

SERIES "O" LATHE

Catalog No. 95

South Bend LATHES

February, 1936



South Bend Lathe Works
South Bend, Indiana, U. S. A.

Foreword

This catalog illustrates the line of Series "O" South Bend Back-Geared, Screw Cutting Lathes, from 9-inch to 18-inch swing, in various types and drives, making the most complete line of small and medium size lathes on the market. There is a size and type of South Bend Lathe for almost every purpose required in metal working industries of all kinds.

The Series "O" South Bend Lathes, in all sizes and types, have power, accuracy and precision. The Tool Room Lathes are practical for the finest class of tool work, gauges, etc. The Production Lathes have the power, rigidity and speed required for the working of metals.

One hundred and four South Bend Back-Geared, Screw Cutting Lathes are used in our own manufacturing plant for tool room work, manufacturing and production work. Many of these lathes are fitted with special attachments and used as single purpose machines.

South Bend Lathes are the most widely used lathes in the United States today. More than 70,000 of these lathes are in use in the U.S.A. and 96 other countries and colonies overseas. For many years we have been manufacturing the South Bend Lathe in large quantities. Quantity production insures accuracy and low costs which permit selling at reasonable prices.

Attention is called to the large line of attachments, tools and fixtures that can be fitted to the South Bend Lathe for doing a variety of work, in the modern shop, such as draw-in collet chuck work, turning and boring tapers, milling, keyway cutting, grinding, turret work, etc.

South Bend Lathe Works

BROWNELL MACHINERY CO.
150 PINE STREET,
PROVIDENCE, R. I.

Series "O" South Bend Lathes

Guarantee

WE GUARANTEE every South Bend Lathe to be accurate and mechanically perfect; to give you entire satisfaction and the service you have a right to expect. We will replace, free of charge, within one year from the date of purchase, any lathe part that proves defective, either in material or workmanship.

Thirty Day Free Trial

If you are interested in a lathe and are not familiar with the quality and workmanship of South Bend Lathes, we will, on request, ship any size or type of South Bend Lathe anywhere in the United States for use in your shop. If for any reason you are not satisfied, you may return it to us within thirty days and we will pay the return freight charges and refund your money.

SOUTH BEND LATHE WORKS

Catalog
No. 95



February
1936

Cable Address: "Twins," South Bend

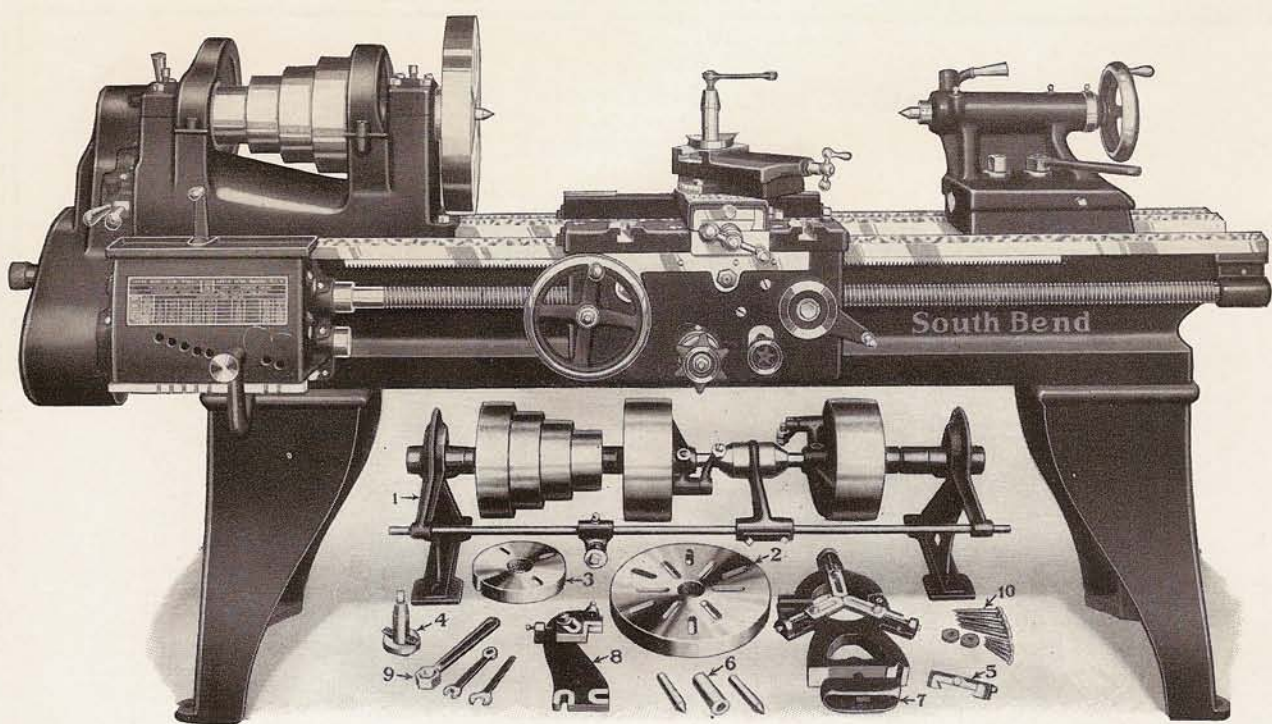
CODES :

Western Union Five Letter Edition A. B. C. Fifth Edition Improved
Western Union Universal Edition Bentley's, Lieber's Standard

South Bend Lathe Works

425 East Madison Street, - - - South Bend, Indiana, U. S. A.

Established 1906 - - Lathe Builders for 30 Years



18" x 8' Quick Change Gear Lathe Including Countershaft and Equipment—\$705.00

18-inch Series "O" South Bend Lathe—Countershaft Drive

Back-Geared, Screw Cutting, Quick Change and Standard Change Gear Precision Lathes

The 18-inch Series "O" South Bend Back-Geared, Screw Cutting Lathe is a heavy powerful tool, practical for production work in the manufacturing plant and general machine shop. This lathe will reduce the diameter of a steel shaft $\frac{7}{8}$ " in one cut and has the precision and accuracy for the finest tool and gauge work.

Mechanical Features described below apply to all types of 18-inch Series "O" South Bend Lathes shown in this catalog. See specifications on page 37.

Back-Geared Headstock is hand-scraped to lathe bed; has four-step cone for $2\frac{1}{2}$ " belt; eight changes of spindle speeds from 16 to 383 R.P.M., four direct and four back-gear; wrenchless bull gear lock; and spring latch reverse.

Headstock Spindle is made of high carbon steel, finish ground, and has a $1\frac{1}{16}$ " hole its entire length. Collet capacity $\frac{1}{4}$ " to 1". Spindle nose $2\frac{5}{8}$ " diam., 6 threads.

Phosphor Bronze Bearings for headstock spindle are line bored and lapped to a perfect bearing, and are adjustable for wear. An improved oiling system lubricates the bearings.

Quick Change Gear Box provides 48 changes for cutting screw threads from 2 to 112 per inch, right or left-hand; and for automatic longitudinal feeds from .0030" to .0208" per revolution of spindle, and for automatic cross feeds from .0011" to .0078" per revolution of spindle. See page 41.

Tailstock is hand-scraped to bed; has set-over for taper turning; graduated spindle; double plug spindle lock; No. 3 Morse Taper spindle center, hardened, ground and self-ejecting; spindle travel $6\frac{3}{4}$ ". See page 38.

Apron has worm drive for both the automatic cross feeds and automatic longitudinal feeds. Half-nuts and lead screw thread are used only for screw thread cutting. An automatic safety device prevents engaging half-nuts and automatic feeds at the same time. See page 40.

Carriage has wide deep bridge; is hand-scraped to bed; has T-slots for clamping work or fixtures; has carriage lock for facing and cutting off; and felt wipers for V-ways of bed.

Precision Lead Screw, $1\frac{3}{8}$ " diameter, 4 Acme standard screw threads per inch; guaranteed to meet the most exacting requirements for cutting screw threads. See page 40.

Compound Rest is graduated 180°; swivels to any angle, and has angular travel of $4\frac{3}{16}$ ". Compound rest screw and cross feed screw have micrometer collars graduated in thousandths. Tool holder shank $\frac{5}{8}$ " x $1\frac{3}{8}$ " for cutters $\frac{3}{8}$ " square.

Lathe Bed is 50% steel, heavily constructed and reinforced by box braces its entire length. Three V-ways and one flat way accurately planed and hand-scraped, align and support the headstock, carriage and tailstock. See page 39.

Regular Equipment consists of: Countershaft; large and small face plates; tool post; thread cutting stop; two 60° lathe centers; spindle sleeve; center rest; follower rest; wrenches; installation plan and book, "How to Run a Lathe."

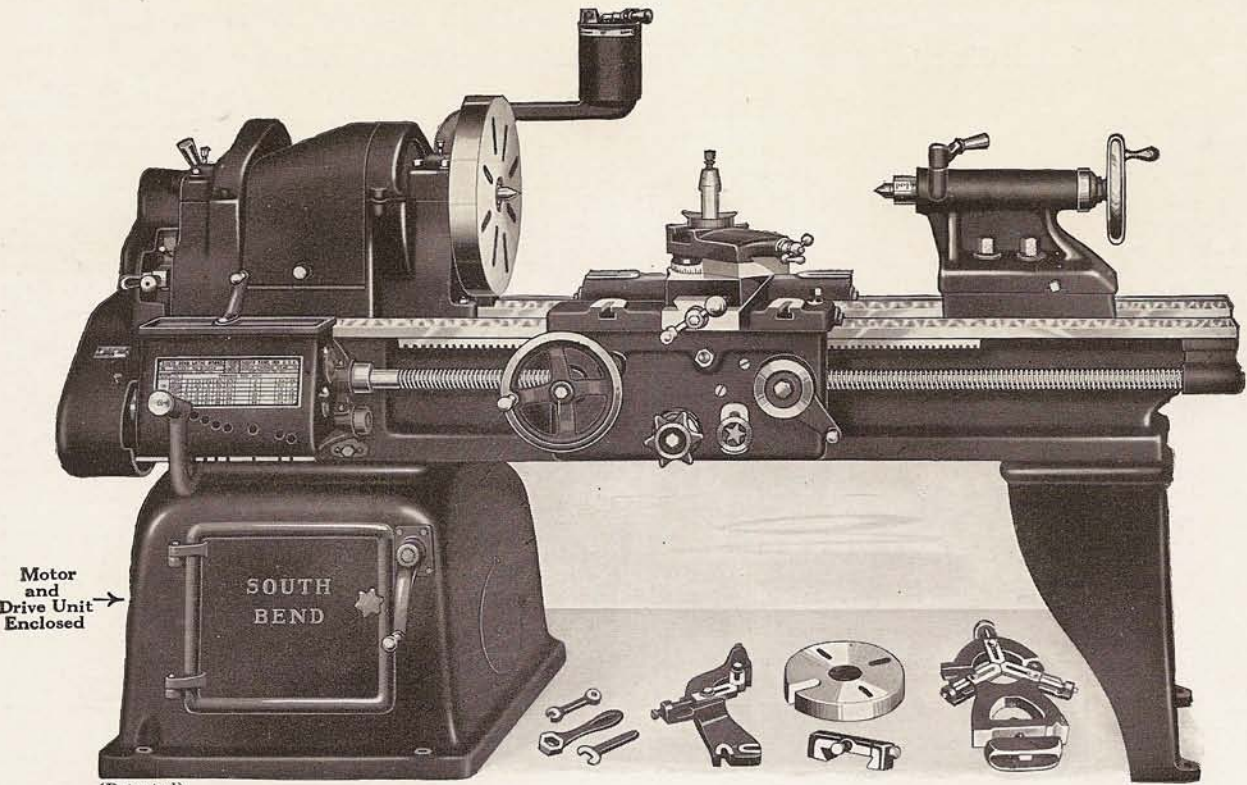
Attachments and Accessories such as collet chuck, taper attachment, etc., can be supplied, see pages 50 to 63.

The 18-inch Lathe is also available in the Standard Change Gear type as priced below and shown on page 4.

Net Factory Prices 18-inch Series "O" Lathes Including Countershaft and Regular Equipment

Swing Over Bed Inches	Length of Bed Feet	Distance Between Centers Inches	Hole Thru Spindle Inches	Swing Over Carriage Inches	Cone Pulley Belt Inches	Counter-shaft Speed R.P.M.	Power Required H.P.	Standard Change Gear Lathes				Quick Change Gear Lathes			
								Cat. No.	Code Word	Weight Crated Pounds	Net Factory Price	Cat. No.	Code Word	Weight Crated Pounds	Net Factory Price
18 $\frac{1}{4}$	6	29 $\frac{1}{2}$	1 $\frac{1}{16}$	12 $\frac{3}{8}$	2 $\frac{1}{2}$	167	2	43-C	Sagah	2400	\$585.00	94-C	Sapho	2440	\$655.00
18 $\frac{1}{2}$	7	41 $\frac{1}{2}$	1 $\frac{1}{16}$	12 $\frac{3}{8}$	2 $\frac{1}{2}$	167	2	43-D	Schoe	2500	610.00	94-D	Setra	2540	680.00
18 $\frac{3}{4}$	8	53 $\frac{1}{2}$	1 $\frac{1}{16}$	12 $\frac{3}{8}$	2 $\frac{1}{2}$	167	2	43-E	Siat	2600	635.00	94-E	Sibar	2640	705.00
18 $\frac{1}{2}$	10	77 $\frac{1}{2}$	1 $\frac{1}{16}$	12 $\frac{3}{8}$	2 $\frac{1}{2}$	167	2	43-G	Sombu	2800	689.00	94-G	Socks	2840	759.00
18 $\frac{3}{4}$	12	101 $\frac{1}{2}$	1 $\frac{1}{16}$	12 $\frac{3}{8}$	2 $\frac{1}{2}$	167	2	43-H	Sumpt	3100	767.00	94-H	Subwa	3140	837.00
18 $\frac{1}{2}$	14	125 $\frac{1}{2}$	1 $\frac{1}{16}$	12 $\frac{3}{8}$	2 $\frac{1}{2}$	167	2	43-K	Sylog	3325	829.00	94-K	Syogi	3365	899.00
18 $\frac{3}{4}$	16	149 $\frac{1}{2}$	1 $\frac{1}{16}$	12 $\frac{3}{8}$	2 $\frac{1}{2}$	167	2	43-M	Syryl	3575	899.00	94-M	Sytny	3615	969.00

Prices of Lathes with 12-foot, 14-foot and 16-foot beds include center leg. If Countershaft is not wanted, deduct \$45.00 from above prices.



(Patented)

18" x 8' Underneath Belt Motor Driven Quick Change Gear Lathe Including Equipment—\$975.00

18-inch Series "O" South Bend Underneath Belt Motor Driven Lathe Back-Geared, Screw Cutting, Quick Change and Standard Change Gear Precision Lathes

The 18-inch Underneath Belt Motor Driven Quick Change Gear Lathe, shown above, is similar to the 18-inch Countershaft Driven Lathe illustrated on page 2, and has the same mechanical features and specifications; the only difference is that this lathe is equipped with Underneath Belt Motor Drive instead of Countershaft Drive.

Underneath Belt Motor Drive is a compact, self-contained unit, completely enclosed within the cabinet leg, under the headstock, away from dirt and chips. The motor and lower cone pulley are mounted on an adjustable tilting cradle which is controlled by the belt release crank on the front of the cabinet leg. A hinged guard covers the spindle cone pulley. For further description of the Underneath Belt Motor Drive mechanism see page 44.

Powerful and Efficient in Operation. Smooth even power is transmitted by V-belts from motor to lower drive unit and by flat leather belt to headstock cone pulley. This modern method of driving the lathe spindle is quiet, efficient, and powerful, and permits handling work with the greatest precision and accuracy.

Belt Tension Adjustments are provided for regulating tension of V-belts from motor to driving unit and for obtaining any desired tension of the vertical belt between the lower drive unit and the headstock cone pulley.

Changing Spindle Speeds. The belt release crank on the front of the cabinet leg permits easy shifting of the belt from one step of the cone pulley to another for changing the spindle speeds. A half turn of the belt release crank lifts the tilting cradle 1½ inches and locks it in position, which permits the operator to place the belt on any step of spindle desired.

Regular Equipment included in price of lathe consists of: Large and small face plates; tool post; thread cutting stop; two 60° lathe centers; spindle sleeve for headstock; center rest; follower rest; wrenches; lag screws and washers; installation plan blue print and book, "How to Run a Lathe."

Electrical Equipment included in the price consists of: Motor drive mechanism mounted in cabinet leg under headstock; 2 H.P., 1200 R.P.M. instant reversing motor (G.E., Westinghouse or equal make); drum reversing switch; wiring enclosed in metal conduit; five V-belts, motor to drive pulley; double ply flat leather belt and wiring diagram blue print.

The 18-inch Underneath Belt Motor Driven Lathe, shown above, is also available in the Standard Change Gear type, which is described on page 4 and priced below.

When Ordering a Motor Driven Lathe give specifications of the electric current to be used. See page 36 for information on how to order motor driven lathes.

