

Motor, tool holder, and steel stand are not included in regular equipment of shaper.

# 7" SOUTH BEND *Precision* BENCH SHAPER

The South Bend 7" Shaper has been developed to meet tool-room and industrial demands for an accurate, compact bench shaper that is precision engineered and sturdily constructed. It has the built-in accuracy and versatility for rapid machining on small parts. The stroke rate per minute is higher than on larger shapers, permitting greater production on work within its capacity. The ease of setting up work in the bench shaper, its high operating speeds, and the low power consumption of the fractional h. p. motor, keep costs to a minimum. Built to the same high standards that have made South Bend Lathes famous for their precision and durability, this shaper is capable of the most exacting work on precision parts of all kinds.

Ram has long dovetail bearings which provide rigid support for the cutting tool, even in the extreme forward position. Gib adjustment is provided, and dovetail ways are fitted with felt wipers on both ends of column. Length of stroke is regulated by crank gear eccentric adjustment, and rocker arm is graduated to indicate length of stroke in inches. A large handwheel is provided for adjusting the ram which is locked in position by a conveniently located binding lever. The crank gear is precision made for quiet operation. Oil impregnated bearings are used for both the crank gear and the countershaft.

Pressure lubrication is provided by an automatic pump which circulates lubricating 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.

Tool head swivels to any angle, and has  $3\frac{1}{2}$ " diameter mounting with accurately cut graduations 0 to 90° right and left. The tool slide screw has a clear cut graduated collar reading in thousandths of an inch. The clapper box swivels on the tool slide and may be adjusted for clearance, regardless of the tool slide angle. A tool slide lock is provided so that extreme accuracy and flatness can be maintained.

Table has holes and slots on top and on each side for clamping work. A V-groove is also provided on one side of the table. The cross-feed screw has a clear cut graduated collar reading in thousandths of an inch. The cross rail on which table slides is substantially constructed with large widely spaced bearing ways. Gib adjustment is provided for take-up. Provision is made for locking the vertical adjustment. For safety, the cross-feed screw is so constructed that the nut will run off the thread when it has traveled the maximum distance in either direction. An adjustable front end support shoe travels with the table and provides extreme rigidity for heavy cuts regardless of table position.

Vise swivels to any angle, with base graduated 0 to 90° right and left, and can be mounted on the top or right side of the table. Vise jaw inserts are made of heat-treated steel.

Motor required is  $\frac{1}{3}$  or  $\frac{1}{2}$  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  $\frac{1}{3}$  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 pages 80 and 81). Shipping weight crated 330 lbs. Boxed weight 400 lbs., cubic feet boxed 12.\* Price f.o.b. factory ..... **\$632.00**

**CS100M.** South Bend 7" Shaper, same as above but with metric graduations. Price f.o.b. factory ..... **\$632.00**

\* Cubic feet boxed with steel stand 38. Boxed weight with steel stand 625 lbs.



# Features

## THAT MAKE SOUTH BEND THE BEST SHAPER VALUE

- 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-feeds .002" to .012" per stroke.
- Graduated eccentric indicating power 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.

## SOUTH BEND 7" SHAPER the only 7" shaper with **PRESSURE LUBRICATION**

No reason Now to worry with outdated, obsolete design shapers that do not have Pressure Lubrication.



Rocker arm graduated for accurate stroke adjustment.



Bearing surface on base for adjustable table support



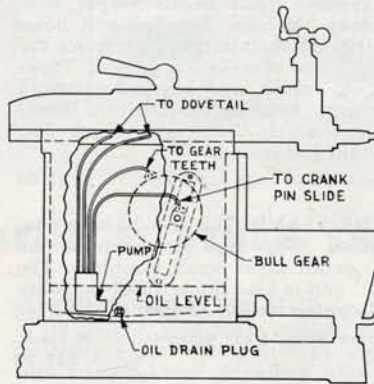
Machining clutch teeth with rotary indexing table.



