

CATALOG 6301E

machine tools

SOUTHBEND

*Builders of Precision Machine Tools Since 1906*



# SOUTH BEND LATHE CATALOG 6301

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# SOUTH BEND *Precision* MACHINE TOOLS

LATHES • MILLING MACHINES • SHAPERS • DRILL PRESSES • HYDRAULIC PRESSES • MECHANICAL PRESSES

## *Precision Built for Precision Machine Work*

For more than fifty-six years South Bend Lathe, Inc., has been building Precision Machine Tools exclusively. During that time a vast amount of experience has been gained. It has always been the policy of this company to produce a quality product at a reasonable price. Modern plant facilities plus half a century of "know-how" enable us to build a better product and to give you a better value than ever before.

### PRICES

Prices in this catalog are net f.o.b. South Bend, Indiana unless otherwise stated. In accordance with our established policy prices are subject to change without notice and accordingly prices herein are not necessarily those at which deliveries will be made at any future date because we reserve the right to invoice future deliveries at prices in effect at that time.

### WARRANTY

South Bend Lathe, Inc., warrants its products to conform to or excel the specifications set forth in its catalogs in use at the time of sale and reserves the right, at its own discretion, without notice and without making similar changes in articles previously manufactured, to make changes in materials, design, finish, or specifications. South Bend Lathe, Inc., warrants products of its own factory against defects of material or workmanship for a period of one year from date of sale. Liability of South Bend Lathe, Inc., under this warranty shall be limited to replacing, free of charge, f.o.b. South Bend, Indiana, any such parts proving defective within the period of this warranty but South Bend Lathe, Inc., will not be responsible for transportation charges or consequential damages.

The warranty of South Bend Lathe, Inc., is not made for products manufactured by others which are illustrated and described in "South Bend" catalogs or incorporated in "South Bend" products in essentially the same form as supplied by the original manufacturer. With respect to all such products, the warranties of the original manufacturers supplant the warranty of South Bend Lathe, Inc., but, in applicable instances, the latter agrees to use its best efforts to have original suppliers make good their warranties.

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## SOUTH BEND LATHE, INC.

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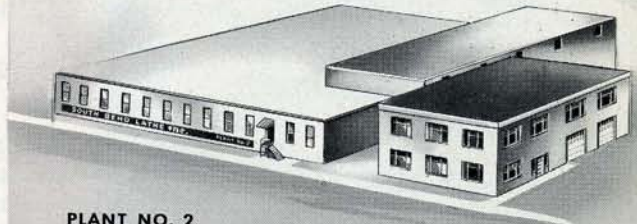
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PLANT NO. 1



PLANT NO. 3



PLANT NO. 2

ONE OF THE **Amsted**  
INDUSTRIES



# Improved SOUTH BEND *Precision* LATHES

FEATURES OF 10"-1 $\frac{1}{16}$ " COLLET AND LARGER SIZES

You can depend on the quality of South Bend Lathes because they are designed and built by men who take pride in their craftsmanship. Each operation, each part, each assembly, each lathe is manufactured to exacting specifications.

Continual research has resulted in many improvements which contribute to the accuracy, durability, and ease of operation of South Bend Lathes. Each new design is thoroughly tested in our experimental laboratory or by actual use in our own shops (usually both) before it is approved for production.

## SMOOTH POWER

Direct belt drive to the spindle gives you the smooth, silent power so essential for high speed precision finishing operations. For heavy cuts you have a powerful back-gear drive. Motor and driving mechanism are fully enclosed in base of lathe. Quick acting belt tension release and convenient back-gear lever permit changing spindle speeds quickly and easily.

## SUPERFINISHED SPINDLE

Headstock spindle bearing surfaces are hardened, ground and superfinished. Spindle runs in precision bored and burnished bronze bearings. This bearing construction provides rigid support to the spindle. Large oil reservoirs and capillary wicks circulate clean filtered oil through the bearings.

## SADDLE AND COMPOUND REST

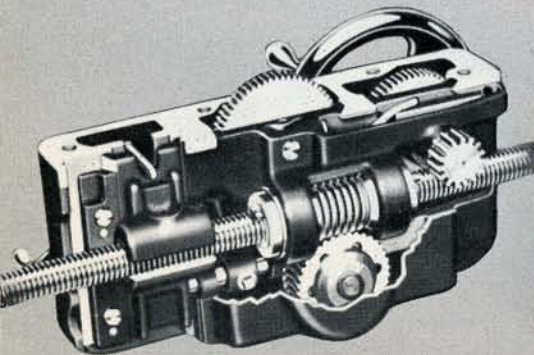
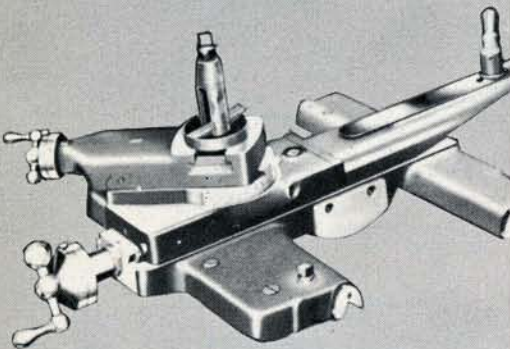
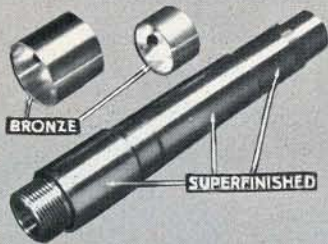
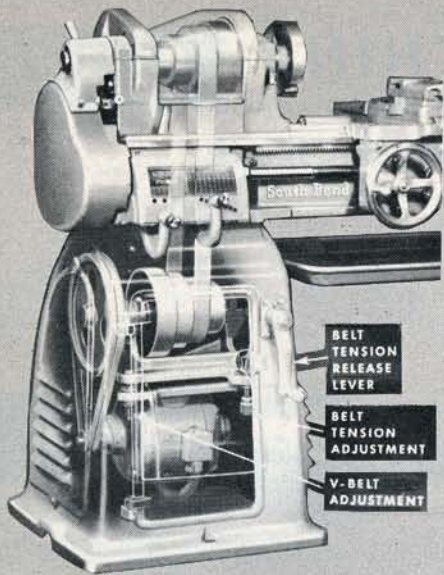
Saddles for South Bend Lathes have unusually long bearings carefully hand-scraped to outer V-ways of lathe bed. Large, easy reading graduated collars on cross-feed and compound rest screws have non-glare satin finish chrome surface with black lines and figures. Cross-feed screw has ball thrust bearings for smooth, easy operation. Both compound rest top and base dovetails have tapered gibs and compound rest swivel is accurately graduated 180°.

## IMPROVED CARRIAGE

Apron is of the rigid one-piece double wall construction with gear shafts supported on both ends. Large oil reservoir in apron provides automatic lubrication. Half-nuts are dovetailed into back wall of apron and have automatic interlock which prevents engaging power feeds and half-nuts at the same time. Quick acting lever operated clutch permits instant engagement or disengagement of power feeds.

## IMPROVED QUICK CHANGE BOX

Years of research and testing resulted in the improved double tumbler quick change box, an exclusive South Bend feature. Compact, dependable, and easy to set for any desired thread or feed, this mechanism has been copied but never duplicated.



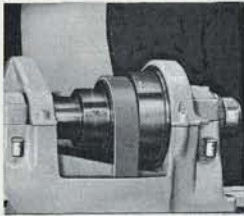






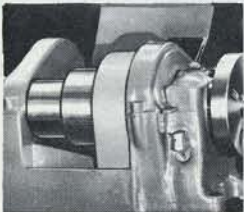
# Only South Bend

OFFERS



## FOUR-STEP PULLEY (13" and larger lathes only)

Provides eight spindle speeds with one-speed motor, sixteen speeds with two-speed motor. Desirable for toolroom work and finishing operations.



## THREE-STEP PULLEY

Provides 6 or 12 spindle speeds with one-speed motor, 12 or 24 with two-speed motor. Wide belt transmits maximum power for heavy roughing cuts.



## HARDENED BED WAYS

Hardened and ground bed ways resist wear and scoring. They are supplied to order in lieu of regular bed ways at extra cost. See page 36.



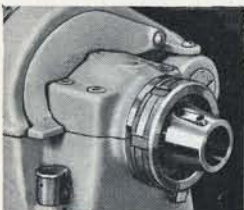
## THREADED SPINDLE

Supplied unless cam lock or long taper key drive spindle is specified. Precision milled thread assures perfect interchangeability of chucks, face plates and work fixtures.



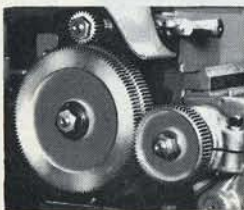
## CAM LOCK SPINDLE

4" Type D1 Cam Lock Spindle supplied to order in lieu of regular threaded spindle at extra cost. Chucks, face plates and other accessories available. See pages 36 and 37.



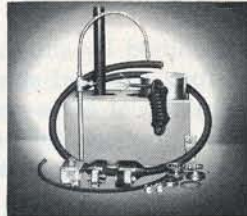
## LONG TAPER SPINDLE

Size L00 Long Taper Key Drive Spindle supplied to order in lieu of regular threaded spindle at extra cost. Chucks, face plates, and other accessories available. See pages 36 and 37.



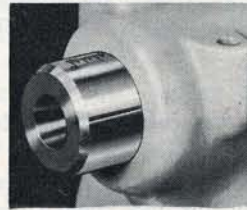
## METRIC EQUIPMENT

Metric lead screw, metric quick change box and metric graduations supplied in lieu of English at no extra cost. Metric transposing gears at extra cost. See pages 66 and 67.



## COOLANT EQUIPMENT

Coolant pump, reservoir, oil pan and piping speed production and improve finish on many classes of work. Supplied at extra cost. See pages 10 and 52.



## HARDENED TAILSTOCK TAPER

Tailstock spindle with hardened and precision ground taper furnished in lieu of regular at small extra cost. See page 55.



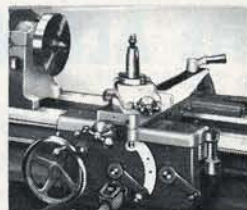
## HANDLEVER TAILSTOCK

Supplied in lieu of regular tailstock at extra cost. Also available as an extra. Speeds drilling and reaming operations. See page 47.



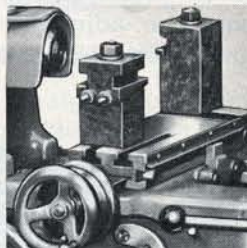
## FINE FEED HANDWHEEL

With this fine feed handwheel planetary gear reduction assures smooth, steady movement of carriage as handwheel is turned. See page 55.



## SPECIAL FINISH

Any desired color or combination of colors can be supplied in lieu of the regular gray enamel finish on South Bend Lathes. See page 46 for extra charges.



## DOUBLE TOOL CROSS SLIDE

This cross-feed may be power operated through friction clutch in apron or manually by cross-feed handwheel. Ideal where multiple tool set up is necessary. See page 45.



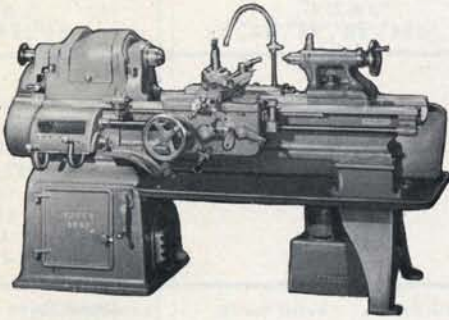
## EXTRA TOOL POST

An extra tool post on your lathe can often be a real time saver. Where long production runs are required this accessory is a must. See pages 10 and 52.



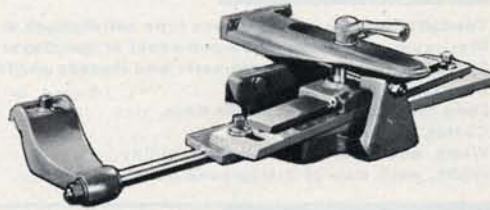
ALL THESE

# Optional Features



## SPLASH PANS • CHIP PANS

Available for all models of South Bend Lathes, these pans are heavy gauge steel with welded corners and roll rim. See page 52.



## TAPER ATTACHMENT

Taper turning and boring are as easily accomplished as straight turning on lathes equipped with the South Bend Telescopic Taper Attachment. See page 50.

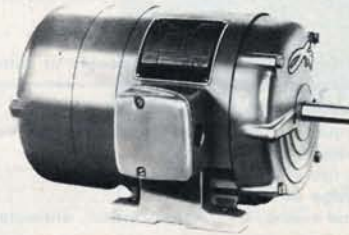


SECTION OF GROUND THREAD SCREW



## HARDENED AND GROUND THREAD SCREWS

Cross-feed Screws and Compound Rest Screws with Hardened and Ground Threads can be supplied in lieu of regular threads on South Bend Lathe. See page 55.



## BRAKE TYPE MOTORS

Magnetic Brake Type Motors for use on 10" to 16-24" lathes can now be supplied. An extensive range of size and current combinations are available. See page 68.

## 5% BUDGET PAYMENT PLAN

Orders for "South Bend" machine tools, together with necessary motors, controls and related accessories and attachments, (when included in the same order with the machine), may be placed under our low cost budget plan, making a small down payment and distributing the balance over 12, 18, 24 or 36 months. Minimum balance which can be financed is \$100 and finance charge is only

5% per annum on the original unpaid balance due. See pages 94 and 95 for details and payment schedule.

Note: Due to special-purpose features built into a good many of the Johnson Presses to satisfy the particular requirements of the customer, budget payment terms requested on mechanical press orders will be considered on an individual basis.



# Specifications

10"-1 1/16"

	10"	13"
<b>CAPACITY</b>		
Swing over bed and saddle wings	10-1/8"	13-1/8"
Swing over cross slide, engine lathe	5-7/8"	7-3/4"
Swing over cross slide, toolroom lathe	5-3/4"	8"
Swing over cross slide without chip guard, engine lathe only	6-3/4"	8-3/4"
Between centers (various bed lengths)	14", 20", 27", 34"	16", 28", 40", 52"
<b>HEADSTOCK</b>		
Capacity through spindle, nose type collet chuck or lathe chuck	1-3/8"	1-3/8"
Maximum collet capacity, handwheel or handlever type	1-1/16"	1-1/16"
Threaded spindle nose, diameter and threads per inch	2-1/4"-8	2-1/4"-8
Cam lock spindle nose, size	4" type D1	4" type D1
Long taper key drive spindle nose, size	LOO	LOO
Center, Morse taper	No. 2	No. 3
Width, each step of 4-step cone pulley		1-3/4"
Width, each step of 3-step cone pulley	1-5/16"	2-3/8"
<b>SPINDLE SPEEDS</b> (approximate, not exact)		
With 4-Step Cone Pulley 1-speed motor, r.p.m.		<b>Direct Drive</b> 940, 628, 418, 270   <b>Back-Geared</b> 135, 90, 60, 40
2-speed motor { High speeds—r.p.m.		940, 628, 418, 270   135, 90, 60, 40
{ Low speeds—r.p.m.		470, 314, 209, 135   67, 45, 30, 20
With 3-Step Cone Pulley 1-speed motor, r.p.m.		940, 497, 270   135, 71, 40
2-speed motor { High speeds—r.p.m.		940, 497, 270   135, 71, 40
{ Low speeds—r.p.m.		470, 248, 135   67, 35, 20
1-speed motor { High speeds—r.p.m.	<b>Direct Drive</b> 1400, 898, 585	<b>Back-Geared</b> 250, 160, 105
{ Low speeds—r.p.m.	740, 470, 304	130, 85, 55
2-speed motor { High speeds—r.p.m.	1400, 898, 585	250, 160, 105
{ Low speeds—r.p.m.	740, 470, 304	130, 85, 55
	700, 449, 292	125, 80, 52
	370, 235, 152	65, 42, 27
Higher spindle speeds available at extra cost, up to	2400 r.p.m.	1600 r.p.m.
<b>THREADS AND FEEDS</b>		
Number of changes for threads and feeds	70	48
Range of threads cut	4 to 480	4 to 224
Range of longitudinal feeds	.0007" to .0836"	.0015" to .0841"
Range of cross-feeds	.0003" to .0303"	.0006" to .0315"
Lead screw, 29° Acme thread, diameter and threads	3/4"-8	1"-6
<b>COMPOUND REST</b>		
Cross slide travel, engine lathe model	6-1/4"	8-3/4"
Cross slide travel, toolroom lathe model	5-7/8"	8-1/8"
Angular hand feed, compound rest top slide	2"	3-1/8"
Tool post opening for tool holder shank	3/8" x 13/16"	1/2" x 1-1/8"
<b>TAILSTOCK</b>		
Center, Morse taper	No. 2	No. 3
Spindle travel	2-1/8"	4-1/4"
Set-over of top for taper turning	11/16"	15/16"
<b>MOTOR</b>		
Recommended size, one-speed	3/4 h.p.	1 h.p.
Recommended size, two-speed	1 h.p.—1/2 h.p.	1-1/2 h.p.—3/4 h.p.
Optional size, one-speed	1 h.p.	1-1/2 h.p.
Optional size, two-speed		2 h.p.—1 h.p.

## SOUTH BEND'S Precision LATHES...

FOR over 50 years South Bend has lead the way in the manufacture of Precision Lathes. This has been possible only through a devoted program of testing, checking and refining every operation in the manufacturing process.

Inspect any South Bend Lathe. You'll see many of the reasons why South Bend's remain trouble free throughout long years of rough and tough service, why they deliver ultra-fine finish and why they last a lifetime if given proper care.



# COLLET AND LARGER LATHES

14½"		16"		16-24"		17" Geared Head	
14-5/8" 8-3/4" 8-15/16" 10-1/4" 24", 36", 48", 60"		16-1/4" 9-5/8" 9-5/8" 11-1/8" 33", 45", 57", 81", 105", 129"		25-1/8" 18-3/4" ..... 19-1/4" 30", 42", 54", 78", 102", 126"		17-1/8" 10-1/2" ..... 11-1/4" 54"	
1-3/8" 1-1/16" 2-3/8"—6 4" type D1 LOO No. 3 2-1/16" 2-25/32"		1-3/8" 1-1/16" 2-3/8"—6 4" type D1 LOO No. 3 2-1/4" 3"		1-3/8" 1-1/16" 2-3/8"—6 4" type D1 LOO No. 3 2-1/4" 3"		2-9/16" ..... 8" Type D-1 ..... No. 5	
<b>Direct Drive</b> 75, 545, 350, 215	<b>Back-Geared</b> 130, 80, 50, 30	<b>Direct Drive</b> 980, 610, 390, 240	<b>Back-Geared</b> 125, 80, 50, 30	<b>Direct Drive</b> 470, 280, 175, 105	<b>Back-Geared</b> 60, 35, 22, 15	<b>Spindle Speeds for 17" Geared Head Lathe</b>  <b>Single Speed Motor</b> <b>1800 R.P.M.</b> <b>900 R.P.M.</b> 60, 94, 210      30, 47, 105 290, 440, 466      145, 220, 233 700, 1050, 1580      350, 525, 790  <b>Two Speed Motors</b> <b>1800 R.P.M.</b> <b>900 R.P.M.</b> 30, 47, 60      290, 350, 440 94, 105, 145      466, 525, 700 210, 220, 233      790, 1050, 1580	
75, 545, 350, 215	130, 80, 50, 30	980, 610, 390, 240	125, 80, 50, 30	900, 550, 340, 203	116, 70, 45, 30		
37, 272, 175, 107	65, 40, 25, 15	490, 305, 195, 120	62, 40, 25, 15	455, 274, 170, 104	60, 34, 24, 15		
875, 428, 215	130, 61, 30	945, 550, 300	118, 70, 32	405, 235, 130	50, 30, 14		
875, 428, 215	130, 61, 30	945, 550, 300	118, 70, 32	790, 460, 250	100, 60, 27		
437, 214, 107	65, 30, 15	475, 278, 150	60, 33, 20	400, 230, 125	50, 29, 15		
1200 r.p.m.		1200 r.p.m.					
48 4 to 224 .0015" to .0841" .0006" to .0315" 1-1/8"—6		48 4 to 224 .0015" to .0841" .0006" to .0315" 1-1/8"—6		48 4 to 224 .0015" to .0841" .0006" to .0315" 1-1/8"—6		60 1-3/8 to 80 .0021" to .1242" .0011" to .0678" 1-3/8"—4	
10" 9-1/2" 3-1/8" 5/8" x 1-3/8"		10-1/2" 10-1/16" 3-3/4" 5/8" x 1-3/8"		10-1/2" ..... 3-3/4" 5/8" x 1-3/8"		12-1/4" ..... 3-1/2" 13/16" x 2"	
No. 3 5-1/4" 15/16"		No. 3 5-3/4" 1"		No. 3 5-3/4" 1"		No. 4 6" 1/2"	
2 h.p. 2 h.p.—1 h.p. 3 h.p. 3 h.p.—1-1/2 h.p.		2 h.p. 2 h.p.—1 h.p. 3 h.p. 3 h.p.—1-1/2 h.p.		2 h.p. 2 h.p.—1 h.p. 3 h.p. 3 h.p.—1-1/2 h.p.		5 H.P. 5—2-1/2 H.P. 7-1/2 H.P. 7-1/2—3-3/4 H.P.	

## STANDARD EQUIPMENT

### TOOLROOM LATHES (10"-1½" Collet and larger)

South Bend Toolroom lathes are built to *ultra-precision* tolerances—even closer than our Engine Lathes. Special lead screw and spindle alignment tests are made on each toolroom lathe as it is assembled to assure precision for the most exacting toolroom work. In addition to all regular equipment supplied with South Bend Engine Lathes, the Toolroom Lathes have the following equipment:

Precision lead screw  
Handwheel collet attachment (less collets)  
Collet rack

Telescopic taper attachment  
Large face plate  
Chip pan  
Micrometer carriage stop

### ENGINE LATHES (10"—1½" Collet through 16")

Equipment supplied and included in the price of each South Bend Engine Lathe is as follows:

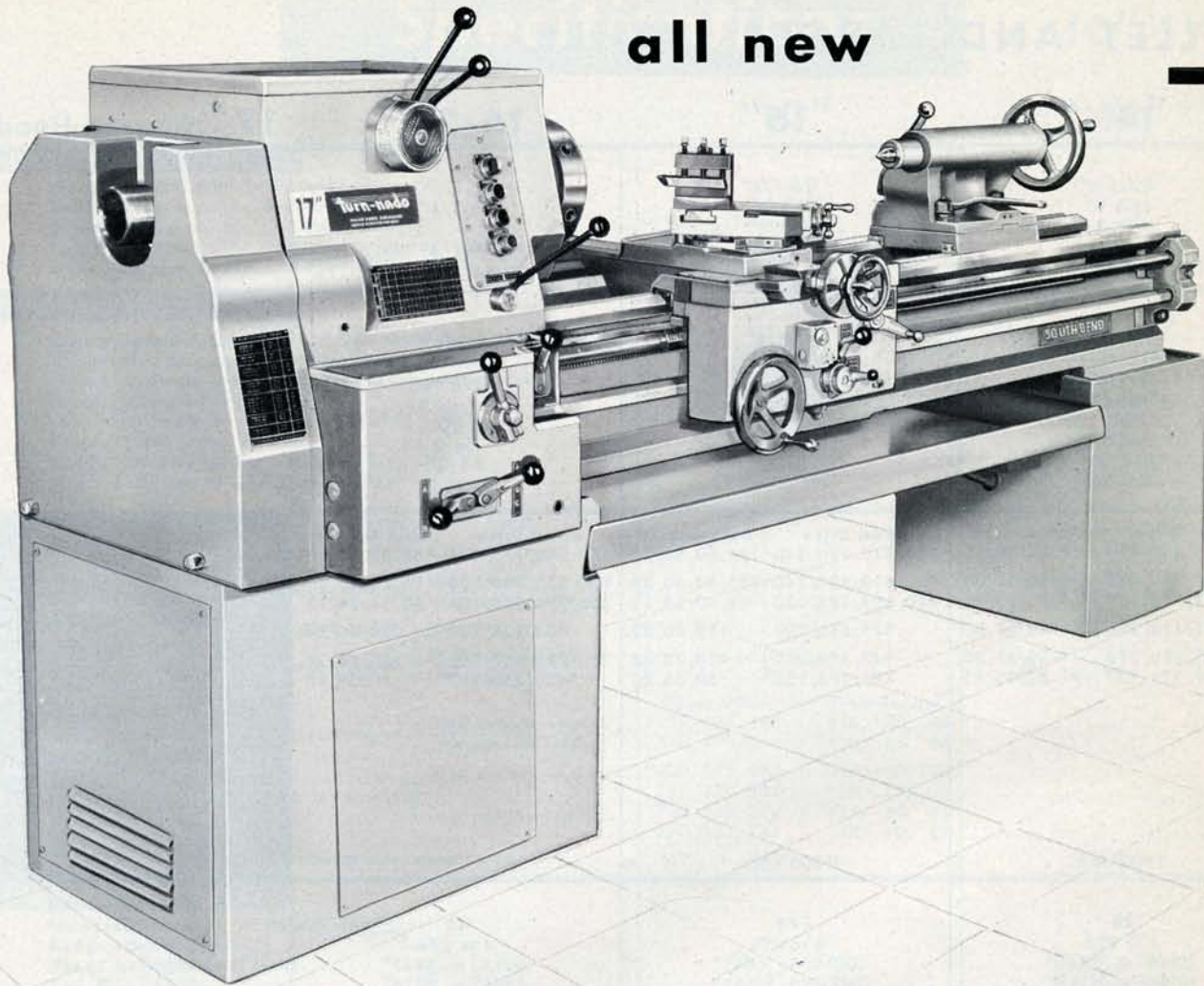
Thread indicator dial  
Thread cutting stop  
Small face plate  
Round tool post assembly  
60° Centers and spindle sleeve  
Necessary belting and motor pulley

Wrenches, installation plan and manual  
10"—1½" Collet Metal Cabinet  
Lathe prices include built-in chip pan.  
Electrical equipment is not included.

For Standard Equipment on 17" Geared Head Lathes—See page 9.



**all new**



**CL170E. 17" Geared Head Lathe — with full  $2\frac{9}{16}$ " Spindle hole and an 8" D-1 Cam Lock Spindle. (Distance between centers 54")**

**\$4900**

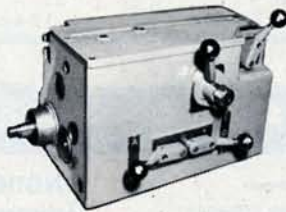
*All geared spindle drive  
Range of 60 threads and feeds*

*Chip slide built into bed  
Bed ways hardened and ground*

## **functional features**



Shaved steel gears in headstock. Spindle supported by two tapered roller bearings, an adjustable bronze center bearing and a pre-loaded ball bearing at the rear. 8" D-1 Cam Lock Spindle is standard.



Gear box provides 60 threading feeds  $1\frac{3}{8}$  to 80 t.p.i. through lead screw, 60 power turning feeds and 60 power cross feeds through hexagon feed rod. Gear box contains separate pump operated oiling system.



9 or 18 spindle speeds are available. Speed changes are made by shifting two convenient levers, third lever controls quick acting clutch and spindle brake. A constant flow oiling system lubricates all moving parts.



**2<sup>9</sup>/<sub>16</sub>" SPINDLE HOLE  
FOR BIG  
BAR JOBS**

# 17" SOUTH BEND *Turn-nado*\* GEARED HEAD LATHE

South Bend introduces a completely new geared head lathe . . . new in basic design, new in every component. It has been engineered to give both large and small shops the lathe features they need for competitive machining.

You get extra measure in the Geared Head "Turn-nado Lathes." The fully geared headstock has the speed and accuracy needed for high output and power to take advantage of the capacity of modern tools. Choice of 60 feeds for threading, turning and cross feeding is typical of its adaptability to do a greater variety of jobs with utmost efficiency. Throughout its entire design you'll find improvements that pay off in lower machining costs.

You'll have to try the "Turn-nado Lathe" to fully appreciate its capabilities—and, its smooth, responsive handling. After you have compared it with all others, you'll find that the South Bend 17" "Turn-nado" Geared Head Lathe gives you far more for your money.

## STANDARD EQUIPMENT

17" x 54" between centers "Turn-nado" Geared Head Lathe with 2-9/16" Hole through Spindle. The following equipment is standard and is included in the price of the Lathe.

8"D-1 Cam-Lock Spindle, Hardened and Ground Bedways, Hardened and Ground Cross Feed and Compound Rest Screws, Chip Pan, Small Face Plate, Thread Dial Indicator, Open Side Tool Post, Thread Cutting Stop, Spindle Sleeve, No. 4 MT

\*The trade mark "Turn-nado" is the property of South Bend Lathe, Inc.

60° Center, No. 5 MT 60° Center and necessary Wrenches.

## UNIQUE FEATURES

New sliding chip pan is designed for easy removal of chips. A chip screen is provided in the chip pan near the tailstock leg. This position helps keep screen from loading up with chips.

For expediency in leveling the lathe, precision leveling screws are built into the headstock and the tailstock legs.

## MOTORS AND CONTROLS FOR 17" GEARED HEAD LATHES

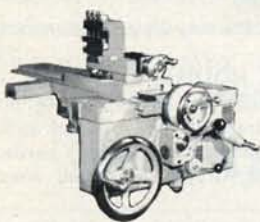
Cat. No.	R.P.M.	Current	Phase	Cycle	Volts	H.P.	Price
CE1705D	1800	A.C.	3	60	220	5	\$ 150
CE1705F	1800	A.C.	3	60	440	5	150
CE1705H	1800	A.C.	3	60	550	5	150
CE1710D	1800	A.C.	3	60	220	7.5	210
CE1710F	1800	A.C.	3	60	440	7.5	210
CE1710H	1800	A.C.	3	60	550	7.5	210
CE1715D	—	A.C.	3	60	220	2.5/5	242
CE1715F	—	A.C.	3	60	440	2.5/5	242
CE1715H	—	A.C.	3	60	550	2.5/5	242
CE1720D	—	A.C.	3	60	220	3.75/7.5	301
CE1720F	—	A.C.	3	60	440	3.75/7.5	301
CE1720H	—	A.C.	3	60	550	3.75/7.5	301
CE1725D	900	A.C.	3	60	220	5	275
CE1725F	900	A.C.	3	60	440	5	275
CE1725H	900	A.C.	3	60	550	5	275

CL710D. Push Button Operated Magnetic Reversing Line-starter, with Transformer and Jog Button for 220 Volt Operation (Single Speed) . . . . . \$155.00

CL710F. Push Button Operated Magnetic Reversing Line-starter, with Transformer and Job Button for 440 Volt Operation (Single Speed) . . . . . \$155.00

CL705D. Push Button Operated Magnetic Reversing Line-starter with Transformer for 220 Volt 2 Speed Motor. (No Jog Button) . . . . . \$329.00

CL705F. Push Button Operated Magnetic Reversing Line-starter with Transformer for 440 Volt 2 Speed Motor. (No Jog Button) . . . . . \$329.00



Double wall apron construction. Cross feed and compound rest screws have hardened and ground threads. Large diameter micro-meter dials are standard. Carriage rides on 62 square inches of bearing surface.

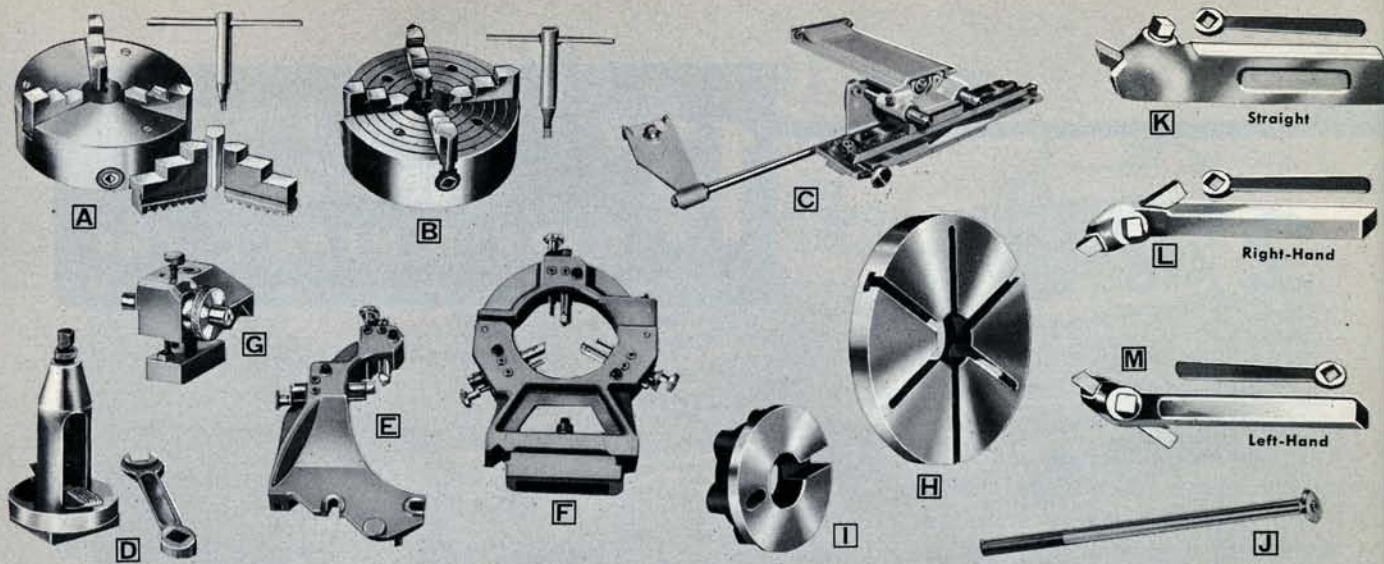


The tailstock design includes a barrel clamp that exerts upward pressure on the 2 1/2" spindle. This prevents misalignment—Spindle has tang slot and 6" of travel. Centers self ejecting. Two screws at front set over tailstock in either direction.



Three V-Way and one flat way all hardened and ground. Heavy side walls and cross bracing assure permanent precision alignment of headstock, tailstock and carriage. Inclined longitudinal bracing forms slide to discharge chips and coolant into slide-out chip pan.





## ACCESSORIES for SOUTH BEND 17" GEARED HEAD LATHE

**A THREE JAW UNIVERSAL LATHE CHUCKS** with two sets of jaws, one set external—one set internal. Chuck body ground, jaws hardened. Jaws move simultaneously, automatically center work piece. Price includes wrench.

**CL3510GJ.** 10" 3 Jaw Universal Chuck w/2 sets of jaws, Direct Mount to D-1 Cam Lock. . . . . **\$304.00**

**CL3512GJ.** 12" 3 Jaw Universal Chuck w/2 sets of jaws. Direct Mount to D-1 Cam Lock. . . . . **\$371.00**

**B FOUR JAW INDEPENDENT LATHE CHUCKS** have four reversible jaws with individual screw adjustment. Chuck body ground, jaws hardened and ground. Price includes wrench.

**CL4210GJ.** 10" 4 Jaw Independent Duty Chuck Direct Mount to D-1 Cam Lock. . . . . **\$225.00**

**CL4212GJ.** 12" 4 Jaw Independent Duty Chuck Direct Mount to D-1 Cam Lock. . . . . **\$265.00**

**C TAPER ATTACHMENT.** This telescopic taper attachment is permanently mounted on the lathe carriage and is always ready to use. It does not interfere with any lathe operation. Only a few seconds are required to change over from straight to taper work.

The swivel bar is graduated in degrees on one end and in inches per foot on the other end. Taper attachment provides a maximum taper of 4" per foot and 16" maximum turning length at one setting.

Proper fitting of the Taper Attachment to the lathe requires meticulous care and normally should be done at the factory before lathe is shipped. However, a good mechanic who understands the problems involved and uses the proper care can install the Taper Attachment on the South Bend Lathe.

**CL1545GJ.** Taper Attachment for 17" Geared Head Lathe. Shipping weight approx. 100 lbs. f.o.b. factory. . . . . **\$369.00**

**D ROUND TOOL POST ASSEMBLY.** On some jobs a round tool post may be preferred over the regular open side tool post that is standard equipment with your lathe. Price includes tool post assembly complete.

**CE2450GJ.** Tool Post for 17" Geared Head Lathe. . . . . **\$19.35**

**E STEADY REST.** Clamps onto the inside ways of the lathe bed, this steady rest has lock screws for securing the jaws guides to prevent jaws from turning. Each jaw is tipped with a brass "wear shoe" which can be replaced. The top of the steady rest is hinged for expediency in inserting and removing shafts. Capacity 3/16" minimum to 6" maximum.

**CL2400GJ.** Steady Rest. Shipping weight 50 lbs. Price f.o.b. factory. . . . . **\$55.00**

**F FOLLOWER REST.** Attaches to the lathe carriage and travels with the carriage. Has lock screws for securing the jaws guides to prevent jaws from turning. Each jaw is tipped with a brass "wear shoe" which can be replaced. Capacity 1/8" to 4 1/4".

**CL2395GJ.** Follower Rest. Shipping weight 35 lbs. Price f.o.b. factory. . . . . **\$35.00**

**G MICROMETER CARRIAGE STOP.** Can be used on either side of carriage. Has accurately graduated micrometer collar and may be locked for repetitive operations on duplicate work.

**CL968GJ.** Micrometer Carriage Stop. Shipping weight 8 lbs. Price f.o.b. factory. . . . . **\$40.00**

**H LARGE FACE PLATE.** Heavily constructed and accurately machined and ground. Has 3 T-slots for clamping work or fixtures plus regular drive slots for lathe dogs. Plate is 15" in diameter and 3" thick. Cam lock studs furnished for mounting on Cam Lock Spindle.

**CL2180GJ.** Large Face Plate. Shipping weight 70 lbs. Price f.o.b. factory. . . . . **\$80.00**

**I SMALL FACE PLATE.** Solid construction, accurately machined and ground. Has slots for driving lathe dog. 8 7/8" in diameter and 3" thick. Cam Lock Studs furnished for mounting on Cam Lock Spindle.

**CL2175GJ.** Small Face Plate. Shipping weight 35 lbs. Price f.o.b. factory. . . . . **\$48.00**

**J CENTER KNOCK-OUT BAR.** For removing headstock center and sleeve from spindle. Made of steel, with knurled handle and brass bushing.

**CL1475GJ.** Center Knock-Out Bar. Shipping weight 8 lbs. Price f.o.b. factory. . . . . **\$5.45**

**K CARBIDE TURNING TOOL HOLDER.** Drop forged steel, heat treated and hardened lathe tool holders for 3/8" cutter bits. Supplied in three styles, straight, right handed and left handed as illustrated. Price includes tool holder with hardened steel set screw and a hardened, drop-forged steel wrench. Cutter bit not included.

**CE817S.** Straight Carbide Turning Tool Holder. For 3/8" Cutter bits. Shipping weight 3 lbs. Price. . . . . **\$11.65**

**L CE817R.** Right Hand Carbide Turning Tool Holder. For 3/8" cutter bits. Shipping weight 3 lbs. Price. . . . . **\$11.65**

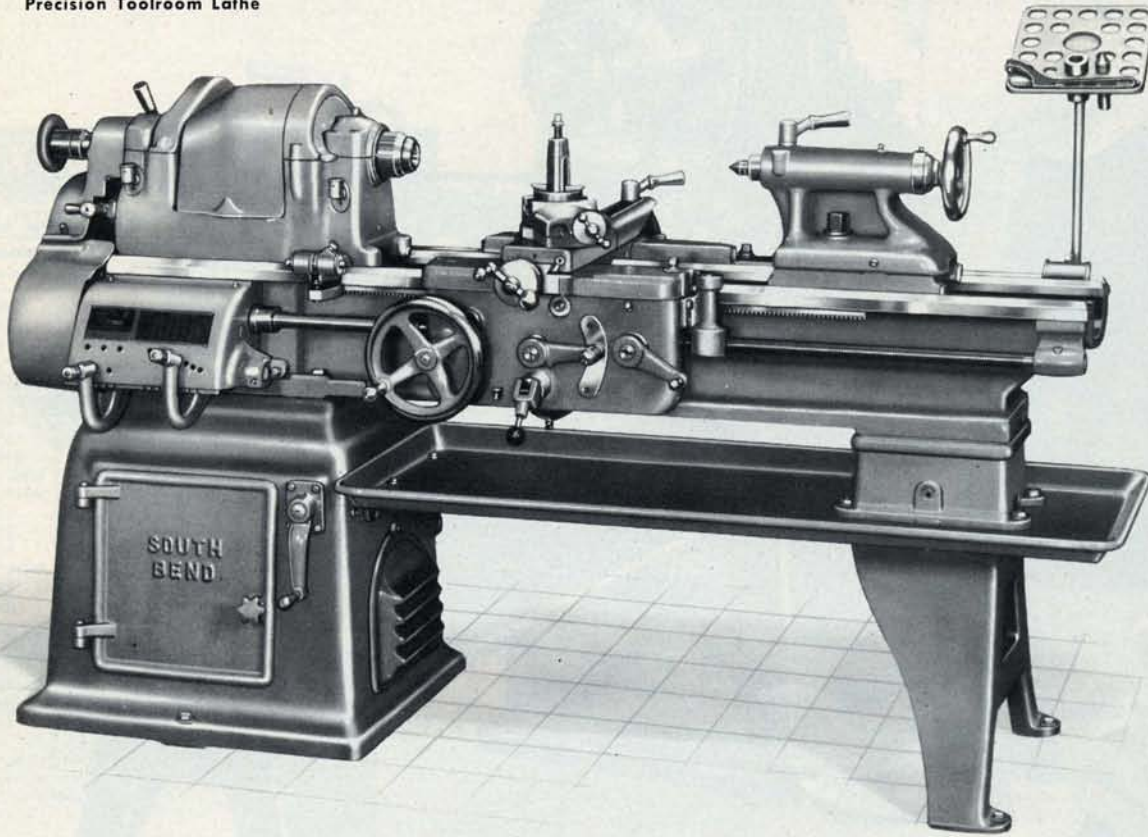
**M CE817L.** Left Hand Carbide Turning Tool Holder. For 3/8" cutter bits. Shipping weight 3 lbs. Price. . . . . **\$11.65**

**COOLANT EQUIPMENT.** Coolant equipment for 17" Geared Head Lathe is priced the same as for 16" South Bend Lathe. See page 52 for price and description.



# 16" SOUTH BEND *Precision* TOOLROOM LATHES

16" Swing South Bend  
Precision Toolroom Lathe



South Bend 16" Toolroom Lathes are the finest example of precision machine construction. Proven design and expert workmanship give these 16" lathes extreme accuracy for precision tool and gauge work, smooth power and speed for efficient production.

Some of the features responsible for the excellent performance of these lathes include an alloy steel spindle with hardened, ground and superfinished bearing surfaces running in adjustable bronze

sleeve bearings, one-piece double wall apron with steel gears running in oil, a powerful worm drive and multiple disc, lever operated, friction clutch permits instant engagement or disengagement of power feeds. Large diameter handwheels with swivel machine handles, extra large, clear cut, easy reading satin chrome micrometer graduated collars and conveniently arranged controls reduce operator fatigue and assure maximum efficiency.

Extras for 16" Lathes, see page 13. electricals are extra.

## SOUTH BEND 16-INCH *Precision* TOOLROOM LATHES

TYPE OF LATHE	TYPE OF HEADSTOCK	CATALOG NUMBER	BED LENGTH FEET	BETWEEN CENTERS INCHES	CUBIC FEET BOXED	BOXED WEIGHT POUNDS	CRATED WEIGHT POUNDS	PRICE F.O.B. FACTORY
TOOLROOM LATHES	THREE-STEP CONE PULLEY	CL8155C	6	33	100	2925	2525	\$ 3230
		CL8155D	7	45	106	3175	2605	3304
		CL8155E	8	57	117	3375	2685	3378
	FOUR-STEP CONE PULLEY	CL8117C	6	33	100	2925	2525	3230
		CL8117D	7	45	106	3175	2605	3304
		CL8117E	8	57	117	3375	2685	3378



**ECONOMICAL TO OWN  
DEPENDABLE TO OPERATE**



16" Swing South Bend Precision Engine Lathe. Chip pan, chuck and tool holder are extra.

Capable of heavy cuts at high speed, South Bend 16" swing lathes are among the most popular for general production work. The 16" South Bend Precision Engine Lathe is basically the same as the toolroom model, but does not have the collet attachment, taper attachment, and other toolroom accessories. The cost of the lathe is thus reduced,

but should any of the attachments be needed, they can be selected from the accessory table on the following page. Having ample power and capacity for efficient production on almost any size or type of job. This lathe is one of the most popular for manufacturing, maintenance, toolroom and experimental work.

TYPE OF LATHE	TYPE OF HEADSTOCK	CATALOG NUMBER	BED LENGTH FEET	BETWEEN CENTERS INCHES	CUBIC FEET BOXED	BOXED WEIGHT POUNDS	CRATED WEIGHT POUNDS	PRICE F.O.B. FACTORY
ENGINE LATHES	THREE-STEP CONE PULLEY	CL155C	6	33	89	2700	2300	\$2591
		CL155D	7	45	96	2950	2380	2656
		CL155E	8	57	105	3150	2460	2721
		CL155G	10*	81	123	3550	2800	2902
		CL155H	12*	105	141	3900	2975	3142
		CL155K	14*	129	167	4380	3200	3479
		CL117C	6	33	89	2700	2300	2591
	CL117D	7	45	96	2950	2380	2656	
	CL117E	8	57	105	3150	2460	2721	
	CL117G	10*	81	123	3550	2800	2902	
	CL117H	12*	105	141	3900	2975	3142	
	CL117K	14*	129	167	4380	3200	3479	
	CL117F	10*	81	123	3550	2800	2902	
	CL117I	12*	105	141	3900	2975	3142	
CL117J	14*	129	167	4380	3200	3479		

\*Center leg is supplied with 10', 12', and 14' beds.

Electrical equipment is not included in price.



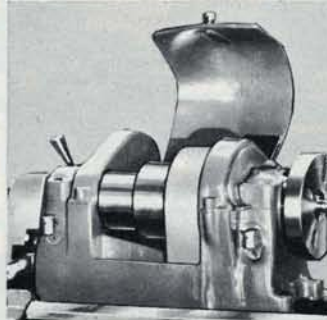
# 16" SOUTH BEND *Precision* ENGINE LATHES

## EXTRAS for 16" Lathes

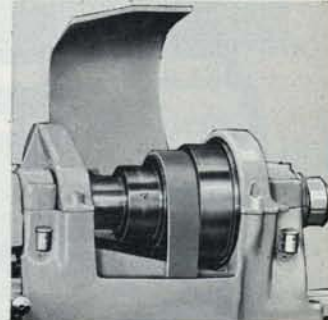
Most commonly used attachments and accessories

Catalog Number	Description	See Page	Factory Price
CL4306H	Handwheel Collet Attachment*	38	\$ 76.75
CL5206H	Handlever Collet Attachment...	38	187.00
CE3077	Set of 16 R-S-B Steel Collets for Round Work.....	40	97.00
CE1770H	Collet Rack*	38	27.00
CL1545H	Taper Attachment*	50	295.00
CL2400H	Telescoping Jaw Steady Rest	43	35.00
CL2395H	Telescoping Jaw Follower Rest	43	20.40
CL968FH	Micrometer Carriage Stop*	53	29.40
CL4210MH	10" 4-Jaw Independent Chuck	59	141.00
CL3507MH	7½" 3-Jaw Universal Chuck...	59	161.00
CE1206	1" Drill Chuck.....	59	36.75
CE2307	Drill Chuck Arbor.....	59	2.35
CE2103	Set of 11 Safety Lathe Dogs	64	31.75
CE1475QH	Center Knock-out Bar.....	57	4.40
CE853S	Turning Tool Holder, Straight	60	10.35
CE884R	Cutting-off Tool Holder, R.H.	60	11.64
CE432	Boring Tool, Style "B".....	61	19.86
CE894	Knurling Tool.....	62	20.70
CE2815	Work Light.....	54	14.20
CE2698	Plastic Cover for Lathe (7' bed length).....	54	7.80
CE2218	12" Precision Level.....	54	17.15
	Chip Pan*.....	52	

\*These items are supplied with and included in prices of 16" Toolroom Lathes.



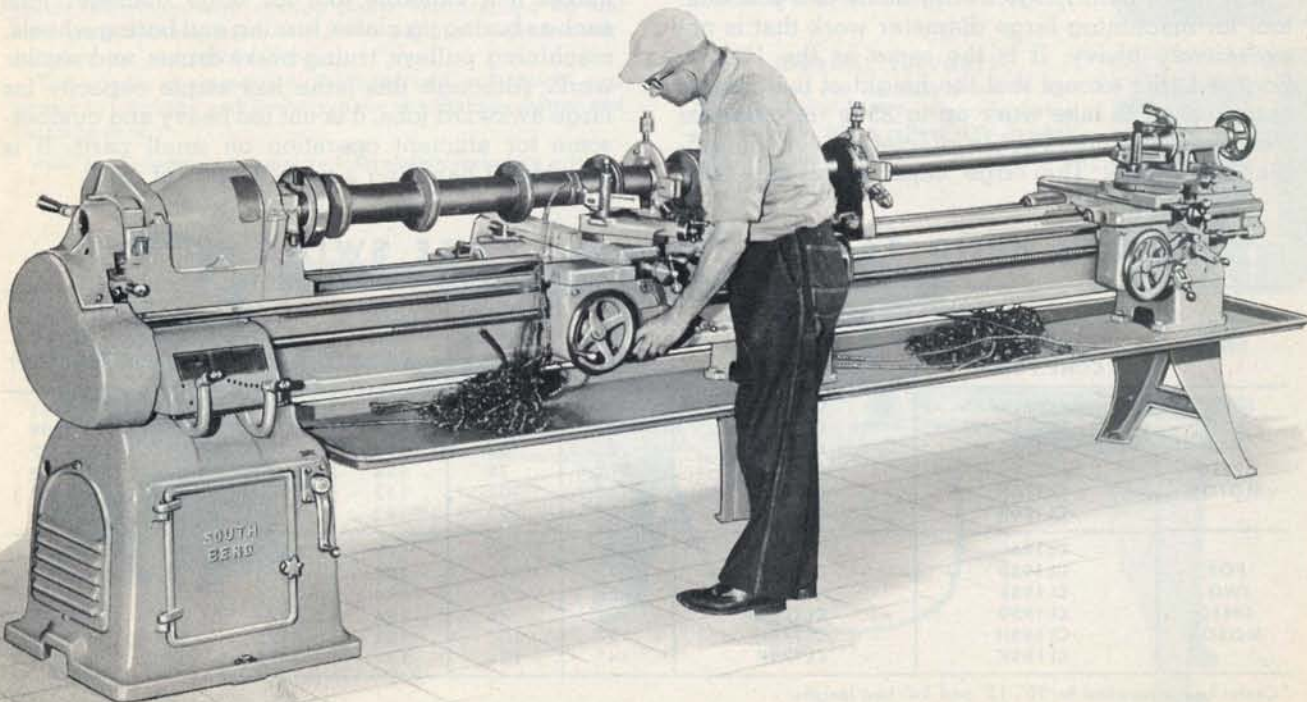
The wide belt 3-step cone pulley headstock assures maximum power for heavy roughing cuts and rapid production. Recommended for use with a two-speed motor.



The 4-step cone pulley is well adapted to toolroom work and finishing operations as it provides a greater selection of spindle speeds.

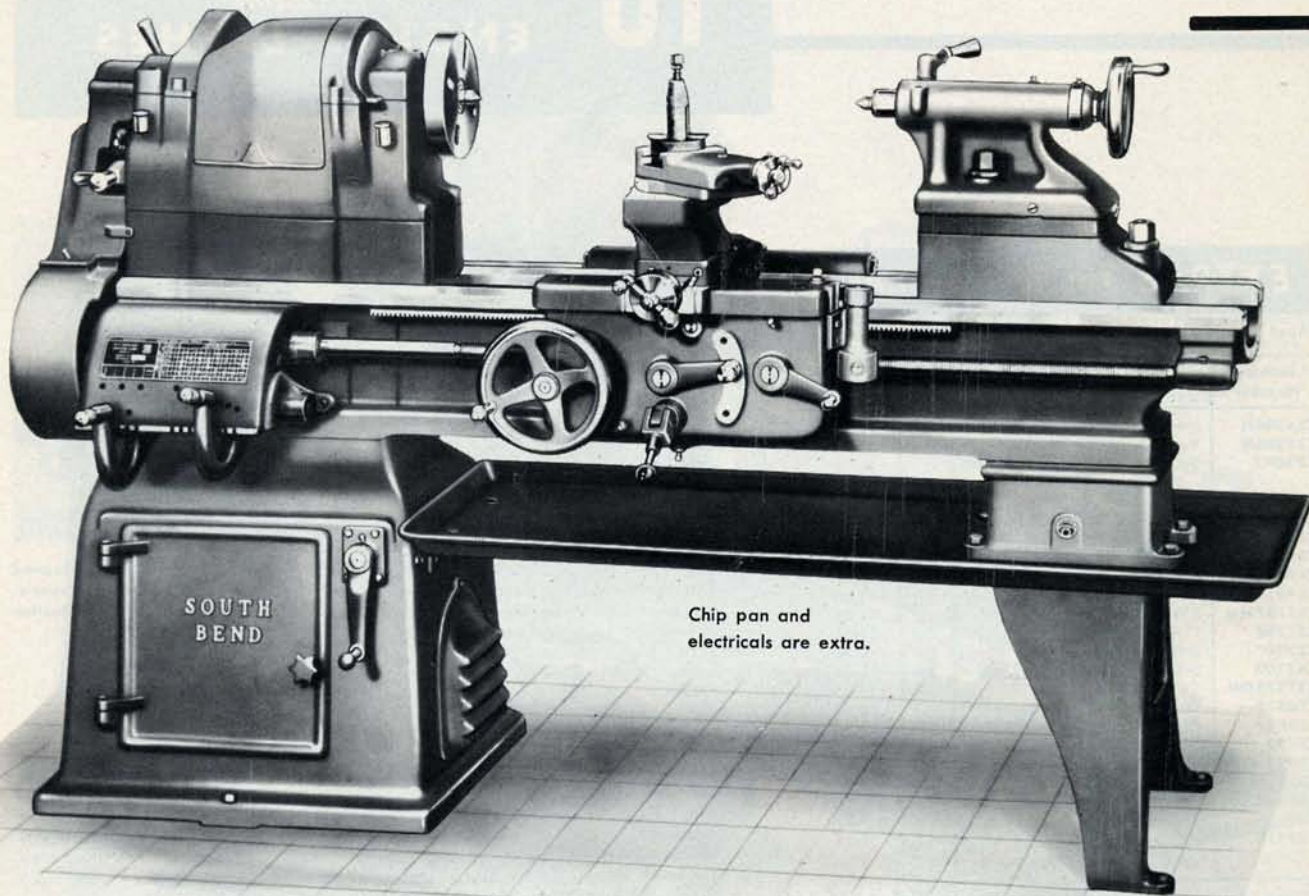
## LONG BED DOUBLE CARRIAGE LATHE

South Bend 16" swing Lathes with 14-foot bed length are supplied to order with double carriage as illustrated below. Carriages are identical and are the same as supplied on all other 16-inch swing South Bend Lathes. They may be used independently or simultaneously and on some classes of work much time can be saved. A 3 h.p. motor is recommended.





# ACCURACY PLUS BIG CAPACITY



Chip pan and electricals are extra.

The 16-24-inch Large Swing Lathe is a practical tool for machining large diameter work that is not excessively heavy. It is the same as the 16-inch Engine Lathe except that the height of the centers is increased to take work up to 25 $\frac{1}{8}$ " in diameter over the bed and 18 $\frac{3}{4}$ " in diameter over the saddle cross slide. The large capacity of this lathe

makes it a valuable tool for large diameter jobs such as boring jig plates, turning and boring wheels, machining pulleys, truing brake drums, and similar work. Although this lathe has ample capacity for large awkward jobs, it is not too heavy and cumbersome for efficient operation on small parts. It is capable of handling a wide variety of work.

## SOUTH BEND 16-24" *Precision* LARGE SWING LATHES

DRIVE UNIT	CATALOG NUMBER		BED LENGTH FEET	BETWEEN CENTERS INCHES	CUBIC FEET BOXED	BOXED WEIGHT POUNDS	CRATED WEIGHT POUNDS	PRICE F.O.B. FACTORY
	THREE-STEP CONE PULLEY	FOUR-STEP CONE PULLEY						
FOR ONE-SPEED MOTOR	CL176C	CL198C	6	30	98	3100	2480	\$3141
	CL176D	CL198D	7	42	104	3200	2560	3209
	CL176E	CL198E	8	54	114	3300	2640	3277
	CL176G	CL198G	10*	78	134	3800	2980	3472
	CL176H	CL198H	12*	102	153	4100	3155	3667
	CL176K	CL198K	14*	126	182	4500	3350	4021
FOR TWO-SPEED MOTOR	CL195C	CL179C	6	30	98	3175	2555	3141
	CL195D	CL179D	7	42	104	3275	2635	3209
	CL195E	CL179E	8	54	114	3375	2715	3277
	CL195G	CL179G	10*	78	134	3875	3055	3472
	CL195H	CL179H	12*	102	153	4175	3230	3667
	CL195K	CL179K	14*	126	182	4575	3425	4021

\*Center Leg is supplied for 10', 12' and 14' bed lengths.

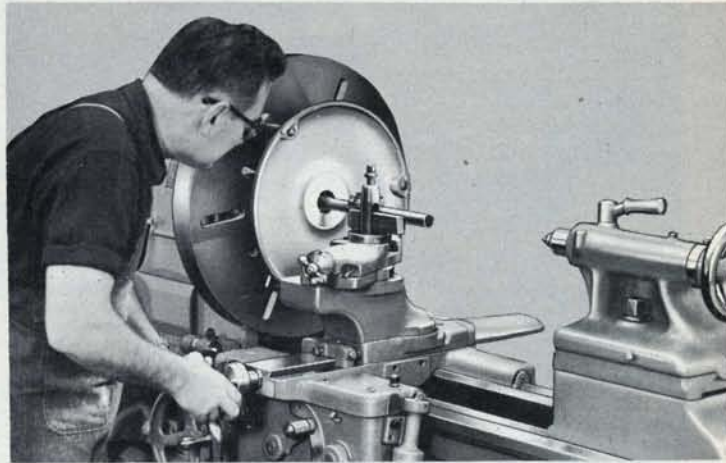


# 16-24" SOUTH BEND *Precision* LARGE SWING LATHES

## EXTRAS for 16-24" Lathes

Most commonly used attachments and accessories

Catalog Number	Description	See Page	Factory Price
CL4306H	Handwheel Collet Attachment...	38	\$ 76.75
CL5206H	Handlever Collet Attachment...	38	187.00
CE3077	Set of 16 ←R-S-B← Steel Collets for Round Work.....	40	97.00
CE1770H	Collet Rack.....	38	27.00
CL1545H	Taper Attachment.....	50	295.00
CL2400V	Telescoping Jaw Steady Rest.....	43	44.50
CL2395V	Telescoping Jaw Follower Rest.....	43	26.65
CL968FH	Micrometer Carriage Stop.....	53	29.40
CL4210MH	10" 4-Jaw Independent Chuck.....	59	141.00
CL3507MH	7½" 3-Jaw Universal Chuck.....	59	161.00
CE1206	1" Drill Chuck.....	59	36.75
CE2307	Drill Chuck Arbor.....	59	2.35
CE2103	Set of 11 Safety Lathe Dogs.....	64	31.75
CE1475QH	Center Knock-out Bar.....	57	4.40
CE8535	Turning Tool Holder, Straight.....	60	10.35
CE884R	Cutting-off Tool Holder, R.H.....	60	11.64
CE432	Boring Tool, Style "B".....	61	19.86
CE894	Knurling Tool.....	62	20.70
CE2815	Work Light.....	54	14.20
CE2698	Plastic Cover for Lathe (7' bed length).....	54	7.80
CE2218	12" Precision Level.....	54	17.15
	Chip Pan.....	52	



Facing and boring a large diameter pedestal floor flange

## NEW SOUTH BEND ROLLER GRINDING LATHE

Designed especially for restoring like new surface to rubber and plastic rollers by precision surface grinding. Can be purchased as a complete unit including a South Bend 16-24" lathe with 14' bed or the grinding unit can be supplied for attaching to your own 16-24" South Bend. Ideal for printing plants, aluminum strip coating plants, lithographed tin and steel plate manufacturers, etc., who require frequent resurfacing of ink and paint rollers.

The grinder is a precision, balanced unit with weight supported by carriage and bedways thus eliminating chatter and carriage rock.

Write for bulletin and complete information including prices.

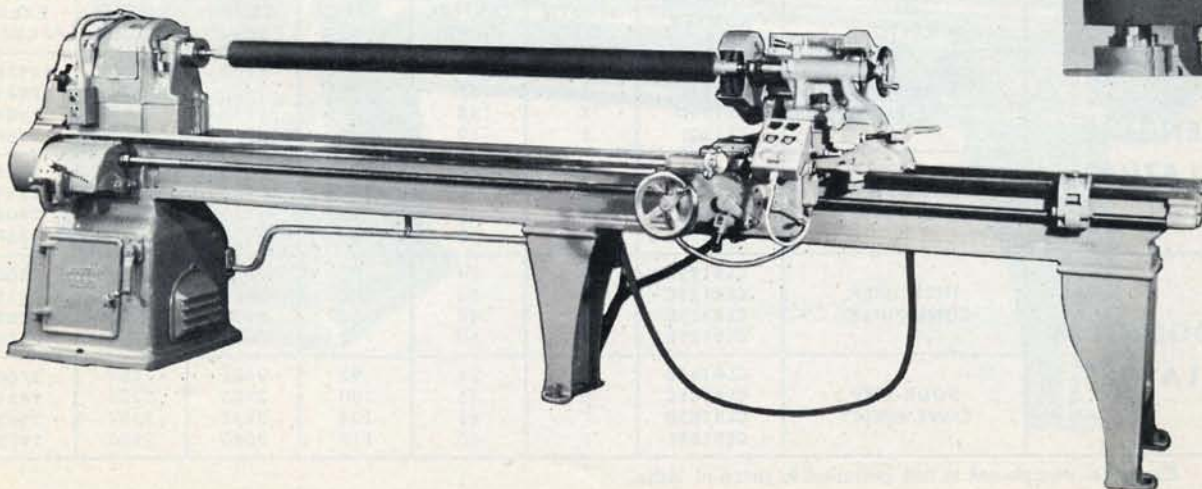
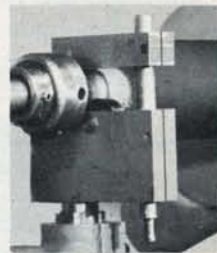
### BALANCED WHEEL HOLDER

Balancing type wheel holder eliminates need for wheel balancing on the job. Simply remove entire wheel assembly and replace with another wheel assembly which has been previously balanced.



### JOURNAL SUPPORTS

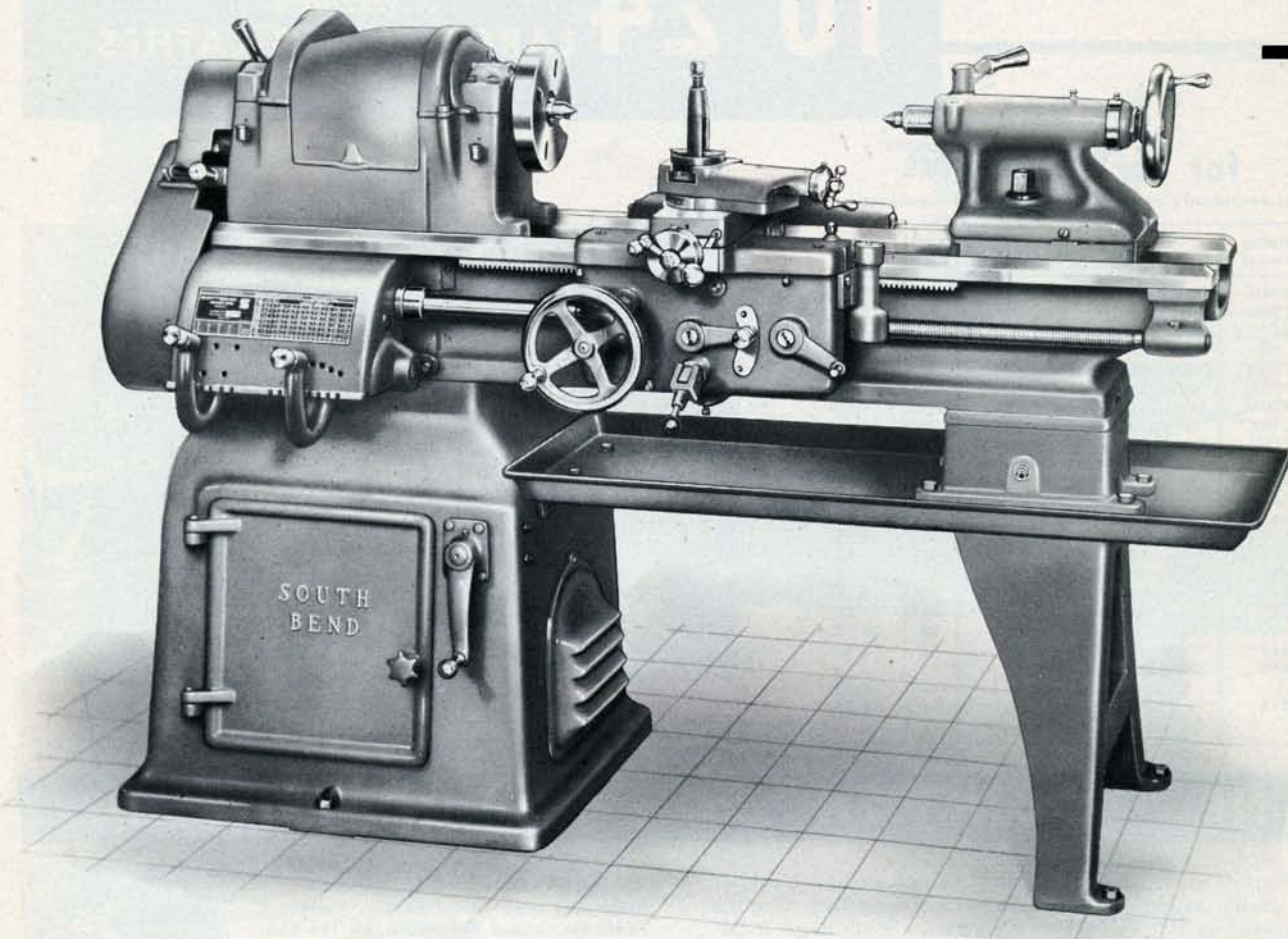
Just as they run on your press or machine they are ground—assuring perfect concentricity. Grind rollers right in their own bearings or supported on the journal ends of the core.





14½" Swing South Bend Precision Engine  
Lathe. Chip Pan is extra.

## accuracy to keep machining economical



Careful design and conscientious workmanship are combined in South Bend 14½" Lathes to give you a machine tool that you can depend on for years of satisfactory service. Continual research has resulted in many improvements and refine-

ments which contribute to accuracy, durability, and ease of operation. This superbly engineered model will appeal to the most discriminating technician. We know of no other lathe selling at a competitive price that can match its performance.

TYPE OF LATHE	TYPE OF HEADSTOCK	CATALOG NUMBER	BED LENGTH FEET	BETWEEN CENTERS INCHES	CUBIC FEET BOXED	BOXED WEIGHT POUNDS	CRATED WEIGHT POUNDS	PRICE F.O.B. FACTORY
<b>ENGINE LATHES</b>	<b>THREE-STEP CONE PULLEY</b>	CL129B	5	24	82	2500	1995	\$2178
		CL129C	6	36	89	2600	2070	2241
		CL129D	7	48	96	2750	2145	2304
		CL129E	8	60	105	2900	2225	2367
	<b>FOUR-STEP CONE PULLEY</b>	CL185B	5	24	82	2500	1995	2178
		CL185C	6	36	89	2600	2070	2241
		CL185D	7	48	96	2750	2145	2304
		CL185E	8	60	105	2900	2225	2367
<b>TOOLROOM LATHES</b>	<b>THREE-STEP CONE PULLEY</b>	CL8129B	5	24	92	2685	2180	2760
		CL8129C	6	36	100	2785	2255	2831
		CL8129D	7	48	106	2935	2330	2902
		CL8129E	8	60	117	3085	2405	2973
	<b>FOUR-STEP CONE PULLEY</b>	CL8185B	5	24	92	2685	2180	2760
		CL8185C	6	36	100	2785	2255	2831
		CL8185D	7	48	106	2935	2330	2902
		CL8185E	8	60	117	3085	2405	2973

Electrical equipment is not included in price of lathe.

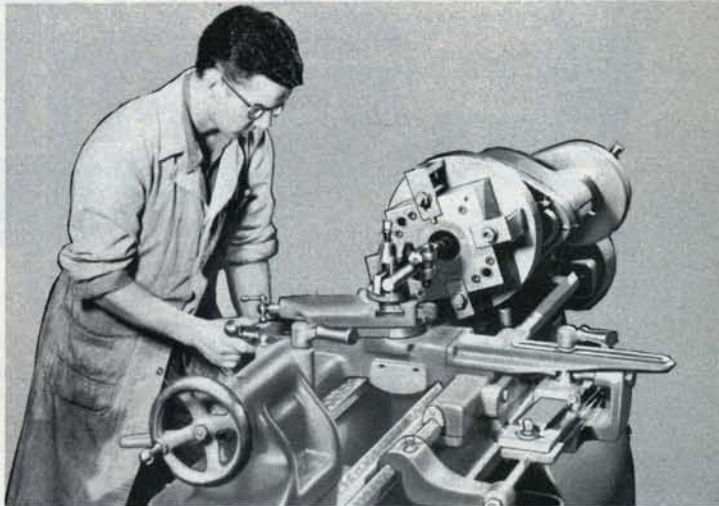


# 14<sup>1</sup>/<sub>2</sub>" SOUTH BEND *Precision* LATHES

## EXTRAS for 14<sup>1</sup>/<sub>2</sub>" Lathes

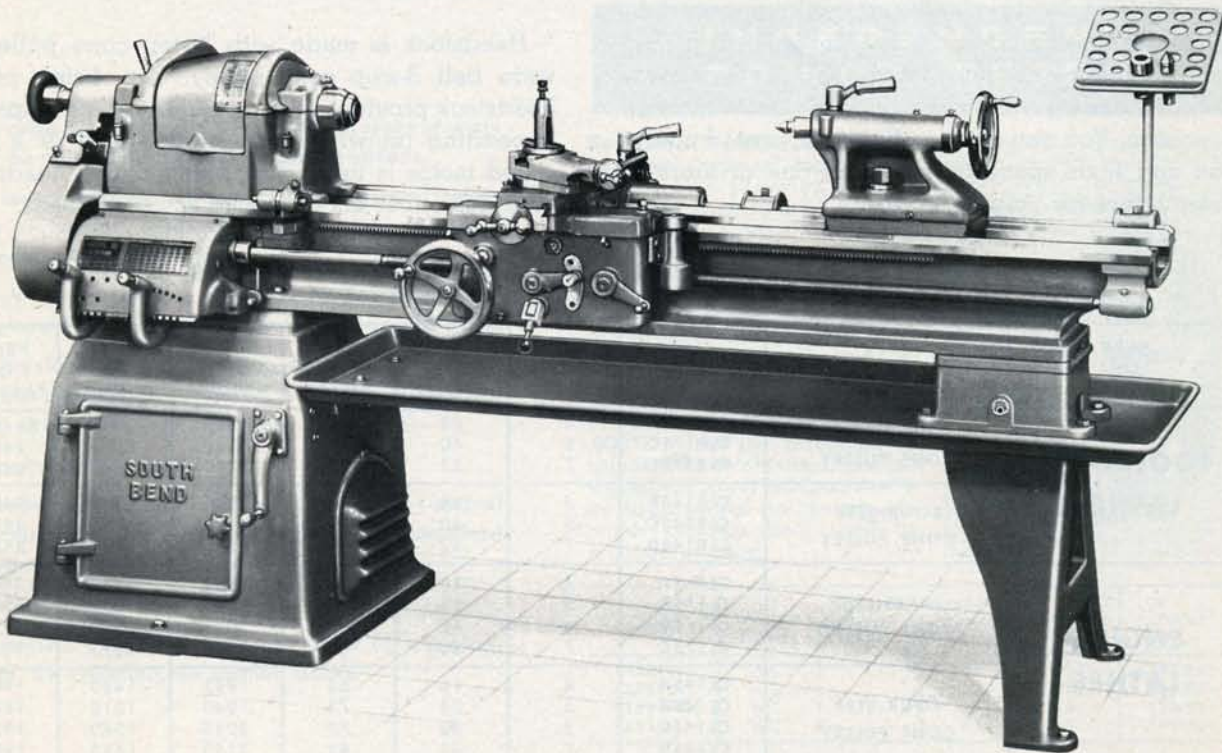
Most commonly used attachments and accessories

Catalog Number	Description	See Page	Factory Price
CL4306M	Handwheel Collet Attachment*	38	\$ 73.50
CL5206M	Handlever Collet Attachment	38	172.00
CE3077	Set of 16 R-5-B-C Steel Collets for round work.....	40	97.00
CE1770M	Collet Rack*.....	38	27.00
CL1545F	Taper Attachment*.....	50	264.00
CL2400F	Telescoping Jaw Steady Rest	43	33.00
CL2395F	Telescoping Jaw Follower Rest	43	19.75
CL968FH	Micrometer Carriage Stop*.....	53	29.40
CL4209MH	9" 4-Jaw Independent Chuck	59	125.00
CL3507MH	7 <sup>1</sup> / <sub>2</sub> " 3-Jaw Universal Chuck	59	161.00
CE1202	3/4" Drill Chuck	59	17.10
CE2305	Drill Chuck Arbor	59	2.10
CE2103	Set of 11 Safety Lathe Dogs	64	31.75
CE1475QH	Center Knock-out Bar	57	4.40
CE8535	Turning Tool Holder, Straight.....	60	10.35
CE884R	Cutting-off Tool Holder, R.H.....	60	11.64
CE432	Boring Tool, Style "B".....	61	19.86
CE894	Knurling Tool.....	62	20.70
CE2815	Work Light.....	54	14.20
CE2698	Plastic Cover for Lathe (7' bed).....	54	7.80
CE2218	12" Precision Level.....	54	17.15
	Chip Pan*.....	52	



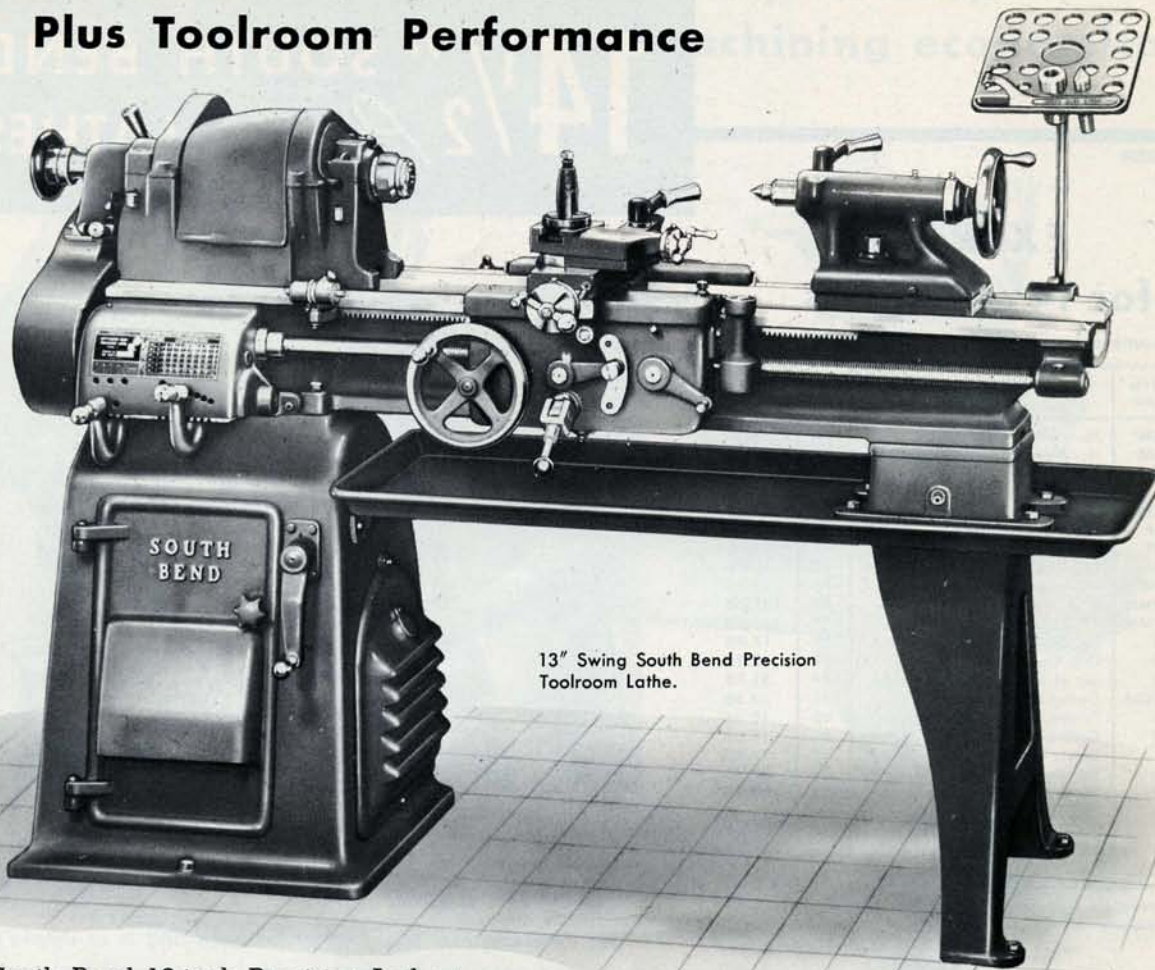
### SOUTH BEND 14<sup>1</sup>/<sub>2</sub>" TOOLROOM LATHE

This Precision tool has perfect balance and is so simple to set up and operate. An ideal machine for general toolroom use.





