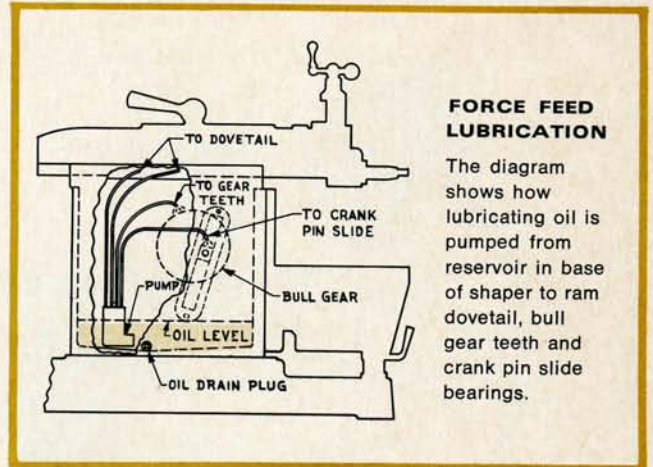
**CS100.** South Bend 7" Precision Bench Shaper with vise, drive unit for ½ h.p. motor, motor pulley, V-belts, guards, work light, and built-in pushbutton type across-the-line manual starter for motor, but without motor, steel stand, or tool holder. (See page 39.) Shipping weight crated 330 lbs.

## FEATURES

- Extreme precision for the most exacting tolerances.
- Convenient controls for maximum ease of operation.
- Built-in work light to prevent eye strain.
- Ample bearing surfaces assure rigidity and durability.
- Force feed lubrication to ram dovetail, bull gear, and crank pin slide.
- Powerful built-in V-belt motor drive.
- Smooth, quiet operation at all speeds.
- Quick acting belt tension release for changing speeds.
- Sliding support shoe for outer end of table.
- Convenient length of stroke adjustment graduated 0 to 7" .
- Reversible power cross-feed in thousandths.
- Swivel vise graduated in degrees, mounts on top or side of table. Locks at any angle.
- Swivel tool head graduated in degrees, locks at any angle.
- Tool slide has swivel clapper box and heat-treated steel tool post and tool post screw.
- Cross-feed screw for table has micrometer graduated collar.
- Tool slide feed screw has micrometer graduated collar.
- Swivel handles on down feed, cross-feed and table elevating crank.

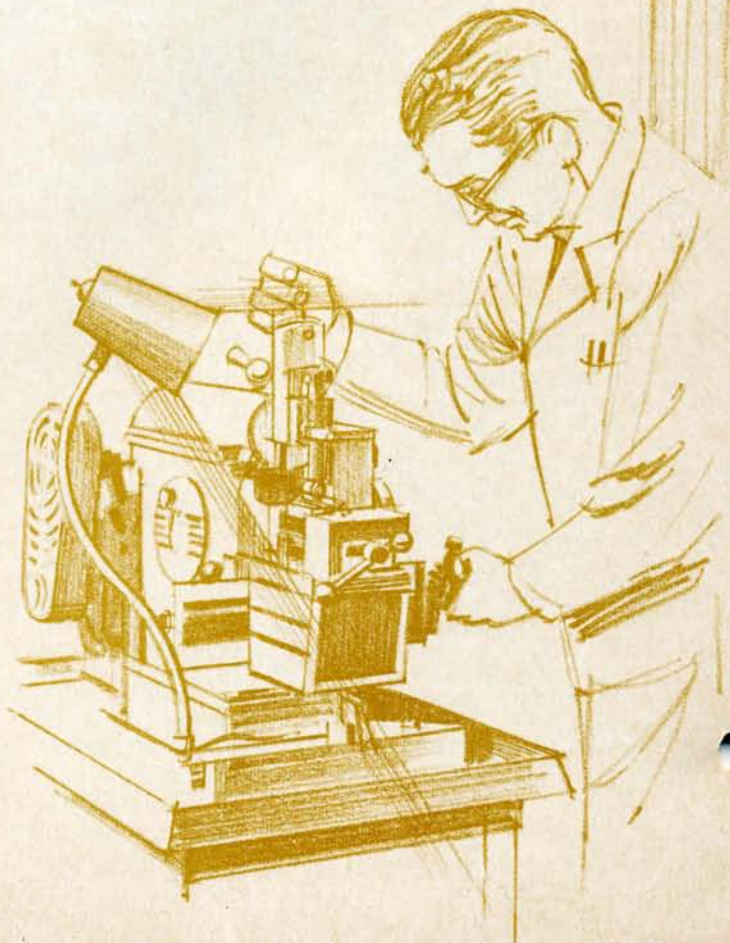
## SPECIFICATIONS

Length of ram stroke .....	0 to 7"
Strokes per minute, approximate .....	42-75-120-195
Cutting speeds .....	3 to 114 feet per minute
Vertical feed of tool .....	.3"
Tool post takes tool .....	$\frac{3}{8}$ " x $\frac{13}{16}$ "
Tool head swivels .....	360°
Width of vise jaws .....	.4"
Depth of vise jaws .....	.1"
Maximum opening of vise jaws .....	.4"
Length of table top .....	6 $\frac{5}{16}$ "
Width of table top .....	.5"
Depth of table .....	.5 $\frac{3}{8}$ "
Horizontal travel of table .....	.9 $\frac{1}{2}$ "
Vertical travel of table .....	.5"
Distance of table from ram .....	$\frac{1}{2}$ " to 5 $\frac{1}{2}$ "
Power cross-feeds (reversible) .....	.002" to .012"
Width of slots in table .....	$\frac{5}{16}$ "
Holes in table for clamp bolts .....	$\frac{9}{32}$ "
Motor size .....	$\frac{1}{2}$ h.p.