Machining flat surfaces on shaft with indexing head

## SPECIFICATIONS

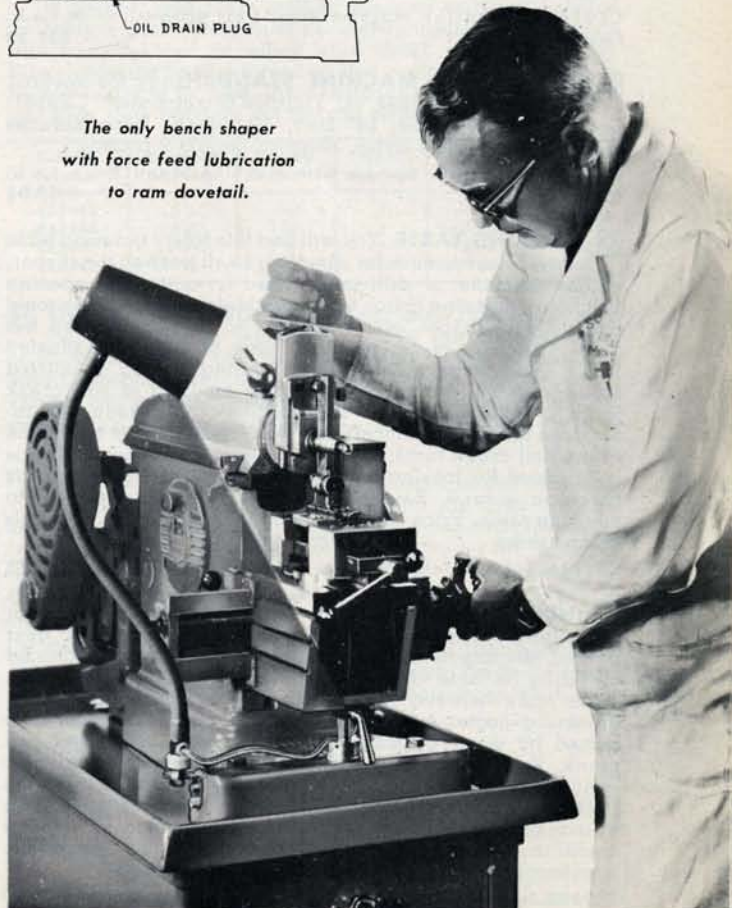
Length of ram stroke	0 to 7"
Strokes per minute, approximate	42-75-120-195
Cutting speeds	3 to 114 feet per minute
Vertical feed of tool	3"
Tool post takes tool	3/8" x 1 3/16"
Tool head swivels	360°
Width of vise jaws	4"
Depth of vise jaws	1"
Maximum opening of vise jaws	4"
Length of table top	6 7/16"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



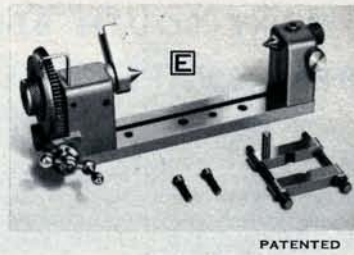
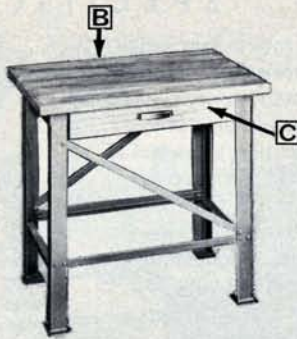
### FORCE FEED LUBRICATION

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.

The only bench shaper  
with force feed lubrication  
to ram dovetail.







## ACCESSORIES FOR SOUTH BEND 7" BENCH SHAPERS

**A STEEL STAND FOR SHAPER.** This sturdy, welded steel stand provides rigid support for a bench shaper, drill press, vise, jig saw, or other machine. Top has bolt holes punched for mounting shaper. A built-in chip pan forms the top of the stand permitting the use of coolant if desired. Three drawers 10½" x 5½" x 15¾" inside, with key locks provide plenty of storage space for work, tools and accessories. Nicely finished with gray wrinkle enamel. Width 19", depth 36", height 28¾". Shipping weight 150 pounds.

**CS9600.** Steel Stand for Shaper. Price f.o.b. factory..... **\$125.00**

**B WOOD TOP MACHINE STAND.** This is a heavily constructed angle steel stand 29¾" high for mounting the bench shaper, drill press, or for other small machines. The glued wood top is 20" x 32" and is 1¾" thick. Steel parts are finished in gray enamel. Shipping weight 52 pounds.

**CE9141.** Wood Top Machine Stand (less drawer). Price f.o.b. factory..... **\$27.25**

**C DRAWER FOR MACHINE STAND.** Handy for keeping small tools, wrenches, etc. Finished to match stand CE9141. Drawer is 20½" wide, 14" long, 3¾" deep. Price includes metal pull and wood slides. Shipping weight 9 pounds.

**CE1780D.** Drawer for use with Machine Stand. Price f.o.b. factory..... **\$9.05**

**D INDEXING TABLE.** You will find this rotary indexing table a great convenience for mounting small work on the shaper, milling machine, or drill press. Used for accurately spacing bolt holes, indexing clutch teeth, machining square, hexagonal or octagonal shapes, etc. Table is 4½" in diameter and has three T-slots for clamping work. Edge of table is graduated 360°. Table is turned by worm gearing having graduated collar and ball crank. Thumb screw on front of ball crank locks graduated collar in any position. Each graduation indicates a table movement of 3 minutes. One complete revolution of the ball crank turns the table 5 degrees. 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. Price includes eight clamping bolts with nuts and washers.