Net Factory Prices 18-inch Series "O" South Bend Underneath Belt Motor Driven Lathes

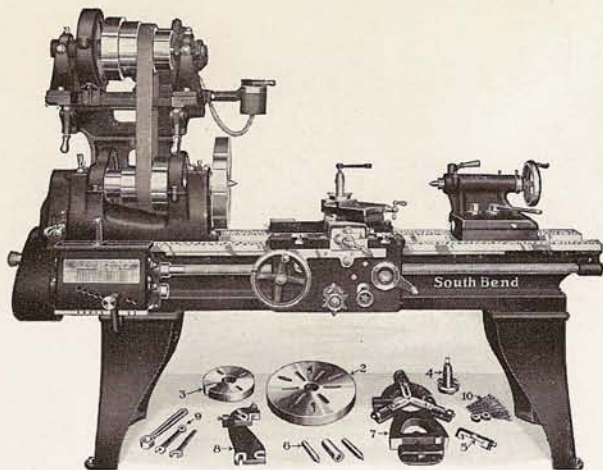
Prices Include Regular Equipment, and Electrical Equipment as Listed Above

Swing Over Bed Inches	Length of Bed Feet	Distance Between Centers Inches	Hole Thru Spindle Inches	Swing Over Carriage Inches	Size Motor Used H.P.	Approx. Weight Crated Pounds	Standard Change Gear Lathes			Quick Change Gear Lathes						
							Cat. No.	Code Word	3-Phase 60-Cycle A.C. Motor	1-Phase 60-Cycle A.C. Motor	Direct Current Motor	Cat. No.	Code Word	3-Phase 60-Cycle A.C. Motor	1-Phase 60-Cycle A.C. Motor	Direct Current Motor
18 1/4	6	29 1/2	1 1/2	12 3/8	2	3090	143-C	Depam	\$ 855.00	\$ 926.00	\$ 940.00	194-C	Delek	\$ 925.00	\$ 996.00	\$1010.00
18 1/4	7	41 1/2	1 1/2	12 3/8	2	3190	143-D	Depen	880.00	951.00	965.00	194-D	Demak	950.00	1021.00	1035.00
18 1/4	8	53 1/2	1 1/2	12 3/8	2	3290	143-E	Depur	905.00	976.00	990.00	194-E	Demel	975.00	1046.00	1060.00
18 1/4	10	77 1/2	1 1/2	12 3/8	2	3490	143-G	Derap	959.00	1030.00	1044.00	194-G	Demup	1029.00	1100.00	1114.00
18 1/4	12	101 1/2	1 1/2	12 3/8	2	3790	143-H	Deros	1037.00	1108.00	1122.00	194-H	Denal	1107.00	1178.00	1192.00
18 1/4	14	125 1/2	1 1/2	12 3/8	2	4015	143-K	Deser	1099.00	1170.00	1184.00	194-K	Denem	1169.00	1240.00	1254.00
18 1/4	16	149 1/2	1 1/2	12 3/8	2	4265	143-M	Denop	1169.00	1240.00	1254.00	194-M	Demno	1239.00	1310.00	1324.00

Lathes with 12-foot, 14-foot and 16-foot beds are equipped with center leg which is included in the price of the lathe.

18-inch Series "O" South Bend Silent V-Belt Motor Driven Lathe

Quick Change Gear and Standard Change Gear Precision Lathes



18" x 8' Quick Change Gear Silent V-Belt Motor Driven Lathe. . . \$895.00

The 18-inch Silent V-Belt Motor Driven Quick Change Gear Lathe shown at the left is similar to the 18-inch Countershaft Driven Lathe illustrated on page 2, and has the same mechanical features and specifications. The only difference is that this lathe is equipped with the Silent V-Belt Motor Drive instead of Countershaft Drive.

Silent V-Belt Motor Drive is efficient, powerful and noiseless in operation. Motor and driving cone are mounted on tilting table above headstock of lathe. Drive is by V-Belts from motor to driving pulley and by flat leather belt to spindle cone pulley. For detailed description of this drive see page 36.

Regular Equipment included in price of lathe consists of: Silent motor drive unit; large and small face plates; tool post; thread cutting stop; two 60° lathe centers and spindle sleeve for headstock; center rest; follower rest; wrenches; lag screws and washers; installation plan and book, "How to Run a Lathe."

Electrical Equipment included in price consists of: 2 H.P. 1200 R.P.M. instant reversing motor (G.E., Westinghouse or equal); drum reversing switch; wiring enclosed in metal conduit; five V-belts, motor to drive pulley; double ply flat leather cone pulley belt, and wiring diagram.

Net Factory Prices 18-inch Series "O" South Bend Silent V-Belt Motor Driven Lathes

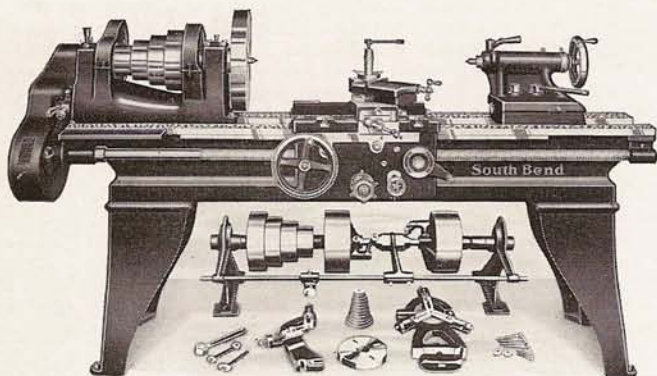
Prices Include Lathe Equipment, Reversing Motor, Reversing Switch and Belting

Swing Over Bed Inches	Length of Bed Feet	Distance Between Centers Inches	Hole Thru Spindle Inches	Swing Over Carriage Inches	Size Motor Used H.P.	Approx. Weight Crated Pounds	Standard Change Gear Lathes			Quick Change Gear Lathes						
							Cat. No.	Code Word	3-Phase 60-Cycle A.C. Motor	1-Phase 60-Cycle A.C. Motor	Direct Current Motor	Cat. No.	Code Word	3-Phase 60-Cycle A.C. Motor	1-Phase 60-Cycle A.C. Motor	Direct Current Motor
18 1/4	6	29 1/4	1 1/8	12 5/8	2	2940	343-C	Sober	\$ 775.00	\$ 846.00	\$ 860.00	394-C	Sacks	\$ 845.00	\$ 916.00	\$ 930.00
18 1/4	7	41 1/2	1 1/8	12 5/8	2	3040	343-D	Sorel	800.00	871.00	885.00	394-D	Sarge	870.00	941.00	955.00
18 1/4	8	53 1/2	1 1/8	12 5/8	2	3140	343-E	Sanro	825.00	896.00	910.00	394-E	Semin	895.00	966.00	980.00
18 1/4	10	77 1/2	1 1/8	12 5/8	2	3340	343-G	Suere	879.00	950.00	964.00	394-G	Seoul	949.00	1020.00	1034.00
18 1/4	12*	101 1/2	1 1/8	12 5/8	2	3640	343-H	Sugar	957.00	1028.00	1042.00	394-H	Simpe	1027.00	1098.00	1112.00
18 1/4	14*	125 1/2	1 1/8	12 5/8	2	3865	343-K	Synth	1019.00	1090.00	1104.00	394-K	Sinks	1089.00	1160.00	1174.00
18 1/4	16*	149 1/2	1 1/8	12 5/8	2	4115	343-M	Sykdy	1089.00	1160.00	1174.00	394-M	Sizod	1159.00	1230.00	1244.00

*Includes Center Leg.

18-inch Standard Change Gear Series "O" South Bend Lathe

Back-Geared, Screw Cutting Precision Lathe—Countershaft Drive



18" x 8' Standard Change Gear Countershaft Driven Lathe. \$635.00

Attachments and Accessories such as draw-in collet chuck, taper attachment, thread indicator, etc., can be supplied for the 18-inch Series "O" Lathes. For descriptions and prices, see pages 50 to 63.

Prices 18-inch Series "O" Standard Change Gear Lathes with Countershaft and Equipment

Cat. No. of Lathe	Swing Over Bed Inches	Length of Bed Feet	Distance Between Centers Inches	Hole Thru Spindle Inches	Swing Over Carriage Inches	Cone Pulley Belt Inches	Countershaft Speed R.P.M.	Power Required H.P.	Weight Crated Pounds	Code Word	Net Factory Price
43-C	18 1/4	6	29 1/4	1 1/8	12 5/8	2 1/2	167	2	2400	Sagah	\$585.00
43-D	18 1/4	7	41 1/2	1 1/8	12 5/8	2 1/2	167	2	2500	Sehoe	610.00
43-E	18 1/4	8	53 1/2	1 1/8	12 5/8	2 1/2	167	2	2600	Siati	635.00
43-G	18 1/4	10	77 1/2	1 1/8	12 5/8	2 1/2	167	2	2800	Sombu	689.00
43-H	18 1/4	12*	101 1/2	1 1/8	12 5/8	2 1/2	167	2	3100	Sumpt	767.00
43-K	18 1/4	14*	125 1/2	1 1/8	12 5/8	2 1/2	167	2	3325	Sylog	829.00
43-M	18 1/4	16*	149 1/2	1 1/8	12 5/8	2 1/2	167	2	3575	Syryl	899.00

*Includes center leg. If Countershaft is not wanted, deduct \$45.00 from above prices.

The 18-inch Standard Change Gear Lathe is identical with the 18-inch Quick Change Gear Lathe illustrated on page 2, except that the quick change gear box is replaced by a set of Independent Change Gears. Features and specifications on page 2 apply to this Standard Change Gear Lathe.

Change Gears are used to cut standard screw threads, right or left-hand, from 2 to 40 per inch, as shown on chart below, and to provide a wide range of automatic longitudinal feeds and automatic cross feeds. Special change gear equipment for cutting standard screw threads from 44 to 80 per inch can be supplied at \$20.00 extra, when purchased with lathe. See page 43.

18-inch Standard Change Gear Lathe is also available with Underneath Belt Motor Drive as shown on page 3, and Silent V-Belt Motor Drive as shown above.

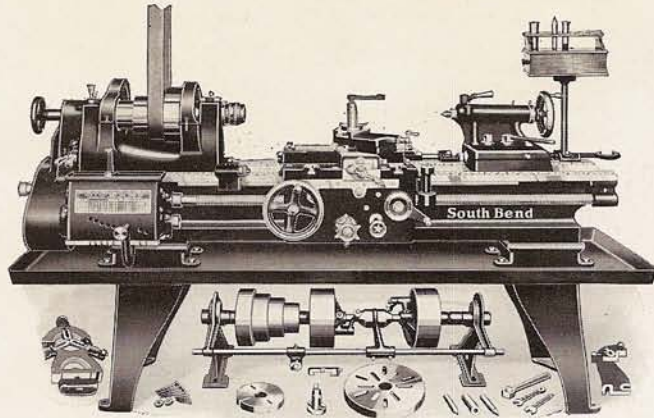
Equipment Included in Price consists of: Countershaft; large face plate; small face plate; tool post; thread cutting stop; two 60° lathe centers; spindle sleeve, center rest; follower rest; change gears; wrenches; installation plan and book, "How to Run a Lathe."

SCREW THREAD CUTTING CHART		
STANDARD CHANGE GEAR LATHE		
THREADS PER INCH	10" STD. GEAR	SCREW
2	48	24
3	48	36
4	48	48
5	48	60
6	48	72
7	48	84
8	48	96
9	48	108
10	48	120
11	24	66
1 1/2	24	69
12	24	72
13	24	78
14	24	84
16	24	96
18	24	108
20	24	120
22	24 - 1 - 2	66
24	24 - 1 - 2	72
26	24 - 1 - 2	78
27	24 - 1 - 2	81
28	24 - 1 - 2	84
30	24 - 1 - 2	90
32	24 - 1 - 2	96
36	24 - 1 - 2	108
40	24 - 1 - 2	120

Metal Index Chart attached to Lathe

18-inch "Series O" Tool Room Lathe—Countershaft Drive

Back-Geared, Screw Cutting Precision Lathe—Quick Change Gear Type



18" x 8' Tool Room Lathe, Countershaft Drive.....\$977.00

The 18-inch South Bend Tool Room Precision Lathe, illustrated at left, is recommended for the finest class of tool, gauge and fixture work in the modern tool room. This lathe is ideal for making precision taps, master thread gauges, dies, tools, etc., and will meet the most exacting demands of the expert mechanic for accuracy and precision.

18-inch Tool Room Precision Lathe is built up of the same units as used on the 18-inch Quick Change Gear Lathe illustrated and described on page 2, and has the same mechanical features and specifications.

Tool Room Lathe Attachments itemized in the tabulation below may be purchased complete with lathe, or individually as desired. For complete information on attachments, see pages 50 to 63.

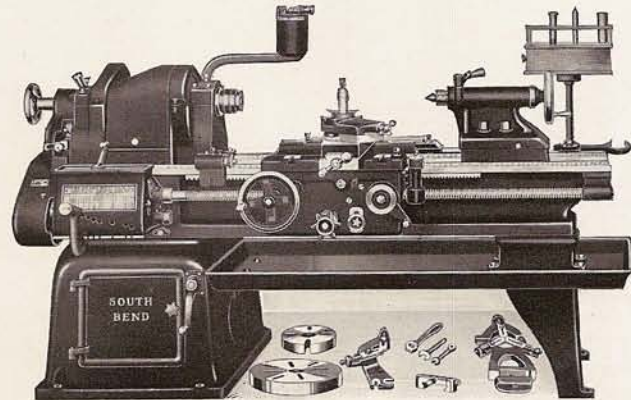
Regular Equipment Included In Price of lathe consists of: countershaft; large face plate; small face plate; tool post; adjustable thread cutting stop; two 60° lathe centers; spindle sleeve; center rest; follower rest; wrenches; installation plan and book, "How to Run a Lathe."

Net Factory Prices 18-inch Series "O" South Bend Tool Room Precision Lathes—Countershaft Drive

Size and Catalog Number.....	No. 894-C—18" x 6'		No. 894-E—18" x 8'		No. 894-G—18" x 10'	
	Code Word	Price	Code Word	Price	Code Word	Price
18-inch Tool Room Quick Change Gear Precision Lathe, Countershaft Drive, with Regular Lathe Equipment but without Tool Room Attachments.....	Sapho	\$655.00	Sibar	\$705.00	Soeks	\$ 759.00
TOOL ROOM ATTACHMENTS						
Draw-in Collet Chuck (Hand Wheel Type) with One Collet, Any Size	Adult	55.00	Adult	55.00	Adult	55.00
Extra Collets 1/8-inch up to 1-inch capacity by 64ths. Each.....	Comet	5.00	Comet	5.00	Comet	5.00
Taper Attachment.....	Dunns	100.00	Dunns	100.00	Dunns	100.00
Thread Indicator.....	Agrol	15.00	Agrol	15.00	Agrol	15.00
Oil Pan.....	Okres	55.00	Omens	65.00	Oaleh	75.00
Micrometer Carriage Stop.....	Coral	17.00	Coral	17.00	Coral	17.00
Collet Cabinet and Bracket.....	Catch	15.00	Catch	15.00	Catch	15.00
Prices of Tool Room Lathe, Complete as Illustrated Above.....	Sexon	\$917.00	Stove	\$977.00	Sedog	\$1041.00
Distance Between Centers of Lathe.....	29 1/2 in.		53 1/2 in.		77 1/2 in.	
Weight of Lathe and Tool Room Attachments Crated for Shipment.....	2732 lbs.		2932 lbs.		3132 lbs.	

18-inch Series "O" Tool Room Lathe—Underneath Belt Motor Drive

Back-Geared, Screw Cutting Precision Lathe—Quick Change Gear Type



18" x 8' Tool Room Lathe, Underneath Belt Motor Drive.....\$1229.00

The 18-inch South Bend Underneath Belt Motor Driven Tool Room Precision Lathe, illustrated at left, is similar to the 18-inch Countershaft Driven Tool Room Lathe shown above, and has the same mechanical features and specifications. The only difference is that this lathe is equipped with Underneath Belt Motor Drive instead of Countershaft Drive.

Underneath Belt Motor Drive Mechanism used on this lathe is illustrated and further described on page 44.

Tool Room Lathe Attachments may be purchased complete with lathe, or individually. See pages 50 to 63.