# Precision Built Throughout for Plus Toolroom Performance



13" Swing South Bend Precision  
Toolroom Lathe.

The South Bend 13-inch Precision Lathe is especially popular for small and medium sized jobs requiring speed and accuracy. Conveniently placed controls reduce operator fatigue. Special accuracy tests are made during assembling to assure extreme precision. You can save on first cost, cost of operation and floor space by selecting one or more of these lathes for your shop.

Headstock is made with 4-step cone pulley or wide belt 3-step cone pulley. The 4-step pulley headstock provides eight or sixteen spindle speeds, depending on whether a single-speed or a two-speed motor is used. The 3-step pulley headstock provides either six or twelve spindle speeds.

## SOUTH BEND 13-INCH Precision LATHES

TYPE OF LATHE	TYPE OF HEADSTOCK	CATALOG NUMBER	BED LENGTH FEET	BETWEEN CENTERS INCHES	CUBIC FEET BOXED	BOXED WEIGHT POUNDS	CRATED WEIGHT POUNDS	PRICE F.O.B. FACTORY
TOOLROOM LATHES	THREE-STEP CONE PULLEY	CL8175B	5	28	84	1995	1665	\$2408
		CL8175C	6	40	89	2150	1715	2472
		CL8175D	7	52	96	2305	1770	2536
	FOUR-STEP CONE PULLEY	CL8145B	5	28	84	1995	1665	2408
		CL8145C	6	40	89	2150	1715	2472
		CL8145D	7	52	96	2305	1770	2536
ENGINE LATHES	THREE-STEP CONE PULLEY	CL175A	4	16	63	1835	1460	1809
		CL175B	5	28	73	1940	1510	1870
		CL175C	6	40	77	2045	1560	1931
		CL175D	7	52	82	2150	1615	1992
	FOUR-STEP CONE PULLEY	CL145A	4	16	63	1835	1460	1809
		CL145B	5	28	73	1940	1510	1870
		CL145C	6	40	77	2045	1560	1931
		CL145D	7	52	82	2150	1615	1992

Electrical equipment is not included in price of lathe.



# 13" SOUTH BEND *Precision* LATHES

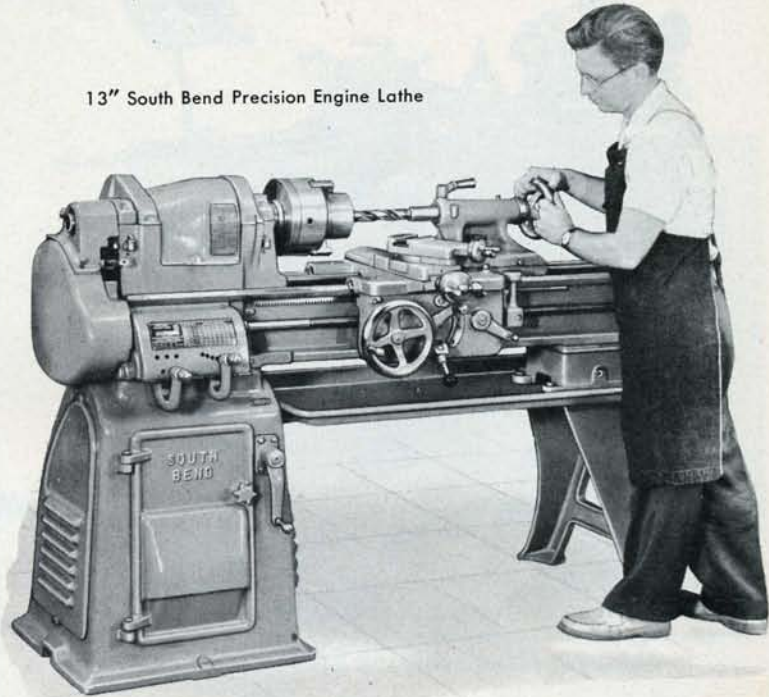
## EXTRAS for 13" Lathes

Most commonly used attachments and accessories

Catalog Number	Description	See Page	Factory Price
CL4306Q	Handwheel Collet Attachment*	38	\$ 68.75
CL5206Q	Handlever Collet Attachment...	38	158.00
CE3077	Set of 16 R-S-B Steel Collets for Round Work.....	40	97.00
CE1770Q	Collet Rack*.....	38	27.00
CL1545T	Taper Attachment*.....	50	245.00
CL2400T	Telescoping Jaw Steady Rest	43	27.50
CL2395T	Telescoping Jaw Follower Rest	43	16.65
CL968T	Micrometer Carriage Stop*.....	53	28.35
CL4207LQ	7½" 4-Jaw Independent Chuck	59	111.00
CL3506LQ	6" 3-Jaw Universal Chuck.....	59	137.00
CE1202	¾" Drill Chuck.....	59	17.10
CE2305	Drill Chuck Arbor.....	59	2.10
CE2103	Set of 11 Safety Lathe Dogs	64	31.75
CE1475QH	Center Knock-out Bar.....	57	4.40
CE8525	Turning Tool Holder, Straight	60	8.44
CE883R	Cutting-off Tool Holder, R.H.	60	9.28
CE431	Boring Tool, Style "B".....	61	15.10
CE893	Knurling Tool.....	62	17.49
CE2815	Work Light.....	54	14.20
CE2698	Plastic Cover for Lathe (7' bed).....	54	7.80
CE2218	12" Precision Level.....	54	17.15
	Chip Pan*.....	52	

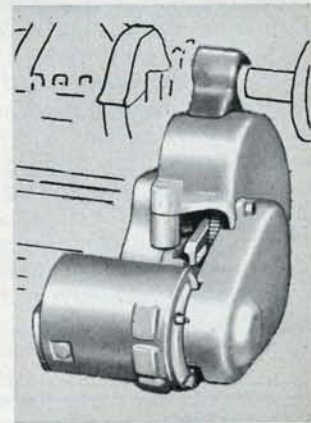
\*These items are supplied with and included in prices of 13" Toolroom Lathes.

13" South Bend Precision Engine Lathe



## INDEPENDENT POWER FEEDS

**For 13-Inch Lathe.** Equipment includes a special high speed drive which provides spindle speeds ranging from 67 to 1600 r.p.m. and a separate motor, pulleys and gear for driving the power carriage feeds independent of the lathe spindle speeds. This provides 40 quick changes of carriage feed from .517 to 14.48 inches per minute, through the lathe gear box. When spindle revolves 1600 r.p.m. a fine longitudinal feed of approximately .00032 inches per revolution of spindle can be obtained. The independent power feed may easily be disconnected and the regular power carriage feeds used in a normal manner.



Wide range of spindle speeds, nearly all sizes of work can be machined at effective cutting speeds.

Two lever gear box permits instantaneous selection of power feeds for any turning, facing or thread cutting operation.

Three V-ways and one flat way assure permanent alignment of headstock, carriage and tailstock.

Microfinished sleeve type spindle bearings give greater support to the work, smoother operation, long life and deliver extremely fine finish.

48 longitudinal and 48 cross feeds.

Easy reading, satin chrome, graduated dials—swivel machine handles, tapered gibs, all standard equipment.

Rugged design for proven low maintenance.

Trouble-free, cord reinforced belt drive to spindle—quiet, no vibration, no chatter marks.

Catalog Number	Motor Specifications				Price
	Current	Phase	Cycle	Voltage	
CL331BT	A.C.	1	60	115	\$157.00
CL331DT	A.C.	1	60	230	164.00
CL333DT	A.C.	3	60	220	189.00
CL333FT	A.C.	3	60	440	199.00

Write for price of Independent Power Feed with motor for other current characteristics.



**NOW—EVEN A BETTER VALUE**

**1-1/16" COLLET CAPACITY**



**FLOOR LEG MODEL**

**METAL CABINET MODEL**



Modern in design, the South Bend 10" Precision Toolroom Lathes are built with care, they're fast, accurate, and versatile. With high spindle speeds and rigidity for efficient machining with carbide or diamond tipped tools and plenty of power for heavy roughing cuts. They are capable of finish turning and boring with such precision that subsequent grinding, honing and lapping operations can often be eliminated. We believe they are unsurpassed for cutting screw threads to the exacting tolerances required for precision thread gauges, taps, dies, instruments, etc. 1-1/16" maximum collet capacity and available with floor or metal cabinet mounting.

### Metal Cabinet or Floor Mounting

Either metal cabinet or floor mounting can be supplied. Metal Cabinet lathes are mounted on a substantial welded steel cabinet with built-in chip pan. Motor and driving mechanism are fully enclosed in cabinet beneath lathe headstock. Floor lathes have a large cabinet leg under lathe headstock in which motor and driving mechanism are enclosed.

TYPE OF LATHE	TYPE OF MOUNTING	CATALOG NUMBER	BED LENGTH FEET	BETWEEN CENTERS INCHES	CUBIC FEET BOXED	BOXED WEIGHT POUNDS	CRATED WEIGHT POUNDS	PRICE F.O.B. FACTORY
<b>TOOLROOM LATHES</b>	FLOOR	CL8187Y	3	14	54	1290	990	\$1833
		CL8187Z	3½	20	54	1310	1010	1861
		CL8187A	4	27	54	1330	1030	1891
	METAL CABINET	CL8187YB	3	14	56	1310	960	1898
		CL8187ZB	3½	20	56	1360	990	1925
		CL8187AB	4	27	68	1410	1060	1967

Electrical equipment is not included in the price of the lathe.



# 10" SOUTH BEND *Precision* TOOLROOM LATHES

## EXTRAS for 10" Lathes

Most commonly used attachments and accessories

Catalog Number	Description	See Page	Factory Price
CL4306L	Handwheel Collet Attachment*	38	\$ 63.00
CL5206L	Handlever Collet Attachment	38	142.00
CE3077	Set of 16 R-S-B Steel Collets for round work	40	97.00
CE1770L	Collet Rack*	38	27.00
CL1545R	Taper Attachment*	50	204.00
CL2400R	Telescoping Jaw Steady Rest	43	21.90
CL2395R	Telescoping Jaw Follower Rest	43	14.00
CL968R	Micrometer Carriage Stop*	53	25.15
CL4206LQ	6" 4-Jaw Independent Chuck	59	90.00
CL3506LQ	6" 3-Jaw Universal Chuck	59	137.00
CE1201	1/2" Drill Chuck	59	11.40
CE2302	Drill Chuck Arbor	59	1.50
CE2107	Set of 6 Safety Lathe Dogs	64	10.00
CE1475L	Center Knock-out Bar	57	3.45
CE847S	Turning Tool Holder, Straight	60	3.22
CE833R	Cutting-off Tool Holder, R.H.	60	3.81
CE423	Boring Tool, Style "B"	61	12.71
CE820	Knurling Tool	62	7.61
CE2815	Work Light	54	14.20
CE2696	Plastic Cover for Lathe (4 1/2' bed)	54	3.40
CE2218	12" Precision Level	54	17.15
	Chip Pan*	52	

\*These items are supplied with and included in prices of 10" Toolroom Lathes.

Exceptionally accurate—and they stay accurate.

Speed and handling ease for high output.

Hardened, ground and superfinished spindle bearing surfaces.

Precision bored and burnished sleeve type bearings.

Provides smooth, vibration-free operation for fine finish turning.

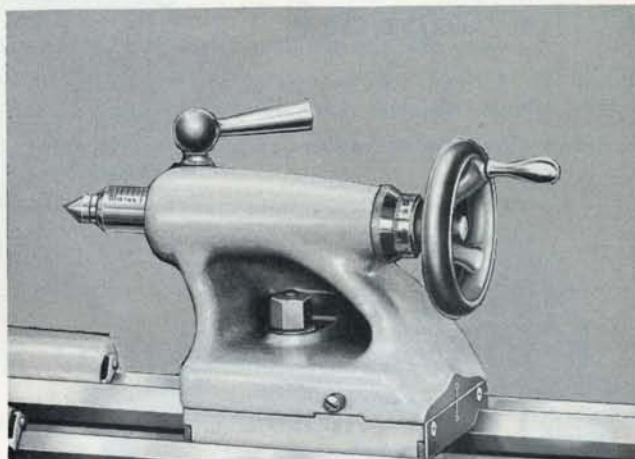
Hardened and ground bed ways optional.

More usable power.

1 1/16" collet capacity — 70 threading, 70 longitudinal and 70 cross-feeds.

Low original cost—high investment return.

Many attachments for specialized operations.



The tailstock spindle is graduated in tenths of an inch, and the tailstock screw is fitted with a micrometer collar reading in thousandths for drilling and reaming to a specified depth with extreme precision.

## INDEPENDENT POWER FEEDS

**For 10-Inch Lathe.** Equipment includes a special high-speed drive which provides spindle speeds ranging from 55 to 2400 r.p.m., and a separate motor with gearing for driving the power carriage feeds independent of the lathe spindle speeds. The rate of feed is determined by the speed of the lathe spindle. For example, when the spindle revolves at 2400 r.p.m., the power longitudinal feeds range from .00015" to .018" per revolution of the spindle, approximately. The independent power feed may be disconnected and the regular power carriage feeds used for coarser feeds or for cutting screw threads.



Catalog Number	Motor Specifications				Price
	Current	Phase	Cycle	Voltage	
CL333DR	A.C.	3	60	220	\$184.00
CL333FR	A.C.	3	60	440	194.00
CL331BR	A.C.	1	60	115	152.00
CL331DR	A.C.	1	60	230	159.00

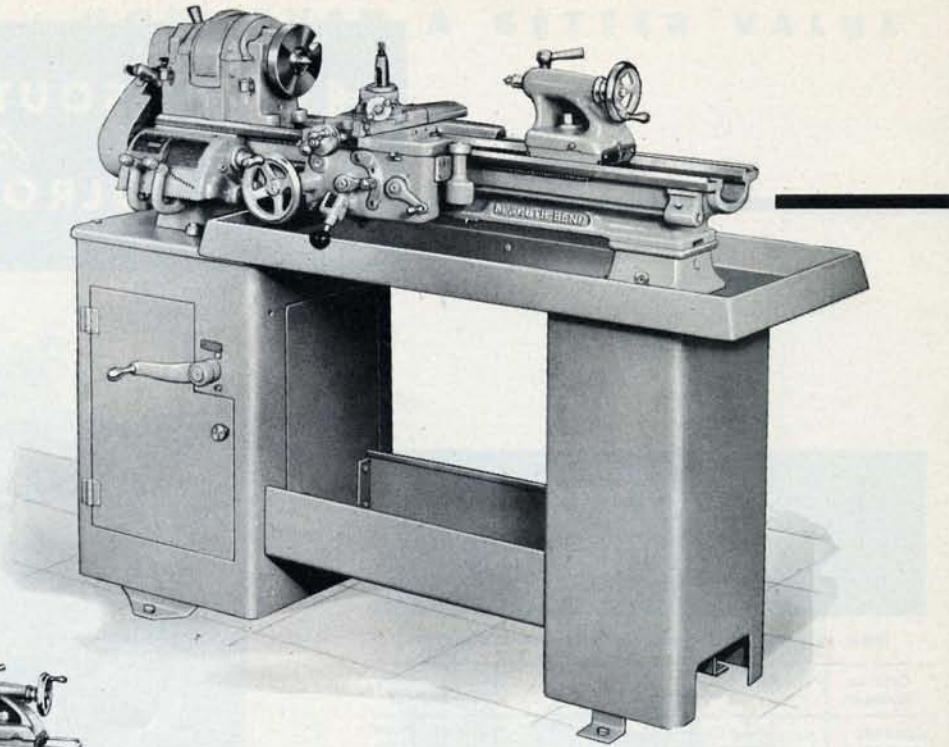
This attachment is especially desirable for manufacturing dental amalgam, diamond turning and diamond boring operations, and other work requiring extremely smooth, fine feeds, or high spindle speeds. This attachment should be ordered with the lathe and fitted at the factory.



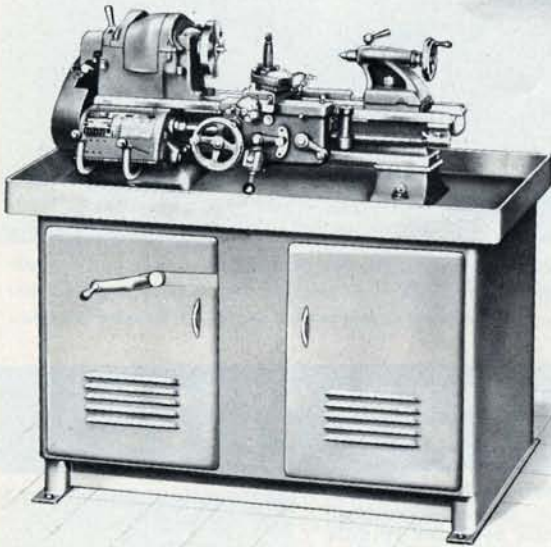
**10"-1 1/16" COLLET  
LATHES**

For those who do not need the larger capacity through the collet and spindle, we can supply these lathes with 1" hole through the spindle and 1 1/16" maximum collet capacity. Write for information.

**1 1/16" Maximum  
Collet Capacity**



**FLOOR LEG MODEL**



**METAL CABINET MODEL**

Ruggedly constructed throughout, this lathe has ample power for all work within its capacity. Direct belt drive to spindle assures quiet, vibration-free operation at high spindle speeds. Slow speeds for heavy cuts on large diameter work are driven

through powerful back gears. This lathe can be equipped with a one-speed motor or a two-speed motor to provide twelve or twenty-four spindle speeds. Higher spindle speeds available (up to 2400 R.P.M.) can be delivered, factory installed, at extra cost. Many attachments are available for special classes of work. See accessory chart on page 21.

**Metal Cabinet or Floor Mounting**

Either metal cabinet or floor mounting can be supplied. Metal Cabinet lathes are mounted on a substantial welded steel cabinet with built-in chip pan. Motor and driving mechanism are fully enclosed in cabinet beneath lathe headstock. Floor lathes have a large cabinet leg under lathe headstock in which motor and driving mechanism are enclosed.

TYPE OF LATHE	TYPE OF MOUNTING	CATALOG NUMBER	BED LENGTH FEET	BETWEEN CENTERS INCHES	CUBIC FEET BOXED	BOXED WEIGHT POUNDS	CRATED WEIGHT POUNDS	PRICE F.O.B. FACTORY
<b>ENGINE LATHES</b>	<b>FLOOR</b>	CL187Y	3	14	49	1180	940	\$1396
		CL187Z	3 1/2	20	55	1200	960	1423
		CL187A	4	27	61	1220	980	1450
		CL187R	4 1/2	34	67	1240	1000	1490
	<b>METAL CABINET</b>	CL187YB	3	14	56	1200	850	1504
		CL187ZB	3 1/2	20	56	1250	880	1531
		CL187AB	4	27	68	1300	950	1574
		CL187RB	4 1/2	34	68	1350	980	1612



# 10" SOUTH BEND *Precision* ENGINE LATHES



4" Type DI Cam lock spindle.  
See page 36.



LOO Long taper key drive  
spindle. See page 36.

Three V-Ways and one flat way assure permanent alignment of headstock, tailstock and carriage.

Rugged design, practically no maintenance.

Accuracy to easily duplicate any tolerance.

Microfinished sleeve type spindle bearings for greater accuracy, longer life and complete spindle support.

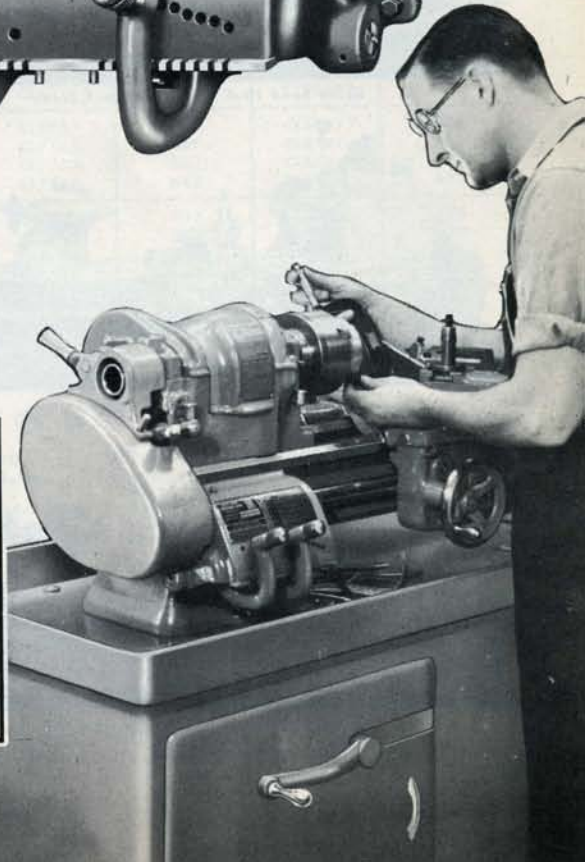
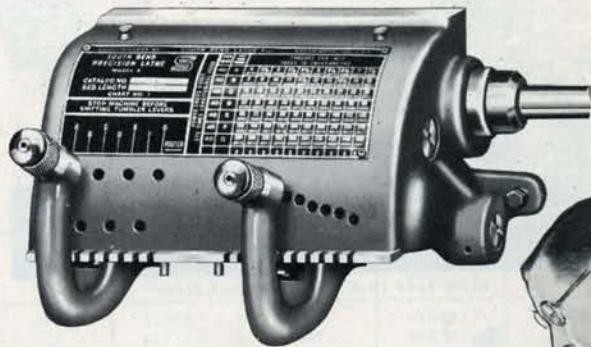
More spindle speeds—power longitudinal, cross and threading feeds.

Low original cost—high investment return.

## IMPROVED WIDE RANGE QUICK CHANGE BOX 70 Screw Threads—70 Cross-Feeds—70 Longitudinal Feeds

With the improved full quick change mechanism supplied on South Bend 10" Lathes you have at your finger tips 70 pitches of screw threads, 70 changes for power longitudinal feeds, and 70 power cross-feeds. Threads cut range from 4 to 480 per inch as shown on the index chart below. Included are all standard pitches 4 to 80 as listed in the National Bureau of Standards Handbook H28, "Screw Thread Standards". You can also cut many important pitches such as 11½ and 27 pipe thread, 4, 6, and 7½ fire hose coupling thread, 30 instrument thread and fine pitches up to 480 per inch used in watch and instrument work.

All pitches shown on the index chart are obtained by shifting the two tumbler levers on the gear box. No pick-off gears are used and no stud gear or primary gear changes are required. However, the stud gear can be easily changed if desired for cutting diametral pitch worm thread of other unusual pitches. Transposing gears can be supplied for cutting metric screw threads. See pages 66 and 67.



MANUFACTURED BY **SOUTH BEND LATHE INC.** SOUTH BEND, IND., U.S.A.

**SOUTH BEND PRECISION LATHE**

CATALOG NO. \_\_\_\_\_  
BED LENGTH \_\_\_\_\_  
CHART NO. 1

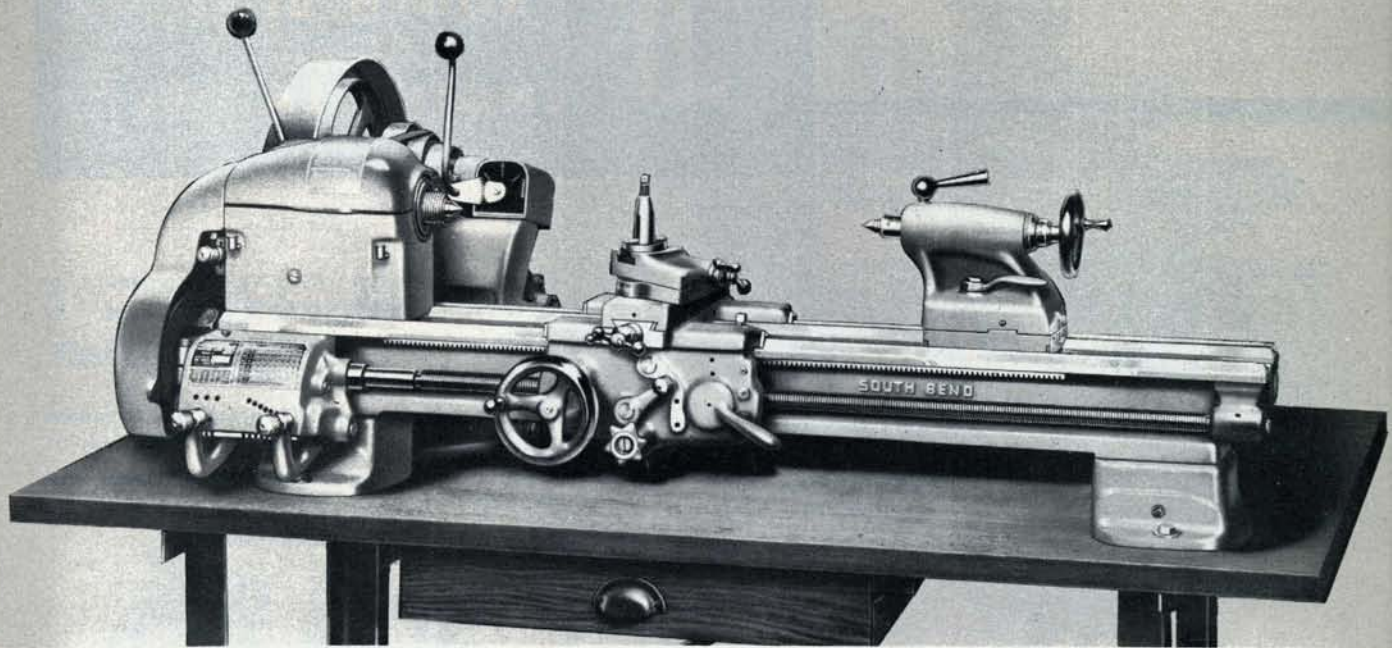
STOP MACHINE BEFORE SHIFTING TUMBLER LEVERS

A B C D E F G POSITION

STUD GEAR	LEFT HAND TUMBLER	THREADS PER INCH FEEDS IN THOUSANDTHS																			
		4	4½	5	5½	6	6½	6¾	7	7½	8	9	10	11	11½	12	13	13½	14	15	
40	A	0836	0743	0669	0608	0551	0515	0495	0470	0446	4	5	6	7	8	9	10	11	12		
40	B	0418	0372	0334	0304	0291	0278	0257	0240	0219	0209	16	18	20	22	23	24	26	27	28	30
40	C	0209	0186	0167	0152	0145	0139	0129	0124	0119	0104	0093	0084	0076	0072	0070	0064	0062	0060	0054	0050
40	D	0104	0093	0084	0076	0072	0070	0064	0062	0060	0054	0050	0046	0042	0038	0036	0035	0032	0031	0030	0028
40	E	0054	0050	0046	0042	0038	0036	0035	0032	0031	0030	0028	0026	0023	0021	0019	0018	0017	0016	0015	0014
40	F	0026	0023	0021	0019	0018	0017	0016	0015	0014	0013	0012	0011	0010	0009	0008	0008	0008	0008	0007	0007
40	G	0013	0012	0011	0010	0009	0008	0008	0008	0008	0008	0008	0008	0008	0008	0008	0008	0008	0008	0008	0007

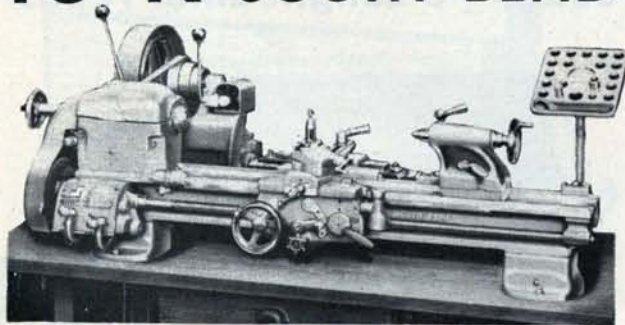
POWER CROSS FEEDS  
375 TIMES LONGITUDINAL FEEDS



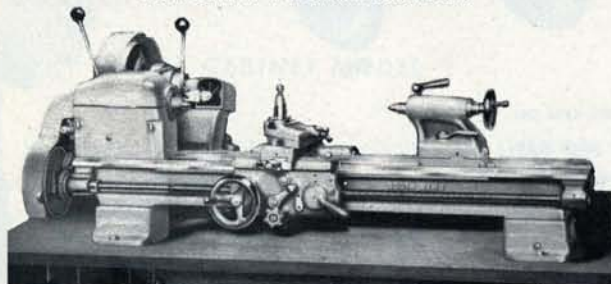


Model A South Bend 10-K Precision Bench Lathe

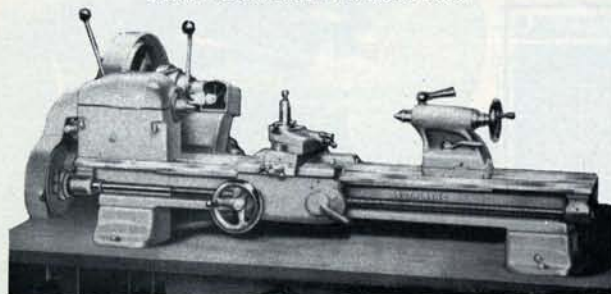
# 10-K SOUTH BEND *Precision* BENCH LATHES



South Bend 10-K Toolroom Bench Lathe



Model B South Bend 10-K Bench Lathe



Model C South Bend 10-K Bench Lathe

The 10-K is a very fine precision lathe for small work in the toolroom, manufacturing plant, maintenance department or repair shop. Although it is competitively priced, it has the same precision and many of the features and refinements usually found only on larger and much more expensive lathes. These include precision finished V-ways on the lathe bed, heat-treated and superfinished spindle, replaceable bronze sleeve bearings for spindle with oil reservoir and capillary oiling system, oilite bushings in countershaft bearings, built-in leveling leg, and graduated tailstock spindle with micrometer graduated collar on feed screw.

## Four Models

South Bend 10-K Bench Lathes are made in four models: Model A, Model B, Model C, and Toolroom.

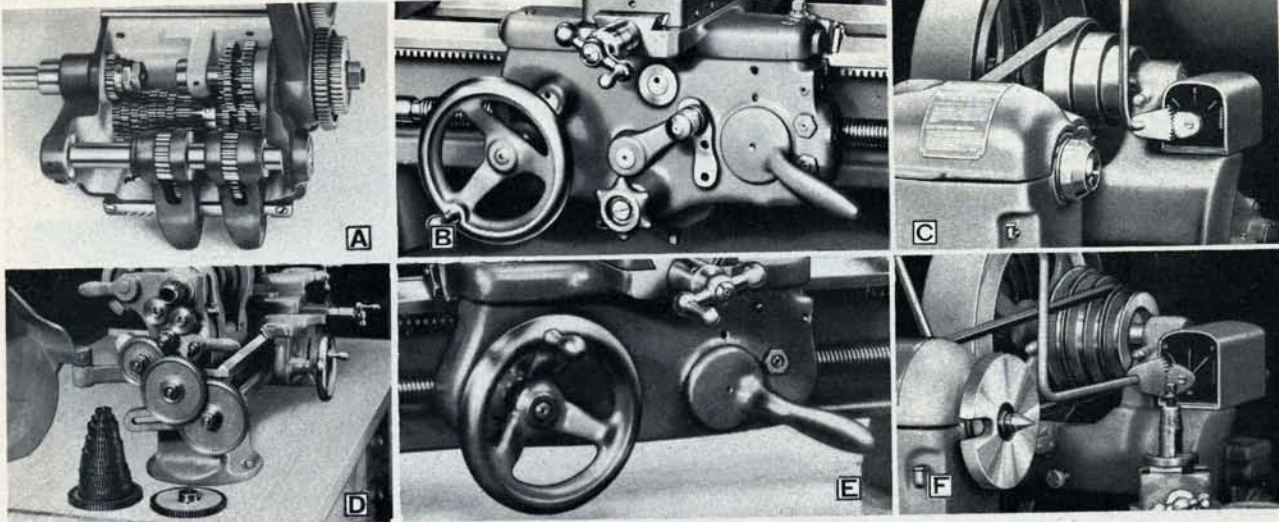
**MODEL A** 10-K Bench Lathes have full quick change box and patented worm drive apron with friction clutch which provide a wide range of thread cutting feeds, power cross-feeds and power longitudinal feeds. See specifications.

Regular equipment included in price of Model A Lathe consists of: horizontal motor drive unit (patented); motor pulley with  $\frac{5}{8}$ " hole; necessary belting; worm drive friction clutch power feed apron (patented); graduated compound rest; small face plate; heat-treated steel tool post; two 60-degree hardened tool steel centers; spindle sleeve; wrenches; quick change box; installation plan; and book "How to Run a Lathe". Bench and electrical equipment not included. See pages 56 and 69 to 73.

**MODEL B** 10-K Bench Lathes are the same as Model A Lathes, except that instead of the quick change box a set of independent change gears is supplied for cutting screw threads and for power longitudinal feeds and power cross-feeds. Lathe equipment is the same except that the change gears are supplied instead of the gear box. Bench and electrical equipment are not included. See pages 56 and 69 to 73.

**MODEL C** 10-K Bench Lathes are the same as Model B Lathes, except that they do not have the worm drive and clutch in the apron for operating the power feeds. Lead screw and half-nuts are used for power longitudinal feeds and the cross-feeds





A. Interior of Quick Change Box for Model A and Toolroom Lathes  
 B. Patented Apron used on Toolroom, Model A and Model B Lathes  
 C. Patented Twelve-speed Flat Belt Horizontal Motor Drive

D. Change Gears Supplied for Models B and C  
 E. Apron supplied on Model C Lathe  
 F. Patented Sixteen-speed V-belt Horizontal Motor Drive

are hand-operated. Otherwise the equipment is the same. Bench and electrical equipment are not included. See pages 56 and 69 to 73.

**TOOLROOM 10-K Bench Lathes** are the same as Model A Lathes, and have the same regular equipment. In addition, the following toolroom attachments are supplied: precision lead screw; handwheel type draw-in collet attachment (without collets); collet rack; plain taper attachment; thread indicator; thread cutting stop; large face plate; and micrometer carriage stop. Bench and electrical equipment are not included. See pages 56 and 69 to 73.

## TWO TYPES OF DRIVES Twelve or Sixteen Spindle Speeds

All models of 10-K Horizontal Motor Drive Bench Lathes can be supplied with either flat belt or V-belt cone pulleys for the headstock. The flat belt drive provides twelve spindle speeds. Power is transmitted with extreme smoothness at all speeds making this drive popular with those who require high precision and a fine finish. The sixteen-speed V-belt drive is well adapted to production work, especially for heavy roughing cuts at slow speeds. When worn out, the endless V-belt can be replaced easily by using a spliced leather V-belt. It is not necessary to disassemble the headstock.

### 10-K South Bend Bench Lathes

MODEL	BED LENGTH FEET	BETWEEN CENTERS INCHES	CUBIC FEET BOXED	BOXED WEIGHT POUNDS	CRATED WEIGHT POUNDS	WITH 16-SPEED V-BELT HORIZONTAL MOTOR DRIVE		WITH 12-SPEED FLAT BELT HORIZONTAL MOTOR DRIVE	
						CAT. NO.	PRICE	CAT. NO.	PRICE
TOOLROOM	3	16	26	650	520	CL8770Y	\$893	CL8670Y	\$825
	3½	22	26	665	535	CL8770Z	868	CL8670Z	850
	4	28	29	690	550	CL8770A	893	CL8670A	875
MODEL A	3	16	22	600	490	CL770Y	602	CL670Y	584
	3½	22	22	615	505	CL770Z	627	CL670Z	609
	4	28	25	640	520	CL770A	652	CL670A	634
	4½	34	29	670	535	CL770R	688	CL670R	670
MODEL B	3	16	22	585	475	CL767Y	514	CL667Y	496
	3½	22	22	600	490	CL767Z	539	CL667Z	521
	4	28	25	625	505	CL767A	564	CL667A	546
	4½	34	29	655	520	CL767R	600	CL667R	582
MODEL C	3	16	22	575	465	CL753Y	435	CL653Y	417
	3½	22	22	590	480	CL753Z	460	CL653Z	442
	4	28	25	615	495	CL753A	485	CL653A	467
	4½	34	29	645	510	CL753R	521	CL653R	503

## SPECIFICATIONS

### CAPACITY OF LATHE

Swing over bed, maximum.....10"  
 Swing over saddle wings.....9 1/4"  
 Swing over cross slide, (models A, B, C).....6 1/4"  
 Swing over cross slide, (toolroom lathe).....5 3/8"

### TAILSTOCK

Size of center, Morse taper.....No. 2  
 Spindle travel.....2 1/8"  
 Each graduation on tailstock spindle.....1/10"  
 Tailstock top set-over for taper turning.....3/8"

### COMPOUND REST

Cross slide travel (models A, B, C).....5 7/8"  
 Cross slide travel (toolroom lathe).....5 3/8"  
 Angular hand feed of compound rest top slide.....2 1/4"

### TOOL POST

Size of tool holder shank.....3/8" x 1 1/16"  
 Size of cutter bit for tool holder.....1/4" sq.

### SPINDLE SPEEDS (approximate, not exact)

	Direct Drive	Back-Geared
With Flat Belt		
High, r.p.m.	1435, 844, 502	276, 165, 96
Low, r.p.m.	706, 415, 244	137, 80, 48
With V-belt		
High, r.p.m.	1365, 1010, 760, 570	265, 195, 150, 112
Low, r.p.m.	670, 495, 370, 285	130, 95, 75, 52

### HEADSTOCK

Hole through spindle.....27/32"  
 Maximum collet capacity.....3/8"  
 Spindle nose diameter and threads per inch. 1 1/2"-8  
 Size of center, Morse taper.....No. 2  
 Width of cone pulley step for flat belt.....1"  
 Small face plate diameter.....5 1/8"  
 Front spindle bearing diameter.....1 1/16"

### THREAD CUTTING RANGE

Toolroom and Model A—  
 48 pitches, R.H. or L.H. .... 4 to 224 per inch  
 Models B and C—45 pitches,  
 R.H. or L.H. .... 4 to 160 per inch  
 Lead screw, 29° Acme thread. 3/4" dia.—8 threds.

### POWER LONGITUDINAL FEEDS

Toolroom and Model A—  
 48 feeds......0015" to .0853"  
 Model B—26 feeds......0021" to .0155"  
 Model C—14 feeds......0021" to .0156"

### POWER CROSS-FEEDS

Toolroom and Model A—  
 48 feeds......0004" to .0255"  
 Model B—23 feeds......0009" to .0046"

### MOTOR

Standard size of motor recommended.....1/2 h.p.



# 10-K

SOUTH BEND

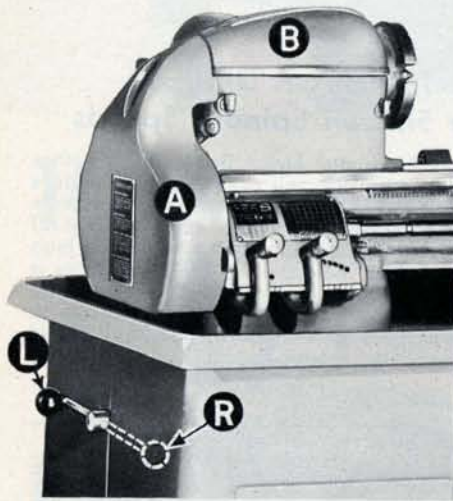
*Precision*

**FLOOR LATHES  
WITH METAL COLUMN  
BASE UNDERNEATH  
MOTOR DRIVE**



Design patented

South Bend 10-K Precision Lathe with Metal Column Base



## UNUSUAL SAFETY FEATURES

South Bend 10-K Underneath Motor Drive Lathes have an automatic safety interlock which makes it impossible to open the end gear guard, "A", or the cone pulley cover, "B", until the belt tension lever, "L" is placed in position "R", disconnecting power.

These lathes are the same as corresponding models of 10-K Bench Lathes except for the underneath motor drive and the necessary alterations in the headstock. Lathe is supplied with headstock and drive shaft cone pulleys for either V-belt or flat belt drive. Fully enclosed in the metal column base, the motor and driving mechanism are protected from dust, dirt and chips. Base is available with three drawers, 10<sup>3</sup>/<sub>4</sub>" x 5<sup>1</sup>/<sub>2</sub>" x 14" as shown in illustration, or without drawers\*. A built in chip pan forms the top of the metal column base. Equipment included in price of lathe is same as for corresponding models of bench lathes listed on preceding pages. Electrical equipment is not included in price of lathe. See pages and 69 to 73.

Specifications are the same as for corresponding models of 10-K Bench Lathes except for spindle speeds, shipping weights, and cubic feet boxed. Approximate spindle speeds with V-belt drive: low range, 52, 75, 95, 130, 285, 370, 495, and 670 r.p.m.; high range: 112, 150, 195, 265, 570, 760, 1010, and 1365 r.p.m. Approximate spindle speed with flat belt drive: low range, 50, 78, 135, 240, 410, and 715 r.p.m.; high range 90, 155, 265, 460, 780, and 1365 r.p.m.

MODEL	BED LENGTH FEET	BETWEEN CENTERS INCHES	CUBIC FEET BOXED	BOXED WEIGHT POUNDS	CRATED WEIGHT POUNDS	WITH 16-SPEED V-BELT UNDERNEATH MOTOR DRIVE		WITH 12-SPEED FLAT BELT UNDERNEATH MOTOR DRIVE	
						CAT. NO.	PRICE	CAT. NO.	PRICE
TOOLROOM	3½	22	56	940	750	CL78370ZD	\$1202	CL8370ZD	\$1183
	4	28	68	1000	780	CL78370AD	1235	CL8370AD	1216
MODEL A	3½	22	56	910	720	CL7370ZD	960	CL370ZD	941
	4	28	68	960	750	CL7370AD	993	CL370AD	974
	4½	34	68	970	760	CL7370RD	1030	CL370RD	1011
MODEL B	3½	22	56	895	705	CL7367ZD	872	CL367ZD	853
	4	28	68	945	730	CL7367AD	905	CL367AD	886
	4½	34	68	955	740	CL7367RD	942	CL367RD	923
MODEL C	3½	22	56	895	695	CL7353ZD	793	CL353ZD	774
	4	28	68	940	720	CL7353AD	826	CL353AD	807
	4½	34	68	950	730	CL7353RD	863	CL353RD	844

\*3½', 4' and 4½' bed lengths can be supplied without drawers, deduct \$25.00.



Model A 10-K Floor Lathe with Self-Contained Flat Belt Drive



# 10-K SOUTH BEND SELF-CONTAINED DRIVE PRECISION FLOOR LATHES

The 10-K Self-Contained Motor Drive Floor Lathe is made in four models, Model A, Model B, Model C and Toolroom. These lathes are the same and have the same equipment as corresponding models of 10-K Bench Lathes described on the preceding pages 24 and 25, with the exception of the self-contained drive equipment, chip pan and floor legs. Specifications are the same except for shipping weights and cubic feet boxed.

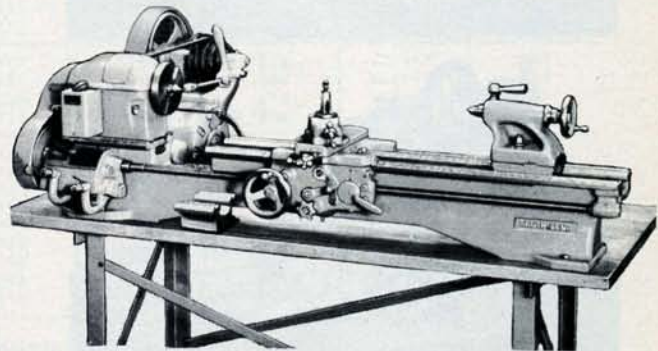
Self-contained drive equipment is permanently mounted back of the lathe headstock and consists of the self-contained motor drive unit (patented) for 1/2 h.p. motor, motor pulley with 5/8" hole, belt guard for motor belt and necessary belting. Electrical equipment is not included.

Either flat belt or V-belt cone pulleys are supplied for the headstock. The flat belt drive transmits power with extreme smoothness required for high precision and fine finish. The V-belt drive is well adapted to production work, especially for heavy roughing cuts at slow speeds. See page 25.

MODEL	BED LENGTH FEET	BETWEEN CENTERS INCHES	CUBIC FEET BOXED	BOXED WEIGHT POUNDS	CRATED WEIGHT POUNDS	WITH 16-SPEED V-BELT SELF-CONTAINED DRIVE		WITH 12-SPEED FLAT BELT SELF-CONTAINED DRIVE	
						CAT. NO.	PRICE	CAT. NO.	PRICE
TOOLROOM	3	16	33	875	700	CL8270Y	\$ 960	CL8970Y	\$ 943
	3 1/2	22	33	900	725	CL8270Z	982	CL8970Z	975
	4	28	37	925	750	CL8270A	1024	CL8970A	1007
MODEL A	3	16	33	825	650	CL270Y	720	CL970Y	703
	3 1/2	22	33	850	675	CL270Z	752	CL970Z	735
	4	28	37	875	700	CL270A	784	CL970A	767
	4 1/2	34	37	900	725	CL270R	828	CL970R	811
MODEL B	3	16	33	805	630	CL267Y	632	CL967Y	615
	3 1/2	22	33	830	655	CL267Z	664	CL967Z	647
	4	28	37	855	680	CL267A	696	CL967A	679
	4 1/2	34	37	880	705	CL267R	740	CL967R	723
MODEL C	3	16	33	795	620	CL253Y	553	CL953Y	536
	3 1/2	22	33	820	645	CL253Z	585	CL953Z	568
	4	28	37	845	670	CL253A	617	CL953A	600
	4 1/2	34	37	870	695	CL253R	661	CL953R	644

# 10-K SOUTH BEND GAP BED PRECISION BENCH LATHES

The 10-K Gap Bed Bench Lathe is made with 4 1/2\* foot bed and is available in three models. Model A, Model B and Model C. Also available in the Self-Contained Motor Drive Lathes with Model A, Model B and Model C. (See copy above.) The 10-K Gap Bed Lathes have a 1" gap measured from the face plate when bed insert is in place. When 4" insert is removed, the 5" gap allows 14-7/8" swing capacity. Ideal for larger work requiring boring and facing operation. All models of the 10-K Gap Bed Lathe can be supplied with either flat belt or V-belt cone pulleys for the headstock. These lathes have the same drive unit as used on the 9" lathes. Otherwise they have the same equipment as corresponding models of 10-K bench lathes described on the preceding pages. All other specifications are the same except for shipping weights. See pages 24 and 25.



South Bend 10-K Gap Bed Bench Lathe

## 10-K HORIZONTAL MOTOR DRIVE GAP BED LATHES

Model	Bed Length Feet	Between Centers Inches	Cubic Feet Boxed	Boxed Weight Pounds	Crated Weight Pounds	With 16-Speed V-belt Drive		With 12-Speed Flat Belt Drive	
						Cat. No.	Price	Cat. No.	Price
A	4 1/2	34	29	700	565	CL770RG	\$725	CL670RG	\$707
B	4 1/2	34	29	685	550	CL767RG	637	CL667RG	619
C	4 1/2	34	29	675	540	CL753RG	558	CL653RG	540

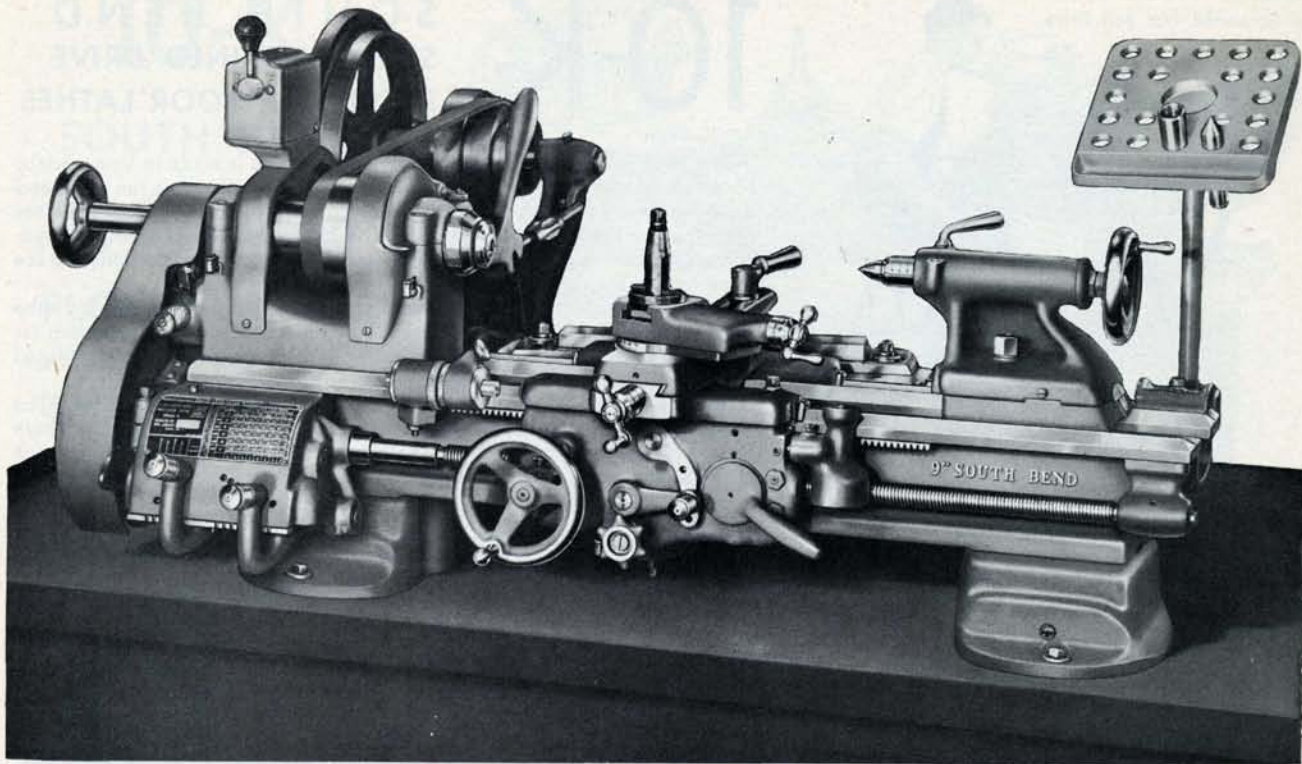
## 10-K SELF-CONTAINED DRIVE GAP BED LATHES

A	4 1/2	34	37	930	755	CL270RG	864	CL970RG	847
B	4 1/2	34	37	910	735	CL267RG	776	CL967RG	759
C	4 1/2	34	37	900	725	CL253RG	697	CL953RG	680

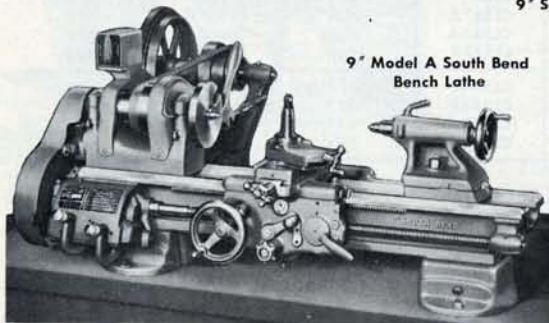
\* Available only in 4 1/2' bed length.

Bench and electrical equipment are not included.

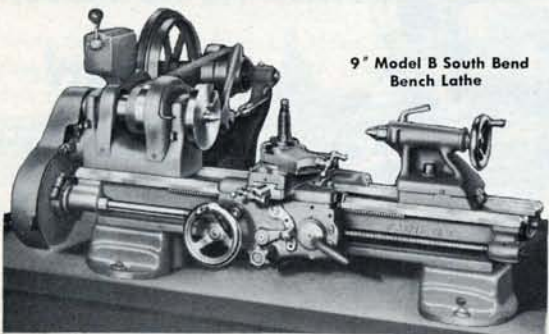




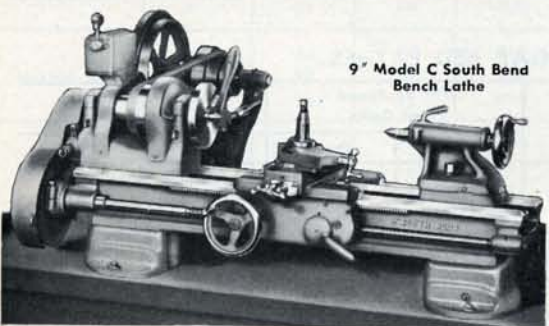
9" South Bend Toolroom Bench Lathe



9" Model A South Bend Bench Lathe



9" Model B South Bend Bench Lathe



9" Model C South Bend Bench Lathe

## 9" SOUTH BEND *Precision* LATHES

We sincerely believe that South Bend 9" Lathes are superior in quality to any other lathe of similar size available at anywhere near the same price. They are precision tools capable of machining work to the exacting tolerances demanded in modern industry. Features include precision finished V-ways on lathe bed, heat-treated and super-finished spindle, precision bored integral bearings for spindle with oil reservoir and capillary oiling system, graduated tailstock spindle, oilite bushings in countershaft bearings and built-in leveling leg.

### Four Models

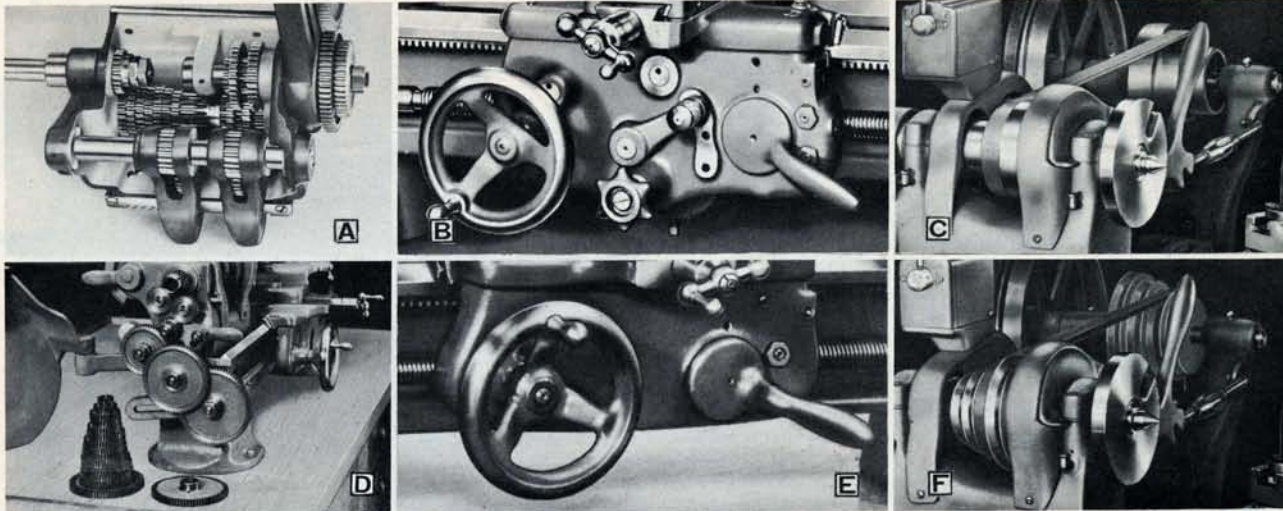
South Bend 9" Bench Lathes are made in four models: Model A, Model B, Model C, and Toolroom.

**MODEL A** 9" Bench Lathes have quick change box and patented worm drive apron with friction clutch which provide a wide range of thread cutting feeds, power cross-feeds and power longitudinal feeds. See specifications for threads and feeds.

Regular equipment included in price of Model A Lathe consists of: horizontal motor drive unit (patented); motor pulley with  $\frac{5}{8}$ " hole; necessary belting; worm drive friction clutch power feed apron (patented); graduated compound rest; small face plate; heat-treated steel tool post; two 60-degree hardened tool steel centers; spindle sleeve; wrenches; quick change box; installation plan; and book "How to Run a Lathe". Bench and electrical equipment are not included. See pages 56 and 69 to 73.

**MODEL B** 9" Bench Lathes are the same as Model A Lathes, except that instead of the quick change box a set of independent change gears is supplied for cutting screw threads and for power longitudinal feeds and power cross-feeds. Lathe equipment is the same except that the change gears are supplied instead of the quick change box. Bench and electrical equipment are not included. See pages 56 and 69 to 73.





A. Interior of Quick Change Box for Model A and Toolroom Lathes  
 B. Patented Apron used on Toolroom, Model A, and Model B Lathes  
 C. Patented Twelve-speed Flat Belt Horizontal Motor Drive

D. Change Gears Supplied for Model B and C Lathes  
 E. Apron supplied on Model C Lathe  
 F. Patented Sixteen-speed V-belt Horizontal Motor Drive

**MODEL C** 9" Bench Lathes are the same as the Model B Lathes, except that they do not have the worm drive and clutch in the apron for operating the power feeds. Lead screw and half-nuts are used for power longitudinal feeds and the cross-feeds are hand-operated. Otherwise the equipment is the same. Bench and electrical equipment not included. See pages 56 and 69 to 73.

**TOOLROOM** 9" Bench Lathes are the same as Model A Lathes, and have the same regular equipment. In addition, the following toolroom attachments are supplied: precision lead screw; handwheel type draw-in collet attachment (without collets); collet rack; plain taper attachment; thread indicator dial; thread cutting stop; large face plate; and micrometer carriage stop. Bench and electrical equipment are not included in price of lathe. See pages 56 and 69 to 73.

## TWO TYPES OF DRIVES Twelve or Sixteen Spindle Speeds

All models of 9" Horizontal Motor Drive Bench Lathes can be supplied with either flat belt or V-belt cone pulleys for the headstock. The flat belt drive provides twelve spindle speeds. Power is transmitted with extreme smoothness at all speeds making this drive popular with those who require high precision and a fine finish. The sixteen-speed V-belt drive is well adapted to production work, especially for heavy roughing cuts at slow speeds. When worn out, the endless V-belt can be replaced easily by using a spliced leather V-belt. It is not necessary to disassemble the headstock.

### 9-inch South Bend Bench Lathes

MODEL	BED LENGTH FEET	BETWEEN CENTERS INCHES	CUBIC FEET BOXED	BOXED WEIGHT POUNDS	CRATED WEIGHT POUNDS	WITH 16-SPEED V-BELT HORIZONTAL MOTOR DRIVE		WITH 12-SPEED FLAT BELT HORIZONTAL MOTOR DRIVE	
						CAT. NO.	PRICE	CAT. NO.	PRICE
TOOLROOM	3	16	21	550	440	CL8744Y	\$754	CL8644Y	\$736
	3½	22	21	565	455	CL8744Z	780	CL8644Z	762
	4	28	23	580	470	CL8744A	806	CL8644A	788
MODEL A	3	16	20	500	390	CL744Y	518	CL644Y	499
	3½	22	20	515	404	CL744Z	544	CL644Z	525
	4	28	21	530	420	CL744A	570	CL644A	551
	4½	34	24	545	435	CL744R	606	CL644R	587
MODEL B	3	16	20	485	375	CL777Y	430	CL677Y	411
	3½	22	20	500	390	CL777Z	456	CL677Z	437
	4	28	21	515	405	CL777A	482	CL677A	463
	4½	34	24	530	420	CL777R	518	CL677R	499
MODEL C	3	16	20	475	365	CL715Y	334	CL615Y	315
	3½	22	20	490	380	CL715Z	360	CL615Z	341
	4	28	21	505	395	CL715A	386	CL615A	367
	4½	34	24	520	410	CL715R	422	CL615R	403

\*Note: Above equipped with standard drive suitable for NEMA 56 frame. For NEMA 66 and larger, a larger drive unit will be supplied at no extra charge when lathe is ordered with motor. If lathe is ordered less motor, standard drive will be supplied, with larger drive unit available at \$11.00 additional.

## SPECIFICATIONS

### CAPACITY OF LATHE

Swing over bed and saddle wings . . . . . 9¼"  
 Swing over saddle cross slide, (models A, B, C) . . . 5½"  
 Swing over saddle cross slide, (toolroom lathe) . . . 5"

### TAILSTOCK

Size of center, Morse taper . . . . . No. 2  
 Spindle travel . . . . . 2½"  
 Each graduation on tailstock spindle . . . . . ¼"  
 Tailstock top set-over for taper turning . . . . . 5"

### COMPOUND REST

Cross slide travel (models A, B, C) . . . . . 5⅞"  
 Cross slide travel (toolroom lathe) . . . . . 5⅞"  
 Angular hand feed of compound rest top slide . . . 2¼"

### TOOL POST

Size of tool holder shank . . . . . ¾" x 1⅜"  
 Size of cutter bit for tool holder . . . . . ¼" sq.

### SPINDLE SPEEDS (approximate, not exact)

	Direct Drive	Back-Geared
With flat belt		
High, r.p.m.	1270, 750, 446	250, 145, 86
Low, r.p.m.	692, 410, 244	134, 81, 50
With V-belt		
High, r.p.m.	1200, 900, 662, 505	235, 179, 130, 100
Low, r.p.m.	640, 490, 362, 272	130, 95, 70, 54

### HEADSTOCK

Hole through spindle . . . . . ¾"  
 Maximum collet capacity . . . . . ½"  
 Spindle nose diameter and threads per inch . . . 1½"-8  
 Size of center, Morse taper . . . . . No. 2  
 Width of cone pulley step for belt . . . . . 1"  
 Small face plate diameter . . . . . 5⅞"  
 Front spindle bearing diameter . . . . . 1⅜"

### THREAD CUTTING RANGE

Toolroom and Model A—48 pitches, R.H. or L.H. . . . . 4 to 224 per inch  
 Models B and C—45 pitches, R.H. or L.H. . . . . 4 to 160 per inch  
 Lead screw, 29° Acme thread . . . ¼" dia.—8 threds.

### POWER LONGITUDINAL FEEDS

Toolroom and Model A—48 feeds . . . . . .0015" to .0853"  
 Model B—26 feeds . . . . . .0021" to .0155"  
 Model C—14 feeds . . . . . .0021" to .0156"

### POWER CROSS-FEEDS

Toolroom and Model A—48 feeds . . . . . .0004" to .0255"  
 Model B—23 feeds . . . . . .0009" to .0046"

### MOTOR

Standard size of motor recommended . . . . . ½ h.p.



# 9"

## SOUTH BEND

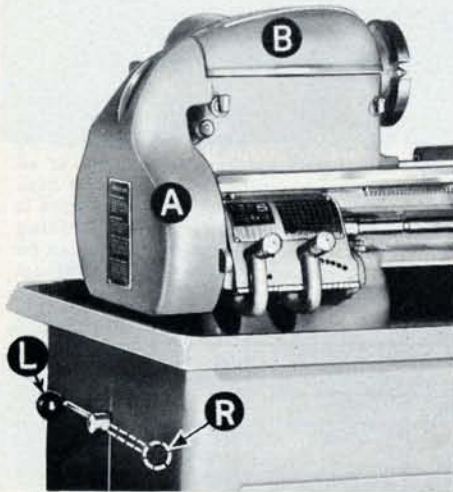
*Precision*

### FLOOR LATHES WITH METAL COLUMN BASE UNDERNEATH MOTOR DRIVE



Design patented

South Bend 9-inch Precision Lathe  
with Metal Column Base



### UNUSUAL SAFETY FEATURES

South Bend 9-inch Underneath Motor Driven Lathes have an automatic safety interlock which makes it impossible to open the end gear guard, "A", or the cone pulley cover, "B", until the belt tension lever, "L", is placed in position "R", disconnecting power.

These lathes are the same as corresponding models of 9-inch Bench Lathes, except for the underneath motor drive and the necessary alterations in the headstock. Lathe is supplied with headstock and drive shaft cone pulleys for either V-belt or flat belt drive. Fully enclosed in the metal column base, the motor and driving mechanism are protected from dust, dirt, and chips. Base is available with three drawers, 10 $\frac{3}{4}$ " x 5 $\frac{1}{2}$ " x 14" as shown in illustration, or without drawers\*. A built-in chip pan forms the top of the metal column base. Regular equipment included in price of lathe is same as for corresponding models of bench lathes listed on preceding pages. Electrical equipment is not included in the price of lathe. See pages 69 to 73.

Specifications are the same as for corresponding models of 9-inch Bench Lathes except for spindle speeds, shipping weights, and cubic feet boxed. Approximate spindle speeds with V-belt drive: low range, 52, 75, 95, 130, 285, 370, 495, and 670; high range, 112, 150, 195, 265, 570, 760, 1010, and 1365. Approximate spindle speed with flat belt drive: low range, 50, 78, 135, 240, 410, and 715 r.p.m.; high range, 90, 155, 265, 460, 780, and 1365 r.p.m.

MODEL	BED LENGTH FEET	BETWEEN CENTERS INCHES	CUBIC FEET BOXED	BOXED WEIGHT POUNDS	CRATED WEIGHT POUNDS	WITH 16-SPEED V-BELT UNDERNEATH MOTOR DRIVE		WITH 12-SPEED FLAT BELT UNDERNEATH MOTOR DRIVE	
						CAT. NO.	PRICE	CAT. NO.	PRICE
TOOLROOM	3 $\frac{1}{2}$	22	56	930	740	CL78344ZD	\$1066	CL8344ZD	\$1047
	4	28	68	960	760	CL78344AD	1100	CL8344AD	1081
MODEL A	3 $\frac{1}{2}$	22	56	900	710	CL7344ZD	830	CL344ZD	811
	4	28	68	930	720	CL7344AD	864	CL344AD	845
	4 $\frac{1}{2}$	34	68	950	730	CL7344RD	901	CL344RD	882
MODEL B	3 $\frac{1}{2}$	22	56	885	695	CL7377ZD	742	CL377ZD	723
	4	28	68	915	705	CL7377AD	776	CL377AD	757
	4 $\frac{1}{2}$	34	68	935	715	CL7377RD	813	CL377RD	794
MODEL C	3 $\frac{1}{2}$	22	56	880	685	CL7315ZD	646	CL315ZD	627
	4	28	68	910	690	CL7315AD	680	CL315AD	661
	4 $\frac{1}{2}$	34	68	930	695	CL7315RD	717	CL315RD	698

\* 3 $\frac{1}{2}$ ', 4' and 4 $\frac{1}{2}$ ' bed lengths can be supplied without drawers, deduct \$25.00.



Model A 9-inch Floor  
Lathe with Self-Contained  
Flat Belt Drive



# 9" SOUTH BEND SELF-CONTAINED DRIVE PRECISION FLOOR LATHES

The 9-inch Self-Contained Motor Drive Floor Lathe is made in four models, Model A, Model B, Model C and Toolroom. These lathes are the same and have the same equipment as corresponding models of 9-inch Bench Lathes described on the preceding pages 28 and 29, with the exception of the self-contained drive equipment, chip pan and floor legs. Specifications are the same except for shipping weights.

Self-contained drive equipment is permanently mounted back of the lathe headstock and consists of the self-contained motor drive unit (patented) for 1/2 h.p. motor, motor pulley with 9/8" hole, belt guard for motor belt and necessary belting. Electrical equipment is not included.

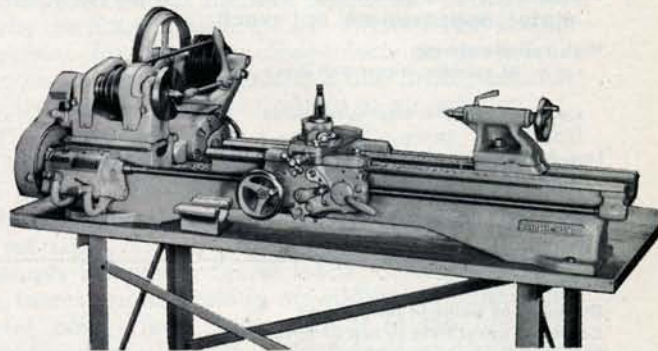
Either flat belt or V-belt pulleys are supplied for the headstock. The flat belt drive transmits power with the extreme smoothness required for high precision and fine finish. The V-belt drive is well adapted to production work, especially for heavy roughing cuts at slow speeds. See Page 29.

Model	Bed Length Feet	Between Centers Inches	Cubic Feet Boxed	Boxed Weight Pounds	Crated Weight Pounds	With 16-Speed V-belt Self-Contained Drive		With 12-Speed Flat Belt Self-Contained Drive	
						Cat. No.	Price	Cat. No.	Price
TOOLROOM	3	16	30	835	660	CL8244Y	\$858	CL8944Y	\$840
	3 1/2	22	30	860	685	CL8244Z	885	CL8944Z	867
	4	28	34	885	710	CL8244A	912	CL8944A	894
MODEL A	3	16	30	775	600	CL244Y	622	CL944Y	603
	3 1/2	22	30	800	625	CL244Z	649	CL944Z	630
	4	28	34	825	650	CL244A	676	CL944A	657
	4 1/2	34	34	850	675	CL244R	713	CL944R	694
MODEL B	3	16	30	760	585	CL277Y	534	CL977Y	515
	3 1/2	22	30	785	615	CL277Z	561	CL977Z	542
	4	28	34	815	635	CL277A	588	CL977A	569
	4 1/2	34	34	835	660	CL277R	625	CL977R	606
MODEL C	3	16	30	740	575	CL215Y	438	CL915Y	419
	3 1/2	22	30	775	605	CL215Z	465	CL915Z	446
	4	28	34	805	625	CL215A	492	CL915A	473
	4 1/2	34	34	825	659	CL215R	529	CL915R	510

# 9" SOUTH BEND GAP BED PRECISION BENCH LATHES

The 9-inch Gap Bed Bench Lathe is made with 4 1/2\* foot bed and is available in three models, Model A, Model B and Model C. Also available in the Self-Contained Motor Drive Lathes with Model A, Model B and Model C. (See copy above.) The 9-inch Gap Bed Lathes have a 1" gap measured from the face plate when bed insert is in place. When 4" insert is removed, the 5" gap allows 14 1/8" swing capacity. Ideal for larger work requiring boring and facing operation.

All models of the 9-inch Gap Bed Lathe can be supplied with either flat belt or V-belt cone pulleys for the headstock. These Lathes are the same and have the same equipment as the corresponding models of 9-inch Bench Lathes described on the preceding pages. All other specifications are the same except for shipping weights. See pages 28 and 29.



## 9" HORIZONTAL MOTOR DRIVE GAP BED LATHES

Model	Bed Length Feet	Between Centers Inches	Cubic Feet Boxed	Boxed Weight Pounds	Crated Weight Pounds	With 16-Speed V-belt Drive		With 12-Speed Flat Belt Drive	
						Cat. No.	Price	Cat. No.	Price
A	4 1/2	34	24	575	465	CL744RG	\$657	CL644RG	\$638
B	4 1/2	34	24	560	450	CL777RG	569	CL677RG	550
C	4 1/2	34	24	550	440	CL715RG	473	CL615RG	454

## 9" SELF-CONTAINED DRIVE GAP BED LATHES

A	4 1/2	34	34	880	705	CL244RG	764	CL944RG	745
B	4 1/2	34	34	865	690	CL277RG	676	CL977RG	657
C	4 1/2	34	34	855	689	CL215RG	579	CL915RG	561

\* Available only in 4 1/2' bed length.

Bench and electrical equipment are not included.



# SOUTH BEND *Precision* TURRET LATHES

South Bend Turret Lathes are designed and built to give you many years of satisfactory service. They have the precision for maintaining exacting tolerances, ample power for any work within their capacity and rigidity for producing a smooth finish. Having an unusually wide range of spindle speeds, they will perform with maximum efficiency on a wide variety of machining operations.

The turret indexing mechanism is ruggedly constructed and superbly designed. You can depend on South Bend Turrets to index within  $\pm .0005"$  at a distance of 4" from the turret face. To assure long life, the generously proportioned indexing pin is hardened, ground and superfinished and operates in replaceable heat-treated steel bushings.

The universal carriage supplied as regular equipment on all South Bend Turret Lathes has a wide range of power longitudinal feeds, power cross-feeds and thread cutting feeds. All changes are made through the quick change box at the headstock end of the lathe. Front and back tool blocks are supplied on the cross slide and a 4-way turret tool block is available to

order. The large diameter micrometer graduated collar on the cross slide handwheel permits adjusting the cutting tools with extreme accuracy. (Note: On turret lathes equipped with taper attachment, Double Tool Slide cannot be used.)

## TURRET LATHE EQUIPMENT

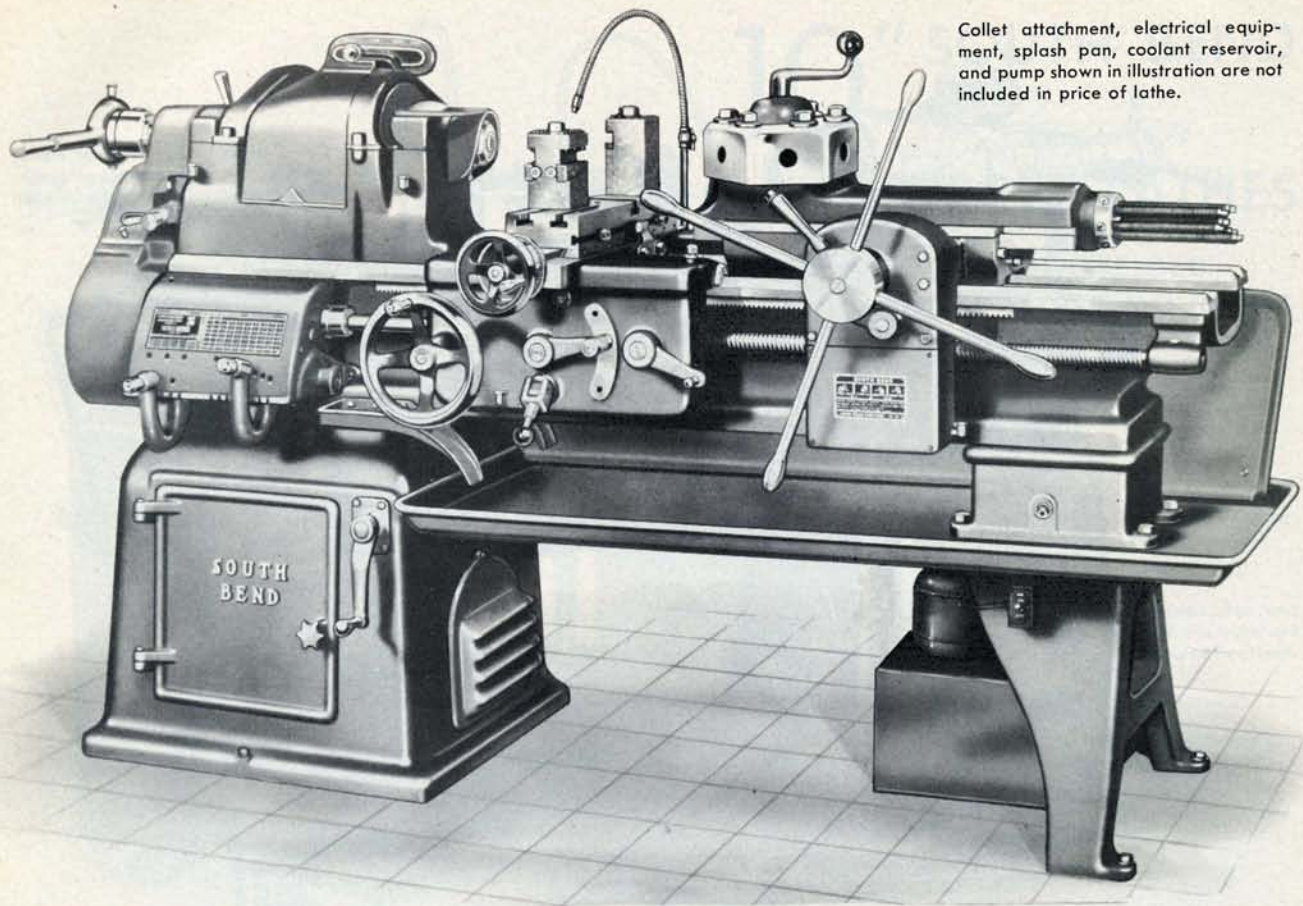
Equipment included in the price of each 13" or 2-H South Bend Turret Lathe consists of: universal carriage with screw feed double tool slide having front and rear square tool blocks; power feed ram-type turret; quick change box; oil pan; coolant return troughs; wrenches; and installation plan. Electrical equipment, handlever collet attachment, collet splash guard, coolant reservoir, coolant pump, splash pan, and piping are not included in price of lathe. See pages 69 to 73 for electricals.

10" Turret Lathes have the same equipment with the exception of handlever operated turret in place of power feed turret and a combination double tool cross slide in place of the screw feed double tool slide. (No crossfeed screw assembly supplied with 10" Turret Lathes.) 10" Metal Cabinet Turret Lathes are mounted on a rigidly constructed steel bench.