**CE9144.** Indexing Table. Ship. wt. 14 lbs. Price f.o.b. factory. **\$61.75**

**E INDEXING CENTERS.** This is an indispensable device for cutting splines or flutes in shafts, laying out work, gear cutting, shaping hexagons, squares, etc. Base has bolt holes for clamping on table of shaper, drill press, or milling machine. Takes work between centers up to 5" in diameter, 6" long. Revolving center has large dial graduated 360°. Center is turned by worm gearing having graduated collar and ball crank. Each graduation indicates a center movement of 3 minutes. One complete revolution of the ball crank turns the center 5°. 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. Price includes two clamping bolts.

**CE9635.** Indexing Centers. Ship. wt. 12 lbs. Price f.o.b. factory. **\$76.90**

**F MOTORS FOR SOUTH BEND SHAPERS.** Motors listed below are recommended for use with South Bend 7" Shapers. These are all ball-bearing motors. All single phase motors are capacitor type. Prices of ½ h.p. motors include special mounting base, when required. Prices of 230 v., single phase motors include 230 v. lamp in lieu of 115 v. lamp which is regularly supplied with shaper.

Information on motors for current characteristics not listed will be supplied on request. Approximate shipping weights: ⅓ h.p. motors 40 lbs., ½ h.p. motors 50 lbs.

Cat. No.	H.P.	Current	Volts	Phase	Cycle	Price
CS4910B	½	A.C.	115	1	60	\$ 38.50
CS4910D	½	A.C.	230	1	60	38.50
CS4911A	½	A.C.	115	1	50	42.00
CS4911C	½	A.C.	230	1	50	42.00
CS4912D	½	A.C.	208-220	3	60	41.50
CS4912C	½	A.C.	208-220	3	50	41.50
CS4913S	½	A.C.	380	3	50	41.50
CS4913F	½	A.C.	440	3	60	44.50
CS4913E	½	A.C.	440	3	50	44.50
CS4920B	½	A.C.	115	1	60	45.00
CS4920D	½	A.C.	230	1	60	45.00
CS4921A	½	A.C.	115	1	50	49.00
CS4921C	½	A.C.	230	1	50	49.00
CS4916R	½	A.C.	125	1	50	48.50
CS4915Q	½	A.C.	250	1	50	48.50
CS4922Y	½	A.C.	115	1	40	91.50
CS4922Z	½	A.C.	230	1	40	91.50
CS4914D	½	A.C.	208-220	2	60	48.50
CS4914C	½	A.C.	208-220	2	50	48.50
CS4914F	½	A.C.	440	2	60	48.50
CS4914E	½	A.C.	440	2	50	48.50
CS4924D	½	A.C.	208-220	3	60	48.50
CS4924C	½	A.C.	208-220	3	50	48.50
CS4924S	½	A.C.	380	3	50	48.50
CS4924F	½	A.C.	440	3	60	48.50
CS4924E	½	A.C.	440	3	50	48.50

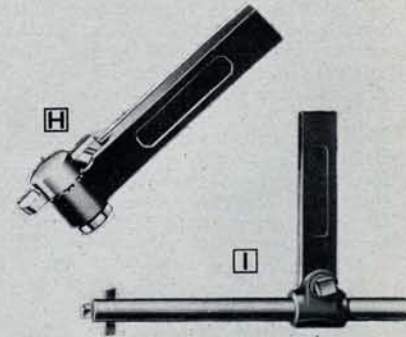
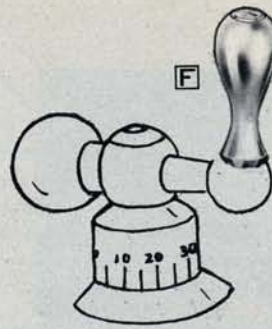
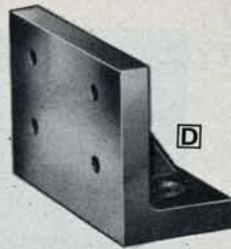
**G OPTIONAL LOW VOLTAGE CONTROLS.** Low voltage remote control equipment is optional (not required) for two and three phase motors. This equipment includes step-down transformer and relays which reduce current to operating switch to 110 v. and provide overload protection and low voltage release. Transformer is dual voltage rated type and may be connected for use with either 220 v. or 440 v. line current. Price of shaper includes the manual type across-the-line motor control switch.