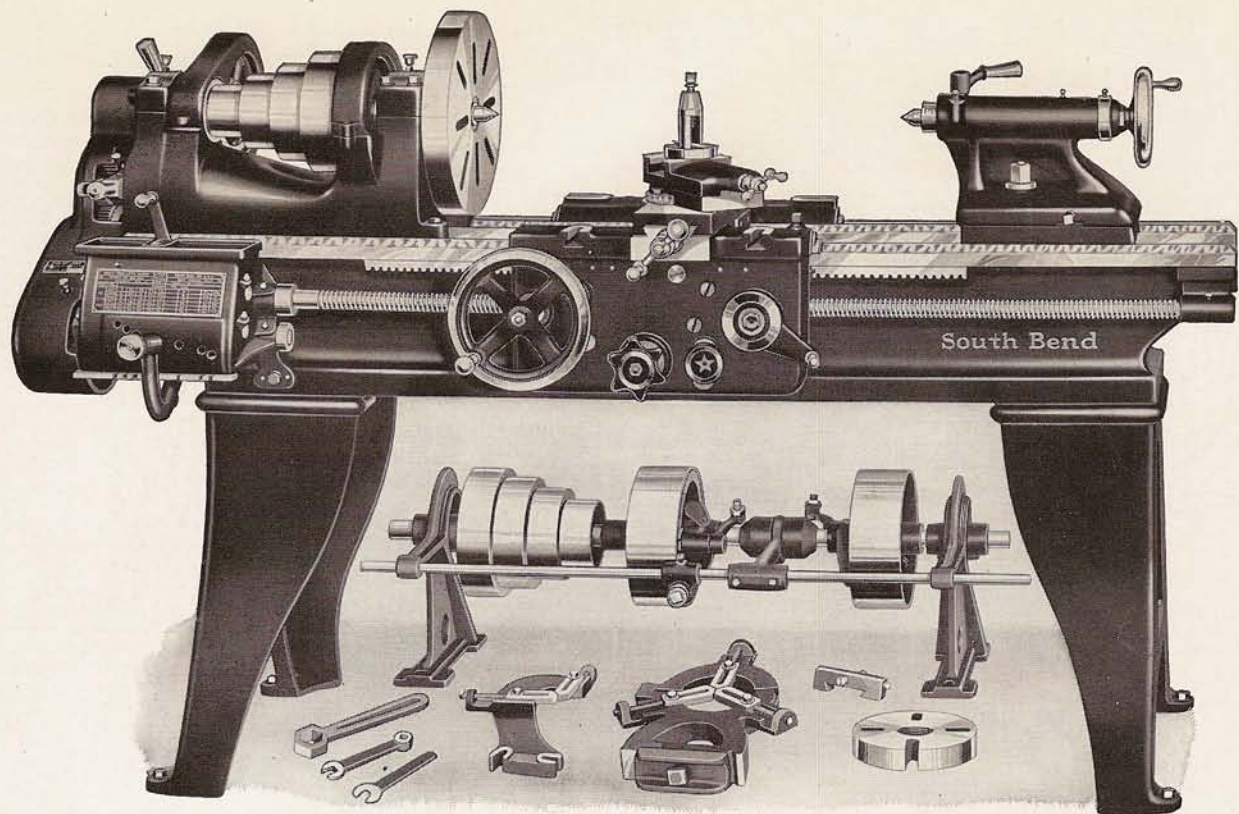
Regular Equipment consists of: motor drive unit; large face plate; small face plate; tool post; thread cutting stop; two 60° lathe centers; spindle sleeve; center rest; follower rest; wrenches; installation plan and book, "How to Run a Lathe."

Electrical Equipment included in price of lathe consists of 2-H.P. 1200 R.P.M. instant reversing motor (Westinghouse, General Electric, or equal make); drum reversing switch; wiring between motor and switch, enclosed in metal conduit; five V-belts; one flat leather belt and wiring directions.

Net Factory Prices 18-inch Series "O" South Bend Tool Room Precision Lathes—Underneath Belt Motor Drive

Catalog No. 1894-E, 18" x 8' Tool Room Quick Change Gear Precision Lathe, with Underneath Belt Motor Drive, Regular Lathe Equipment and Electrical Equipment but without Tool Room Attachments.....	With 3 Phase-60 Cycle A. C. Motor		With 1 Phase-60 Cycle A. C. Motor		With Direct Current Motor	
	Code Word	Price	Code Word	Price	Code Word	Price
.....	Demel	\$ 975.00	Demel	\$1046.00	Demel	\$1060.00
TOOL ROOM ATTACHMENTS						
Draw-in Collet Chuck (Hand Wheel Type) with One Collet, Any Size	Adult	55.00	Adult	55.00	Adult	55.00
Extra Collets 1/8-inch up to 1-inch capacity by 64ths. Each.....	Comet	5.00	Comet	5.00	Comet	5.00
Taper Attachment.....	Dunns	100.00	Dunns	100.00	Dunns	100.00
Thread Indicator.....	Agrol	15.00	Agrol	15.00	Agrol	15.00
Chip Pan.....	Bopol	47.00	Bopol	47.00	Bopol	47.00
Micrometer Carriage Stop.....	Coral	17.00	Coral	17.00	Coral	17.00
Collet Cabinet and Bracket.....	Catch	15.00	Catch	15.00	Catch	15.00
Prices of Tool Room Lathe, Complete as Illustrated Above.....	Dezob	\$1229.00	Dezuc	\$1300.00	Dibad	\$1314.00
Distance Between Centers of Lathe.....	53 1/2 in.		53 1/2 in.		53 1/2 in.	
Weight of Lathe and Tool Room Attachments Crated for Shipment.....	3550 lbs.		3630 lbs.		3651 lbs.	

For Prices of Tool Room Lathes complete with 6-ft. bed deduct \$60.00 from above prices. For 10-ft. bed add \$64.00.



16" x 6' Quick Change Gear Lathe including Countershaft and Equipment—\$540.00

16-inch Series "O" South Bend Lathe—Countershaft Drive

Back-Geared, Screw Cutting, Quick Change and Standard Change Gear Precision Lathes

The 16-inch Series "O" South Bend Back-Geared, Screw Cutting Lathe is a rigid powerful lathe, recommended for the manufacturing plant, tool room and general machine shop, because of its extreme accuracy and general all-round usefulness. This lathe will reduce the diameter of a steel shaft $\frac{3}{4}$ " in one cut and has the precision for the finest tool and gauge work.

Mechanical Features described below apply to all types of 16-inch South Bend Lathes. See specifications page 37.

Back-Geared Headstock is hand-scraped to lathe bed; has four-step cone for $2\frac{1}{4}$ " belt; eight changes of spindle speeds from 18 to 598 R.P.M., four direct and four back-geared; wrenchless bull gear lock; and spring latch reverse.

Headstock Spindle is made of high carbon steel, finish ground, and has a $1\frac{3}{8}$ " hole its entire length. Collet capacity $\frac{1}{4}$ " to $\frac{7}{8}$ ". Spindle nose $2\frac{3}{8}$ " diam., 6 threads.

Phosphor Bronze Bearings for headstock spindle are line bored and lapped to a perfect bearing, and are adjustable for wear. An improved oiling system lubricates the bearings.

Quick Change Gear Box provides 48 changes for cutting screw threads from 2 to 112 per inch, right or left-hand; and for automatic longitudinal feeds from .0030" to .0208" per revolution of spindle, and for automatic cross feeds from .0011" to .0078" per revolution of spindle. See page 41.

Tailstock is hand-scraped to bed; has set-over for taper turning; graduated spindle; double plug spindle lock; No. 3 Morse Taper spindle center, hardened, ground and self-ejecting; spindle travel $5\frac{3}{4}$ ". See page 38.

Apron has worm drive for both the automatic cross feeds and automatic longitudinal feeds. Half-nuts and lead screw thread are used only for screw thread cutting. An automatic safety device prevents engaging half-nuts and automatic feeds at the same time. See page 40.

Carriage has wide deep bridge; is hand-scraped to bed; has T-slots for clamping work or fixtures; has carriage lock for facing and cutting off; and felt wipers for "V" ways.

Precision Lead Screw, $1\frac{1}{8}$ " diameter, 6 Acme standard screw threads per inch; guaranteed to meet the most exacting requirements for cutting screw threads. See page 40.

Compound Rest is graduated 180° ; swivels to any angle, and has angular travel of $3\frac{3}{4}$ ". Compound rest screw and cross feed screw have micrometer collars graduated in thousandths. Tool holder shank $\frac{5}{8}$ " x $1\frac{3}{8}$ " for cutters $\frac{3}{8}$ " square.

Lathe Bed is 50% steel, heavily constructed and reinforced by box braces its entire length. Three V-ways and one flat way accurately planed and hand-scraped, align and support the headstock, carriage and tailstock. See page 39.

Regular Equipment consists of: Countershaft; large and small face plates; tool post; thread cutting stop; two 60° lathe centers; spindle sleeve; center rest; follower rest; wrenches; installation plan and book, "How to Run a Lathe."

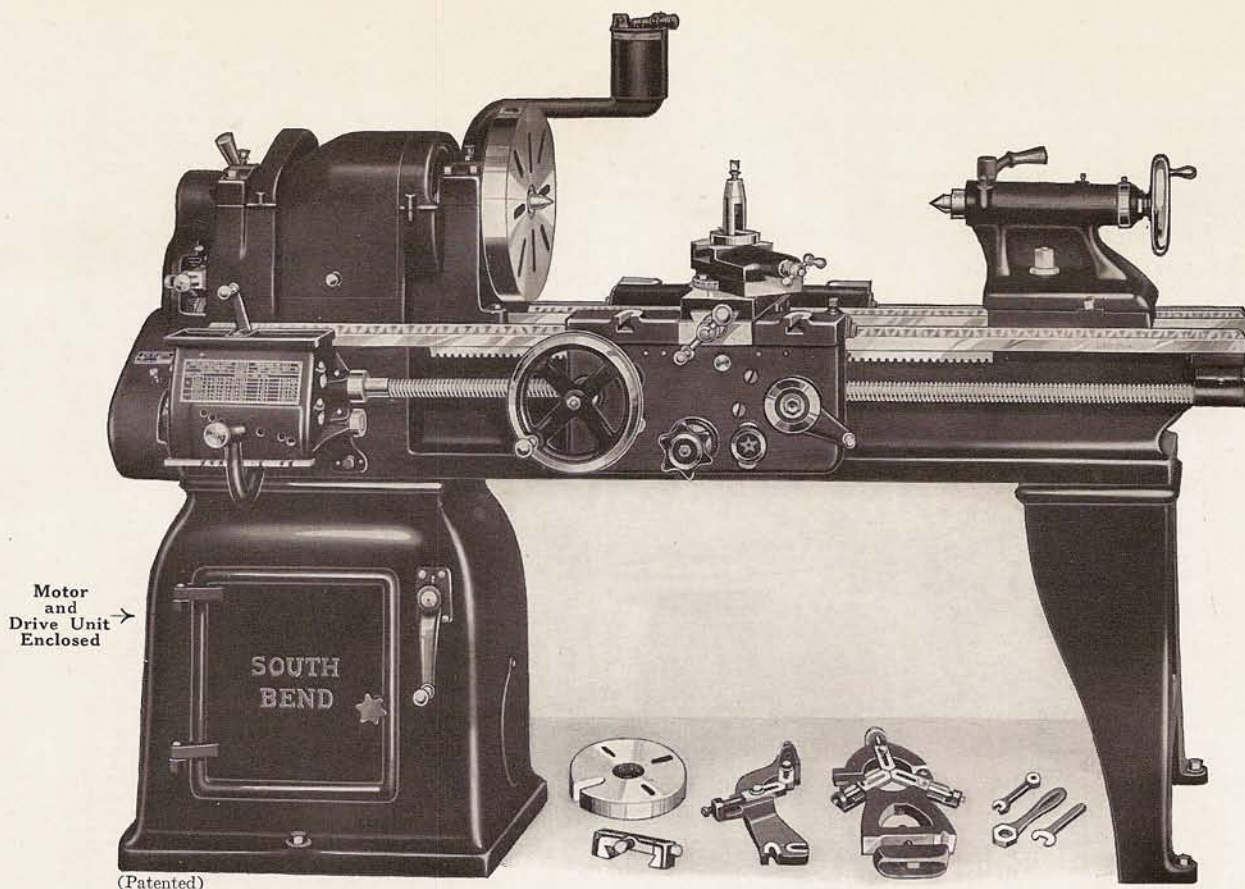
Attachments and Accessories such as collet chuck, taper attachment, etc., can be supplied, see pages 50 to 63.

The 16-inch Lathe is also available in the Standard Change Gear type as priced below and shown on page 8.

Net Factory Prices 16-inch Series "O" Lathes Including Countershaft and Regular Equipment

Swing Over Bed Inches	Length of Bed Feet	Distance Between Centers Inches	Hole Thru Spindle Inches	Swing Over Carriage Inches	Cone Pulley Belt Inches	Countershaft Speed R.P.M.	Power Required H.P.	Standard Change Gear Lathes				Quick Change Gear Lathes			
								Cat. No.	Code Word	Weight Crated Pounds	Net Factory Price	Cat. No.	Code Word	Weight Crated Pounds	Net Factory Price
16 $\frac{1}{4}$	6	34	1 $\frac{3}{8}$	11 $\frac{1}{2}$	2 $\frac{1}{4}$	225	1	41-C	Mater	1840	\$480.00	92-C	Malta	1875	\$540.00
16 $\frac{1}{2}$	7	46	1 $\frac{3}{8}$	11 $\frac{1}{2}$	2 $\frac{1}{4}$	225	1	41-D	Medow	1920	500.00	92-D	Melbo	1955	560.00
16 $\frac{3}{4}$	8	58	1 $\frac{3}{8}$	11 $\frac{1}{2}$	2 $\frac{1}{4}$	225	1	41-E	Milky	2000	520.00	92-E	Mitre	2035	580.00
16 $\frac{1}{2}$	10	82	1 $\frac{3}{8}$	11 $\frac{1}{2}$	2 $\frac{1}{4}$	225	1	41-G	Money	2160	564.00	92-G	Movir	2195	624.00
16 $\frac{3}{4}$	12	106	1 $\frac{3}{8}$	11 $\frac{1}{2}$	2 $\frac{1}{4}$	225	1	41-H	Mules	2390	627.00	92-H	Muday	2425	687.00
16 $\frac{1}{2}$	14	130	1 $\frac{3}{8}$	11 $\frac{1}{2}$	2 $\frac{1}{4}$	225	1	41-K	Musiz	2615	682.00	92-K	Murzo	2650	742.00

Prices of Lathes with 12-foot and 14-foot bed include center leg. If Countershaft is not wanted, deduct \$31.00 from above prices.



(Patented) 16" x 6' Underneath Belt Motor Driven Quick Change Gear Lathe Including Equipment—\$752.00

16-inch Series "O" South Bend Underneath Belt Motor Driven Lathe Back-Geared, Screw Cutting, Quick Change and Standard Change Gear Precision Lathes

The 16-inch Underneath Belt Motor Driven Quick Change Gear Lathe, shown above, is similar to the 16-inch Countershaft Driven Lathe illustrated on page 6, and has the same mechanical features and specifications; the only difference is that this lathe is equipped with Underneath Belt Motor Drive instead of Countershaft Drive.

Underneath Belt Motor Drive is a compact, self-contained unit, completely enclosed within the cabinet leg, under the headstock, away from dirt and chips. The motor and lower cone pulley are mounted on an adjustable tilting cradle which is controlled by the belt release crank on the front of the cabinet leg. A hinged guard covers the spindle cone pulley. For illustrations of the Underneath Belt Motor Drive mechanism and further description, see page 44.

Powerful and Efficient in Operation. Smooth even power is transmitted by V-belts from motor to lower drive unit and by flat leather belt to headstock cone pulley. This modern method of driving the lathe spindle is quiet, efficient, and powerful, and permits handling work with the greatest precision and accuracy.

Changing Spindle Speeds. The belt release crank on the front of the cabinet leg permits easy shifting of the belt from one step of the cone pulley to another for changing the spindle

speeds. A half turn of the belt release crank lifts the tilting cradle $1\frac{1}{2}$ inches and locks it in position, which permits the operator to place the belt on any step of spindle desired.

Belt Tension Adjustments are provided for regulating tension of V-belts from motor to driving unit and for obtaining any desired tension of the vertical belt between the lower drive unit and the headstock cone pulley.

Regular Equipment included in price of lathe consists of: Large and small face plates; tool post; thread cutting stop; two 60° lathe centers; spindle sleeve for headstock; center rest; follower rest; wrenches; lag screws and washers; installation plan blue print and book, "How to Run a Lathe."

Electrical Equipment included in the price consists of: Motor drive mechanism mounted in cabinet leg under headstock; 1 H.P., 1200 R.P.M. instant reversing motor (G.E., Westinghouse or equal make); drum reversing switch; wiring enclosed in metal conduit; three V-belts, motor to drive pulley; double ply flat leather belt and wiring diagram blue print.

The 16-inch Underneath Belt Motor Driven Lathe, shown above, is also available in the Standard Change Gear type, which is described on page 8 and priced below.

When Ordering a Motor Driven Lathe give specifications of the electric current to be used. See page 36 for information.