### FORCE FEED LUBRICATION

The diagram shows how lubricating oil is pumped from reservoir in base of shaper to ram dovetail, bull gear teeth and crank pin slide bearings.



## ACCESSORIES FOR SOUTH BEND 7" BENCH SHAPERS



### STEEL STANDS FOR SHAPERS

A built-in chip pan forms the top of the stand. Three drawers provide plenty of storage space. Finished with gray wrinkle enamel. Width 19", depth 36", height 28 $\frac{3}{8}$ ". Shipping weight 150 lbs. **CS9600.**



### WOOD TOP MACHINE STANDS

Made of heavily constructed angle steel; stands 29 $\frac{3}{4}$ " high. The glued wood top is 20" x 32" and is 1 $\frac{1}{8}$ " thick. Steel parts are finished in gray enamel. Shipped knocked down. Shipping weight 52 lbs. **CE9141.**

### DRAWERS FOR MACHINE STANDS

Finished to match stand CE9141. Drawer is 20 $\frac{1}{8}$ " wide, 14" long, 3 $\frac{3}{8}$ " deep. Includes metal pull and wood slides. Shipping weight 9 lbs. **CE1780D.**



### INDEXING TABLES

Used for accurately spacing bolt holes, indexing clutch teeth, machining square, hexagonal or octagonal shapes, etc. Table is 4 $\frac{1}{2}$ " in diameter and has three T-slots for clamping work. Edge of table is graduated 360°. Clamping device is provided for locking table in any position. Top of table is precision ground. Base has two bolt holes for clamping to machine table. Includes eight clamping bolts with nuts and washers. Shipping weight 14 lbs. **CE9144.**

### INDEXING CENTERS

This is an indispensable device for cutting splines or flutes in shafts, laying out work, gear cutting, shaping hexagons, squares, etc. Takes work between centers up to 5" in diameter, 6" long. Revolving center has large dial graduated 360°. Worm gear can be disengaged for quick positioning of indexing center. Clamping device is provided for locking center in any position. Base has two bolt holes for clamping to machine table. Includes two clamping bolts. Shipping weight 12 lbs. **CE9635.**



### CHUCK ADAPTER STUDS

Consist of accurately machined base plate with threaded stud on which lathe chuck may be screwed. When ordering be sure thread on stud conforms with thread in back of chuck to be used. Includes bar for screwing stud into base plate but does not include clamps or bolts.

Catalog Number	Diameter of Plate	Thread Diameter	Threads Per Inch	Shipping Weight
CE3445	6 $\frac{1}{4}$ "	1 $\frac{1}{2}$ "	8	7 lbs.
CE3447	7 $\frac{1}{2}$ "	2 $\frac{1}{4}$ "	8	13 lbs.



### MOTORS AND CONTROLS FOR SOUTH BEND SHAPERS

Ball bearing motors listed below are recommended. All single phase motors are capacitor type. Approximate shipping weight 50 lbs. Write for additional information.

Catalog No.	H.P.	Current	Volts	Phase	Cycle
CS4920B	$\frac{1}{2}$	A.C.	115	1	60
CS4920D	$\frac{1}{2}$	A.C.	230	1	60
CS4924D	$\frac{1}{2}$	A.C.	230	3	60
CS4924F	$\frac{1}{2}$	A.C.	460	3	60

Motors with other characteristics available, contact your distributor.



### UNIVERSAL TABLES

Both upper and lower slides have graduated swivels and may be turned through full 360°.

**CE9150.** Universal Table complete with base for South Bend 7" Shaper, two slides, two graduated swivels, and eight clamp bolts with nuts. Ship. wt. 37 lbs.



**CE9157.** Single Table with one graduated swivel and four clamp bolts with nuts. Shipping weight 19 lbs.



**CE9158.** Base only for adapting single table to South Bend 7" shaper. Ship. wt. 3 lbs.

### SHAPER TOOL HOLDER



For  $\frac{1}{4}$ " square cutter bits. Adjustable to work at all angles. Head can be swiveled and locked at eight different positions for machining many odd shapes and for cutting various angles without shifting the work. Shipping weight 1 lb. **CS9630.**

### EXTENSION SHAPER TOOL



For internal work. Adapted for die work, internal keyways or for any work on the shaper in which extra clearance is needed. Size of bar is  $\frac{1}{2}$ " x 7 $\frac{1}{2}$ ". Takes cutter bit  $\frac{3}{16}$ " x  $\frac{3}{16}$ ". Shipping weight 2 lbs. **CS9631.**

### GROUND CUTTER BITS FOR SHAPER



High speed steel cutter bits,  $\frac{1}{4}$ " square, ground to shape, ready for use in shaper tool holder CS9630. Shipping weight 4 ozs. each.



**CE9620.** Right-Cut Shaper Tool Bit.



**CE9621.** Left-Cut Shaper Tool Bit.

**CE9622.** Slot-Cutting Shaper Tool Bit.

**CE9623.** Set of Three Tool Bits (one ea. of above).

### ANGLE PLATES

Heavy cast iron. Size 4 $\frac{1}{2}$ " x 3" x 2". Six bolt holes. Shipping weight 4 lbs. **CE9640.**