**CE9609E.** Remote Control for three phase or two phase three wire 208-220/440 v., 50 cy. A.C. motors. Ship. wt. 14 lbs. Price f.o.b. factory..... **\$90.00**

**CE9609F.** Remote controls for three phase or two phase three wire 208-220/440 v., 60 cy., A.C. motors. Ship. wt. 14 lbs. Price f.o.b. factory..... **\$90.00**

**CE9609S.** Remote Control for three phase 380 v. A.C. motors. Shipping weight 14 lbs. Price f.o.b. factory..... **\$94.00**





## ACCESSORIES FOR SOUTH BEND 7" BENCH SHAPERS

**A UNIVERSAL TABLE.** Both upper and lower slides have graduated swivels and may be turned through full 360°. **B** Slides can be used without graduated swivels to reduce height if desired. They can be positioned at any angle with each other and may be turned individually or together. **C** Each slide has feed screw with micrometer collar reading in thousandths of an inch. Dovetails are equipped with full length gibs for take-up. The precision ground work surface is 4" x 8<sup>7</sup>/<sub>8</sub>" and maximum travel is 4" for either slide. Table has four slots for clamping work. Clamp bolts fit snugly into round slots in such a way that there is little danger of breaking out or otherwise damaging the slots. Slides and bases may be purchased separately if desired.

**CE9150.** Universal Table "A" complete with base for South Bend 7" Shaper, two slides, two graduated swivels, and eight clamp bolts with nuts. Shipping weight 37 lbs. Price f.o.b. factory . . . . . \$132.00  
**CE9157.** Single Table "B" with one graduated swivel and four clamp bolts with nuts. Shipping weight 19 lbs. Price f.o.b. factory . . . . . \$63.50  
**CE9158.** Base only "C" for adapting single table to South Bend 7" Shaper. Shipping weight 3 lbs. Price f.o.b. factory . . . . . \$5.55

**D ANGLE PLATE.** This is a heavy cast iron angle plate suitable for clamping work on the shaper, drill press, milling machine, face plate of lathe, etc. Size 4<sup>1</sup>/<sub>2</sub>" x 3" x 2". Has six bolt holes.  
**CE9640.** Shipping weight 4 lbs. Price f.o.b. factory . . . . . \$10.00

**E PLASTIC COVER FOR SHAPER.** Keep your shaper clean and in good condition by protecting it overnight and whenever not in use with this waterproof oil resistant service cover. Attractive maroon color. Size 21" wide, 37" long, 24" high, large enough to cover the entire shaper. Ship. wt. 2 lbs.  
**CE2694.** Waterproof Service Cover for Shaper. Price . . . . . \$2.85

**F SWIVELING MACHINE HANDLES.** Swiveling machine handles for the shaper can be supplied in lieu of the solid machine handles, provided they are specified when the shaper is ordered.  
**CS9636.** Swiveling Machine Handles for tool head feed screw, table cross-feed screw, and table vertical feed screw, in lieu of solid machine handles. Price f.o.b. factory when ordered with shaper . . . . . \$2.80

**G CHUCK ADAPTER STUD** for mounting chuck on table of shaper, drill press, milling machine or other machine for holding work. Consists 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. Price 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	Price
CE3445	6 <sup>1</sup> / <sub>4</sub> "	1 <sup>1</sup> / <sub>2</sub> "	8	7 lbs.	\$ 7.75
CE3446	6 <sup>1</sup> / <sub>4</sub> "	1 <sup>7</sup> / <sub>8</sub> "	8	10 lbs.	9.05
CE3447	7 <sup>1</sup> / <sub>2</sub> "	2 <sup>1</sup> / <sub>4</sub> "	8	13 lbs.	10.65
CE3448	11 <sup>3</sup> / <sub>4</sub> "	2 <sup>3</sup> / <sub>8</sub> "	6	14 lbs.	19.30

**H SHAPER TOOL HOLDER.** An extremely rigid forged steel tool holder for 1/4" square cutter bits. Adjustable to work at all angles. Head can be swivled and locked at eight different positions for machining many odd shapes and for cutting various angles without shifting the work. Shipping wt. 1 lb.  
**CS9630.** Adjustable Shaper Tool Holder. Price f.o.b. factory . . \$10.35

**I EXTENSION SHAPER TOOL.** A rigid forged steel tool holder 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 1/2" x 7<sup>1</sup>/<sub>2</sub>". Takes cutter bit 3/8" x 3/8". Shipping weight 2 lbs.  
**CS9631.** Extension Shaper Tool. Price f.o.b. factory . . . . . \$10.35

**J GROUND CUTTER BITS FOR SHAPER.** High speed steel cutter bits, 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. Price f.o.b. factory . . . . . \$ .70  
**CE9621.** Left-Cutter Shaper Tool Bit. Price f.o.b. factory . . . . . \$ .70  
**CE9622.** Slot-Cutting Shaper Tool Bit. Price f.o.b. factory . . . . . \$ .85  
**CE9623.** Set of Three Tool Bits (one each of above). Price . . . . . \$2.00

You can get almost any South Bend product quickly, either from stock carried by our distributors in all principal cities or direct from the factory at South Bend.