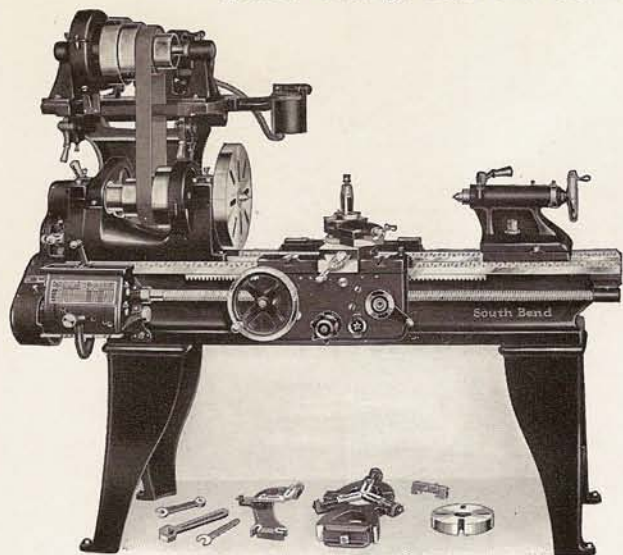
Net Factory Prices 16-inch Series "O" South Bend Underneath Belt Motor Driven Lathes Prices Include Regular Equipment, and Electrical Equipment as Listed Above

Swing Over Bed Inches	Length of Bed Feet	Distance Between Centers Inches	Hole Thru Spindle Inches	Swing Over Carriage Inches	Size Motor Used H.P.	Weight Crated Pounds	Standard Change Gear Lathes			Quick Change Gear Lathes						
							Cat. No.	Code Word	3-Phase 60-Cycle A.C. Motor	1-Phase 60-Cycle A.C. Motor	Direct Current Motor	Cat. No.	Code Word	3-Phase 60-Cycle A.C. Motor	1-Phase 60-Cycle A.C. Motor	Direct Current Motor
16 $\frac{1}{4}$	6	34	1 $\frac{3}{8}$	11 $\frac{1}{8}$	1	2300	141-C	Deheg	\$692.00	\$730.00	\$758.00	192-C	Defif	\$752.00	\$790.00	\$ 818.00
16 $\frac{1}{4}$	7	46	1 $\frac{3}{8}$	11 $\frac{1}{8}$	1	2380	141-D	Dejag	712.00	750.00	778.00	192-D	Defog	772.00	810.00	838.00
16 $\frac{1}{4}$	8	58	1 $\frac{3}{8}$	11 $\frac{1}{8}$	1	2460	141-E	Dejok	732.00	770.00	798.00	192-E	Degef	792.00	830.00	858.00
16 $\frac{1}{4}$	10	82	1 $\frac{3}{8}$	11 $\frac{1}{8}$	1	2620	141-G	Dekol	776.00	814.00	842.00	192-G	Degoh	836.00	874.00	902.00
16 $\frac{1}{4}$	12	106	1 $\frac{3}{8}$	11 $\frac{1}{8}$	1	2850	141-H	Dekum	839.00	877.00	905.00	192-H	Dehaf	899.00	937.00	965.00
16 $\frac{1}{4}$	14	130	1 $\frac{3}{8}$	11 $\frac{1}{8}$	1	3075	141-K	Detra	894.00	932.00	960.00	192-K	Dewoy	954.00	992.00	1020.00

Lathes with 12-foot and 14-foot bed are equipped with center leg, which is included in price of Lathe.

16-inch Series "O" South Bend Silent V-Belt Motor Driven Lathe

Quick Change Gear and Standard Change Gear Precision Lathes



16" x 6' Quick Change Gear Silent V-Belt Motor Driven Lathe...\$682.00

The 16-inch Silent V-Belt Motor Driven Quick Change Gear Lathe shown at the left is similar to the 16-inch Countershaft Driven Lathe illustrated on page 6, and has the same mechanical features and specifications. The only difference is that this lathe is equipped with the Silent V-Belt Motor Drive instead of Countershaft Drive.

Silent V-Belt Motor Drive is efficient, powerful and noiseless in operation. Motor and driving cone are mounted on tilting table above headstock of lathe. Drive is by V-Belts from motor to driving pulley and by flat leather belt to spindle cone pulley. For detailed description of this drive see page 36.

Regular Equipment included in price of lathe consists of: Silent motor drive unit; large and small face plates; tool post; thread cutting stop; two 60° lathe centers and spindle sleeve for headstock; center rest; follower rest; wrenches; lag screws and washers; installation plan and book, "How to Run a Lathe."

Electrical Equipment included in price consists of: 1 H.P. 1200 R.P.M. instant reversing motor (G.E., Westinghouse or equal); drum reversing switch; wiring enclosed in metal conduit; three V-belts, motor to drive pulley; double ply flat leather cone pulley belt, and wiring diagram.

Net Factory Prices 16-inch Series "O" South Bend Silent V-Belt Motor Driven Lathes

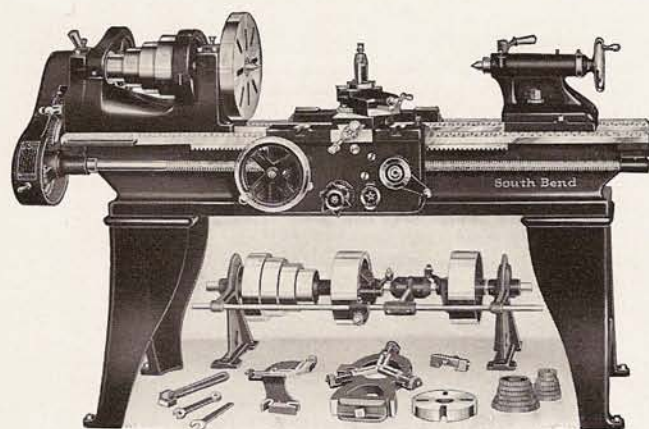
Prices Include Lathe Equipment, Reversing Motor, Reversing Switch and Belting

Swing Over Bed Inches	Length of Bed Feet	Distance Between Centers Inches	Hole Thru Spindle Inches	Swing Over Carriage Inches	Size Motor Used H.P.	Approx. Weight Crated Pounds	Standard Change Gear Lathes			Quick Change Gear Lathes						
							Cat. No.	Code Word	3-Phase 60-Cycle A.C. Motor	1-Phase 60-Cycle A.C. Motor	Direct Current Motor	Cat. No.	Code Word	3-Phase 60-Cycle A.C. Motor	1-Phase 60-Cycle A.C. Motor	Direct Current Motor
16 1/4	6	34	1 3/8	11 1/8	1	2230	341-C	Mirac	\$622.00	\$660.00	\$688.00	392-C	Madge	\$682.00	\$720.00	\$748.00
16 1/4	7	46	1 3/8	11 3/8	1	2310	341-D	Moats	642.00	680.00	708.00	392-D	Magpi	702.00	740.00	768.00
16 1/4	8	58	1 3/8	11 3/8	1	2390	341-E	Moral	662.00	700.00	728.00	392-E	Mears	722.00	760.00	788.00
16 1/4	10	82	1 3/8	11 3/8	1	2550	341-G	Music	706.00	744.00	772.00	392-G	Metro	766.00	804.00	832.00
16 1/4	12	106	1 3/8	11 3/8	1	2780	341-H	Mybeu	769.00	807.00	835.00	392-H	Mires	829.00	867.00	895.00
16 1/4	14	130	1 3/8	11 3/8	1	3005	341-K	Myceb	824.00	862.00	890.00	392-K	Migeb	884.00	922.00	950.00

Lathes with 12-foot and 14-foot bed are equipped with center leg which is included in price of the lathe.

16-inch Standard Change Gear Series "O" South Bend Lathe

Back-Geared, Screw Cutting Precision Lathe—Countershaft Drive



16" x 6' Standard Change Gear Countershaft Driven Lathe\$480.00

Attachments and Accessories such as draw-in collet chuck, taper attachment, etc., can be supplied. See pages 50 to 63.

The 16-inch Standard Change Gear Lathe is identical with the 16-inch Quick Change Gear Lathe illustrated on page 6, except that the quick change gear box is replaced by a set of Independent Change Gears. Features and specifications on page 6 apply to this Standard Change Gear Lathe.

Change Gears are used to cut standard screw threads, right or left-hand, from 2 to 40 per inch, as shown on chart below, and to provide a wide range of automatic longitudinal feeds and automatic cross feeds. Special change gear equipment for cutting standard screw threads from 44 to 80 per inch can be supplied at \$17.00 extra, when purchased with the lathe. For further information see page 43.

16-inch Standard Change Gear Lathe is also available with Underneath Belt Motor Drive and Silent V-Belt Motor Drive.

Equipment Included in Price consists of: Countershaft; large face plate; small face plate; tool post; thread cutting stop; two 60° lathe centers; spindle sleeve, center rest; follower rest; change gears; wrenches; installation plan and book, "How to Run a Lathe."

Prices 16-inch Series "O" Standard Change Gear Lathes with Countershaft and Equipment

Cat. No. of Lathe	Swing Over Bed Inches	Length of Bed Feet	Distance Between Centers Inches	Hole Thru Spindle Inches	Swing Over Carriage Inches	Cone Pulley Belt Inches	Countershaft Speed R.P.M.	Power Required H.P.	Weight Crated Pounds	Code Word	Net Factory Price
41-C	16 1/4	6	34	1 3/8	11 1/8	2 1/4	225	1	1840	Mater	\$480.00
41-D	16 1/4	7	46	1 3/8	11 3/8	2 1/4	225	1	1920	Medow	500.00
41-E	16 1/4	8	58	1 3/8	11 3/8	2 1/4	225	1	2000	Milky	520.00
41-G	16 1/4	10	82	1 3/8	11 3/8	2 1/4	225	1	2160	Money	564.00
41-H	16 1/4	12*	106	1 3/8	11 3/8	2 1/4	225	1	2390	Mules	627.00
41-K	16 1/4	14*	130	1 3/8	11 3/8	2 1/4	225	1	2615	Musiz	682.00

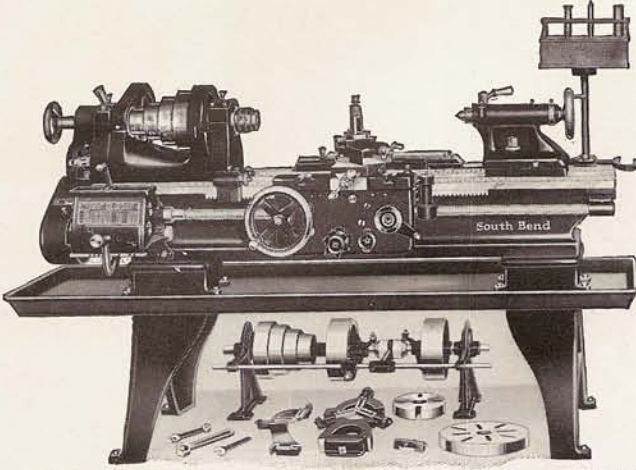
*Includes center leg. If Countershaft is not wanted, deduct \$51.00 from above prices.

SCREW THREAD CUTTING CHART		
STANDARD CHANGE GEAR LATHE		
13-15-16"		
THREADS PER INCH	STUD GEAR	SCREW GEAR
2	72	24
3	48	24
4	48	32
5	48	40
6	48	48
7	48	56
8	48	64
9	48	72
10	48	80
11	24	44
1 1/8	24	46
1 1/4	24	48
1 1/2	24	52
1 3/4	24	56
2	24	64
18	24	72
20	24	80
22	24-1-2	44
24	24-1-2	48
26	24-1-2	52
28	24-1-2	54
30	24-1-2	56
32	24-1-2	60
34	24-1-2	64
36	24-1-2	70
40	24-1-2	80

Metal Index Chart attached to Lathe

16-inch Series "O" Tool Room Lathe—Counter Shaft Drive

Back-Geared, Screw Cutting Precision Lathe—Quick Change Gear Type



16" x 6' Tool Room Lathe, Countershaft Drive.....\$777.75

The 16-inch South Bend Tool Room Precision Lathe, illustrated at left, is recommended for the finest class of tool, gauge and fixture work in the modern tool room. This lathe is ideal for making precision taps, master thread gauges, dies, tools, etc., and will meet the most exacting demands of the expert mechanic for accuracy and precision.

16-inch Tool Room Precision Lathe is built up of the same units as used on the 16-inch Quick Change Gear Lathe illustrated and described on page 6, and has the same mechanical features and specifications.

Tool Room Lathe Attachments itemized in the tabulation below may be purchased complete with lathe, or individually as desired. For complete information on attachments, see pages 50 to 63.

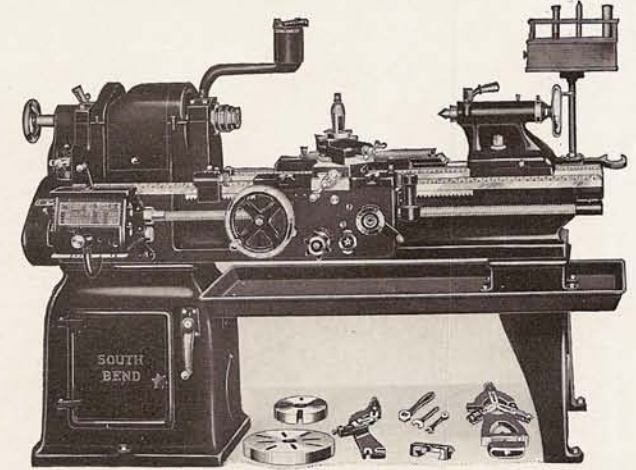
Regular Equipment Included in Price of lathe consists of: countershaft; large face plate; small face plate; tool post; adjustable thread cutting stop; two 60° lathe centers; spindle sleeve; center rest; follower rest; wrenches; installation plan and book, "How to Run a Lathe."

Net Factory Prices 16-inch Series "O" South Bend Tool Room Precision Lathes—Countershaft Drive

Size and Catalog Number.....	No. 892-C—16" x 6'		No. 892-D—16" x 7'		No. 892-E—16" x 8'	
	Code Word	Price	Code Word	Price	Code Word	Price
16-inch Tool Room Quick Change Gear Precision Lathe, Countershaft Drive, with Regular Lathe Equipment but without Tool Room Attachments.....	Malta	\$540.00	Melbo	\$560.00	Mitre	\$580.00
TOOL ROOM ATTACHMENTS						
Draw-in Collet Chuck (Hand Wheel Type) with One Collet, Any Size	Adore	50.00	Adore	50.00	Adore	50.00
Extra Collets 1/8-inch up to 3/8-inch capacity by 64ths. Each.....	Clear	4.75	Clear	4.75	Clear	4.75
Taper Attachment.....	Dress	90.00	Dress	90.00	Dress	90.00
Thread Indicator.....	Aflot	13.00	Aflot	13.00	Aflot	13.00
Oil Pan.....	Okres	50.00	Olean	55.00	Omens	60.00
Micrometer Carriage Stop.....	Climb	15.00	Climb	15.00	Climb	15.00
Collet Cabinet and Bracket.....	Cadro	15.00	Cadro	15.00	Cadro	15.00
Prices of Tool Room Lathe Complete as Illustrated Above.....	Mufat	\$777.75	Myajo	\$802.75	Myron	\$827.75
Distance Between Centers of Lathe.....	34 in.		46 in.		58 in.	
Weight of Lathe and Tool Room Attachments Crated for Shipment.....	2125 lbs.		2205 lbs.		2285 lbs.	

16-inch Series "O" Tool Room Lathe—Underneath Belt Motor Drive

Back-Geared, Screw Cutting Precision Lathe—Quick Change Gear Type



16" x 6' Tool Room Lathe, Underneath Belt Motor Drive..... \$974.75

The 16-inch South Bend Underneath Belt Motor Driven Tool Room Precision Lathe, illustrated at left, is similar to the 16-inch Countershaft Driven Tool Room Lathe shown above, and has the same mechanical features and specifications. The only difference is that this lathe is equipped with Underneath Belt Motor Drive instead of Countershaft Drive.

Underneath Belt Motor Drive Mechanism used on this lathe is illustrated and further described on page 44.

Tool Room Lathe Attachments itemized in the tabulation below may be purchased complete with lathe, or individually as desired. See pages 50 to 63.

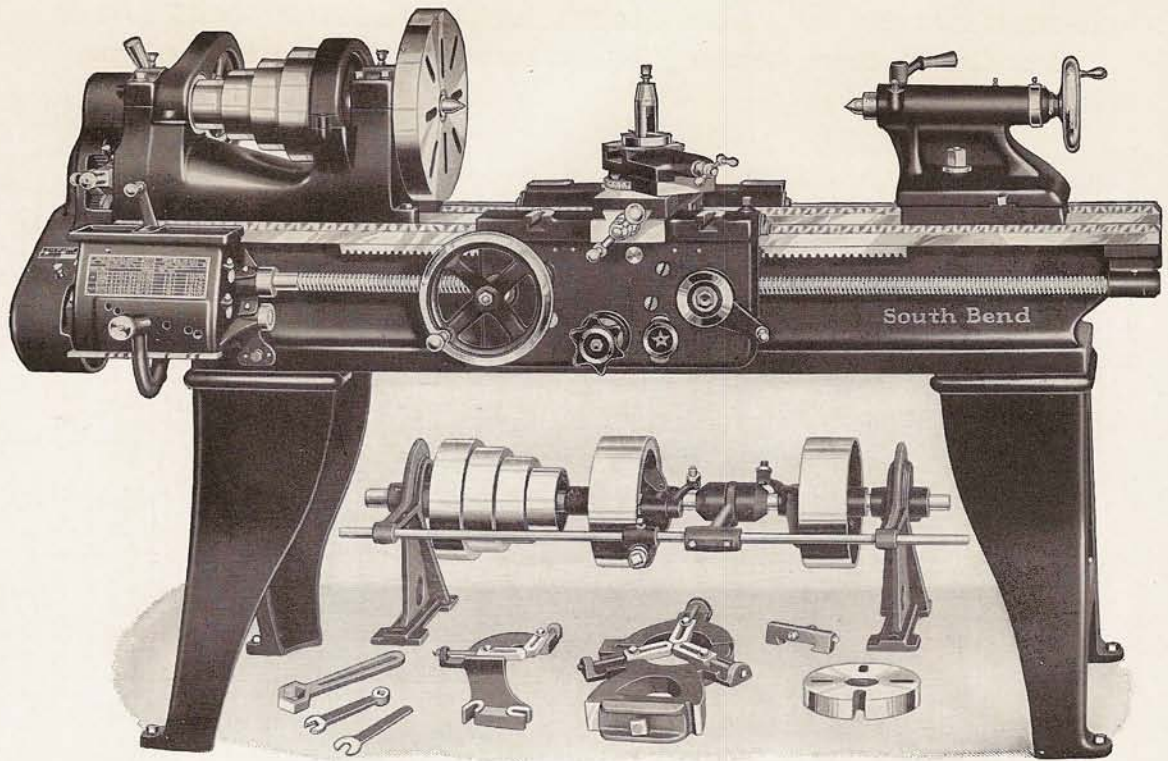
Regular Equipment consists of: motor drive unit; large face plate; small face plate; tool post; thread cutting stop; two 60° lathe centers; spindle sleeve; center rest; follower rest; wrenches; installation plan and book, "How to Run a Lathe."