## SPECIFICATIONS

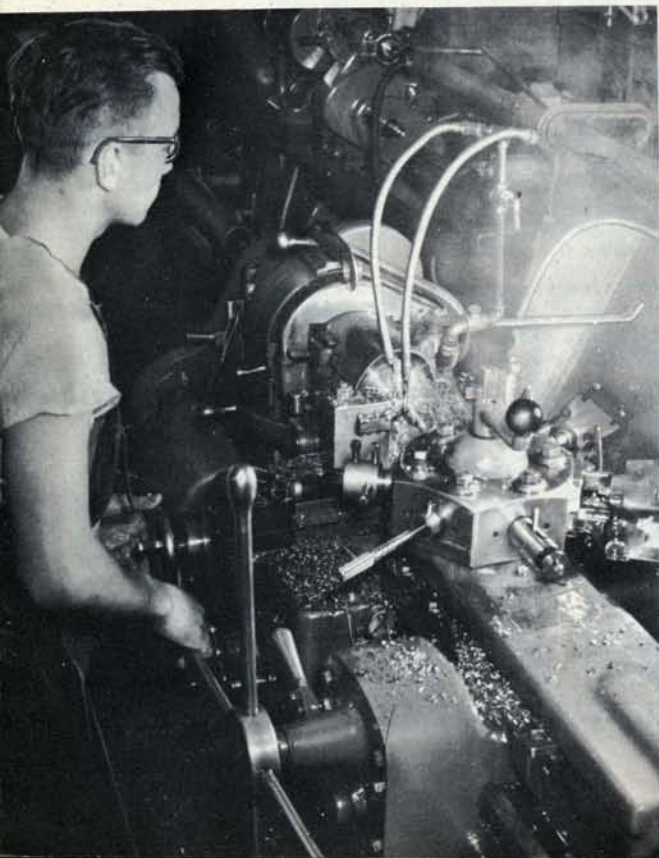
	10"	13"	2-H
<b>Capacity</b>			
Swing over bed and saddle wings .....	10-1/8"	13-1/8"	16-1/4"
Swing over double tool cross slide .....	3-9/16"	6-7/8"	6-7/8"
<b>Headstock</b>			
Capacity through spindle, nose type collet chuck or lathe chuck .....	1-3/8"	1-3/8"	1-3/8"
Maximum handlever collet capacity .....	1-1/16"	1-1/16"	1-1/16"
Spindle nose diameter and threads .....	2-1/4"—8	2-1/4"—8	2-3/8"—6
Center, Morse taper .....	No. 2	No. 3	No. 3
<b>Spindle Speeds (Standard spindle speeds with two-speed motor, approximate, not exact)</b>			
<b>High spindle speeds</b>			
r.p.m. of spindle, direct belt drive .....	1400, 898, 585	940, 497, 270	945, 550, 300
r.p.m. of spindle, back-gear drive .....	740, 470, 304	135, 71, 40	118, 70, 32
r.p.m. of spindle, back-gear drive .....	250, 160, 105		
r.p.m. of spindle, back-gear drive .....	130, 85, 55		
<b>Low spindle speeds (Not available with 1-speed motor)</b>			
r.p.m. of spindle, direct belt drive .....	700, 449, 292	470, 248, 135	475, 278, 150
r.p.m. of spindle, direct belt drive .....	370, 235, 152		
r.p.m. of spindle, back-gear drive .....	125, 80, 52	67, 35, 20	60, 33, 20
r.p.m. of spindle, back-gear drive .....	65, 42, 27		
<b>Turret</b>			
Diameter of holes in turret faces .....	5/8"*	1"	1-1/2"
Center of turret hole to top of turret slide .....	1-1/2"	1-7/8"	2-1/2"
Effective feed of turret slide .....	4"	6-1/2"	8-7/8"
Distance between opposite flats .....	4-7/8"	8"	9-3/8"
Maximum distance between spindle nose and turret face at beginning of indexing movement .....	3-1/2 ft. bed 19-3/8"	6 ft. bed 35-5/8"	6 ft. bed 28-1/4"
<b>Universal Carriage</b>			
Thread cutting range .....	4 to 480 per inch	4 to 224 per inch	4 to 224 per inch
Power longitudinal feeds .....	.0007" to .0836"	.0015" to .0841"	.0015" to .0841"
Maximum longitudinal travel .....	3-1/2" bed 16"	6 ft. bed 31-3/4"	6 ft. bed 22-1/2"
Power cross-feeds .....	.0003" to .0303"	.0006" to .0315"	.0006" to .0315"
Cross travel of cross slide .....	3-5/8"	9-3/8"	9-3/4"
Tool block openings for cutter bits .....	7/16" x 7/16"	7/16" x 7/16"	5/8" x 5/8"
<b>Motor</b>			
Recommended size, one-speed .....	3/4 h.p.	1 h.p.	2 h.p.
Recommended size, two-speed .....	1 h.p.—1/2 h.p.	1-1/2 h.p.—3/4 h.p.	2 h.p.—1 h.p.
Optional size, one-speed .....	1 h.p.	1-1/2 h.p.	3 h.p.
Optional size, two-speed .....		2 h.p.—1 h.p.	3 h.p.—1-1/2 h.p.





Collet attachment, electrical equipment, splash pan, coolant reservoir, and pump shown in illustration are not included in price of lathe.

# 2-H SOUTH BEND *Precision* TURRET LATHES



Designed for the efficient production of duplicate parts, the South Bend No. 2-H Turret Lathe has the precision for exacting close-tolerance operations, smooth power for producing a fine finish, and versatility that reduces set-up time to a minimum.

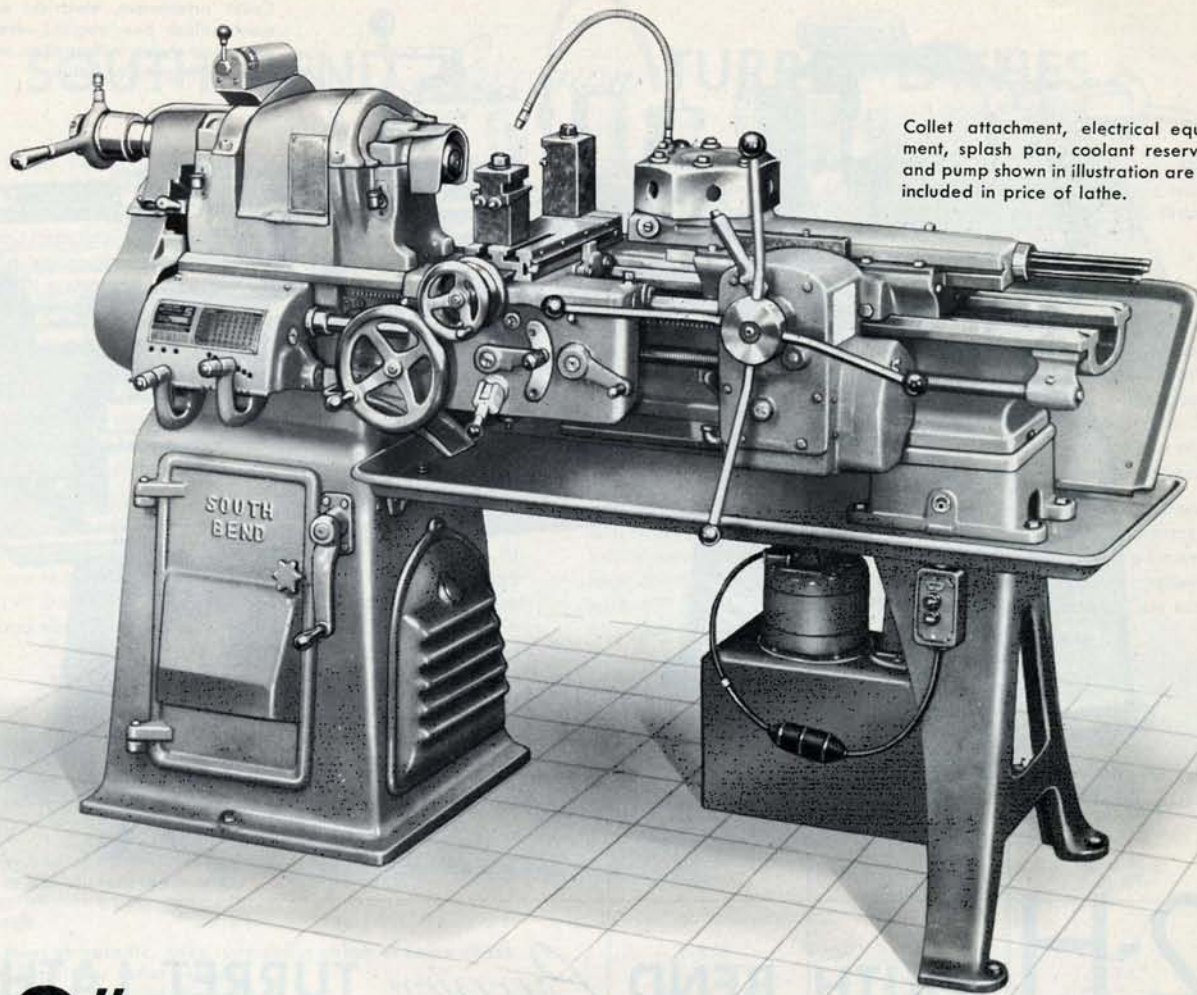
The ram-type turret has both power feed and hand feed, with an adjustable feed trip and stop for each of the six turret faces. The turret head indexes automatically on the return stroke of the turret slide. The quick change box provides 48 changes for power turret feeds. Change gears in the turret apron provide an additional change for turret power feed, independent of the universal carriage feeds in both rate of feed and direction of feed. Turret ram lock is provided.

Full advantage may be taken of the higher cutting speeds of tungsten carbide tools as the result of the wide range of speeds and feeds available. The use of a two-speed motor permits quick change from high speeds to low speeds for reaming and tapping operations.

CATALOG NUMBER	BED LENGTH FEET	CUBIC FEET BOXED	BOXED WEIGHT POUNDS	CRATED WEIGHT POUNDS	PRICE F.O.B. FACTORY
CL2CT	6	115	3175	2810	\$4037
CL2DT	7	130	3300	2900	4102

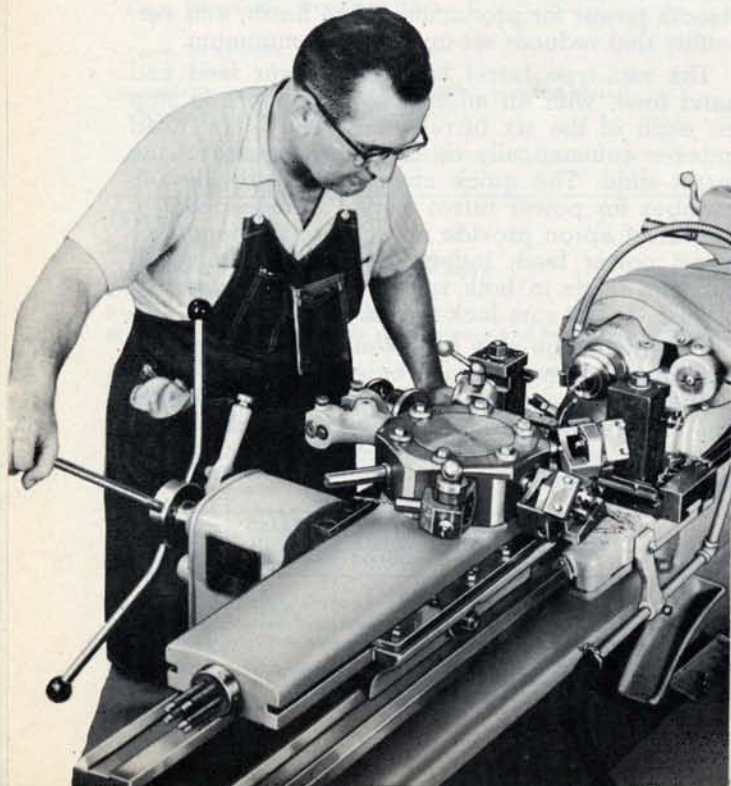
**NOTE**—These lathes can be supplied with hand feed only for the turret if desired. Write for information.





Collet attachment, electrical equipment, splash pan, coolant reservoir, and pump shown in illustration are not included in price of lathe.

# 13" SOUTH BEND *Precision* TURRET LATHES



The South Bend 13" Turret Lathe is a dependable tool for the manufacture of duplicate parts. The turret head indexes and locks automatically when the turret slide is returned to the starting position. An individual feed trip and stop for each face of the turret accurately regulates the length of the cut with either the power feed or the hand feed.

Power feeds for the turret slide are driven by a lever operated friction clutch, permitting instant engagement and disengagement. Quick change box of lathe provides 144 power turret feeds .0006" to .1093". Lever shift gears in turret apron permit quick selection of fast, intermediate or slow feeds. Direction of feed is reversed by changing gears in turret apron.

Turret is mounted on inside bed ways and can be placed close to lathe headstock to eliminate excessive overhang of work or tools. Turret head is hollow so that either work or turret tools may pass entirely through the 1" diameter turret tool holes.

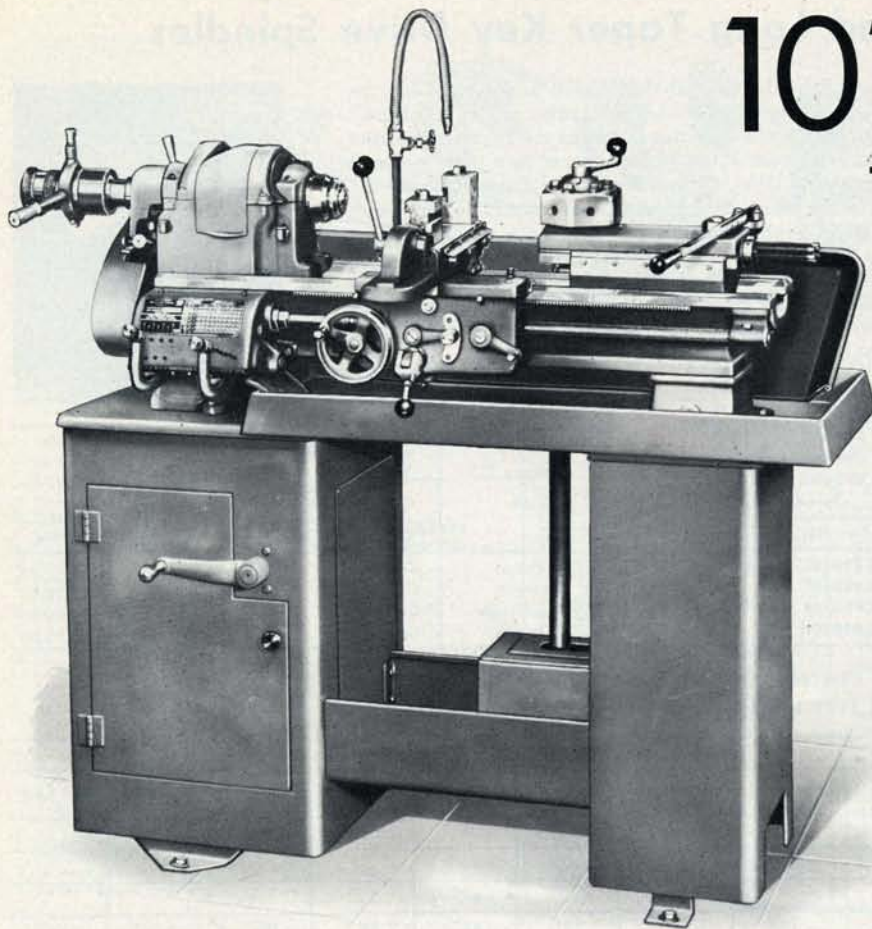
CATALOG NUMBER	BED LENGTH FEET	CUBIC FEET BOXED	BOXED WEIGHT POUNDS	CRATED WEIGHT POUNDS	PRICE F.O.B. FACTORY
CL1BT	5	88	1875	1570	\$2829
CL1CT	6	103	1950	1620	2890
CL1DT	7	117	2025	1670	2951

NOTE: These lathes can be supplied with hand feed turret if desired. Write for information.



# 10" SOUTH BEND *Precision* TURRET LATHES

WITH NEW WELDED  
STEEL FLOOR MOUNTING



SOUTH BEND 10" Precision TURRET LATHE  
with New Welded Steel Floor Mounting.

The bed turret, double tool cross slide and other accessories supplied with this lathe are also sold separately and are listed in attachment section of catalog.

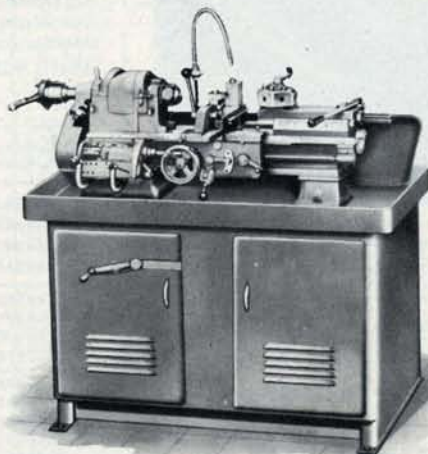
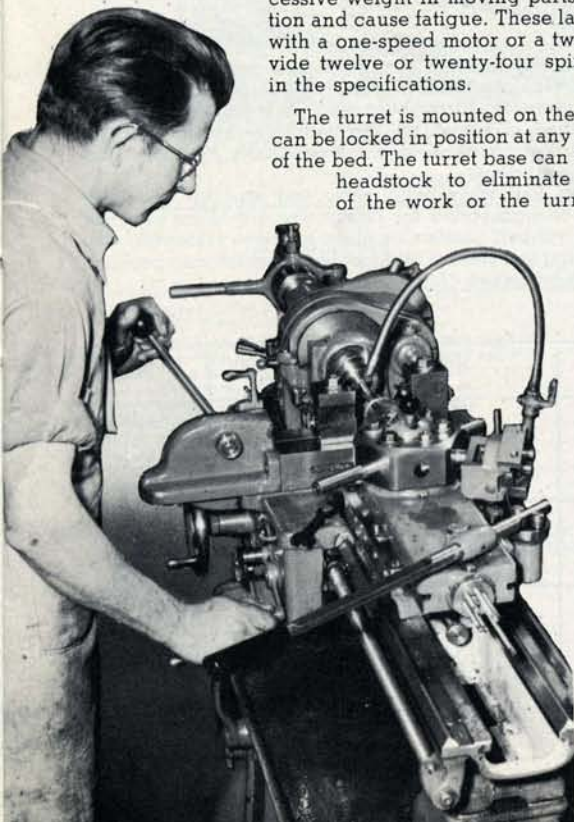
South Bend 10" Turret Lathes are made with  $3\frac{1}{2}'$  bed length and with either metal cabinet or floor mounting, as illustrated. They are precision tools capable of fast, efficient production and are easily adaptable to a wide variety of work. There is no excessive weight in moving parts to slow down operation and cause fatigue. These lathes can be equipped with a one-speed motor or a two-speed motor to provide twelve or twenty-four spindle speeds as listed in the specifications.

The turret is mounted on the inside bed ways and can be locked in position at any point along the length of the bed. The turret base can be placed close to the headstock to eliminate excessive overhang of the work or the turret tools. Turret head

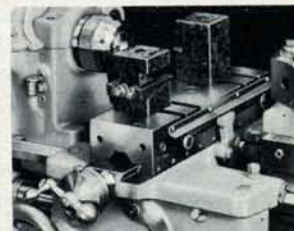
indexes automatically when the lever is moved to the extreme right, and has individual stops for each of the six turret faces. The turret head will index within plus or minus .0005", measured 4" from turret face and it may be back indexed or spun to skip tool positions. Turret ram slide can be locked for mounting work between centers if desired.

CATALOG NUMBER	TYPE OF MOUNTING	CUBIC FEET BOXED	BOXED WEIGHT POUNDS	CRATED WEIGHT POUNDS	PRICE F.O.B. FACTORY
CL1006Z	Floor	59	1350	1050	\$1927
CL1005Z	Met. Cab't.	56	1250	950	1977

NOTE: Splash pan, tailstock, compound rest, centers, spindle sleeve, face plates, draw-in collet chuck attachment, lathe chuck, thread cutting stop, coolant equipment, and electrical equipment are not included in price of lathe. See attachment section of catalog for these accessories.



South Bend 10" Metal Cabinet Turret Lathe.



Double Tool Slide with Screw Feed.



# Cam Lock and Long Taper Key Drive Spindles



Left—Type D1 Cam Lock Spindle Nose.

All South Bend Lathes, 10-1 $\frac{1}{16}$ " Collet and larger, can be supplied with 4" Type D1 Cam Lock Spindles or Size L00 Type L Long Taper Key Drive Spindles in lieu of the regular threaded spindles at extra cost. Price includes small face plate which is supplied with the lathe. (Does not apply to Turret Lathes.) On tool room lathes price also includes Large Face Plate and Hand-wheel Collet Attachment fitted for Cam Lock or Long Taper Key Drive Spindle Nose. Spindle nose dimensions conform with ASA standards, but spindle bore and inside taper are larger to accommodate South Bend Collet equipment, spindle sleeves and centers. See page 37 for descriptions of chucks, collet equipment and other accessories for these lathes.



Right—Type L00 Long Taper Key Drive Spindle Nose.

Size of Lathe	Size L00 Long Taper Key Drive Spindle Nose in Lieu of Regular Threaded Spindle Nose		4" Cam Lock Spindle Nose in Lieu of Regular Threaded Spindle Nose	
	Cat. No.	Price	Cat. No.	Price
10" (Engine and Turret)	CA8050L	\$ 24.95	CB8050L	\$33.10
13" Lathes	CA8050T	35.20	CB8050T	35.20
14 $\frac{1}{2}$ " Lathes	CA8050F	43.05	CB8050F	43.05
16", 16-24", & 2-H	CA8050H	49.60	CB8050H	49.60

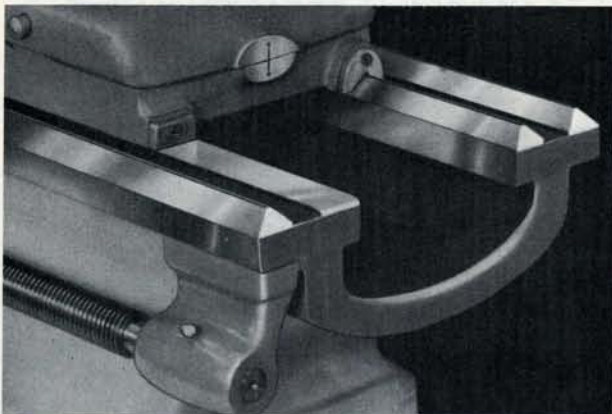
Size of Lathe	Size L00 Long Taper Key Drive Spindle Nose in Lieu of Regular Threaded Spindle Nose		4" Cam Lock Spindle Nose in Lieu of Regular Threaded Spindle Nose	
	Cat. No.	Price	Cat. No.	Price
10" Toolroom	CA8051L	\$41.50	CB8051L	\$49.65
13" Toolroom	CA8051T	52.90	CB8051T	52.90
14 $\frac{1}{2}$ " Toolroom	CA8051F	64.20	CB8051F	64.20
16" Toolroom	CA8051H	71.00	CB8051H	71.00

## DISTANCES BETWEEN CENTERS FOR LATHES WITH 4" TYPE D1 CAM LOCK SPINDLES OR TYPE L00 LONG TAPER KEY DRIVE SPINDLES

Size of Lathes	Distance Between Centers										
	3' bed	3 $\frac{1}{2}$ ' bed	4' bed	4 $\frac{1}{2}$ ' bed	5' bed	6' bed	7' bed	8' bed	10' bed	12' bed	14' bed
10"	13"	19"	25"*	33"	...	...	...	...	...	...	...
13"	...	...	15"	...	27"	39"	51"	...	...	...	...
14 $\frac{1}{2}$ "	...	...	...	...	23"	35"	47"	59"	...	...	...
16"	...	...	...	...	...	32"	44"	56"	80"	104"	128"
16-24"	...	...	...	...	...	29"	41"	53"	77"	101"	125"

\* 26" with Cam Lock Spindle.

# Hardened and Ground Bed Ways



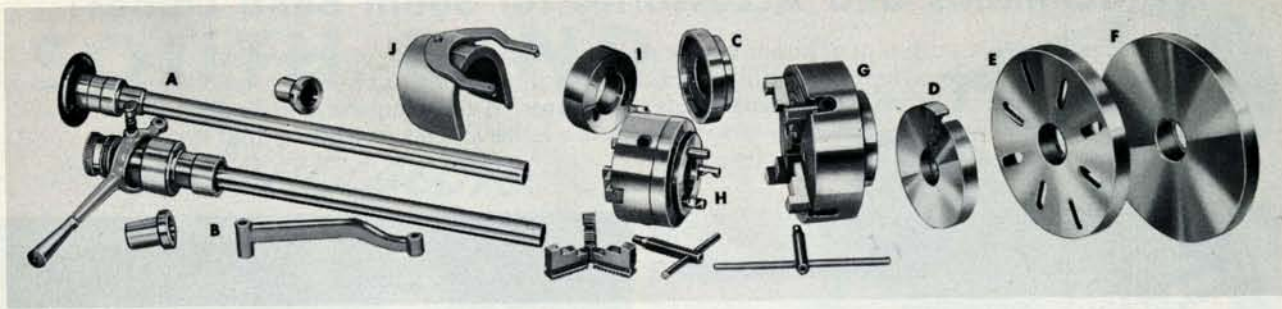
South Bend Lathes can be supplied with hardened and ground bed ways in lieu of regular bed ways at extra cost as listed in tabulation below. Heat-treating produces a hardness of all bed ways throughout the wearing area of the bed. After a period of seasoning, the bed ways are finished by precision grinding on equipment especially designed and built for the purpose.

Hardened bed ways resist wear and scoring. They are especially recommended for lathes that are to be used for machining rubber, plastics or other abrasive materials, also for machining tool steel or other materials which may produce sharp work-hardened chips.

Catalog Number	Size	Bed Length Feet	Price
CL4954Y	9" & 10-K	3	\$103
CL4954Z	9" & 10-K	3 $\frac{1}{2}$	108
CL4954A	9" & 10-K	4	113
CL4954R	9" & 10-K	4 $\frac{1}{2}$	118
CL4955Y	10"	3	165
CL4955Z	10"	3 $\frac{1}{2}$	171
CL4955A	10"	4	176
CL4955R	10"	4 $\frac{1}{2}$	182

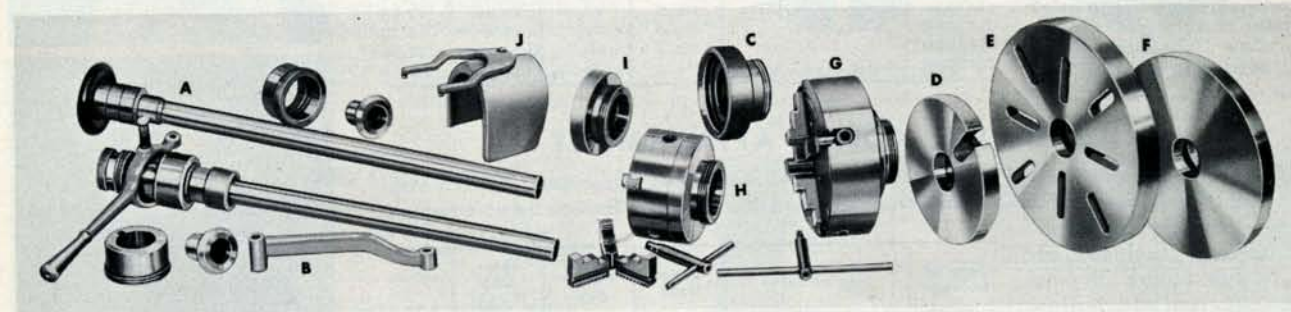
Catalog Number	Size	Bed Length Feet	Price
CL4956A	13"	4	\$ 201
CL4956B	13"	5	214
CL4956C	13"	6	227
CL4956D	13"	7	240
CL4957B	14 $\frac{1}{2}$ "	5	229
CL4957C	14 $\frac{1}{2}$ "	6	244
CL4957D	14 $\frac{1}{2}$ "	7	258
CL4957E	14 $\frac{1}{2}$ "	8	271
CL4958C	16", 16-24" & 2-H	6	257
CL4958D	16", 16-24" & 2-H	7	273
CL4958E	16", 16-24"	8	290
CL4958G	16", 16-24"	10	322
CL4958H	16", 16-24"	12	354
CL4958K	16", 16-24"	14	427





ACCESSORIES FOR LATHES WITH 4" TYPE D1 CAM LOCK SPINDLES

Description	For 10" Lathe		For 13" Lathe		For 14 1/2" Lathe		For 16", 16-24", 2-H	
	Catalog Number	Price	Catalog Number	Price	Catalog Number	Price	Catalog Number	Price
A Handwheel Collet Attachment	CB4306L	\$ 70.00	CB4306T	\$ 75.70	CB4306F	\$ 80.25	CB4306H	\$ 83.75
B Handlever Collet Attachment	CB5206L	148.60	CB5206T	164.00	CB5206F	179.00	CB5206H	193.75
Closer for Step Chucks 3" and 4" maximum capacity	CB6309LH	15.15	CB6309LH	15.15	CB6309LH	15.15	CB6309LH	15.15
Closer for Step Chucks 5" and 6" maximum capacity	CB6311LH	20.10	CB6311LH	20.10	CB6311LH	20.10	CB6311LH	20.10
D Small Face Plate	CB2175LT	21.25	CB2175LT	21.25	CB2175FH	31.50	CB2175FH	31.50
E Large Face Plate	CB2180L	29.00	CB2180T	31.50	CB2180FH	42.75	CB2180FH	42.75
Extra Large Face Plate for 16-24" Lathe only	CB46L	20.10	CB46T	21.80	CB46FH	23.50	CB46FH	23.50
F Fixture Plate	CB4006	61.00	CB4206	97.00	CB4207	114.00	CB4207	114.00
6" 4-Jaw Independent Chuck	CB4206	97.00	CB4207	114.00	CB4209	130.00	CB4209	130.00
7 1/2" 4-Jaw Independent Chuck	CB4207	114.00	CB4209	130.00	CB4210	146.00	CB4210	146.00
9" 4-Jaw Independent Chuck							CB4212	205.00
10" 4-Jaw Independent Chuck								
12" 4-Jaw Independent Chuck								
5" 3-Jaw Universal Chuck with two sets of jaws—1 pinion	CB3005	88.00	CB3005	88.00	CB3505	130.00	CB3505	130.00
5" 3-Jaw Universal Chuck with two sets of jaws—3 pinions	CB3505	130.00	CB3505	130.00	CB3506	142.00	CB3506	142.00
H 6" 3-Jaw Universal Chuck with two sets of jaws	CB3506	142.00	CB3506	142.00	CB3507	164.00	CB3507	164.00
7 1/2" 3-Jaw Universal Chuck with two sets of jaws			CB3507	164.00	CB3509	208.00	CB3509	208.00
9" 3-Jaw Universal Chuck with two sets of jaws					CBR3507	164.00	CBR3507	208.00
3-Jaw Chuck—with 2 piece (reversible top) Jaws	CBR3506	142.00	CBR3507	164.00	CB2935	31.50	CB2935	31.50
Chuck Plate fitted to chuck	CB2935	31.50	CB2935	31.50	CB2704RH	20.10	CB2704RH	20.10
I Semi-Machined Chuck Plate—5"	CB2704RH	20.10	CB2704RH	20.10	CB2707RH	21.25	CB2707RH	21.25
Semi-Machined Chuck Plate—6 1/4"	CB2707RH	21.25	CB2707RH	21.25	CB2709RH	23.15	CB2709RH	23.15
Semi-Machined Chuck Plate—9"	CB2709RH	23.15	CB2709RH	23.15	CB5223F	6.35	CB5223H	8.10
J Collet Splash Guard	CB5223L	6.10	CB5223T	6.15				



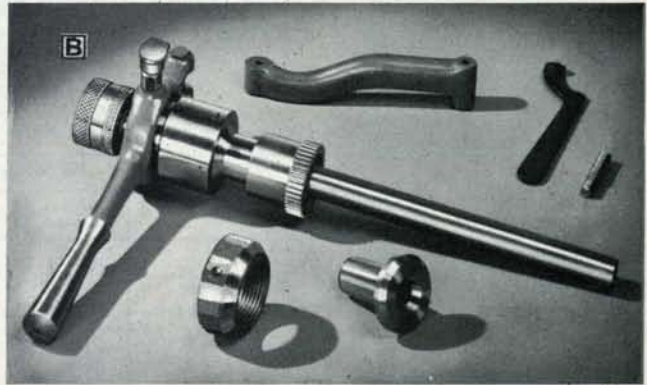
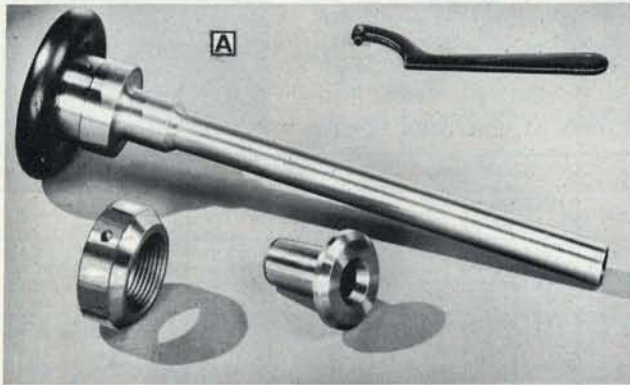
ACCESSORIES FOR LATHES WITH TYPE LOO LONG TAPER KEY DRIVE SPINDLES

Description	For 10" Lathe		For 13" Lathe		For 14 1/2" Lathe		For 16", 16-24", 2-H	
	Catalog Number	Price	Catalog Number	Price	Catalog Number	Price	Catalog Number	Price
A Handwheel Collet Attachment	CA4306L	\$ 70.00	CA4306T	\$ 75.70	CA4306F	\$ 80.25	CA4306H	\$ 83.75
B Handlever Collet Attachment	CA5206L	148.60	CA5206T	164.00	CA5206F	179.00	CA5206H	193.75
Closer for Step Chucks 3" and 4" maximum capacity	CA6309LH	17.90	CA6309LH	17.90	CA6309LH	17.90	CA6309LH	17.90
Closer for Step Chucks 5" and 6" maximum capacity	CA6311LH	23.75	CA6311LH	23.75	CA6311LH	23.75	CA6311LH	23.75
D Small Face Plate	CA2175L	21.25	CA2175T	21.25	CA2175FH	31.50	CA2175FH	31.50
E Large Face Plate	CA2180L	29.00	CA2180T	31.50	CA2180FH	42.75	CA2180FH	42.75
Extra Large Face Plate for 16-24" Lathe only	CA46L	20.10	CA46T	21.80	CA46FH	23.50	CA46FH	23.50
F Fixture Plate	CA4006	61.00	CA4206	97.00	CA4207	114.00	CA4207	114.00
6" 4-Jaw Independent Chuck	CA4206	97.00	CA4207	114.00	CA4209	130.00	CA4209	130.00
7 1/2" 4-Jaw Independent Chuck	CA4207	114.00	CA4209	130.00	CA4210	146.00	CA4210	146.00
9" 4-Jaw Independent Chuck							CA4212	205.00
10" 4-Jaw Independent Chuck								
12" 4-Jaw Independent Chuck								
5" 3-Jaw Universal Chuck with two sets of jaws—1 pinion	CA3005	88.00	CA3005	88.00	CA3505	130.00	CA3505	130.00
5" 3-Jaw Universal Chuck with two sets of jaws—3 pinions	CA3505	130.00	CA3505	130.00	CA3506	142.00	CA3506	142.00
H 6" 3-Jaw Universal Chuck with two sets of jaws	CA3506	142.00	CA3506	142.00	CA3507	164.00	CA3507	164.00
7 1/2" 3-Jaw Universal Chuck with two sets of jaws			CA3507	164.00	CA3509	208.00	CA3509	208.00
9" 3-Jaw Universal Chuck with two sets of jaws					CAR3507	164.00	CAR3507	208.00
3-Jaw Chuck—with 2 piece (reversible top) Jaws	CAR3506	142.00	CAR3507	164.00	CA2935	31.50	CA2935	31.50
Chuck Plate fitted to chuck	CA2935	31.50	CA2935	31.50	CA2704RH	20.10	CA2704RH	20.10
I Semi-Machined Chuck Plate—5"	CA2704RH	20.10	CA2704RH	20.10	CA2707RH	21.25	CA2707RH	21.25
Semi-Machined Chuck Plate—6 1/4"	CA2707RH	21.25	CA2707RH	21.25	CA2709RH	22.40	CA2709RH	22.40
Semi-Machined Chuck Plate—9"	CA2709RH	22.40	CA2709RH	22.40	CA5223F	6.35	CA5223H	8.10
J Collet Splash Guard	CA5223L	5.80	CA5223T	5.95				



# Attachments and Accessories for South Bend Lathes

A complete assortment of attachments and accessories greatly increases the adaptability of any lathe. Often a careful selection of equipment will save much loss of time and the expense of making special tools or fixtures. It is recommended that certain attachments and accessories be ordered with the lathe so that any fitting that may be required can be done at the factory.



## HANDWHEEL COLLET ATTACHMENT

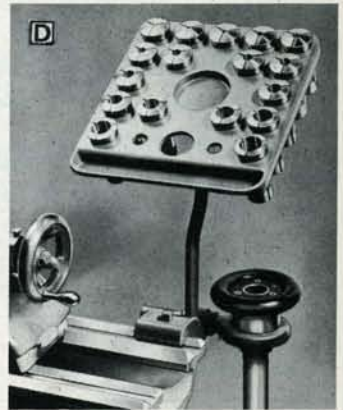
**A** This attachment is a great time saver in mounting small work in the lathe for production, toolroom, and maintenance operations, especially when extremely accurate centering is required. Bar and tube stock can be fed through the hollow draw-bar which operates the collet. When the handwheel is tightened, the collet automatically grips and centers the work. Equipment includes steel draw-bar with handwheel, spindle nose cap, spanner wrench, and heat-treated steel closing sleeve if required. Collets are not included. See page 39.

Catalog Number	Size of Lathe	Collet Used	Max. Collet Cap.	Shipping Weight	Price
CL4306N	9"	No. 3	1/2"	5 lbs.	\$22.50
CL4306K	10-K	No. 6K	5/8"	5 lbs.	25.75
CL4306R	10"-1 1/16" Collet	No. 2	1 1/16"	8 lbs.	59.75
CL4306L	10"-1 1/8" Collet	No. 5	1 1/8"	10 lbs.	63.00
CL4306Q	13"	No. 5	1 1/8"	14 lbs.	68.75
CL4306M	14 1/2"	No. 5	1 1/8"	14 lbs.	73.50
CL4306H	16", 16-24", & 2-H	No. 5	1 1/8"	15 lbs.	76.75

## HANDLEVER COLLET ATTACHMENT

**B** Speed and accuracy are combined in the Handlever Collet Attachment. Without stopping the lathe spindle, the collet can be released, bar stock fed through the spindle, and the collet tightened again. Equipment includes adjustable chuck closing mechanism and hollow draw-bar, spindle nose cap, spanner wrench and heat-treated steel closing sleeve if required. Collets are not included. See pages 39, 40, and 41.

Catalog Number	Size of Lathe	Collet Used	Max. Collet Cap.	Shipping Weight	Price
CL5206N	9"	No. 3	1/2"	10 lbs.	\$89.75
CL5206K	10-K	No. 6K	5/8"	10 lbs.	106.00
CL5206R	10"-1 1/16" Collet	No. 2	1 1/16"	19 lbs.	127.00
CL5206L	10"-1 1/8" Collet	No. 5	1 1/8"	20 lbs.	142.00
CL5206Q	13"	No. 5	1 1/8"	25 lbs.	158.00
CL5206M	14 1/2"	No. 5	1 1/8"	31 lbs.	172.00
CL5206H	16", 16-24", & 2-H	No. 5	1 1/8"	32 lbs.	187.00



## COLLET SPLASH GUARD

**C** To prevent chips or coolant from flying off of lathe spindle, the collet splash guard is attached to the lathe headstock as shown above. Guard hooks into socket head cap screws and fits snugly around spindle nose and collet, but does not interfere with use of collet attachment. All lathes fitted with both collet attachment and coolant equipment should also be equipped with one of these guards.

Cat. No.	Size and Type of Lathe	Ship Wt.	Price
CL5223NK	9" & 10-K Underneath M. D.	2 lbs.	\$3.45
CL5200N	9" Horizontal M. D.	2 lbs.	3.55
CL5200K	10-K H. M. D.	2 lbs.	3.85
CL5223R	10" Underneath M. D.	2 lbs.	4.10
CL5223T	13" Underneath M. D.	2 lbs.	4.40
CL5223F	14 1/2" Underneath M. D.	3 lbs.	5.35
CL5223H	16", 16-24", & 2-H U. M. D.	3 lbs.	6.60

## COLLET RACK

**D** This collet rack provides a convenient place for keeping collets, centers, spindle sleeve, and draw-bar. Tray along lower edge of collet rack is provided for holding spanner wrench. Clamp for attaching to back V-way of lathe bed is supplied. Price does not include collets or collet attachment.

Catalog Number	Size of Lathe	Rack Holds	Ship. Wt.	Price
CE1770N	9"	19 Collets	9 lbs.	\$19.75
CE1770K	10-K	17 Collets	10 lbs.	21.25
CE1770R	10"-1 1/16" Collet	17 Collets	10 lbs.	23.75
CE1770L	10"-1 1/8" Collet	17 Collets	10 lbs.	27.00
CE1770Q	13"-1 1/8" Collet	17 Collets	12 lbs.	27.00
CE1770M	14 1/2"-1 1/8" Collet	17 Collets	14 lbs.	27.00
CE1770H	16", 16-24", No. 2-H	17 Collets	15 lbs.	27.00



# SOUTH BEND

## Precision COLLETS



### SOUTH BEND COLLETS ARE CAM GROUND

All Steel Collets Manufactured by South Bend are Cam Ground.

Cam grinding provides many important advantages.

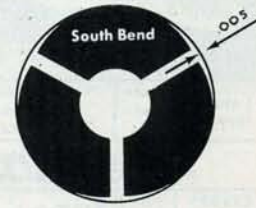
1. Tight, Snug Grip
2. Quick Opening
3. Closes Easier
4. Less Sticking



South Bend **←R-S-B←** Steel Collets are manufactured with exacting care to give long, dependable service. They are your best investment for work requiring utmost precision, maximum durability and smooth, easy operation. All bearing surfaces including the screw thread are ground after heat-treating. This process enables us to hold exceedingly close tolerances for size and concentricity. Each collet is carefully inspected and tested, and is individually packed in a substantial plastic box with transparent lid through which the collet size can be read for quick and easy selection.



**ROUND GROUND COLLETS**  
In closing, force is exerted on edges of taper segment.



**CAM GROUND COLLETS**  
Closing force is always at the center of the taper.

#### ←R-S-B← SOUTH BEND STEEL COLLETS

Catalog Number	Collet No.	Sizes of Lathes Used on	Collet Capacities for Round Work	Shipping Weight	Price Each Collet
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#### COLLETS WITH STANDARD HOLE SIZES FOR ROUND WORK

State capacity of each collet wanted

CE3050	3	9"	1/16" to 1/2" in 64ths.	6 ozs.	\$5.05
CE3051	6K	10-K	1/16" to 3/8" in 64ths.	8 ozs.	5.20
CE3052	2	10" & 13"-1 1/16" Col.	1/16" to 1 1/16" in 64ths.	8 ozs.	5.25
CE3053	4	14 1/2"-3/4" Col.	1/16" to 3/4" in 64ths.	8 ozs.	5.65
CE3054	5	10", 13", 14 1/2", 16", 16-24" & 2-H 1 1/16" Col.	1/16" to 1 1/16" in 64ths.	1 lb.	6.00

#### COLLETS WITH DECIMAL HOLE SIZES FOR ROUND WORK

State capacity of each collet wanted (Not Returnable)

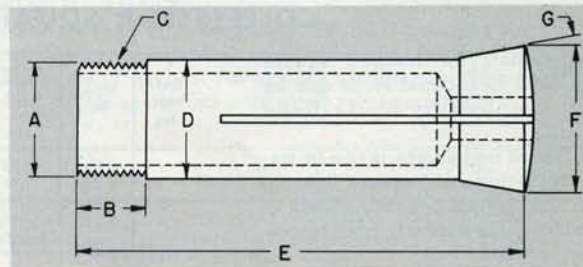
CE3055	3	9"	.0625" to .500"	6 ozs.	\$6.55
CE3056	6K	10-K	.0625" to .625"	8 ozs.	6.70
CE3057	2	10" & 13"-1 1/16" Col.	.0625" to .6875"	8 ozs.	6.75
CE3058	4	14 1/2"-3/4" Col.	.0625" to .750"	8 ozs.	7.15
CE3059	5	10", 13", 14 1/2", 16", 16-24" & 2-H 1 1/16" Col.	.0625" to 1.063"	1 lb.	7.50

#### COLLETS WITH METRIC HOLE SIZES FOR ROUND WORK

State capacity of each collet wanted (Not Returnable)

CE3060	3	9"	1.5 mm to 12.5 mm*	6 ozs.	\$6.55
CE3061	6K	10-K	1.5 mm to 15.5 mm*	8 ozs.	6.70
CE3062	2	10" & 13"-1 1/16" Col.	1.5 mm to 17.0 mm*	8 ozs.	6.75
CE3064	5	10", 13", 14 1/2", 16", 16-24" & 2-H 1 1/16" Col.	1.5 mm to 27.0 mm*	1 lb.	7.50

\*In increments of 0.5 mm

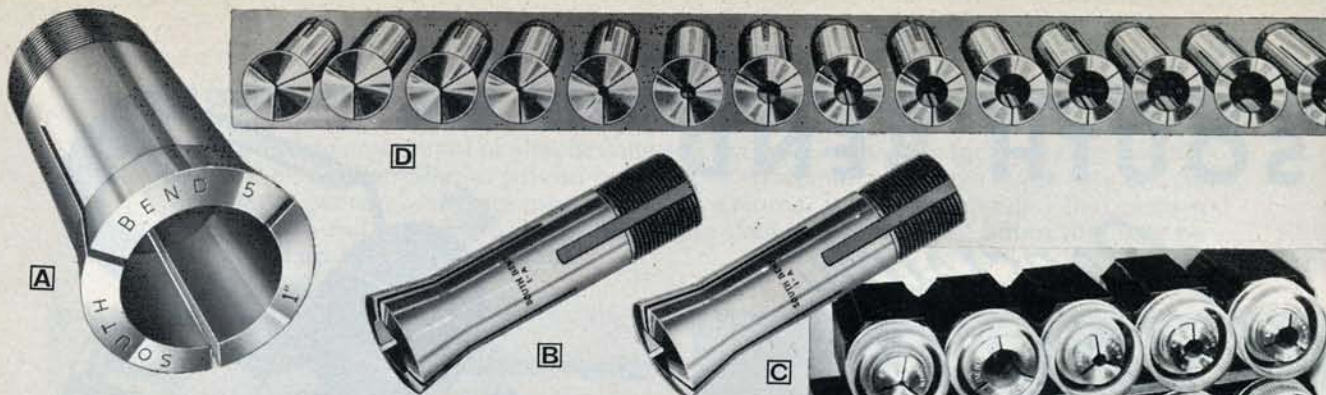


#### COLLET SPECIFICATIONS

South Bend No. 2, 3, 4, and 5 collets are interchangeable with 2-A, 3-C, 4-C and 5-C respectively. If you are not sure which collet fits your lathe or other machine, compare the measured length and body diameter with specifications in table below. The thread diameter of your collet may be worn and should not be considered an accurate dimension for comparison.

Collet No.	3	6K	2	4	5
Sizes of Lathes Used on	9"	10-K	10" & 13" 1/16" Col.	14 1/2" 3/4" Col.	All 1 1/16" Col. Cap. S. B. Lathes
A, Thread Diameter	.642"	.767"	.857"	.942"	1.242"
B, Thread Length	3/4"	2 1/32"	1 3/16"	1 3/16"	3/4"
C, Threads per in.	26	26	20	20	20
D, Body Diameter	.6495"	.8425"	.8595"	.9495"	1.2495"
E, Collet Length	2 1/16"	3"	3 5/16"	3"	3 3/32"
F, Head Diameter	.852"	1.160"	1.095"	1.150"	1.452"
G, Angle of Head	12°	15°	15°	10°	10°





## SOUTH BEND BRASS COLLETS WITH STANDARD HOLE SIZES FOR ROUND WORK

SIZES TO FIT MOST LATHES AT PRICES YOU CANNOT AFFORD TO OVERLOOK

### LOW COST BRASS COLLETS

**A** South Bend Brass Collets are indispensable for many applications and have no superior in their accuracy. They can be readily machined for holding tapered or irregular shapes. When worn they can be rebored to larger diameters.

Catalog Number	Collet No.	Sizes of Lathes Used on	Collet Capacities for Round Work	Ship. Wt.	Price Each Collet
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#### COLLETS WITH STANDARD HOLE SIZES FOR ROUND WORK State capacity of each collet wanted.

CE2825	3	9"	1/16" to 1/2" in 16ths.	6 ozs.	\$2.20
CE2826	6K	10-K	1/16" to 3/8" in 16ths.	8 ozs.	2.55
CE2827	2	10" & 13" - 1 1/4" Col.	1/16" to 1 1/8" in 16ths.	8 ozs.	2.85
CE2829	4	14 1/2" - 3/4" Col.	1/16" to 3/4" in 16ths.	8 ozs.	3.00
CE2828	5	10", 13", 14 1/2", 16", 16-24" & 2-H 1 1/4" Col.	1/16" to 1 1/8" in 16ths.	1 lb.	3.55



**E** COLLET BOXES Collets will retain their accuracy indefinitely if protected from accidental damage, dirt, abrasive dust, and corrosion. Keep each collet in one of these substantial plastic boxes with time-saving transparent lid through which the collet size can be easily read. Boxes are square and can be stacked neatly on shelf as shown in illustration. Can also be used for other makes not larger than No. 5 South Bend. See diagram on page 39. These boxes are 1 1/4" diameter x 2 3/4" deep on inside and are ideal for keeping small tools and parts of all kinds.

Cat. No.	Description	Ship. Wt.	Price
CE2190	One Collet Box	1 lb.	\$ .25
CE2191	Lot of 10 Collet Boxes	3 lbs.	2.25
CE2192	Lot of 20 Collet Boxes	5 lbs.	4.25
CE2193	Lot of 50 Collet Boxes	14 lbs.	8.75

### COLLETS FOR SQUARE AND HEXAGONAL WORK

**B** Collets for holding square and hexagonal stock can be supplied by South Bend Lathe.

These collets are made in sixteenths from 1/8" across flats up to a maximum capacity shown in table. State capacity of each collet wanted.

Collet No.	Ship. Wt.	Collets for Square Work		
		Max. Cap.	←R-S-B→ Steel Cat. No.	Price Each
3	6 ozs.	5/16"	CE3080	\$9.75
6K	8 ozs.	3/8"	CE3081	9.75
2	8 ozs.	7/16"	CE3082*	10.00
4	8 ozs.	1/2"	CE3083*	10.00
5	1 lb.	1 1/16"	CE3084	10.25

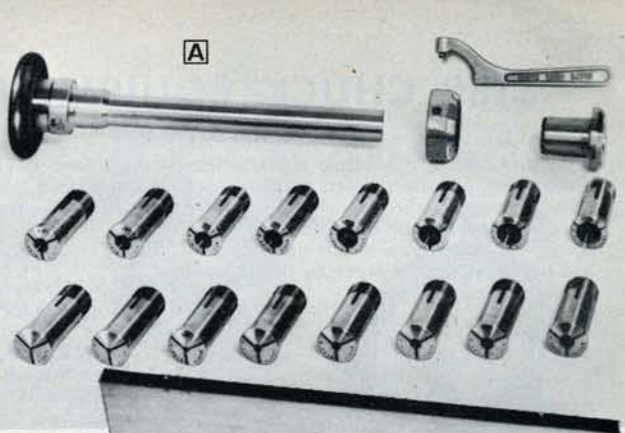
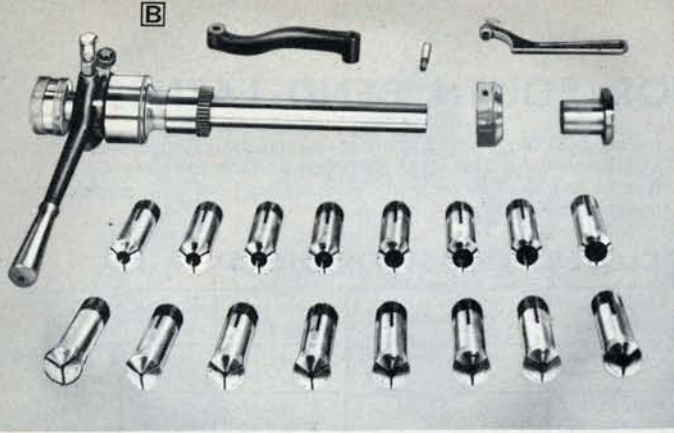
Collet No.	Ship. Wt.	Collets for Hexagon Work		
		Max. Cap.	←R-S-B→ Steel Cat. No.	Price Each
3	6 ozs.	7/16"	CE3085	\$9.75
6K	8 ozs.	1/2"	CE3086	9.75
2	8 ozs.	9/16"	CE3087*	10.00
4	8 ozs.	5/8"	CE3088*	10.00
5	1 lb.	3/4"	CE3089	10.25

### FOR ECONOMY AND CONVENIENCE BUY COLLETS IN COMPLETE SETS

**D** Collets for South Bend Lathes can be supplied in sets as listed in the tabulation. A complete set of collets is especially helpful for toolroom and maintenance work. Often the time saved in getting out a single rush job without having to wait for a collet to come from the factory will more than compensate for the cost of a full set of collets. Each collet is individually packed in a plastic box with transparent lid.

Collet No.	Collets in Set	Ship. Wt. Lbs.	Sizes of Collets	Brass Collets		←R-S-B→ Collets	
				Catalog No.	Price	Catalog No.	Price
3	8	3	1/16" to 1/2" in 16ths.	CE2235	\$17.25	CE3065	\$39.60
	7	3	3/32" to 1 1/32" in odd 32nds			CE3066	34.65
	14	6	3/64" to 3 1/64" in odd 64ths			CE3067	68.60
6K	10	7	1/16" to 3/8" in 16ths.	CE2485	25.00	CE3068	50.95
	9	7	3/32" to 1 1/32" in odd 32nds			CE3069	45.85
	18	12	3/64" to 3 3/64" in odd 64ths			CE3070	90.00
2	11	6	1/16" to 1 1/16" in 16ths.	CE2238	30.40	CE3071	56.00
	10	6	3/32" to 2 1/32" in odd 32nds			CE3072	51.45
	20	12	3/64" to 4 3/64" in odd 64ths			CE3073	101.85
4	12	7	1/16" to 3/4" in 16ths.	CE2244	34.90	CE3074	65.75
	11	7	3/32" to 2 3/32" in odd 32nds			CE3075	60.30
	22	12	3/64" to 4 3/64" in odd 64ths			CE3076	119.35
5	16	11	1/16" to 1" in 16ths.	CE2241	55.10	CE3077	93.15
	15	11	3/32" to 2 1/32" in odd 32nds			CE3078	87.30
	30	20	3/64" to 4 3/64" in odd 64ths			CE3079	172.80





**YOU GET MORE FOR YOUR MONEY WHEN YOU BUY COMPLETE COLLET EQUIPMENT WITH YOUR COLLET ATTACHMENT**

**A HANDWHEEL COLLET ATTACHMENT WITH COLLETS.**  
 You can save time and money by ordering your collet attachment complete with collets as listed below. Prices include Handwheel Collet Attachment with complete set of ←R-5-B← Collets in sixteenths, in sizes from 1/16" capacity up to the maximum capacity shown in table. Each collet packed in individual plastic case. Additional collet sets in 32nds and 64ths may be selected from page 40.

Catalog Number	Size of Lathe	Number of Collets	Max. Collet Cap.	Shipping Weight	Price f.o.b. Factory
CL5417N	9"	8	1/2"	9 lbs.	\$ 61.00
CL5417K	10K	10	3/8"	10 lbs.	75.00
CL5417R	10"—1 1/16" Collet	11	1 1/16"	24 lbs.	113.50
CL5417L	10"—1 1/8" Collet	16	1"	28 lbs.	153.50
CL5417Q	13"—1 1/8" Collet	16	1"	33 lbs.	158.50
CL5417M	14 1/2"—1 1/8" Collet	16	1"	35 lbs.	163.50
CL5417H	16", 16-24", & 2-H 1 1/8" Collet	16	1"	35 lbs.	166.50

**B HANDLEVER COLLET ATTACHMENT WITH COLLETS.**  
 To be complete, your collet equipment should include a set of collets in sixteenths. Delay caused by waiting for a missing collet size can be more costly than the complete equipment. Prices include handlever collet attachment with a complete set of ←R-5-B← Collets in sixteenths, in sizes from 1/16" capacity up to the maximum capacity shown in table. Each collet packed in individual plastic case. Additional collet sets in 32nds and 64ths may be selected from page 40. Also collets for square and hexagonal work.

Catalog Number	Size of Lathe	Number of Collets	Max. Collet Cap.	Shipping Weight	Price f.o.b. Factory
CL5418N	9"	8	1/2"	14 lbs.	\$128.00
CL5418K	10K	10	3/8"	15 lbs.	155.50
CL5418R	10"—1 1/16" Collet	11	1 1/16"	29 lbs.	181.50
CL5418L	10"—1 1/8" Collet	16	1"	35 lbs.	230.50
CL5418Q	13"—1 1/8" Collet	16	1"	44 lbs.	246.00
CL5418M	14 1/2"—1 1/8" Collet	16	1"	51 lbs.	260.00
CL5418H	16", 16-24", & 2-H 1 1/8" Collet	16	1"	52 lbs.	274.50

**SPECIAL COMBINATION SETS FOR 9" SWING LATHES**

**C COLLET CHEST AND COLLETS.** Chest is made of wood and is supplied fitted with the handwheel type collet attachment for the 9-inch South Bend Lathe and various assortments of ←R-5-B← steel or brass collets. Space is provided for a full set of 29 collets, regardless of the number of collets included in the price of each of the smaller assortments. This permits adding collets as desired until a full set is acquired.

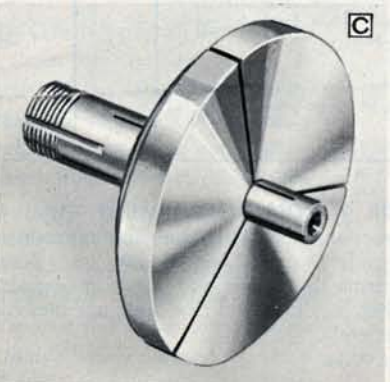
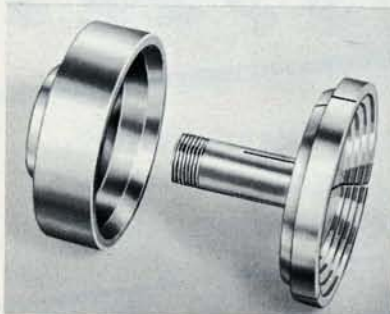
Cat. No.	Description	Ship. Wt. Lbs.	Price
CE2233	Collet chest, 9" handwheel collet attachment, 29 ←R-5-B← Steel Collets for round work, 1/16" to 1/2" in 64ths.....	14	\$173.00
CE2234	Collet chest, 9" handwheel collet attachment, 8 ←R-5-B← Steel Collets for round work, 1/16" to 1/2" in 16ths.....	12	71.00
CE2293	Collet chest, 9" handwheel collet attachment, 8 Brass Collets for round work, 1/16" to 1/2" in 16ths.....	12	49.00

**D CHEST ONLY FOR 9" COLLET EQUIPMENT.** This is a well-constructed wooden chest for holding the handwheel collet attachment and up to 29 collets for a 9-inch South Bend Lathe. Hinged lid protects the collets and collet attachment from dust and dirt when not in use. Price does not include collet attachment or collets.  
 CE2225 Shipping weight 7 lbs..... \$10.85



# STEP CHUCK EQUIPMENT FOR SOUTH BEND LATHES

The step chuck is similar to regular collets, except that it is designed for holding larger diameters. A step chuck closer with an internal taper screws onto the threaded lathe spindle nose. As the step chuck is drawn back into the closer by the draw-bar of the collet attachment, the three jaws of the step chuck are tightened on the work by the taper in the step chuck closer.



The work is rigidly supported and can be chucked quickly and accurately. The large gripping surface prevents distortion of thin walled parts such as tubing, and also prevents marring the work.

## CLOSERS FOR STEP CHUCKS

**A** A closer is required for each size of step chuck, except for the 2" size which fits directly into the collet sleeve in the equipment of the collet attachment. Closers are threaded to fit spindle nose of lathe.

Catalog Number	Size Lathe	Takes Step Chuck Sizes	Shipping Weight	Price
CL6309NK CL6311NK	9" & 10-K	3" and 4" 5" and 6"	3 lbs. 5 lbs.	\$ 6.60 10.30
CL6309R CL6311R	10"—1 1/8" Collet	3" and 4" 5" and 6"	4 lbs. 5 lbs.	7.70 11.45
CL6309LQ CL6311LQ	10" and 13" 1 1/8" Collet	3" and 4" 5" and 6"	4 lbs. 6 lbs.	9.75 13.20
CL6309MH CL6311MH	14 1/2", 16", 16-24" & 2-H 1 1/8" Collet	3" and 4" 5" and 6"	5 lbs. 7 lbs.	10.90 15.25

## FINISHED STEP CHUCKS

**B** Finished step chucks have 4 to 6 steps which are finished to the diameters indicated in table below. Steps are 1/16" deep, and may be remachined as required to any larger diameter up to the maximum capacity of the step chuck.

Cat. No.	Size Lathe	Nominal Size	Diameters of Steps	Ship. Wt.	Price
CE5960*	9"	2"	2", 1 3/4", 1 1/2", 1"	2 lbs.	\$12.65
CE5961		3"	3", 2 3/4", 2 1/2", 2 1/4", 2", 1 1/2"	3 lbs.	18.10
CE5962		4"	4", 3 1/2", 3 1/4", 3", 2 3/4", 2 1/2"	5 lbs.	20.85
CE5963		5"	5", 4 1/2", 4", 3 1/2", 3 1/4", 3"	8 lbs.	24.20
CE5964		6"	6", 5 1/2", 5", 4 1/2", 4 1/4", 4"	12 lbs.	27.75
CE5965*	10-K	2"	2", 1 3/4", 1 1/2", 1"	3 lbs.	13.20
CE5966		3"	3", 2 3/4", 2 1/2", 2 1/4", 2", 1 1/2"	4 lbs.	18.60
CE5967		4"	4", 3 1/2", 3 1/4", 3", 2 3/4", 2 1/2"	6 lbs.	21.20
CE5968		5"	5", 4 1/2", 4", 3 1/2", 3 1/4", 3"	8 lbs.	24.20
CE5969		6"	6", 5 1/2", 5", 4 1/2", 4 1/4", 4"	12 lbs.	27.75
CE5970*	10"—1 1/8" Col.	2"	2", 1 3/4", 1 1/2", 1"	4 lbs.	13.50
CE5971		3"	3", 2 3/4", 2 1/2", 2 1/4", 2", 1 1/2"	4 lbs.	18.60
CE5972		4"	4", 3 1/2", 3 1/4", 3", 2 3/4", 2 1/2"	5 lbs.	21.20
CE5973		5"	5", 4 1/2", 4", 3 1/2", 3 1/4", 3"	9 lbs.	24.75
CE5974		6"	6", 5 1/2", 5", 4 1/2", 4 1/4", 4"	13 lbs.	27.75
CE5975*	10", 13", 14 1/2", 16", 16-24", & 2-H 1 1/8" Collet	2"	2", 1 3/4", 1 1/2", 1"	4 lbs.	14.05
CE5976		3"	3", 2 3/4", 2 1/2", 2 1/4", 2", 1 1/2"	4 lbs.	19.55
CE5977		4"	4", 3 1/2", 3 1/4", 3", 2 3/4", 2 1/2"	5 lbs.	22.05
CE5978		5"	5", 4 1/2", 4", 3 1/2", 3 1/4", 3"	9 lbs.	25.25
CE5979		6"	6", 5 1/2", 5", 4 1/2", 4 1/4", 4"	13 lbs.	27.75

\*This step chuck fits directly into collet sleeve and does not require a closer.

## STEP CHUCK BLANKS

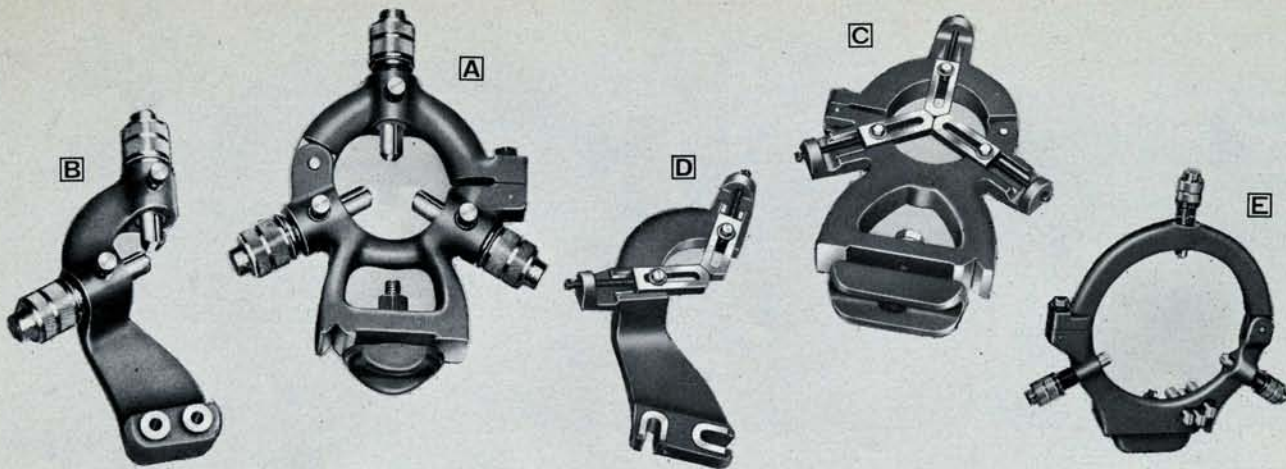
**C** Extreme precision can be attained by mounting a step chuck blank in the closer of the lathe on which it is to be used and machining either multiple steps or a single cavity to receive the work. The cavity obviously will run dead true and should chuck the work to be machined with perfect concentricity.

Step chuck blanks are made in various sizes having a maximum capacity of 2", 3", 4", 5", and 6" respectively. The 2" size fits directly into the collet sleeve and does not require a closer, but all other sizes must be used with a closer of required size.

Catalog Number	Size Lathe	Nominal Size	Max. Cap.	Shipping Weight	Price
CE5916*	9"	2"	2"	2 lbs.	\$ 9.50
CE5917		3"	3"	3 lbs.	13.00
CE5918		4"	4"	5 lbs.	16.00
CE5919		5"	5"	8 lbs.	19.45
CE5920		6"	6"	12 lbs.	22.30
CE5936*	10-K	2"	2"	3 lbs.	10.10
CE5937		3"	3"	4 lbs.	14.30
CE5938		4"	4"	6 lbs.	16.45
CE5939		5"	5"	8 lbs.	19.65
CE5940		6"	6"	12 lbs.	22.30
CE5921*	10"—1 1/8" Collet	2"	2"	4 lbs.	10.35
CE5922		3"	3"	4 lbs.	14.30
CE5923		4"	4"	5 lbs.	16.45
CE5924		5"	5"	9 lbs.	19.65
CE5925		6"	6"	13 lbs.	22.30
CE5926*	10", 13", 14 1/2", 16", 16-24", & 2-H 1 1/8" Collet	2"	2"	4 lbs.	10.90
CE5927		3"	3"	4 lbs.	14.90
CE5928		4"	4"	5 lbs.	17.70
CE5929		5"	5"	9 lbs.	20.80
CE5930		6"	6"	13 lbs.	22.30

\*This step chuck fits directly into collet sleeve and does not require a closer.





## STEADY RESTS AND FOLLOWER RESTS

**A TELESCOPING JAW STEADY REST.** This is an improved design which provides quicker, easier and more efficient operation. Principal features are wrenchless adjustment and locking of the telescoping jaws. Each jaw has a large knurled knob for adjusting the jaw position, and a thumb screw for locking. An ingeniously designed double acting compound screw thread provides approximately  $\frac{3}{16}$ " jaw movement for each revolution of the adjusting knob.

The jaws are made of brass and slide through precision steel sleeves which are pressed into the supporting frame. Manufactured to close tolerances throughout, the jaws and other parts are replaceable. The top of the steady rest is hinged to facilitate inserting and removing shafts.

The Steady Rest is clamped to the inside bed ways, and is used to support long, slender shafts mounted between the lathe centers. It is also used to support the outer end of a bar or shaft in such a way that it may be drilled, bored, reamed, etc., with tools mounted in the tailstock or in the tool post of the lathe.

Catalog Number	Size Lathe	Maximum Capacity	Minimum Capacity	Shipping Weight	Price
CL2400N	9 inch	3 in.	$\frac{3}{16}$ in.	11 lbs.	\$20.70
CL2400K	10-K	3 in.	$\frac{3}{16}$ in.	11 lbs.	20.85
CL2400R	10 inch	3 in.	$\frac{3}{16}$ in.	13 lbs.	21.90
CL2400T	13 inch	$3\frac{3}{4}$ in.	$\frac{3}{16}$ in.	21 lbs.	27.50
CL2400F	$14\frac{1}{2}$ inch	$4\frac{3}{4}$ in.	$\frac{3}{16}$ in.	28 lbs.	33.00
CL2400H	16" & 2-H	$4\frac{3}{4}$ in.	$\frac{3}{16}$ in.	30 lbs.	35.00
CL2400V	16-24"	$4\frac{3}{4}$ in.	$\frac{3}{16}$ in.	47 lbs.	44.50

**B TELESCOPING JAW FOLLOWER REST.** Has the same improved design for adjusting and locking the jaws as described above for the Telescoping Jaw Steady Rest. The follower rest is attached to the lathe carriage and travels with the carriage. It is used to support long, slender shafts while being machined between the lathe centers.

Catalog Number	Size Lathe	Maximum Capacity	Minimum Capacity	Shipping Weight	Price
CL2395N	9 inch	2 in.	$\frac{3}{16}$ in.	7 lbs.	\$12.90
CL2395K	10-K	2 in.	$\frac{3}{16}$ in.	7 lbs.	13.00
CL2395R	10 inch	$2\frac{1}{2}$ in.	$\frac{3}{16}$ in.	9 lbs.	14.00
CL2395T	13 inch	$3\frac{3}{4}$ in.	$\frac{3}{16}$ in.	11 lbs.	16.65
CL2395F	$14\frac{1}{2}$ inch	$4\frac{3}{4}$ in.	$\frac{3}{16}$ in.	15 lbs.	19.75
CL2395H	16" & 2-H	$4\frac{3}{4}$ in.	$\frac{3}{16}$ in.	17 lbs.	20.40
CL2395V	16-24"	$4\frac{3}{4}$ in.	$\frac{3}{16}$ in.	21 lbs.	26.65

**C REGULAR JAW STEADY REST.** Clamps onto the inside ways of the lathe bed and is used for supporting long shafts, boring spindles, etc. The top of the steady rest is hinged to facilitate inserting and removing shafts. The regular jaw steady rest is ruggedly designed to provide a rigid support for the work. The jaws are made of cast iron, are machined all over and have adjusting screws and lock screws for setting and securing them in the desired position.

Catalog Number	Size Lathe	Maximum Capacity	Minimum Capacity	Shipping Weight	Price
CL1177N	9 inch	3 in.	$\frac{1}{4}$ in.	10 lbs.	\$11.30
CL1177K	10-K	3 in.	$\frac{1}{4}$ in.	11 lbs.	Not Made
CL1177R	10 inch	3 in.	$\frac{1}{4}$ in.	11 lbs.	16.30
CL1177T	13 inch	$3\frac{3}{4}$ in.	$\frac{3}{8}$ in.	19 lbs.	20.75
CL1177F	$14\frac{1}{2}$ inch	$4\frac{3}{4}$ in.	$\frac{3}{8}$ in.	27 lbs.	25.20
CL1177H	16" & 2-H	$4\frac{3}{4}$ in.	$\frac{3}{8}$ in.	29 lbs.	28.35
CL1177V	16-24 inch	$4\frac{3}{4}$ in.	$\frac{3}{8}$ in.	47 lbs.	38.60

**D REGULAR JAW FOLLOWER REST** is attached to the lathe carriage and travels with the carriage. The Follower Rest is used to support long, slender shafts while being machined between the lathe centers. Slots used for attaching follower rest to carriage permit attaching or removing quickly as it is not necessary to remove the screws from the saddle. Design, adjustment and construction of jaws are same as for regular jaw steady rest, as described above.

Catalog Number	Size Lathe	Maximum Capacity	Minimum Capacity	Shipping Weight	Price
CL1353N	9 inch	2 in.	$\frac{3}{16}$ in.	4 lbs.	\$ 7.35
CL1353K	10-K	2 in.	$\frac{3}{16}$ in.	4 lbs.	Not Made
CL1353R	10 inch	$2\frac{1}{2}$ in.	$\frac{3}{16}$ in.	6 lbs.	11.30
CL1353T	13 inch	$3\frac{3}{4}$ in.	$\frac{3}{16}$ in.	9 lbs.	12.60
CL1353F	$14\frac{1}{2}$ inch	$4\frac{3}{4}$ in.	$\frac{3}{16}$ in.	12 lbs.	14.95
CL1353H	16" & 2-H	$4\frac{3}{4}$ in.	$\frac{3}{16}$ in.	13 lbs.	16.30
CL1353V	16-24 inch	$4\frac{3}{4}$ in.	$\frac{3}{16}$ in.	18 lbs.	23.35

**E EXTRA LARGE STEADY REST.** Similar to the Telescoping Jaw and Regular Jaw Steady Rests, but with greater capacity for supporting large diameter work.

Cat No.	Lathe	Capacity	Ship. Wt.	Price
<b>Telescoping Jaw Extra Large Steady Rest</b>				
CL2266H	16" & No. 2-H	$4\frac{3}{4}$ " to $10\frac{3}{4}$ "	65 lbs.	\$ 64.50
CL2266V	16-24"	$4\frac{3}{4}$ " to $10\frac{3}{4}$ "	85 lbs.	74.50
<b>Regular Style Extra Large Steady Rest</b>				
CL2258H	16" & No. 2-H	5" to 11"	75 lbs.	\$ 48.25
CL2258V	16-24"	5" to 11"	95 lbs.	59.50





## HAND AND POWER FEED BED TURRETS Save Time on Repetitive Operations

**A HAND FEED BED TURRET** for 16" Lathe. This turret converts any 16" swing South Bend Lathe into an efficient hand feed turret lathe for economical manufacturing. The turret is mounted on the inside bed ways in place of the tailstock. Turret slide feed is hand-operated by turning the large turnstile which operates a rack and pinion mechanism. No power feed is available.

The turret head is hexagonal in shape, having six accurately machined faces. It indexes automatically when the turret slide is returned to the starting position. An individual feed stop is provided for each face of the turret. The stop accurately regulates the length of the cut. The turret head may be back indexed or spun when it is desired to skip tool positions.

Accurate indexing (within plus or minus .0005" measured 4" from turret face) is assured by the use of a hardened, ground, and superfinished index pin which operates in heat-treated steel bushings. The indexing bushings are replaceable. The main central bearing is tapered for adjustment. The turret head is locked securely in position by a substantial binder. The turret slide has tapered gibs on both sides which provide adjustment for wear and alignment. Ram lock is provided.

Effective feed of turret slide 8 $\frac{7}{8}$ ". Center of turret hole to top of turret slide 2 $\frac{1}{2}$ ". Takes standard turret tools with 1 $\frac{1}{2}$ " diameter shank. Distance between opposite turret flats is 9 $\frac{3}{8}$ ". When turret is ordered separate from lathe, the purchaser must assume the responsibility of fitting and boring.

**CL1917H.** Hand Feed Turnstile Bed Turret for 16" South Bend Lathe. Ship. wt. 505 lbs. Price..... **\$782.00**

**B HAND AND POWER FEED BED TURRETS** for 13" Lathe. Power feed turret is illustrated, hand feed turret is similar but does not have power feeds for the turret slide. Effective feed of turret slide is 6 $\frac{1}{2}$ ". Turret head revolves on a precision ball bearing and has six 1" diameter holes for tools. Turret head indexes to within plus or minus .0005" measured 4" from turret face and locks automatically on the return stroke of the turret slide. Turret ram lock is provided. Clearance from center of tool hole to top of turret slide is 1 $\frac{7}{8}$ ".

Power feed turret has three feed changes in turret apron which, with gear box on lathe, provide 144 feeds .0006" to .0193". Lever shift gears in turret apron provide quick selection of fast, intermediate or slow feeds. Direction of feed is reversed by changing gears in turret apron.

When ordered separate from lathe, customer must assume responsibility of fitting and boring, however, the design of this turret is such that relatively little fitting is required for either the power feed type or hand feed type. Mounting instructions furnished with each turret.

**CL1917T.** Hand Feed Turnstile Bed Turret for 13" South Bend Lathe. Approx. ship.wt. 346 lbs. Price..... **\$578.00**

**CL2620T.** Power Feed Turnstile Bed Turret for 13" South Bend Lathe. Approx. ship. wt. 414 lbs. Price..... **\$800.00**

**C HANDLEVER BED TURRETS** for 9", 10", and 13" lathes. These turrets mount on the inside bed ways and can be locked in position at any point along the length of the bed. The turret head indexes automatically when the feed lever is pushed to the extreme right. Each face of the turret has an independently adjustable feed stop screw which accurately regulates the length of the cut. Ram lock is provided.