Electrical Equipment included in price of lathe consists of 1-H.P. 1200 R.P.M. instant reversing motor (Westinghouse, General Electric, or equal make); drum reversing switch; wiring between motor and switch, enclosed in metal conduit; three V-Belts; one flat leather belt and directions for wiring.

Net Factory Prices 16-inch Series "O" South Bend Tool Room Precision Lathes—Underneath Belt Motor Drive

Catalog No. 1892-C—16" x 6' Tool Room Quick Change Gear Precision Lathe, with Underneath Belt Motor Drive, Regular Lathe Equipment and Electrical Equipment, but without Tool Room Attachments.....	With 3 Phase-60 Cycle A. C. Motor		With 1 Phase-60 Cycle A. C. Motor		With Direct Current Motor	
	Code Word	Price	Code Word	Price	Code Word	Price
TOOL ROOM ATTACHMENTS	Defif	\$752.00	Defif	\$ 790.00	Defif	\$ 818.00
Draw-in Collet Chuck (Hand Wheel Type) with One Collet, Any Size	Adore	50.00	Adore	50.00	Adore	50.00
Extra Collets 1/8-inch up to 3/8-inch capacity by 64ths. Each.....	Clear	4.75	Clear	4.75	Clear	4.75
Taper Attachment.....	Dress	90.00	Dress	90.00	Dress	90.00
Thread Indicator.....	Aflot	13.00	Aflot	13.00	Aflot	13.00
Chip Pan.....	Boplo	35.00	Boplo	35.00	Boplo	35.00
Micrometer Carriage Stop.....	Climb	15.00	Climb	15.00	Climb	15.00
Collet Cabinet and Bracket.....	Cadro	15.00	Cadro	15.00	Cadro	15.00
Prices of Tool Room Lathe Complete as Illustrated Above.....	Deyoz	\$974.75	Deyub	\$1012.75	Deziz	\$1040.75
Distance Between Centers of Lathe.....	34 in.		34 in.		34 in.	
Weight of Lathe and Tool Room Attachments Crated for Shipment.....	2525 lbs.		2560 lbs.		2580 lbs.	

For prices of Tool Room Lathes complete with 7 ft. bed add \$25.00 to above prices. For 8 ft. bed add \$50.00.



15' x 6' Quick Change Gear Lathe Including Countershaft and Equipment—\$485.00

15-inch Series "O" South Bend Lathe—Countershaft Drive

Back-Geared, Screw Cutting, Quick Change and Standard Change Gear Precision Lathes

The 15-inch Series "O" South Bend Back-Geared, Screw Cutting Lathe is a practical lathe for the manufacturing plant and general machine shop. The Series "O" has features and improvements that have made it a popular size for tool room purposes. This lathe will reduce the diameter of a steel shaft $\frac{1}{16}$ " in one cut and has the accuracy for all fine tool and gauge work.

Mechanical Features described below apply to all types of 15-inch South Bend Lathes. See specifications page 37.

Back-Geared Headstock is hand-scraped to lathe bed; has four-step cone for 2" belt; eight changes of spindle speeds from 20 to 579 R.P.M., four direct and four back-geared; wrenchless bull gear lock; and spring latch reverse.

Headstock Spindle is made of high carbon steel, finish ground, and has a $1\frac{1}{8}$ " hole its entire length. Collet capacity $\frac{1}{64}$ " to $\frac{3}{4}$ ". Spindle nose $2\frac{1}{4}$ " diam., 6 threads.

Phosphor Bronze Bearings for headstock spindle are line bored and lapped to a perfect bearing, and are adjustable for wear. An improved oiling system lubricates the bearings.

Quick Change Gear Box provides 48 changes for cutting screw threads from 2 to 112 per inch, right or left-hand; and for automatic longitudinal feeds from .0030" to .0208" per revolution of spindle, and for automatic cross feeds from .0011" to .0078" per revolution of spindle. See page 41.

Tailstock is hand-scraped to bed; has set-over for taper turning; graduated spindle; double plug spindle lock; No. 3 Morse Taper spindle center, hardened, ground and self-ejecting; spindle travel $5\frac{1}{4}$ ". See page 38.

Apron has worm drive for both the automatic cross feeds and automatic longitudinal feeds. Half-nuts and lead screw thread are used only for screw thread cutting. An automatic safety device prevents engaging half-nuts and automatic feeds at the same time. See page 40.

Carriage has wide deep bridge; is hand-scraped to bed; has T-slots for clamping work or fixtures; has carriage lock for facing and cutting off; and felt wipers for "V" ways.

Precision Lead Screw, $1\frac{1}{8}$ " diameter, 6 Acme standard screw threads per inch; guaranteed to meet the most exacting requirements for cutting screw threads. See page 40.

Compound Rest is graduated 180° ; swivels to any angle, and has angular travel of $3\frac{1}{8}$ ". Compound rest screw and cross feed screw have micrometer collars graduated in thousandths. Tool holder shank $\frac{1}{2}$ " x $1\frac{1}{8}$ " for cutters $\frac{5}{16}$ " square.

Lathe Bed is 50% steel, heavily constructed and reinforced by box braces its entire length. Three V-ways and one flat way accurately planed and hand-scraped, align and support the headstock, carriage and tailstock. See page 39.

Regular Equipment consists of: Countershaft; large and small face plates; tool post; thread cutting stop; two 60° lathe centers; spindle sleeve; center rest; follower rest; wrenches; installation plan and book, "How to Run a Lathe."

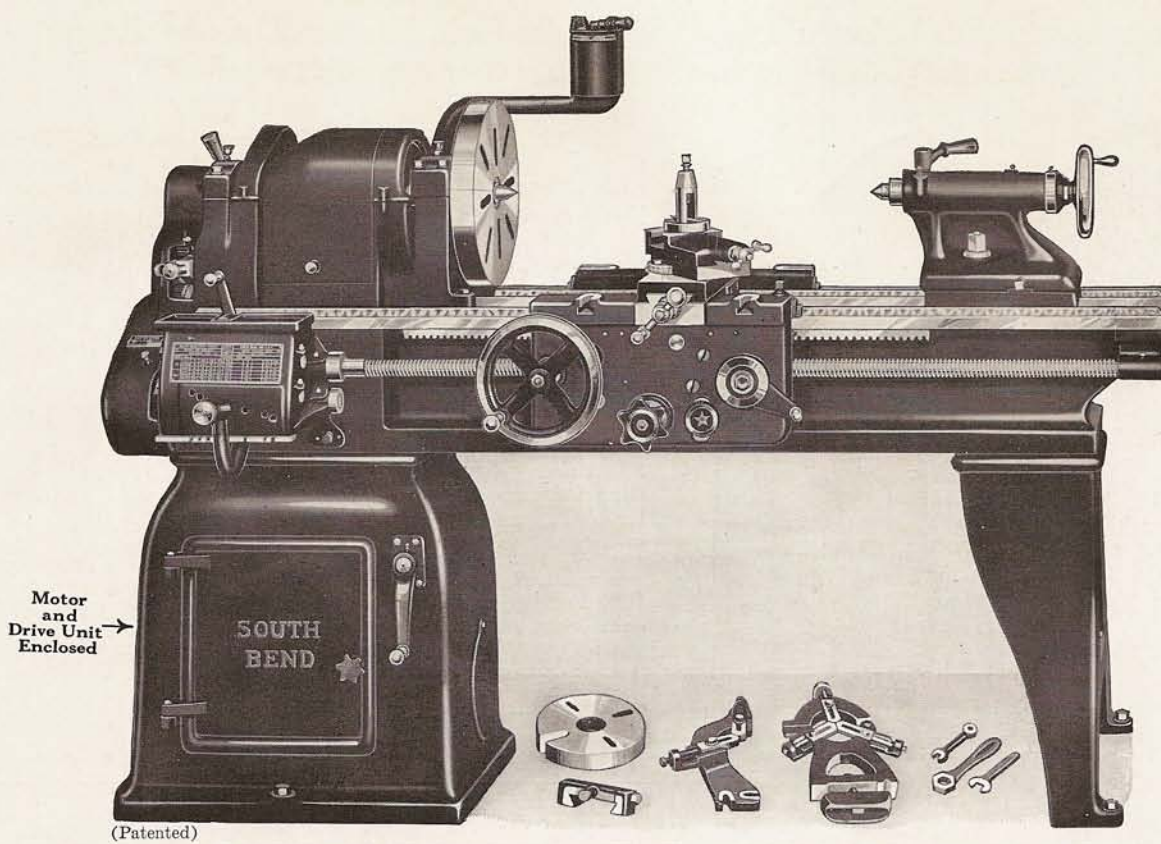
Attachments and Accessories such as collet chuck, taper attachment, etc., can be supplied, see pages 50 to 63.

The 15-inch Lathe is also available in the Standard Change Gear type as priced below and shown on page 12.

Net Factory Prices 15-inch Series "O" South Bend Lathes Including Countershaft and Regular Equipment

Swing Over Bed Inches	Length of Bed Feet	Distance Between Centers Inches	Hole Thru Spindle Inches	Swing Over Carriage Inches	Cone Pulley Belt Inches	Counter-shaft Speed R.P.M.	Power Required H.P.	Standard Change Gear Lathes				Quick Change Gear Lathes			
								Cat. No.	Code Word	Weight Crated Pounds	Net Factory Price	Cat. No.	Code Word	Weight Crated Pounds	Net Factory Price
15 $\frac{1}{4}$	5	24 $\frac{1}{2}$	1 $\frac{1}{2}$	10 $\frac{5}{8}$	2	225	1	39-B	Lance	1550	\$412.00	88-B	Latin	1575	\$467.00
15 $\frac{1}{4}$	6	36 $\frac{1}{2}$	1 $\frac{1}{2}$	10 $\frac{5}{8}$	2	225	1	39-C	Lewis	1625	430.00	88-C	Lemon	1650	485.00
15 $\frac{1}{4}$	7	48 $\frac{1}{2}$	1 $\frac{1}{2}$	10 $\frac{5}{8}$	2	225	1	39-D	Liver	1700	448.00	88-D	Liquor	1725	503.00
15 $\frac{1}{4}$	8	60 $\frac{1}{2}$	1 $\frac{1}{2}$	10 $\frac{5}{8}$	2	225	1	39-E	Lovit	1780	468.00	88-E	Lower	1805	523.00
15 $\frac{1}{4}$	10	84 $\frac{1}{2}$	1 $\frac{1}{2}$	10 $\frac{5}{8}$	2	225	1	39-G	Lunar	1945	512.00	88-G	Lupin	1970	567.00

If Countershaft is not wanted, deduct \$30.00 from above prices.



(Patented)

15" x 6' Underneath Belt Motor Driven Quick Change Gear Lathe Including Equipment—\$695.00

15-inch Series "O" South Bend Underneath Belt Motor Driven Lathe Back-Geared, Screw Cutting, Quick Change and Standard Change Gear Precision Lathes

The 15-inch Underneath Belt Motor Driven Quick Change Gear Lathe, shown above, is similar to the 15-inch Countershaft Driven Lathe illustrated on page 10, and has the same mechanical features and specifications; the only difference is that this lathe is equipped with Underneath Belt Motor Drive instead of Countershaft Drive.

Underneath Belt Motor Drive is a compact, self-contained unit, completely enclosed within the cabinet leg, under the headstock, away from dirt and chips. The motor and lower cone pulley are mounted on an adjustable tilting cradle which is controlled by the belt release crank on the front of the cabinet leg. A hinged guard covers the spindle cone pulley. For illustrations of the Underneath Belt Motor Drive mechanism and further description, see page 44.

Powerful and Efficient in Operation. Smooth even power is transmitted by V-belts from motor to lower drive unit and by flat leather belt to headstock cone pulley. This modern method of driving the lathe spindle is quiet, efficient, and powerful, and permits handling work with the greatest precision and accuracy.

Changing Spindle Speeds. The belt release crank on the front of the cabinet leg permits easy shifting of the belt from one step of the cone pulley to another for changing the spindle

speeds. A half turn of the belt release crank lifts the tilting cradle $1\frac{1}{2}$ inches and locks it in position, which permits the operator to place the belt on any step of spindle desired.

Belt Tension Adjustments are provided for regulating tension of V-belts from motor to driving unit and for obtaining any desired tension of the vertical belt between the lower drive unit and the headstock cone pulley.

Regular Equipment included in price of lathe consists of: Large and small face plates; tool post; thread cutting stop; two 60° lathe centers; spindle sleeve for headstock; center rest; follower rest; wrenches; lag screws and washers; installation plan blue print and book, "How to Run a Lathe."

Electrical Equipment included in the price consists of: Motor drive mechanism mounted in cabinet leg under headstock; 1 H.P., 1200 R.P.M. instant reversing motor (G.E., Westinghouse or equal make); drum reversing switch; wiring enclosed in metal conduit; three V-belts, motor to drive pulley; double ply flat leather belt and wiring diagram blue print.

The 15-inch Underneath Belt Motor Driven Lathe, shown above, is also available in the Standard Change Gear type, which is described on page 12 and priced below.

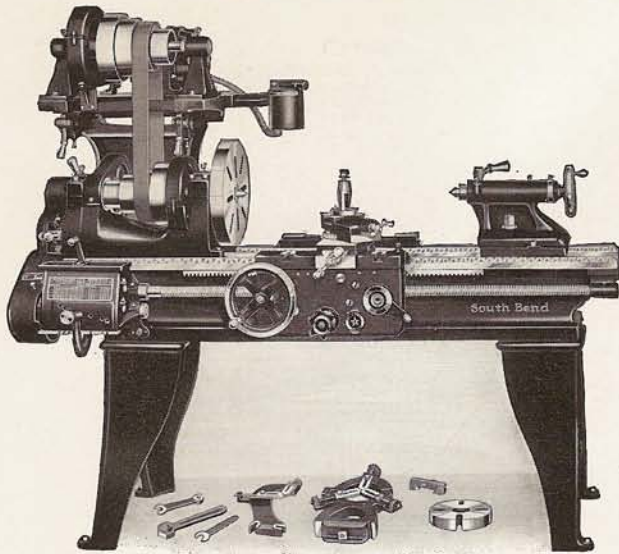
When Ordering a Motor Driven Lathe give specifications of the electric current to be used. See page 36 for information.

Net Factory Prices 15-inch Series "O" South Bend Underneath Belt Motor Driven Lathes Prices Include Regular Equipment, and Electrical Equipment as Listed Above

Swing Over Bed Inches	Length of Bed Feet	Distance Between Centers Inches	Hole Thru Spindle Inches	Swing Over Carriage Inches	Size Motor Used H.P.	Approx. Weight Crated Pounds	Standard Change Gear Lathes			Quick Change Gear Lathes						
							Cat. No.	Code Word	3-Phase 60-Cycle A.C. Motor	1-Phase 60-Cycle A.C. Motor	Direct Current Motor	Cat. No.	Code Word	3-Phase 60-Cycle A.C. Motor	1-Phase 60-Cycle A.C. Motor	Direct Current Motor
15 $\frac{1}{4}$	5	24 $\frac{1}{2}$	1 $\frac{1}{8}$	10 $\frac{3}{8}$	1	1995	139-B	Decie	\$622.00	\$660.00	\$638.00	188-B	Debez	\$677.00	\$715.00	\$743.00
15 $\frac{1}{4}$	6	36 $\frac{1}{2}$	1 $\frac{1}{8}$	10 $\frac{3}{8}$	1	2070	139-C	Dedab	640.00	678.00	706.00	188-C	Deboec	695.00	733.00	761.00
15 $\frac{1}{4}$	7	48 $\frac{1}{2}$	1 $\frac{1}{8}$	10 $\frac{3}{8}$	1	2145	139-D	Dedec	658.00	696.00	724.00	188-D	Debud	713.00	751.00	779.00
15 $\frac{1}{4}$	8	60 $\frac{1}{2}$	1 $\frac{1}{8}$	10 $\frac{3}{8}$	1	2225	139-E	Dedof	678.00	716.00	744.00	188-E	Decaz	733.00	771.00	799.00
15 $\frac{1}{4}$	10	84 $\frac{1}{2}$	1 $\frac{1}{8}$	10 $\frac{3}{8}$	1	2390	139-G	Defac	722.00	760.00	788.00	188-G	Deceb	777.00	815.00	843.00

15-inch Series "O" South Bend Silent V-Belt Motor Driven Lathe

Quick Change Gear and Standard Change Gear Precision Lathes



15" x 6' Quick Change Gear Silent V-Belt Motor Driven Lathe. . . \$625.00

The 15-inch Silent V-Belt Motor Driven Quick Change Gear Lathe shown at the left is similar to the 15-inch Countershaft Driven Lathe illustrated on page 10, and has the same mechanical features and specifications. The only difference is that this lathe is equipped with the Silent V-Belt Motor Drive instead of Countershaft Drive.

Silent V-Belt Motor Drive is efficient, powerful and noiseless in operation. Motor and driving cone are mounted on tilting table above headstock of lathe. Drive is by V-Belts from motor to driving pulley and by flat leather belt to spindle cone pulley. For detailed description of this drive see page 36.

Regular Equipment included in price of lathe consists of: Silent motor drive unit; large and small face plates; tool post; thread cutting stop; two 60° lathe centers and spindle sleeve for headstock; center rest; follower rest; wrenches; lag screws and washers; installation plan and book, "How to Run a Lathe."

Electrical Equipment included in price consists of: 1 H.P. 1200 R.P.M. instant reversing motor (G.E., Westinghouse or equal); drum reversing switch; wiring enclosed in metal conduit; three V-belts, motor to drive pulley; double ply flat leather cone pulley belt, and wiring diagram.

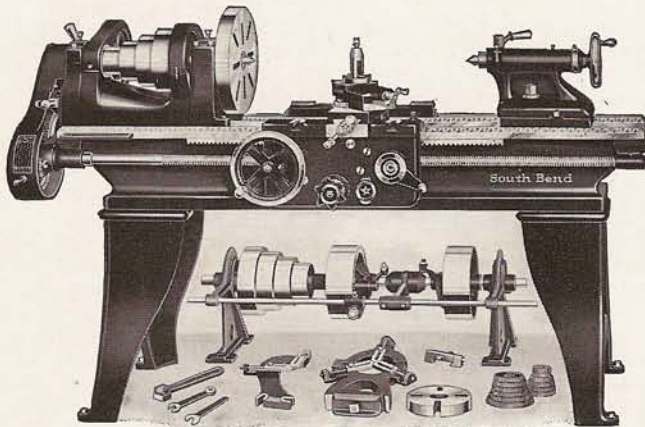
Net Factory Prices 15-inch Series "O" South Bend Silent V-Belt Motor Driven Lathes

Prices Include Lathe Equipment, Reversing Motor, Reversing Switch and Belting

Swing Over Bed Inches	Length of Bed Feet	Distance Between Centers Inches	Hole Thru Spindle Inches	Swing Over Carriage Inches	Size Motor Used H.P.	Approx. Weight Crated Pounds	Standard Change Gear Lathes				Quick Change Gear Lathes					
							Cat. No.	Code Word	3-Phase 60-Cycle A.C. Motor	1-Phase 60-Cycle A.C. Motor	Direct Current Motor	Cat. No.	Code Word	3-Phase 60-Cycle A.C. Motor	1-Phase 60-Cycle A.C. Motor	Direct Current Motor
15 1/4	5	24 1/2	1 1/8	10 3/8	1	1925	339-B	Loane	\$552.00	\$590.00	\$618.00	388-B	Labor	\$607.00	\$645.00	\$673.00
15 1/4	6	36 1/2	1 1/8	10 3/8	1	2000	339-C	Longe	570.00	608.00	636.00	388-C	Leone	625.00	663.00	691.00
15 1/4	7	48 1/2	1 1/8	10 3/8	1	2075	339-D	Lotus	588.00	626.00	654.00	388-D	Leper	643.00	681.00	709.00
15 1/4	8	60 1/2	1 1/8	10 3/8	1	2155	339-E	Luella	608.00	646.00	674.00	388-E	Licen	663.00	701.00	729.00
15 1/4	10	84 1/2	1 1/8	10 3/8	1	2320	339-G	Lyric	652.00	690.00	718.00	388-G	Lindy	707.00	745.00	773.00

15-inch Standard Change Gear Series "O" South Bend Lathe

Back-Geared, Screw Cutting Precision Lathe—Countershaft Drive



15" x 6' Standard Change Gear Countershaft Driven Lathe. \$430.00

The 15-inch Standard Change Gear Lathe is identical with the 15-inch Quick Change Gear Lathe illustrated on page 10, except that the quick change gear box is replaced by a set of Independent Change Gears. Features and specifications on page 10 apply to this Standard Change Gear Lathe.

Change Gears are used to cut standard screw threads, right or left-hand, from 2 to 40 per inch, as shown on chart below, and to provide a wide range of automatic longitudinal feeds and automatic cross feeds. Special change gear equipment for cutting standard screw threads from 44 to 80 per inch can be supplied at \$17.00 extra, when purchased with lathe. See page 43.

15-inch Standard Change Gear Lathe is also available with Underneath Belt Motor Drive as shown on page 11, and Silent V-Belt Motor Drive as shown above.

Equipment Included in Price consists of: Countershaft; large face plate; small face plate; tool post; thread cutting stop; two 60° lathe centers; spindle sleeve; center rest; follower rest; change gears; wrenches; installation plan and book, "How to Run a Lathe."

SCREW THREAD CUTTING CHART		
STANDARD CHANGE GEAR LATHE		
—13-15-16—		
THREADS PER INCH	STUD GEAR	SCREW GEAR
2	72	24
3	48	24
4	48	32
5	48	40
6	48	48
7	48	56
8	48	64
9	48	72
10	48	80
11	24	44
11 1/2	24	46
12	24	48
13	24	52
14	24	56
16	24	64
18	24	72
20	24	80
22	24-1-2	44
24	24-1-2	48
26	24-1-2	52
27	24-1-2	54
28	24-1-2	56
30	24-1-2	60
32	24-1-2	64
36	24-1-2	72
40	24-1-2	80

Metal Index Chart attached to Lathe

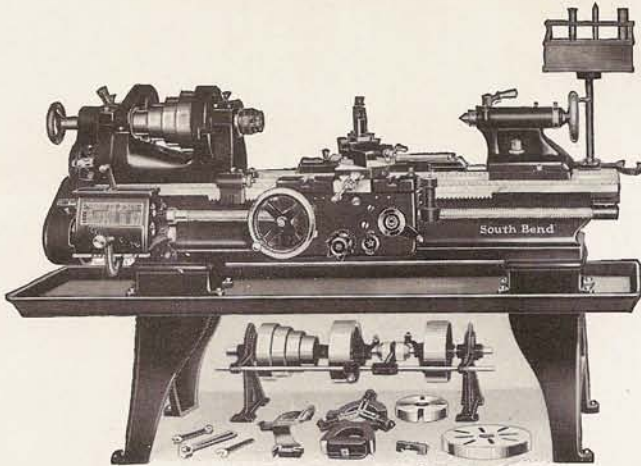
Prices 15-inch Series "O" Standard Change Gear Lathes with Countershaft and Equipment

Cat. No. of Lathe	Swing Over Bed Inches	Length of Bed Feet	Distance Between Centers Inches	Hole Thru Spindle Inches	Swing Over Carriage Inches	Cone Pulley Belt Inches	Countershaft Speed R.P.M.	Power Required H.P.	Weight Crated Pounds	Code Word	Net Factory Price
39-B	15 1/4	5	24 1/2	1 1/8	10 3/8	2	225	1	1550	Lance	\$412.00
39-C	15 1/4	6	36 1/2	1 1/8	10 3/8	2	225	1	1625	Lewis	430.00
39-D	15 1/4	7	48 1/2	1 1/8	10 3/8	2	225	1	1700	Liver	448.00
39-E	15 1/4	8	60 1/2	1 1/8	10 3/8	2	225	1	1780	Lovit	468.00
39-G	15 1/4	10	84 1/2	1 1/8	10 3/8	2	225	1	1945	Lunar	512.00

If Countershaft is not wanted, deduct \$30.00.

15-inch Series "O" Tool Room Lathe—Countershaft Drive

Back-Geared, Screw Cutting Precision Lathe—Quick Change Gear Type



15" x 6' Tool Room Lathe, Countershaft Drive.....\$709.25

The 15-inch South Bend Tool Room Precision Lathe, illustrated at left, is recommended for the finest class of tool, gauge and fixture work in the modern tool room. This lathe is ideal for making precision taps, master thread gauges, dies, tools, etc., and will meet the most exacting demands of the expert mechanic for accuracy and precision.

15-inch Tool Room Precision Lathe is built up of the same units as used on the 15-inch Quick Change Gear Lathe illustrated and described on page 10, and has the same mechanical features and specifications.

Tool Room Lathe Attachments itemized in the tabulation below may be purchased complete with lathe, or individually as desired. For complete information on attachments, see pages 50 to 63.

Regular Equipment Included In Price of lathe consists of: countershaft; large face plate; small face plate; tool post; adjustable thread cutting stop; two 60° lathe centers; spindle sleeve; center rest; follower rest; wrenches; installation plan and book, "How to Run a Lathe."

Net Factory Prices 15-inch Series "O" South Bend Tool Room Precision Lathes—Countershaft Drive

15-inch Tool Room Quick Change Gear Precision Lathe Countershaft Drive, with Regular Lathe Equipment but without Tool Room Attachments.....

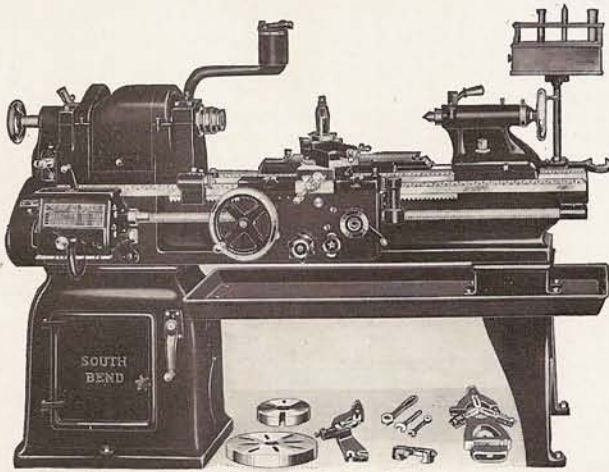
No. 888-B—15" x 5'		No. 888-C—15" x 6'		No. 888-D—15" x 7'	
Code Word	Price	Code Word	Price	Code Word	Price
Latin	\$467.00	Lemon	\$485.00	Liquor	\$503.00
Above	45.00	Above	45.00	Above	45.00
Civit	4.25	Civit	4.25	Civit	4.25
Doted	85.00	Doted	85.00	Doted	85.00
Aesop	12.00	Aesop	12.00	Aesop	12.00
Obern	45.00	Okres	49.00	Olean	53.00
Cigar	14.00	Cigar	14.00	Cigar	14.00
Cnarl	15.00	Cnarl	15.00	Cnarl	15.00
Likos	\$687.25	Lomar	\$709.25	Lunes	\$731.25

TOOL ROOM ATTACHMENTS
 Draw-in Collet Chuck (Hand Wheel Type) with One Collet, Any size
 Extra Collets $\frac{1}{16}$ -inch up to $\frac{3}{4}$ -inch capacity by 64ths. Each.....
 Taper Attachment.....
 Thread Indicator.....
 Oil Pan.....
 Micrometer Carriage Stop.....
 Collet Cabinet and Bracket.....

Prices of Tool Room Lathe, Complete as Illustrated Above.....
 Distance Between Centers of Lathe.....
 Weight of Lathe and Tool Room Attachments Crated for Shipment.....

15-inch Series "O" Tool Room Lathe—Underneath Belt Motor Drive

Back-Geared, Screw Cutting Precision Lathe—Quick Change Gear Type



15" x 6' Tool Room Lathe, Underneath Belt Motor Drive.....\$904.25

The 15-inch South Bend Underneath Belt Motor Driven Tool Room Precision Lathe, illustrated at left, is similar to the 15-inch Countershaft Driven Tool Room Lathe shown above, and has the same mechanical features and specifications. The only difference is that this lathe is equipped with Underneath Belt Motor Drive instead of Countershaft Drive.

Underneath Belt Motor Drive Mechanism used on this lathe is illustrated and further described on page 44.

Tool Room Lathe Attachments itemized in the tabulation below may be purchased complete with lathe, or individually as desired. See pages 50 to 63.

Regular Equipment consists of: motor drive unit; large face plate; small face plate; tool post; thread cutting stop; two 60° lathe centers; spindle sleeve; center rest; follower rest; wrenches; installation plan and book, "How to Run a Lathe."

Electrical Equipment included in price of lathe consists of 1-H.P. 1200 R.P.M. instant reversing motor (Westinghouse, General Electric, or equal make); drum reversing switch; wiring between motor and switch, enclosed in metal conduit; three V-Belts; one flat leather belt and directions for wiring.

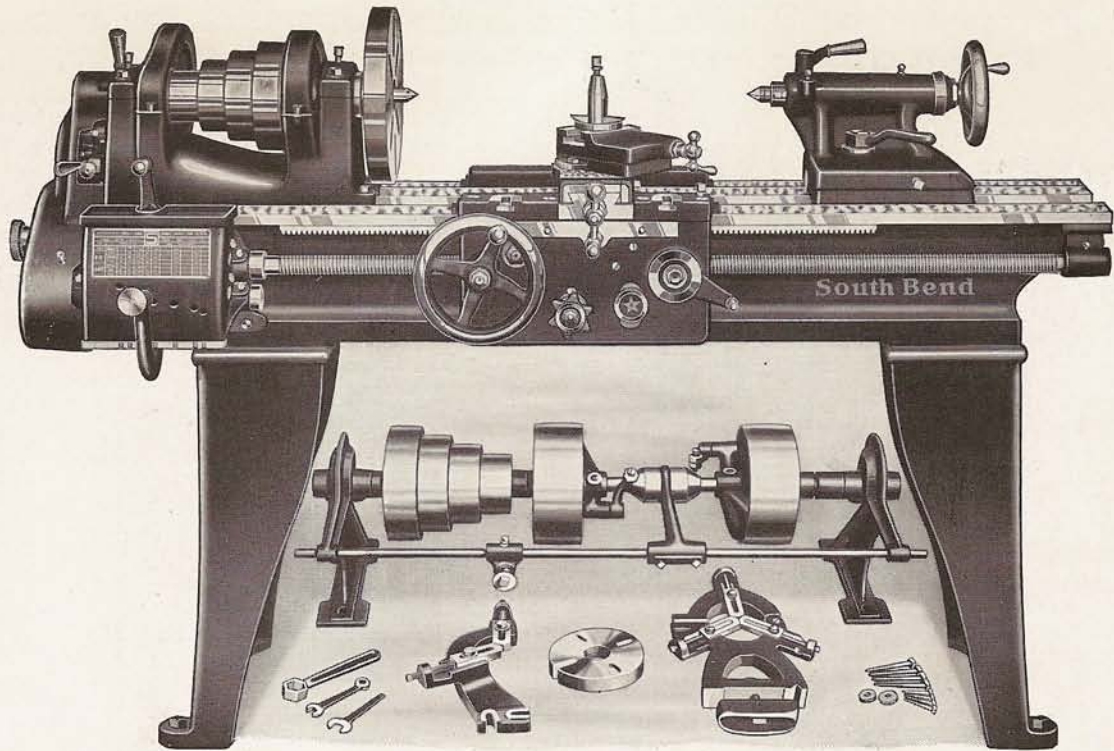
Net Factory Prices 15-inch Series "O" South Bend Tool Room Precision Lathes—Underneath Belt Motor Drive

Catalog No. 1888-C, 15" x 6' Tool Room Quick Change Gear Precision Lathe, with Underneath Belt Motor Drive, Regular Lathe Equipment and Electrical Equipment but without Tool Room Attachments.....

With 3 Phase-60 Cycle A. C. Motor		With 1 Phase-60 Cycle A. C. Motor		With Direct Current Motor	
Code Word	Price	Code Word	Price	Code Word	Price
Deboe	\$695.00	Deboe	\$733.00	Deboe	\$761.00
Above	45.00	Above	45.00	Above	45.00
Civit	4.25	Civit	4.25	Civit	4.25
Doted	85.00	Doted	85.00	Doted	85.00
Aesop	12.00	Aesop	12.00	Aesop	12.00
Boplo	34.00	Boplo	34.00	Boplo	34.00
Cigar	14.00	Cigar	14.00	Cigar	14.00
Cnarl	15.00	Cnarl	15.00	Cnarl	15.00
Dewuz	\$904.25	Deyav	\$942.25	Deyix	\$ 970.25

Prices of Tool Room Lathe, Complete as Illustrated Above.....
 Distance Between Centers of Lathe.....
 Weight of Lathe and Tool Room Attachments Crated for Shipment.....

For prices of Tool Room Lathes complete with 5 ft. bed deduct \$22.00 from above price. For 7 ft. bed add \$22.00.