Accurate indexing of the turret head (within plus or minus .0005" measured 4" from turret face) is assured by the use of hardened, ground, and superfinished index pin which operates in heat-treated steel bushings.

The effective feed of the turret slide is 4". Center of turret hole to top of turret slide 1 $\frac{1}{2}$ ". Takes standard turret tools with  $\frac{5}{8}$ " diameter shank\*. Distance between opposite flats on turret head is 4 $\frac{7}{8}$ ". When turret is ordered separate from lathe, the purchaser must assume the responsibility of fitting turret to lathe and boring turret head.

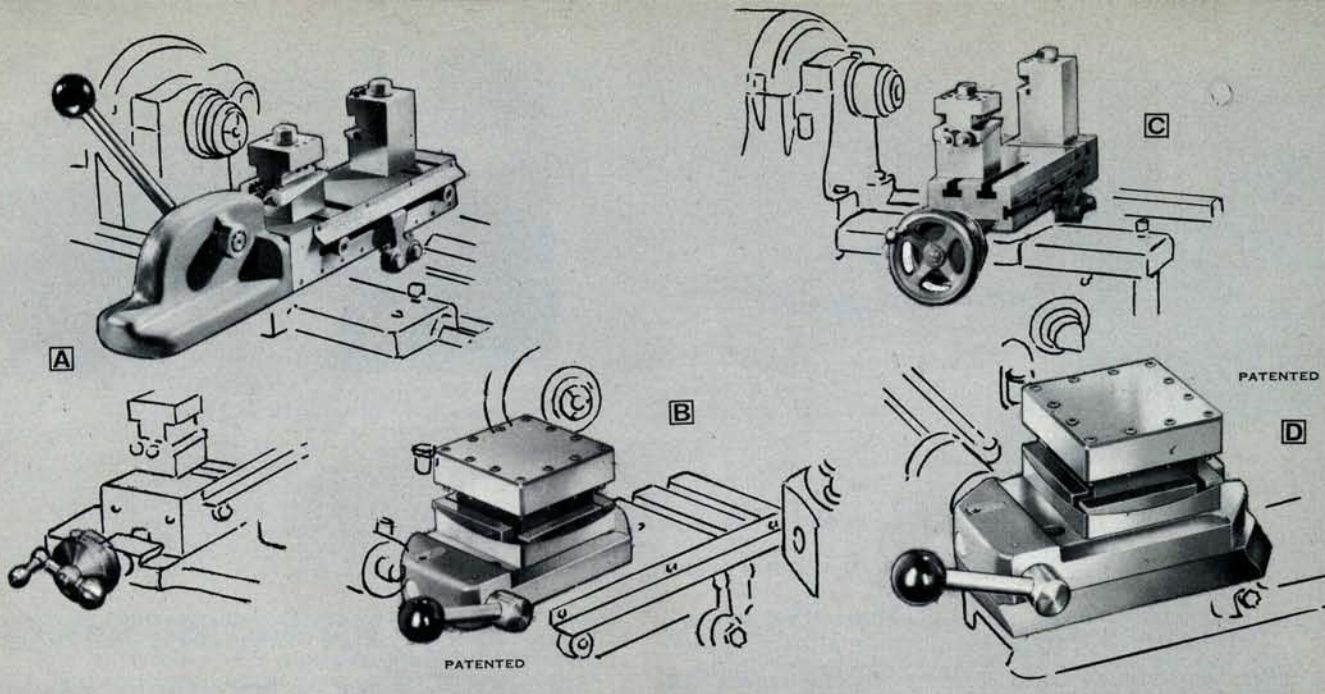
Catalog Number	Size Lathe	Shipping Weight	Price
CL1611N	9"	76 lbs.	\$307.00
CL1611K	10-K	76 lbs.	315.00
CL1611R	10"	83 lbs.	336.00
CL1611T	13"	130 lbs.	368.00

\*Can be supplied to order with  $\frac{3}{4}$ " holes in turret face. No extra charge.

**D HANDLEVER TURRET, Tailstock Type, for 9", 10", and 13" Lathes.** This handlever turret is mounted on the lathe bed in place of the tailstock. The turret head has six holes for tools with  $\frac{5}{8}$ " diameter shanks. Adjustable stops are provided for each of the six turret holes. The turret head is geared to the stop roll so that the stop is brought in line with each stop screw as the corresponding tool in the turret head is revolved to the working position. The indexing mechanism is of high carbon heat-treated steel. Index lock releases automatically at the end of the return movement of the turret slide. The turret head is revolved by hand. The maximum length of stroke is 3 $\frac{3}{4}$  inches. When ordered separate from lathe, purchaser must assume the responsibility of fitting and boring.

Cat. No.	Size Lathe	Shipping Weight	Price
CL2045N	9"	50 lbs.	\$149.00
CL2045K	10-K	50 lbs.	154.00
CL2045R	10"	60 lbs.	169.00
CL2045T	13"	90 lbs.	198.00





## SQUARE TURRETS • DOUBLE TOOL SLIDES

### Speed Production for Greater Profits

**A COMBINATION DOUBLE TOOL SLIDE** for 9", 10-K and 10" Lathes. This combination Handlever and Screw Feed Double Tool Cross Slide is mounted on the saddle cross slide dovetail in place of the compound rest assembly. It does not interfere with the power longitudinal carriage feeds. The power cross-feed can be used by removing the handlever and replacing it with the cross-feed screw. Cross-feed nut is supplied for either English or metric pitch thread. Adjustable stops limit the movement of the cross slide in either direction, in or out. Handlever can be used on either side.

This cross slide has front and back square tool blocks in which  $\frac{3}{8}$ " square cutter bits can be mounted. T-slots in the cross slide base permit adjusting the positions of the tool blocks. The front tool block takes two cutter bits, and the back tool block takes one cutter bit. Tapered wedges and thumb screws provide adjustment for the height of cutter bits.

Cat. No.	Size Lathe	Swing over Cross Slide	Cross Feed	Ship. Wt.	Price*
CL2030N	9"	3 $\frac{3}{8}$ "	ENGLISH	36 lbs.	\$103.50
CL2030K	10-K	3 $\frac{3}{8}$ "		37 lbs.	109.50
CL2030R	10"	3 $\frac{3}{8}$ "		45 lbs.	121.00
CL2030NME	9"	3 $\frac{3}{8}$ "	METRIC	36 lbs.	103.50
CL2030KME	10-K	3 $\frac{3}{8}$ "		37 lbs.	109.50
CL2030RME	10"	3 $\frac{3}{8}$ "		45 lbs.	121.00

\*Can be supplied less handlever at lower prices. Write for information.

**B SQUARE TURRETS** for Double Tool Cross Slides. Designed for use only on screw feed double tool cross slide. Cannot be used with handlever feed or with compound rest cross slide.

Four cutting tools can be mounted in the turret tool block. The turret indexes accurately, permitting each tool to be used in sequence for rough turning, finish turning, facing, boring, cutting-off, or other operations as required. A quick acting lever locks the turret securely in each of the four positions. Rocker adjustment is provided for adjusting the height of the cutting edge of each tool.

Catalog Number	Size of Lathe	Size Square	Takes Tools	Ship. Weight	Price
CL3376NR	9" and 10"	3"	$\frac{3}{8}$ " x $\frac{3}{8}$ "	10 lbs.	\$44.75
CL3376K	10-K	3"	$\frac{3}{8}$ " x $\frac{3}{8}$ "	11 lbs.	46.00
CL3376T	13"	3"	$\frac{3}{8}$ " x $\frac{3}{8}$ "	20 lbs.	61.00
CL3376H	16" & No. 2-H	4"	$\frac{3}{8}$ " x $\frac{3}{8}$ "	28 lbs.	89.50

**C SCREW FEED DOUBLE TOOL SLIDE** for 13" and 16" Lathes.

This cross slide fits on the saddle dovetail in place of the compound rest assembly. The cross-feed may be operated by power through the friction clutch in the apron, as well as by the cross-feed handwheel. A large diameter micrometer graduated collar permits adjusting the cutting tools with extreme precision. Cross-feed screw and graduations are supplied in either English or metric system.

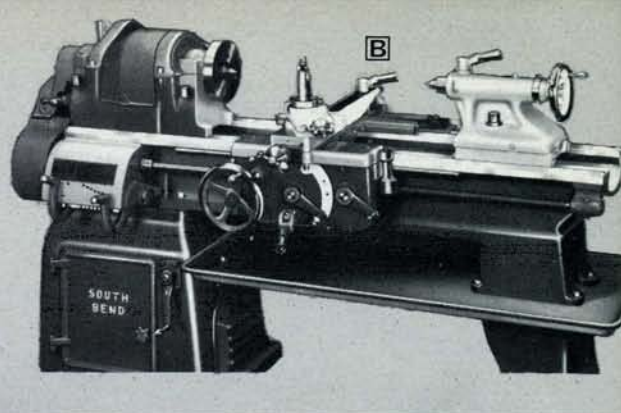
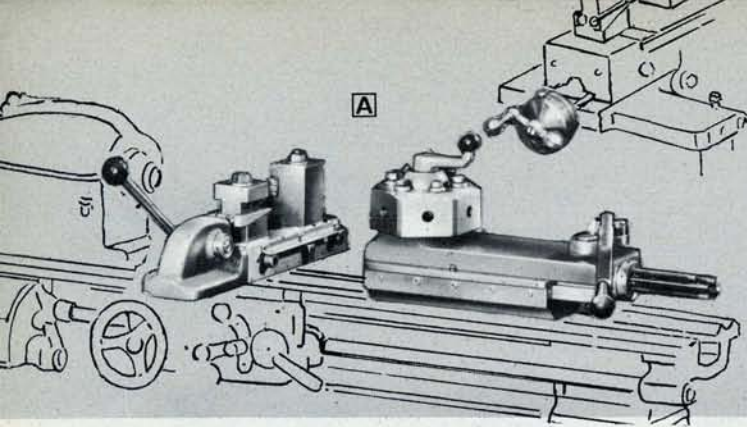
Adjustable stops are provided for locating the position of the front and rear tools for repetitive operations. See page 47 for four-position stop. The front tool block takes two square cutter bits and the back tool block takes one square cutter bit. Tapered wedges are provided for adjusting the height of the cutter bits. T-slots in the cross slide base are provided for adjusting the position of the tool blocks. Should be ordered with the lathe. Cannot be used on lathe with taper attachment.

Catalog Number	Size Lathe	Swing over Cross Slide	Cross-Feed	Size Bit	Shipping Weight	Price
CL2027T	13"	6 $\frac{7}{8}$ "	ENGLISH	$\frac{7}{16}$ " sq.	60 lbs.	\$179.50
CL2027H	16"	6 $\frac{7}{8}$ "		$\frac{3}{8}$ " sq.	95 lbs.	195.00
CL2027TME	13"	6 $\frac{7}{8}$ "	METRIC	$\frac{7}{16}$ " sq.	60 lbs.	179.50
CL2027HME	16"	6 $\frac{7}{8}$ "		$\frac{3}{8}$ " sq.	95 lbs.	195.00

**D SQUARE TURRET** for Compound Rest Cross Slide. This turret fits onto the base of the compound rest. It cannot be used on the double tool cross slide. Four cutting tools can be mounted in the turret tool block. The turret indexes accurately, permitting each tool to be used in sequence for rough turning, finish turning, facing, boring, cutting-off, or other operations as required. A quick acting lever locks the turret securely in each of the four positions. Rocker adjustment is provided for adjusting the height of the cutting edge of each tool.

Catalog Number	Size of Lathe	Size Square	Takes Tools	Shipping Weight	Price
CL3375N	9"	3"	$\frac{3}{8}$ " x $\frac{3}{8}$ "	13 lbs.	\$50.50
CL3375K	10-K	3"	$\frac{3}{8}$ " x $\frac{3}{8}$ "	14 lbs.	54.50
CL3375R	10"	3"	$\frac{3}{8}$ " x $\frac{3}{8}$ "	15 lbs.	55.75
CL3375T	13"	3"	$\frac{3}{8}$ " x $\frac{3}{8}$ "	24 lbs.	62.00
CL3375F	14 $\frac{1}{2}$ "	4"	$\frac{3}{8}$ " x $\frac{3}{8}$ "	36 lbs.	89.50
CL3375H	16" and 16-24"	4"	$\frac{3}{8}$ " x $\frac{3}{8}$ "	40 lbs.	96.50





## TURRET LATHE CONVERSION UNITS

For All 9" and 10-K South Bend Lathes

**A** Any South Bend 9" or 10-K Lathe, either bench or floor type, can be supplied as a turret lathe with handle lever bed turret and combination handle lever or screw feed double tool cross slide in lieu of the regular tailstock and compound rest assemblies. When this equipment is wanted, Turret Lathe Conversion Units as listed below must be specified when the lathe is ordered.

### HANDLEVER BED TURRET

The handle lever Bed Turret mounts on the inside bed ways and can be locked in position at any point along the length of the bed. The turret head indexes automatically when the feed lever is pushed to the extreme right. Each face of the turret has an independently adjustable feed stop screw which accurately regulates the length of the cut.

Accurate indexing of the turret head (within plus or minus .0005" measured 4" from the turret face) is assured by the use of hardened, ground and superfinished index pin which operates in heat-treated steel bushings.

The effective feed of the turret slide is 4". Turret ram slide lock is provided. Center of turret hole to top of turret slide 1 1/2". Turret holes take standard turret tools with 5/8" diameter shank. If specified when lathe is ordered, turret head can be bored to order to take tools with 3/4" diameter shank, no extra charge. Distance between opposite flats on turret head is 4 7/8".

### COMBINATION DOUBLE TOOL SLIDE

The combination Handle lever and Screw Feed Double Tool Cross Slide is mounted on the saddle cross slide dovetail in place of the compound rest assembly. The handle lever can be used on either side of the cross slide. Adjustable stops limit the movement of the cross slide in either direction, in or out. Power longitudinal carriage feeds can be used with either the handle lever cross-feed or screw cross-feed. The handle lever feed is easily removed and replaced with the screw operated cross-

feed. Power cross-feeds are available with the screw cross-feed. Cross-feed screw and nut can be supplied with either English or metric thread and graduations.

This cross slide has front and back square tool blocks in which 7/16" square cutter bits can be mounted for multiple turning, forming, facing and cutting-off operations. The front tool block takes two cutter bits and the back tool block takes one cutter bit. Tapered wedges and thumb screws provide adjustment for the height of cutter bits. Maximum swing over double tool cross slide is 3 3/8", maximum travel of cross slide 3 5/8". T-slots in the cross slide base permit adjusting the positions of the tool blocks.

### TURRET LATHE CONVERSION UNITS

Prices for Turret Lathe Conversion Units listed below are for handle lever bed turret and combination handle lever and screw feed double tool cross slide in lieu of compound rest, tailstock, centers, spindle sleeve, tool post and small face plate. Prices also include making chip pan oil tight on Self-Contained and Underneath Motor Drive Lathes, installing coolant dams and drains in lathe bed, leveling leg in lieu of regular leg for tailstock end of lathe, fitting cross slide and turret to lathe, and boring turret head. These prices apply only when Turret Lathe Conversion Units are specified when lathe is ordered. See pages 44 and 45 if turret equipment is wanted for lathes now in service.

### TURRET LATHE CONVERSION UNITS FOR 9" AND 10-K LATHES

Catalog Number	Size Lathe	Type of Drive	Price
CL3815N	9"	Horizontal Motor Drive, V-belt or flat belt	\$350
CL3816N	9"	Self-Contained Drive, V-belt or flat belt	350
CL3817N	9"	Underneath Motor Drive, V-belt or flat	350
CL3815K	10-K	Horizontal Motor Drive, V-belt or flat belt	352
CL3816K	10-K	Self-Contained Drive, V-belt or flat belt	352
CL3817K	10-K	Underneath Motor Drive, V-belt or flat	352

## SPECIAL PAINT COLORS AND STYLES

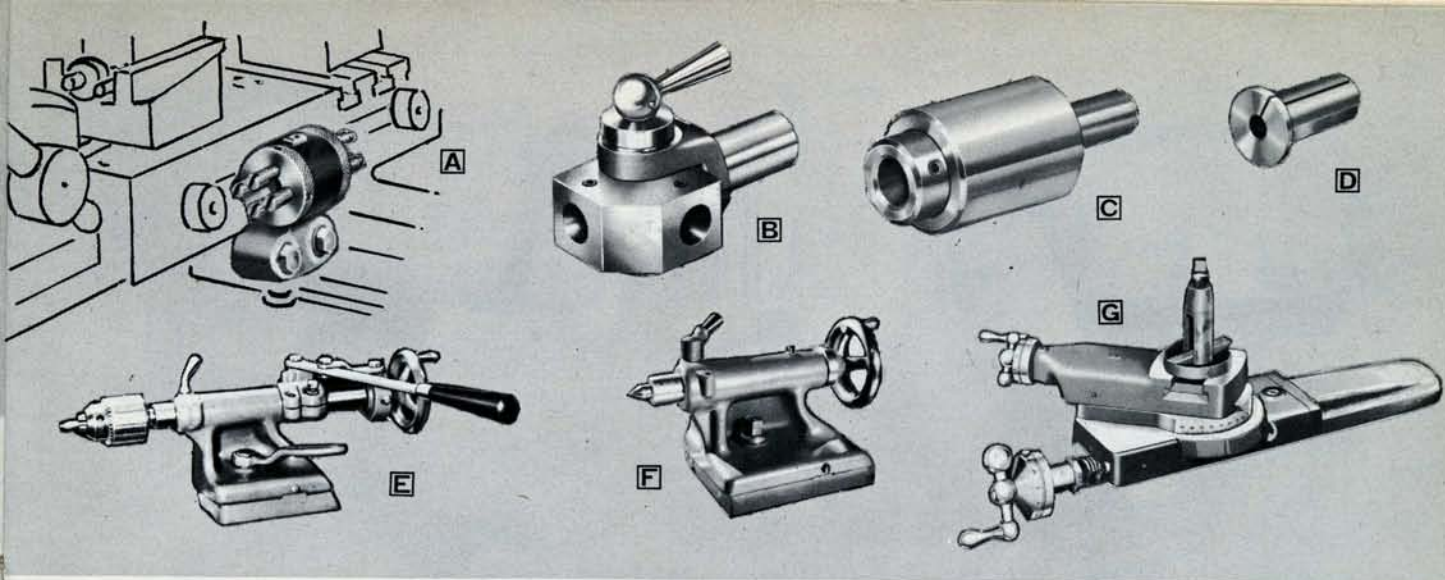
**B** South Bend Lathes and other Machine Tools can be finished to order in any special color of paint, or in any combination of two or more colors to conform with your own color code or specifications. When special colors are wanted, color samples for matching must be supplied. If certain portions of the

machinery are to be finished in different colors, clear and specific instructions indicating the exact portions for each color must be supplied. Finish enamel may be supplied by purchaser if desired, but no allowance or deduction for it can be made. Quantity required will be stated on request.

Size and Type of Machine	*17" Geared Head Lathe		2-H, 16-24", 16", 14 1/2" & 13" Lathes, Milling Machine		10" M. C. & Floor, 9" & 10-K UMD and Self-Cont. Lathes, 3 & 4 Spindle Drill Presses		9" & 10-K HMD Bench Lathes, Shaper, 1 & 2 Spindle Drill Presses	
	Cat. No.	Price	Cat. No.	Price	Cat. No.	Price	Cat. No.	Price
Colors								
One Special Solid Color	CE2857	\$ 43.00	CE2860	\$ 43.00	CE2861	\$ 29.50	CE2862	\$ 15.00
Multicolor 1st Color	CE2858	43.00	CE2863	43.00	CE2864	30.00	CE2865	15.00
Multicolor, each extra color	CE2859	31.00	CE2866	31.00	CE2867	25.00	CE2868	9.75

\*Inside of gearbox, headstock and bed painted cream. This is standard. (No changes possible.)





**A FOUR POSITION CROSS SLIDE STOP.** This stop fits onto the saddle and is used with the double tool cross slide in place of the regular cross slide stop. See page 45. It has four adjustable stops for locating positions of the cutting tools for each of four successive operations.

Cat. No.	Size Lathe	Ship. Wt.	Price
CL2154NR	9", 10-K and 10"	2 lbs.	\$15.65
CL2154T	13"	3 lbs.	15.80
CL2154H	16" and No. 2-H	3 lbs.	19.00

**B DUPLEX TURRET TOOL HOLDER.** With this tool holder two tools can be mounted on one face of the turret head. Shank of tool holder fits into turret head and tools are mounted in two holes in holder. Lever on holder is used to turn each tool to operating position as required. Adjustable stops position tool with sufficient accuracy for most drilling, reaming, or tapping operations.

Cat. No.	Shank Size		Hole Size		Ship. Wt. Pounds	Price
	Dia.	Length	Dia.	Length		
CE2666	3/8"	1 1/2"	3/8"	3/4"	4	\$33.00
CE2667	3/4"	1 1/2"	3/8"	3/4"	6	34.25
CE2668	1"	1 1/2"	3/8"	3/4"	8	35.75
CE2669	1 1/2"	2 7/8"	1"	1 1/8"	10	48.25

**C FLOATING TURRET TOOL HOLDER.** For holding drills, reamers, and similar tools in turret head. Has loose fitting drive sleeve which permits reamer to align itself with hole. Also has 60° center point inside tool hole on which tool can be supported if desired. Tool may be mounted direct in holder or with tool bushings, item "D" below.

Catalog Number	Shank Size		Hole Size		Ship. Wt. Pounds	Price
	Dia.	Length	Dia.	Length		
CE3666	3/8"	1 1/2"	3/8"	1 5/8"	3	\$ 9.55
CE3667	3/4"	1 1/2"	3/8"	1 5/8"	3	9.55
CE3668	1"	1 1/2"	3/8"	1 5/8"	3	9.55
CE3683	1 1/2"	2 13/16"	1 1/8"	2 7/8"	9	13.25

**D TOOL BUSHINGS** for mounting drills, reamers and other tools in Floating Turret Tool Holder, item "C" above.

Bore	3/8" Outside Diameter			1 1/8" Outside Diameter		
	Cat. No.	Ship. Wt.	Price	Cat. No.	Ship. Wt.	Price
1/8"	CE3669	8 ozs.	\$2.15	.....	.....	.....
3/16"	CE3670	8 ozs.	2.15	.....	.....	.....
1/4"	CE3671	8 ozs.	2.15	CE3706	12 ozs.	\$3.25
5/16"	CE3672	8 ozs.	2.15	CE3707	12 ozs.	3.25
3/8"	CE3673	8 ozs.	2.15	CE3708	12 ozs.	3.25
7/16"	CE3674	8 ozs.	2.15	CE3709	12 ozs.	3.25
1/2"	CE3675	8 ozs.	2.15	CE3710	12 ozs.	3.25
5/8"	.....	.....	.....	CE3711	12 ozs.	3.25
3/4"	.....	.....	.....	CE3712	12 ozs.	3.25
1 1/16"	.....	.....	.....	CE3713	12 ozs.	3.25
3/4"	.....	.....	.....	CE3714	12 ozs.	3.25
13/16"	.....	.....	.....	CE3715	12 ozs.	3.25
7/8"	.....	.....	.....	CE3716	12 ozs.	3.25

**E HANDLEVER TAILSTOCK.** This is a practical attachment for drilling, reaming, tapping, and centering operations. The convenient lever operation of the spindle saves much time on production work. The spindle may be set for drilling to any depth up to maximum length of feed. This tailstock is similar to the regular tailstock, except for the spindle construction. The tailstock top may be set over for taper turning. The spindle may be operated by the handlever or by turning the tailstock handwheel. This tailstock is interchangeable with the regular tailstock, and can be used for machining work between centers as well as for drilling, reaming, and tapping.

Size Lathe	Lgth. of Feed Inches	Ship. Weight Lbs.	In Lieu of Regular Tailstock		In Addition to Regular Tailstock	
			Cat. No.	Price	Cat. No.	Price
9"	2 5/8	25	CL519N	\$68.75	CL1197N	\$ 92.00
10-K	2 5/8	25	CL519K	76.25	CL1197K	103.00
10"	2 5/8	33	CL519R	81.50	CL1197R	109.25

**F REGULAR TAILSTOCK.** Prices of South Bend Turret Lathes do not include tailstock. Standard set-over type tailstock can be supplied to order. Tailstock mounts on the lathe bed, in place of the turret, for machining work between centers. Spindle is graduated and is fitted with a 60° hardened center. Tailstock has set-over for taper turning. This unit should be ordered with the lathe and fitted at the factory.

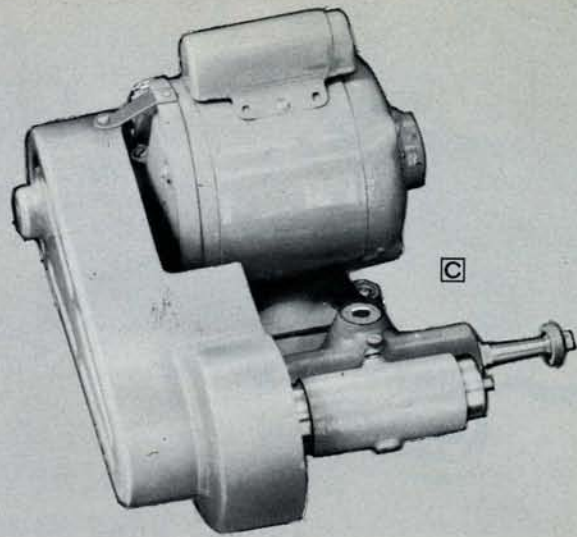
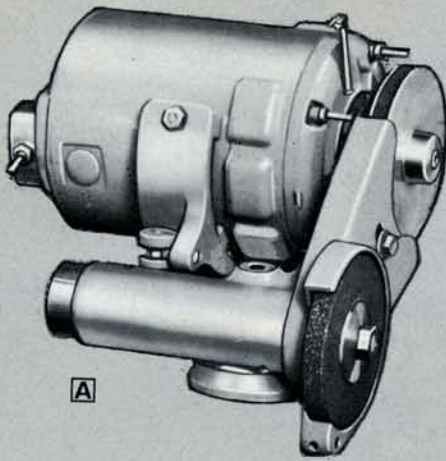
Catalog No.	Size Lathe	Size Center	Shipping Weight	Price
CL2036N	9"	No. 2 M.T.	22 lbs.	\$ 50.00
CL2036K	10-K	No. 2 M.T.	22 lbs.	68.75
CL2036R	10"	No. 2 M.T.	42 lbs.	87.25
CL2036T	13"	No. 3 M.T.	90 lbs.	157.00
CL2036P	No. 2-H	No. 3 M.T.	133 lbs.	196.25

**G COMPOUND REST.** The compound rest type cross slide can be supplied for use on the saddle cross slide dovetail of any South Bend Turret Lathe in place of the double tool cross slide. This compound rest is the same as is regularly supplied with the corresponding size of lathe.

Price includes compound rest top, swivel, and base assembly complete with tool post. Cross-feed screw assembly is supplied for 10" - 1 1/16" Collet Lathes and larger but is not supplied for the 9" and 10-K lathes\*. Cannot be used with double tool slide. When this unit is required, it should be ordered with the lathe and fitted at the factory.

Cat. No.	Size Lathe	Ship. Wt.	Price
CL2200N	9"	13 lbs.	\$ 44.00 *
CL2200K	10-K	14 lbs.	45.25 *
CL2200R	10"	15 lbs.	72.25
CL2200T	13"	30 lbs.	112.50
CL2200P	2-H	50 lbs.	143.25





## GRINDING ATTACHMENTS for Precision Toolroom Grinding

**A EXTERNAL GRINDING ATTACHMENT.** This powerful and efficient grinding attachment is recommended for grinding bushings, sharpening reamers and cutters, and other external grinding. Designed especially for South Bend Lathes, it is easily adaptable for use on other makes of lathes. The spindle revolves in prelubricated, precision ball bearings which are sealed to protect them from damage by dust, grit, and metal particles produced when grinding. Supplied with  $\frac{1}{4}$  h.p., constant speed continuous duty motor, and  $4" \times \frac{1}{2}"$  No. CE2759 general purpose grinding wheel. Spindle speed is approximately 5275 r.p.m.

Clamp bolt equipment is not included as it varies in design to conform with the various sizes of South Bend Lathes. When ordering the grinding attachment, be sure to include the clamp bolt equipment needed to mount the grinding attachment on the compound rest top of your lathe. See description and tabulation of clamp bolt equipment below.

Catalog Number	Motor Specifications			Shipping Weight	Price
	Phase	Cycle	Volts		
CE301B	1	60	115	43 lbs.	\$81.00
CE301D	1	60	230	43 lbs.	85.00
CE301A	1	50	115	43 lbs.	89.00
CE301C	1	50	230	43 lbs.	92.00
CE303D	3	60	208-220	43 lbs.	90.00*
CE303F	3	60	440	43 lbs.	94.00*
CE303C	3	50	208-220	43 lbs.	90.00*
CE303E	3	50	440	43 lbs.	94.00*

\*These prices do not include switch.

**B CLAMP BOLT EQUIPMENT.** The equipment supplied with each External or Internal Grinding Attachment does not include the clamp bolt and other fittings necessary for mounting the grinding attachment on the lathe. The Clamp Bolt Equipment required for various sizes of South Bend Lathes is listed in the table below. Be sure to include the required Clamp Bolt Equipment when ordering a grinding attachment.

Catalog Number	Size Lathe	Shipping Weight	Price
CE307NK	9" & 10-K	1 lb.	\$2.45
CE307R	10"	1 lb.	3.00
CE307T	13"	3 lbs.	3.50
CE307F	14 $\frac{1}{2}"$	3 lbs.	4.10
CE307H	16" & 16-24"	4 lbs.	4.10

**C INTERNAL GRINDING ATTACHMENT.** This South Bend Constant Speed Precision Grinder has been developed to meet the long felt need for an internal grinding attachment having sufficient power to maintain a more constant wheel speed under varying loads and to prevent stalling under comparatively heavy cuts.

The grinder is powered by a standard type, constant speed, continuous duty  $\frac{1}{6}$  h.p., 3450 r.p.m., A.C. motor which has proved to be far superior to the universal type A.C.-D.C. motors ordinarily used. The motor is compound belted through an intermediate shaft to obtain a quill spindle speed of 30,000 r.p.m. Tests have shown that less than 1000 r.p.m. drop in spindle speed occurs when taking cuts as heavy as .003" on a side in hardened steel. Power loss is negligible.

The grinding wheel and intermediate shaft spindle run on high precision, high speed ball bearings which require no adjustment. Lubricant is supplied from built-in oil wells. Oil is effectively sealed in the spindle units and dust sealed out in such a way that the bearings will retain their precision indefinitely. The compound belting and the three pulleys are enclosed by a one-piece guard.

This grinder can be easily adapted for use on other makes of lathes or on other machine tools. Grinders have motor and accessories as listed below under specifications. Shipping weight 51 lbs.

Clamp bolt equipment is not included as it varies in design to conform with the various sizes of South Bend Lathes. When ordering the grinding attachment, be sure to include the clamp bolt equipment needed to mount the grinding attachment on the compound rest top of your lathe. See description and tabulation of clamp bolt equipment under "B".

### SPECIFICATIONS

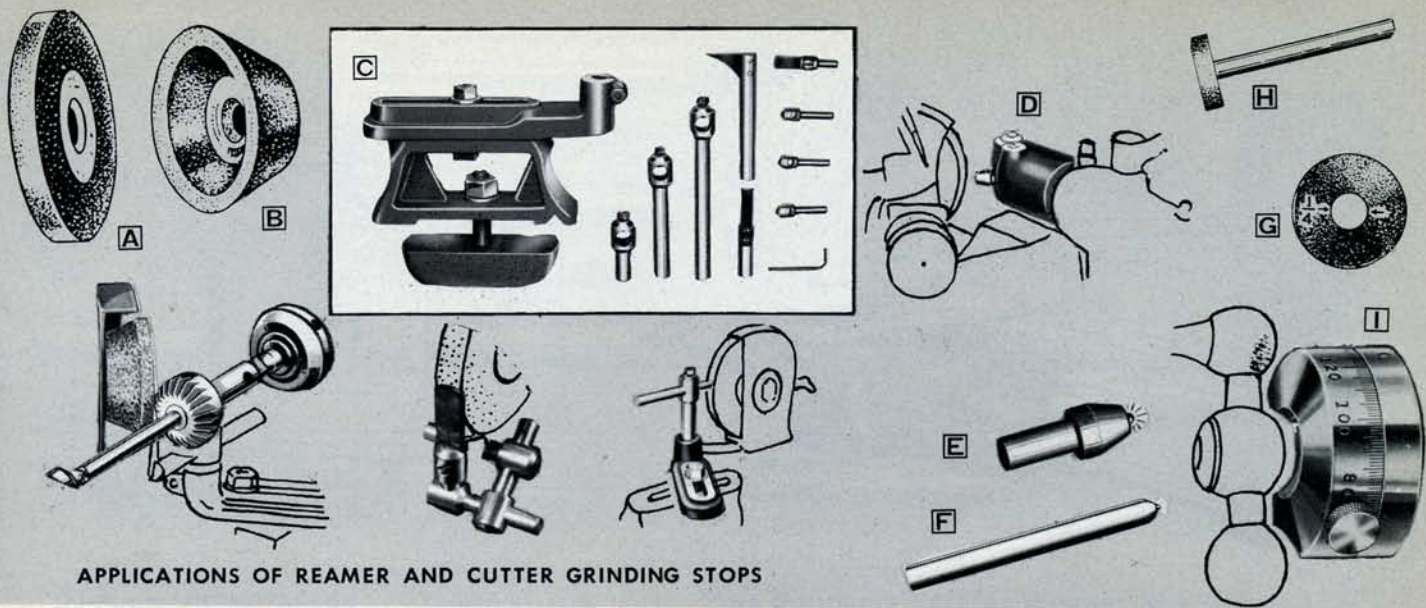
Grinding wheel speed ..... 30,000 r.p.m.  
 Maximum depth of ground hole with 1-inch wheel .....  $3\frac{3}{8}$  inches  
 Maximum wheel diameter recommended ..... 1-inch  
 Accessories supplied:  
 Four  $\frac{1}{4}"$  wheel arbors: lengths  $2\frac{3}{16}"$ ,  $2\frac{1}{16}"$ ,  $3\frac{1}{16}"$ , and  $4\frac{1}{16}"$ .  
 Two grinding wheels:  $\frac{1}{4}"$  bore;  $\frac{1}{4}"$  face;  $\frac{3}{8}"$  and  $\frac{3}{4}"$  diameters.  
 One chuck for mounted wheels .....  $\frac{1}{8}"$  capacity  
 Eight-foot extension cord, plug, and switch.

**CE601B.** Internal Grinding Attachment with 1 ph., 60 cy., 115 v., A.C. motor and accessories listed above, but without clamp bolt equipment. Price f.o.b. factory ..... \$194.00

**CE603D.** Same as above but with 3 ph., 60 cy., 220 v., A.C. motor less switch. Price f.o.b. factory ..... \$196.00

Write for information and prices of grinders equipped with motors for other current characteristics.





**APPLICATIONS OF REAMER AND CUTTER GRINDING STOPS**

**A GRINDING WHEELS.** For rapid grinding and smooth finish, the correct grade of grinding wheel should be selected. The grinding wheels listed below cover the more important classes of work. These grinding wheels are 4" in diameter with 1/2" face and 1/2" hole, to fit external grinding attachment. Shipping weight 2 lbs. each.

Cat. No.	Type of Work	Class of Work	Price
CE2759	General Work	Rough or Finish	\$2.65
CE2758	Cutting Tools	Rough or Finish	2.85
CE2774	Automobile Valves	Rough or Finish	2.65
CE2757	Cast Iron	Finish Grinding	3.25
CE2769	Soft Steel	Finish Grinding	2.85

**B CUP GRINDING WHEEL,** 3 1/4" outside diameter, 1 1/4" face, 1/2" hole for use with External Grinding Attachment. Used for sharpening reamers, milling cutters, etc.  
**CE3236.** Cup Grinding Wheel. Ship. wt. 2 lbs. \$4.00

**C REAMER AND CUTTER GRINDING STOPS.**

Equipment includes fixture and clamp for mounting on lathe bed and complete set of stationary spring stops for fixture, also a set of small spring stops for mounting on grinding attachment to travel with grinding wheel. Fixture and clamp are also used for holding the No. CE18 Diamond Dresser listed under 'F'.

Cat. No.	Size Lathe	Ship. Wt.	Price
CE1512N	9"	7 lbs.	\$19.40
CE1512K	10-K	8 lbs.	20.10
CE1512R	10"	9 lbs.	20.85
CE1512T	13"	14 lbs.	25.75
CE1512F	14 1/2"	20 lbs.	29.00
CE1512H	16"	24 lbs.	30.00
CE1512V	16-24"	30 lbs.	39.00

**D DIAMOND HOLDING FIXTURE** clamps to tailstock spindle of lathe for holding the No. CE406 diamond dresser listed under 'E' below. Has three holes for mounting diamond dresser for truing grinding wheel at various angles. Cannot be used while work is mounted between centers. Prices shown in table do not include diamond dresser.

Cat. No.	Size Lathe	Ship. Wt.	Price
CE91NK	9" & 10-K	3 lbs.	\$9.40
CE91R	10"	3 lbs.	9.40
CE91T	13"	4 lbs.	11.20
CE91F	14 1/2"	4 lbs.	11.20
CE91H	16" & 16-24"	5 lbs.	12.60

**E DIAMOND DRESSER.** Mounts in tailstock type holding fixture 'D' above for truing grinding wheels. For satisfactory operation the grinding wheel should be trued frequently with a diamond dresser. Price does not include holding fixture.  
**CE406.** Diamond Dresser. Ship wt. 1/2 lb. \$8.65

**F DIAMOND DRESSER.** This dresser is designed for mounting in Reamer and Cutter Grinding Stop Fixture listed under 'C' above. Price does not include fixture.  
**CE18.** Diamond Dresser. Ship. wt. 1 lb. \$8.65

**G GRINDING WHEELS** with 1/4" hole for use with Internal Grinding Attachment or other grinder of similar size and speed. Grit and grain suitable for general purpose grinding on bushings, tool steel, etc.

Catalog Number	Shipping Weight	Diameter	Face	Price
CE2925	4 ozs.	3/8"	1/4"	\$.60
CE2926	4 ozs.	3/4"	1/4"	.60

**H GRINDING WHEELS** with 1/8" diameter shank for chuck mounting on Internal Grinding Attachment or other grinder of similar size and speed. Grit and grain suitable for general purpose grinding on bushings, tools, etc.

Catalog Number	Shank	Diameter	Face	Price
CE3035	1/8"	1/4"	1/8"	\$.65
CE3036	1/8"	1/2"	1/8"	.65
CE3037	1/8"	3/4"	1/8"	.70
CE3038	1/8"	1"	1/8"	.75
CE3039	1/8"	3/32"	1/4"	.65
CE3040	1/8"	1/8"	1/4"	.65
CE3041	1/8"	3/16"	1/4"	.65
CE3042	1/8"	1/4"	1/4"	.65
CE3043	1/8"	3/16"	1/4"	.65
CE3044	1/8"	3/8"	1/4"	.65
CE3045	1/8"	1/2"	1/4"	.65
CE3046	1/8"	3/8"	1/4"	.70
CE3047	1/8"	3/4"	1/4"	.70

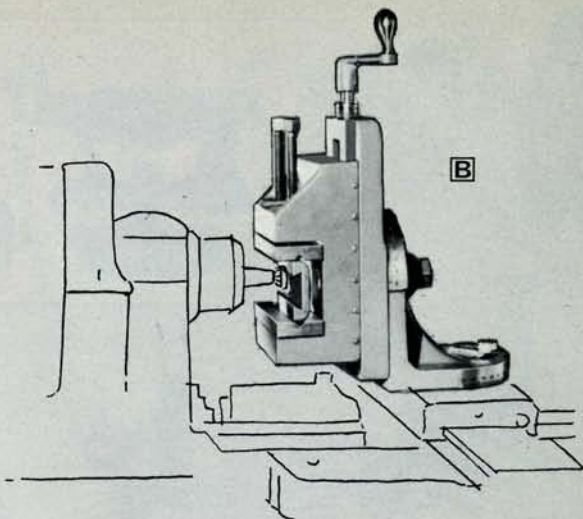
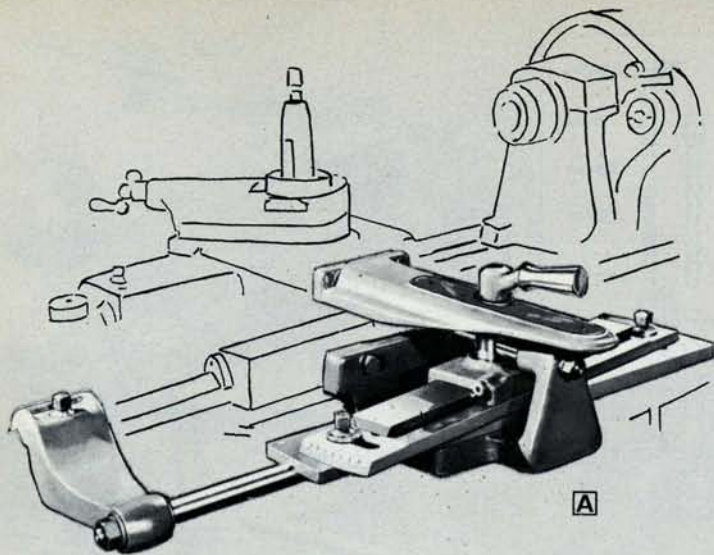
**I SPECIAL MICROMETER COLLARS.** Graduated collars on South Bend Lathes follow U.S. custom and are graduated in thousandths of an inch to measure the advance of the tool itself. Obviously, if the tool advances 1/1000 inch the work diameter is being reduced 2/1000 inch. European custom is to graduate the collar to read in thousandths the amount the work piece is being reduced. Such collars are known as DIRECT READING and can be supplied in lieu of standard collars on cross-feed and compound rest screws at prices shown below.

**LARGE DIAMETER** Collars for 9" & 10-K Lathes include ball thrust bearings on cross-feed screw assembly and can be supplied in lieu of regular collars for cross-feed and compound rest screws at extra cost.

**METRIC** graduated collars available in lieu of English when ordered with any South Bend Lathe, no extra Cost.

Size Lathe	Large Dia. Reg. Grad.		Direct Reading	
	Cat. No.	Price	Cat. No.	Price
9" & 10-K	CL2117NK	\$8.25	CL2520NK	\$11.00
10"	.....	.....	CL2520R	4.10
13", 14 1/2", 16", 16-24"	.....	.....	CL2520TH	4.95
10", 13" & 16" Turret	.....	.....	CL2520P	5.20





## TWO PRACTICAL ATTACHMENTS That Increase Lathe Versatility

**A TAPER ATTACHMENT.** Taper turning and boring are as easily accomplished as straight turning on lathes equipped with the South Bend Telescopic Taper Attachment. The taper attachment swivel bar is graduated in degrees on one end and taper in inches per foot on the other end. Graduations can also be supplied in the metric system.

The telescopic taper attachment is supplied on 10"-1 $\frac{1}{16}$ " Collet and larger lathes. A telescopic cross-feed screw eliminates the necessity of disconnecting the cross-feed nut when tapers are machined. The cross-feed screw may be used to adjust the lathe tool for the required diameter. When the binding lever is tightened, the cross slide base is rigidly locked to the taper attachment swivel slide, and the thrust is removed from the cross-feed screw.

A plain taper attachment is supplied for the 9-inch and 10-K lathes. This taper attachment has plain cross-feed screw and straight gibs. The cross-feed screw and nut must be disconnected before the taper attachment can be engaged for taper turning and boring.

The taper attachment is permanently mounted on the lathe carriage and is always ready for use. It does not in any way interfere with straight turning and boring, and only a few seconds are required to change over from straight to taper work. Accuracy and smooth operation are assured by the practical design and rugged construction of this attachment.

Proper fitting of the Taper Attachment to the lathe requires meticulous care and normally should be done at the factory before lathe is shipped. However, a good mechanic who understands the problems involved and uses the proper care can install the Taper Attachment on the South Bend Lathe.

**B MILLING ATTACHMENT.** The Milling and Keyway Cutting Attachment is excellent equipment for the shop that does not have a milling machine. It is mounted on the compound rest base of the lathe, permitting the power cross-feeds and power longitudinal feeds to be employed for milling and boring operations on work held in the milling attachment vise.

The angle plate to which the vertical slide is attached is graduated 180° in both the horizontal plane and vertical plane, permitting the vise to be swiveled in any direction. The vertical slide adjusting screw is equipped with a micrometer graduated collar.

The equipment included consists of: milling and keyway cutting attachment, two V-blocks for holding round work, one crank handle for feed screw, one double end wrench, and necessary bolts and nuts for installing attachment on lathe. Milling cutters and arbors are not included.

Cat. No.	Size of Lathe	Vert. Feed Ins.	Cross Feed Ins.	Vise Holds Ins.	Jaw Depth Ins.	Jaw Width Ins.	Ship. Wt. Lbs.	Price
CL2680NK	9-10-K	3	5 $\frac{7}{8}$	1 $\frac{1}{2}$	1 $\frac{3}{16}$	3	13	\$ 56.00
CL2680R	10"	3	5 $\frac{7}{8}$	1 $\frac{3}{4}$	1 $\frac{5}{16}$	3 $\frac{1}{2}$	25	70.00
CL2680T	13"	4 $\frac{1}{4}$	8 $\frac{1}{8}$	2 $\frac{7}{8}$	1 $\frac{11}{16}$	4 $\frac{3}{8}$	40	86.50
CL2680F	14 $\frac{1}{2}$ "	6	10	4	2	5 $\frac{3}{4}$	50	101.50
CL2680H	16"	6	10 $\frac{1}{2}$	4	2	5 $\frac{3}{4}$	65	117.50
CL2680H	16-24"	6	10 $\frac{1}{2}$	4	2	5 $\frac{3}{4}$	65	117.50

### TAPER ATTACHMENT WITH ENGLISH GRADUATIONS

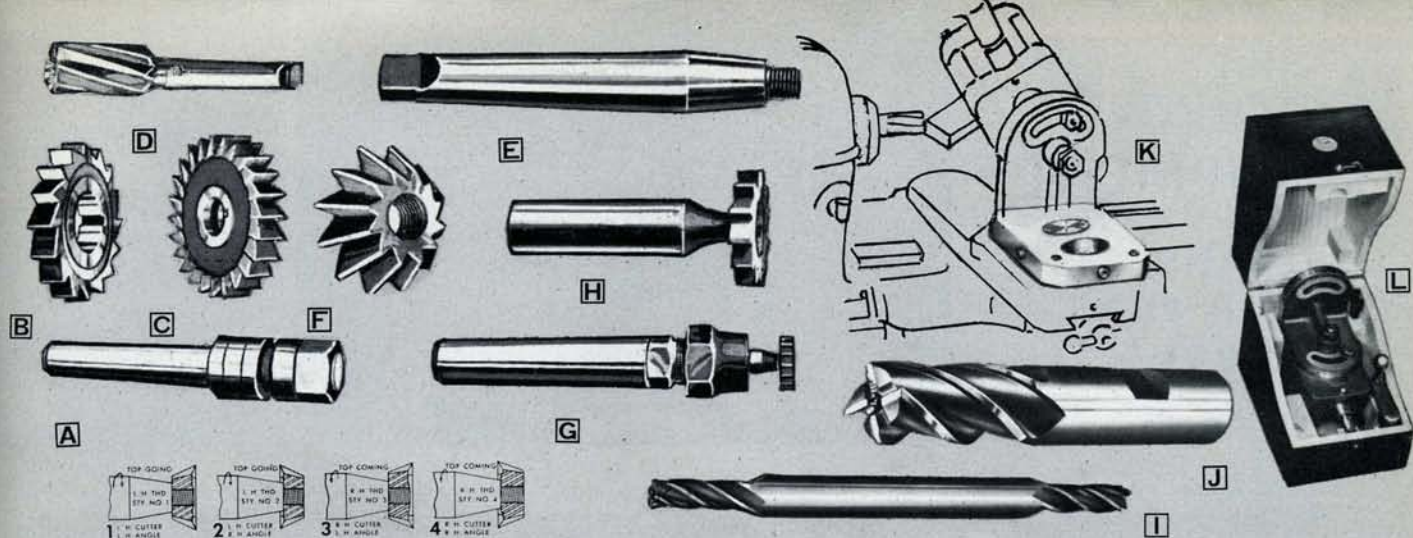
Cat. No.	Size of Lathe	Swing Over Cross Slide	Maximum Taper			Approx. Ship. Wt.	Price
			At One Setting	Per Foot	In Degrees		
CL428NK	9"	5"	7"	3 $\frac{1}{2}$ "	16 $\frac{1}{2}$	35 lbs.	\$ 99.50
CL428NK	10-K	5 $\frac{7}{8}$ "	7"	3 $\frac{1}{2}$ "	16 $\frac{1}{2}$	35 lbs.	99.50
CL1545R	10"	5 $\frac{3}{4}$ "	8 $\frac{1}{2}$ "	3 $\frac{1}{2}$ "	16 $\frac{1}{2}$	40 lbs.	204.00
CL1545T	13"	8"	9 $\frac{1}{4}$ "	3 $\frac{1}{2}$ "	16 $\frac{1}{2}$	65 lbs.	245.00
CL1545F	14 $\frac{1}{2}$ "	8 $\frac{1}{2}$ "	9 $\frac{1}{4}$ "	3 $\frac{1}{2}$ "	16 $\frac{1}{2}$	80 lbs.	264.00
CL1545H	16"	9 $\frac{3}{8}$ "	11 $\frac{1}{2}$ "	3 $\frac{1}{2}$ "	16 $\frac{1}{2}$	100 lbs.	295.00
CL1545H	16-24"	18 $\frac{3}{4}$ "	11 $\frac{1}{2}$ "	3 $\frac{1}{2}$ "	16 $\frac{1}{2}$	100 lbs.	295.00

**METRIC TAPER ATTACHMENT** with metric graduations can be supplied for any size or type of South Bend Lathe. See Page 67.

**METRIC MILLING ATTACHMENT.** The milling and keyway cutting attachments shown above can be supplied with metric graduations in lieu of English graduations. Prices and specifications are same as for corresponding sizes with English graduations. Specify catalog numbers listed below for milling attachments with metric graduations.

Catalog Number	Size Lathe	Catalog Number	Size Lathe
CL2680NKME	9" & 10-K	CL2680FME	14 $\frac{1}{2}$ "
CL2680RME	10"	CL2680HME	16" & 16-24"
CL2680TME	13"		





**A PLAIN MILLING ARBOR** for milling cutters with 1-inch hole. Has No. 3 Morse taper shank, nut and spacing collars. CE109. Plain Arbor. Ship. wt. 3 lbs. **\$10.65**

**B PLAIN MILLING CUTTERS.** Made of high speed steel with 1" hole. Cut on face only. Ship. wt. approx. 1 lb. each.

Cat. No.	Face Width	O.D.	Price	Cat. No.	Face Width	O.D.	Price
CE3920	3/16"	2 1/2"	\$5.85	CE3924	7/16"	2 1/2"	\$9.10
CE3921	1/4"	2 1/2"	7.65	CE3925	1/2"	2 1/2"	9.90
CE3922	5/16"	2 1/2"	7.90	CE3926	3/8"	2 1/2"	10.80
CE3923	3/8"	2 1/2"	8.45	CE3927	3/4"	2 1/2"	11.65

**C SIDE MILLING CUTTERS.** Made of high speed steel with 1" hole. Cut on face and sides. Ship. wt. approx. 3 lbs. each.

Cat. No.	Face Width	O.D.	Price	Cat. No.	Face Width	O.D.	Price
CE3930	1/4"	3"	\$12.65	CE3934	1/2"	3"	\$15.55
CE3931	3/16"	3"	13.30	CE3935	3/4"	4"	26.00
CE3932	3/8"	3"	13.95	CE3936	7/8"	4"	28.00
CE3933	7/16"	3"	14.70				

**D SPIRAL END MILLS.** Made of high speed steel with right-hand cut and right-hand spiral. Ship. wt. approx. 2 lbs. each.

Cat. No.	Dia. Mill	Morse Taper	Price	Cat. No.	Dia. Mill	Morse Taper	Price
CE3893	1/2"	No. 2	\$7.60	CE3808	3/4"	No. 3	\$11.65
CE3894	3/8"	No. 2	7.95	CE3809	7/8"	No. 3	13.10
CE3895	3/4"	No. 2	8.75	CE3810	1"	No. 3	14.95
CE3896	7/8"	No. 2	12.15	CE3811	1 1/8"	No. 3	17.80
CE3897	1"	No. 2	11.65	CE3812	1 1/4"	No. 3	20.25

**E THREADED ARBORS** for angular milling cutters "F" with threaded holes. Have No. 3 Morse taper shank. Ship. wt. approx. 2 lbs.

CE829. For angular cutters with right-hand thread. **\$5.20**  
 CE830. For angular cutters with left-hand thread. **\$5.20**

**F ANGULAR MILLING CUTTERS.** High speed steel milling cutters with threaded hole, 60° included angle, 1 1/4" O.D., 7/16" face. Ship. wt. approx. 8 ozs. each

Cat. No.	Style	Description	Price
CE66751	1	L.H. thread, L.H. angle	\$10.90
CE66752	2	L.H. thread, R.H. angle	10.90
CE66753	3	R.H. thread, L.H. angle	10.90
CE66754	4	R.H. thread, R.H. angle	10.90

**G COLLET CHUCK** for holding Woodruff Cutters with 1/2" diameter shank. Has No. 3 Morse taper shank. Ship. 2 lb. CE101. Collet Chuck for Woodruff cutters. **\$13.75**

**H WOODRUFF KEYSEAT CUTTERS.** Made of high speed steel with 1/2" diameter straight shanks. Right-hand cut. Ship. wt. approx. 8 ozs. each.

Cat. No.	Cutter Dia.	Cutter Face	Price	Cat. No.	Cutter Dia.	Cutter Face	Price
CE3940	1/2"	1/16"	\$5.00	CE3948	1"	1/4"	\$7.80
CE3941	1/2"	1/8"	5.00	CE3949	1"	3/16"	8.20
CE3942	5/8"	1/8"	4.60	CE3950	1 1/8"	3/16"	8.45
CE3943	3/4"	1/8"	5.70	CE3951	1 1/8"	1/4"	8.45
CE3944	3/4"	3/16"	6.25	CE3952	1 1/8"	3/16"	8.85
CE3945	7/8"	3/16"	6.95	CE3953	1 1/4"	3/16"	8.50
CE3946	7/8"	1/4"	6.95	CE3954	1 1/4"	1/4"	8.75
CE3947	1"	3/16"	7.15	CE3955	1 1/4"	3/8"	10.00

**I DOUBLE-END END MILLS.** Made of high speed steel with both ends right-hand cut and right-hand spiral. Ship. wt. approx. 8 ozs. each.

Cat. No.	Dia. of Mill	Dia. of Shank	Length of Flutes	No. of Flutes	Whole Length	Price
MIL7031	3/32"	3/16"	3/8"	4	2 1/4"	\$3.05
MIL7032	1/8"	3/16"	3/8"	4	2 1/4"	3.05
MIL7033	3/32"	3/16"	7/16"	4	2 1/4"	3.05
MIL7034	3/16"	3/16"	1/2"	4	2 1/4"	3.05

**J STRAIGHT SHANK END MILLS.** Made of high speed steel with single end right-hand cut and right-hand spiral. Ship. wt. approx. 1 lb. each.

Cat. No.	Dia. of Mill	Dia. of Shank	Length of Flutes	No. of Flutes	Whole Length	Price
MIL7023	1/8"	3/8"	3/8"	4	2 3/16"	\$2.30
MIL7024	1/4"	3/8"	5/8"	4	2 7/16"	2.30
MIL7025	3/8"	3/8"	3/4"	4	2 1/2"	2.40
MIL7026	1/2"	1/2"	1 1/4"	4	3 1/4"	3.20
MIL7027	3/8"	5/8"	1 5/8"	4	3 3/4"	4.90
MIL7028	3/4"	3/8"	1 3/8"	4	3 3/4"	5.60
MIL7029	7/8"	7/8"	1 7/8"	4	4 1/8"	7.20
MIL7030	1"	1"	2"	4	4 1/2"	8.40

**K OFFSET BASE FOR MILLING ATTACHMENT.** To increase the capacity of the milling attachment for the 9" and 10-K lathes the offset base is used. The base consists of a metal plate which is mounted between the compound rest base of the lathe and the milling attachment base. When the off-set base is used, the position of the milling attachment is 1 1/2" farther away from the center line of the lathe spindle. This permits milling parts that might otherwise be too large for machining. Price includes necessary screws for mounting.

CL2408NK. Offset Base for milling attachment. Fits 9" and 10-K lathes only. Ship. wt. 5 lbs. Price **\$8.85**

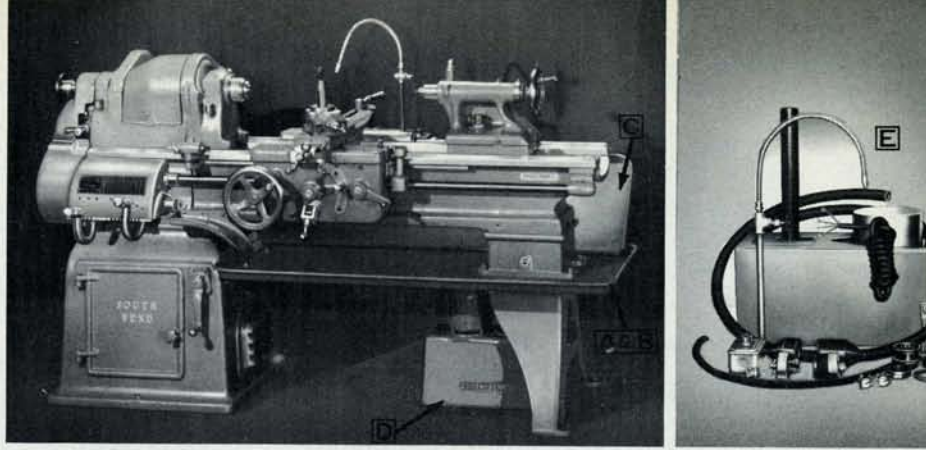
**L MILLING ATTACHMENT CHEST.** This substantially constructed wooden chest holds the 9" or 10-K milling attachment, milling attachment crank, and milling attachment wrench. This protects the attachment from dirt, dust, and other abuse, when it is not in use. Price does not include milling attachment.

CL2224. Hinged Wooden Chest for No. CL2680NK Milling and Keyway Cutting Attachment. Shipping wt. 4 lbs. Price **\$8.95**



# COOLANT EQUIPMENT

## OIL PANS SPLASH PANS CHIP PANS



Oil Pans, Splash Pans, and Chip Pans for South Bend Lathes are made of heavy gauge sheet steel with welded corners and roll rim. Pans should be specified at the time the lathe is ordered so that they can be properly fitted at the factory. See page 38 for collet splash guard.

**A CHIP PANS** are intended for collecting chips only and are not necessarily oil tight. Chip pans extend from the headstock leg to the tailstock end of bed.

**B OIL PANS** are designed for collecting both oil and chips and are oil tight. Oil pans extend from the headstock leg to the tailstock end of bed as shown. Oil return troughs are provided at the headstock end of the lathe.

**C SPLASH PANS** are an essential addition to the oil pans for all lathes that are equipped with taper attachments and for all turret lathes. The splash pans are attached to the back of the oil pans, as shown in the illustration above.

### PANS FOR FLOOR LEG SOUTH BEND LATHES

Size Lathe	A Chip Pans		B Oil Pans		C Splash Pans	
	Cat. No.	Price	Cat. No.	Price	Cat. No.	Price
9" and 10-K U.M.D.					CL2057Z	\$20.75
10" x 3"	CL1987Y	\$43.00	CL2020Y	\$94.00	CL2059Y	25.25
10" x 3 1/2"	CL1987Z	44.50	CL2020Z	97.00	CL3059Y	25.25
10" x 3 1/2" **	CL2987Z	44.50	CL3020Z	97.00	CL3059Z	25.25
10" Turret*					CL3059Z	25.25
10" Turret**					CL3059Z	25.25
10" x 4"	CL1987A	46.00	CL2020A	98.00	CL3059A	31.00
10" x 4 1/2"	CL2987A	46.00	CL3020A	98.00	CL3059A	31.00
10" x 4 1/2" **	CL1987R	47.50	CL2020R	100.00	CL2059R	31.00
10" x 4 1/2" **	CL2987R	47.50	CL3020R	100.00	CL3059R	31.00
13" x 4"	CL1989A	58.50	CL2022A	114.50	CL2060A	34.25
13" x 5"	CL1989B	61.50	CL2022B	117.50	CL2060B	37.25
13" x 6"	CL1989C	64.00	CL2022C	121.00	CL2060C	38.75
13" x 7"	CL1989D	67.00	CL2022D	127.00	CL2060D	40.50
14 1/2" x 5"	CL1990B	61.50	CL2023B	125.50	CL2062B	37.25
14 1/2" x 6"	CL1990C	68.50	CL2023C	133.00	CL2062C	43.00
14 1/2" x 7"	CL1990D	76.00	CL2023D	139.00	CL2062D	43.00
14 1/2" x 8"	CL1990E	83.50	CL2023E	146.00	CL2062H	52.50
16" x 6"	CL1991C	70.50	CL2024C	134.50	CL2062C	43.00
16" x 7"	CL1991D	79.00	CL2024D	143.50	CL2062D	43.00
16" x 8"	CL1991E	87.50	CL2024E	152.50	CL2062H	52.50
16" x 10"	CL1991G	106.00	CL2024G	170.00	CL2062H	52.50
16" x 12"	CL1991H	134.50	CL2024H	197.50	CL2062H	52.50
16" x 14"	CL1991K	175.50	CL2024K	238.50	CL2062H	52.50
16-24" x 6"	CL1991C	70.50	CL2064C	155.00	CL2062C	43.00
16-24" x 7"	CL1991D	79.00	CL2064D	164.00	CL2062D	43.00
16-24" x 8"	CL1991E	87.50	CL2064E	172.50	CL2062H	52.50
16-24" x 10"	CL1991G	106.00	CL2064G	190.50	CL2062H	52.50
16-24" x 12"	CL1991H	134.50	CL2064H	218.00	CL2062H	52.50
16-24" x 14"	CL1991K	175.50	CL2064K	259.50	CL2062H	52.50
2-H x 6"					CL2062C	43.00
2-H x 7"					CL2062D	43.00

\* Cast Iron Legs \*\* Welded Steel Legs

### PANS FOR SOUTH BEND BENCH AND MET. CAB. LATHES

Size Lathe	A Chip Pans		B Splash Pans	
	Cat. No.	Price	Cat. No.	Price
9" and 10-K x 3'	CL1297Y	\$34.25	CL2056Y	\$18.85
9" and 10-K x 3 1/2'	CL1297Z	37.50	CL2057Z	20.75
9" and 10-K x 4'	CL1297A	40.50	CL2057Z	20.75
9" and 10-K x 4 1/2'	CL1297R	41.75	CL2057R	22.00
10" x 3' or 3 1/2' Metal Cabinet Lathes			CL3057Z	20.75
10" x 4' or 4 1/2' Metal Cabinet Lathes			CL3057R	22.00

**D COOLANT PUMP AND RESERVOIR** equipment for use with South Bend Lathes equipped with oil pans. The oil pump is self-priming as it is below the oil level. Equipment includes coolant pump, tubing, reservoir, 1/4 h.p. motor, and switch. Price includes fitting to lathe at factory.

### COOLANT PUMP AND RESERVOIR FITTED TO 10"-1 1/2" COLLET OR LARGER FLOOR LEG LATHES, NO. 2-H, 13" OR 10" FLOOR LEG TURRET LATHES

Cat. No.	Current	Phase	Cycle	Voltage	Price
CL503C	A.C.	3	50	208-220	\$201.00
CL503D	A.C.	3	60	208-220	201.00
CL503E	A.C.	3	50	440	201.00
CL503F	A.C.	3	60	440	201.00
CL503G	A.C.	3	50	550	201.00
CL503H	A.C.	3	60	550	201.00
CL502C	A.C.	2	50	208-220	201.00
CL502D	A.C.	2	60	208-220	201.00
CL501A	A.C.	1	50	115	182.00
CL501B	A.C.	1	60	115	180.00
CL501C	A.C.	1	50	230	184.00
CL501D	A.C.	1	60	230	182.00

### COOLANT PUMP AND RESERVOIR FITTED TO 9" OR 10-K U.M.D. LATHES, OR 10" METAL CABINET LATHES

Cat. No.	Current	Phase	Cycle	Voltage	Price
CL513C	A.C.	3	50	208-220	\$201.00
CL513D	A.C.	3	60	208-220	201.00
CL513E	A.C.	3	50	440	201.00
CL513F	A.C.	3	60	440	201.00
CL513G	A.C.	3	50	550	201.00
CL513H	A.C.	3	60	550	201.00
CL512C	A.C.	2	50	208-220	201.00
CL512D	A.C.	2	60	208-220	201.00
CL511A	A.C.	1	50	115	182.00
CL511B	A.C.	1	60	115	180.00
CL511C	A.C.	1	50	230	184.00
CL511D	A.C.	1	60	230	182.00

When ordered for 9" or 10-K U.M.D. Lathes or 10-inch U.M.D. Lathes on metal cabinet, there is an additional charge for making chip pan oil tight and installing necessary drain pipes, splash guards, and oil tight seal. This does not apply to turret lathes.

CL2195NK—Making chip pan oil tight on 9" or 10-K Lathe.

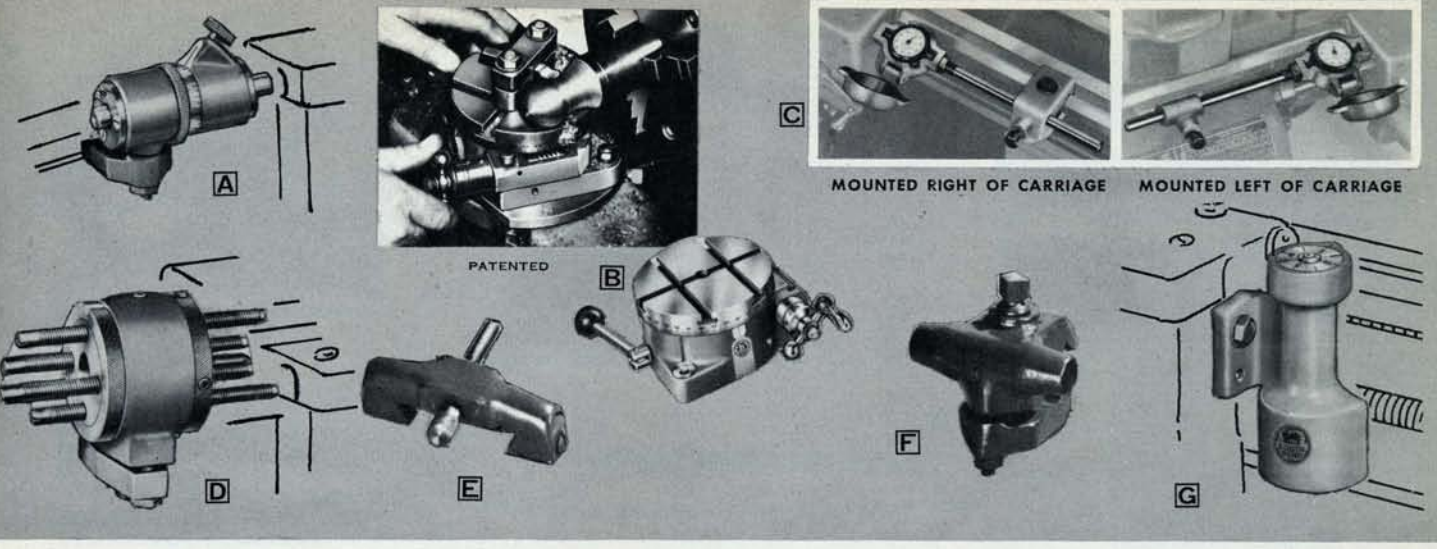
Price f.o.b. factory ..... \$37.25

CL2195R—Making chip pan oil tight on 10" Lathe. Price ..... \$37.25

**E UNIVERSAL COOLANT PUMP EQUIPMENT** for application to lathes, drill presses, or other machine tools. Equipment consists of: coolant pump, tubing, reservoir, 1/4 h.p. motor, switch, and wire for connecting motor and switch, but does not include equipment for fitting to South Bend Lathes. Ship. wt. 110 lbs.

Cat. No.	Current	Phase	Cycle	Voltage	Price
CE2003C	A.C.	3	50	208-220	\$174.75
CE2003D	A.C.	3	60	208-220	174.75
CE2003E	A.C.	3	50	440	174.75
CE2003F	A.C.	3	60	440	174.75
CE2003G	A.C.	3	50	550	174.75
CE2003H	A.C.	3	60	550	174.75
CE2002C	A.C.	2	50	208-220	174.75
CE2002D	A.C.	2	60	208-220	174.75
CE2001A	A.C.	1	50	115	157.75
CE2001B	A.C.	1	60	115	155.00
CE2001C	A.C.	1	50	230	159.50
CE2001D	A.C.	1	60	230	157.50





**A MICROMETER CARRIAGE STOP.** This attachment is useful for accurate facing, turning, boring, etc. It is used for locating the carriage at any point along lathe bed. Can be used on either side of carriage. Has accurately graduated micrometer collar. Either English or metric graduations can be supplied. The stop is hardened on both ends and may be locked for repetitive operations on duplicate work.

Size Lathe	Ship. Wt.	English Graduations		Metric Graduations	
		Cat. No.	Price	Cat. No.	Price
9" & 10-K	2 lbs.	CL968NK	\$24.10	CL968NKME	\$24.10
10"	4 lbs.	CL968R	25.15	CL968RME	25.15
13"	4 lbs.	CL968T	28.35	CL968TME	28.35
14½", 16", 16-24", & 2-H	7 lbs.	CL968FH	29.40	CL968FHME	29.40

**B INDEXING TABLE.** It is possible to use this Rotary Table on compound rest base of 10" and larger lathes but customer must devise his own means of mounting to achieve machining of spherical surfaces and concave or convex radial surfaces. This table can also be used for mounting small work on the milling machine, drill press, or shaper. Used for accurately spacing bolt holes, indexing clutch teeth, machining square, hexagonal or octagonal shapes, milling circular grooves or 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 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 ..... \$61.75

**C DIAL INDICATOR CARRIAGE STOP.** Repetitive facing, shouldering or grooving operations can be performed with speed and precision on lathes equipped with a dial indicator type carriage stop. Position of carriage is clearly shown on face of dial which has a total movement of .250". Indicator support bar has 5/16" adjustment in bracket.

Enclosed in a heavy metal case with hinged lid, the indicator is well protected at all times. Case is so constructed that indicator is protected from accidental damage by excessive pressure of carriage against indicator.

Two mounting brackets are supplied, one for work close to headstock, and the other for any position along length of bed. Price includes one dial indicator, indicator case with hinged lid, and two mounting brackets.

**CL2795RT.** Dial Indicator Carriage Stop for 10" or 13" Lathe. Shipping wt. 10 lbs. Price ..... \$43.05

**CL2795FH.** Dial Indicator Carriage Stop for 14½", 16", 16-24" or 2-H Lathe. Ship. wt. 12 lbs. Price ..... \$46.75

**D FOUR-POSITION CARRIAGE STOP.** Much time can be saved in positioning the cutting tool for repetitive operations by using this four position carriage stop. Each of the four adjustable stops may be set for a different tool position and may be revolved into position to locate the carriage for each of four successive cuts. This attachment is especially desirable for spacing shoulders in shafts and similar operations.

Catalog Number	Size Lathe	Shipping Weight	Price
CL2185NK	9" & 10-K	6 lbs.	\$26.25
CL2185R	10"	6 lbs.	27.30
CL2185T	13"	6 lbs.	28.35
CL2185FH	14½", 16", 16-24", & 2-H	10 lbs.	31.50

**E THREAD CUTTING STOP.** The Thread Cutting stop is clamped onto the saddle cross slide dovetail and is used for regulating the depth of cut for each successive chip when cutting screw threads. Price includes stop complete with clamp and knurled thumb screw.

Catalog Number	Size Lathe	Shipping Weight	Price
CL2250NK	9" & 10-K	½ lb.	\$3.65
CL2250R	10"	½ lb.	4.20
CL2250T	13"	1 lb.	5.00
CL2250F	14½"	1 lb.	5.80
CL2250H	16" & 16-24"	2 lbs.	6.55

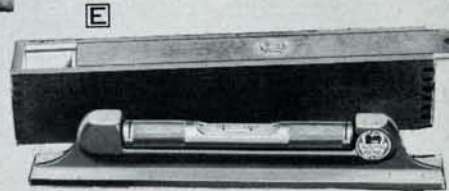
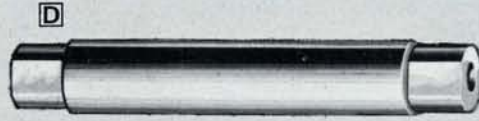
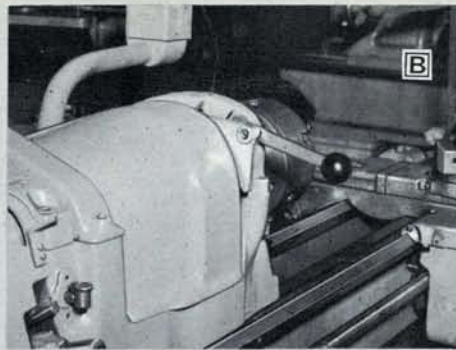
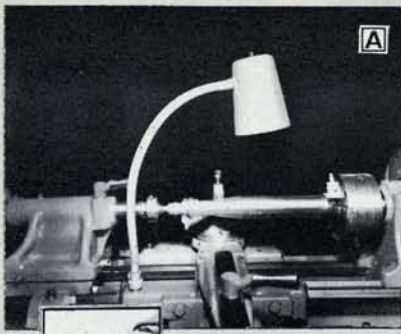
**F PLAIN CARRIAGE STOP.** This stop may be clamped onto the front V-way of the lathe bed, on either side of the saddle, to locate the position of the cutting tool for facing, necking, cutting shoulders, machining grooves, and similar operations.

Catalog Number	Size Lathe	Shipping Weight	Price
CL758NK	9" & 10-K	2 lbs.	\$4.80
CL758R	10"	4 lbs.	5.25
CL758T	13"	4 lbs.	6.30
CL758FH	14½", 16", 16-24", & 2-H	7 lbs.	7.90

**G THREAD INDICATOR.** Eliminates reversing the lathe spindle when cutting threads. Dial is numbered and graduated to show when to close half-nuts on lead screw to catch the thread on each successive cut, after returning carriage to the starting point. For English pitches only. See page 66 for metric thread indicator dial.

Catalog Number	Size Lathe	Shipping Weight	Price
CL810NK	9" & 10-K	2 lbs.	\$11.50
CL810R	10"	3 lbs.	18.40
CL810TH	13", 14½", 16", 16-24", 2-H	5 lbs.	22.05





**A WORK LIGHT.** For clear vision without eyestrain, equip all your lathes (and other machine tools) with this South Bend Work Light. Simple to install, by drilling and tapping the saddle for the snap bolt (see inset). The flexible support arm then can be snapped into position as shown in the larger illustration. When attached to the lathe carriage the light travels with the cutting tool. With this quick acting snap-on arrangement, light can be put into use or removed from the lathe in seconds. Light shade is heat resistant and does not heat up excessively when in use. If ordered with the lathe, the saddle will be drilled and tapped for the work light at no extra charge. Bulb is not included.

**CE2815.** Work Light for Lathe, including snap bolt for attaching to lathe bed. Shipping weight 5 lbs. Price ..... **\$14.20**

**B SPINDLE BRAKE FOR 13" LATHES.** This spindle brake is made especially for South Bend 13" lathes. The brake lever is pivoted on the bull gear guard. When pressure is applied to the control lever, the friction brake shoe contacts the periphery of the pulley cone and stops the spindle. As you apply brake, a micro-switch automatically disconnects power to the lathe motor. For micro-switch to operate satisfactorily, it is necessary for your lathe to be equipped with magnetic line-starter equipment with pushbutton. If purchased with the lathe, brake will be installed before lathe is shipped.

**CL2350.** Lever operated Friction Spindle Brake with Micro-Switch assembled to the lathe at factory. Price ..... **\$17.75**

**CL2351.** Lever operated Friction Spindle Brake with Micro-Switch. With instructions for installing. (Not installed). Price ..... **\$22.75**

**CL2352.** Lever operated Friction Spindle Brake (LESS Micro-Switch) assembled to the lathe at the factory. Price ..... **\$12.50**

**CL2353.** Lever operated Friction Spindle Brake (LESS Micro-Switch). With instructions for installing. (Not installed) ..... **\$16.75**

**C SWIVELING MACHINE HANDLES.** Standard equipment on 10"-1 1/8" collet and larger South Bend Lathes. Supplied in lieu of the regular solid machine handles for the 9" and 10-K Lathes if specified when lathe is ordered.

**CL2605NK.** Swiveling Machine Handles for apron handwheel, cross-feed knob, and tailstock handwheel in lieu of regular machine handles on 9" or 10-K Lathes. Price ..... **\$2.40**

### HOW TO GET PROMPT DELIVERY

1. See or telephone nearest distributor.
2. Order by mail from your distributor.
3. If no distributor is nearby, order direct from factory.