13" x 5' Quick Change Gear Lathe Including Countershaft and Equipment—\$402.00

13-inch Series "O" South Bend Lathe—Countershaft Drive Back-Geared, Screw Cutting, Quick Change and Standard Change Gear Precision Lathes

The 13-inch Series "O" South Bend Back-Geared, Screw Cutting Precision Lathe is practical for the manufacturing plant, machine shop, tool room and laboratory. This lathe will reduce the diameter of a steel shaft $\frac{5}{8}$ " in one cut, and has the accuracy for the finest tool and gauge work.

Mechanical Features described below apply to all types of 13-inch South Bend Lathes. See specifications page 37.

Back-Geared Headstock is hand-scraped to lathe bed; has four-step cone for $1\frac{3}{4}$ " belt; eight changes of spindle speeds from 23 to 605 R.P.M., four direct and four back-geared; wrenchless bull gear lock; and spring latch reverse.

Headstock Spindle is made of high carbon steel, finish ground, and has a 1" hole its entire length. Collet capacity $\frac{1}{64}$ " to $\frac{5}{8}$ ". Spindle nose $1\frac{1}{8}$ " diam., 8 threads.

Phosphor Bronze Bearings for headstock spindle are line bored and lapped to a perfect bearing, and are adjustable for wear. An improved oiling system lubricates the bearings.

Quick Change Gear Box provides 48 changes for cutting screw threads from 2 to 112 per inch, right or left-hand; and for automatic longitudinal feeds from .0030" to .0208" per revolution of spindle, and for automatic cross feeds from .0011" to .0078" per revolution of spindle. See page 41.

Tailstock is hand-scraped to bed; has set-over for taper turning; graduated spindle; double plug spindle lock; No. 3 Morse Taper spindle center, hardened, ground and self-ejecting; spindle travel $4\frac{1}{4}$ ". See page 38.

New Apron has automatic cross feed and automatic longitudinal feed (both controlled by a friction clutch). Half-nuts are provided for screw thread cutting. An automatic safety device prevents engaging half-nuts and automatic feeds at the same time. See page 40.

Carriage has wide deep bridge, hand-scraped to bed; two T-slots for clamping work; carriage lock for facing and cutting off; felt wipers for V-ways.

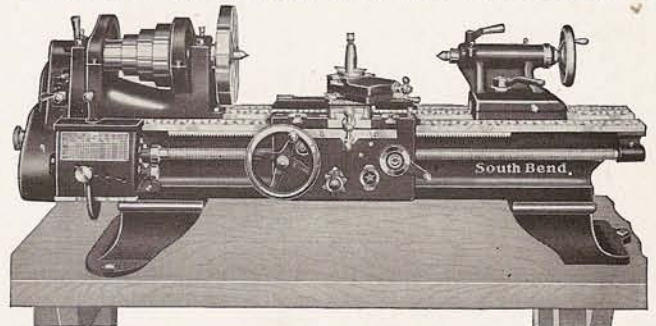
Precision Lead Screw, 1" diameter, 6 Acme standard threads per inch, for cutting screw threads. See page 40.

Compound Rest is graduated 180°, swivels to any angle and has an angular travel of 3". Shown on page 39.

Lathe Bed is 50% steel, heavily constructed and reinforced by box braces its entire length. See page 39.

Regular Equipment consists of: Countershaft; large and small face plates; tool post; thread cutting stop; two 60° lathe centers; spindle sleeve; center rest; follower rest; wrenches; installation plan and book, "How to Run a Lathe."

The 13-inch Lathe is also available in the Standard Change Gear type as priced below and shown on page 16.

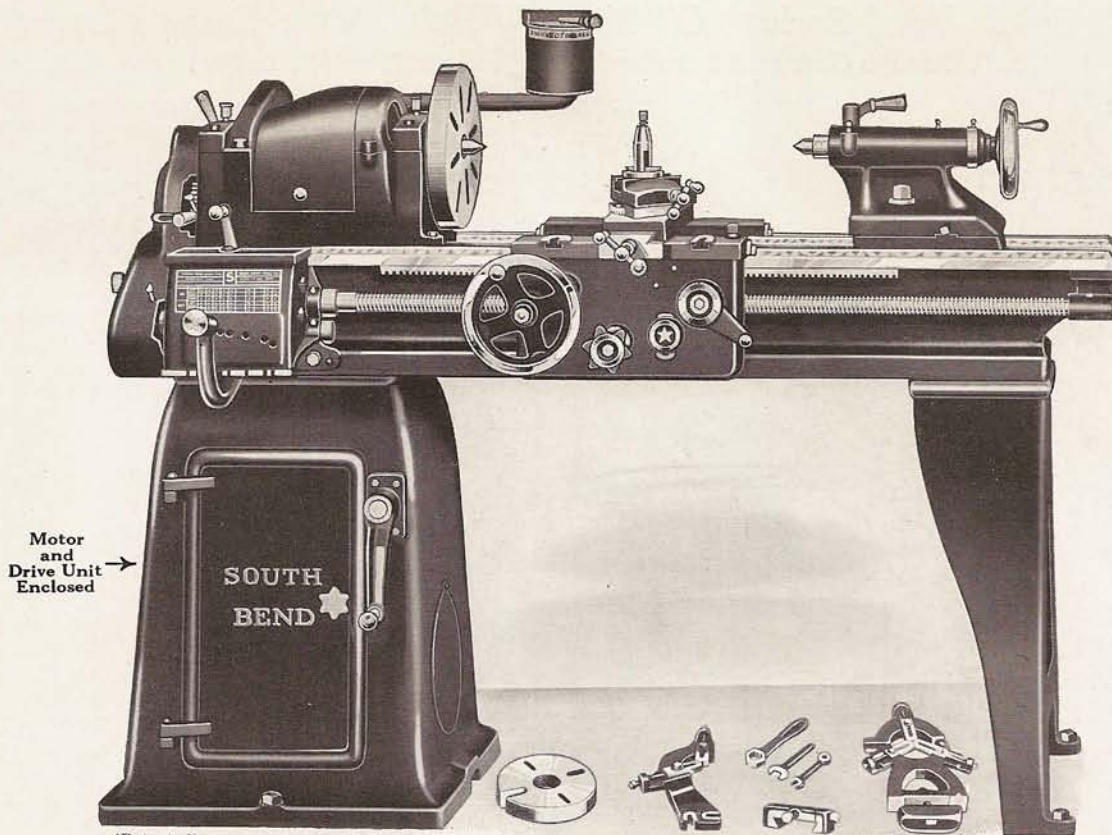


13" x 5' Quick Change Gear Bench Lathe.....\$392.00

Net Factory Prices 13-inch Series "O" South Bend Lathes Including Countershaft and Regular Equipment

Swing Over Bed Inches	Length of Bed Feet	Distance Between Centers Inches	Hole Thru Spindle Inches	Swing Over Carriage Inches	Cone Pulley Belt Inches	Countershaft Speed R.P.M.	Power Required H.P.	Standard Change Gear Lathes				Quick Change Gear Lathes			
								Cat. No.	Code Word	Weight Crated Pounds	Net Factory Price	Cat. No.	Code Word	Weight Crated Pounds	Net Factory Price
13 1/4	4	16	1	9	1 3/4	250	3/4	35-A	Gaget	1040	\$337.00	86-A	Galup	1060	\$387.00
13 1/4	5	28	1	9	1 3/4	250	3/4	35-B	Geldy	1090	352.00	86-B	Gehos	1110	402.00
13 1/4	6	40	1	9	1 3/4	250	3/4	35-C	Gisot	1140	367.00	86-C	Gifts	1160	417.00
13 1/4	7	52	1	9	1 3/4	250	3/4	35-D	Goldy	1195	384.00	86-D	Gobli	1215	434.00
13 1/4	8	64	1	9	1 3/4	250	3/4	35-E	Guset	1255	403.00	86-E	Guaik	1275	453.00

If Countershaft is not wanted, deduct \$20.00 from above prices. If bench legs are wanted instead of floor legs, deduct \$10.00.



(Patented)

13" x 5' Underneath Belt Motor Driven Quick Change Gear Lathe Including Equipment—\$575.00

13-inch Series "O" South Bend Underneath Belt Motor Driven Lathe Back-Gearred, Screw Cutting, Quick Change and Standard Change Gear Precision Lathes

The 13-inch Underneath Belt Motor Driven Quick Change Gear Lathe, shown above is similar to the 13-inch Quick Change Gear Countershaft Driven Lathe illustrated and described on page 14 of this catalog, and has the same mechanical features and specifications; the only difference is that the above lathe is equipped with Underneath Belt Motor Drive instead of Overhead Countershaft Drive.

Underneath Belt Motor Drive is a compact, self-contained unit, completely enclosed within the cabinet leg, under the headstock, away from dirt and chips. The motor and lower cone pulley are mounted on an adjustable tilting cradle which is controlled by the belt release crank on the front of the cabinet leg. A hinged guard covers the spindle cone pulley. For illustrations of the Underneath Belt Motor Drive mechanism and further description, see page 44.

Powerful and Efficient in Operation. Smooth even power is transmitted by V-belts from motor to lower drive unit and by flat leather belt to headstock cone pulley. This modern method of driving the lathe spindle is quiet, efficient, and powerful, and permits handling work with the greatest precision and accuracy.

Belt Tension Adjustments are provided for regulating tension of V-belts from motor to driving unit and for obtaining any desired tension of the vertical belt between the lower drive unit and the headstock cone pulley.

Changing Spindle Speeds. The belt release crank on the front of the cabinet leg permits easy shifting of the belt from one step of the cone pulley to another for changing the spindle speeds. A half turn of the belt release crank lifts the tilting cradle $1\frac{1}{2}$ inches and locks it in position, which permits the operator to place the belt on any step of spindle desired.

Regular Equipment included in price of lathe consists of: Large and small face plates; tool post; thread cutting stop; two 60° lathe centers; spindle sleeve for headstock; center rest; follower rest; wrenches; lag screws and washers; installation plan blue print and book, "How to Run a Lathe."

Electrical Equipment included in the price consists of: Motor drive mechanism mounted in cabinet leg under headstock; $\frac{3}{4}$ H.P., instant reversing motor (General Electric, Westinghouse or equal make); drum reversing switch; wiring enclosed in metal conduit; two V-belts, motor to drive pulley; double ply flat leather belt and wiring diagram blue print.

Attachments and Accessories such as draw-in collet chuck, collets, etc., can be supplied. See pages 50-63.

The 13-inch Underneath Belt Motor Driven Lathe, shown above, is also available in the Standard Change Gear type, which is described on page 16 and priced below.

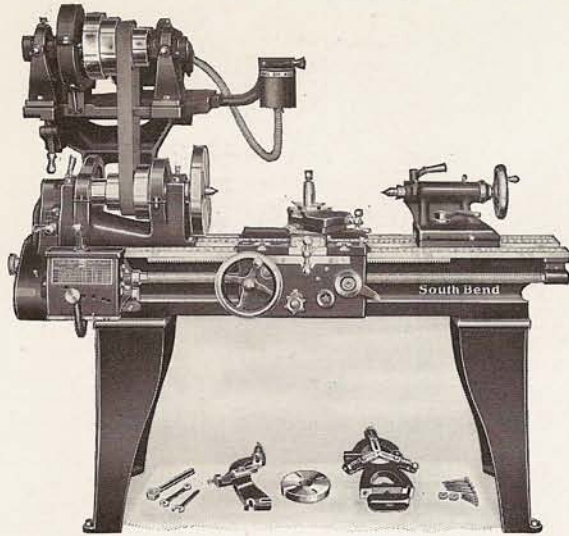
When Ordering a Motor Driven Lathe give specifications of the electric current to be used. See page 36 for information.

Net Factory Prices 13-inch Series "O" South Bend Underneath Belt Motor Driven Lathes
Prices Include Regular Equipment, and Electrical Equipment as Listed Above

Swing Over Bed Inches	Length of Bed Feet	Distance Between Centers Inches	Hole Thru Spindle Inches	Swing Over Carriage Inches	Size Motor Used H.P.	Approx. Weight Crated Pounds	Standard Change Gear Lathes			Quick Change Gear Lathes						
							Cat. No.	Code Word	3-Phase 60-Cycle A.C. Motor	1-Phase 60-Cycle A.C. Motor	Direct Current Motor	Cat. No.	Code Word	3-Phase 60-Cycle A.C. Motor	1-Phase 60-Cycle A.C. Motor	Direct Current Motor
13 $\frac{1}{4}$	4	16	1	9	$\frac{3}{4}$	1460	135-A	Dayer	\$510.00	\$520.00	\$535.00	186-A	Davus	\$560.00	\$570.00	\$585.00
13 $\frac{1}{4}$	5	28	1	9	$\frac{3}{4}$	1510	135-B	Dazar	\$25.00	\$35.00	\$50.00	186-B	Dawap	\$75.00	\$85.00	\$600.00
13 $\frac{1}{4}$	6	40	1	9	$\frac{3}{4}$	1560	135-C	Dazit	\$40.00	\$50.00	\$65.00	186-C	Dawir	\$90.00	\$100.00	\$615.00
13 $\frac{1}{4}$	7	52	1	9	$\frac{3}{4}$	1615	135-D	Dazov	\$57.00	\$67.00	\$82.00	186-D	Dawos	\$107.00	\$117.00	\$632.00
13 $\frac{1}{4}$	8	64	1	9	$\frac{3}{4}$	1675	135-E	Debay	\$76.00	\$86.00	\$101.00	186-E	Dawut	\$126.00	\$136.00	\$651.00

13-inch South Bend Series "O" Silent V-Belt Motor Driven Lathe

Quick Change Gear and Standard Change Gear Precision Lathes



13" x 5' Quick Change Gear Silent Motor Driven Lathe. . \$535.00

The 13-inch Series "O" South Bend Silent V-Belt Motor Driven Quick Change Gear Lathe, shown at the left, is similar to the 13-inch Quick Change Gear Countershaft Driven Lathe illustrated and described on page 14, and has the same mechanical features and specifications; the only difference is that this lathe is equipped with the Silent V-Belt Motor Drive instead of Countershaft Drive.

Silent V-Belt Motor Drive is efficient, powerful and noiseless in operation. Motor and driving cone are mounted on tilting table above headstock of lathe. The tilting table is fitted with locking cam and belt adjustment. Drive is by V-belts from motor to driving pulley and by flat leather belt to spindle cone pulley. For detailed description of this drive, see page 36.

Regular Equipment Included in Price of the 13-inch Silent V-Belt Motor Driven Lathe consists of: Silent motor drive unit; large and small face plates; tool post; thread cutting stop; two 60° lathe centers and spindle sleeve for headstock; center rest; follower rest; wrenches; lag screws; washers; installation plan and book, "How to Run a Lathe."

Electrical Equipment Included in Price of the 13-inch Silent V-Belt Motor Driven Lathe consists of: 3/4 H.P. instant reversing motor (General Electric, Westinghouse, or equal make); drum reversing switch; wiring enclosed in metal conduit; two V-belts, motor to drive pulley; double ply flat leather cone pulley belt and wiring diagram.

Net Factory Prices 13-inch Series "O" South Bend Silent V-Belt Motor Driven Lathes

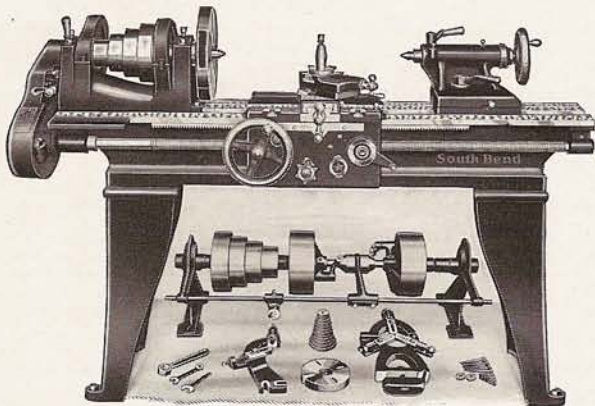
Prices Include Lathe Equipment, Reversing Motor, Reversing Switch and Belting

Swing Over Bed Inches	Length of Bed Feet	Distance Between Centers Inches	Hole Thru Spindle Inches	Swing Over Carriage Inches	Size Motor Used H.P.	Approx. Weight Crated Pounds	Standard Change Gear Lathes			Quick Change Gear Lathes						
							Cat. No.	Code Word	3-Phase 60-Cycle A.C. Motor	1-Phase 60-Cycle A.C. Motor	Direct Current Motor	Cat. No.	Code Word	3-Phase 60-Cycle A.C. Motor	1-Phase 60-Cycle A.C. Motor	Direct Current Motor
13 3/4	4	16	1	9	3/4	1410	335-A	Glubr	\$ 470.00	\$492.00	\$506.00	386-A	Gazed	\$520.00	\$542.00	\$556.00
13 3/4	5	28	1	9	3/4	1460	335-B	Guest	485.00	507.00	521.00	386-B	Gemic	535.00	557.00	571.00
13 3/4	6	40	1	9	3/4	1510	335-C	G ramp	500.00	522.00	536.00	386-C	Giraf	550.00	572.00	586.00
13 3/4	7	52	1	9	3/4	1565	335-D	Grief	517.00	539.00	553.00	386-D	Gotam	567.00	589.00	603.00
13 3/4	8	64	1	9	3/4	1625	335-E	Gwilt	536.00	558.00	572.00	386-E	Gneza	586.00	608.00	622.00

If Bench Legs are wanted in lieu of Floor Legs, deduct \$7.00.