**D LATHE MANDRELS.** For machining work mounted between lathe centers. Made of steel and properly carburized, hardened and ground for maximum durability. Large center holes provide substantial bearings on centers. Mandrels taper .006" per foot and are slightly undersize at small end for easy starting in standard holes. Flat for lathe dog is milled on each end. Nominal size of each mandrel is stamped on large end.

Catalog Number	Diameter Inches	Total Length, In.	Ship. Wt. Pounds	Price
CE3620	1/4	3 3/4	1	\$3.00
CE3621	3/16	4	1	3.25
CE3622	3/8	4 1/4	1	3.55
CE3623	7/16	4 1/2	1	3.85
CE3624	1/2	5	1	4.05
CE3625	9/16	5 1/4	1	4.10
CE3626	5/8	5 1/2	1	4.20
CE3627	1 1/16	5 3/4	2	4.40
CE3628	3/4	6	2	4.55
CE3629	1 3/16	6 1/4	2	4.70
CE3630	7/8	6 1/2	2	4.90
CE3631	1 5/16	6 3/4	3	5.05
CE3632	1	7	3	5.20

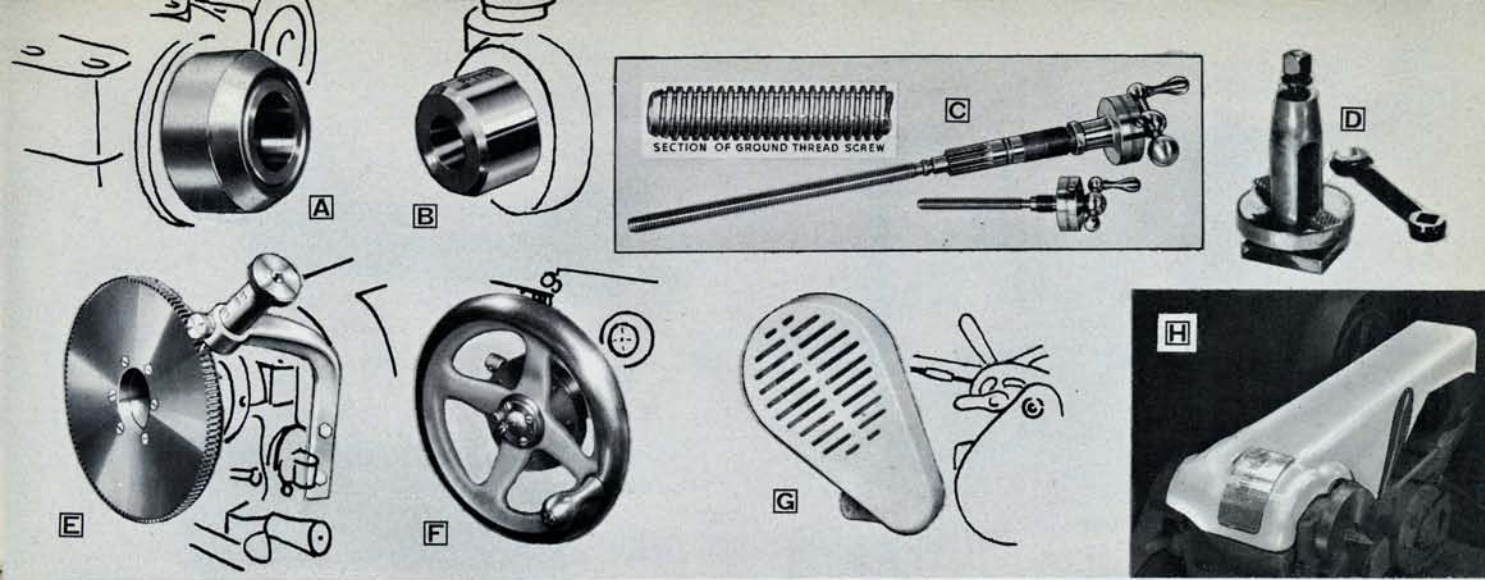
**E 12" PRECISION LEVEL.** Precision tolerances can be maintained only when the lathe is properly leveled. With this 12" sensitive precision level, a lathe or other machine can be properly installed and leveled. The level has a ground and graduated vial mounted in a twelve inch cast iron frame with machined base having a V-way for leveling shafts. It has been carefully designed to provide just the right degree of sensitivity for quick and accurate leveling. Can be used only in horizontal position. We recommend that every shop be equipped with one of these levels.

**CE2218.** Precision Level. Packed in wooden case. Shipping weight 5 lbs. Price f.o.b. factory ..... **\$17.15**

**F PLASTIC COVERS FOR MACHINE TOOLS.** Use these durable waterproof oil resistant plastic machine tool service covers to protect your equipment overnight or whenever it is not in use. Effectively prevents dust and dirt from accumulating.

Catalog Number	Sizes, Inches			Suggested for	Ship. Wt.	Price
	Wdth.	Lgth.	Ht.			
CE2695	32	48	17	9" & 10" Lathe, 3' & 3 1/2' Bed	2 lbs.	\$3.05
CE2696	32	60	17	9" & 10" Lathe, 4' & 4 1/2' Bed	3 lbs.	3.40
CE2697	38	72	25	13" & 14 1/2" Lathe 4' & 5' Bed	3 lbs.	5.45
CE2698	38	96	25	13", 14 1/2", 16", 16-24" & 2-H Lathe, 6' and 7' Bed	3 lbs.	7.80
CE2693	12	28	28	Drill Press	2 lbs.	2.05
CE2694	21	37	24	Shaper	2 lbs.	2.85





**A SPINDLE NOSE THREAD PROTECTOR.** When a lathe chuck or face plate is not in use, the threads of the lathe spindle nose should be protected against accidental damage. Price includes spanner wrench for removing from spindle nose.

Catalog Number	Thread Size	Size Lathe	Ship. Weight	Price
CL3515NK	1 1/2"-8	9" & 10-K	2 lbs.	\$3.70
CL3515R	1 7/8"-8	10"-1 1/4" Collet	2 lbs.	4.40
CL3515LT	2 1/4"-8	10"-1 1/4" Collet & 13"	3 lbs.	4.75
CL3515FH	2 3/8"-6	14 1/2", 16", 16-24" & 2-H	4 lbs.	7.10

**B HARDENED TAPER TAILSTOCK SPINDLE.** Tailstock spindles with hardened and ground taper hole can be supplied for 10" and larger South Bend Lathes, either as an extra or in lieu of regular spindle. They are especially recommended for lathes that are to be used with taper shank tools in tailstock for drilling, reaming, and similar operations. If wanted in lieu of regular tailstock spindle, the spindle with hardened and ground taper must be specified when lathe is ordered.

Size Lathe	In Lieu of Regular Tailstock Spindle		As an Extra		
	Cat. No.	Price	Cat. No.	Ship. Wt.	Price
10"	CL3870R	\$6.05	CL3875R	2 lbs.	\$15.75
13"	CL3870T	6.50	CL3875T	4 lbs.	18.40
14 1/2"	CL3870F	7.70	CL3875F	5 lbs.	21.20
16" & 16-24"	CL3870H	8.60	CL3875H	7 lbs.	24.15

**C HARDENED AND GROUND THREAD SCREWS.** Cross-feed Screws and Compound Rest Screws with hardened and ground English pitch threads can be supplied in lieu of regular screws on 10" and larger South Bend Lathes. Principal advantages of the hardened and ground thread screws are smoother operation and longer life. Prices below apply only when hardened and ground thread screws are specified when lathe is ordered and they can be supplied in lieu of regular screws when lathe is assembled at the factory.

Metric Hardened and Ground Thread Cross-feed Screws and Compound Rest Screws can be supplied in lieu of regular screws on 10" and larger South Bend Lathes. See Page 67.

**CROSS-FEED AND COMPOUND REST SCREWS WITH HARDENED AND GROUND THREAD IN LIEU OF REGULAR SCREWS**

Regular Cross-Feed			Taper Attachment Cross-Feed		
Cat. No.	Size Lathe	Price	Cat. No.	Size Lathe	Price
CL2032L	10"	\$14.70	CL2198L	10"	\$17.85
CL2032T	13"	25.20	CL2198T	13"	28.10
CL2032F	14 1/2"	27.30	CL2198F	14 1/2"	30.65
CL2032H	16" & 16-24"	28.10	CL2198H	16" & 16-24"	31.40

**CL2222T.** Hardened and ground thread cross-feed screw in lieu of regular screw for 13" lathe screw feed double tool cross slide. \$19.60

**CL2222H.** Hardened and ground thread cross-feed screw in lieu of regular screw for 16" lathe or 2-H turret lathe screw feed double tool cross slide. \$21.80

**D EXTRA TOOL POSTS.** Machining time can often be saved by using two tool posts simultaneously. Tool posts may be mounted close together by grinding off sides of tool post rings. Made of heat-treated steel. Price includes tool post assembly complete.

Catalog Number	Size Lathe	Dimensions in Inches			Ship. Wt.	Price
		Dia.	Opening	Block		
CE2450NK	9" & 10-K	5 3/4"	1 3/2 x 7/8	1/4 x 1 1/4 x 1 3/8	2 lbs.	\$6.85
CE2450R	10"	3 1/2"	1 3/2 x 1	1/4 x 1 3/8 x 1 1/2	2 lbs.	10.00
CE2450T	13"	1 3/4"	1 3/2 x 1 1/4	3/8 x 1 3/4 x 1 7/8	3 lbs.	12.60
CE2450F	14 1/2"	1 1/2"	2 1/2 x 1 3/4	1/2 x 2 x 2 3/4	4 lbs.	16.30
CE2450H	16"	1 1/2"	2 3/2 x 1 3/4	1/2 x 2 1/4 x 2 1/2	5 lbs.	17.35

**E INDEXING ATTACHMENT FOR 10" LATHE.** With this attachment the lathe spindle can be accurately indexed for fluting, splining, graduating, cross-drilling, and similar operations. Changeable index wheels attached to the left end of the spindle do not interfere with work passed through the headstock. Equipment includes eight index wheels having 45, 56, 60, 64, 72, 80, 84, and 100 divisions respectively. This attachment should be ordered with the lathe and fitted at the factory. It cannot be used with collet attachment.

**CL2505L.** Indexing Attachment for 10"-1 1/4" Collet Lathe. Shipping weight 30 lbs. Price f.o.b. factory \$93.00

**F FINE FEED HANDWHEEL.** With the fine feed planetary gear reduction apron handwheel it is easy to adjust the carriage position with extreme precision. Planetary gear reduction assures smooth, steady movement of the carriage as the handwheel is turned. Gear reduction can be disengaged for rapid movement of carriage or for engaging regular power carriage feeds. Supplied separate from lathe as an extra or in lieu of regular apron handwheel assembly at extra cost when specified at time lathe is ordered.

Size Lathe	In Lieu of Regular Handwheel		Extra, in Addition to Regular Handwheel		
	Cat. No.	Price	Cat. No.	Ship. Wt.	Price
13" or 14 1/2"	CL3305TF	\$40.00	CL3307TF	12 lbs.	\$51.00
16", 16-24" or 2-H	CL3305H	47.75	CL3307H	15 lbs.	52.50

**G MOTOR BELT GUARD for 9" Lathe.** This guard is designed to enclose the motor pulley, motor V-belt, and countershaft drive pulley of 9-inch Horizontal Motor Driven Bench Lathes made since February 1940.

**CL2885.** Motor Belt Guard for 9" Horizontal Motor Drive with 1/4 h.p. or 1/2 h.p. NEMA No. 56 frame motor. Ship. wt. 26 lbs. Price \$13.80

**CL2886.** Motor Belt Guard for 9" Horizontal Motor Drive with 1/2 h.p. NEMA No. 66 frame motor. Ship. wt. 27 lbs. Price \$16.30

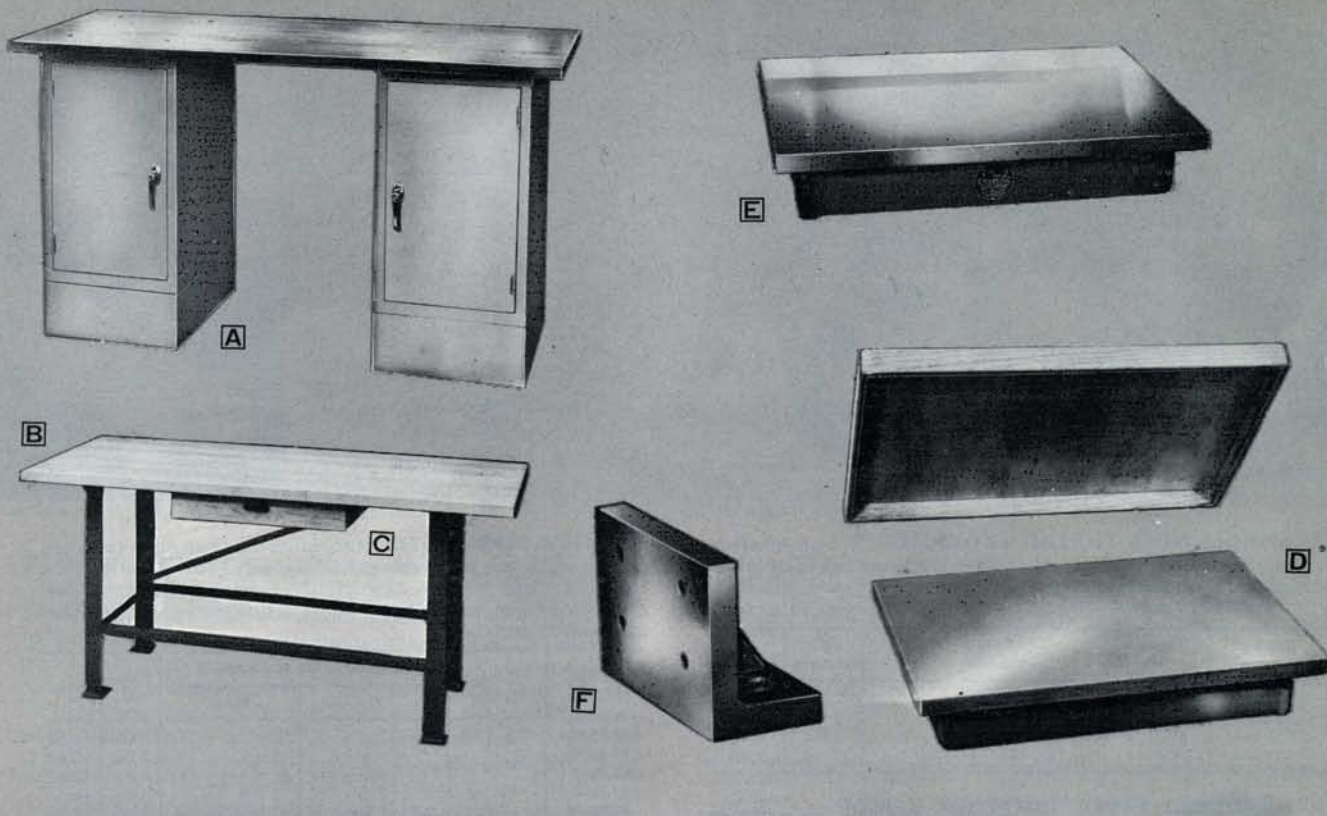
**H FIBER GLASS BELT GUARD.** Designed to cover the drive belt and cone pulleys on 9" and 10-K HMD Lathes.

**CL2882NK.** Belt Guard for 9" & 10-K HMD lathes. With instructions for installing. Price \$20.50

**CL2883N.** Belt Guard for 9" HMD lathe when ordered with lathe. With instructions for installing. Price \$16.55

**CL2883K.** Belt Guard for 10-K HMD lathe when ordered with lathe. With instructions for installing. Price \$16.55





**A MODERN CABINET STYLE BENCH.** Designed especially for 9" and 10-K South Bend Bench Lathes with horizontal motor drive, this sturdily constructed double pedestal bench will give your lathe the rigid support it needs for the most satisfactory operation.

The bench top is edge glued, oil finished hard wood 26" x 60" x 1-3/4" thick. The cabinet legs are 16" wide by 21" deep and each is provided with an adjustable steel shelf and a locking door handle. The cabinets are alike except one has a left hand door and the other a right hand door. Two keys are included. Metal cabinets are finished with gray enamel.

Bench is shipped unassembled in three (3) units consisting of hardwood top and right hand and left hand steel cabinets. Necessary hardware for assembling is included.

**CE1731.** Cabinet Style Bench 34" high with Hardwood Top. Shipping weight 216 lbs. Price f.o.b. factory ..... **\$89.50**

**B ANGLE STEEL BENCH.** Heavy angle steel construction, 29 3/16" or 34" high, with hardwood top 26" x 60" x 1 3/4" thick. For 9" and 10-K Horizontal Motor Driven Bench Lathes, any bed length. This also makes an ideal work bench for general shop use. Bench top is edge glued and has oil finish. Price does not include drawer, which is listed separately below.

Bench is shipped knocked down with all necessary bolts for assembling. Metal parts are finished with gray enamel. The sturdy construction of this bench makes it ideal for mounting a vise, surface plate, drill press, grinder, shaper, or other equipment as well as the lathe.

**CE1780.** Steel Bench 29 3/16" high with wood top (less drawer). Shipping weight, 124 lbs. Price f.o.b. factory ..... **\$46.50**

**CE1849.** Same as above but 34- 9/16" high ..... **\$48.50**

**C DRAWER FOR BENCH. CE1780D.** Drawer for angle steel bench, 20 1/8" wide, 14" long, 3 3/16" deep. Shipping weight 9 lbs. Price f.o.b. factory ..... **\$9.05**

**D SURFACE PLATE.** This is a heavy surface plate for laying out work, testing and inspecting, surfacing, checking flat surfaces, and general toolroom and shop use. Made of close-grained cast iron, properly heat-treated to normalize casting and machining strains and prevent distortion.

Top surface is precision ground and is well supported by heavy ribs on back. Wooden cover is supplied to protect ground surface. Edges are machined and under side of edges is finished all around. Size 12" x 17" x 3" with top 3/4" thick. Approximate net weight 64 pounds.

**CE2215.** Surface Plate. Shipping weight 75 lbs. Price ..... **\$44.75**

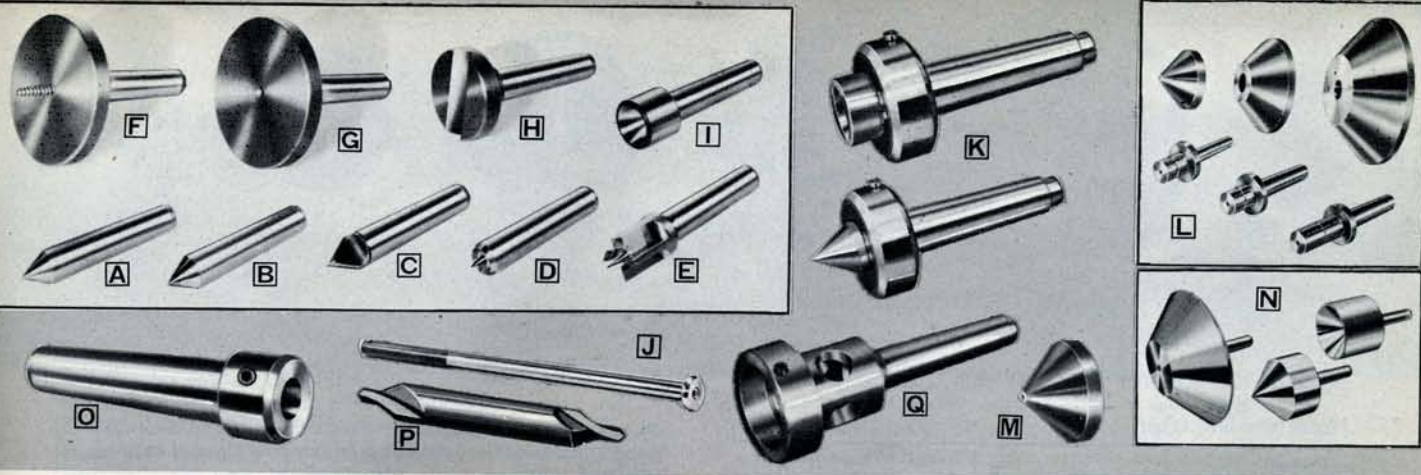
**E BENCH PLATE.** This is a substantial economically priced bench plate intended for work that does not require the true flat surface of the precision ground surface plate described above. Size 12" x 17" x 3" with top 3/4" thick. Top surface has commercial ground finish. Edges are unfinished.

**CE2219.** Bench Plate. Shipping weight 75 lbs. Price ..... **\$28.25**

**F ANGLE PLATE.** This is a heavy cast iron angle plate suitable for clamping work on the face plate or compound rest base of the lathe. Also for setting up work on the shaper, drill press, milling machine, etc. Size 4 1/2" x 3" x 2". Has six bolt holes.

**CE9640.** Angle Plate. Shipping weight 4 lbs. Price ..... **\$10.00**





## LATHE CENTERS AND DRILL PADS

Description	No. 2 Morse Taper Shank			No. 3 Morse Taper Shank		
	Cat. No.	Ship. Wt.	Price	Cat. No.	Ship. Wt.	Price
A—60° Center	CE2401	1 lb.	\$3.40	CE2402	2 lbs.	\$4.40
B—60° Carbide Center	CE1889	1 lb.	6.60	CE1890	2 lbs.	11.75
C—Half Center	CE2424	1 lb.	3.40	CE2425	2 lbs.	4.40
D—Cup Center	CE2422	1 lb.	3.10	CE2423	2 lbs.	4.10
E—Spur Center	CE2416	2 lbs.	4.40	CE2417	5 lbs.	4.80
F—Screw Center	CE2413	3 lbs.	4.50	CE2414	4 lbs.	5.25
G—Drill Pad	CE2396	3 lbs.	3.75	CE2397	4 lbs.	4.10
H—Crotch Center	CE2398	2 lbs.	3.75	CE2399	3 lbs.	4.80
I—60° Hollow Center	CE1896	2 lbs.	5.45	CE1897	2 lbs.	6.40

**J CENTER KNOCK-OUT BARS.** For removing headstock center and sleeve from spindle. Made of steel, with knurled handle and brass bushing.

Catalog Number	Size Lathe	Outside Dia.	Total Length	Ship. Weight	Price
CE1475NK	9" & 10-K	3/4"	16"	4 lbs.	\$2.15
CE1475R	10"-1 1/16" Collet	1"	17 3/16"	5 lbs.	3.25
CE1475L	10"-1 1/16" Collet	1 3/8"	17 3/16"	7 lbs.	3.45
CE1475QH	13", 14 1/2", 16", 16-24", & 2-H	1 3/8"	28 1/8"	7 lbs.	4.40

**K BALL BEARING LIVE CENTERS.** Designed for maximum precision, strength and rigidity, the Ball Bearing Live Centers are recommended for high speeds and heavy roughing cuts. Concentricity of center point is guaranteed within  $\pm .00015"$ . Two styles are available one having a 60° external point and one having a 60° hollow as shown in illustrations. Both styles are made with No. 2 and No. 3 Morse standard tapers. Ball bearing is easily replaceable.

Catalog Number	Style of Center	Morse Taper	Shipping Weight	Price
CE3900	60° Point	No. 2	3 lbs.	\$19.10
CE3901	60° Point	No. 3	5 lbs.	22.90
CE3903	60° Hollow	No. 2	3 lbs.	19.10
CE3904	60° Hollow	No. 3	5 lbs.	22.90

**L PIPE CENTERS.** For mounting tubing, pipe etc., between the lathe centers for machining. Centers have accurately ground 90° cone, and revolve on steel shanks with plain bearings.

### PIPE CENTERS

Cat. No.	Takes Pipe	Requires Shank	Shipping Weight	Price
CE2160	1/2" to 3"	CE2172	4 lbs.	\$ 6.60
CE2161	3" to 5"	CE2174	6 lbs.	9.00
CE2162	5" to 8"	CE2173	17 lbs.	13.50

### PIPE CENTER SHANKS

Cat. No.	Shank Taper	Takes Centers	Shipping Weight	Price
CE2172	No. 2	CE2160 & CE2161	2 lbs.	\$ 5.65
CE2174	No. 3	CE2160 & CE2161	3 lbs.	6.55
CE2173	No. 3	CE2162	4 lbs.	11.05

**M HARDENED PIPE CENTER.** Takes pipe 1/2" to 3". Same as CE2160, but made of heat-treated and hardened steel.

CE2163. Shipping weight 4 lbs. \$7.70

**N BALL BEARING PIPE CENTERS.** Fitted with large, double row ball bearings, these extra large precision centers provide rigid support for pipe and other large diameter work. Tight fitting seal protects bearings from dust.

Catalog Number	Style of Center	Capacity	Morse Taper	Shipping Weight	Price
CE2445	90° Point	7/32" to 3/8"	No. 2	9 lbs.	\$49.75
CE2446	90° Point	7/32" to 3/8"	No. 3	9 lbs.	50.50
CE2449	90° Point	3 3/8" to 8 3/8"	No. 3	20 lbs.	65.50
CE2447	90° Hollow	7/16" to 3 1/16"	No. 2	8 lbs.	60.00
CE2448	90° Hollow	7/16" to 3 1/16"	No. 3	8 lbs.	60.00

**O CENTER DRILL HOLDERS.** The Center Drill Holder is designed for greater accuracy in center drilling. Holds drill rigidly.

Catalog Number	Taper Shank	Diameter Will Hold	Shipping Weight	Price
CE2338	No. 2	1/8"	1 lb.	\$3.75
CE3029	No. 2	3/16"	1 lb.	3.80
CE2340	No. 2	13/64"	1 lb.	3.75
CE2339	No. 2	15/64"	1 lb.	3.75
CE3030	No. 2	1/4"	1 lb.	3.80
CE2341	No. 2	.302"	1 lb.	3.75
CE3031	No. 2	5/16"	1 lb.	3.80
CE2342	No. 2	7/16"	1 lb.	3.75
CE2346	No. 3	1/8"	2 lbs.	4.70
CE3032	No. 3	3/16"	2 lbs.	4.75
CE2343	No. 3	13/64"	2 lbs.	4.70
CE2347	No. 3	15/64"	2 lbs.	4.70
CE3033	No. 3	1/4"	2 lbs.	4.75
CE2344	No. 3	.302"	2 lbs.	4.70
CE3034	No. 3	5/16"	2 lbs.	4.75
CE2345	No. 3	7/16"	2 lbs.	4.70

**P COMBINATION CENTER DRILL AND COUNTERSINKS.**

For drilling center hole and countersinking 60° angle for lathe center. Made of high speed tool steel.

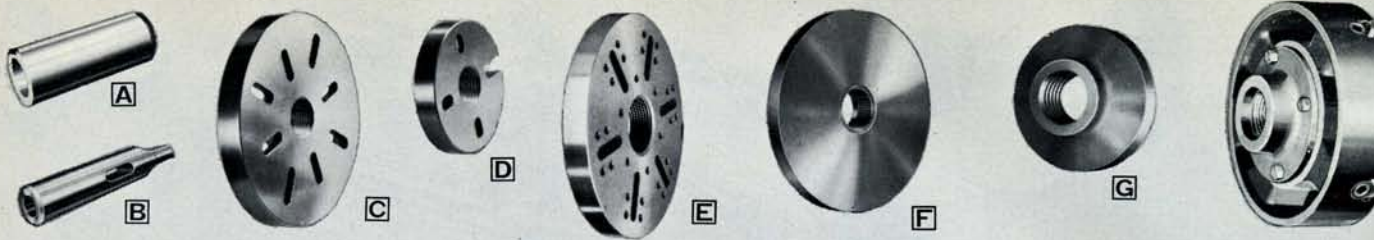
Dia. of Drill	Dia. of Body	Single Drill			Lot of Twelve		
		Cat. No.	Ship. Wt.	Price	Cat. No.	Ship. Wt.	Price
3/64"	1/8"	CE2087	4 ozs.	\$ .98	CE2555	8 ozs.	\$11.75
3/64"	3/16"	CE3021	4 ozs.	.98	CE3025	8 ozs.	11.75
7/64"	1/4"	CE3022	4 ozs.	.98	CE3026	8 ozs.	11.75
1/8"	3/8"	CE3023	4 ozs.	.98	CE3027	1 lb.	11.75
3/16"	7/16"	CE3024	6 ozs.	1.48	CE3028	2 lbs.	17.75

CE3020. Set of 5 Combination Center Drills and Countersinks, one each of above. Price f.o.b. factory. \$5.40

**Q DIE HOLDER.** For holding standard 1" or 1 1/2" diameter button dies in tailstock spindle of lathe for cutting screw threads on work held in lathe chuck. Die holder has 1/2" hole, 3" deep for stock clearance. Made of a single piece of steel.

Catalog Number	Takes Dies	Taper Shank	Shipping Weight	Price
CE1829	1" diameter	No. 2	2 lbs.	\$6.25
CE1834	1" diameter	No. 3	3 lbs.	7.20
CE1838	1 1/2" diameter	No. 2	2 lbs.	6.25
CE1839	1 1/2" diameter	No. 3	3 lbs.	7.20





**A SPINDLE SLEEVES FOR LATHES.** Outside taper ground to fit taper hole in lathe spindle, inside taper ground to Morse standard taper.

Catalog Number	Size Lathe	Taper Inside	Ship. Weight	Price
CL205NK	9" and 10-K	No. 2	1 lb.	\$3.00
CL205R	10"-1 $\frac{1}{16}$ " Collet	No. 2	2 lbs.	3.85
CL205RT	10"-1 $\frac{1}{16}$ " Collet	No. 3	2 lbs.	4.35
CL205L	10"-1 $\frac{1}{16}$ " Collet, 13", 14 $\frac{1}{2}$ ", 16", 16-24", and 2-H	No. 2	2 lbs.	4.10
CL205H	10"-1 $\frac{1}{16}$ " Collet, 13", 14 $\frac{1}{2}$ ", 16", 16-24", and 2-H	No. 3	2 lbs.	5.45

**B TAPER REDUCING SLEEVES.** Standard Morse Taper Reducing Sleeves for fitting drills, reamers, and other taper shank tools to spindle taper of lathe or other machine.

Catalog No.	Morse Taper		Shipping Weight	Price
	Outside	Inside		
CE2525	2	1	8 ozs.	\$1.50
CE2526	3	1	12 ozs.	1.75
CE2527	3	2	12 ozs.	1.75

**C LARGE FACE PLATES.** Heavily constructed and ribbed on back. Accurately machined and ground with milled thread for precision fit on lathe spindle. Slots provided for clamping work or fixtures.

Catalog Number	Size Lathe	Outside Dia.	Thread	No. of Slots	Shipping Weight	Price
CL2180NK	9" and 10-K	7 $\frac{3}{8}$ "	1 $\frac{1}{2}$ "-8	6	8 lbs.	\$11.30
CL2180R	10"-1 $\frac{1}{16}$ " Collet	8 $\frac{3}{8}$ "	1 $\frac{7}{8}$ "-8	6	10 lbs.	13.90
CL2180L	10"-1 $\frac{1}{16}$ " Collet	8 $\frac{3}{8}$ "	2 $\frac{1}{4}$ "-8	6	10 lbs.	19.45
CL2180Q	13"	10 $\frac{3}{4}$ "	2 $\frac{1}{4}$ "-8	8	19 lbs.	20.75
CL2180MH	14 $\frac{1}{2}$ ", 16", 16-24", & 2-H	13 $\frac{1}{4}$ "	2 $\frac{3}{8}$ "-6	8	38 lbs.	28.35
CL2180V*	16-24"	22 $\frac{3}{4}$ "	2 $\frac{3}{8}$ "-6	12	96 $\frac{1}{2}$ lbs.	83.00

\*This is an extra large face plate for mounting large diameter work in 16-24" lathe only.

**D SMALL FACE PLATES.** Heavily constructed and accurately finished with milled thread for precision fit on lathe spindle. Have slot for driving lathe dog.

Catalog Number	Size Lathe	Outside Dia.	Thread	No. of Slots	Shipping Weight	Price
CL2175NK	9" and 10-K	5 $\frac{1}{8}$ "	1 $\frac{1}{2}$ "-8	1	4 lbs.	\$ 8.15
CL2175R	10"-1 $\frac{1}{16}$ " Collet	5 $\frac{3}{8}$ "	1 $\frac{7}{8}$ "-8	1	5 lbs.	11.55
CL2175L	10"-1 $\frac{1}{16}$ " Collet	5 $\frac{3}{8}$ "	2 $\frac{1}{4}$ "-8	1	5 lbs.	14.20
CL2175Q	13"	6 $\frac{3}{8}$ "	2 $\frac{1}{4}$ "-8	4	4 lbs.	14.20
CL2175MH	14 $\frac{1}{2}$ ", 16", 16-24", & No. 2-H	8 $\frac{1}{16}$ "	2 $\frac{3}{8}$ "-6	4	13 lbs.	20.75

**E MULTI-TAPPED FACE PLATES.** This heavily constructed face plate has six slots and thirty tapped holes for clamping work or special work holding fixtures. The cored slots are  $\frac{3}{16}$ " wide, and the tapped holes have  $\frac{3}{16}$ "-18 threads. The face plate is made of cast iron, and is accurately machined all over. It has a precision milled thread for the spindle nose of the lathe, and is  $\frac{7}{8}$ " thick.

Catalog Number	Size Lathe	Outside Dia.	Spindle Thread	Shipping Weight	Price
CL1483NK	9" & 10-K	8 $\frac{1}{2}$ "	1 $\frac{1}{2}$ "-8	13 lbs.	\$14.20
CL1483R	10"-1 $\frac{1}{16}$ " Collet	8 $\frac{1}{2}$ "	1 $\frac{7}{8}$ "-8	13 lbs.	19.70
CL1483LQ	10"-1 $\frac{1}{16}$ " Collet & 13"	8 $\frac{1}{2}$ "	2 $\frac{1}{4}$ "-8	13 lbs.	22.05

**F FIXTURE PLATES.** Used for mounting special fixtures, jigs, holding devices, and tools on the spindle nose of the lathe. Being accurately machined all over, and threaded to fit the spindle nose of the lathe, a fixture plate will save much time and expense when tooling up a lathe for a production operation which calls for a special holding fixture fitted to the lathe spindle.

Catalog Number	Size Lathe	Outside Dia.	Spindle Thread	Shipping Weight	Price
CL46NK	9" & 10-K	7 $\frac{1}{2}$ "	1 $\frac{1}{2}$ "-8	9 lbs.	\$ 5.90
CL46R	10"-1 $\frac{1}{16}$ " Collet	9"	1 $\frac{7}{8}$ "-8	14 lbs.	10.50
CL46L	10"-1 $\frac{1}{16}$ " Collet	9"	2 $\frac{1}{4}$ "-8	14 lbs.	11.55
CL46Q	13"	10 $\frac{1}{4}$ "	2 $\frac{1}{4}$ "-8	22 lbs.	13.15
CL46MH	14 $\frac{1}{2}$ " 16" 16-24" & No. 2-H	11 $\frac{3}{4}$ "	2 $\frac{3}{8}$ "-6	29 lbs.	14.70

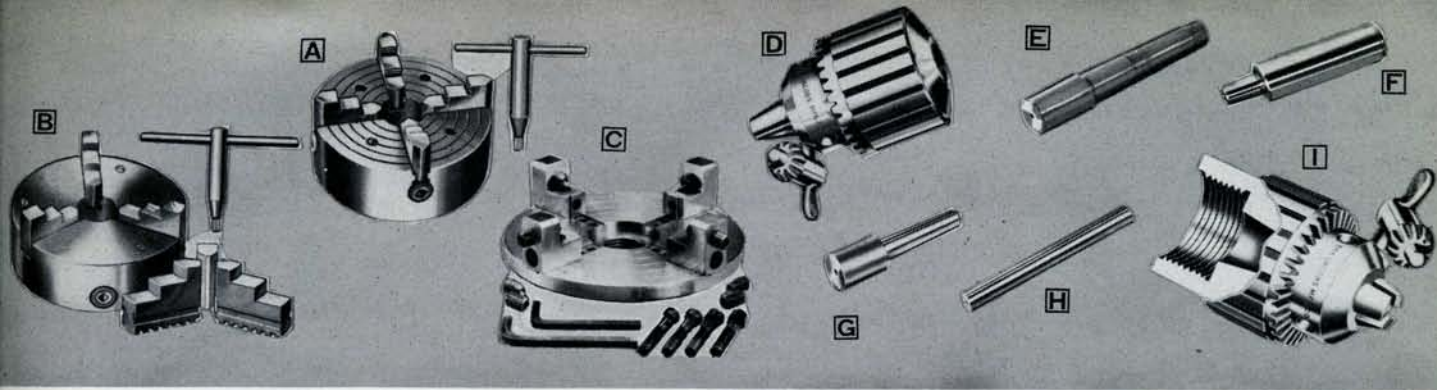
**G THREADED CHUCK PLATES.** Semi-machined threaded chuck plates are supplied for those who wish to fit their own chucks to South Bend Lathes. These are heavily constructed cast-iron plates, accurately threaded to fit the spindle nose of the lathe. The back of the plate is finished, and the outside diameter and face are rough machined. When ordering, be sure to specify the correct plate to fit the diameter of the recess in back of chuck. Stock is allowed for finishing to diameter shown in the table.

Catalog Number	Size Lathe	Spindle Nose Th'd	O.D. of Plate	Shipping Weight	Price		
CE2703NK	9" and 10-K	1 $\frac{1}{2}$ "-8	3 $\frac{1}{2}$ "	3 lbs.	\$ 4.10		
CE2704NK			5"	4 lbs.	4.40		
CE2709NK			7 $\frac{1}{2}$ "	10 lbs.	5.70		
CE2703RT	10"-1 $\frac{1}{16}$ " Col.	1 $\frac{7}{8}$ "-8	3 $\frac{1}{2}$ "	4 lbs.	9.05		
CE2704RT			5"	6 lbs.	9.50		
CE2705RT			5 $\frac{1}{2}$ "	8 lbs.	9.65		
CE2707RT			6 $\frac{1}{4}$ "	9 lbs.	9.90		
CE2708RT			7 $\frac{1}{2}$ "	12 lbs.	10.35		
CE2709RT			9"	16 lbs.	10.80		
CE2710RT			10 $\frac{1}{4}$ "	20 lbs.	11.25		
CE2703LQ			10"-1 $\frac{1}{16}$ " Col. & 13"	2 $\frac{1}{4}$ "-8	3 $\frac{1}{2}$ "	4 lbs.	10.70
CE2704LQ					5"	5 lbs.	11.20
CE2705LQ					5 $\frac{1}{2}$ "	6 lbs.	11.35
CE2707LQ	6 $\frac{1}{4}$ "	7 lbs.			11.60		
CE2708LQ	7 $\frac{1}{2}$ "	11 lbs.			12.00		
CE2709LQ	9"	13 lbs.	12.50				
CE2710LQ	10 $\frac{1}{4}$ "	18 lbs.	12.90				
CE2704MH	14 $\frac{1}{2}$ ", 16", 16-24", & 2-H	2 $\frac{3}{8}$ "-6	5"	8 lbs.	12.70		
CE2705MH			5 $\frac{1}{2}$ "	8 lbs.	12.85		
CE2706MH			6"	9 lbs.	13.00		
CE2707MH			6 $\frac{1}{4}$ "	9 lbs.	13.15		
CE2708MH			7 $\frac{1}{2}$ "	13 lbs.	13.55		
CE2710MH			10 $\frac{1}{4}$ "	20 lbs.	15.00		
CE2711MH			11 $\frac{3}{4}$ "	24 lbs.	15.00		

**H CHUCK PLATES FITTED TO CHUCKS.** Catalog numbers listed below cover fitting charges when chucks are shipped to us to be fitted with chuck plates threaded to fit South Bend Lathes. Fitting charges include chuck plate and fitting but do not include transportation costs.

Catalog Number	Size Lathes	Price
CE2935NK	9" & 10-K	\$ 7.70
CE2935RT	10"-1 $\frac{1}{16}$ " Collet	15.45
CE2935LQ	10"-1 $\frac{1}{16}$ " Collet & 13"-1 $\frac{1}{16}$ " Collet	16.55
CE2935MH	14 $\frac{1}{2}$ ", 16", 16-24", & 2-H	18.40





**A FOUR-JAW INDEPENDENT LATHE CHUCKS.** Have four reversible jaws with individual screw adjustment. Chuck body ground, jaws hardened and ground. Price includes wrench, chuck plate fitted to spindle and chuck. Recommended size in bold type.

Cat. No.	Size	Thread	Size of Lathe	Wt.	Price
CL4006NK	6"	1 1/2"-8	9" and 10-K	14 lbs.	\$ 51.00
CL4206NK	6"	1 1/2"-8	9" and 10-K	26 lbs.	88.00
CL4006R	6"	1 3/8"-8	10"-1 1/16" Collet	14 lbs.	55.00
<b>CL4206R</b>	<b>6"</b>	<b>1 3/8"-8</b>	<b>10"-1 1/16" Collet</b>	<b>28 lbs.</b>	<b>89.00</b>
CL4207R	7 1/2"	1 3/8"-8	10"-1 1/16" Collet	40 lbs.	110.00
CL4006L	6"	2 1/4"-8	10"-1 1/16" Collet	14 lbs.	56.00
<b>CL4206LQ</b>	<b>6"</b>	<b>2 1/4"-8</b>	<b>10"-1 1/16" Collet</b>	<b>28 lbs.</b>	<b>90.00</b>
CL4207LQ	7 1/2"	2 1/4"-8	10"-1 1/16" Collet	40 lbs.	111.00
CL4206LQ	6"	2 1/4"-8	13"	28 lbs.	90.00
<b>CL4207LQ</b>	<b>7 1/2"</b>	<b>2 1/4"-8</b>	<b>13"</b>	<b>40 lbs.</b>	<b>111.00</b>
CL4209Q	9"	2 1/4"-8	13"	51 lbs.	124.00
CL4207MH	7 1/2"	2 3/8"-6	14 1/2"	42 lbs.	112.00
<b>CL4209MH</b>	<b>9"</b>	<b>2 3/8"-6</b>	<b>14 1/2"</b>	<b>52 lbs.</b>	<b>125.00</b>
CL4210MH	10"	2 3/8"-6	14 1/2"	62 lbs.	141.00
CL4207MH	7 1/2"	2 3/8"-6	16", 16-24", & 2-H	42 lbs.	112.00
CL4209MH	9"	2 3/8"-6	16", 16-24", & 2-H	52 lbs.	125.00
<b>CL4210MH</b>	<b>10"</b>	<b>2 3/8"-6</b>	<b>16", 16-24", &amp; 2-H</b>	<b>62 lbs.</b>	<b>141.00</b>
CL4212H	12"	2 3/8"-6	16", 16-24", & 2-H	84 lbs.	199.00

**B THREE-JAW UNIVERSAL LATHE CHUCKS** with two sets of jaws. One set external—one set internal. Chuck body ground, jaws hardened. Jaws move simultaneously automatically centering work. Price includes wrench, threaded chuck plate fitted to lathe spindle. Recommended size in bold type.

Number	Size	Thread	Size of Lathe	Wt.	Price
CL3005NK	5"	1 1/2"-8	9" and 10-K	14 lbs.	\$ 82.00
CL3505NK	5"	1 1/2"-8	9" and 10-K	16 lbs.	123.00
CL3506NK	6"	1 1/2"-8	9" and 10-K	25 lbs.	133.00
CL3005R	5"	1 3/8"-8	10"-1 1/16" Collet	14 lbs.	84.00
CL3505R	5"	1 3/8"-8	10"-1 1/16" Collet	18 lbs.	124.00
<b>CL3506R</b>	<b>6"</b>	<b>1 3/8"-8</b>	<b>10"-1 1/16" Collet</b>	<b>33 lbs.</b>	<b>135.00</b>
CL3005L	5"	2 1/4"-8	10"-1 1/16" Collet	14 lbs.	86.00
CL3505LQ	5"	2 1/4"-8	10"-1 1/16" Collet	18 lbs.	125.00
<b>CL3506LQ</b>	<b>6"</b>	<b>2 1/4"-8</b>	<b>10"-1 1/16" Collet</b>	<b>33 lbs.</b>	<b>137.00</b>
CL3505LQ	5"	2 1/4"-8	13"	18 lbs.	125.00
<b>CL3506LQ</b>	<b>6"</b>	<b>2 1/4"-8</b>	<b>13"</b>	<b>33 lbs.</b>	<b>137.00</b>
CL3507Q	7 1/2"	2 1/4"-8	13"	49 lbs.	160.00
CL3505MH	5"	2 3/8"-6	14 1/2"	19 lbs.	127.00
CL3506MH	6"	2 3/8"-6	14 1/2"	29 lbs.	138.00
<b>CL3507MH</b>	<b>7 1/2"</b>	<b>2 3/8"-6</b>	<b>14 1/2"</b>	<b>50 lbs.</b>	<b>161.00</b>
CL3509MH	9"	2 3/8"-6	14 1/2"	62 lbs.	199.00
CL3505MH	5"	2 3/8"-6	16", 16-24", & 2-H	19 lbs.	127.00
CL3506MH	6"	2 3/8"-6	16", 16-24", & 2-H	29 lbs.	138.00
<b>CL3507MH</b>	<b>7 1/2"</b>	<b>2 3/8"-6</b>	<b>16", 16-24", &amp; 2-H</b>	<b>50 lbs.</b>	<b>161.00</b>
CL3509MH	9"	2 3/8"-6	16", 16-24", & 2-H	62 lbs.	199.00

**LATHE CHUCKS WITH THREE 2-PIECE JAWS (reversible tops).**

CLR3506NK	6"	1 1/2"-8	9" and 10-K	33 lbs.	\$133.00
CLR3506R	6"	1 3/8"-8	10" 1 1/16" Collet	33 lbs.	135.00
CLR3506LQ	6"	2 1/4"-8	10" 1 1/16" Collet	33 lbs.	137.00
CLR3506MH	6"	2 3/8"-6	14 1/2" thru 2-H	33 lbs.	138.00
CLR3507Q	7 1/2"	2 1/4"-8	13"	50 lbs.	160.00
CLR3507MH	7 1/2"	2 3/8"-6	14 1/2" thru 2-H	50 lbs.	161.00
CLR3509MH	9"	2 3/8"-6	14 1/2" thru 2-H	62 lbs.	199.00

**C FACE PLATE CHUCK.** This inexpensive Face Plate Chuck can be used for holding round, square, or irregular work. Maximum capacity for round work is 7 1/2" in diameter. Face plate is 8" in diameter, with annular lines to aid in centering.

Cat. No.	Size of Lathe	Thread	Weight	Price
CL2155NK	9" and 10-K	1 1/2"-8	14 lbs.	\$20.50
CL2155R	10"-1 1/16" Collet	1 3/8"-8	16 lbs.	22.05
CL2155L	10"-1 1/16" Collet	2 1/4"-8	16 lbs.	23.10

**D DRILL CHUCKS.** These drill chucks are so constructed that they will hold the drill securely and accurately. Jaws are tempered steel. Price includes pinion key, but does not include arbor.

Cat. No.	Make of Chuck	Capacity of Chuck	Net Wt. Lbs.	Ship. Wt. Lbs.	Price
CE1200	Jacobs	0 to 3/8 in.	1 1/8	1 3/8	\$ 9.80
CE1201	Jacobs	0 to 1/2 in.	1 3/4	2 3/8	12.20
CE1202	Jacobs	3/8 to 3/4 in.	3 1/8	3 1/2	18.30
CE1206	Jacobs	3/8 to 1 in.	6 3/8	7 1/2	39.25

**E TAPER ARBORS FOR DRILL CHUCKS.** Have short taper to fit chuck and Morse taper shank to fit taper of lathe headstock spindle or tailstock spindle.

For Drill Chuck	No. 2 Morse Taper			No. 3 Morse Taper		
	Cat. No.	Ship. Wt.	Price	Cat. No.	Ship. Wt.	Price
CE1200	CE2300	3/8 lb.	\$1.50	CE2301	3/4 lb.	\$2.10
CE1201	CE2302	1/2 lb.	1.50	CE2303	3/8 lb.	2.10
CE1202	CE2304	1/2 lb.	1.65	CE2305	3/4 lb.	2.10
CE1206	CE2306	1 1/8 lbs.	2.10	CE2307	1 1/2 lbs.	2.35

**F STRAIGHT ARBORS FOR DRILL CHUCKS.** Have short taper to fit drill chuck and straight shank for fitting drill chuck to hole in turret head.

Cat. No.	For Turret Hole	For Drill Chuck	Price	Cat. No.	For Turret Hole	For Drill Chuck	Price
CE2360	5/8"	CE1200	\$2.35	CE2900	1"	CE1200	\$2.60
CE2362	5/8"	CE1201	2.35	CE2901	1"	CE1201	2.60
CE2364	5/8"	CE1202	2.35	CE2902	1"	CE1202	2.60
CE2366	5/8"	CE1206	2.35	CE2903	1"	CE1206	2.60
CE2361	3/4"	CE1200	2.60	CE2377	1 1/2"	CE1200	3.00
CE2363	3/4"	CE1201	2.60	CE2378	1 1/2"	CE1201	3.00
CE2365	3/4"	CE1202	2.60	CE2379	1 1/2"	CE1202	3.00
CE2367	3/4"	CE1206	2.60	CE2380	1 1/2"	CE1206	3.00

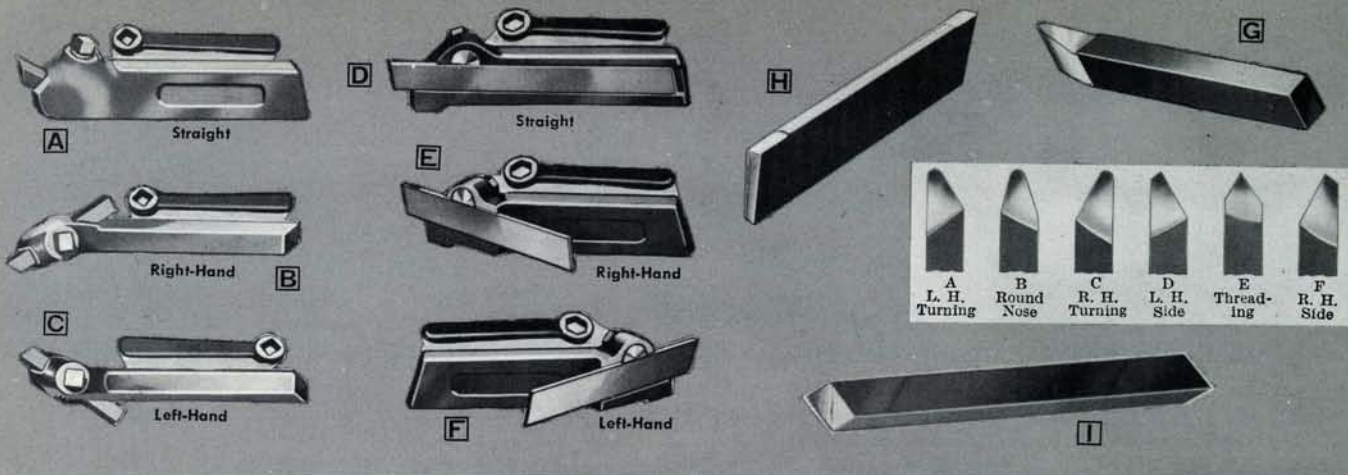
**G SEMI-MACHINED DRILL CHUCK ARBORS.** Have either straight or taper shanks for fitting drill chucks and other tools to lathe spindle or turret head. Must be machined to fit drill chuck or other tool.

Cat. No.	Shank	Ship. Wt.	Price
CE1500	No. 2 Morse Taper	1 lb.	\$1.95
CE1501	No. 3 Morse Taper	2 lbs.	2.30
CE2325	5/8" Diameter Straight	1 lb.	1.95
CE2326	3/4" Diameter Straight	1 lb.	2.00

**I HOLLOW BODY SPINDLE NOSE CHUCK.** Has 1 1/2"-8 thread to fit spindle nose of 9" and 10-K lathes only. Has hollow body for holding automobile engine valves for refacing. Also used for holding small rods, bars, and tubes for machining. 5/8" chuck can be used in tailstock of lathe when fitted with taper arbor, No. CE2304 or CE2305, listed under "E" above. Price includes pinion key.

Cat. No.	Capacity	Ship. Wt.	Price
CE907	1/8" to 3/8"	3 3/4 lbs.	\$24.50
CE925	3/8" to 3/4"	4 1/4 lbs.	29.00





**A TURNING TOOL HOLDERS.** Drop-forged steel, heat-treated and hardened lathe tool holders. Supplied in three styles: straight, right-hand, and left-hand as illustrated. **B** Price includes: tool holder with hardened steel set screw, one unground hardened high-speed steel cutter bit, and a hardened drop-forged steel wrench.

Cat. No.	Size Lathe	Size Shank	Size Cutter	Ship. Wt.	Price
<b>A Straight Shank Turning Tool Holder</b>					
CE8475	9", 10-K, & 10"	3/8" x 1 3/16"	1/4" x 1/4"	1 lb.	\$3.22
CE8465	9", 10-K, & 10"	3/8" x 1 3/16"	1/4" x 1/4"	2 lbs.	7.38
CE8525	13"	1/2" x 1 1/8"	3/16" x 3/16"	3 lbs.	8.44
CE8535	14 1/2", 16" & 16-24"	3/8" x 1 3/8"	3/8" x 3/8"	3 lbs.	10.35

Cat. No.	Size Lathe	Size Shank	Size Cutter	Ship. Wt.	Price
<b>B Right-Hand Turning Tool Holders</b>					
CE847R	9", 10-K, & 10"	3/8" x 1 3/16"	1/4" x 1/4"	1 lb.	\$3.22
CE846R	9", 10-K, & 10"	3/8" x 1 3/16"	1/4" x 1/4"	2 lbs.	7.38
CE852R	13"	1/2" x 1 1/8"	3/16" x 3/16"	3 lbs.	8.44
CE853R	14 1/2", 16" & 16-24"	3/8" x 1 3/8"	3/8" x 3/8"	3 lbs.	10.35

Cat. No.	Size Lathe	Size Shank	Size Cutter	Ship. Wt.	Price
<b>C Left-Hand Turning Tool Holders</b>					
CE847L	9", 10-K, & 10"	3/8" x 1 3/16"	1/4" x 1/4"	1 lb.	\$3.22
CE846L	9", 10-K, & 10"	3/8" x 1 3/16"	1/4" x 1/4"	2 lbs.	7.38
CE852L	13"	1/2" x 1 1/8"	3/16" x 3/16"	3 lbs.	8.44
CE853L	14 1/2", 16" & 16-24"	3/8" x 1 3/8"	3/8" x 3/8"	3 lbs.	10.35

**D CUTTING-OFF TOOL HOLDERS.** Made of drop-forged steel, heat-treated and hardened. Supplied in three styles: straight, right-hand, and left-hand as illustrated. Price includes: tool holder, one cutter blade, and wrench.

Cat. No.	Size Lathe	Size Shank	Size Cutter	Ship. Wt.	Price
<b>D Straight Shank Cutting-off Tool Holders</b>					
CE833S	9", 10-K, & 10"	3/8" x 1 3/16"	3/32" x .595"	1 lb.	\$3.81
CE736S	9", 10-K, & 10"	3/8" x 1 3/16"	3/32" x .475"	2 lbs.	7.38
CE883S	13"	1/2" x 1 1/8"	1/8" x .735"	3 lbs.	9.28
CE884S	14 1/2", 16" & 16-24"	3/8" x 1 3/8"	1/8" x .870"	3 lbs.	11.64

Cat. No.	Size Lathe	Size Shank	Size Cutter	Ship. Wt.	Price
<b>E Right-Hand Cutting-off Tool Holders</b>					
CE833R	9", 10-K, & 10"	3/8" x 1 3/16"	3/32" x .595"	1 lb.	\$3.81
CE736R	9", 10-K, & 10"	3/8" x 1 3/16"	3/32" x .475"	2 lbs.	7.38
CE883R	13"	1/2" x 1 1/8"	1/8" x .735"	3 lbs.	9.28
CE884R	14 1/2", 16" & 16-24"	3/8" x 1 3/8"	1/8" x .870"	3 lbs.	11.64

Cat. No.	Size Lathe	Size Shank	Size Cutter	Ship. Wt.	Price
<b>F Left-Hand Cutting-off Tool Holders</b>					
CE736L	9", 10-K, & 10"	3/8" x 1 3/16"	3/32" x .475"	2 lbs.	\$7.38
CE883L	13"	1/2" x 1 1/8"	1/8" x .735"	3 lbs.	9.28
CE884L	14 1/2", 16" & 16-24"	3/8" x 1 3/8"	1/8" x .870"	3 lbs.	11.64

**G GROUND CUTTER BITS FOR TURNING TOOL HOLDERS.** Finish ground and ready for use when mounted in tool holder. These cutter bits are made of good quality high-speed steel and are heat-treated and hardened.

When ordering, be sure to specify the catalog numbers and the letters designating shapes of bits wanted.

Size Square Inch	Length Cutter Inches	Single Bit			Set of 6 Bits		
		Cat. No.	Ship. Wt.	Price	Cat. No.	Ship. Wt.	Price
1/4	2	CE1305	4 ozs.	\$0.55	CE1779	10 ozs.	\$3.10
3/16	2 1/2	CE1313	5 ozs.	\$0.80	CE1777	10 1/2 ozs.	4.60
3/8	3	CE1316	5 ozs.	1.60	CE1778	11 ozs.	9.40

**H BLADES FOR CUTTING-OFF TOOL HOLDERS.** Made from high-speed steel, heat-treated, hardened, ground on the edges, ready to use in above tool holders or 10 in 1 Tool Holder listed on page 62.

Cat. No.	Size of Blade	Ship. Wt.	Price
CE876	3/32" x .595" x 5"	5 ozs.	\$2.22
CE1192	3/32" x .475" x 4 1/2"	5 ozs.	2.04
CE878	1/8" x .735" x 5"	6 ozs.	2.66
CE879	1/8" x .870" x 6"	8 ozs.	3.24

**I UNGROUND CUTTER BITS.** These cutter bits are made of good quality high-speed steel. They are heat-treated and hardened and are ready for use when sharpened. Specify catalog number and size when ordering cutter bits.

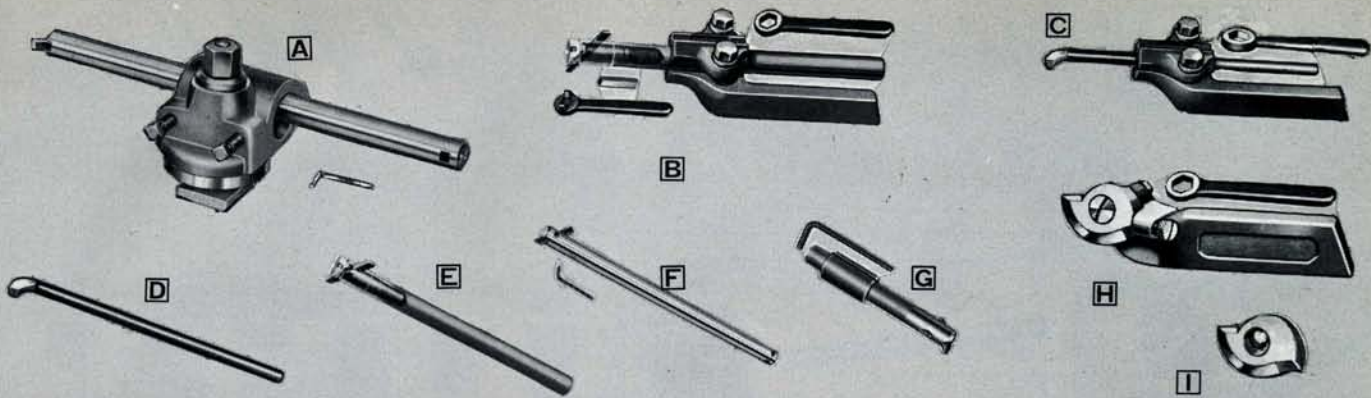
#### UNGROUND HIGH SPEED STEEL CUTTER BITS

Catalog Number	Size Square	Length Cutter	Shipping Weight	Factory Price
CE3531	3/16"	1"	3 ozs.	\$0.15
CE3532	3/16"	1 1/2"	3 ozs.	0.18
CE3533	1/4"	2"	4 ozs.	0.28
CE3534	3/8"	2 1/2"	5 ozs.	0.50
CE3535	3/8"	3"	5 ozs.	0.73
CE3536	7/16"	3 1/2"	7 ozs.	1.04
CE3537	1/2"	4"	12 ozs.	1.40
CE3538	3/8"	4 3/8"	1 lb.	2.08

#### UNGROUND HIGH SPEED STEEL CUTTER BITS IN LOTS

Size Square Inch	Length Cutter Inches	Lot of 6 Bits			Lot of 24 Bits		
		Cat. No.	Ship. Wt.	Price	Cat. No.	Ship. Wt.	Price
3/16	1				CE2370	1 lb.	\$ 3.25
3/16	1 1/2				CE2371	1 lb.	3.90
1/4	2	CE1629	10 ozs.	\$ 1.40	CE2372	2 lbs.	5.25
3/8	2 1/2	CE1632	10 1/2 ozs.	2.80	CE2373	3 lbs.	10.65
3/8	3	CE1633	11 ozs.	3.90	CE2374	4 lbs.	15.45
3/8	3 1/2	CE2501	2 lbs.	5.70	CE2375	6 lbs.	22.35
1/2	4	CE2502	3 lbs.	7.80	CE2393	13 lbs.	31.75
3/8	4 3/8	CE2503	4 lbs.	11.40	CE2376	15 lbs.	44.70





**A HEAVY DUTY BORING AND TURNING TOOL.** This is a very rigid combination tool for boring, turning, and facing operations. Holder takes bars from  $\frac{3}{8}$ " up to maximum capacity listed in tabulation. Tool may be swiveled to any angle and holder may be reversed for turning extra large diameters. Bar has slots for holding bit at 90° and 45°. Supplied either with or without boring bar, as indicated in table.

Size Lathe	9" & 10-K	10"	13"	14½"	16" & 16-24"
Max. Bar Cap.	¾"	¾"	1¼"	1½"	1½"
Size Boring Bar	¾" x 12"	¾" x 12"	1" x 16"	1½" x 18"	1½" x 18"
Size Cutter Bit	¼" x ¼"	¼" x ¼"	¾" x ¾"	¾" x ¾"	¾" x ¾"
Holder Only					
Cat. No.	CE3677NK	CE3677R	CE3677T	CE3677F	CE3677H
Ship. Wt. Lbs.	3	3	5	7	7
Price	\$12.45	\$13.25	\$14.05	\$15.75	\$17.50
Holder and Bar					
Cat. No.	CE469NK	CE469R	CE469T	CE469F	CE469H
Ship. Wt. Lbs.	8	8	14	15	18
Price	\$19.15	\$19.95	\$26.25	\$31.25	\$33.10

**B STYLE "B" BORING TOOL.** Made of drop-forged steel. Cutter can be set either straight or at a 45-degree angle. Price includes: drop-forged steel boring tool holder with hardened steel set screws, sleeve bar, end cap, two wrenches, and two unground high-speed steel cutter bits. Will take the following sizes of boring bars: No. CE423, 1/8" to 1/2"; No. CE431, 1/4" to 3/4"; No. CE432, 3/8" to 1".

Cat. No.	Size of Lathe	Size of Shank, Inches	Size Bar, Inches	Size of Cutter, Inch	Ship. Wt. Lbs.	Price
CE423	9", 10-K, & 10"	5/16 x 3/4	1/2 x 7 3/8	3/16 x 3/16	2	\$12.71
CE431	13"	1/2 x 1 1/8	3/4 x 11	1/4 x 1/4	5	15.10
CE432	14½", 16", 16-24"	3/8 x 1 3/8	1 1/8 x 13 1/4	3/8 x 3/8	8	19.86

**C STYLE "D" BORING TOOL.** For boring or threading work of small internal diameter. Price includes drop-forged steel boring tool holder, one boring bar, and wrench. Will take the following sizes of boring bars: No. CE3175, 1/8" to 1/2"; No. CE3176, 1/4" to 3/4"; No. CE3177, 3/8" to 1".

Cat. No.	Size of Lathe	Size of Shank, Inches	Size Bar, Inches	Ship. Wt. Lbs.	Price
CE3175	9", 10-K, & 10"	5/16 x 3/4	1/4 x 5	2	\$7.70
CE3176	13"	1/2 x 1 1/8	3/8 x 7	4	8.86
CE3177	14½", 16", 16-24"	3/8 x 1 3/8	7/16 x 8	6	10.04

**D SOLID BORING BARS.**

For use with Style "B" and "D" Boring Tools and in the 10 in 1 Tool Holder. High speed steel tip welded onto carbon steel shank. Can be ground for either boring or internal thread cutting operations.

Cat. No.	Bar Inches	Ship. Wt.	Price
CE3856	1/8 x 4	3 ozs.	\$0.88
CE3857	3/16 x 4 1/2	4 ozs.	1.17
CE3858	1/4 x 5	5 ozs.	1.50
CE3859	5/16 x 6	5 ozs.	1.72
CE3860	3/8 x 7	8 ozs.	2.33
CE3861	7/16 x 8	1 lb.	3.22

**E SLEEVE BORING BARS.** For use with Style "B" and "D" Boring Tools, Heavy Duty Boring Tool and in the 10 in 1 Tool Holder. Sleeve can be adjusted to hold square high speed steel cutter bit at 45° and 90° angles for boring and inside thread cutting operations. Price includes two cutter bits and wrench.

Cat. No.	Size of Bar	Size of Cutter Bit	Ship. Wt.	Price
CE2419	1/2" x 7 3/8"	3/16" x 3/16"	1 lb.	\$ 7.79
CE2420	3/4" x 11"	1/4" x 1/4"	2 lbs.	9.74
CE2421	1 1/8" x 13 1/4"	3/8" x 3/8"	4 lbs.	14.02

**F PLAIN BORING BARS.** For use with 10 in 1 Tool Holder and other Boring Tool Holders. Bars will hold cutter bit at 45° and 90° angles. Price includes cutter bit and wrench.

Cat. No.	Bar Size	Cutter Bit	Ship. Wt.	Price
CE2943	3/4" x 12"	1/4" x 1/4"	3 lbs.	\$ 6.95
CE2944	1" x 16"	3/8" x 3/8"	5 lbs.	12.10
CE2945	1 1/8" x 18"	3/8" x 3/8"	7 lbs.	15.45

**G PRECISION BORING BAR FOR CHUCK.** Designed especially for boring holes in turret head with extreme precision, this boring bar can be used for any similar operation in which the work is mounted on the lathe carriage or turret and the boring bar is held in the lathe chuck. Cutter bit has a very fine adjustment of .010" obtained by revolving the eccentric bushing. Minimum diameter of bore is 5/8". Maximum depth of bore is 2 1/2".

CE3420. Precision Boring Bar for Chuck. Shipping weight 1 lb. Price f.o.b. factory ..... \$3.00

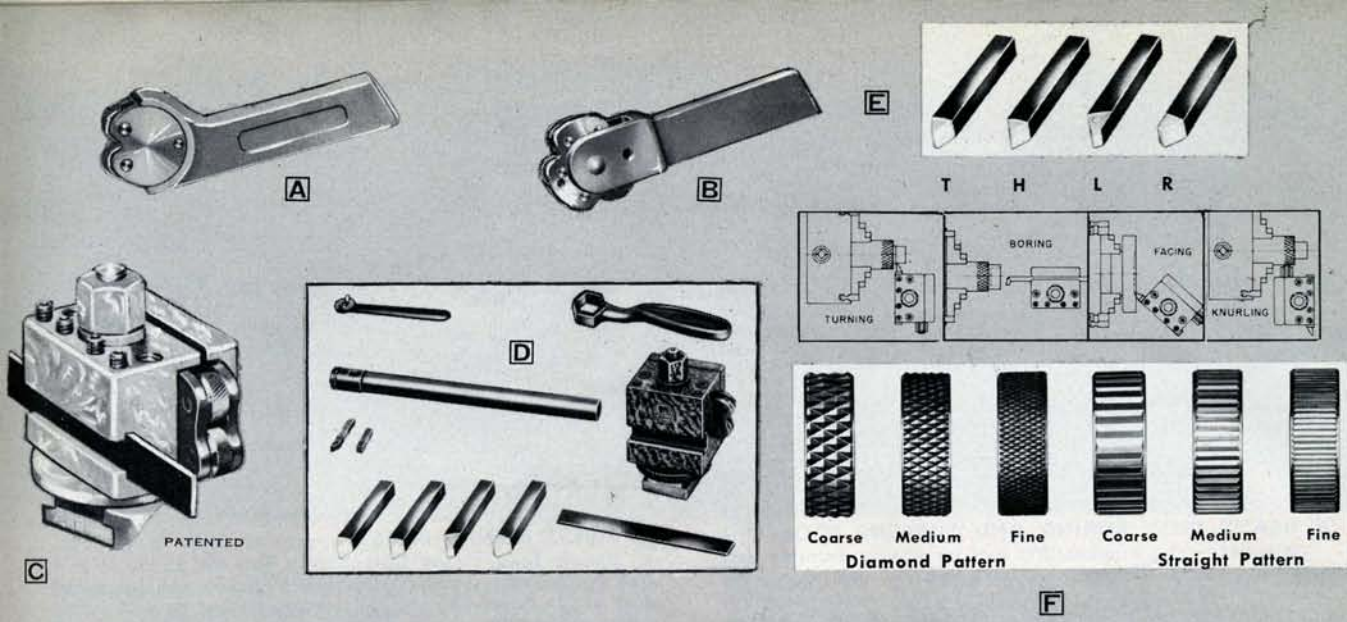
**H THREADING TOOLS.** Made of drop-forged steel. Cutter requires grinding on top edge only to sharpen. Price includes: threading tool holder with hardened steel set screw; wrench; and one high speed steel single point cutter. Choice of 60° cutter for U. S. Standard, V, or metric thread; or 55° cutter for Whitworth Standard thread. The 60° cutter will be furnished unless otherwise specified.

Cat. No.	Size of Lathe	Size of Shank	Ship. Wt.	Price
CE845	9" 10-K, & 10"	3/8" x 3/4"	2 lbs.	\$ 6.40
CE648	9", 10-K, & 10"	3/8" x 3/4"	2 lbs.	10.77
CE867	13"	1/2" x 1 1/8"	3 lbs.	12.99
CE868	14½", 16", & 16-24"	3/8" x 1 3/8"	4 lbs.	16.62

**I EXTRA CUTTERS FOR THREADING TOOLS.** Formed cutters properly heat-treated and ground, ready for use with Threading Tools described above. Made of high speed steel.

Catalog Number		Fits Thread Tools	Shipping Weight	Price
60° Angle	55° Angle			
CE3480	CE3483	CE845 & CE648	3 ozs.	\$4.17
CE3481	CE3484		4 ozs.	8.11
CE3482	CE3485		5 ozs.	10.81





**A KNURLING TOOL.** Knurling tool holder is made of drop-forged steel, heat-treated and hardened. Knurls are made of tool steel, hardened and tempered. Price includes: holder with choice of knurls in coarse, medium, or fine; straight or diamond shape. When ordering specify pattern of knurls wanted; otherwise medium diamond knurls will be supplied.

Cat. No.	Size Lathe	Shank Size	Ship Wt.	Price
CE820	9", 10-K, & 10"	3/8" x 3/4"	2 lbs.	\$ 7.61
CE665	9", 10-K, & 10"	5/16" x 3/4"	2 lbs.	14.62
CE893	13"	1/2" x 1 1/8"	2 lbs.	17.49
CE894	14 1/2", 16", & 16-24"	3/8" x 1 3/8"	3 lbs.	20.70

**B REVOLVING HEAD KNURLING TOOL.** Revolving head carries three sets of knurls for fine, medium, and coarse diamond patterns.

Cat. No.	Size Lathe	Shank Size	Ship Wt.	Price
CE3615	9", 10-K, & 10"	3/8" x 7/8"	2 lbs.	\$20.74
CE3616	13"	1/2" x 1 1/8"	2 lbs.	23.34
CE3617	14 1/2", 16", & 16-24"	3/8" x 1 3/8"	3 lbs.	27.18

**C 10 IN 1 TOOL HOLDER.** The 10 in 1 Tool Holder replaces the conventional tool post and various tool holders ordinarily used for general lathe work. It provides rigid support for turning, boring, threading, and cut-off tool bits. In addition, it is equipped with self-aligning knurling head having No. CE3151 medium diamond knurls. Screw adjustments for tool height are easily made, and they stay put. No readjustment is required when replacing tools. This tool block can be adapted to fit other makes of lathes. See pages 60 and 61 for cutter bits, boring bars, and cut-off blades. Cut off blade shown in illustration is not included.

Catalog Number	Size Lathe Inches	Holds Cutter Bits Inch	Holds Boring Bars Inches	Holds Cut-off Blades Inch	Ship. Wt. Lbs.	Price
CE1413NK	9 & 10-K	3/8 x 3/8	3/8 to 3/4	3/22 x .595	5	\$21.00
CE1413R	10	3/8 x 3/8	3/8 to 3/4	3/22 x .595	5	21.00
CE1413T	13	1/2 x 1/2	1/2 to 1 1/4	1/8 x .735	7	27.75
CE1413F	14 1/2	3/8 x 3/8	1/2 to 1 1/4	1/8 x .870	10	31.50
CE1413H	16 & 16-24	3/8 x 3/8	1/2 to 1 1/4	1/8 x .870	10	31.75

**D 10 IN 1 TOOL HOLDER KIT.** You can save money by purchasing this 10 in 1 Tool Holder Kit complete with boring bar, cut-off blade, and set of four ground high speed steel cutter bits. Price includes tool holder, knurling head, bolt, clamp, and all other equipment regularly supplied with the 10 in 1 tool holder. For specifications of tool holder see item "C". For description and illustrations of cutter bits, boring bars, and cut-off blades, see item "E" below and pages 60 and 61.

Catalog No. of Kit	Size of Lathe	Items Included in Kit			Ship. Weight	Price
		Cutter Bits	Boring Bar	Cut-off Blade		
CE2930NK	9" & 10-K	CE2776	CE2419	CE876	7 lbs.	\$34.25
CE2930R	10"	CE2776	CE2419	CE876	7 lbs.	34.25
CE2930T	13"	CE2777	CE2420	CE878	12 lbs.	48.25
CE2930F	14 1/2"	CE2778	CE2421	CE879	18 lbs.	64.50
CE2930H	16" & 16-24"	CE2778	CE2421	CE879	18 lbs.	65.00

**E GROUND CUTTER BITS FOR 10 IN 1 TOOL HOLDER.** High speed steel cutter bits ground for use in 10 in 1 tool holder listed above. Made in four shapes: T for turning, H for threading, R for facing on right side of work, and L for facing on left side of work. When ordering single bits be sure to specify shape wanted.

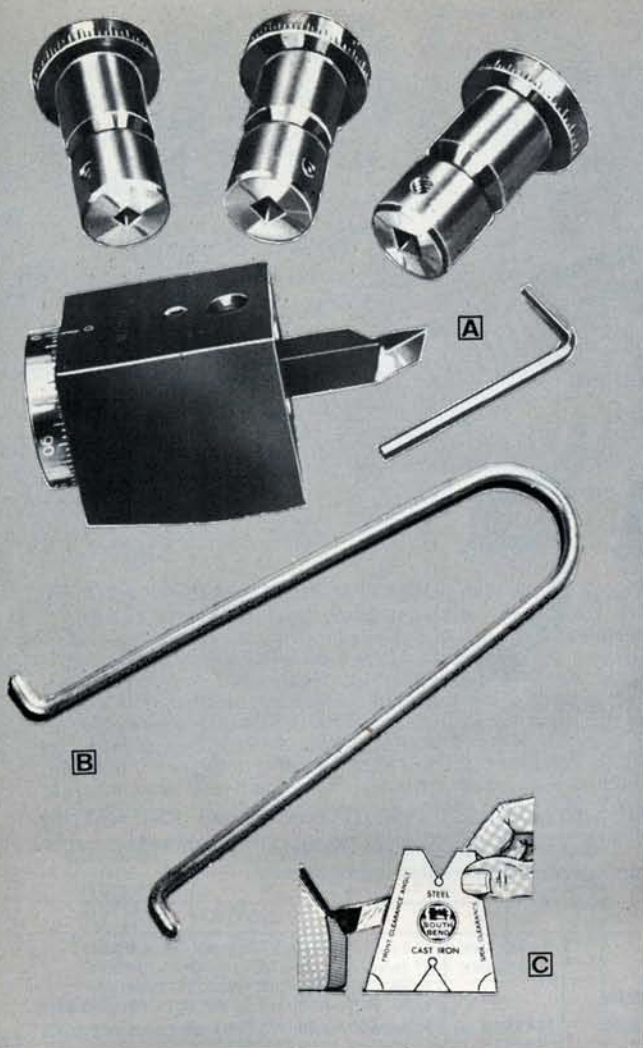
Size Square Inch	Length Cutter Inches	Single Bit			Set of 4 Bits		
		Cat. No.	Ship. Wt.	Price	Cat. No.	Ship. Wt.	Price
3/8	3	CE2267	5 ozs.	\$1.60	CE2776	1 lb.	\$ 6.25
1/2	4	CE2268	8 ozs.	2.50	CE2777	2 lbs.	9.15
3/4	4 3/8	CE2269	1 lb.	4.55	CE2778	3 lbs.	17.25

**F EXTRA KNURLS FOR KNURLING TOOLS.** For use with Knurling Tools and with 10 in 1 Tool Holder. Illustrations above show actual size of knurling produced. Supplied in pairs.

Cat. No.	Pattern	Size	Fits Knurling Tools	Ship. Wt.	Price
CE3150†	Fine Diamond . . .	3/8" x 3/16"	CE820 & CE665	4 ozs.	\$2.86
CE3151†	Med. Diamond . . .	3/8" x 3/16"	CE820 & CE665	4 ozs.	2.86
CE3152†	Coarse Diamond . . .	3/8" x 3/16"	CE820 & CE665	4 ozs.	2.86
CE3153†	Fine Straight . . .	3/8" x 3/16"	CE820 & CE665	4 ozs.	2.86
CE3154†	Med. Straight . . .	3/8" x 3/16"	CE820 & CE665	4 ozs.	2.86
CE3155†	Coarse Straight . . .	3/8" x 3/16"	CE820 & CE665	4 ozs.	2.86
CE3156	Fine Diamond . . .	3/4" x 3/8"	CE893 & CE894	5 ozs.	3.32
CE3157	Med. Diamond . . .	3/4" x 3/8"	CE893 & CE894	5 ozs.	3.32
CE3158	Coarse Diamond . . .	3/4" x 3/8"	CE893 & CE894	5 ozs.	3.32
CE3159	Fine Straight . . .	3/4" x 3/8"	CE893 & CE894	5 ozs.	3.32
CE3160	Med. Straight . . .	3/4" x 3/8"	CE893 & CE894	5 ozs.	3.32
CE3161	Coarse Straight . . .	3/4" x 3/8"	CE893 & CE894	5 ozs.	3.32

†Fits all sizes of 10 in 1 Tool Holders.





**A CUTTER BIT GRINDING BLOCK.** Here is an all-new Cutter Bit Grinding Block—The Graduated Collar simplifies getting the correct angles—side clearance—front clearance or tool angle. All angles easy to dial and grind. Block firmly supports cutter bit—eliminates burned fingers. Just dial your angle and grind!

This new cutter bit grinding block comes complete with master block—4 bit holders— $\frac{3}{16}$ ",  $\frac{1}{4}$ ",  $\frac{5}{16}$ " and  $\frac{3}{8}$ " capacity. Wrench included. Price less cutter bit.

**CE2168.** Cutter Bit Grinding Block. Ship. Wt. 3 lb. . . . . \$9.95

**B THREAD CLEANER.** A very handy tool for cleaning dirt and chips from inside threads of chucks, face plates and other lathe accessories which fit on the lathe spindle nose threads.

Made of  $\frac{3}{16}$ " steel, bent into the shape of a large hairpin with ends bent over and ground to a V-thread form. Approx. 7" long.

**CE2196.** One thread cleaner Ship. wt.  $\frac{1}{2}$  lb. . . . . \$0.35

**CE2197.** Lot of three Thread Cleaners Ship. wt. 2 lb. . . . . \$1.00

**C CUTTER BIT GRINDING GAUGE.** For grinding the correct front clearance, side clearance, front rake, and side rake on lathe tool cutter bits for machining iron and steel. Made of stainless steel. Instructions for using are packed with each gauge.

**CE2169.** Shipping weight  $\frac{1}{2}$  lb. Factory price . . . . . \$0.60



**D STANDARD LATHE DOGS.** To hold work securely, lathe dogs should correspond in capacity with the diameter of the work to be held. These lathe dogs are made of heavy malleable iron and are properly designed for maximum strength and long service. Tail of dog is shaped to fit slot in drive plate. Price includes square head alloy steel set screw.

Catalog Number	Cap. In.	Ship. Wt.	Price	Catalog Number	Cap. In.	Ship. Wt.	Price
<b>Standard Lathe Dogs for 13" and Larger Lathes</b>							
CE3843	$\frac{1}{2}$	1 lb.	\$1.50	CE3849	2	4 lbs.	\$3.35
CE3844	$\frac{3}{4}$	1 lb.	1.65	CE3850	2½	5 lbs.	4.00
CE3845	1	2 lbs.	1.75	CE3851	3	6 lbs.	4.35
CE3846	1¼	2 lbs.	2.15	CE3852	3½	7 lbs.	5.15
CE3847	1½	3 lbs.	2.50	CE3853	4	9 lbs.	6.65
CE3848	1¾	3 lbs.	2.85				

Catalog Number	Cap. In.	Ship. Wt.	Price	Catalog Number	Cap. In.	Ship. Wt.	Price
<b>Standard Lathe Dogs for 9" and 10" Lathes</b>							
CE3837	$\frac{3}{8}$	1 lb.	\$1.30	CE3840	1	2 lbs.	\$1.70
CE3838	$\frac{1}{2}$	1 lb.	1.35	CE3841	1¼	3 lbs.	1.85
CE3839	$\frac{3}{4}$	2 lbs.	1.60	CE3842	1½	3 lbs.	2.30

**E SAFETY LATHE DOGS.** Same as standard lathe dogs described above, except that they have hollow headless set screws instead of square head set screws.

Catalog Number	Cap. In.	Ship. Wt.	Price	Catalog Number	Cap. In.	Ship. Wt.	Price
<b>Safety Lathe Dogs for 13" and Larger Lathes</b>							
CE3826	$\frac{1}{2}$	1 lb.	\$1.50	CE3832	2	4 lbs.	\$3.35
CE3827	$\frac{3}{4}$	1 lb.	1.65	CE3833	2½	5 lbs.	4.00
CE3828	1	2 lbs.	1.75	CE3834	3	6 lbs.	4.35
CE3829	1¼	2 lbs.	2.15	CE3835	3½	7 lbs.	5.15
CE3830	1½	3 lbs.	2.50	CE3836	4	9 lbs.	6.65
CE3831	1¾	3 lbs.	2.85				

Catalog Number	Cap. In.	Ship. Wt.	Price	Catalog Number	Cap. In.	Ship. Wt.	Price
<b>Safety Lathe Dogs for 9" and 10" Lathes</b>							
CE3820	$\frac{3}{8}$	1 lb.	\$1.30	CE3823	1	2 lbs.	\$1.70
CE3821	$\frac{1}{2}$	1 lb.	1.35	CE3824	1¼	3 lbs.	1.85
CE3822	$\frac{3}{4}$	2 lbs.	1.60	CE3825	1½	3 lbs.	2.30

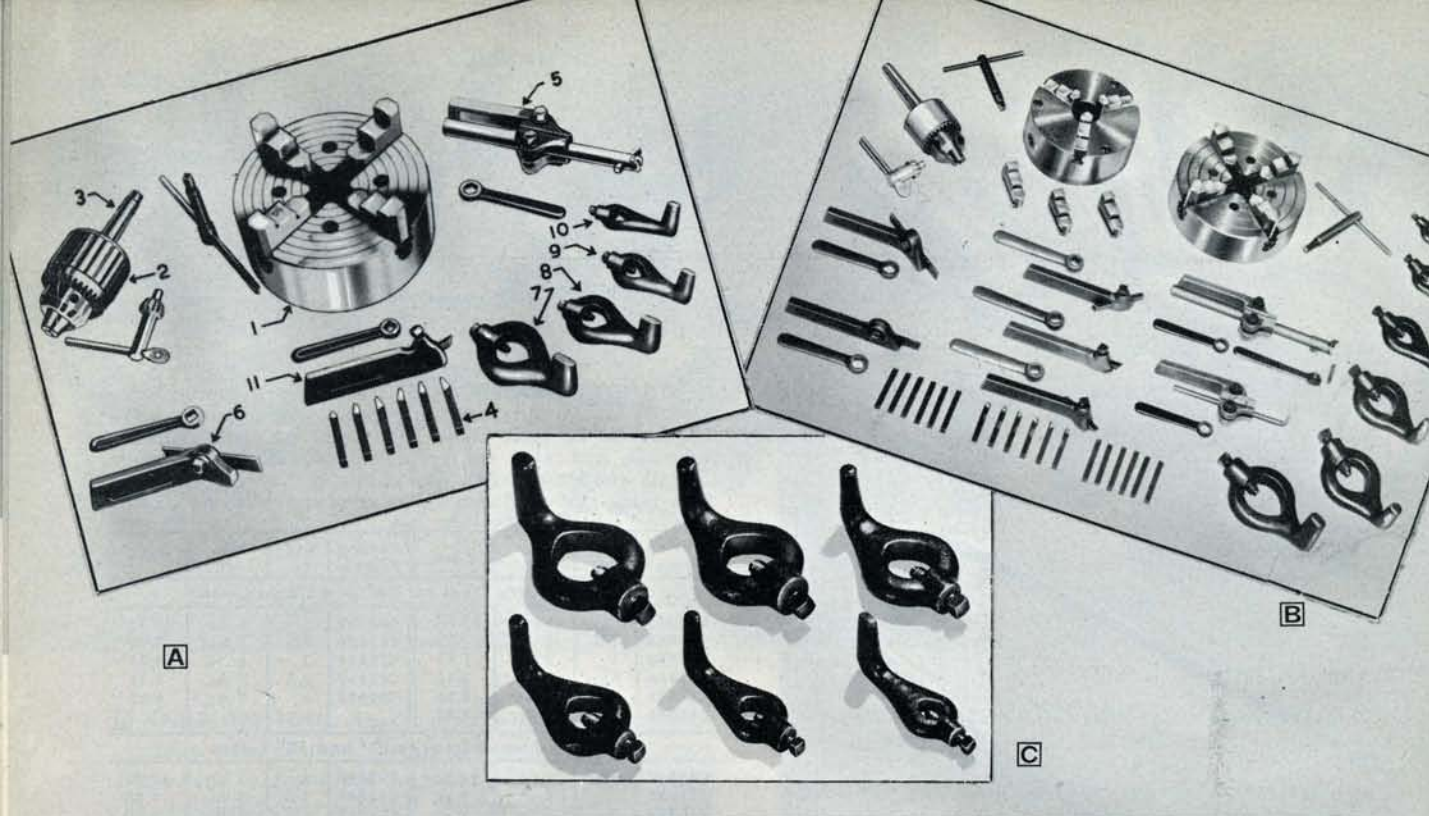
**F WRENCHES FOR SAFETY LATHE DOGS.** Hexagonal steel wrenches for tightening hollow head set screws in safety lathe dogs.

Cat. No.	FITS LATHE DOGS	Ship. Wt.	Price
CE2385	CE3820, CE3821, CE3826	3 oz.	\$0.07
CE2386	CE3822, CE3827	4 oz.	0.08
CE2387	CE3823, CE3828	4 oz.	0.12
CE2388	CE3824, CE3825, CE3829	4 oz.	0.13
CE2389	CE3830, CE3831, CE3832	4 oz.	0.17
CE2390	CE3833, CE3834, CE3835, CE3836	6 ozs.	0.27

**G CLAMP LATHE DOGS.** Made of heavy drop-forged steel, carefully machined and hardened. Practical for holding round, hexagonal or rectangular work. Screws have U.S. Standard thread and are hardened and tempered. The nuts permit adjusting screws for minimum projection of screw heads beyond body of lathe dog. Each clamp lathe dog is boxed separately.

Catalog Number	Capacity		Size Lathe Used With	Shipping Weight	Price
	Maximum Opening	Distance Between Screws			
CE160	1½"	1¾"	9" & larger	1 lb.	\$6.45
CE161	1¾"	2¼"	13" & larger	2 lbs.	8.57
CE162	2½"	2¾"	13" & larger	3 lbs.	10.75
CE163	3¼"	3½"	14½" & larger	4 lbs.	15.01





## SAVE TIME AND MONEY BY ORDERING COMPLETE CHUCK AND TOOL ASSORTMENTS

It pays to have each lathe fully equipped, ready for use on any type of work without waiting for chucks, tools or accessories ordered after the need arises. Several practical assortments of equipment are listed on this page. You can save time and money by purchasing one or more of these assortments rather than individual items. For use with threaded spindles only.

**A 11-TOOL ASSORTMENTS.** These assortments consist of the basic equipment required for general machine work in the average shop. The most popular sizes of chucks for each of the various sizes of lathes are included. See table below.

### EQUIPMENT INCLUDED IN 11-TOOL ASSORTMENTS

Item	Description
1	4-Jaw Independent Lathe Chuck fitted to lathe. Sizes: 6 in. on 9" and 10" Lathes; 7½ in. on 13" Lathe; 9 in. on 14½" Lathe; 10" on 16" and 16-24" Lathes.
2	Jacob's 3-Jaw Drill Chuck. Sizes: ½ in. on 9" and 10" Lathes; ¾ in. on 13" and 14½" Lathes; 1 in. on 16" and 16-24" Lathes.
3	Arbor Fitted to above Drill Chuck.
4	6 Ground Cutter Bits for Tool Holder.
5	Boring Tool Holder, Style "B". 9" and 10-K Lathes take Style "D".
6	Cutting-off Tool Holder, Right-Hand.
7-10	4 Malleable Lathe Dogs. Sizes: ½", ¾", 1" and 1½".
11	Straight Shank Tool Holder.

### COMPLETE 11-TOOL ASSORTMENTS AS LISTED ABOVE

Catalog Number	Size Lathe	Shipping Weight	Price
CL2890NK	9" & 10-K	28 lbs.	\$ 83.50
CL2890R	10"-1½" Collet	35 lbs.	132.00
CL2890L	10"-1½" Collet	35 lbs.	133.00
CL2890Q	13"-1½" Collet	70 lbs.	167.00
CL2890M	14½"-1½" Collet	87 lbs.	194.00
CL2890H	16" & 16-24"	110 lbs.	226.00

### 11-TOOL ASSORTMENT WITH UNIVERSAL CHUCK FOR 9-INCH AND 10-K LATHES ONLY

This assortment is exactly the same as the No. CL2890NK assortment listed above, except that a No. CL3005NK, 5" 3-Jaw Universal chuck is supplied in lieu of the 6" 4-jaw Independent chuck.

CL2960NK. Eleven Tool Assortment with Universal Chuck for 9-inch and 10-K Lathes. Ship. wt. 20 lbs. Price ..... \$114.00

### B 20-TOOL ASSORTMENT FOR 9" and 10-K LATHES.

This is a more complete assortment than those listed at left and consists of the following equipment:

Item	Cat. No.	Description
1	CL4006NK	6" Four-Jaw Independent Lathe Chuck, fitted.
2	CL3005NK	5" Three-Jaw Universal Lathe Chuck, fitted.
3		Jacob's Three-Jaw Drill Chuck, ½" capacity.
4		Taper Shank Arbor (No. 2 M.T.), fitted to Drill Chuck.
5	CE8475	Straight Shank Turning Tool Holder.
6	CE847R	Right-Hand Turning Tool Holder.
7	CE847L	Left-Hand Turning Tool Holder.
8	CE833R	Right-Hand Cutting-off Tool Holder.
9	CE833S	Straight Shank Cutting-off Tool Holder.
10	CE1779	Set (6) Ground Cutter Bits for Turning Tools.
11-12	CE1629	Two Sets (6) Unground Cutter Bits for Turning Tools.
13	CE3175	Style "D" Boring Tool Holder.
14	CE423	Style "B" Boring Tool Holder.
15	CE3837	¾" Standard Malleable Lathe Dog.
16	CE3838	½" Standard Malleable Lathe Dog.
17	CE3839	¾" Standard Malleable Lathe Dog.
18	CE3840	1" Standard Malleable Lathe Dog.
19	CE3841	1¼" Standard Malleable Lathe Dog.
20	CE3842	1½" Standard Malleable Lathe Dog.

CL2970NK. Twenty Tool Assortment as listed above for 9" or 10-K Lathes. Shipping weight 52 lbs. .... \$191.00

### C SETS OF LATHE DOGS. A complete set of dogs for each

lathe will save time and contribute to efficient operation. Having the correct size of lathe dog at hand for any job will more than compensate for the cost of a full set. Two or more dogs of each size will often save time on production work, as this permits changing one dog while the other is in use.

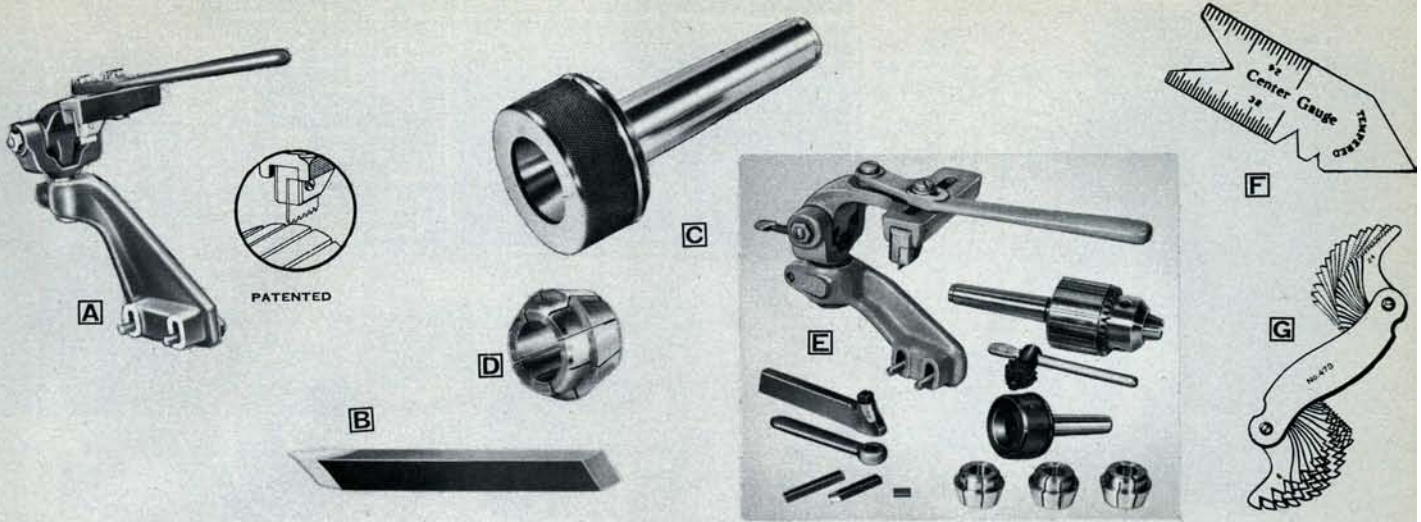
Cat. No. CE2102. Set of 11 Standard Lathe Dogs, ½" to 4" capacity for 13" and larger lathes. Ship. wt. 36 lbs. .... \$31.75

Cat. No. CE2103. Set of 11 Safety Lathe Dogs, ½" to 4" capacity for 13" and larger lathes. Ship wt. 36 lbs. .... \$31.75

Cat. No. CE2105. Set of 6 Standard Lathe Dogs, ¾" to 1½" capacity for 9" and 10" lathes. Ship. wt. 6 lbs. .... \$10.00

Cat. No. CE2107. Set of 6 Safety Lathe Dogs, ¾" to 1½" capacity for 9" and 10" lathes. Ship. wt. 6 lbs. Price ..... \$10.00





**A MICA UNDERCUTTING ATTACHMENT.** Any shop that repairs armatures for motors, generators or starters will have a lot of use for this practical attachment. It attaches to the saddle of the lathe for undercutting armature commutators. Hand operated, easy to use, and efficient. Cutter blade can be aligned with commutator segments, even though they are not parallel with the armature shaft. This prevents cutting into copper and throwing up burrs. A screw adjustment is provided for regulating the depth of the cut. Maximum length of stroke is 3". When not in use, the undercutter may be tilted back out of the way. Price includes one cutter blade .020" thick.

Catalog No.	Size Lathe	Ship. Weight	Price
CL675N	9"	7 lbs.	\$28.35
CL675KR	10-K & 10"	10 lbs.	28.35
CL675T	13"	12 lbs.	29.40
CL675F	14½"	15 lbs.	31.00
CL675H	16"	17 lbs.	33.10

CE2028. Extra cutter .015" thick. Ship. wt. ½ lb. Price ..... \$0.25  
 CE2029. Extra cutter .020" thick. Ship. wt. ½ lb. Price ..... 0.35

**B GROUND CUTTER BITS** for truing armature commutators. Made of high speed steel, sharpened for truing commutators, and ready for use when mounted in tool holder.

Size of Bit	Single Bit			Lot of Six Bits		
	Cat. No.	Ship. Wt.	Price	Cat. No.	Ship. Wt.	Price
¼" sq.	CE1363	4 ozs.	\$0.55	CE1744	10 ozs.	\$3.10
⅜" sq.	CE1365	5 ozs.	\$0.80	CE1746	10½ ozs.	4.60
½" sq.	CE1366	5 ozs.	1.60	CE1747	11 ozs.	9.40

**C ADJUSTABLE COLLET BUSHING CHUCK.** The adjustable Collet Bushing Chuck provides extremely accurate, but inexpensive equipment for mounting centerless armature shafts and similar parts in the lathe. Can be used in either head or tail spindle of lathe. Collets are made of brass and may be adjusted for either running fit or driving fit on shaft.



Description	Cat. No.	Shank	Shipping Weight	Price
Adjustable Collet Bushing Chuck only.....	CE1615NR	No. 2	2 lbs.	\$ 9.75
	CE1615TH	No. 3	2 lbs.	10.50
Adjustable Collet Bushing Chuck with set of 3 collets, ¼", ⅜", and .637" capacity for popular armatures.	CE1608NR	No. 2	3 lbs.	14.60
	CE1608TH	No. 3	4 lbs.	15.15

**D EXTRA COLLETS.** Order a complete assortment of collets for supporting work in the Adjustable Collet Bushing Chuck described at left. With them you can support centerless shafts for many jobs in addition to truing armature commutators. Collets are made of brass in sizes from ⅛" to 1" round in increments of ⅛".

CE1659. Extra Collets for round work, any capacity ⅛" to 1" round by 16ths, also .637", ship. wt. each 1 lb. Price each... \$1.70

**E ARMATURE SERVICE EQUIPMENT KIT.** This kit consists of mica undercutting attachment with two cutter blades; adjustable collet bushing chuck with set of three collets; drill chuck, ⅜" to ¾" capacity for driving armatures; taper shank arbor with No. 3 shank for drill chuck; straight shank turning tool with cutter bit and wrench; and cutter bit ground for truing commutators. See page items "A", "B" and "C" for descriptions of these items.

Catalog No.	Size Lathe	Shipping Weight	Price
CL2330N	9"	20 lbs.	\$62.50
CL2330K	10-K	22 lbs.	62.50
CL2330R	10"	22 lbs.	62.50
CL2330T	13"	26 lbs.	69.50
CL2330F	14½"	28 lbs.	73.00
CL2330H	16"	30 lbs.	75.00

**F CENTER GAUGE.** The center gauge is a useful tool for the lathe operator. The 60° included angle is used for checking the angle of the lathe center point. The two small 60° notches in the side of the tool are used for grinding and setting the point of the lathe tool for cutting screw threads. Engine divided graduations in each corner are in 32nds, 24ths, 20ths, and 14ths respectively. Made of good quality tool steel, hardened and tempered. Accurately ground on all faces, and lapped in the notches to a light tight fit with a standard.

CE650. Center Gauge. Shipping weight 2 ozs..... \$1.75

**G SCREW THREAD PITCH GAUGES.** With one of these handy gauges you can check the pitches of internal and external screw threads quickly and accurately. Made of steel, with each blade marked to indicate threads per inch. Each blade has standard 60° U.S. thread form accurately milled and held well within commercial tolerances. Can be used for checking V, American National and U.S. Standard threads.

CE2188. Ace screw pitch gauge with 14 blades for 10, 11, 12, 13, 14, 16, 18, 20, 24, 27, 28, 32, 36, and 40 threads per inch. Shipping weight 4 ozs. Price f.o.b. factory..... \$1.75

CE2171. Starrett screw pitch gauge with 30 blades for 6, 7, 8, 9, 10, 11, 11½, 12, 13, 14, 15, 16, 18, 20, 22, 24, 26, 27, 28, 30, 32, 34, 36, 38, 40, 42, 48, 50, 56, and 60 threads per inch. Shipping weight 5 ozs. Price f.o.b. factory..... \$5.55



MANUFACTURED BY SOUTH BEND LATHE INC., SOUTH BEND, IND.

PITCHES IN mm—PASOS EN mm—PAS EN mm			POSITION POSITION	STUD AND ANGLE					
7.500	7.000	5.500	5.000	4.500	4.000	D	50		
3.750	3.500	3.250	3.000	2.750	2.500	2.250	2.000	C	"
1.875	1.750	1.625	1.500	1.375	1.250	1.125	1.000	B	"
FEEDS IN mm—AVANCES EN mm			POSITION POSITION	STUD AND ANGLE					
1.500	1.400	1.300	1.200	1.100	1.000	0.900	0.800	C	20
0.750	0.700	0.650	0.600	0.550	0.500	0.450	0.400	B	"
0.375	0.350	0.325	0.300	0.275	0.250	0.225	0.200	A	"
0.612	0.478	0.444	0.410	0.375	0.341	0.307	0.273	C	20
0.256	0.239	0.222	0.205	0.188	0.171	0.154	0.137	B	"
0.128	0.119	0.111	0.102	0.094	0.085	0.077	0.068	A	"

TRANSPOSING GEAR CHART  
METRIC SCREW THREADS  
ENGLISH PITCH LEAD SCREW

M.P.H. PITCH	STUD GEAR	SEAR GEAR	SCREW GEAR
6.00	48	FIG. 1	20
5.50	44	FIG. 1	20
5.00	40	FIG. 1	20
4.50	36	FIG. 1	20
4.00	32	FIG. 1	20
3.50	28	FIG. 1	20
3.00	24	FIG. 1	20
2.75	22	FIG. 1	20
2.50	20	FIG. 1	20
2.25	18	FIG. 1	20
2.00	16	FIG. 1	20
1.75	14	FIG. 2	20
1.50	12	FIG. 2	20
1.40	11	FIG. 2	20
1.30	10	FIG. 2	20
1.25	9	FIG. 2	20
1.20	8	FIG. 2	20
1.10	7	FIG. 2	20
1.00	6	FIG. 2	20
0.90	5	FIG. 2	20
0.80	4	FIG. 2	20
0.75	3	FIG. 2	20
0.70	2	FIG. 2	20
0.60	1	FIG. 2	20
0.55	1	FIG. 2	20
0.50	1	FIG. 2	20
0.45	1	FIG. 2	20
0.40	1	FIG. 2	20
0.35	1	FIG. 3	100
0.30	1	FIG. 3	100
0.25	1	FIG. 3	100
0.20	1	FIG. 3	100

TRANSPOSING GEAR CHART  
ENGLISH SCREW THREAD  
METRIC PITCH LEAD SCREW

STUD GEAR	SEAR GEAR	SCREW GEAR
20	FIG. 1	20
22	FIG. 1	20
24	FIG. 1	20
26	FIG. 1	20
28	FIG. 1	20
30	FIG. 1	20
32	FIG. 1	20
34	FIG. 1	20
36	FIG. 1	20
38	FIG. 1	20
40	FIG. 1	20
42	FIG. 1	20
44	FIG. 1	20
46	FIG. 1	20
48	FIG. 1	20
50	FIG. 1	20
52	FIG. 1	20
54	FIG. 1	20
56	FIG. 1	20
58	FIG. 1	20
60	FIG. 1	20
62	FIG. 1	20
64	FIG. 1	20
66	FIG. 1	20
68	FIG. 1	20
70	FIG. 1	20
72	FIG. 1	20
74	FIG. 1	20
76	FIG. 1	20
78	FIG. 1	20
80	FIG. 1	20
100	FIG. 3	100
110	FIG. 3	100
120	FIG. 3	100
130	FIG. 3	100
140	FIG. 3	100
150	FIG. 3	100
160	FIG. 3	100
170	FIG. 3	100
180	FIG. 3	100
190	FIG. 3	100
200	FIG. 3	100

# METRIC SYSTEM EQUIPMENT

**A METRIC TRANSPOSING GEARS.** When equipped with set of metric transposing gears, right-hand and left-hand metric threads ranging from 6 mm pitch to 0.20 mm pitch, as listed in the index chart above can be cut (in addition to the regular English pitches) on any size or type of South Bend Lathe having an English lead screw.

When "English" lathes are ordered with metric transposing gears, the graduations on the tailstock spindle, the cross-feed screw, and the compound rest screw are supplied to read in the English system and the lead screw, compound rest screw and cross-feed screw have English pitch threads. Any deviation from this will be handled on a special order basis. **Catalog numbers listed below apply to equipment for current models of lathes only. Write for information and prices of transposing equipment for older lathes with single tumbler gear boxes.**

### METRIC TRANSPOSING GEARS ORDERED WITH LATHE

Size of Lathe	With English Graduations		With Metric Graduations	
	Cat. No.	Price	Cat. No.	Price
9" Model A	CL1955NK	\$15.50	CL1941NK	\$15.50
9" Model B	CL2248N	18.50	CL2247N	18.50
9" Model C	CL2261N	18.50	CL2263N	18.50
10-K Model A	CL1955NK	15.50	CL1941NK	15.50
10-K Model B	CL2248K	19.50	CL2247K	19.50
10-K Model C	CL2261K	19.50	CL2263K	19.50
10" Quick Change	CL1955R	58.50	CL1941R	58.50
13" Quick Change	CL1955T	65.00	CL1941T	65.00
14½" Quick Change	CL1955F	76.25	CL1941F	76.25
16", 16-24", & 2-H Q.C.	CL1955H	76.25	CL1941H	76.25

### METRIC TRANSPOSING GEARS ORDERED SEPARATE FROM LATHE

Size of Lathe	Ship. Wt.	Cat. No.	Price
9" Model A	8 lbs.	CL1957NK	\$15.50
9" Model B	21 lbs.	CL1962N	25.00
9" Model C	21 lbs.	CL1961N	25.00
10-K Model A	8 lbs.	CL1957NK	15.50
10-K Model B	21 lbs.	CL1962K	26.50
10-K Model C	21 lbs.	CL1961K	26.50
10" Quick Change	51 lbs.	CL1957R	70.50
13" Quick Change	73 lbs.	CL1957T	77.25
14½" Quick Change	121 lbs.	CL1957F	93.75
16", 16-24", & 2-H Q.C.	65 lbs.	CL1957H	93.75

**B METRIC THREAD DIAL.** This attachment saves much time when cutting long screw threads. Instead of reversing the lathe to return the cutting tool to the starting point, the half-nuts may be opened and the carriage moved quickly by hand. The graduated dial shows when to engage the half-nuts so the cutting tool will follow the original cut.

**CL2265NK.** Metric Thread Dial for 9" and 10-K South Bend Lathes with metric lead screw. Ship. wt. 3 lbs. Price.....\$19.45

**CL2265R.** Metric Thread Dial for 10" South Bend Lathes with metric lead screw. Same as CL2265NK but includes adapter to fit 10" lathes. Ship wt. 3 lbs....\$30.20

**CL2265TH.** Metric Thread Dial for 13", 14½" and 16" South Bend Lathes with metric lead screw. Shipping weight 5 lbs.....\$42.00

**C METRIC LEAD SCREW LATHES.** All South Bend Lathes can be supplied in the metric system, with metric lead screw and gearing for cutting standard pitches of metric screw threads, and metric cross-feed and compound rest feed screw having micrometer collars with metric graduations. The tailstock spindle and taper attachment are graduated in both English and metric systems. Except for these features, the metric lathes are identical with corresponding models having English gearing and graduations. Write for complete information.

**D ENGLISH TRANSPOSING GEARS.** When equipped with a set of English transposing gears, right-hand and left-hand English screw threads ranging from 4 to 80 threads per inch, as listed in the index chart above can be cut (in addition to the regular metric pitches) on any size or type of South Bend Lathe having a metric lead screw.

When "Metric" lathes are ordered with English transposing gears, the graduated collars on the tailstock spindle, the cross-feed screw, and the compound rest screw are supplied to read in the metric system and the lead screw, compound rest screw and cross-feed screw have metric pitch threads. Any deviation from this will be handled on a special basis.

### ENGLISH TRANSPOSING GEARS ORDERED WITH LATHE

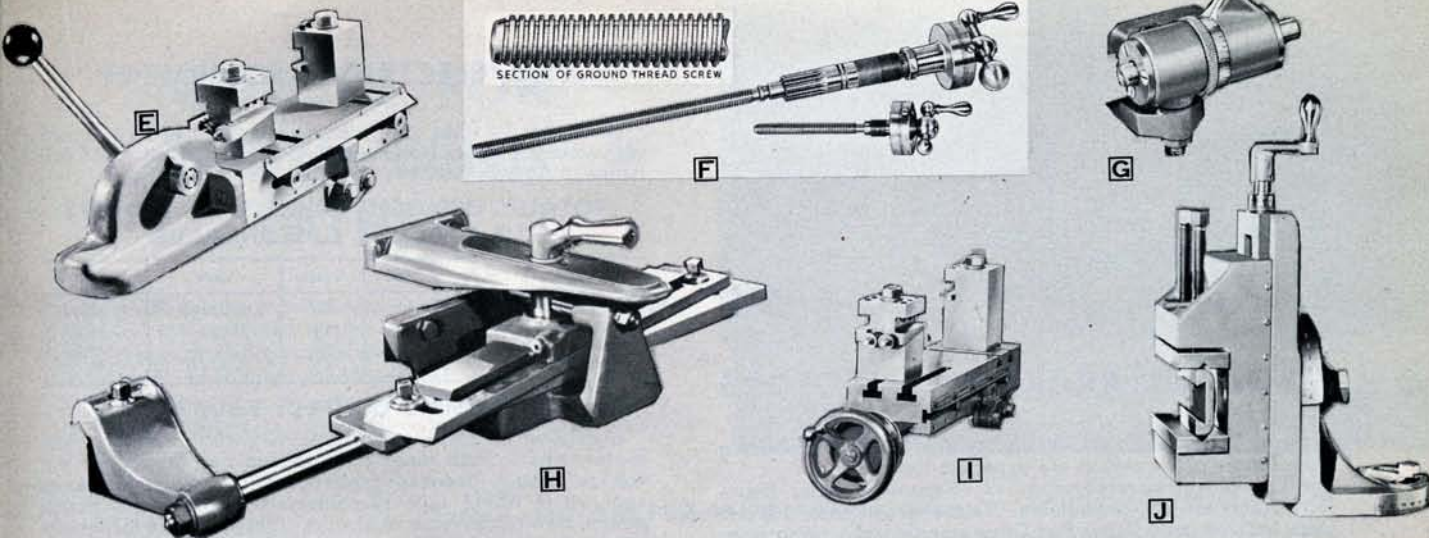
Size of Lathe	With English Graduations		With Metric Graduations	
	Cat. No.	Price	Cat. No.	Price
9" Model A	CL2288NK	\$17.10	CL2284NK	\$15.50
9" Model B	CL2253N	18.50	CL2255N	19.00
9" Model C	CL2254N	18.50	CL2256N	19.00
10-K Model A	CL2288NK	17.10	CL2284NK	15.50
10-K Model B	CL2253K	20.00	CL2255K	20.00
10-K Model C	CL2254K	20.00	CL2256K	20.00
10" Quick Change	CL2288R	53.00	CL2284R	53.00
13" Quick Change	CL2288T	58.50	CL2284T	58.50
14½" Quick Change	CL2288F	68.00	CL2284F	68.00
16", 16-24", & 2-H Q.C.	CL2288H	73.00	CL2284H	73.00

### ENGLISH TRANSPOSING GEARS ORDERED SEPARATE FROM LATHE

Size of Lathe	Ship. Wt.	Cat. No.	Price
9" Model A	8 lbs.	CL2289NK	\$ 15.80
9" Model B	21 lbs.	CL1283N	25.00
9" Model C	21 lbs.	CL1284N	25.00
10-K Model A	8 lbs.	CL2289NK	15.80
10-K Model B	21 lbs.	CL1283K	26.50
10-K Model C	21 lbs.	CL1284K	26.50
10" Quick Change	51 lbs.	CL2289R	71.75
13" Quick Change	73 lbs.	CL2289T	79.25
14½" Quick Change	121 lbs.	CL2289F	88.25
16", 16-24", & 2-H Q.C.	65 lbs.	CL2289H	102.75

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.





**E COMBINATION DOUBLE TOOL SLIDE** for 9", 10-K and 10" Lathes. This combination Hand Lever and Screw Feed Double Tool Cross Slide mounts on saddle cross slide dovetail in place of compound rest assembly. Front tool block takes two square cutter bits, back tool block takes one cutter bit. See **A** page 45 for detailed description.

Cat. No.	Size Lathe	Swing over Cross Slide	Cross Feed	Ship. Wt.	Price*
CL2030NME	9"	3 3/4"	METRIC	36 lbs.	\$103.50
CL2030KME	10-K	3 3/4"		37 lbs.	109.50
CL2030RME	10"	3 3/4"		45 lbs.	121.00

\*Can be supplied less handlever at lower prices. Write for information.

**F METRIC HARDENED AND GROUND Thread Screws.** Cross-feed Screws and Compound Rest Screws with hardened and ground Metric pitch threads can be supplied in lieu of regular screws on 10" and larger South Bend Lathes. Principal advantages of the hardened and ground thread screws are smoother operation and longer life. Prices below apply only when hardened and ground thread screws are specified when lathe is ordered and they can be supplied in lieu of regular screws when lathe is assembled at the factory.

**METRIC CROSS-FEED AND COMPOUND REST SCREWS WITH HARDENED AND GROUND THREAD IN LIEU OF REGULAR SCREWS**

Regular Cross-Feed			Taper Attachment Cross-Feed		
Cat. No.	Size Lathe	Price	Cat. No.	Size Lathe	Price
CL2032LME	10"	\$14.70	CL2198LME	10"	\$17.85
CL2032TME	13"	25.20	CL2198TME	13"	28.10
CL2032FME	14 1/2"	27.30	CL2198FME	14 1/2"	30.65
CL2032HME	16" & 16-24"	28.10	CL2198HME	16" & 16-24"	31.40

**CL2222TME.** Metric hardened and ground thread cross-feed screw in lieu of regular metric screw for 13" lathe screw feed double tool cross slide.....\$19.60

**CL2222HME.** Metric hardened and ground thread cross-feed screw in lieu of regular metric screw for 16" lathe or 2-H turret lathe screw feed double tool cross slide.....\$21.80

**G METRIC MICROMETER CARRIAGE STOP.** This attachment is useful for accurate facing, turning, boring, etc. It is used for locating the carriage at any point along lathe bed. Can be used on either side of carriage. Has accurately graduated micrometer collar. Metric graduations. The stop is hardened on both ends and may be locked for repetitive operations on duplicate work.

SIZE LATHE	SHIP. WT.	METRIC GRADUATIONS	
		CAT. NO.	PRICE
9" & 10-K	2 lbs.	CL968NKME	\$24.10
10"	4 lbs.	CL968RME	25.15
13"	4 lbs.	CL968TME	28.35
14 1/2", 16", 16-24", & 2-H	7 lbs.	CL968FHME	29.40

**H METRIC TAPER ATTACHMENT** with metric graduations can be supplied for any size or type of South Bend Lathe. Plain taper attachment is supplied for 9" and 10-K Lathes, a telescopic taper attachment on 10" and larger. See page 50 for detailed specifications.

**TAPER ATTACHMENT WITH METRIC GRADUATIONS**

Cat. No.	Size of Lathe	Swing M.M.	Swing Over Cross Slide	Maximum Taper		Approx. Ship. Weight	Price
				At One Sighting	In Degrees		
CL428NKME	9"	234	127mm	177 mm	16 1/2	35 lbs.	\$ 99.50
CL428NKME	10-K	254	149mm	177 mm	16 1/2	35 lbs.	99.50
CL1545RME	10"	257	146mm	215 mm	16 1/2	40 lbs.	204.00
CL1545TME	13"	333	203mm	234 mm	16 1/2	65 lbs.	245.00
CL1545FME	14 1/2"	371	227mm	234 mm	16 1/2	80 lbs.	264.00
CL1545HME	16"	412	244mm	292 mm	16 1/2	100 lbs.	295.00
CL1545HME	16-24"	638	476mm	292 mm	16 1/2	100 lbs.	295.00

**I SCREW FEED DOUBLE TOOL SLIDE** for 13" and 16" Lathes. Fits on saddle dovetail in place of compound rest assembly. May be operated manually or by power through friction clutch in apron. See **C** page 45 for detailed description.

Catalog Number	Size Lathe	Swing over Cross Slide	Cross-Feed	Size Bit	Shipping Weight	Factory Price
CL2027TME	13"	6 7/8"	METRIC	7/16" sq.	60 lbs.	\$179.50
CL2027HME	16"	6 7/8"		9/16" sq.	95 lbs.	195.00

**J METRIC MILLING ATTACHMENT.** The milling and key-way cutting attachments shown above can be supplied with metric graduations in lieu of English graduations. Prices and specifications are same as for corresponding sizes with English graduations. Specify catalog numbers listed below for milling attachments with metric graduations. See page 50 for detailed specifications.

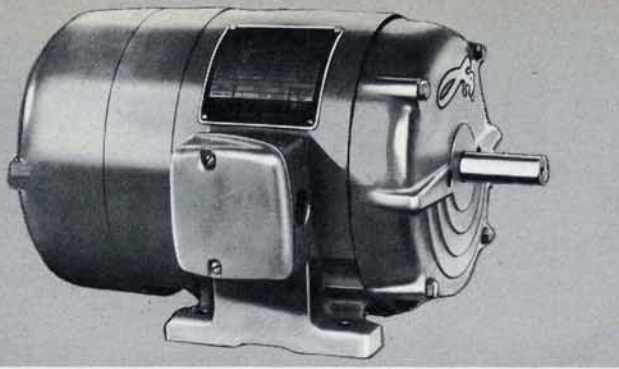
Catalog Number	Size Lathe	Catalog Number	Size Lathe
CL2680NKME	9" & 10-K	CL2680FME	14 1/2"
CL2680RME	10"	CL2680HME	16" & 16-24"
CL2680TME	13"		

METRIC graduated collars can be supplied in lieu of English for any South Bend Lathe if ordered with lathe, no extra cost. Metric graduated collars are not direct reading.

**METRIC GRADUATIONS**

South Bend Milling Machines can be supplied with metric quill stop screw and depth scale, metric feed screws and metric graduated collars in lieu of English at no extra cost when metric equipment is specified at time machine is ordered.





## MAGNETIC BRAKE TYPE MOTORS

Magnetic Brake Type Motors listed are instant reversing type. Single phase motors are capacitor type.

All brake type motors are purchased special to order, therefore, orders are non-cancellable. We recommend use of either Cam Lock or Long Taper Key Drive spindle when using magnetic brake type motors.

Controls for motors listed below are the same as used for regular motors. See pages 70 and 71 for control equipment for each motor. Alternate controls listed on page 72.

### MAGNETIC BRAKE TYPE MOTORS FOR SOUTH BEND LATHES

Catalog Number	Size of Lathe	Type of Current	Phase	Cycle	Voltage	h.p.	Speeds	Price f.o.b. Fact.	
CE2543PB	14 1/2-inch	A.C.	3	60	208	2	One	\$223.00	
CE2543CB		A.C.	3	50	220	2		223.00	
CE2543DB		A.C.	3	60	220	2		223.00	
CE2543EB		16-24 inch	A.C.	3	50	440		2	223.00
CE2543FB		and 2-H	A.C.	3	60	440		2	223.00
CE2552GB		A.C.	3	50	550	2		223.00	
CE2552HB		A.C.	3	60	550	2		223.00	
CE2543SB	A.C.	3	50	380	2	223.00			
CE2548AB	14 1/2-inch	A.C.	1	50	115	1 1/2	One	316.00	
CE2548BB	16-inch	A.C.	1	60	115	1 1/2		316.00	
CE2548CB	16-24-inch	A.C.	1	50	230	1 1/2		316.00	
CE2548DB	and 2-H	A.C.	1	60	230	1 1/2		316.00	
CE2628AB	10" METAL	A.C.	1	50	115	1	One	266.00	
CE2628BB	CABINET	A.C.	1	60	115	1		266.00	
CE2628CB	13-inch	A.C.	1	50	230	1		266.00	
CE2628DB		A.C.	1	60	230	1		266.00	
CE2625PB	10-inch	A.C.	3	60	208	1	One	\$186.00	
CE2625CB		A.C.	3	50	220	1		186.00	
CE2625DB		A.C.	3	60	220	1		186.00	
CE2625EB		A.C.	3	50	440	1		186.00	
CE2625FB		13-inch	A.C.	3	60	440		1	186.00
CE2627GB		A.C.	3	50	550	1		186.00	
CE2627HB		A.C.	3	60	550	1		186.00	
CE2625SB		A.C.	3	50	380	1		186.00	
CE2801PB	10-inch	A.C.	3	60	208	3/4	One	162.00	
CE2801CB		A.C.	3	50	220	3/4		162.00	
CE2801DB		A.C.	3	60	220	3/4		162.00	
CE2801EB		A.C.	3	50	440	3/4		162.00	
CE2801FB		A.C.	3	60	440	3/4		162.00	
CE2803GB		A.C.	3	50	550	3/4		162.00	
CE2803HB		A.C.	3	60	550	3/4		162.00	
CE2801SB		A.C.	3	50	380	3/4		162.00	
CE3384PB	10" METAL CABINET	A.C.	3	60	208	1/2-1	Two	295.00	
CE3384CB		A.C.	3	50	220	1/2-1		295.00	
CE3384DB		A.C.	3	60	220	1/2-1		295.00	
CE3384EB		A.C.	3	50	440	1/2-1		295.00	
CE3384FB		A.C.	3	60	440	1/2-1		295.00	
CE3388GB		A.C.	3	50	550	1/2-1		295.00	
CE3388HB		A.C.	3	60	550	1/2-1		295.00	
CE3384SB		A.C.	3	50	380	1/2-1		295.00	

## J. I. C. ELECTRICAL EQUIPMENT

South Bend Lathes 10" swing and larger can be supplied with electrical equipment manufactured to Joint Industry Committee of Automotive Industry standards as listed below.

### TOTALLY ENCLOSED SINGLE-SPEED MOTORS TO MEET J. I. C. STANDARDS

Cat. No.	H.P.	Phase	Cycle	Volts	Price
CE6150	3/4	3	60	220/440	\$ 54.50
CE6151	1	3	60	220/440	104.00
CE6152	1 1/2	3	60	220/440	119.00
CE6153	2	3	60	220/440	146.00

### NON-FUSIBLE CONTROL EQUIPMENT

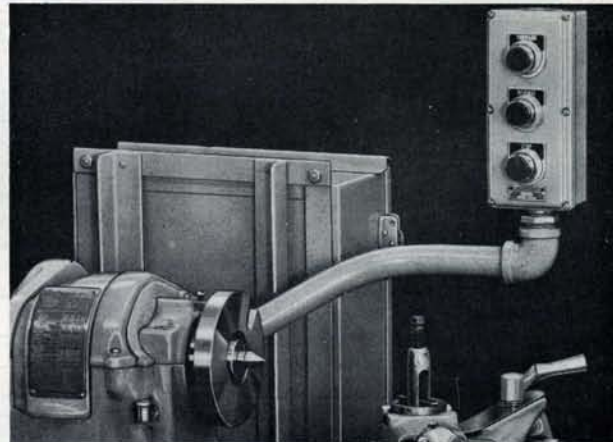
Consisting of one combination magnetic reversing line-starter, size 1, with fused dual voltage transformer for low voltage control, overload protection and non-fusible disconnect, all in NEMA type 12 enclosure. Also one pushbutton station, forward, reverse, stop, in oil tight enclosure for surface mounting. For use on 3 ph., 60 cycle, 220/440 A.C.

CE6154. Non-fusible Electrical Control Equipment to J. I. C. standards. Price ..... \$254.00

### FUSIBLE CONTROL EQUIPMENT

Consisting of one combination magnetic reversing line-starter, size 1, with fused dual voltage transformer for low voltage control, with overload protection and with fusible disconnect, all in NEMA type 12 enclosure. Also one pushbutton station, forward, reverse, stop, in oil tight enclosure for surface mounting. For use on 3 ph., 60 cycle, 220/440 A.C.

CE6155. Fusible Electrical Control Equipment to J. I. C. standards. Price ..... \$259.00



### CIRCUIT BREAKER CONTROL EQUIPMENT

Consisting of one combination magnetic reversing line-starter, size 1, with fused dual voltage transformer for low voltage control, overload protection and circuit breaker, all in NEMA type 12 enclosure. Also one pushbutton station, forward, reverse, stop, in oil tight enclosure for surface mounting. For use on 3 ph., 60 cycle, 220/440 A.C.

CE6156. Circuit Breaker Electrical Control Equipment to J. I. C. standards. Price ..... \$286.00

### FITTING AND CONNECTING EQUIPMENT

Labor and material for fitting and connecting J. I. C. electrical equipment to lathe, including special stand for mounting line-starter to J. I. C. standards are extra and will be supplied as follows:

CE6157. Mounting J. I. C. Electrical Equipment on 10" Underneath Motor Drive Met. Cab. Lathe. Price ..... \$ 90.00

CE6158. Mounting J. I. C. Electrical Equipment on 10" Underneath Motor Drive Floor Lathe. Price ..... \$104.00

CE6159. Mounting J. I. C. Electrical Equipment on 13" Underneath Motor Drive Lathe. Price ..... \$104.00

CE6160. Mounting J. I. C. Electrical Equipment on 14 1/2" or 16" Underneath Motor Drive Lathe. Price ..... \$105.00

CE6161. Mounting J. I. C. Electrical Equipment on 16-24" Underneath Motor Drive Lathe. Price ..... \$105.00



# MOTORS FOR SOUTH BEND LATHES

MOTORS listed are instant reversing type to permit reversing lathe spindle for thread cutting, tapping, and similar operations. Single phase motors are capacitor type. Prices of motors for current characteristics not listed will be quoted on request. Regular control equipment for each motor is listed on pages 70, 71 and 73. Alternate controls for motors are listed on page 72.

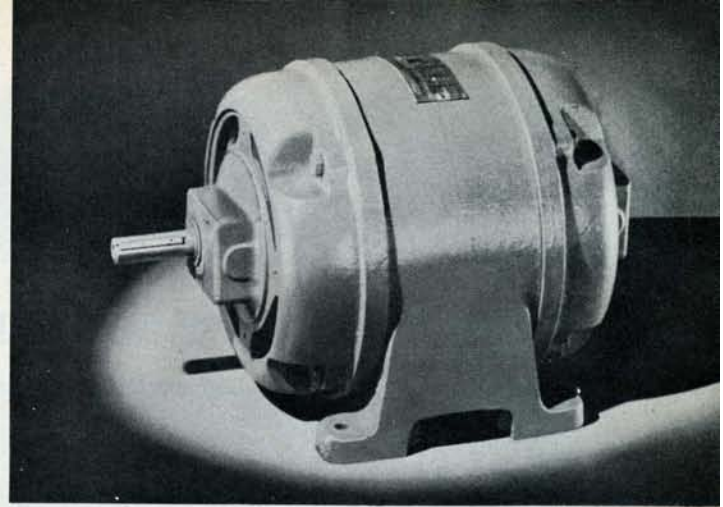


Table 2—MOTORS FOR SOUTH BEND LATHES

Catalog Number	Size of Lathe	Type of Current	Phase	Cycle	Voltage	h.p.	Speeds	Price f.o.b. Fact.	
CE2592P	14½-inch 16-inch 16/24-inch and 2-H	A.C.	3	60	208	3	One-Speed	\$123.00	
CE2592C		A.C.	3	50	220	3		123.00	
CE2592D		A.C.	3	60	220	3		123.00	
CE2592E		A.C.	3	50	440	3		123.00	
CE2592F		A.C.	3	60	440	3		123.00	
CE2593G		A.C.	3	50	550	3		123.00	
CE2593H		A.C.	3	60	550	3		123.00	
CE2592S	A.C.	3	50	380	3	123.00			
CE2594P†	14½-inch 16-inch 16/24-inch and 2-H	A.C.	3	60	208	3-1½	Two-Speed	187.00	
CE2595C†		A.C.	3	50	220	3-1½		187.00	
CE2594D†		A.C.	3	60	220	3-1½		187.00	
CE2597E†		A.C.	3	50	440	3-1½		187.00	
CE2596F†		A.C.	3	60	440	3-1½		187.00	
CE2599G†		A.C.	3	50	550	3-1½		187.00	
CE2598H†		A.C.	3	60	550	3-1½		187.00	
CE2602S†	A.C.	3	50	380	3-1½	187.00			
CE3373††	13-inch 14½-inch 16-inch 16/24-inch and 2-H	A.C.	3	60	208	2-1	Two-Speed	202.00	
CE2130††		A.C.	3	60	220	2-1		202.00	
CE2131††		A.C.	3	60	440	2-1		202.00	
CE2147†		A.C.	3	50	220	2-1		157.00	
CE2148†		A.C.	3	50	440	2-1		157.00	
CE3372††		A.C.	3	60	550	2-1		202.00	
CE2603S††		A.C.	3	50	380	2-1		202.00	
CE2543P	14½-inch 16-inch 16/24-inch and 2-H	A.C.	3	60	208	2	One-Speed	111.00	
CE2543C		A.C.	3	50	220	2		111.00	
CE2543D		A.C.	3	60	220	2		111.00	
CE2543E		A.C.	3	50	440	2		111.00	
CE2543F		A.C.	3	60	440	2		111.00	
CE2552G		A.C.	3	50	550	2		111.00	
CE2552H		A.C.	3	60	550	2		111.00	
CE2631A		A.C.	1	50	115	2		207.00	
CE2631B		A.C.	1	60	115	2		207.00	
CE2631C		A.C.	1	50	230	2		207.00	
CE2631D		A.C.	1	60	230	2		207.00	
CE2543S		A.C.	3	50	380	2		111.00	
CE2545P		13-inch	A.C.	3	60	208		1½	One-Speed
CE2545C	A.C.		3	50	220	1½	95.00		
CE2545D	A.C.		3	60	220	1½	95.00		
CE2545E	A.C.		3	50	440	1½	95.00		
CE2545F	A.C.		3	60	440	1½	95.00		
CE2547G	A.C.		3	50	550	1½	95.00		
CE2547H	A.C.		3	60	550	1½	95.00		
CE2548A	A.C.		1	50	115	1½	153.00		
CE2548B	A.C.		1	60	115	1½	148.00		
CE2548C	A.C.		1	50	230	1½	153.00		
CE2548D	A.C.		1	60	230	1½	148.00		
CE2545S	A.C.		3	50	380	1½	95.00		
CE2625P	10-inch 13-inch		A.C.	3	60	208	1	One-Speed	
CE2625C		A.C.	3	50	220	1	81.00		
CE2625D		A.C.	3	60	220	1	81.00		
CE2625E		A.C.	3	50	440	1	81.00		
CE2625F		A.C.	3	60	440	1	81.00		
CE2627G		A.C.	3	50	550	1	81.00		
CE2627H		A.C.	3	60	550	1	81.00		
CE2628A		A.C.	1	50	115	1	124.00		
CE2628B		A.C.	1	60	115	1	113.00		
CE2628C		A.C.	1	50	230	1	124.00		
CE2628D		A.C.	1	60	230	1	113.00		
CE2625S		A.C.	3	50	380	1	81.00		

Catalog Number	Size of Lathe	Type of Current	Phase	Cycle	Voltage	h.p.	Speeds	Price f.o.b. Fact.	
CE3383††	13-inch	A.C.	3	60	208	1½-¾	Two	\$192.00	
CE3380††		A.C.	3	60	220	1½-¾		192.00	
CE3381††		A.C.	3	60	440	1½-¾		192.00	
CE2604S††		A.C.	3	50	380	1½-¾		192.00	
CE2801P	10-inch	A.C.	3	60	208	¾	One-Speed	49.00	
CE2801C		A.C.	3	50	220	¾		49.00	
CE2801D		A.C.	3	60	220	¾		49.00	
CE2801E		A.C.	3	50	440	¾		49.00	
CE2801F		A.C.	3	60	440	¾		49.00	
CE2803G		A.C.	3	50	550	¾		49.00	
CE2803H		A.C.	3	60	550	¾		49.00	
CE2804		A.C.	1	60	115	¾		64.00	
CE2805		A.C.	1	60	230	¾		64.00	
CE2806A		A.C.	1	50	115	¾		68.00	
CE2806B		A.C.	1	50	230	¾		68.00	
CE2801S		A.C.	3	50	380	¾		49.00	
CE3384††		10-inch	A.C.	3	60	208		½-1	Two
CE3385††	A.C.		3	60	220	½-1	182.00		
CE3386††	A.C.		3	60	440	½-1	182.00		
CE2606S††	A.C.		3	50	380	½-1	182.00		
CE3227P	10-K and 9-inch	A.C.	3	60	208	½	One-Speed	39.00	
CE3228*		A.C.	1	60	115	½		53.50	
CE3240*		A.C.	1	50	115	½		57.50	
CE3229		A.C.	1	60	230	½		53.50	
CE3230		A.C.	1	50	230	½		57.50	
CE3227C		A.C.	3	50	220	½		39.00	
CE3227D		A.C.	3	60	220	½		39.00	
CE3227E		A.C.	3	50	440	½		39.00	
CE3227F		A.C.	3	60	440	½		39.00	
CE4927G		A.C.	3	50	550	½		44.50	
CE4927H		A.C.	3	60	550	½		44.50	
CE3227S		A.C.	3	50	380	½		39.00	

\*Equipped with 6-ft. extension cord and plug when ordered with Lathe. †Single winding motor. ††Double winding motor.

## MOTORS AND CONTROLS FOR 17" GEARED HEAD LATHES

A complete listing of Motor and Control equipment for 17" Geared Head Lathes can be found on page 9.

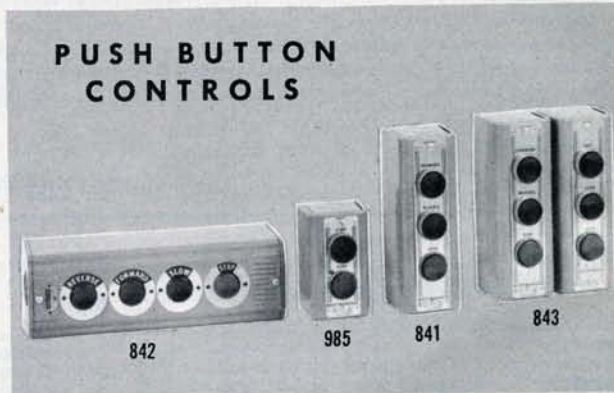
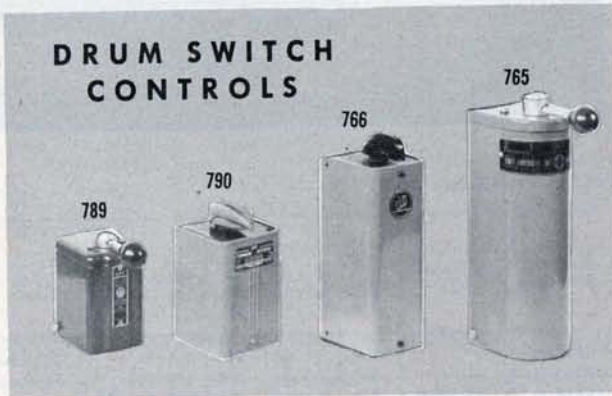
## NEMA MAXIMUM FRAME SIZES

Maximum NEMA standard frame sizes for motors that can be used for South Bend Underneath Motor Driven Lathes are: 14½", 16", 16-24" Lathes and 2-H Turret Lathes... Frame 215  
13" Lathes and 13" Turret Lathes... Frame 213  
10" Lathes and 10" Turret Lathes... Frame 184



# MOTOR CONTROLS

## DRUM CONTROLS — PUSHBUTTON CONTROLS — LINESTARTERS



### Procedure To Be Followed When Specifying Lathe Motor Controls

The following prefixes are to be used to specify the location of the operating control. Page 72 should be referred to so that proper selection can be made for the particular size lathe in question.

- ES** —Controls mounted on switch arm
- EQ** —Controls mounted on quill gear guard
- EG** —Controls mounted on gear box
- EB** —Controls mounted in metal cabinet leg or metal cabinet leg well
- ET** —Controls mounted on back of cabinet leg with switch control arm over headstock (16" Lathes only)  
(Usual Turret type control)
- ETR**—Controls mounted on tailstock raising block (16/24" Lathes only)
- ERC**—Controls mounted on remote control bed bracket when used as the only lathe control. See page 73 for price.  
(This can be used as a second control mounting also, and is for 10' and longer beds. Prices on request.)
- ED** —Controls mounted on drive unit (10-K Horiz. only)
- EH** —Controls mounted on headstock (10-K Gap Lathe only)

After the proper prefix is selected to designate the location of the operating control, the type of control should then be selected, being sure that the type of control can be mounted in the position selected. The following listings are the various types of controls that are available. Again, page 72 should be consulted to determine equipment for the purpose.

### DRUM CONTROLS

(See illustration)

No.	DRUM SWITCH DESCRIPTION	MAX. H.P. RATING				
		SINGLE PH.		POLYPHASE		
		115 V.	230 V.	110 V.	220 V.	440 V. or 550 V.
765	2 speed drum control — 2 forward, 2 reverse, 1 stop for 2 speed, 2 wdg. motor				3	3
766	2 speed drum control — 2 forward, 1 reverse, 1 stop for 2 speed, 2 wdg. motor			1½	2	2
768	2 speed drum control — 2 forward, 2 reverse, 1 stop for 2 speed, 1 wdg. motor				3	3
789	1 speed drum control — 1 forward, 1 reverse, 1 stop (single phase only) for 9" HMD and 10-K Gap Lathes only	1	2			
790	1 speed drum control — 1 forward, 1 reverse, 1 stop	1	1½	1½	2	2
965	1 speed drum control — 1 forward, 1 reverse, 1 stop	1½	3	3	5	7½
966	1 speed drum control — 1 forward, 1 reverse, 1 stop	3	7½	7½	15	25



# for South Bend Lathes

## DRUM SWITCH—LINESTARTER CONTROLS

(Overload Protection-Low Voltage Release)

- 961**—1 speed drum control, for use with one magnetic reversing linestarter
- 962**—2 speed drum control, with one magnetic reversing linestarter and one magnetic non-reversing linestarter. (This is used only with 2 speed, 2 winding motors)
- 963**—2 speed drum control, for use with two magnetic reversing linestarters. (Use with 2 speed, 2 winding motors)
- 964**—2 speed drum control, with two magnetic reversing linestarters. (This is used only with 2 speed, 1 winding motors)

## PUSH BUTTON—LINESTARTER CONTROLS

(Overload Protection-Low Voltage Release)

- 841** —3 button push button station, (forward, reverse, stop) for use with one magnetic reversing linestarter (1 speed motors only)
- 842\***—4 button push button station, (2 forward, 1 reverse, 1 stop) for use with two magnetic reversing linestarters.
- 843** —6 button push button station, (2 forward, 2 reverse, 2 stop) for use with two magnetic reversing linestarters.

Push button control can be mounted on switch arm (ES), gear box (EG), tailstock raising block (ETR), remote control bed bracket (ERC) or metal cabinet leg well (EB). They cannot be mounted on the quill gear guard (EQ).

\*4 button push button station can be used only on 14½" and larger gear box (EG) or in metal cabinet leg well (EB).

## PUSH BUTTON—DRUM CONTROL LINESTARTER

- 985**—2 button push button station, (start, stop) and 1 speed drum control, and one magnetic non-reversing linestarter.

**Note:** This type control can be mounted on quill gear guard (EQ) or in bench leg well (EB).

When using the new listing for lathe motor controls the following suffixes shall follow the previously listed base numbers. These suffixes are to indicate the voltage of the control.

<b>A</b> —115 Volts	<b>1</b> Phase AC
<b>B</b> —230 Volts	<b>1</b> Phase AC
<b>C</b> —208 or 220 Volts	<b>3</b> Phase AC
<b>D</b> —440 Volts	<b>3</b> Phase AC
<b>E</b> —550 Volts	<b>3</b> Phase AC
<b>H</b> —380 Volts	<b>3</b> Phase AC

## LATHE MOTOR CONTROLS

When ordering controls that operate 440 volts or over and are used in conjunction with linestarters, it is recommended that a step down transformer be used to reduce the voltage to 115 volts at the operating control. When a step down transformer is desired, place the letter T after the base number of the control.

The following suffixes are to indicate the size of linestarter to be used in each control. This suffix is to be listed after the base number.

## MAGNETIC LINESTARTERS

SIZE	DESCRIPTION	MAX. H.P. RATING			
		SINGLE PHASE		POLYPHASE	
		115V.	230V.	220V.	440/550V.
<b>0</b>	Furnas magnetic non-reversing linestarter	1	2	3	3
<b>0</b>	Furnas magnetic reversing linestarter	2	3	3	3
<b>1*</b>	Westinghouse magnetic non-reversing linestarter	2	3		
<b>1*</b>	Westinghouse magnetic reversing linestarter	1½ (1)	3 (2)	7½ (3)	7½ (3)
<b>2*</b>	Westinghouse magnetic reversing linestarter	— (2)	— (5)	15 (10)	15 (10)

\*NEMA rated

( ) Horsepower rating, shown in brackets, when linestarter is used for constant plugging or jogging.

The following suffixes are to be used with a drum type control when desiring overload protection only.

**W2**—Motor watchman, 2 pole for use with single phase motors.

**W3**—Motor watchman, 3 pole for use with polyphase motors.

**W4**—Motor watchman, 3 pole for use with 2 speed polyphase motors.

The above listed prefixes, base numbers and suffixes shall be used to designate the type of control desired and also where the operating controls shall be located. The following are examples of what typical catalog numbers will be.

### ETR 961 DT1

**ETR**—CONTROL LOCATION      **T**—WITH TRANSFORMER  
**961**—BASE NUMBER              **NO "T"**—NO TRANSFORMER  
**D**—VOLTAGE RATING              **1**—LINESTARTER SIZE

**ETR** indicates that operating control will be mounted on the tailstock raising block (16-24" lathes only).

**961** indicates that a 2 speed drum control with 2 magnetic reversing linestarters will be used.

**D** indicates that the control is for 440 volts, 3 phase AC.

**T** indicates a step down transformer will be used.

**1** indicates that the linestarters that are to be used are size "1".

### EQ 790

**EQ**—CONTROL LOCATION              **790**—BASE NUMBER

**EQ** indicates that operating control will be mounted on the quill gear guard.

**790** indicates a 1 speed drum control with 1 forward—1 reverse—1 stop.

### ES 843 CO

**ES**—CONTROL LOCATION              **C**—VOLTAGE RATING  
**843**—BASE NUMBER                  **O**—LINESTARTER SIZE

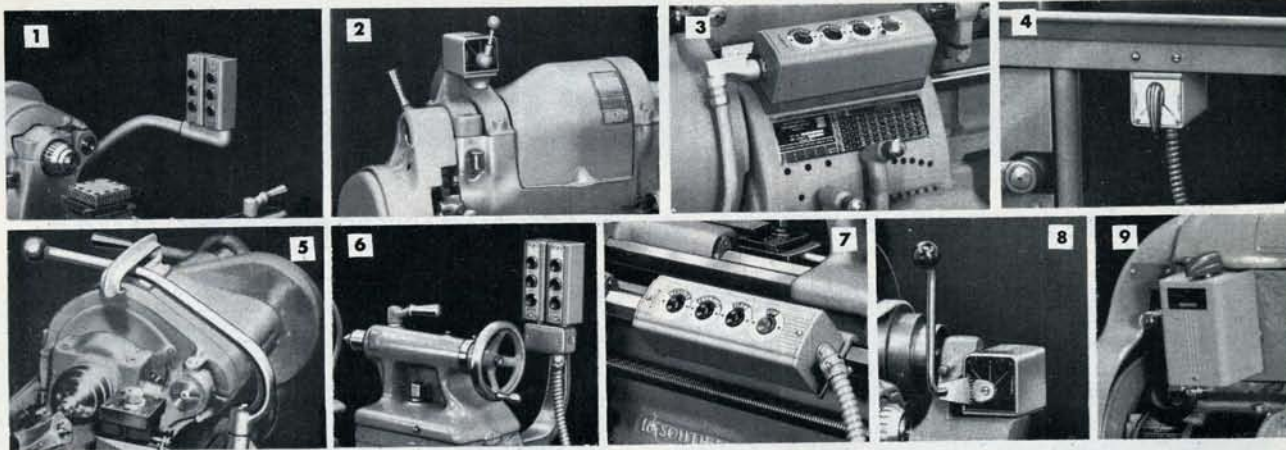
**ES** indicates that operating control will be mounted on switch arm.

**843** indicates that a 6 push-button station, 2 forward—2 reverse—2 stop for use with two magnetic reversing linestarters will be used.

**C** indicates 208/220 volt, 3 phase A.C.

**O** indicates that the linestarter to be used is Size "O".





## ALTERNATE CONTROLS FOR MOTORS AND OPTIONAL MOUNTINGS FOR MOTORS

In addition to regular controls and control mountings listed on pages 70 and 71, optional controls and mountings can be supplied as listed below. Illustrations above show method of mounting a representative control in each group, but do not illustrate all controls. Prices for alternate controls and mountings can be obtained from your South Bend Lathe distributor.

**Fig. 1. Switch Arm Mounted Controls for 10", 13", 14½", and 16" Lathes.**

- ES765. 2-speed Drum Control, Furnas. ††
- ES766. 2-speed Drum Control, Allen-Bradley (10" only). ††
- ES768. 2-speed Drum Control, Furnas (16" only). †
- ES790. 1-speed Drum Control.
- ES841. 1-speed Pushbutton Linestarter Control.
- ES843. 2-speed Pushbutton Linestarter Control. ††
- ES961. 1-speed Drum Control with Linestarter.
- ES962. 2-speed Allen-Bradley Drum Control with Linestarter. ††
  
- ES963. 2-speed Furnas Drum Control with Linestarter. ††
- ES964. 2-speed Allen-Bradley Drum Control with Linestarter, (14½" and 16" only). †
- ES965. 1-speed Drum Control (14½" and 16" only).
- ES966. 1-speed Drum Control (14½" and 16" only).

**Fig. 2. Quill Gear Guard Mounted Controls for 9", 10", 13", 14½", 16", and 16-24" Lathes.**

- EQ765. 2-speed Drum Control, Furnas (10" and larger only). ††
- EQ766. 2-speed Drum Control, Allen-Bradley (10" and 13" only). ††
- EQ768. 2-speed Drum Control, Furnas (16" and 16-24" only). †
- EQ789. 1-speed Drum Control, Furnas (9" Horizontal Motor Drive only).
- EQ790. 1-speed Drum Control, Cutler-Hammer.
- EQ961. 1-speed Drum Control, Furnas, with Linestarter.
- EQ963. 2-speed Drum Control, Furnas, with Linestarter (10" and larger only). ††
- EQ964. 2-speed Allen-Bradley Drum Control with Linestarter, 50 cycle (14½", 16", and 16-24" only). †
- EQ965. 1-speed Drum Control, Cutler-Hammer (14½", 16", and 16-24" only).
- EQ966. 1-speed Drum Control, Cutler-Hammer (14½", 16", and 16-24" only).
- EQ985. Start and Stop Pushbutton and Drum Control with Non-Reversing Linestarter.

**Fig. 3. Gear Box Mounted Controls for 14½", 16", and 16-24" Lathes. These controls can also be used on 13" swing lathes, but will prevent using carriage stop on left of carriage close to headstock.**

- EG765. 2-speed Drum Control, Furnas. ††
- EG790. 1-speed Drum Control.
- EG841. 1-speed Pushbutton Linestarter Control.
- EG842. 2-speed Pushbutton Linestarter Control. † (14½", 16", 16-24" only).
- EG961. 1-speed Drum Control with Linestarter.
- EG962. 2-speed Allen-Bradley Drum Control with Linestarter. ††
- EG963. 2-speed Furnas Drum Control with Linestarter. ††
- EG964. 2-speed Allen-Bradley Drum Control with Linestarter. †
- EG965. 1-speed Drum Control, Cutler-Hammer.
- EG966. 1-speed Drum Control, Cutler-Hammer.

† For single winding motor. †† For double winding motor.

**Fig. 4. Bench Leg or Bench Leg Well Mounted Controls for 9" UMD, 10-K UMD, and 10" Metal Cabinet Lathes.**

- EB765. 2-speed Drum Control, Furnas (10" only). ††
- EB766. 2-speed Drum Control, Allen-Bradley (10" only). ††
- EB790. 1-speed Drum Control.
- EB841. 1-speed Pushbutton Linestarter Control.
- EB842. 2-speed Pushbutton Linestarter Control (10" only). ††
- EB961. 1-speed Drum Control with Linestarter.
- EB962. 2-speed Allen-Bradley Drum Control with Linestarter (10" only)
- EB963. 2-speed Furnas Drum Control with Linestarter (10" only). ††
- EB985. Start-Stop Pushbutton and Drum Control with Non-Reversing Linestarter.

**Fig. 5. Turret Type Mounted Controls for 16" and 2-H Lathes.**

- ET961. 1-speed Drum Control with Linestarter.
- ET962. 2-speed Allen-Bradley Drum Control with Linestarter. ††
- ET964. 2-speed Allen-Bradley Drum Control with Linestarter. †
- ET790. One-speed Drum Control.

**Fig. 6. Tailstock Raising Block Mounted Controls for 16-24" Lathes Only.**

- ETR765. 2-speed Drum Control, Furnas. ††
- ETR768. 2-speed Drum Control, Furnas. †
- ETR790. 1-speed Drum Control.
- ETR841. 1-speed Pushbutton Linestarter Control.
- ETR843. 2-speed Pushbutton Linestarter Control. ††
- ETR961. 1-speed Drum Control with Linestarter.
- ETR965. 1-speed Drum Control, Size 1.
- ETR963. 2-speed Furnas Drum Control with Linestarter. ††
- ETR966. 1-speed Drum Control, Size 2.

**Fig. 7. Remote Control Mounted on Movable Bed Bracket for Lathes with 10' or Longer Beds. (Controls marked (\*) can be used as a second control also.)**

- ERC765. 2-speed Furnas Drum Control. ††
- ERC768. 2-speed Drum Control, Furnas. †
- ERC790. 1-speed Drum Control.
- \*ERC841. 1-speed Pushbutton Linestarter Control.
- \*ERC842. 2-speed Pushbutton Linestarter Control. †
- \*ERC843. 2-speed Pushbutton Linestarter Control. ††
- \*ERC961. 1-speed Drum Control with Linestarter.
- ERC963. 2-speed Furnas Drum Control with Linestarter. ††
- ERC965. 1-speed Drum Control, Size 1.
- ERC966. 1-speed Drum Control, Size 2.

**Fig. 8. Drive Unit Mounted Controls for 10-K Lathes only.**

- ED790. 1-speed Drum Control.
- ED841. 1-speed Pushbutton Linestarter Control. (Linestarter not fitted).
- ED961. 1-speed Drum Control with Linestarter. (Linestarter not fitted).

**Fig. 9. Headstock Mounted control for 10-K Gap Lathes only.**

- EH789. 1 Speed Drum Control, Furnace Type.
- EH790. 1 Speed Drum Control, Cutler-Hammer Type.



# MOTOR CONTROLS FOR LATHES

## PRICE LIST

Catalog No.	Price	Catalog No.	Price	Catalog No.	Price	Catalog No.	Price	Catalog No.	Price
EB 765	.....\$ 51.00	ED 841 HO	..\$ 78.00	ERC 843 ET1	..\$275.00	ES 961 D0	..\$ 97.00	ERC 963 D1	..\$278.00
EB 765 W4	...132.00	ED 841 HTO	.. 88.00	ERC 843 H1	...261.00	ES 961 DT0	...107.00	ERC 963 DT1	...288.00
EG 765	..... 51.00	EG 841 A0	... 97.00	ERC 843 HT1	...271.00	ES 961 E0	.... 97.00	ERC 963 E1	....278.00
EG 765 W4	...132.00	EG 841 B0	.... 97.00	ES 843 C0	....176.00	ES 961 ETO	...111.00	ERC 963 ET1	...292.00
EQ 765	..... 51.00	EG 841 C0	... 97.00	ES 843 C1	....242.00	ES 961 H0	... 97.00	ERC 963 H1	...278.00
EQ 765 W4	...132.00	EG 841 D0	... 97.00	ES 843 D0	....176.00	ES 961 HTO	...107.00	ERC 963 HT1	...288.00
ERC 765	..... 54.00	EG 841 DT0	...107.00	ES 843 DT0	...186.00	ET 961 A2	...222.00	ES 963 C0	....193.00
ERC 765 W4	...136.00	EG 841 E0	.... 97.00	ES 843 D1	...242.00	ET 961 B1	....134.00	ES 963 C1	....259.00
ES 765	..... 51.00	EG 841 ETO	...111.00	ES 843 DT1	...252.00	ET 961 C1	....134.00	ES 963 D0	...193.00
ES 765 W4	...132.00	EG 841 H0	... 97.00	ES 843 E0	....176.00	ET 961 D1	...134.00	ES 963 DT0	...203.00
ETR 765	..... 51.00	EG 841 HTO	...107.00	ES 843 ETO	...190.00	ET 961 DT1	...144.00	ES 963 D1	...259.00
ETR 765 W4	...132.00	ERC 841 A0	...101.00	ES 843 E1	....242.00	ET 961 E1	....134.00	ES 963 DT1	...269.00
EB 766	..... 69.00	ERC 841 A2	...222.00	ES 843 ET1	...256.00	ET 961 ET1	...148.00	ES 963 E0	....193.00
EB 766 W4	...150.00	ERC 841 B0	....101.00	ES 843 H0	....176.00	ET 961 H1	...134.00	ES 963 ETO	...207.00
EG 766	..... 69.00	ERC 841 B1	....134.00	ES 843 HTO	...186.00	ET 961 HT1	...144.00	ES 963 E1	....259.00
EG 766 W4	...150.00	ERC 841 C0	....101.00	ES 843 H1	...242.00	ETR 961 A0	...101.00	ES 963 ET1	...273.00
EQ 766	..... 69.00	ERC 841 D0	....101.00	ES 843 HT1	...252.00	ETR 961 A2	...222.00	ES 963 H0	....193.00
EQ 766 W4	...150.00	ERC 841 DT0	...111.00	ETR 843 C1	....261.00	ETR 961 B0	....101.00	ES 963 HTO	...203.00
ERC 766	..... 72.00	ERC 841 E0	....101.00	ETR 843 D1	...261.00	ETR 961 B1	....134.00	ES 963 H1	...259.00
ERC 766 W4	...147.00	ERC 841 ETO	...115.00	ETR 843 DT1	...271.00	ETR 961 C0	....101.00	ES 963 HT1	...269.00
ES 766	..... 69.00	ERC 841 H0	....101.00	ETR 843 E1	....261.00	ETR 961 D0	...101.00	ETR 963 C1	....278.00
ES 766 W4	...150.00	ERC 841 HTO	...111.00	ETR 843 ET1	...275.00	ETR 961 DT0	...111.00	ETR 963 D1	...278.00
ET 766	..... 69.00	ES 841 A0	... 97.00	ETR 843 H1	...261.00	ETR 961 E0	....101.00	ETR 963 DT1	...288.00
ET 766 W4	...150.00	ES 841 A2	...222.00	ETR 843 HT1	...271.00	ETR 961 ETO	...115.00	ETR 963 E1	....278.00
EQ 768	..... 74.00	ES 841 B0	.... 97.00	EB 961 A0	... 97.00	ETR 961 H0	...101.00	ETR 963 ET1	...292.00
ERC 768	..... 77.00	ES 841 B1	....130.00	EB 961 B0	.... 97.00	ETR 961 HTO	...111.00	ETR 963 H1	...278.00
ES 768	..... 74.00	ES 841 C0	.... 97.00	EB 961 C0	.... 97.00	ET 962 C1	....244.00	ETR 963 HT1	...288.00
ETR 768	..... 74.00	ES 841 D0	.... 97.00	EB 961 D0	.... 97.00	ET 962 D1	...244.00	ET 964 C1	....296.00
EH 789	..... 8.50	ES 841 DT0	...107.00	EB 961 DT0	...107.00	ET 962 DT1	...254.00	ET 964 D1	...296.00
EQ 789	..... 8.50	ES 841 E0	.... 97.00	EB 961 E0	.... 97.00	ET 962 E1	....244.00	ET 964 DT1	...306.00
EQ 789 W2	...34.50	ES 841 ETO	...111.00	EB 961 ETO	...111.00	ET 962 ET1	...258.00	ET 964 E1	....296.00
EB 790	..... 12.00	ES 841 H0	... 97.00	EB 961 H0	... 97.00	ET 962 H1	...244.00	ET 964 ET1	...310.00
EB 790 W2	...39.00	ES 841 HTO	...107.00	EB 961 HTO	...107.00	ET 962 HT1	...254.00	ET 964 H1	...296.00
EB 790 W3	...44.00	ETR 841 A0	...101.00	EG 961 A0	... 97.00	EB 963 C0	....193.00	ET 964 HT1	...306.00
ED 790	..... 12.00	ETR 841 A2	...222.00	EG 961 A2	...218.00	EB 963 D0	...193.00	EG 965	..... 40.00
ED 790 W2	...39.00	ETR 841 B0	....101.00	EG 961 B0	.... 97.00	EB 963 DT0	...203.00	EG 965 W2	... 67.00
ED 790 W3	...44.00	ETR 841 B1	....134.00	EG 961 B1	....130.00	EB 963 E0	....193.00	EG 965	..... 40.00
EG 790	..... 19.00	ETR 841 C0	....101.00	EG 961 C0	.... 97.00	EB 963 ETO	...207.00	EQ 965 W2	... 67.00
EG 790 W2	...45.00	ETR 841 D0	....101.00	EG 961 D0	.... 97.00	EB 963 H0	...193.00	ERC 965	..... 40.00
EG 790 W3	...50.00	ETR 841 DT0	...111.00	EG 961 DT0	...107.00	EB 963 HTO	...203.00	ERC 965 W2	... 67.00
EH 790	..... 12.00	ETR 841 E0	....101.00	EG 961 E0	.... 97.00	EG 963 C0	....193.00	ES 965	..... 40.00
EQ 790	..... 12.00	ETR 841 ETO	...115.00	EG 961 ETO	...111.00	EG 963 C1	....259.00	ES 965 W2	... 67.00
EQ 790 W2	...39.00	ETR 841 H0	....101.00	EG 961 H0	... 97.00	EG 963 D0	...193.00	ETR 965	..... 40.00
EQ 790 W3	...44.00	ETR 841 HTO	...111.00	EG 961 HTO	...107.00	EG 963 DT0	...203.00	ETR 965 W2	... 67.00
ERC 790	..... 12.00	EB 842 C0	....185.00	EQ 961 A0	... 97.00	EG 963 D1	...259.00	EG 966	....109.00
ERC 790 W3	...44.00	EB 842 D0	....185.00	EQ 961 A2	...218.00	EG 963 DT1	...269.00	EG 966 W2	...136.00
ES 790	..... 12.00	EB 842 DT0	...195.00	EQ 961 B0	.... 97.00	EG 963 E0	....193.00	EQ 966	....109.00
ES 790 W2	...39.00	EB 842 E0	....185.00	EQ 961 B1	....130.00	EG 963 ETO	...207.00	EQ 966 W2	...136.00
ES 790 W3	...44.00	EB 842 ETO	...199.00	EQ 961 C0	.... 97.00	EG 963 E1	....259.00	ERC 966	....106.00
ET 790	..... 12.00	EB 842 H0	....185.00	EQ 961 D0	.... 97.00	EG 963 ET1	...273.00	ERC 966 W2	...133.00
ET 790 W3	...44.00	EB 842 HTO	...195.00	EQ 961 DT0	...107.00	EG 963 H0	...193.00	ES 966	....106.00
ETR 790	..... 19.00	EG 842 C1	....251.00	EQ 961 E0	.... 97.00	EG 963 HTO	...203.00	ES 966 W2	...136.00
ETR 790 W3	...44.00	EG 842 D1	....251.00	EQ 961 ETO	...111.00	EG 963 H1	...259.00	ETR 966	....106.00
EB 841 A0	... 97.00	EG 842 DT1	...261.00	EQ 961 H0	... 97.00	EG 963 HT1	...269.00	ETR 966 W2	...136.00
EB 841 B0	... 97.00	EG 842 E1	....251.00	EQ 961 HTO	...107.00	EQ 963 C0	....193.00	EB 985 A0	... 64.00
EB 841 C0	... 97.00	EG 842 ET1	...265.00	ERC 961 A1	...134.00	EQ 963 C1	....259.00	EB 985 A1	... 79.50
EB 841 D0	... 97.00	EG 842 H1	....251.00	ERC 961 B1	...134.00	EQ 963 D0	...193.00	EB 985 B0	... 64.00
EB 841 DT0	...107.00	EG 842 HT1	...261.00	ERC 961 C0	....101.00	EQ 963 DT0	...203.00	EB 985 B1	... 79.50
EB 841 E0	... 97.00	ERC 842 C1	....270.00	ERC 961 D0	....101.00	EQ 963 D1	...259.00	EB 985 C0	... 64.00
EB 841 ETO	...111.00	ERC 842 D1	....270.00	ERC 961 DT0	...111.00	EQ 963 DT1	...269.00	EB 985 C1	... 79.50
EB 841 H0	... 97.00	ERC 842 DT1	...280.00	ERC 961 E0	....101.00	EQ 963 E0	....193.00	EQ 985 A0	... 63.00
EB 841 HTO	...107.00	ERC 842 E1	....270.00	ERC 961 ETO	...115.00	EQ 963 ETO	...207.00	EQ 985 A1	... 78.50
ED 841 A0	... 78.00	ERC 842 ET1	...284.00	ERC 961 H0	....101.00	EQ 963 E1	....259.00	EQ 985 B0	... 63.00
ED 841 B0	... 78.00	ERC 842 H1	....270.00	ERC 961 HTO	...111.00	EQ 963 ET1	...273.00	EQ 985 B1	... 78.50
ED 841 C0	... 78.00	ERC 842 HT1	...280.00	ES 961 A0	... 97.00	EQ 963 H0	...193.00	EQ 985 C0	... 63.00
ED 841 D0	... 78.00	ERC 843 C1	....261.00	ES 961 A2	...222.00	EQ 963 HTO	...203.00	EQ 985 C1	... 78.50
ED 841 DO	... 88.00	ERC 843 D1	....261.00	ES 961 B0	.... 97.00	EQ 963 H1	...259.00		
ED 841 E0	... 78.00	ERC 843 DT1	...271.00	ES 961 B1	....130.00	EQ 963 HT1	...269.00		
ED 841 ETO	... 92.00	ERC 843 E1	....261.00	ES 961 C0	.... 97.00	ERC 963 C1	...278.00		



# SOUTH BEND VERTICAL SPINDLE

*Precision*

## MILLING MACHINE

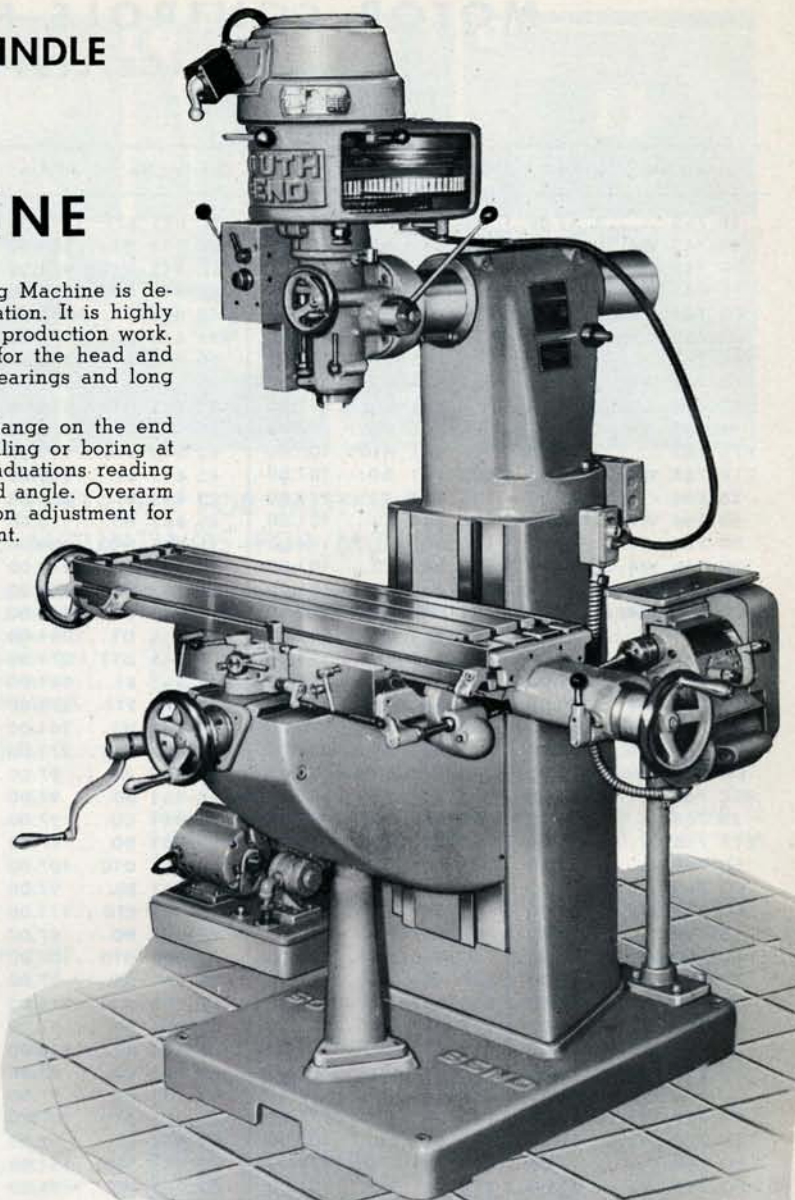
The South Bend Vertical Spindle Precision Milling Machine is designed for maximum convenience and ease of operation. It is highly efficient for a wide variety of exacting toolroom and production work. Heavily constructed column provides rigid support for the head and table assemblies. Massive knee has wide dovetail bearings and long tapered gibs for both column and table.

The universal type head is mounted on a large flange on the end of the overarm and swivels full 360° for milling, drilling or boring at any angle. Worm gearing and precision vernier graduations reading in minutes permit quick and easy adjustment for head angle. Overarm has large key with tapered gib and rack and pinion adjustment for positioning head without disturbing angular adjustment.

Flange mounted motor designed for operating in any position is mounted on milling machine head. Motor housing swivels around spindle for maximum flexibility in setting up work. A compound V-belt and timing belt "Lo-Loss" drive transmits power to the spindle with extreme smoothness. Aluminum pulleys are accurately machined and balanced. Convenient belt tension release permits changing speeds quickly and easily. Reversing switch controls direction of spindle rotation, permitting right- or left-hand milling. Convenient mechanical brake permits stopping spindle quickly. Spindle lock is provided for easy changing of cutting tools.

Spindle is made of hardened and ground alloy steel and runs in Timken tapered precision roller bearings. The ten-spline spindle has lever for rapid movement and handwheel for slow feed. A dependable micrometer depth stop is graduated in thousandths and positive quill lock is provided.

Table has dual controls for operating from either end. Movement of table is controlled by two Acme thread feed screws, each equipped with large easy-reading satin finish chrome plated micrometer collars with black graduations. Adjustable stops are provided for regulating the length of table feed. Three T-slots for clamping work or fixtures extend full length of table.



### PRICES OF SOUTH BEND MILLING MACHINES

Equipment included in prices of milling machines listed below consists of three phase, 60 cycle, 220/440 v. A.C. motor; reversing switch; master collet holder; wrenches; and four collets having 3/8", 1/2", 5/8" and 3/4" capacities respectively. See pages 76 and 77 for cutter arbors, vises and other accessories.

Catalog Number	Table Length	Motor		Price
		R.P.M.	H.P.	
MIL3212	32"	1200	3/4	\$1829.00
MIL3218	32"	1800	1	1829.00
MIL4212	42"	1200	3/4	1911.00
MIL4218	42"	1800	1	1911.00

### ALTERNATE MOTORS AND CONTROL

Prices below show the additional cost for single phase and special three phase motors and controls in lieu of regular three phase motors and controls of corresponding horsepower and speed, when specified at time milling machine is ordered.

Cat. No.	H.P.	Ph.	Cycles	Volts	R.P.M.	Price
MIL2804	3/4	1	60	115	1200	\$52.00
MIL2805	3/4	1	60	230	1200	52.00
MIL2628B	1	1	60	115	1800	45.00
MIL2628D	1	1	60	230	1800	45.00
MIL2712D	1	3	60	220	1200	41.00
MIL2712F	1	3	60	440	1200	41.00

### MECHANICAL POWER TABLE FEED

The South Bend Vertical Spindle Milling Machine can be supplied with power longitudinal feed at extra cost, provided this feature is specified at time machine is ordered. The power feed mechanism has independent motor drive and lever operated quick change mechanism which provide a range of 30 longitudinal feeds 1/4" to 15" per minute. Table feeds in either direction and directional control lever has quick release and neutral position. Automatic feed stops are adjustable for any desired length of cut within the normal feed range. Mechanical overload clutch is provided. When ordering, specify phase, cycle and voltage of motor required.

MIL3262. 32" Power Feed Table in lieu of regular..... \$350  
 MIL4262. 42" Power Feed Table in lieu of regular..... \$350

### HYDRAULIC POWER QUILL FEED

Hydraulic power quill feed attachment can be supplied at extra cost when specified at time Milling Machine is ordered. A single control lever permits feeding the spindle in either direction, up or down, and also has neutral or off position. Rate of feed is infinitely variable 0 to 25" per minute. Rapid traverse lever permits positioning quill quickly. Maximum length of feed is 4" and length of travel can be accurately controlled by positive depth stop. The hydraulic feed quill also has the regular manual feed lever and manual fine feed handwheel. When ordering, specify phase, cycle and voltage of motor required.

MIL7049. Power feed spindle in lieu of regular..... \$250

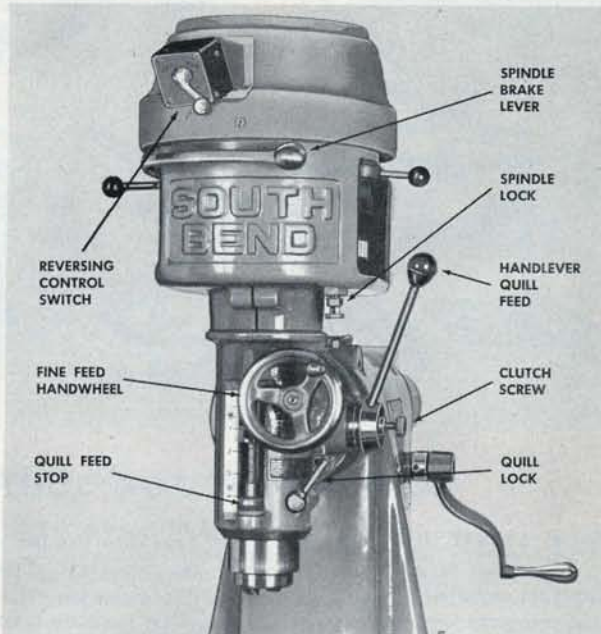


## COMPARE THESE FEATURES

- Overarm has large key with tapered gib and rack and pinion adjustment for positioning head in or out without disturbing angular alignment of head.
- "Lo-Loss" combination timing belt and V-belt drive to spindle transmits full h.p. efficiently at all speeds. Convenient belt tension release is provided for quick and easy speed changes.
- Quill is ground and accurately fitted to semi-steel head casting. Quill bearing in head is bored and honed to a perfect precision fit with quill. Quill has lever operated fast feed and hand-wheel operated slow feed as standard equipment. (Hydraulic power feed is available at extra cost.) Turnstile lever for rapid hand feed disengages when worm and worm gear fine feed is used.
- Spindle has dependable micrometer depth stop graduated in thousandths, and positive quill lock. Independent spindle lock is also provided.
- Spindle is made of hardened and ground alloy steel, has 1 1/4" ten-spline drive, takes No. 30 MM taper quick change individual holders.
- Spindle face has four 3/8"-16 bolt holes for mounting face milling cutters, etc.
- Large diameter easy reading micrometer collars for positioning table have nonglare satin finish surface with black graduations.
- Lever locks for table, knee and saddle are conveniently located on front of machine. Chip guard between dovetails protects cross-feed screw from damage.
- Adjustable stops in T-slot are provided for regulating length of table travel.
- Manual longitudinal and cross-feeds to table are standard equipment. Power longitudinal feeds available at extra cost.

## SPECIFICATIONS

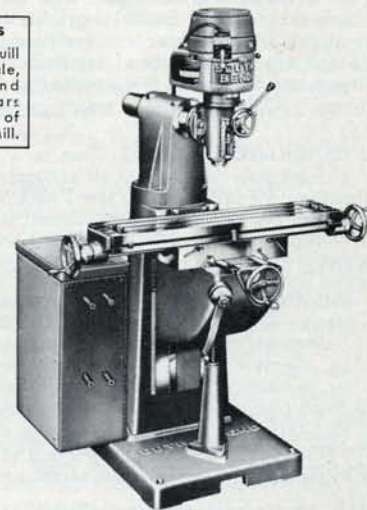
Table width.....	9"	Spindle speeds.....	8
Table lengths.....	32"-42"	r.p.m. with 1 h.p., 1800 r.p.m. motor	135, 220, 350, 560, 900, 1450, 2330, 3750
Table travel, longitudinal.....	20"-30"	r.p.m. with 3/4 h.p., 1200 r.p.m. motor	90, 150, 230, 375, 600, 965, 1550, 2500
Table travel, cross.....	9 1/2"	Net weight, Approx.	
Table travel, vertical.....	18"	With 32" Table.....	1635 lbs.
Table feed screws, Acme thread.....	1 1/4"-5	With 42" Table.....	1700 lbs.
Table to spindle, maximum.....	20"	Shipping weight crated, approx.	
Spindle to column, maximum.....	20"	With 32" Table.....	1950 lbs.
Ram travel by rack and pinion.....	15"	With 42" Table.....	2000 lbs.
Ram diameter.....	4 1/2"	Shipping weight boxed, approx.	
Head rotates.....	360°	With 32" Table.....	2430 lbs.
Quill diameter.....	3 1/4"	With 42" Table.....	2625 lbs.
Quill travel.....	4"	Cubic feet boxed, 32" Table.....	100
Collet capacity, maximum.....	3/4"	Cubic feet boxed, 42" Table.....	118
Spindle taper.....	#30 MM		



The principal controls for the Milling Machine head are illustrated above. The controls are conveniently located and so easy to operate that you will become familiar with them in just a few minutes.

### Metric Graduations

at no extra cost, metric quill stop screw and depth scale, metric feed screws and metric graduated collars can be supplied in lieu of English if ordered with Mill.



### CABINET FOR MILLING MACHINE

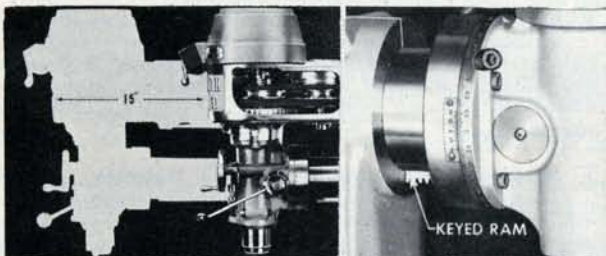
This steel cabinet has two compartments, one for holding the hydraulic pump and reservoir for operating power spindle feed and the other for coolant pump and reservoir.

MIL7052. Cabinet for Milling Machine Price.....\$41.50

### COOLANT EQUIPMENT FOR MILL WITH MOTOR LISTINGS

Coolant Pump Equipment for Milling Machine includes coolant pump, tubing, reservoir, 1/4 h.p. motor, and switch. If coolant pump equipment is purchased with the milling machine, piping will be assembled in place and necessary electrical connections made.

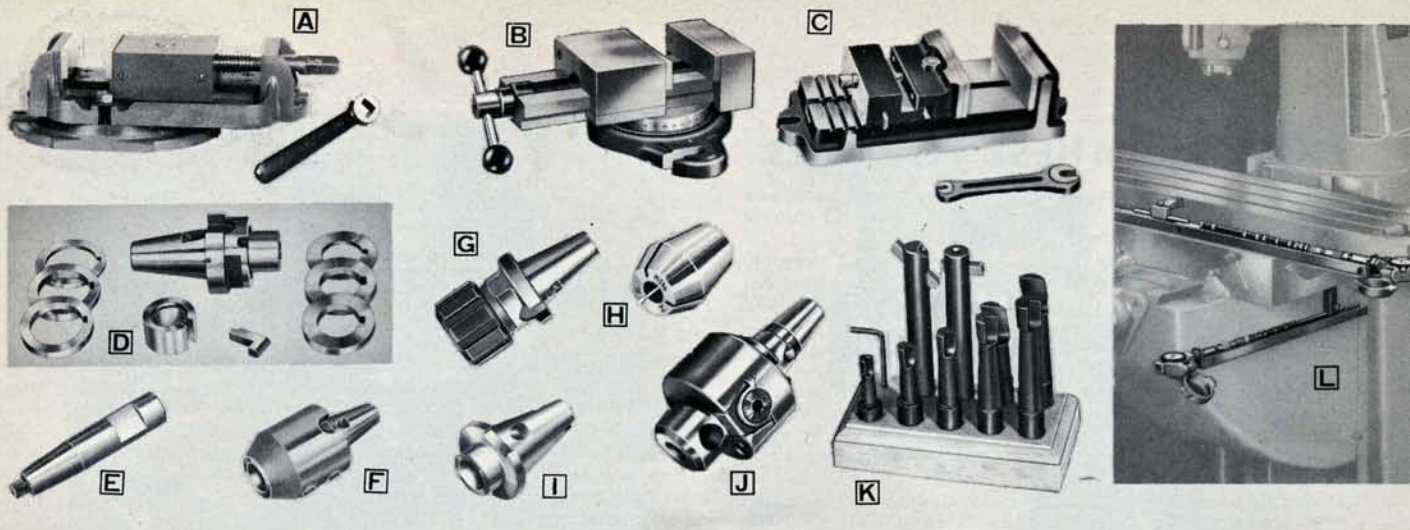
Catalog Number	Motor				Price
	Current	Phase	Cycle	Voltage	
MIL7061A	A.C.	1	50	115	\$182.00
MIL7061B	A.C.	1	60	115	180.00
MIL7061C	A.C.	1	50	230	184.00
MIL7061D	A.C.	1	60	230	182.00
MIL7063C	A.C.	3	50	208/220	201.00
MIL7063D	A.C.	3	60	208/220	201.00
MIL7063E	A.C.	3	50	440	201.00
MIL7063F	A.C.	3	60	440	201.00
MIL7063G	A.C.	3	50	550	201.00
MIL7063H	A.C.	3	60	550	201.00
MIL7063S	A.C.	3	50	380	201.00



### KEYED RAM SAVES TIME

This feature saves you the time and annoyance of resetting the head angle every time the ram is moved transversely. A large key fitted with adjustable tapered gib holds the ram and head assembly in angular alignment, even when ram lock is released for transverse movement of head. The head swivels on a large flange on the end of the ram. Vernier graduations and worm adjustment make angular settings precise and easy.





## ACCESSORIES FOR SOUTH BEND MILLING MACHINES

**A 4" SWIVEL VISE**, with 360° swivel base, has flanges for clamping to machine table. Base has two 11/16" T-slot bolts for swivel and two 11/16" keys to fit machine table slots. Ground steel jaw plates are removable. Vice jaws are 4-1/2" wide, 1-13/16" deep and open 4". Wrench for vise is included in price. Shipping weight 61 lbs.

**MIL7450.** 4" Swivel Milling Machine Vise. Price f.o.b. factory . . . \$84.60

**B 4" SWIVEL VISE** has base with slotted flanges for bolting to machine table. Swivel is graduated 180° to permit setting vise at any angle with slots in machine table. Jaws are replaceable and are made made of hardened steel. Jaws are 4" wide, 1" deep and maximum jaw opening is 4". Shipping wt. 18 lbs.

**CE9100.** Swivel Machine Vise. Price f.o.b. factory . . . \$29.75

**C QUICK-ACTING VISE.** This is a sturdy accurately machined vise for general all around work. Has quick-acting adjustment for self-aligning jaw. Vise screw is wrench operated. Vise jaws are replaceable hardened steel and are 5 1/2" wide, 2 1/8" deep and open 6 1/2". Shipping weight 40 pounds.

**MIL7013.** 5 1/2" Quick-acting Milling Machine Vise. Price . . . \$80.00

**D MILLING CUTTER ARBOR.** This arbor is designed to hold standard side milling cutters and dovetail cutters from 3" to 6" diameter with 1/8" to 3/4" face and having either a 1" or 1 1/4" diameter arbor hole. (See page 51 for milling cutters.) Cutter is securely held by a split expansion taper bushing and flush tightening screw. Cutters are driven by a key which fits standard size key slots. Spacing collars are provided to accommodate various face widths. Shipping weight 3 pounds.

**MIL7035.** Side Milling Cutter Arbor. Price f.o.b. factory . . . \$39.50

**NOTE:** We are in position to supply 30 MM Shell End Mill Arbors to fit South Bend Mills. We must know shank diameter to fit cutter hole. Arbors on special order only. Not subject to return. Price on request.

**E THREADED ARBORS FOR ANGULAR CUTTERS.** These arbors have 3/4" diameter straight shank to fit into 3/4" quick change tool holder or 3/4" collet held in master collet holder. (See page 51 for milling cutters.) Shipping weight 1 pound.

**MIL7037.** Arbor with 3/8"—24 right-hand thread for holding angular cutters **CE66753** and **CE66754**. Price f.o.b. factory . . . \$4.95

**MIL7038.** Arbor with 3/8"—24 left-hand thread for holding angular cutters **CE66751** and **CE66752**. Price f.o.b. factory . . . \$4.95

**F QUICK CHANGE TOOL HOLDERS** fit into No. 30 MM taper to hold single end straight shank end mills, drills, boring bars or other straight shank tools. No. MIL7016 will also hold double end mills. (See page 51 for milling cutters.) Shipping weight 4 lbs. each.

Cat. No.	Capacity	Price	Cat. No.	Capacity	Price
MIL7016	3/16"	\$14.60	MIL7020	3/4"	\$15.65
MIL7017	3/8"	12.80	MIL7021	7/8"	19.30
MIL7018	1/2"	12.25	MIL7022	1"	19.45
MIL7019	5/8"	11.70			

**G MASTER COLLET HOLDER.** One master collet holder is supplied as part of the regular equipment with each milling machine. Additional master collet holders are supplied as extras. Shipping weight 3 lbs.

**MIL7000.** Master Collet Holder and Wrench. Price f.o.b. factory . \$43.00

**H EXTRA COLLETS.** These collets fit into master collet holder (standard equipment) to take straight shank milling cutters, boring tools, etc. Shipping weight 1 pound each.

Cat. No.	Capacity	Price	Cat. No.	Capacity	Price
MIL7001	1/16"	\$10.80	MIL7007	3/16"	\$3.60
MIL7002	1/8"	10.80	MIL7008	1/2"	3.60
MIL7003	3/16"	3.95	MIL7009	3/16"	3.60
MIL7004	1/4"	3.95	MIL7010	3/8"	3.60
MIL7005	5/16"	3.95	MIL7011	1 1/16"	3.60
MIL7006	3/8"	3.60	MIL7012	3/4"	3.60

**I MORSE TAPER SLEEVE.** This sleeve has the No. 30 MM taper on the outside to fit into the milling machine spindle and has a No. 2 Morse taper inside to receive taper shank drills, reamers, boring bars, end mills and other taper shank tools. Shipping weight 1 pound.

**MIL7039.** No. 2 Morse Taper Sleeve for Milling Machine. Price . \$7.50

**J OFFSET BORING HEAD.** This boring head has No. 30 MM taper shank to fit directly into taper of milling machine spindle. Body is 2 3/4" diameter and maximum bar offset is 5/8". Offsetting screw has dial with graduations reading in thousandths and each complete revolution of screw moves tool .050". Bar or tool capacity is 5/8". Price includes T wrench. Shipping weight approx. 4 1/4 lbs.

**MIL7043.** Offset Boring Head. Price f.o.b. factory . . . \$85.00

**K BORING TOOL SET** for use with Offset Boring Head described above. Consists of nine boring bars and boring tools for 3/8" and larger holes. Made of hardened high speed steel with 5/8" diameter shanks. Price includes wrench and wood base. Shipping weight 3 1/2 lbs.

**MIL7044.** Boring Tool Set. Price f.o.b. factory . . . \$29.00

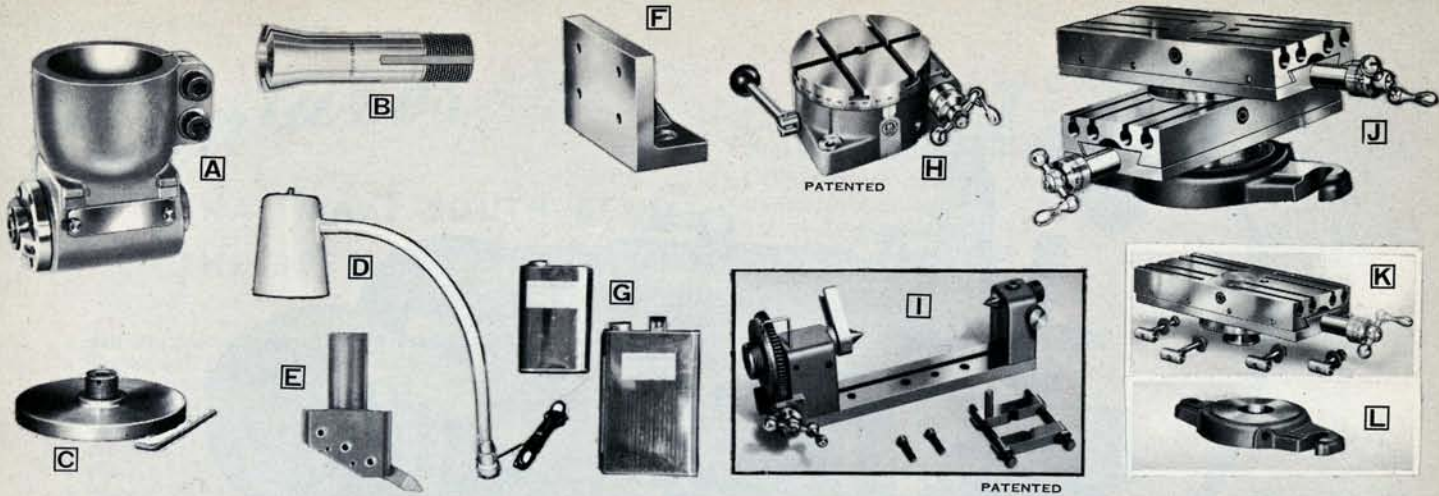
**L MEASURING TRAYS AND RODS.** Measuring trays are attached to table and knee of milling machine and used with 5/8" diameter end measuring rods and micrometers (listed below) for positioning table with extreme precision. Especially useful for jig boring operations. Dial indicators supplied with measuring trays have 100 graduations reading in thousandths of an inch. Indicator housing is so constructed that indicator is protected against accidental damage. Shipping weight approximately 35 pounds.

**MIL7040.** Measuring Trays and Indicators for 32" Table . . . \$129.50

**MIL7041.** Measuring Trays and Indicators for 42" Table . . . \$136.50

**MIL7042.** Set of Precision End Measuring Rods consisting of two 4" to 5" inside micrometers, one 10" solid rod, and two each solid rods 1", 2", 3", and 6" long. Packed in wooden case. Shipping wt. 5 lbs. Price . . . \$217.50





## ACCESSORIES FOR SOUTH BEND MILLING MACHINES

**A 90° MILLING HEAD.** This attachment greatly increases the versatility of the milling machine. It clamps onto quill of milling machine and may be set at any angle. The 90° spindle has #30 MM taper and takes same holders, arbors, sleeves or other tools that are normally used in regular spindle. Also supplied are draw-in collet attachment for the spindle and one 1/2" capacity No. 3 collet. Spindle is driven from the milling machine spindle through bevel gears and operates at same speed as milling machine spindle. Shipping weight 20 lbs.

**MIL7050.** 90° Milling Head. Price f.o.b. factory..... **\$81.50**

**B EXTRA COLLETS FOR 90° MILLING HEAD.** Regular South Bend No 3 **←R-S-B←** steel collets. Any capacity 1/16" to 1/2" round in increments of 1/16". (See page 40 for square and hexagon collets.) Shipping weight each 6 ozs.

**CE3050.** Steel Collet. Price each f.o.b. factory..... **\$5.05**

**C CHUCK ADAPTER STUD** for mounting chuck on table of milling machine, drill press, shaper 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 1/4"	1 1/2"	8	7 lbs.	<b>\$7.75</b>
CE3446	6 1/4"	1 3/8"	8	10 lbs.	<b>9.05</b>
CE3447	7 1/2"	2 1/4"	8	13 lbs.	<b>10.65</b>
CE3448	11 3/4"	2 3/8"	6	14 lbs.	<b>19.30</b>

**D WORK LIGHT.** For clear vision without eyestrain, equip your milling machines (and other machine tools) with this South Bend Work Light. May be permanently installed by drilling and tapping one hole in the milling machine column. When ordered with milling machine, the column will be drilled and tapped for the work light at no extra charge. Shipping weight 5 pounds. Bulb is not included.

**MIL7047.** Work Light for milling machine. Price f.o.b. factory... **\$14.20**

**E FLY CUTTER** for use with Vertical Milling Machine. Has 5/8" shank and takes 5/16" cutter bit. (Cutter bit not included.)

**MIL7058.** Fly Cutter. Price f.o.b. factory..... **\$8.75**

**F ANGLE PLATE.** This is a heavy cast iron angle plate suitable for clamping work on the milling machine, shaper, drill press, face plate of lathe, etc. Size 4 1/2" x 3" x 2". Has six bolt holes. Shipping weight 4 pounds.

**CE9640.** Angle Plate. Price f.o.b. factory..... **\$10.00**

**G HYDRAULIC OIL** For use in Power Feed Quill on Vertical Milling Machine.

**CE7053.** 1 qt. can Hydraulic Oil..... **\$1.30**

**CE7054.** 1 gal. can Hydraulic Oil..... **4.10**

**H ROTARY INDEXING TABLE.** You will find this rotary indexing table a great convenience for mounting small work on the milling machine, drill press, or shaper. Used for accurately spacing holes, indexing clutch teeth, machining squares, hexagonal or octagonal shapes, milling circular grooves or T-slots, etc. Table is 4 1/2" 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. Shipping weight 14 lbs.

**CE9144.** Indexing table. Price f.o.b. factory..... **\$61.75**

**I INDEXING CENTERS.** This is an indispensable device for milling splines or flutes in shafts, laying out work, accurate cross drilling, gear cutting, milling or shaping hexagons, squares, etc. Base has bolt holes for clamping on table of milling machine, drill press or shaper. 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. Shipping weight 12 lbs.

**CE9635.** Indexing Centers. Price f.o.b. factory..... **\$76.90**

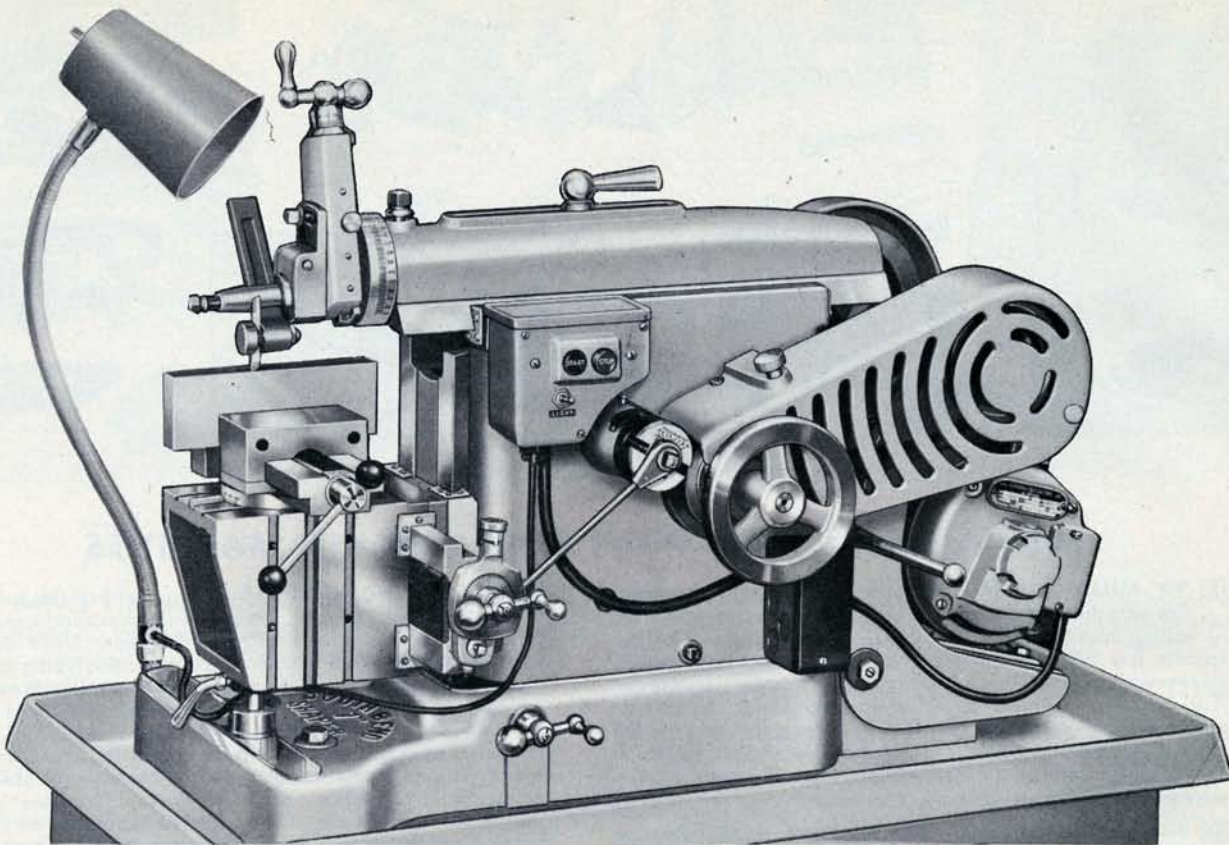
**J UNIVERSAL TABLE.** For angular milling operations. Both upper and lower slides have graduated swivels and may be turned through full 360°. Slides can be used without graduated swivels to reduce height if desired. They can be positioned at any angle with each other and may be turned individually or together. 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 7/8" 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. Supplied with base for use on milling machines, drill press, etc.

**CE9156.** Universal Table complete with base for South Bend milling machine or other machine tools, two slides, two graduated swivels, and eight clamp bolts with nuts. Ship. wt. 43 lbs. Price..... **\$131.00**

**CE9157.** Single Table with one graduated swivel and four clamp bolts with nuts. Ship. wt. 19 lbs. Factory price..... **\$63.50**

**CE9159.** Base only for adapting single table to South Bend milling machine or other machine tool. Ship. wt. 8 lbs. Price..... **\$4.85**





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



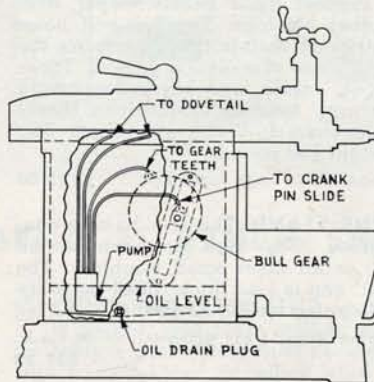
Machining clutch teeth with rotary indexing table.



Machining flat surfaces on shaft with indexing head

## SPECIFICATIONS

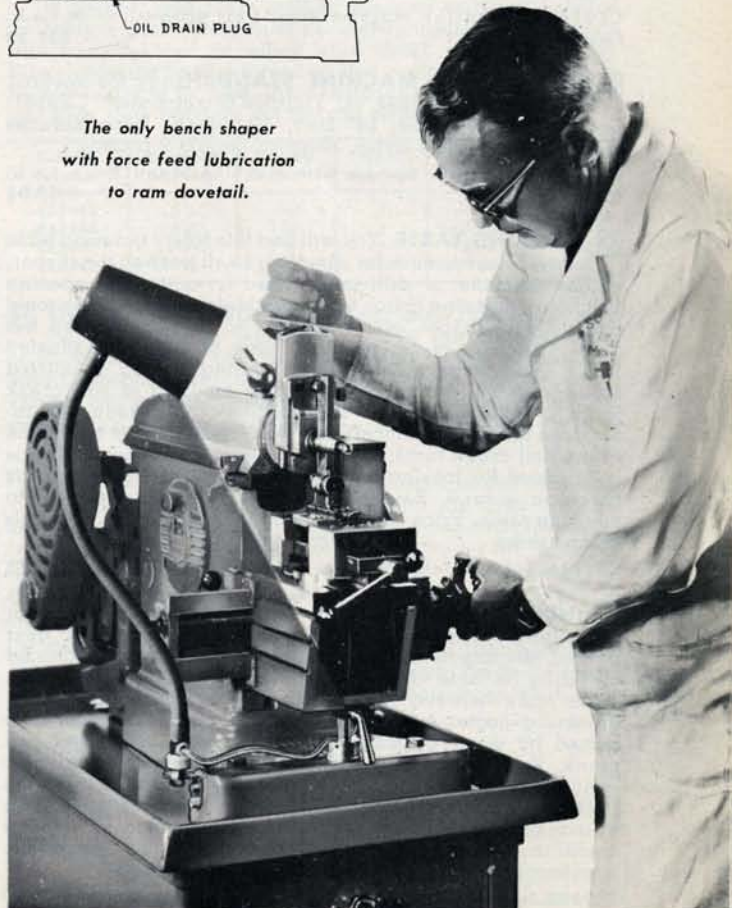
Length of ram stroke	0 to 7"
Strokes per minute, approximate	42-75-120-195
Cutting speeds	3 to 114 feet per minute
Vertical feed of tool	3"
Tool post takes tool	3/8" x 1 3/16"
Tool head swivels	360°
Width of vise jaws	4"
Depth of vise jaws	1"
Maximum opening of vise jaws	4"
Length of table top	6 7/16"
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.



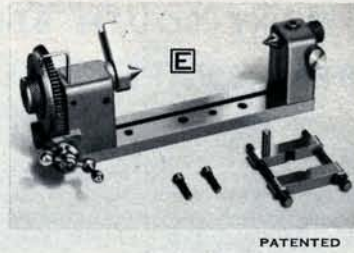
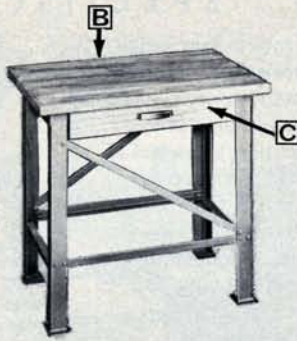
### FORCE FEED LUBRICATION

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

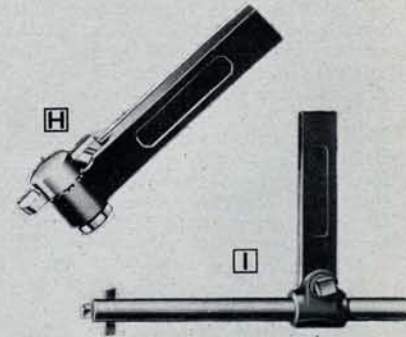
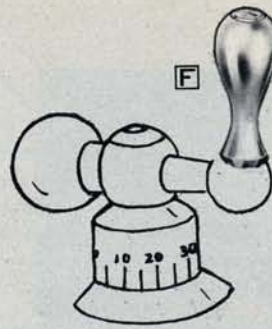
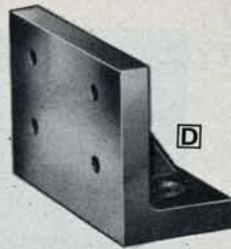
**G OPTIONAL LOW VOLTAGE CONTROLS.** Low voltage remote control equipment is optional (not required) for two and three phase motors. This equipment includes step-down transformer and relays which reduce current to operating switch to 110 v. and provide overload protection and low voltage release. Transformer 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 7/8" 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 1/2" 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 1/4"	1 1/2"	8	7 lbs.	\$ 7.75
CE3446	6 1/4"	1 7/8"	8	10 lbs.	9.05
CE3447	7 1/2"	2 1/4"	8	13 lbs.	10.65
CE3448	11 3/4"	2 3/8"	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 1/2". Takes cutter bit 3/16" x 3/16". 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.



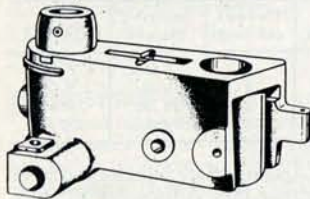
# 14-INCH SOUTH BEND *Precision* MODEL DRILL PRESS

South Bend's 14" Drill Press is the only drill press in its size and price range with a Patented Design Rack Type Depth Gauge completely integrated with the quill. Designed to eliminate spindle and small drill deflection. Depth stop is direct reading, in thousandths of an inch. Not just an ordinary drill press—but a Precision Engineered Machine Tool for extremely accurate work.

A built-in light with independent switch provides shadowless illumination on the work area, eliminating the necessity of installing a separate lighting fixture. A quick-acting belt tension release lever simplifies speed changes and returns the vertical mounted motor to its original position after each change, thus maintaining the same belt tension for each of the four cone pulley steps.

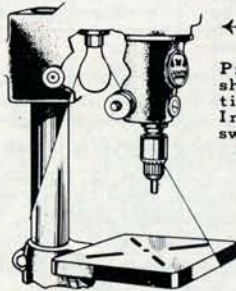
## SPECIFICATIONS

Maximum drill size in iron or steel	.....	1/2"
Drills to center of	.....	14 1/4" circle
Net weight, bench type, less motor	.....	130 lbs.
Net weight, floor type, less motor	.....	165 lbs.
Chuck capacity	.....	0 to 1/2"
Spindle Speeds:		
With 1725 r.p.m. motor, four, approx.	.....	720 to 4325 r.p.m.
With 1140 r.p.m. motor, four, approx.	.....	480 to 2885 r.p.m.
With 1725 r.p.m. motor and multi-speed attachment, (see page 88) twelve, approx.	.....	380 to 8010 r.p.m.
With 1140 r.p.m. motor and multi-speed attachment, (see page 88) twelve, approx.	.....	255 to 5340 r.p.m.
Spindle travel, maximum	.....	4"
Spindle run out, maximum	.....	.001"
Spindle, square with table within	.....	.002" in 5"
Chuck to base, maximum, bench type	.....	16"
Chuck to base, maximum, floor type	.....	45 1/4"
Chuck to table, maximum, bench type	.....	11 3/8"
Chuck to table, maximum, floor type	.....	40 3/4"
Base, work surface, bench type	.....	7" x 10"
Base, work surface, floor type	.....	8" x 12"
Table, work surface	.....	10" x 10"
Table tilt	.....	Any angle
Column diameter	.....	2.730"
Motor, size recommended	.....	1/3 or 1/2 h.p.



**ONE-PIECE HEAD CASTING**

Insures accurate alignment. Heavy, rigid construction. Internal clutch locks the head to column. Column bearing is NOT split.

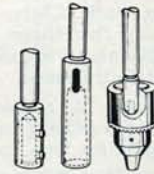
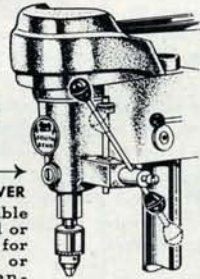


**BUILT-IN LIGHT**

Provides shielded, shadowless illumination on work area. Independent on-off switch is built-in.

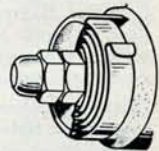
**ADJUSTABLE FEED LEVER**

Feed lever is adjustable and can be centered or extended as desired for increased leverage or for greater convenience.



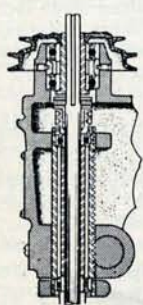
**INTERCHANGEABLE SPINDLES**

Spindles available to take No. 2 Morse taper shank tools, and for 1/2" straight shank tools, router bits, shaper cutters.



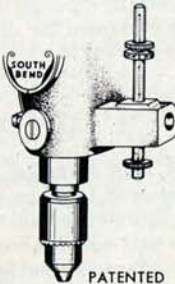
**ADJUSTABLE QUILL RETURN SPRING**

Retracts quill instantly. Feather touch sensitivity of the quill by adjustment of tension spring.



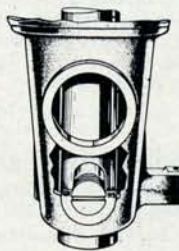
**FOUR PRECISION BALL BEARINGS**

Two on spindle, two on drive sleeve. Prelubricated and sealed precision type, no oiling required.



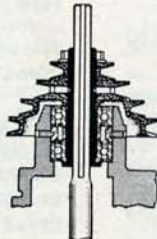
**RACK TYPE DEPTH GAUGE**

Works as an integral part of quill. Eliminates spindle deflection. Graduated in thousandths.



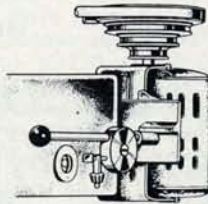
**QUILL SHOE ADJUSTMENT**

Shoe-type take-up provides feather-touch tension and secure locking. Quill bearing is NOT split.



**FREE-FLOATING SPINDLE**

Design prevents misalignment, side thrust and whip. Precision splines in spindle and sleeve.



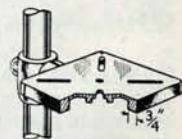
**BELT TENSION RELEASE**

Flip of lever removes tension from belt for easy speed changes. Proper belt tension maintained.



**TABLE LOCK**

Internal clutch securely locks table to column. Eliminates misalignment. Column bearing is NOT split.



**PRECISION TABLE HAS WIDE CLAMPING RIB**

Table has accurately ground work surface. Heavy rib 3/4" wide strengthens table and provides flat surface underneath for clamping work securely to table.





## Precision MODEL 14-INCH BENCH DRILL PRESS

Perfectly proportioned for mounting on any substantial work bench, table, or machine stand, this is one of our most popular drill presses. Base has bolt holes for securing to bench, and precision ground work surface with two slots for clamping. Maximum distance between base and chuck is 16" and between table and chuck is 11  $\frac{3}{8}$ ". See preceding page for other specifications and features.

The free-floating spindle design prevents misalignment, side thrust, and whip. Two precision ball bearings carry the drive sleeve and two additional ball bearings carry the spindle, which is spline driven. All ball bearings pre-lubricated and sealed, require no oiling. Rack type depth gage integrated with the quill, eliminates spindle and small drill deflection.

Regular equipment supplied with each Precision Model Bench Drill Press includes motor base, balanced motor pulley, balanced spindle pulley, V-belt, built-in work light, wiring in drill press head, spindle equipment as indicated in table, switch for work light, and switch for single phase motor when specified, but does not include motor. See page 88 for drill press motors.

PRECISION MODEL BENCH DRILL PRESSES

Catalog Number	Spindle Equipment	Cubic Feet Boxed	Boxed Weight Pounds	Crated Weight Pounds	Price
CD400B	1/2" Jacobs Key Chuck	9	255	190	\$140
CD414B	No. 2 Morse Taper Socket	9	255	190	134



## Precision MODEL 14-INCH FLOOR DRILL PRESS

Except for the tall column and large base for floor mounting, this is the same as the bench drill press shown at the left. Base is heavily constructed and of ample size to provide substantial support. Precision ground work surface on base has two slots for clamp bolts. Maximum distance between base and chuck is 45  $\frac{1}{4}$ " and between table and chuck is 40  $\frac{3}{4}$ ". For other specifications and features see preceding page.

The full tilt type table, with 10" x 10" precision ground top surface, has slots for clamping fixtures or work. An improved type of internal clutch binder is provided for locking the table quickly in any position on the column. The edge of the table has a heavy flange with a  $\frac{3}{4}$ " flat underneath for clamping.

Regular equipment supplied with each Precision Model Floor Drill Press includes motor base, balanced motor pulley, balanced spindle pulley, V-belt, built-in work light, wiring in drill press head, spindle equipment as indicated in table, switch for work light, and switch for single phase motor when specified, but does not include motor. See page 88 for drill press motors.

PRECISION MODEL FLOOR DRILL PRESSES

Catalog Number	Spindle Equipment	Cubic Feet Boxed	Boxed Weight Pounds	Crated Weight Pounds	Price
CD400F	1/2" Jacobs Key Chuck	19	365	235	\$162
CD414F	No. 2 Morse Taper Socket	19	365	235	156

Note: If ordered less motor, specify voltage, phase, and cycle of motor to be used.



# Precision MODEL SINGLE AND MULTIPLE SPINDLE DRILL PRESSES FOR PRODUCTION OPERATIONS

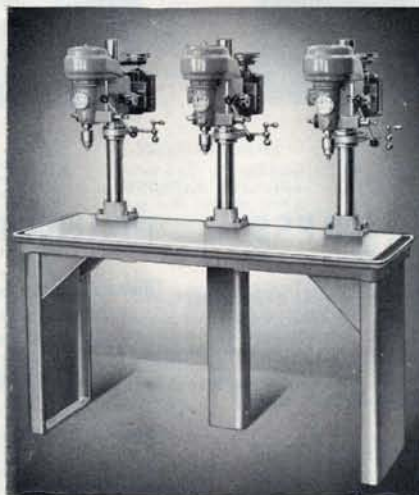
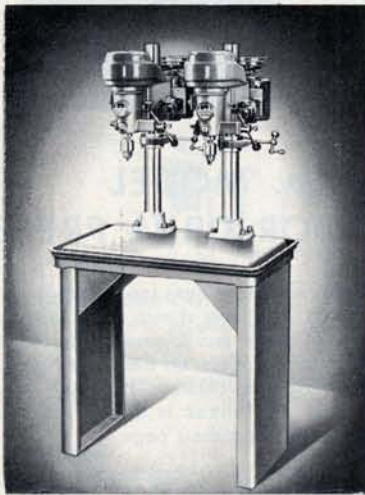
Much time can be saved on production drill press work by using one of these multiple spindle models so that two or more operations can be performed in rapid sequence. Each spindle can be adjusted independently to the correct position and speed for most convenient and efficient operation.

These drill presses consist of our standard 14" Precision Model drill press heads mounted on heavy, accurately machined work tables having large coolant return grooves. Either bench mounting (not illustrated) or heavy welded steel floor legs for floor installation as illustrated, can be supplied.

Drill press heads have the New Patented Design Rack Type Depth Gage, completely eliminating spindle and small drill deflection due to depth gage pressure.

The drill press spindles can be supplied with either 1/2" Jacobs key type chucks or with taper sockets to receive tools with No. 2 Morse taper shanks. Coolant pump and reservoir, multi-speed attachment, and other attachments and accessories can be supplied and are illustrated and described on pages 86 to 88 inclusive.

Regular equipment supplied with each drill press head includes: head positioning mechanism, spindle equipment as indicated in table below, motor base, motor pulley, V-belt, built-in work light, wiring and toggle switches. Motors and remote control equipment are not included. (See page 88.) If drill press is ordered without motors, specify voltage, phase and cycle of motors to be used so correct wiring can be supplied in drill press head.



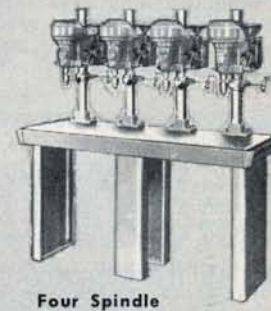
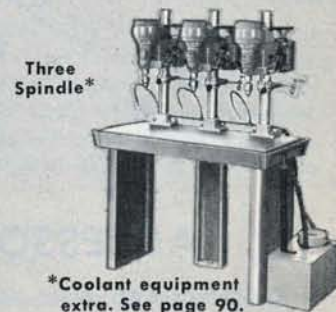
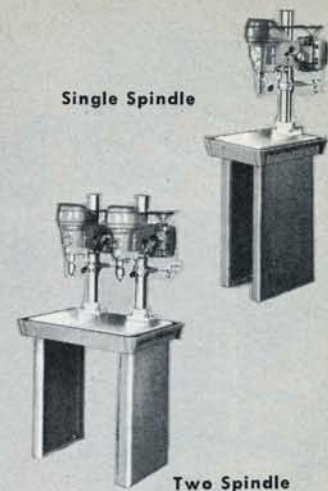
With 1/2" Jacobs Chucks		With No. 2 M.T. Sockets		Number of Spindles	Table Work Surface	Between Column Centers	Over-all Size			Cubic Feet Boxed	Boxed Weight Pounds	Crated Weight Pounds
Cat. No.	Price	Cat. No.	Price				Width	Depth	Height			
<b>Floor Model Drill Presses for Production Operations</b>												
CD451F	\$277	CD491F	\$271	1	13 7/8" x 15 3/4"	...	20"	33"	68 1/2"	22	475	375
CD452F	532	CD492F	521	2	14" x 28 3/4"	13"	33 1/8"	33"	69 3/8"	34	725	628
CD453F	825	CD493F	809	3	14" x 55"	19"	59 1/2"	33"	70 1/8"	57	1185	1065
CD454F	949	CD494F	927	4	14" x 55"	13"	59 1/2"	33"	70 1/8"	57	1320	1200
<b>Bench Model Drill Presses for Production Operations</b>												
CD451B	\$218	CD491B	\$212	1	13 7/8" x 15 3/4"	...	20"	33"	37 3/8"	22	393	293
CD452B	464	CD492B	454	2	14" x 28 3/4"	13"	33 1/8"	33"	38 7/8"	34	645	546
CD453B	687	CD493B	669	3	14" x 55"	19"	59 1/2"	33"	38 1/8"	57	1065	902
CD454B	847	CD494B	824	4	14" x 55"	13"	59 1/2"	33"	38 1/8"	57	1200	1035



# SOUTH BEND 14" DRILL PRESS

## MULTIPLE SPINDLE — SECTIONAL TABLE MODELS

Carefully designed and engineered to provide a Precision Drill Press with maximum strength and minimum weight. Table castings have rigid ribbed construction and legs are reinforced welded steel, equipped with adjustable table leveling mechanism. From single unit to multiple spindle by adding necessary components. No limit to number of stations that can be assembled.



\*Coolant equipment extra. See page 90.

TABLE shows equipment recommended for various set-ups.

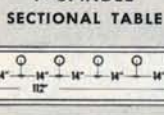
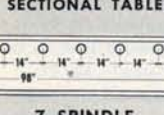
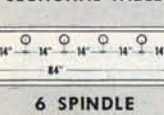
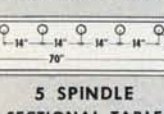
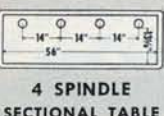
* No. of SPINDLES	Table Section CD552	Table Ends CD555	End Legs CD554	Inner Leg CD553	Head and Column Assembly — 1/2" Jacobs Chuck or #2 M.T. Socket
1 SPINDLE	1	2	2	—	1
2 SPINDLE	2	2	2	—	2
3 SPINDLE	3	2	2	1	3
4 SPINDLE	4	2	2	2	4
5 SPINDLE	5	2	2	3	5
6 SPINDLE	6	2	2	4	6
7 SPINDLE	7	2	2	5	7
8 SPINDLE	8	2	2	6	8

\*Sectional Production Drill Presses are shipped knocked down, ready for assembly.

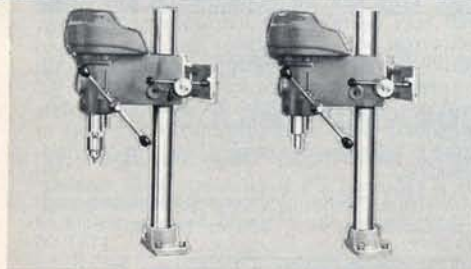
(Requires approx. 1 hour per head for assembly.)

Components can be added as needed to make up any length production drill press.

Note: If heavy duty work is continually being done on the Drill Press, additional inner legs may be added.



### MAKE UP YOUR OWN PRODUCTION DRILL PRESS EQUIPMENT WITH THESE LOW COST COMPONENTS



#### HEAD AND COLUMN ASSEMBLIES

Regular equipment with each head assembly includes a Precision Model Drill Press Head, with motor base, motor pulley, V-belt, built-in work light, wiring, toggle switches (switches not included when three phase motor is used) motor not included. (See page 88 for control equipment for 2 and 3 phase motors). Column assembly includes column and column support assembled plus cap screws for attaching to table. If ordered without motor, specify voltage, phase and cycle of motor to be used so correct wiring can be supplied in drill press head.

CD556. Precision Head Assembly with 1/2" Jacobs Key Chuck. Price f.o.b. . . . . \$115.00

CD557. Precision Head Assembly with #2 M.T. Socket. Price f.o.b. . . . . 110.00

CD558. Column Assembly. Price f.o.b. . . . . 22.80

**A TABLE SECTION.** Each Table Section for production drill press is 14" wide, 21 1/4" long, 4 1/2" thick. Designed for strength with minimum weight. Connecting bolts and leveling mechanism, wrenches and instructions for assembling included with each table section. CD552. Production Drill Press Table Section. . . . \$44.50

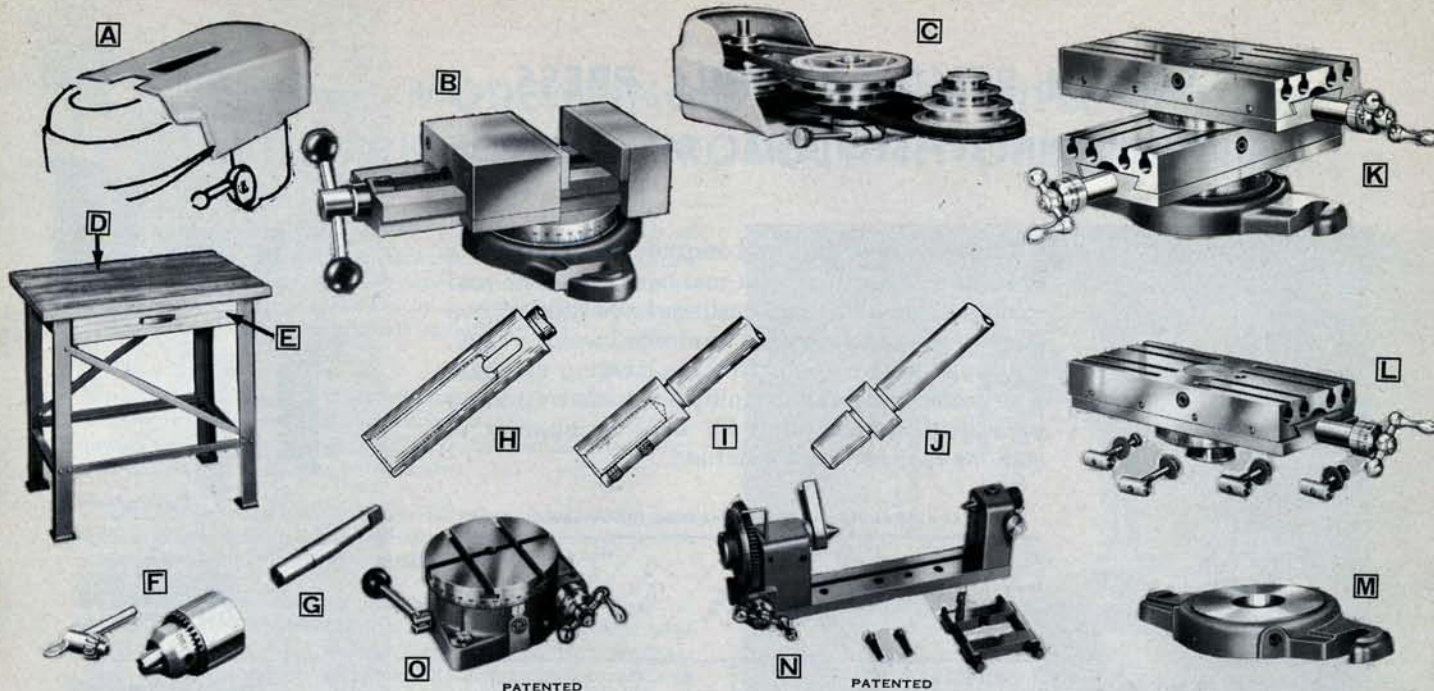
**B TABLE ENDS.** These table ends attach to the drill press table section (see A). Has coolant return grooves to match those of the drill press table. Drilled and tapped for coolant pipe. Table end is 2" wide, 21 1/4" long and same height as table. Pipe plug and hardware for attaching is included. CD555. Table End. Price each. . . . . \$12.05

**C END LEGS.** The end legs for the production drill press are made of heavy gauge reinforced steel. Modern in design and shape, with steel reinforcing at top and bottom of each leg. Leg is drilled and tapped for attaching to drill press table. Two adjustable leveling bushings and pads plus hardware for attaching to table is included with each leg. Leg approx. 30" long, 17" wide. CD554. End Leg. Price each. . . . . \$37.45

**D INNER LEGS.** Inner legs are constructed the same as the end legs. Heavy reinforced welded steel, drilled and tapped for attaching to drill press table. Included with inner leg is one adjustable leveling bushing and pad plus hardware for attaching to table of drill press. Inner leg is approximately 30" long, 6" wide. CD553. Inner Leg. Price each. . . . . \$20.95







## ACCESSORIES FOR SOUTH BEND DRILL PRESSES

**A BELT GUARD.** This belt guard provides complete enclosure for V-belt. Guard is hinged and may be raised for changing spindle speeds. May be used with or without Multi-Speed Attachment.

**CD9136.** Belt Guard for use with Precision Model Drill Press. Shipping weight 16 lbs. Price ..... **\$15.45**

**B SWIVEL MACHINE VISE** for holding work on drill press table, milling machine, shaper, etc. Swivel is graduated 180° to permit setting vise at any angle with slots in table. Hardened and replaceable jaws are 4" wide and 1" deep. Maximum jaw opening is 4".

**CE9100.** Swivel Drill Press Vise. Ship. wt. 18 lbs. Price ..... **\$29.75**

**C MULTI-SPEED ATTACHMENT.** The Multi-Speed Attachment for the South Bend 14" Precision Model Drill Press provides twelve spindle speeds 380 to 8010 r.p.m. with 1725 r.p.m. motor or 255 to 5340 r.p.m. with 1140 r.p.m. motor. The attachment consists of an eccentric spindle, which is mounted in the drill press column to support a 4-step auxiliary cone pulley with two V-belts.

Price includes eccentric spindle, 4-step cone pulley and two V-belts. Shipping weight 8 pounds.

**CD9135A.** For 1/3 h.p. or 1/2 h.p. NEMA No. 56 frame motor. Price f.o.b. factory ..... **\$18.65**

**CD9135B.** For 1/2 h.p. NEMA No. 66 frame motor. Price ..... **\$18.65**

Note: This attachment cannot be used with Head Positioning Attachment.

**D WOOD TOP MACHINE STAND.** This is a heavily constructed angle steel stand 29 3/8" high for mounting the drill press, bench shaper, or for other small machines. The glued wood top is 20" x 32" and is 1 3/8" thick. Steel parts are finished in gray enamel. Shipping weight 52 pounds.

**CE9141.** Wood Top Machine Stand (less drawer). Price ..... **\$27.25**

**E DRAWER FOR MACHINE STAND.** Handy for keeping small tools, wrenches, etc. Finished to match stand CE9141. Drawer is 20 1/8" wide, 14" long, 3 3/8" deep. Price includes metal pull and wood slides. Shipping weight 9 pounds.

**CE1780D.** Drawer for use with Machine Stand. Price ..... **\$9.05**

**F CHUCK AND ARBOR FOR DRILL PRESS.** This drill chuck and arbor are recommended for use with drill presses having spindles with No. 2 Morse taper.

**CE1201.** Jacobs 3-jaw smooth body drill chuck, 0 to 1/2" capacity with pinion key. Shipping weight 2 3/8 pounds. Price ..... **\$11.40**

**CE9110.** No. 2 Morse taper shank arbor with tang, for fitting chuck No. CE1201 to drill press spindle No. CD 9125. Shipping weight 3/4 pound. Price f.o.b. factory ..... **\$2.20**

**H EXTRA SPINDLES FOR DRILL PRESSES.** Extra spindles are interchangeable with regular drill press spindles supplied with either the Single or Multiple Spindle Precision Model Drill Presses.

**CD9125.** Spindle "H" with No. 2 Morse taper hole for holding taper shank tools. Drift included. Ship. wt. 3 pounds. Price ..... **\$9.90**

**CD9128.** Spindle with No. 3 Morse taper hole for holding taper shank tools. Drift included. Shipping weight 5 pounds. Price ..... **\$14.10**

**CD9126.** Utility spindle "I" with 1/2" x 1 3/8" deep straight hole for holding routing tools, etc. Shipping weight 3 pounds. Price ..... **\$7.70**

**CD9127.** Spindle "J" with short taper for 1/2" Drill Chuck No. CE1201. (Jacobs No. 34.) Shipping weight 2 pounds. Price ..... **\$5.60**

**K UNIVERSAL TABLE.** Both upper and lower slides have graduated swivels and may be turned through full 360°. 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. 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 7/8" 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.

**CE9156.** Universal Table "K" complete with base, two slides, two graduated swivels, and eight clamp bolts with nuts. Shipping weight 43 pounds. Price f.o.b. factory ..... **\$131.00**

**CE9157.** Single Table "L" with one graduated swivel and four clamp bolts with nuts. Shipping weight 19 pounds. Price ..... **\$63.50**

**CE9159.** Base only "M" for adapting single table to South Bend Drill Press. Shipping weight 8 pounds. Price f.o.b. factory ..... **\$4.85**

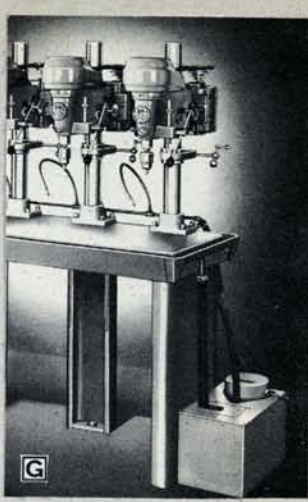
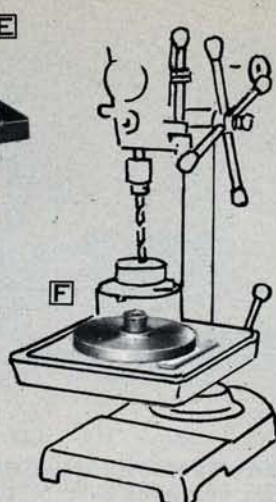
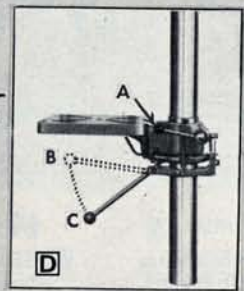
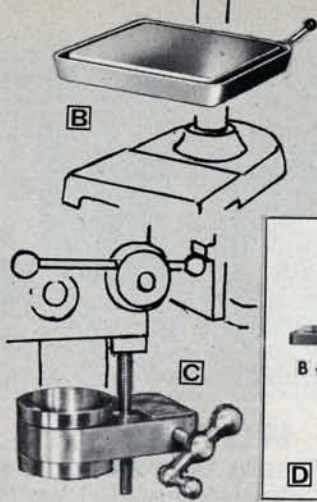
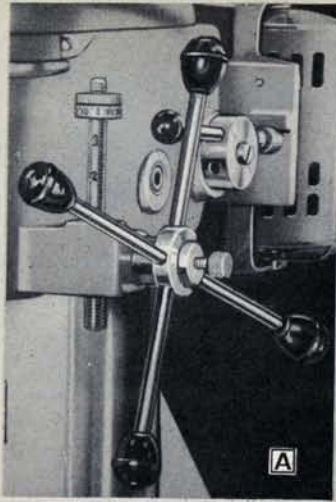
**N INDEXING CENTERS** for accurate indexing, cross drilling, cutting flutes, etc. Takes work up to 5" in diameter and 6" long. Worm gear dial is graduated in degrees and each graduation on ball crank collar indicates 3 minutes.

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

**O INDEXING TABLE** for accurately spacing holes, etc. Table is 4 1/2" in diameter and has three T-slots for clamping work. Edge of table is graduated 360°. Each graduation on ball crank collar indicates table movement of 3 minutes.

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





PATENTED

**A TURNSTILE FEED LEVER ATTACHMENT.** This attachment adds two spokes to the regular feed lever to provide a four spoke turnstile feed for the drill press spindle. It consists of two levers of equal length mounted in a collar which slips over the quill feed shaft. The regular feed lever passes through the collar and locks it in position. The use of this attachment does not interfere with the adjustable feature of the regular feed lever, which can be set in central position or extended for additional leverage or convenience as desired. Made with knobs to match Precision Model Drill Press.

**CD9170.** Turnstile Feed Lever Attachment. Shipping weight 3 pounds. Price f.o.b. factory..... **\$3.60**

**B TABLE WITH COOLANT TROUGH** is heavily constructed with large flat underneath edge for clamping. Precision ground work surface is 10½" square. Coolant trough has drain hole with ¼" pipe thread.

**CD9165.** Table with Coolant Trough in lieu of regular table at time drill press is purchased. Price f.o.b. factory..... **\$11.30**

**CD9166.** Table with Coolant Trough in addition to regular table or separate from drill press. Shipping weight 40 pounds. Price f.o.b. factory..... **\$24.90**

**C HEAD POSITIONING ATTACHMENT.** The Head Positioning Attachment provides a quick and convenient means for adjusting the position of the drill press head on the column. The attachment can be used at any point on the column, and provides four inches of vertical adjustment at one setting. Enclosed worm gearing operated by a steel ball crank assures smooth, easy operation. The head positioning attachment swivels around the column with the head to any desired angle. Designed for use with South Bend 14" Drill Presses which have columns 2.730" in diameter. The head positioning attachment and the multi-speed attachment cannot be used at the same time.

**CE9131.** Head Positioning Attachment. Shipping weight 10 pounds. Price f.o.b. factory..... **\$31.75**

**D NEW EASY-UP TABLE ELEVATOR.** This attachment will "walk-up" the full length of drill press column. To operate, release table clamp A—then move raising lever from B to C in a pumping motion. Table climbs right up column. To lower, swing table slightly from left to right. Table will slide down column. Works equally well with table at 45° and swivels to any position around column.

**CD9186.** Easy-Up Drill Press Table Elevator for use with South Bend Drill Press (2.730 column) f.o.b. factory..... **\$17.00**

**CD9180.** Easy-Up Drill Press Table Elevator for use with any drill press with 2.750 column. f.o.b. factory..... **\$17.00**

**E ANGLE PLATE.** This is a heavy cast iron angle plate suitable for clamping work on the drill press, shaper, milling machine, face plate of lathe, etc. Size 4½" x 3" x 2". Has six bolt holes.

**CE9640.** Shipping weight 4 pounds. Price f.o.b. factory..... **\$10.00**

**F CHUCK ADAPTER STUD** for mounting chuck on table of drill press, milling machine, shaper 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 chuck, clamps or bolts.

Catalog Number	Diameter of Plate	Thread Diameter	Threads per Inch	Shipping Weight	Price
CE3445	6¼"	1½"	8	7 lbs.	\$7.75
CE3446	6¼"	1⅞"	8	10 lbs.	9.05
CE3447	7½"	2¼"	8	13 lbs.	10.65
CE3448	11¾"	2⅝"	6	14 lbs.	19.30

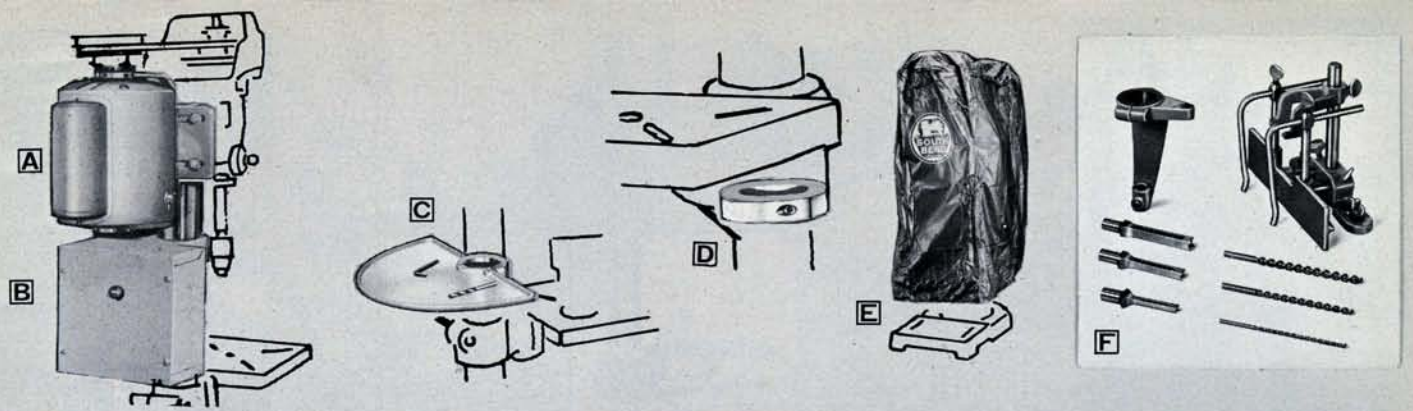
## COOLANT PUMP EQUIPMENT FOR PRODUCTION TYPE DRILL PRESSES

**G COOLANT PUMP EQUIPMENT** for production type drill presses. See pages 84 & 85. Includes a self-priming coolant pump driven by a ¼ h.p. motor, toggle switch, coolant reservoir, necessary piping, and individual nozzle with shut off

valve for each spindle of the drill press. Price includes fitting coolant equipment to drill press at factory. Shipping weight approximately 154 pounds. See page 52 item "E" for universal coolant pump suitable for use with any type of drill press.

CURRENT				One Spindle Drill Press		Two Spindle Drill Press		Three Spindle Drill Press		Four Spindle Drill Press	
Type	Phase	Cycle	Volts	Cat. No.	Price	Cat. No.	Price	Cat. No.	Price	Cat. No.	Price
A.C.	3	50	220	CD9103C	\$215.25	CD9203C	\$221.50	CD9303C	\$229.50	CD9403C	\$235.75
A.C.	3	60	220	CD9103D	215.25	CD9203D	221.50	CD9303D	229.50	CD9403D	235.75
A.C.	3	50	440	CD9103E	219.50	CD9203E	226.00	CD9303E	233.75	CD9403E	240.50
A.C.	3	60	440	CD9103F	219.50	CD9203F	226.00	CD9303F	233.75	CD9403F	240.50
A.C.	3	50	550	CD9103G	219.50	CD9203G	226.00	CD9303G	233.75	CD9403G	240.50
A.C.	3	60	550	CD9103H	219.50	CD9203H	226.00	CD9303H	233.75	CD9403H	240.50
A.C.	2	50	220	CD9102C	215.25	CD9202C	221.50	CD9302C	229.50	CD9402C	235.75
A.C.	2	60	220	CD9102D	215.25	CD9202D	221.50	CD9302D	229.50	CD9402D	235.75
A.C.	1	50	115	CD9101A	198.75	CD9201A	202.25	CD9301A	213.50	CD9401A	219.50
A.C.	1	60	115	CD9101B	194.25	CD9201B	202.25	CD9301B	208.50	CD9401B	216.25
A.C.	1	50	230	CD9101C	202.25	CD9201C	208.50	CD9301C	216.25	CD9401C	222.50
A.C.	1	60	230	CD9101D	197.75	CD9201D	204.25	CD9301D	211.75	CD9401D	218.50





**A MOTORS FOR DRILL PRESSES.** Motors listed below are recommended for use with South Bend 14" Drill Presses. Standard spindle speeds with 1725 r.p.m. motors are approximately 720 to 4325 r.p.m. and with 1140 r.p.m. motors 480 to 2885 r.p.m. These are all vertical mounting ball-bearing motors. All single phase motors are capacitor type. Prices of 230 v. single phase motors include 230 v. lamp in lieu of 115 v. lamp regularly supplied.

Motors operating on two or three phase A.C. require either remote control or across-the-line manual starter equipment described below the motor table.

Wiring and switches for single phase motors are supplied with Precision Model Drill Presses, and need not be ordered as extras. Information on motors for current characteristics not listed will be supplied on request.

Cat. No.	R.P.M.	H.P.	Current	Volts	Phase	Cycle	Price
CE4910B	1725	1/2	A.C.	115	1	60	\$35.00
CE4910D	1725	1/2	A.C.	230	1	60	35.00
CE4911A	1425	1/2	A.C.	115	1	50	38.50
CE4911C	1425	1/2	A.C.	230	1	50	38.50
CE4912D	1725	1/2	A.C.	208-220	3	60	34.00
CE4912C	1425	1/2	A.C.	208-220	3	50	34.00
CE4913S	1425	1/2	A.C.	380	3	50	34.00
CE4913F	1725	1/2	A.C.	440	3	60	37.00
CE4913E	1425	1/2	A.C.	440	3	50	37.00
CE4920B	1725	1/2	A.C.	115	1	60	41.50
CE4920D	1725	1/2	A.C.	230	1	60	41.50
CE4921A	1425	1/2	A.C.	115	1	50	45.50
CE4921C	1425	1/2	A.C.	230	1	50	45.50
CE4922Y	1200	1/2	A.C.	115	1	40	88.00
CE4922Z	1200	1/2	A.C.	230	1	40	88.00
CE4914D	1725	1/2	A.C.	208-220	2	60	41.00
CE4914C	1425	1/2	A.C.	208-220	2	50	41.00
CE4914F	1725	1/2	A.C.	440	2	60	41.00
CE4914E	1425	1/2	A.C.	440	2	50	41.00
CE4924D	1725	1/2	A.C.	208-220	3	60	41.00
CE4924C	1425	1/2	A.C.	208-220	3	50	41.00
CE4924S	1425	1/2	A.C.	380	3	50	41.00
CE4924F	1725	1/2	A.C.	440	3	60	41.00
CE4924E	1425	1/2	A.C.	440	3	50	41.00
CE4932B	1140	1/2	A.C.	115	1	60	51.00
CE4932D	1140	1/2	A.C.	230	1	60	51.00
CE4933D	1140	1/2	A.C.	208-220	3	60	51.00
CE4933F	1140	1/2	A.C.	440	3	60	51.00
CE4934B	1140	1/2	A.C.	115	1	60	66.00
CE4934D	1140	1/2	A.C.	230	1	60	66.00
CE4935D	1140	1/2	A.C.	208-220	3	60	65.50
CE4935F	1140	1/2	A.C.	440	3	60	65.50

**B CONTROLS FOR TWO AND THREE PHASE MOTORS.**

All two and three phase motors for drill presses require either remote control or across-the-line manual starter equipment. Remote control equipment includes step-down transformers and relays which reduce current to operating switch to 110 volts, and provide overload protection and low voltage release.

**CE4901.** Across-the-line Manual Starter for three phase or two phase three wire 208-220/440 v., 50/60 cycle A.C. motors. Shipping weight 5 pounds. Price f.o.b. factory ..... **\$15.00**

**CE4909E.** Remote Control for three phase or two phase three wire 208-220/440 v., 50 cycle A.C. motors. Shipping weight 23 pounds. Price f.o.b. factory ..... **\$90.00**

**CE4909F.** Remote Control for two phase or three phase 208-220/440 v., 60 cy. A.C. motors. Ship. wt. 23 pounds. Price ..... **\$90.00**

**CE4909S.** Remote Control for three phase 380 v., 50 cycle A.C. motors. Ship. wt. 23 lbs. Price f.o.b. factory ..... **\$94.00**

**C TOOL TRAY FOR DRILL PRESS.** This is a convenient metal tool tray which may be clamped on the drill press column either above or below the table. Especially desirable for floor type drill presses.

**CD9175.** Tool Tray. Ship. wt. 5 lbs. Price f.o.b. factory ..... **\$5.00**

**D TABLE SUPPORT RING.** Clamped on the column beneath the drill press table, this support ring permits releasing the table clamp and swinging the table around the column to any position without danger of the table dropping down. Very convenient for surface grinding with cup wheel mounted in drill press spindle, and similar surfacing operations on wood or metal parts. Can also be used under drill press head.

**CE9140.** Table Support Ring. Shipping weight 1 1/2 pounds. Price f.o.b. factory ..... **\$2.85**

**E WATERPROOF SERVICE COVER.** Use this durable waterproof oil resistant plastic service cover to protect your drill press overnight or whenever it is not in use. Effectively prevents dirt from accumulating. Attractive maroon color with South Bend emblem printed in metallic ink. Size 12" wide, 28" long, 28" high, large enough for any South Bend single spindle drill press. Folds compactly to small package for easy storing when not in use. Use two or more on multiple spindle drill presses.

**CE2693.** Waterproof Service Cover for Drill Press. Shipping weight 2 pounds. Price f.o.b. factory ..... **\$2.05**

**F MORTISING ATTACHMENT.** This Mortising Attachment

converts any South Bend 14" Drill Press equipped with a 1/2" drill chuck into an efficient mortising machine. The improved fence assembly adjusts quickly and accurately for different thickness stock. The base clamps to the table and the fence adjusts on two steel posts. This design aids in eliminating alignment errors in the work. Two guide arms mount directly on fence and are separately adjustable. A forked work hold down also adjusts on a vertical steel post mounted on the base. This fence assembly has many uses for guiding work other than mortising. It may be purchased separately.



Requires the use of short spindle No. CD9127 when used on Bench Drill Presses. (See J page 86).

**Specifications**

Capacity under work hold down, maximum .....	5 1/16"
Capacity guide rods to fence, maximum .....	4 7/16"
Distance fence adjusts without moving base on table .....	1"
Working depth of chisels:	
1/4" .....	2 1/16"
3/8" .....	2 3/4"
1/2" .....	3 5/16"

Cat. No.	Description	Ship. Wt.	Price
CE9151	Mortising Attachment Fence Assembly	10 lbs.	\$14.70
CD9152	Mortising Chisel Holder	3 lbs.	4.85
CE9153	1/4" Mortising Chisel and Bit	1/2 lb.	9.65
CE9154	3/8" Mortising Chisel and Bit	3/4 lb.	9.65
CE9155	1/2" Mortising Chisel and Bit	1 lb.	11.10





## BELTS AND LUBRICATION

**A** **TEXALON FLAT BELTS.** A combination of textile and extruded nylon form a strong flexible belt recommended for use with South Bend Lathes. Able to withstand continual flexing without significant stretch and loss of efficiency. Texalon belts are skived on both ends and cement for joining skived ends is included with each belt. Shipping weight each approx. 1/2 lb.

Type of Drive	Cat. No.	Price	Type of Drive	Cat. No.	Price
9" HMD	CE3750N	\$ 7.85	13" UMD 3-Step	CE3753T	\$15.55
10-K HMD	CE3750K	7.55	14 1/2" UMD 4-Step	CE3752F	14.60
9" UMD	CE3752N	7.90	14 1/2" UMD 3-Step	CE3753F	18.70
10-K UMD	CE3752K	7.90	16" UMD 4-Step	CE3752H	17.15
10" UMD Bench	CE3753R	8.85	16" UMD 3-Step	CE3753H	22.30
10" UMD Floor	CE3752R	9.15	16-24" UMD 4-Step	CE3752V	18.85
13" UMD 4-Step	CE3752T	12.50	16-24" UMD 3-Step	CE3753V	25.00
			16" Turret	CE3753H	22.30

**B** **TEXALON BELT CEMENT** for bonding skived ends of Texalon Belts.

CE1887. Texalon Belt Cement 1/4 oz. bottle. . . . . \$0.85

CE2323N. Oak' tan single ply flat leather belt without cord reinforcing for 9" Horizontal Motor Drive only. Has square ends and lace for joining. Price f.o.b. factory. . . . . \$2.00

**C** **BELT SPLICING CLAMPS.** For gluing skived ends of cone pulley belts or other flat leather belts. Made of heavy steel plate with guide for aligning edges of belt ends.

Catalog Number	Maximum Size of Belt			Ship. Wt.	Price f.o.b. Factory
	Width	Thickness	Skive Length		
CE1898	1 3/4"	1/2"	6 3/8"	4 lbs.	\$3.65
CE1899	3"	1/2"	6 3/8"	5 lbs.	4.70

**D** **LUBRICATING OIL.** Nothing is more important to the satisfactory operation and life of fine machinery than correct lubrication. The lubricating oils listed below have been thoroughly tested in our research laboratory and are highly recommended. It is essential that the correct type of oil be used for the lathe spindle, lathe apron and shaper oil reservoirs and general lubrication. A supply of each kind of oil should be kept on hand and used as needed. The Saybolt viscosity of the various oils is indicated in seconds at 100°F.

Cat. No.	Viscosity	Quantity	Ship. Wt.	Price
<b>General Lubricating Oil (See Oil Chart for Individual Machine)</b>				
CE1603	240-500	1 quart	3 lbs.	\$0.95
CE1906	240-500	12 quarts	31 lbs.	10.15
CE2019	240-500	Gal. can	11 lbs.	3.25
<b>Oil for Spindle Bearings of South Bend Lathes (For other components see Oil Chart for Individual Machine)</b>				
CE1600	100	1 quart	3 lbs.	\$0.95
CE1905	100	12 quarts	31 lbs.	10.15
CE2017	100	Gal. can	11 lbs.	3.25
<b>Oil for Lathes and Shapers (See Oil Chart for Individual Machine)</b>				
CE1602	150-240	1 quart	3 lbs.	\$0.95
CE1904	150-240	12 quarts	31 lbs.	10.15
CE2018	150-240	Gal. can	11 lbs.	3.25

**E** **PUMP OIL CAN.** Suitable for lubricating all types of machinery. Has large non-clogging pump tube, no leathers to crimp or dry out. Lower half of body is in one-piece with no seam to open up or wear through. Cone tipped spout seats in oil hole, forces oil into bearings and prevents it from spilling. Hook on tip is provided for opening spring cap oil cups. Holds 7/8 pint and has 6" spout with twin-tipped vent.

CE3575. Pump Oil Can. Shipping weight 1 pound. Price. . . . . \$2.20

**F** **GRAY FINISH ENAMEL.** For refinishing and touching up South Bend Lathes, Drill Presses, Shapers, and other machine tools. Made in two types, light gray high gloss for current models and light gray semi-gloss to match older models of lathes. Cannot be shipped by parcel post.

Catalog Number		Size Can	Number of Cans	Ship. Wt.	Price f.o.b. Factory
Light Gray High Gloss	Light Gray Semi-Gloss				
CE3421	CE2640	Pint	1	2 lbs.	\$1.40
CE3422	CE2641	Quart	1	4 lbs.	2.10
CE3423	CE2642	Gallon	1	12 lbs.	7.55

**G** **BED WAY LUBRICANT.** A specially refined lubricant of superior quality for bed ways and other flat bearing surfaces.

CE1671. Ship. wt. 3 lbs. Twelve ounce can. Price. . . . . \$0.60

**H** **MARLA OPEN GEAR SPRAY LUBRICANT.** This oil is an extreme pressure adhesive lubricant recommended for gearing not running in oil and is effective in reducing gear noise. It is available in 12 oz. pressure cans with a spray dispenser on top which makes it easy to apply.

CE1605. Shipping wt. 3 lbs. Twelve oz. can. Price. . . . . \$2.15

### LEATHER V-BELTS FOR CONE PULLEYS

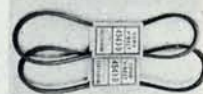
Lathe cone pulley V-belts can be replaced without disassembling the lathe headstock or drive unit by using these cord reinforced leather V-belts. Belts are skived for gluing and belt splicing cement is included.



Cat. No.	Size Lathe	Drive	Ship. Wt.	Price
CE5L61L	9"	U.M.D.	1 lb.	\$7.65
CE5L62L	10-K	U.M.D.	1 lb.	7.75
CE5L54L	9"	H.M.D.	1 lb.	7.05
CE5L51L	10-K	H.M.D.	1 lb.	6.75

### RUBBER V-BELTS

Rubber V-Belts for use with South Bend Lathes and other power driven machinery are available. When ordering specify width at top of V and outside length. Ship. wt. approx. 1/2 lb.



**HYDRAULIC OIL** for use in Power Quill Feed on Vertical Milling Machine. This Hydraulic Oil is also used in the headstock of the 17" Geared Head Lathe.

CE7053. 1 qt. can Hydraulic Oil. . . . . \$1.30  
 CE7054. 1 gal. can Hydraulic Oil. . . . . 4.10



# SOUTH BEND HYDRAULIC PRESSES

ECONOMICAL • VERSATILE • DEPENDABLE

## *Air Powered* Hydraulic Presses

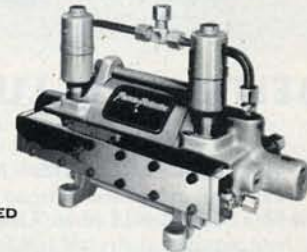
The Hydrolair® Press is a true oil-hydraulic press requiring no motor—no pump, its hydraulic intensifier powered only by compressed air—regular "shop-air" in most installations. This unique operating principle makes performance proved Hydrolair Presses amazingly economical both in purchase price and operating expense, therefore substantially lowering your production costs.

Easy to use, these presses are equipped with simple, convenient controls which anyone can operate. Pressures ranging from 5 tons to maximum can be set by regulating the air pressure valve.

Seamless steel tubing is used for all high pressure piping. Everything is readily accessible through removal of a large access plate on front of the base. Simplicity of construction practically eliminates downtime and reduces maintenance costs to the barest minimum.

### THE AMAZING "Power Petuator" AIR-HYDRAULIC INTENSIFIER

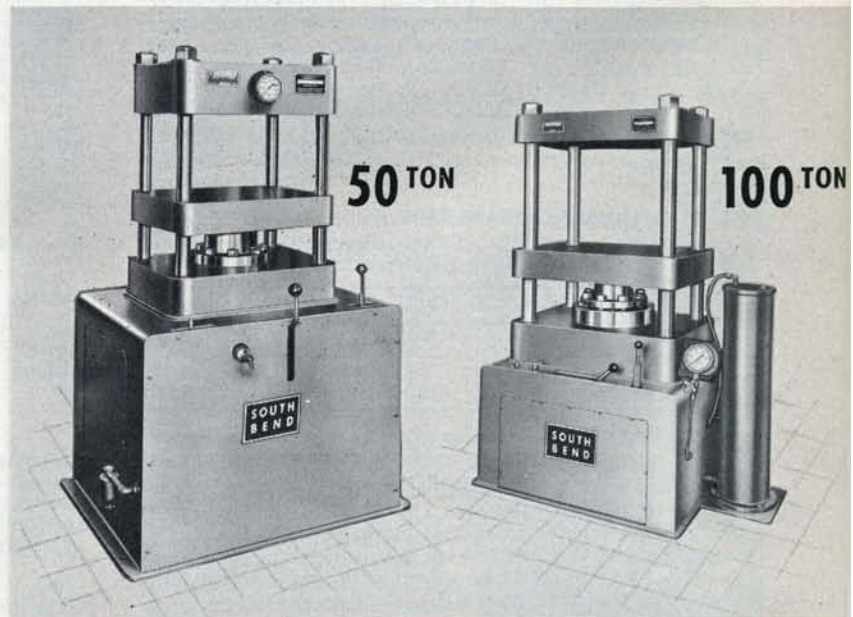
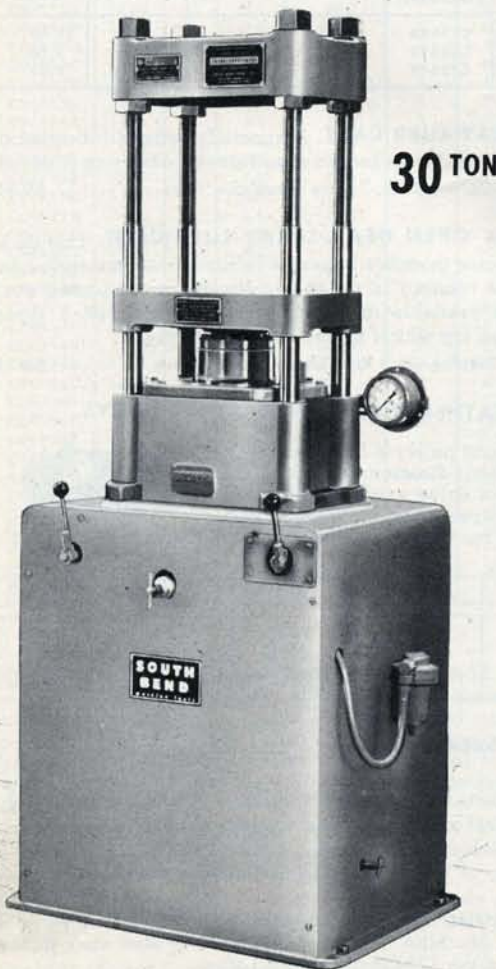
This compact little unit is the real secret of the South Bend Hydrolair's exceptional efficiency and economy. Utilizing ready-at-hand, low cost shop air as a power source, this patented South Bend development provides a continuous high-pressure stroke, maintaining any pre-set pressure for as long as desired.



PATENTED

### SPECIALLY DESIGNED FOR...

Laboratory testing, research work, production molding of plastics and rubber at low cost. Hydrolair Presses have no equal in meeting the needs of small press users.



South Bend Hydrolair Presses are available in three sizes—the 30 ton, the 50 ton and the 100 ton. Standard equipment includes air filter, air pressure reducing valve, hydraulic pressure gage and necessary controls.

**CP30H.** 30 ton Hydrolair Hydraulic Press, with standard equipment as listed above. Price f.o.b. factory. Shipping weight 1150 lbs. .... **\$1600**

**CP50H.** 50 ton Hydrolair Hydraulic Press, with standard equipment as listed above. Price f.o.b. factory. Shipping weight 2600 lbs. .... **\$2900**

**CP55H.** 50 ton Hydrolair Hydraulic Press with electric control providing a semi-automatic cycle with a timed high pressure dwell. Adjustable limit switches are used to control up-stop, down stop and slow down speed change position of the platen. Full pushbutton controls are used with a selector for semi-automatic or manual operation of the press. Price f.o.b. factory ..... **\$4850**

**CP4190.** "Breathe Cycle" equipment, installed at the factory on the CP55H Hydrolair electric controlled Hydraulic Press ..... **\$225**

**CP100.** 100 ton Hydrolair Hydraulic Press including standard equipment as listed above. Price f.o.b. factory. Shipping weight 7000 lbs. .... **\$7520**

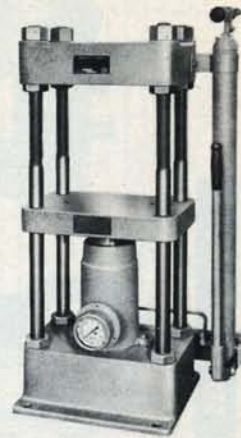
Prices do not include hot plates, or any electrical equipment.



# SOUTH BEND LABORATORY PRESS

This Laboratory Press, with available accessories, is ideal for research work, compression testing, laminating and other pressure applications. The quick closing feature practically eliminates manual effort and makes this press practical for

small production operations. Shop air (50 lbs. p.s.i.—minimum) raises the platen instantly. Just a few strokes of the lever builds up required pressure.



## 30 TON CAPACITY, 4 COLUMN BENCH TYPE

### PLATEN

Size.....10" x 10"  
Construction. Machine-finished surface. Full guides encircle the four columns.

### OPENING BETWEEN PLATEN AND TOPHEAD

.....6" to 13 3/4"  
(Top Head Adjustable—Press will close 0" between hot plates.)

### CLEARANCE LEFT TO RIGHT, BETWEEN COLUMNS

.....12 1/4"

### RAM

Diameter.....4"  
Stroke.....6"

### STANDARD GAUGE

4 1/2" diameter calibrated in pounds per sq. in. and tons to 30-ton ram pressure. In addition, a partial-range gauge and shut-off valve can be furnished, 3 1/2" diameter calibrated in pounds per sq. in. and tons to 6 tons, when greater reading accuracy of the lower pressure is desired.

### HOT PLATES, Size

.....10" x 10"  
Electrically Heated Plates and Steam Heated Plates.

### OVER ALL

DIMENSIONS: 16 3/4" x 13 1/2" x 41 1/4" high

SHIPPING WEIGHT.....660 lbs.

**CP30L — 30 Ton Laboratory Press, including pumping unit, gauge and air rapid advance unit.....\$680**  
Description and prices on Hot Plates, same as for 30 Ton Hydrolair.

## SPECIFICATIONS — SOUTH BEND HYDRAULIC PRESSES

### ELECTRIC HOT PLATES

All electric hot plates are ground to a smooth finish and are parallel within .002 of an inch. These plates are available for either alternating or direct current. 110 volt single-phase AC for 30-ton press only. 220 or 440 volt three-phase AC on all other presses. 550 volt or DC application upon request. Temperature control is by thermostat. All plates provided with 1/4" insulation between plates and press members.

### STEAM-HEATED HOT PLATES

All steam-heated hot plates are ground to a smooth finish and are parallel within .002 of an inch. All plates are provided with drilled passages for a labyrinth type steam flow, and with same insulation as on electric plates. Steam plates may be used for chilling if desired.

### LOW PRESSURE CIRCUIT

The normal Hydrolair circuit permits accurate control of tonnages between 5 tons and maximum by simple adjustment of the air regulator valve on front of press. For accurate control of tonnages below 5 tons, a special low-pressure relief valve is used plus a second hydraulic gauge for accurate reading of the adjusted low-pressure tonnages.

### MULTIPLE PLATENS

For laminating operation, multiple platens are available. These platens will be precision ground on both sides. The platens can be arranged for electric or steam heating, with or without water cooling.

### LONGER OR SHORTER OPENING

All Hydrolairs can be modified to provide a longer or shorter opening, by extending length of the columns.

HOT PLATES	30-TON	50-TON	100-TON
<b>ELECTRIC: 400° F. Max.</b> Plate Dimensions..... Cartridges/Plate..... Total Power Capacity.....	10"x10"x1 3/4" 6 @ 450 W 2700 W/plate	18"x18"x1 3/4" 6 @ 800 W 4800 W/plate	24"x24"x2" 6 @ 1250 W 7500 W/plate
<b>ELECTRIC: 600° F. Max.</b> Plate Dimensions..... Cartridges/Plate..... Total Power Capacity.....	10"x10"x1 3/4" 6 @ 450 W 2700 W/plate	18"x18"x2" 8 @ 850 W 6800 W/plate	24"x24"x2" 10 @ 1250 W 12,500 W/plate
<b>ELECTRIC: 400° F. Max.</b> Arranged for Water Cooling Plate Dimensions..... Total Power Capacity..... Water Connection.....	10"x10"x2 1/2" Same as above 1/2" I.P.T.	18"x18"x3" Same as above 3/4" I.P.T.	24"x24"x3" Same as above 3/4" I.P.T.
<b>ELECTRIC: 600° F. Max.</b> Arranged for Water Cooling Plate Dimensions..... Total Power Capacity..... Water Connection.....	10"x10"x2 1/2" Same as above 1/2" I.P.T.	18"x18"x3" Same as above 3/4" I.P.T.	24"x24"x3" Same as above 3/4" I.P.T.
<b>STEAM HEATED</b> Plate Dimensions..... Number and Size of Passages..... Connection.....	10"x10"x1 3/4" 6—5/8" dia. 1/2" I.P.T.	18"x18"x1 3/4" 6—29/32" dia. 3/4" I.P.T.	24"x24"x2" 8—29/32" dia. 3/4" I.P.T.

	30-TON	50-TON	100-TON
Platen Size.....	10"x10"	18"x18"	24"x24"
Clearance, left to right, between columns..	12 1/4"	18 1/2"	26 1/2"
Stroke.....	6"	6"	12"
Opening.....	6" to 13 3/4" (Adjustable Top Head)	14" (Fixed Top Head)	24" (Fixed Top Head)
Average Speeds of Operation, inches per minute:			
Advance.....	100	80	80
Press (at no load).....	8	5	5*
Return.....	60	60	75
Single-Acting Ram Diameter.....	3 7/8"-4"	6"	8"
Operating Pressure.....	4800 PSI	3500 PSI	4000 PSI
Air-Line Pressure Required.....	60 PSI	45 PSI	50 PSI
Air Consumption—cubic feet of free air, approximate:			
Per 4" rapid advance stroke.....	0.65	1.05	2.10
Per 1/4" pressing stroke.....	1.35	1.75	3.50
Overall Dimensions.....	29"x19"x65"	40"x29"x65"	52"x36"x80"

\*30-ton only double-acting 1.9-ton stripping capacity at maximum pressure.

\*\*100-ton Model is furnished with two Power-Petuator® intensifiers.

Standard Equipment: air filter, air pressure reducing valve, hydraulic pressure gauge, controls. Hot plates and electrical equipment extra. Prices f.o.b. South Bend.

### ACCESSORIES AVAILABLE AT ADDITIONAL COST

	Electric Hot Plate					Electric Water Cooled Hot Plate					
	Cat. No.	F. Degree	Ph.	Voltage	Price Per Pair	Cat. No.	F. Degree	Ph.	Voltage	Price Per Pair	
30 Ton Lab. or Hydrolair	CP4114	400	1	115	\$ 490	30 Ton Lab. or Hydrolair	CP4130	400	1	115	\$ 575
	CP4116	400	1	230	490		CP4132	400	1	230	575
	CP4118	400	3	220	490		CP4134	400	3	220	575
	CP4122	400	3	440	490		CP4138	400	3	440	575
	CP4146	600	1	115	725		CP4162	600	1	115	855
	CP4148	600	1	230	725		CP4164	600	1	230	855
CP4150	600	3	220	725	CP4166	600	3	220	855		
CP4154	600	3	440	725	CP4170	600	3	440	855		
50 Ton	CP4119	400	3	220	\$ 845	50 Ton	CP4135	400	3	220	\$1230
	CP4123	400	3	440	845		CP4139	400	3	440	1230
	CP4151	600	3	220	1030		CP4167	600	3	220	1450
	CP4155	600	3	440	1030		CP4171	600	3	440	1450
100 Ton	CP4120	400	3	220	\$1225	100 Ton	CP4136	400	3	220	\$2115
	CP4124	400	3	440	1225		CP4140	400	3	440	2115
	CP4152	600	3	220	1395		CP4168	600	3	220	2295
	CP4156	600	3	440	1395		CP4172	600	3	440	2295

CP4178 Steam Hot Plates for 30 Ton Press (less flexible connections) pair \$200

CP4179 Steam Hot Plates for 50 Ton Press (less flexible connections) pair \$305

CP4180 Steam Hot Plates for 100 Ton Press (less flexible connections) pair \$560

Following Special Equipment, priced same for Lab-30-50-100 Ton Presses.

Low Pressure Circuit (including Low Pressure Relief Valve, Low Pressure Gage and Shut Off Valve) (Fitted).....\$150

6" Additional Opening (or portion of 6").....25

6" Decreased Opening (or portion of 6").....25

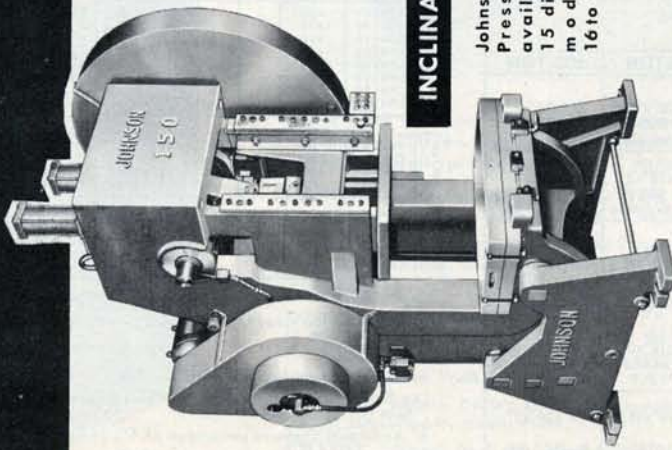
Hanging (1) One Intermediate Platen.....105



# Johnson power presses

Johnson OBI Presses are made of high quality Meehanite castings. Tremendous advancements have been made in the new "Square Top" B model OBI. The new "top mounted trip" has fewer parts and the lock bolt and spring are accessible without removing the wheel. These presses are also available with a Wichita-Friction Disc Clutch. This clutch has been found to be absolutely maintenance free over a period of many years.

Every order for Johnson Presses is carefully checked by the engineering department and is made especially for you, the customer.



## INCLINABLE

Johnson OBI Presses are available in 15 different models — 16 to 150 ton.

### STANDARD FEATURES

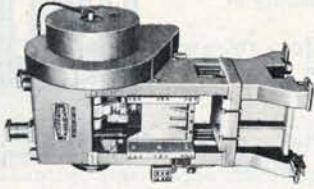
Replaceable bronze inserts at Pitman and Journal Bearings • Roller bearing equipped flywheel and bull gear hub • Anti-friction bearings on back shaft • Motorized 3/60/220-440 • Plain bolster plate

### OPTIONAL FEATURES (at extra cost)

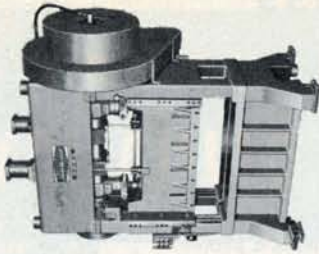
Variable speed drive • Increased die space  
Bronze gibs • Tie Rods  
Manual or automatic lubrication • Flange Ram (on some models)  
Pneumatic die cushion • Air Counter Balance  
Increased stroke of crank • Air Friction Disc Clutch-Wichita

See page below for complete specifications.

## STRAIGHT SIDE



Series S1 Single Crank  
60 to 300 ton



Series S2 Double Crank  
20 to 300 ton

### STANDARD FEATURES

Air Friction Disc Clutch-Wichita • Air Actuated, Spring Set Brake • Air Counterbalance • Bronze Gibs • Power adjusted Ram (150 Ton and Over) • Electrical Controls • 110 Volt providing selector switch for single or continuous, stop at top, jog, emergency stop, and two palm controls • Automatic Lubrication-Bijur • Motorized 3/60/220-440 • Drilled and Tapped for Die Cushion • Fabricated steel tie rod construction stress relieved • Replaceable bronze inserts at Pitman and Journal.

### OPTIONAL FEATURES (at additional cost)

Power adjusted Ram (Up to 150 Ton) • Increased Die Space • Increased Stroke Length • Variable Speed Drive • Die Cushion • Flywheel Brake • Special Electricals.

NOTE: Other sizes available on request.

### STANDARD FEATURES

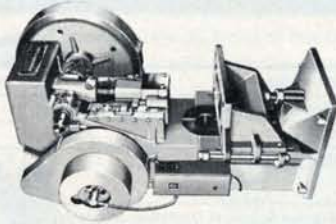
Steel Fabricated stress relieved • Air Friction Disc Clutch-Wichita • Air Actuated, Spring Set Brake • Air Counter Balance • Drilled and Tapped for Die Cushion • Automatic Lubrication-Bijur • Motorized 3/60/220-440 • Electrical Controls 110 Volt providing selector switch for single or continuous, stop at top, jog, emergency stop, and two palm controls • Power adjusted Ram (150 Ton and Over) • Bronze Gibs and Crankshaft Bearings.

### OPTIONAL FEATURES (at additional cost)

Power adjusted Ram (up to 150 Ton) • Increased Die Space • Increased Stroke Length • Variable Speed Drive • Die Cushion • Flywheel Brake • Special Electrical • Tie Rods.

NOTE: Other sizes available on request.

## HORN



Horn Presses  
35 to 60 Ton

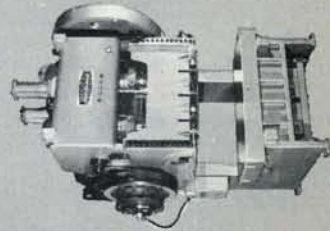
### STANDARD FEATURES

Replaceable bronze inserts at Pitman and Journal Bearings • Roller bearing equipped flywheel and bull gear hub • Anti-friction bearings on back shaft • Motorized 3/60/220-440 • Plain bolster plate • Positive Pin Clutch.

### OPTIONAL FEATURES (at additional cost)

Variable speed drive • Bronze Gibs • Manual or automatic lubrication system • Increased stroke of crank • Increased die space • Spring or Air Counter Balance • Air Friction Disc Clutch-Wichita.

## GAP



Series G2  
40 to 250 ton





# INCLINABLE PRESSES (OBI)

MODEL 16 22 27 27W 35 45 45W 60 60W 70 80 90 100 125 150

	16	22	27	27W	35	45	45W	60	60W	70	80	90	100	125	150
<b>CRANKSHAFT</b>															
Pressure near bottom of stroke	16	22	27	27	35	45	45	60	60	70	80	90	100	125	150
Diameter of main bearing and pin	2 1/4 x 2 1/4	2 1/2 x 2 1/2	2 3/4 x 3	2 3/4 x 3	3 1/4 x 4	3 1/2 x 4 1/2	3 1/2 x 3 1/2	4 1/4 x 5	4 x 4 1/4	4 3/4 x 5 1/4	4 3/4 x 5 1/4	5 1/4 x 6 1/2	5 1/4 x 7	5 3/4 x 7 1/2	6 1/2 x 9
Standard stroke	1 1/2	2	2 1/2	2 1/2	2 1/2	3	4	4	4	4	4	4	4	4	6
Minimum and maximum stroke (special)	4	5	4	5	5	5	6	8	8	8	6	6	6	6	—
<b>DIE SPACE</b>															
Bed to ram face, stroke down adj. (up/down)	9 1/2	9	9 1/2	12 1/2	11	11 1/4	12	12 1/2	15	15 1/2	15 1/2	17 1/2	17 1/2	17 1/2	22
Top of bolster plate, stroke down adj. up	7 1/2	7	7 1/4	10 1/2	9	8 1/4	9 1/2	9 1/2	12	12 1/2	12	13 1/2	13 1/2	13 1/2	17 1/2
Bed to ram face, minimum (special) SUAU	11	11	12 3/4	15	13 1/2	14 1/2	16	16 1/2	19	19 1/2	19 1/2	19 1/2	21 1/2	21 1/2	28
Bed to ram face, maximum (special) SUAU	14	19 1/2	18 3/4	22	28 1/2	29 1/2	31	26 1/2	31	24 1/2	35	34 1/2	34 1/2	45	
<b>RAM</b>															
Adjustment of slide	2 1/2	2 1/2	2 1/2	2 1/2	2 1/2	3	3	3 1/2	3 1/2	3 1/2	3 1/2	3 1/2	4	4	5
Size of round hole for rd. punch shanks	1 1/4	1 1/4	1 1/4	1 1/4	1 1/4	1 1/4	1 1/4	1 1/4	1 1/4	1 1/4	1 1/4	1 1/4	1 1/4	1 1/4	1 1/4
Size of face R to L x F to B	6 1/4 x 6	6 1/4 x 6	6 1/4 x 6	6 1/4 x 6	6 1/4 x 6	6 1/4 x 6	6 1/4 x 6	6 1/4 x 6	6 1/4 x 6	6 1/4 x 6	6 1/4 x 6	6 1/4 x 6	6 1/4 x 6	6 1/4 x 6	6 1/4 x 6
Ram face (special)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Stroke per minute	145	135	120	120	110	105	105	100	100	90	85	75	75	72	72
Spring counter balance (special)	none	none	none	available	available	available	available	available	available	available	available	available	available	available	Air
<b>BED</b>															
Bed opening R to L x F to B	7 x 4 1/2	9 1/4 x 5	10 1/4 x 5 1/2	2 1/4 x 6 1/2	1 1/2 x 8	1 1/2 x 8	1 1/2 x 8	1 1/2 x 8	1 1/2 x 8	1 1/2 x 8	1 1/2 x 8	1 1/2 x 8	1 1/2 x 8	1 1/2 x 8	2 1/4 x 17
Diameter of intersecting circle	none	7	9	8 1/4	—	10 1/2	10 1/2	14	14	14	16	18	18	18	—
Maximum opening (special)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Weight of opening through bed (incl. B max.)	7	9	10 1/4 - 12	21	10 1/2	13	21	15 1/2	21	17 1/2	18	18	21	21	26 - 30
Depth of throat, ram center to frame	5 1/4	6 1/4	9	9	8 1/2	9 1/2	12	11 1/2	16 3/4	11 1/2	14	15	15	15	16
Inclining mechanism	38	38	38	16 - 32	16 - 32	15 - 30	16 - 32	15 - 30	15 - 28	15 - 30	15 - 28	12 - 25	12 - 25	12 - 25	12 1/2 - 25
Inclining mechanism	Yes	Yes	Yes	Yes	Yes	Yes	no	Yes	no	no	no	no	no	no	no
<b>BOLSTER PLATE</b>															
Size R to L x F to B	16 x 10	20 x 12	2 1/2 x 13	3 2/4 x 16 1/2	2 x 15	2 x 15	3 3/4 x 22	3 3/4 x 21	3 3/4 x 32	3 3/4 x 21	3 3/4 x 21	3 3/4 x 24	4 3/4 x 27	4 3/4 x 27	5 3/4 x 30
Thickness	2	2	2	2	2	2 1/2	2 1/2	3	3	3	3 1/4	4	4	4	4 1/2
<b>FLYWHEEL</b>															
Diameter X width	20 1/2 x 3 1/2	22 3/4 x 3 1/2	27 1/2 x 4	27 1/2 x 4	33 x 4 1/2	33 1/2 x 5 3/4	33 1/2 x 5 1/2	38 x 6 1/4	38 x 6 1/4	42 x 6	50 x 5 3/4	52 x 6 1/2	52 x 6 1/2	52 x 6 1/2	56 x 6 1/2
Weight	205	250	400	400	560	1080	775	1250	1040	1380	1750	2200	2200	2400	70 x 90
<b>GENERAL DIMENSIONS</b>															
Floor space R to L x F to B	20 x 29	25 x 32	32 x 40	41 x 45	34 x 42	34 x 44	52 x 67	56 x 72	54 x 75	56 x 72	60 x 77	68 x 75	68 x 75	70 x 77	70 x 90
Height from floor to center of shaft	57 1/4	58 1/2	61	65	64	64	77	80	83	83	85	91	91	94	117
Over all height	66	69	78	80	80	91 1/2	95	100	101	103	110	117	117	121	160
<b>WEIGHT AND MOTOR</b>															
Weight (approx.) studded	1750	2100	3000	4000	4000	6750	8500	10,000	11,500	11,500	15,500	19,000	20,000	21,000	36,000
Motor with standard stroke presses	1 1/2 - 1200	2 x 1200	2 - 1200	2 - 1200	2 - 900	3 - 900	3 - 1200	5 - 900	5 - 900	5 - 900	7 1/2 - 900	7 1/2 - 900	7 1/2 - 900	10 - 900	15 - 430 Genr
Motor with special stroke presses (special)	3 x 1200	3 x 1200	3 - 1200	3 - 1200	3 - 900	5 - 900	5 - 1200	7 1/2 - 900	7 1/2 - 900	7 1/2 - 900	10 - 900	10 - 900	10 - 900	15 - 900	(See Below)
CLUTCH—Pin or oil clutch	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	AC only
<b>CRANKSHAFT</b>															
Pressure near bottom of stroke	27	27	27	27	35	45	45	60	60	70	80	90	100	125	150
Standard stroke	2 1/2	2 1/2	2 1/2	2 1/2	2 1/2	3	4	4	4	4	4	4	4	4	6
Minimum and maximum stroke (special)	5	5	5	5	5	6	8	10	10	10	10	10	10	10	12
<b>RAM</b>															
Strokes per minute	53	53	53	53	50	46	46	46	46	46	44	44	44	44	35
Spring counterbalance (special)	none	available	available	available	available	available	available	available	available	available	available	available	available	available	Air
<b>MAIN GEAR</b>															
Diameter and width	28 x 4	28 x 4	28 x 4	28 x 4	30 x 4	32 x 4 1/2	31 1/2 x 4 1/2	36 x 5 1/4	36 x 5 1/4	45 1/2 x 5 1/2	45 1/2 x 5 1/2	49 3/4 x 6 1/2	49 3/4 x 6 1/2	49 3/4 x 7	72 x 7
Weight	325	325	325	325	450	450	475	650	650	860	1300	1800	1800	1900	2100
<b>GEARING RATIO</b>															
Ratio	4.82 to 1	4.82 to 1	4.82 to 1	4.82 to 1	5.294 to 1	6.47 to 1	6.47 to 1	5.86 to 1	5.86 to 1	6.588	6.25 to 1	6.875 to 1	6.875 to 1	6.875 to 1	6.875 to 1
Speed of belt shaft	256	256	256	256	265	302	302	270	270	290	275	300	300	300	240
<b>WEIGHT AND MOTOR</b>															
Weight (approx.)	3300	4900	4500	4500	6750	9000	9000	10,500	12,000	12,500	15,500	19,500	20,500	22,000	38,000
Motor with standard stroke presses	2 - 1800	2 - 1800	2 - 1800	2 - 1800	3 - 1800	5 - 1800	5 - 1800	5 - 1800	5 - 1800	5 - 1800	7 1/2 - 1800	7 1/2 - 1800	7 1/2 - 1800	10 - 1800	15 - 1200
Motor with special stroke presses (special)	3 - 1800	3 - 1800	3 - 1800	3 - 1800	5 - 1800	7 1/2 - 1800	7 1/2 - 1800	7 1/2 - 1800	7 1/2 - 1800	7 1/2 - 1800	10 - 1800	10 - 1800	10 - 1800	15 - 1800	20 - 1200
CLUTCH—Pin or oil clutch	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	AC only	AC only

Specifications Subject to Change Without Notice



# SOUTH BEND LATHE 5% TIME PAYMENT PLAN

## SUMMARY OF TERMS

**Equipment sold on the Time Payment Plan.** All "South Bend" Machine Tools\*, together with necessary motors, controls, accessories and attachments for such machines, PLEASE NOTE: Only products sold by South Bend Lathe, Inc., may be financed on its Payment Plan.

**Plans Available.** There are four plans. The 12 months plan provides for Time Balance to be paid in 11 equal monthly installments with a Final Payment for odd amount remaining due. The 18 months plan calls for 17 equal monthly installments and a Final Payment for the odd amount remaining due. The 24 months plan calls for 23 equal monthly installments and a Final Payment for the odd amount remaining due. The 36 months plan calls for 35 equal monthly installments and a Final Payment for the odd amount remaining due. Be sure to pick up figures for finance charge and monthly payments from plan to be used.

**Down Payment.** It is intended that in all cases a cash down payment of a reasonable amount will be made by purchaser when Payment Plan order is placed. This matter is to be worked out with "South Bend" distributor from whom purchase is made.

**Finance Charge.** Finance Charge shown in schedule represents single carrying charge which is made for financing the unpaid balance under plan selected. The charge is 5% (or less) per annum on the original unpaid balance under all four plans, 12, 18, 24, and 36 months.

**Monthly Payments.** Figures in Monthly Payment column in schedule on page 95, represent amount of payment to be made 11, 17, 23, or 35 times during life of contract depend-

ing on plan selected. Final payment usually will vary and will be more or less than amount of monthly payments, depending upon amount of Unpaid Balance being financed.

**Freight and Sales Tax.** Freight and/or applicable state or city sales tax may be included in the balance to be financed if down payment is in an amount equal to at least 20% of the total cash price of the equipment plus actual amount of freight and/or sales tax shown on contract.

**Unpaid Balance in Excess of \$3,000.** Schedule shows finance charge and monthly payments for unpaid balances up to \$3,000. To determine Finance Charge and Monthly Payments when unpaid balance (cash price of order less down payment) exceeds \$3,000, add any 2 or more combinations in schedule which total unpaid balance. For example, for Finance Charge on \$3,050, add finance charge for \$2,900 and for \$150 shown in schedule; for \$4,335, add finance charge for \$3,000 and for \$1,335. Follow same procedure to determine monthly payments.

**Refund of Finance Charge.** Appropriate amount refunded if contract is paid up in advance.

**Government Regulations.** In case of government regulations affecting terms of this Time Payment Plan, adjustments of these terms will be made to conform to such regulations for equipment subsequently purchased on payment plan terms.

**Worksheet.** Below is a worksheet for use in determining figures from the 12, 18, 24, or 36 months plans shown in schedule on page 95, which are to be inserted in Conditional Sale Contract. Be sure to pick up figures for Finance Charge and Monthly Payments from the correct plan.

\*NOTE: Due to special-purpose features built into a good many of the Johnson Presses to satisfy the particular requirements of the customer, budget payment terms requested on mechanical press orders will be considered on an individual basis.

TOTAL CASH PRICE OF THIS ORDER .....	\$ _____
<b>DOWN PAYMENT:</b>	
Cash with Order .....	\$ _____
Allowance for Trade-in .....	\$ _____
<b>TOTAL DOWN PAYMENT</b> .....	<b>\$ _____</b>
<b>UNPAID BALANCE</b> (Cash Price less Down Payment) .....	<b>\$ _____</b>
<b>FINANCE CHARGE</b> (See Schedule on page 95) .....	<b>\$ _____</b>
<b>TIME BALANCE</b> (Unpaid Balance plus Finance Charge) .....	<b>\$ _____</b>
<b>TO BE PAID AS FOLLOWS:</b>	
____ Monthly Payments of .....	\$ _____
Final Payment of .....	\$ _____

**(SEE PAGE 95 FOR SCHEDULE OF MONTHLY PAYMENTS)**

South Bend Lathe, Inc.

425 East Madison St.

South Bend 22, Ind.



# SOUTH BEND LATHE 5% TIME PAYMENT PLAN

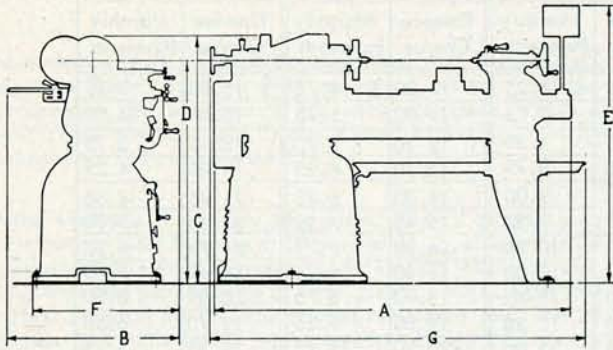
## SCHEDULE OF PAYMENTS

IF UNPAID BALANCE IS	12 MONTHS PLAN		18 MONTHS PLAN		24 MONTHS PLAN		36 MONTHS PLAN	
	Finance Charge	Monthly Payments	Finance Charge	Monthly Payments	Finance Charge	Monthly Payments	Finance Charge	Monthly Payments
\$ 100.00 to \$ 109.99	\$ 5.00	\$ 9.25	\$ 7.50	\$ 6.25	\$ 10.00	\$ 4.75	\$ 15.00	\$ 3.25
110.00 to 120.99	5.50	10.00	8.25	6.75	11.00	5.25	16.50	3.50
121.00 to 131.99	6.05	11.25	9.00	7.50	12.10	5.75	18.15	3.75
132.00 to 142.99	6.60	12.50	9.90	8.25	13.20	6.25	19.80	4.25
143.00 to 153.99	7.15	13.50	10.70	9.00	14.30	6.75	21.45	4.50
154.00 to 164.99	7.70	14.50	11.55	9.50	15.40	7.25	23.10	5.00
165.00 to 175.99	8.25	15.50	12.35	10.25	16.50	7.75	24.75	5.25
176.00 to 186.99	8.80	16.50	13.20	11.00	17.60	8.25	26.40	5.75
187.00 to 197.99	9.35	17.50	14.00	11.75	18.70	8.75	28.05	6.00
198.00 to 208.99	9.90	18.25	14.85	12.50	19.80	9.25	29.70	6.50
209.00 to 219.99	10.45	19.25	15.65	13.00	20.90	9.75	31.35	6.75
220.00 to 230.99	11.00	20.25	16.50	13.75	22.00	10.50	33.00	7.00
231.00 to 241.99	11.55	21.25	17.30	14.50	23.10	11.00	34.65	7.50
242.00 to 252.99	12.10	22.25	18.15	15.25	24.20	11.50	36.30	7.75
253.00 to 263.99	12.65	23.25	18.95	15.75	25.30	12.00	37.95	8.25
264.00 to 285.99	13.20	25.00	19.80	16.50	26.40	12.50	39.60	8.50
286.00 to 307.99	14.30	27.00	21.45	18.00	28.60	13.50	42.90	9.25
308.00 to 329.99	15.40	29.00	23.10	19.25	30.80	14.50	46.20	10.00
330.00 to 351.99	16.50	30.75	24.75	20.75	33.00	15.75	49.50	10.75
352.00 to 373.99	17.60	32.75	26.40	22.25	35.20	16.75	52.80	11.50
374.00 to 395.99	18.70	34.75	28.05	23.50	37.40	17.75	56.10	12.25
396.00 to 417.99	19.80	36.50	29.70	25.00	39.60	18.75	59.40	13.00
418.00 to 439.99	20.90	38.50	31.35	26.25	41.80	19.75	62.70	13.50
440.00 to 461.99	22.00	40.50	33.00	27.50	44.00	21.00	66.00	14.25
462.00 to 483.99	23.10	42.50	34.65	29.00	46.20	22.00	69.30	15.00
484.00 to 505.99	24.20	44.25	36.30	30.25	48.40	23.00	72.60	15.75
506.00 to 527.99	25.30	46.25	37.95	31.50	50.60	24.00	75.90	16.50
528.00 to 560.99	26.40	49.00	39.60	33.25	52.80	25.00	79.20	17.25
561.00 to 593.99	28.05	52.00	42.05	35.25	56.10	26.75	84.15	18.25
594.00 to 626.99	29.70	54.75	44.55	37.50	59.40	28.25	89.10	19.50
627.00 to 659.99	31.35	57.75	47.00	39.50	62.70	29.75	94.05	20.50
660.00 to 692.99	33.00	60.25	49.50	41.25	66.00	31.50	99.00	21.50
693.00 to 725.99	34.65	63.50	51.95	43.25	69.30	33.00	103.95	22.75
726.00 to 758.99	36.30	66.50	54.45	45.25	72.60	34.50	108.90	23.75
759.00 to 791.99	37.95	69.25	56.90	47.25	75.90	36.25	113.85	24.75
792.00 to 835.99	39.60	73.00	59.40	49.75	79.20	37.75	118.80	26.00
836.00 to 879.99	41.80	77.00	62.70	52.50	83.60	39.75	125.40	27.25
880.00 to 923.99	44.00	80.75	66.00	55.00	88.00	42.00	132.00	28.75
924.00 to 967.99	46.20	84.75	69.30	57.75	92.40	44.00	138.60	30.25
968.00 to 1011.99	48.40	88.50	72.60	60.50	96.80	46.25	145.20	31.75
1012.00 to 1055.99	50.60	92.25	75.90	63.00	101.20	48.25	151.80	33.00
1056.00 to 1110.99	52.80	97.00	79.20	66.25	105.60	50.25	158.40	34.50
1111.00 to 1165.99	55.55	102.00	83.30	69.50	111.10	53.00	166.65	36.25
1166.00 to 1220.99	58.30	106.75	87.45	72.75	116.60	55.50	174.90	38.25
1221.00 to 1275.99	61.05	111.50	91.55	76.00	122.10	58.25	183.15	40.00
1276.00 to 1341.99	63.80	117.25	95.70	80.00	127.60	61.00	191.40	41.75
1342.00 to 1407.99	67.10	123.00	100.65	84.00	134.20	64.00	201.30	44.00
1408.00 to 1495.99	70.40	130.75	105.60	88.75	140.80	67.25	211.20	46.25
1496.00 to 1583.99	74.80	138.25	112.20	94.25	149.60	71.50	224.40	49.00
1584.00 to 1671.99	79.20	146.00	118.80	99.50	158.40	75.50	237.60	52.00
1672.00 to 1759.99	83.60	153.75	125.40	104.75	167.20	79.75	250.80	54.75
1760.00 to 1847.99	88.00	161.50	132.00	110.00	176.00	84.00	264.00	57.75
1848.00 to 1935.99	92.40	169.25	138.60	115.50	184.80	88.25	277.20	60.50
1936.00 to 2023.99	96.80	176.75	145.20	120.75	193.60	92.50	290.40	63.50
2024.00 to 2111.99	101.20	184.50	151.80	126.00	202.40	96.75	303.60	66.25
2112.00 to 2199.99	105.60	192.25	158.40	131.25	211.20	100.75	316.80	69.25
2200.00 to 2309.99	110.00	201.75	165.00	137.50	220.00	105.00	330.00	72.25
2310.00 to 2419.99	115.50	211.50	173.25	144.25	231.00	110.25	346.50	75.75
2420.00 to 2529.99	121.00	221.00	181.50	150.75	242.00	115.50	363.00	79.50
2530.00 to 2694.99	126.50	235.25	189.75	159.75	253.00	120.75	379.50	83.10
2695.00 to 2859.99	134.75	249.75	202.10	170.25	269.50	128.75	404.25	88.50
2860.00 to 3000.00	143.00	262.00	214.50	178.75	286.00	136.75	429.00	93.75



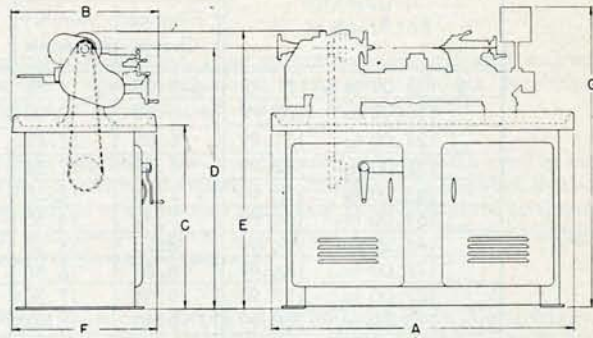
# FLOOR SPACE REQUIRED FOR SOUTH BEND MACHINE TOOLS

DIMENSIONS A TO G GIVEN IN TABLES BELOW ARE IN INCHES



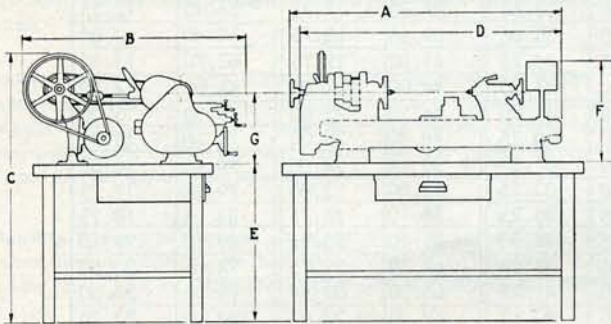
UNDERNEATH MOTOR DRIVEN FLOOR LATHES

Size Lathe	Bed Length	A	B	C	D	E	F	G
10"	3'	44	27 <sup>3</sup> / <sub>4</sub>	44 <sup>23</sup> / <sub>32</sub>	41 <sup>13</sup> / <sub>32</sub>	50 <sup>21</sup> / <sub>32</sub>	24	46
13"	5'	65 <sup>5</sup> / <sub>16</sub>	34 <sup>1</sup> / <sub>4</sub>	45 <sup>1</sup> / <sub>2</sub>	41 <sup>1</sup> / <sub>2</sub>	52 <sup>11</sup> / <sub>32</sub>	26 <sup>3</sup> / <sub>16</sub>	70
14 <sup>1</sup> / <sub>2</sub> "	6'	78 <sup>1</sup> / <sub>2</sub>	36 <sup>3</sup> / <sub>4</sub>	46 <sup>1</sup> / <sub>2</sub>	41 <sup>3</sup> / <sub>16</sub>	50 <sup>11</sup> / <sub>16</sub>	27 <sup>1</sup> / <sub>2</sub>	84
16"	8'	102 <sup>1</sup> / <sub>2</sub>	41 <sup>3</sup> / <sub>8</sub>	46 <sup>3</sup> / <sub>4</sub>	42 <sup>1</sup> / <sub>32</sub>	54 <sup>1</sup> / <sub>32</sub>	28 <sup>3</sup> / <sub>8</sub>	106 <sup>7</sup> / <sub>8</sub>
16-24"	10'	126 <sup>1</sup> / <sub>2</sub>	51 <sup>1</sup> / <sub>2</sub>	46 <sup>23</sup> / <sub>32</sub>	46 <sup>23</sup> / <sub>32</sub>	28 <sup>5</sup> / <sub>8</sub>		



UNDERNEATH MOTOR DRIVEN METAL CABINET LATHES

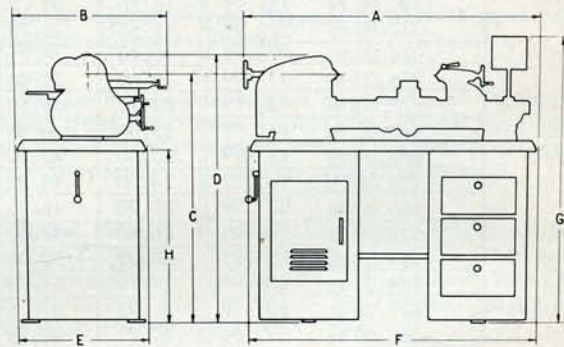
Size Lathe	Bed Length	A	B	C	D	E	F	G
10"	3'	51 <sup>3</sup> / <sub>4</sub>	25 <sup>21</sup> / <sub>32</sub>	32	45 <sup>23</sup> / <sub>32</sub>	49 <sup>3</sup> / <sub>32</sub>	25	54 <sup>1</sup> / <sub>32</sub>
10"	3 <sup>1</sup> / <sub>2</sub> '	51 <sup>3</sup> / <sub>4</sub>	25 <sup>21</sup> / <sub>32</sub>	32	45 <sup>23</sup> / <sub>32</sub>	49 <sup>3</sup> / <sub>32</sub>	25	54 <sup>1</sup> / <sub>32</sub>
10"	4'	65 <sup>3</sup> / <sub>4</sub>	25 <sup>21</sup> / <sub>32</sub>	32	45 <sup>23</sup> / <sub>32</sub>	49 <sup>3</sup> / <sub>32</sub>	25	54 <sup>1</sup> / <sub>32</sub>
10"	4 <sup>1</sup> / <sub>2</sub> '	65 <sup>3</sup> / <sub>4</sub>	25 <sup>21</sup> / <sub>32</sub>	32	45 <sup>23</sup> / <sub>32</sub>	49 <sup>3</sup> / <sub>32</sub>	25	54 <sup>1</sup> / <sub>32</sub>



HORIZONTAL MOTOR DRIVEN BENCH LATHES

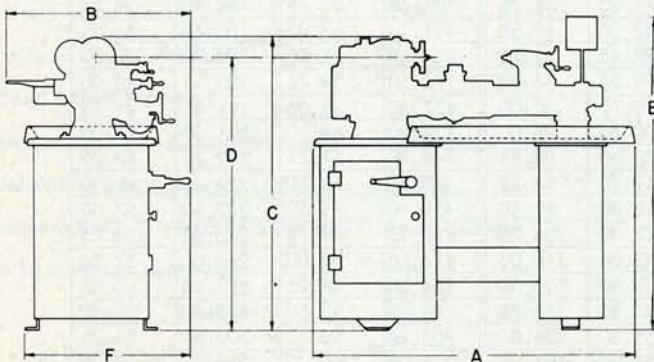
Size Lathe	Bed Length	A	B	C	D	E	F	G
9"	3'	41 <sup>1</sup> / <sub>2</sub>	37	49 <sup>15</sup> / <sub>16</sub>	39 <sup>3</sup> / <sub>8</sub>	29 <sup>3</sup> / <sub>16</sub> *	19 <sup>1</sup> / <sub>2</sub>	12 <sup>11</sup> / <sub>32</sub>
10-K	3'	41 <sup>1</sup> / <sub>2</sub>	38 <sup>1</sup> / <sub>2</sub>	51 <sup>1</sup> / <sub>16</sub>	39 <sup>3</sup> / <sub>8</sub>	29 <sup>3</sup> / <sub>16</sub> *	19 <sup>7</sup> / <sub>8</sub>	12 <sup>4</sup> / <sub>64</sub>

\* Benches also made 34" high.



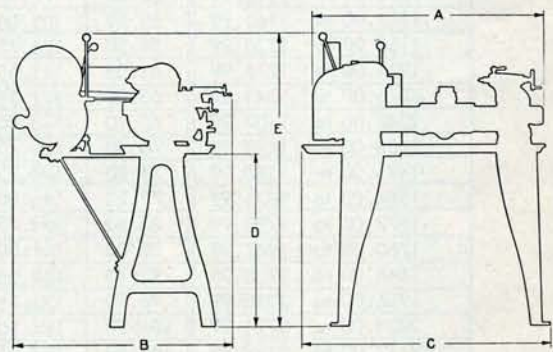
UNDERNEATH MOTOR DRIVEN METAL COLUMN BASE LATHES

Size Lathe	Bed Length	A	B	C	D	E	F	G	H
9"	3 <sup>1</sup> / <sub>2</sub> '	49 <sup>3</sup> / <sub>32</sub>	25 <sup>1</sup> / <sub>4</sub>	41 <sup>23</sup> / <sub>32</sub>	44 <sup>23</sup> / <sub>32</sub>	22 <sup>1</sup> / <sub>2</sub>	49 <sup>3</sup> / <sub>4</sub>	48 <sup>1</sup> / <sub>16</sub>	29 <sup>1</sup> / <sub>8</sub>
10-K	3 <sup>1</sup> / <sub>2</sub> '	49 <sup>3</sup> / <sub>32</sub>	25 <sup>1</sup> / <sub>4</sub>	42 <sup>1</sup> / <sub>8</sub>	45 <sup>5</sup> / <sub>16</sub>	22 <sup>1</sup> / <sub>2</sub>	49 <sup>3</sup> / <sub>4</sub>	49 <sup>3</sup> / <sub>16</sub>	29 <sup>1</sup> / <sub>8</sub>
9"	4 <sup>1</sup> / <sub>2</sub> '	63 <sup>3</sup> / <sub>32</sub>	25 <sup>1</sup> / <sub>4</sub>	41 <sup>23</sup> / <sub>32</sub>	44 <sup>23</sup> / <sub>32</sub>	22 <sup>1</sup> / <sub>2</sub>	63 <sup>3</sup> / <sub>4</sub>	48 <sup>1</sup> / <sub>16</sub>	29 <sup>1</sup> / <sub>8</sub>
10-K	4 <sup>1</sup> / <sub>2</sub> '	63 <sup>3</sup> / <sub>32</sub>	25 <sup>1</sup> / <sub>4</sub>	42 <sup>1</sup> / <sub>8</sub>	45 <sup>5</sup> / <sub>16</sub>	22 <sup>1</sup> / <sub>2</sub>	63 <sup>3</sup> / <sub>4</sub>	49 <sup>3</sup> / <sub>16</sub>	29 <sup>1</sup> / <sub>8</sub>



10" UNDERNEATH MOTOR DRIVEN FLOOR LATHES

Size Lathe	Bed Length	A	B	C	D	E	F
10"	3'	46 <sup>1</sup> / <sub>2</sub>	28 <sup>3</sup> / <sub>16</sub>	46 <sup>1</sup> / <sub>2</sub>	43 <sup>1</sup> / <sub>4</sub>	51 <sup>1</sup> / <sub>4</sub>	25 <sup>1</sup> / <sub>2</sub>
10"	3 <sup>1</sup> / <sub>2</sub> '	52 <sup>1</sup> / <sub>2</sub>	28 <sup>3</sup> / <sub>16</sub>	46 <sup>1</sup> / <sub>2</sub>	43 <sup>1</sup> / <sub>4</sub>	51 <sup>1</sup> / <sub>4</sub>	25 <sup>1</sup> / <sub>2</sub>
10"	4'	59 <sup>1</sup> / <sub>8</sub>	28 <sup>3</sup> / <sub>16</sub>	46 <sup>1</sup> / <sub>2</sub>	43 <sup>1</sup> / <sub>4</sub>	51 <sup>1</sup> / <sub>4</sub>	25 <sup>1</sup> / <sub>2</sub>
10"	4 <sup>1</sup> / <sub>2</sub> '	66 <sup>1</sup> / <sub>2</sub>	28 <sup>3</sup> / <sub>16</sub>	46 <sup>1</sup> / <sub>2</sub>	43 <sup>1</sup> / <sub>4</sub>	51 <sup>1</sup> / <sub>4</sub>	25 <sup>1</sup> / <sub>2</sub>



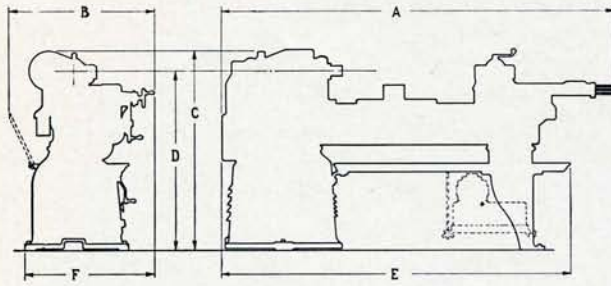
SELF-CONTAINED DRIVE FLOOR LATHES

Size Lathe	Bed Length	A	B	C	D	E
9"	3'	39 <sup>3</sup> / <sub>8</sub>	40	41 <sup>7</sup> / <sub>8</sub>	29 <sup>23</sup> / <sub>32</sub>	50 <sup>1</sup> / <sub>2</sub>
10-K	3'	39 <sup>3</sup> / <sub>8</sub>	39 <sup>3</sup> / <sub>4</sub>	41 <sup>7</sup> / <sub>8</sub>	29 <sup>23</sup> / <sub>32</sub>	51 <sup>3</sup> / <sub>4</sub>



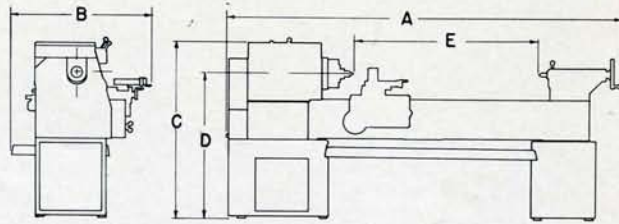
# FLOOR SPACE REQUIRED FOR SOUTH BEND MACHINE TOOLS

DIMENSIONS A TO H IN TABLES BELOW ARE IN INCHES



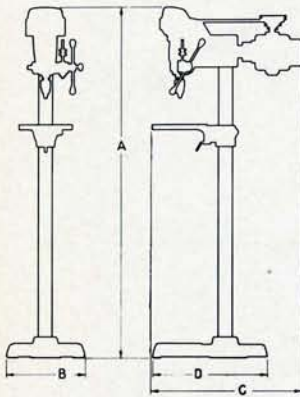
13" AND NO. 2-H TURRET LATHES

Size Lathe	Bed Length	A	B	C	D	E	F
13"	5'	72 1/4	39 1/4	45 3/4	41 1/2	68 1/2	30 3/4
2-H	6'	93 1/2	37	46 3/4	42 1/2	81 1/2	28 3/4



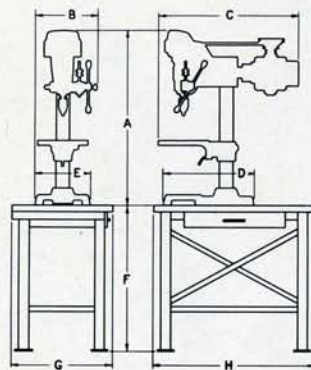
17" GEARED HEAD LATHE

SIZE LATHE	BED LENGTH	A	B	C	D	E
17"	8'-6"	117 1/4	39	53	44	54



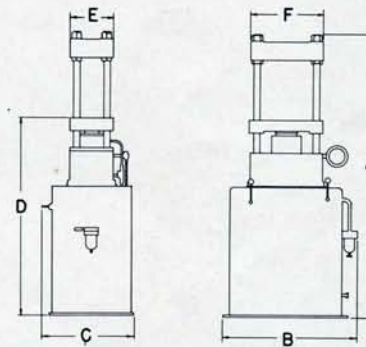
FLOOR TYPE DRILL PRESSES

A	B	C		D
		1/3 h.p.	1/2 h.p.	
65 1/8"	15	27 3/4	29	21



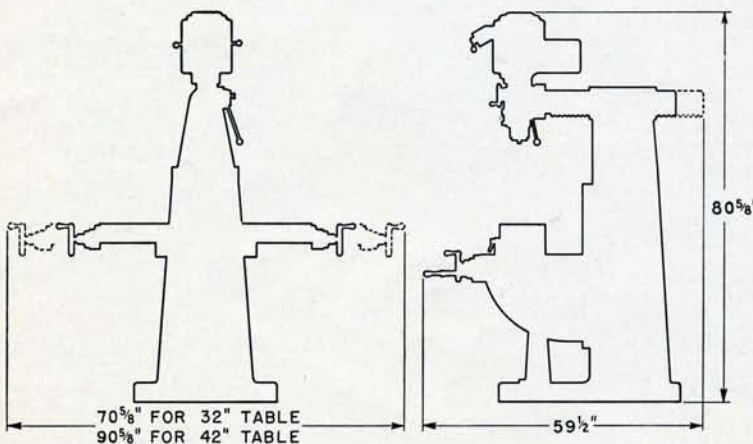
14" BENCH DRILL PRESSES

A—35 1/8"	D—17 3/4"
B—12 1/4"	E—10 3/4"
C—1/3 h.p. motor—27 3/4"	F—29 3/8"
C—1/2 h.p. motor—29"	G—20"
	H—32"



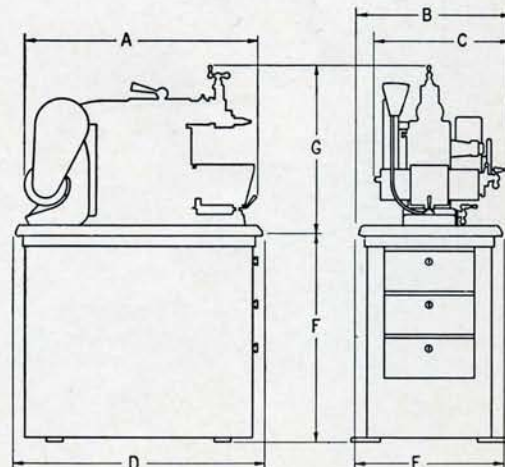
HYDROLAIR HYDRAULIC PRESSES

SIZE PRESS	A	B	C	D	E	F
30-Ton	65 3/4	31 1/4	21 3/4	46	10 1/4	17
50-Ton	65 1/2	43	33 1/2	42 1/4	18	24
100-Ton	80	55	36	44	24	36 1/4



MILLING MACHINE

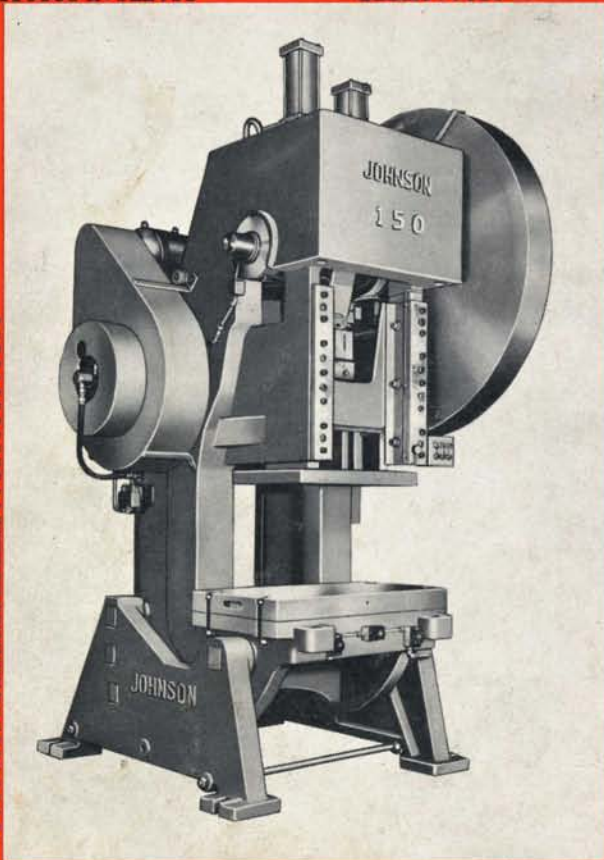
Good light on the work prevents scrap — equip each lathe with South Bend work light. See page 54



7" SHAPER AND STAND

A		B	C	D	E	F	G
1/3 h.p.	1/2 h.p.						
31 3/4	35 1/4	20 1/2	19	36	19	28 3/8	26





*Johnson*

**POWER PRESSES**

There are more than 50 models in the Johnson Press line, each engineered to give you efficient production. Open Back Inclinable Presses from 16 to 150 tons — Straight side, single crank presses 60 to 300 tons — Double crank straight side presses 20 to 300 tons — Gap presses 40 to 250 tons — Horn presses 35 to 60 tons. See pages 92 and 93.

**SOUTH BEND LATHE, INC.**

SOUTH BEND 22, INDIANA