13-inch Standard Change Gear Series "O" South Bend Lathe

Back-Gearred, Screw Cutting Precision Lathe—Countershaft Drive



13" x 5' Standard Change Gear Countershaft Driven Lathe. . \$352.00

The 13-inch Standard Change Gear Lathe is identical with the 13-inch Quick Change Gear Lathe illustrated on page 14, except that the quick change gear box is replaced by a set of Independent Change Gears. Features and specifications on page 14 apply to this Standard Change Gear Lathe.

Change Gears are used to cut standard screw threads, right or left-hand, from 2 to 40 per inch, as shown on chart below, and to provide a wide range of automatic longitudinal and cross feeds. Special gear equipment for cutting standard screw threads from 44 to 80 can be supplied at \$14.00 extra, when purchased with lathe. See page 43.

13-inch Standard Change Gear Lathe is also available with Underneath Belt Motor Drive shown on page 15, and Silent V-Belt Motor Drive shown above.

Regular Equipment Included in the Price of the 13-inch Standard Change Gear Lathe consists of: Double friction countershaft; large face plate; small face plate; tool post complete; adjustable thread cutting stop; two 60° lathe centers; spindle sleeve; center rest; follower rest; wrenches; change gears; installation plan and book, "How to Run a Lathe."

SCREW THREAD CUTTING CHART		
STANDARD CHANGE GEAR LATHE		
13'-15'-16'		
THREADS PER INCH	STUB GEAR	SCREW GEAR
2	72	24
3	48	24
4	48	24
5	48	40
6	48	48
7	48	56
8	48	64
9	48	72
10	48	80
11	24	44
11 1/2	24	46
12	24	48
13	24	52
14	24	56
16	24	64
18	24	72
20	24	80
22	24-1-2	44
24	24-1-2	48
26	24-1-2	52
27	24-1-2	54
28	24-1-2	56
30	24-1-2	60
32	24-1-2	64
36	24-1-2	72
40	24-1-2	80

Metal Index Chart attached to Lathe

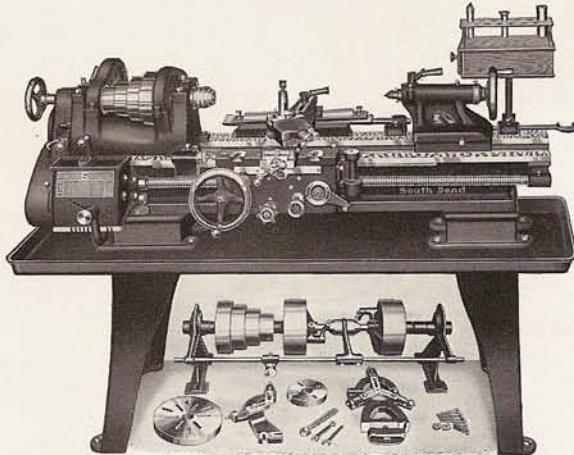
Prices 13-inch Series "O" Standard Change Gear Lathes with Countershaft and Equipment

Cat. No. of Lathe	Swing Over Bed Inches	Length of Bed Feet	Distance Between Centers Inches	Hole Thru Spindle Inches	Swing Over Carriage Inches	Cone Pulley Belt Inches	Countershaft Speed R.P.M.	Power Required H.P.	Weight Crated Pounds	Code Word	Net Factory Price
35-A	13 3/4	4	16	1	9	1 3/4	250	3/4	1040	Gaget	\$337.00
35-B	13 3/4	5	28	1	9	1 3/4	250	3/4	1090	Geldy	352.00
35-C	13 3/4	6	40	1	9	1 3/4	250	3/4	1140	Gisot	367.00
35-D	13 3/4	7	52	1	9	1 3/4	250	3/4	1195	Goldy	384.00
35-E	13 3/4	8	64	1	9	1 3/4	250	3/4	1255	Guset	403.00

If Countershaft is not wanted, deduct \$20.00. If Bench legs are wanted instead of floor legs, deduct \$10.00.

13-inch Series "O" Tool Room Lathe—Countershaft Drive

Back-Geared, Screw Cutting Precision Lathe—Quick Change Gear Type



13" x 5' Tool Room Lathe, Countershaft Drive.....\$595.00

The 13-inch Series "O" South Bend Tool Room Precision Lathe, illustrated at left, is recommended for the finest class of tool, gauge and fixture work in the modern tool room. This lathe is ideal for making precision taps, master thread gauges, dies, tools, etc., and will meet the most exacting demands of the expert mechanic for accuracy and precision.

13-inch Tool Room Precision Lathe is built up of the same units as used on the 13-inch Quick Change Gear Lathe illustrated and described on page 14, and has the same mechanical features and specifications. This lathe is also available in Underneath Belt Motor Drive type shown below.

Tool Room Lathe Attachments itemized in the tabulation below may be purchased complete with the lathe, or individually as desired. For illustrations, description and prices of attachments, see pages 50 to 63 of this catalog.

Regular Equipment Included in the Price of the 13-inch South Bend Tool Room Precision Lathe with Overhead Countershaft Drive consists of: Double friction countershaft; large face plate; small face plate; tool post complete; adjustable thread cutting stop; two 60° lathe centers; spindle sleeve; center rest; follower rest; wrenches; installation plan and book, "How to Run a Lathe."

Net Factory Prices 13-inch Series "O" South Bend Tool Room Precision Lathes—Countershaft Drive

13-inch Tool Room Quick Change Gear Precision Lathe, Countershaft Drive, with Regular Lathe Equipment but without Tool Room Attachments.....

TOOL ROOM ATTACHMENTS

- Draw-in Collet Chuck (Hand Wheel Type) with One Collet, Any Size
- Extra Collets $\frac{1}{16}$ -inch up to $\frac{3}{8}$ -inch capacity by 64ths. Each.....
- Taper Attachment.....
- Thread Indicator.....
- Oil Pan.....
- Micrometer Carriage Stop.....
- Collet Cabinet and Bracket.....

Prices of Tool Room Lathe, Complete as Illustrated Above.....

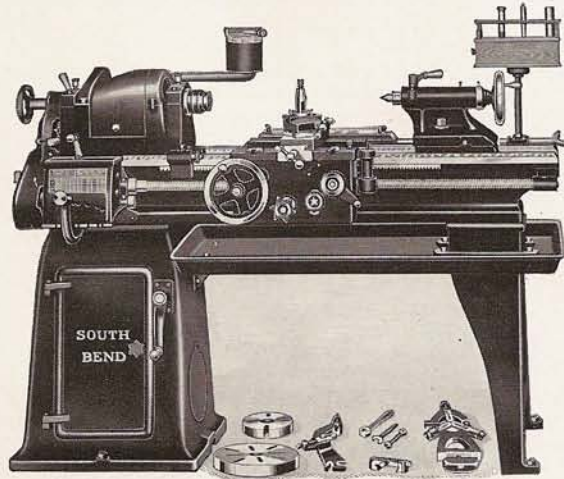
Distance Between Centers of Lathe.....

Weight of Lathe and Tool Room Attachments Crated for Shipment.....

No. 886-B—13" x 5'		No. 886-C—13" x 6'		No. 886-D—13" x 7'	
Code Word	Price	Code Word	Price	Code Word	Price
Gehos	\$402.00	Gifts	\$417.00	Gobli	\$434.00
About	40.00	About	40.00	About	40.00
Chose	4.00	Chose	4.00	Chose	4.00
Digit	75.00	Digit	75.00	Digit	75.00
Advis	11.00	Advis	11.00	Advis	11.00
Ohern	38.00	Okres	41.00	Lean	44.00
Chain	13.00	Chain	13.00	Chain	13.00
Cnoke	12.00	Cnoke	12.00	Cnoke	12.00
Grose	\$595.00	Gefop	\$613.00	Gobis	\$633.00
	28 in.		40 in.		52 in.
	1290 lbs.		1340 lbs.		1395 lbs.

13-inch Series "O" Tool Room Lathe—Underneath Belt Motor Drive

Back-Geared, Screw Cutting Precision Lathe—Quick Change Gear Type



13" x 5' Tool Room Lathe, Underneath Belt Motor Drive, \$757.00

The 13-inch Series "O" South Bend Underneath Belt Motor Driven Tool Room Precision Lathe, illustrated at left, is similar to the 13-inch Countershaft Driven Tool Room Lathe shown above, and has the same mechanical features and specifications. The only difference is that this lathe is equipped with Underneath Belt Motor Drive instead of Countershaft Drive.

Underneath Belt Motor Drive Mechanism used on this lathe is illustrated and further described on page 44.

Tool Room Lathe Attachments itemized in the tabulation below may be purchased complete with lathe, or individually as desired. For complete information on attachments, see pages 50 to 63.

Regular Equipment Included in the Price of the 13-inch Underneath Belt Motor Driven Tool Room Lathe consists of: Motor drive unit; large face plate; small face plate; tool post; thread cutting stop; two 60° lathe centers; spindle sleeve; center rest; follower rest; wrenches; installation plan and book, "How to Run a Lathe."

Electrical Equipment included in the price of this lathe consists of: $\frac{3}{4}$ H.P. instant reversing motor (Westinghouse, General Electric, or equal make); drum reversing switch; wiring between motor and switch, enclosed in metal conduit; two V-belts; one flat leather belt and directions for wiring.

Net Factory Prices 13-inch Series "O" South Bend Tool Room Precision Lathes—Underneath Belt Motor Drive

Catalog No. 1886-B, 13" x 5' Tool Room Quick Change Gear Lathe, with Underneath Belt Motor Drive, Lathe Equipment and Electrical Equipment, but not Tool Room Attachments.....

TOOL ROOM ATTACHMENTS

- Draw-in Collet Chuck (Hand Wheel Type) with One Collet, Any Size
- Extra Collets $\frac{1}{16}$ -inch up to $\frac{3}{8}$ -inch capacity by 64ths. Each.....
- Taper Attachment.....
- Thread Indicator.....
- Chip Pan.....
- Micrometer Carriage Stop.....
- Collet Cabinet and Bracket.....

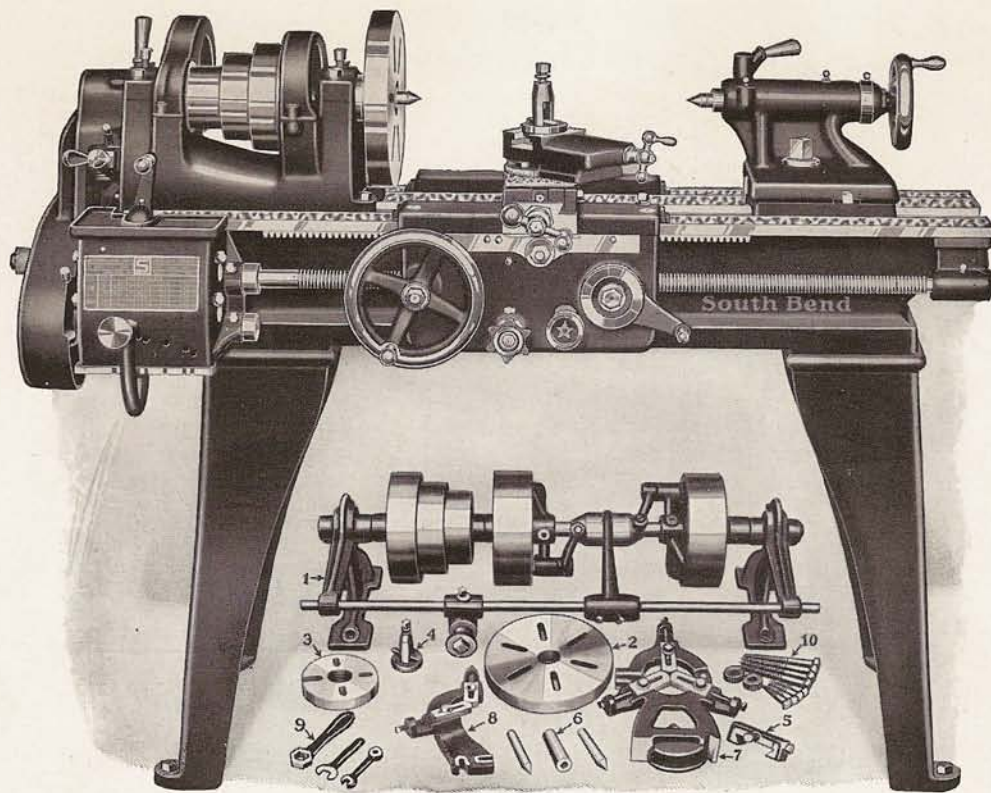
Prices of Tool Room Lathe, Complete as Illustrated Above.....

Distance Between Centers of Lathe.....

Weight of Lathe and Tool Room Attachments Crated for Shipment.....

With 3 Phase-60 Cycle A. C. Motor		With 1 Phase-60 Cycle A. C. Motor		With Direct Current Motor	
Code Word	Price	Code Word	Price	Code Word	Price
Dawap	\$575.00	Dawap	\$585.00	Dawap	\$600.00
About	40.00	About	40.00	About	40.00
Chose	4.00	Chose	4.00	Chose	4.00
Digit	75.00	Digit	75.00	Digit	75.00
Advis	11.00	Advis	11.00	Advis	11.00
Bonga	27.00	Bonga	27.00	Bonga	27.00
Chain	13.00	Chain	13.00	Chain	13.00
Cnoke	12.00	Cnoke	12.00	Cnoke	12.00
Devet	\$757.00	Dewat	\$767.00	Dewev	\$782.00
	28 in.		28 in.		28 in.
	1665 lbs.		1675 lbs.		1660 lbs.

For prices of Tool Room Lathes complete with 6 ft. bed add \$18.00 to above prices. For 7 ft. bed add \$38.00.



11" x 4' Quick Change Gear Lathe Including Countershaft and Equipment—\$358.00

11-inch Series "O" South Bend Lathe—Countershaft Drive Back-Geared, Screw Cutting, Quick Change and Standard Change Gear Precision Lathes

The 11-inch Series "O" South Bend Back-Geared, Screw Cutting Precision Lathe is an excellent tool for small manufacturing and production work. This lathe will reduce the diameter of a steel shaft $\frac{1}{2}$ " in one cut and has the accuracy for the finest tool and gauge work.

Back-Geared Headstock is hand-scraped to lathe bed; has three-step cone for $1\frac{1}{2}$ " belt; six changes of spindle speeds from 34 to 512 R.P.M., three direct and three back-geared; wrenchless bull gear; and spring latch reverse.

Headstock Spindle is made of high carbon steel, finish ground, and has a $\frac{1}{8}$ " hole its entire length. Collet capacity $\frac{1}{8}$ " to $\frac{3}{16}$ ". Spindle nose $1\frac{1}{2}$ " diam., 8 threads.

Phosphor Bronze Bearings for headstock spindle are line bored and lapped to a perfect bearing, and are adjustable for wear. An improved oiling system lubricates the bearings.

Quick Change Gear Box provides 48 changes for cutting screw threads from 2 to 112 per inch, right or left-hand; and for automatic longitudinal feeds from .0030" to .0208" per revolution of spindle, and for automatic cross feeds from .0011" to .0078" per revolution of spindle. See page 41.

Tailstock is hand-scraped to bed; has set-over for taper turning; graduated spindle; double plug spindle lock; No. 2 Morse Taper spindle center, hardened, ground and self-ejecting; spindle travel 3". See page 38.

New Apron has automatic cross feed and automatic longitudinal feed (both controlled by a friction clutch). Half-nuts are provided for screw thread cutting. An automatic safety device prevents engaging half-nuts and automatic feeds at the same time. See page 40.

Carriage has wide deep bridge, hand-scraped to bed; carriage lock for facing and cutting off, felt wipers for V-ways.

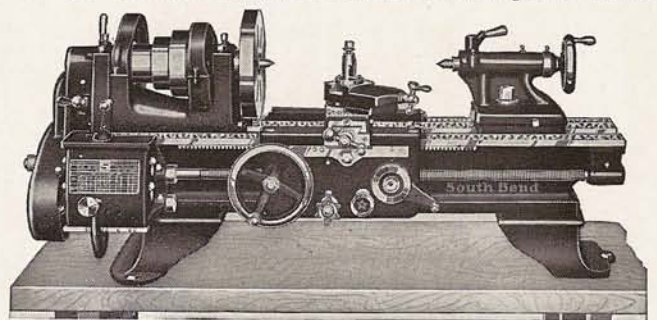
Precision Lead Screw, $\frac{7}{8}$ " diameter, 8 Acme standard threads per inch, for cutting screw threads. See page 40.

Compound Rest is graduated 180°, swivels to any angle and has an angular travel of $2\frac{9}{16}$ ". Shown on page 39.

Lathe Bed is 50% steel, heavily constructed and reinforced by box braces its entire length. See page 39.

Regular Equipment consists of: Countershaft; large and small face plates; tool post; thread cutting stop; two 60° lathe centers; spindle sleeve; center rest; follower rest; wrenches; installation plan and book, "How to Run a Lathe."

The 11-inch Lathe is also available in the Standard Change Gear type as shown on page 21 and priced below.

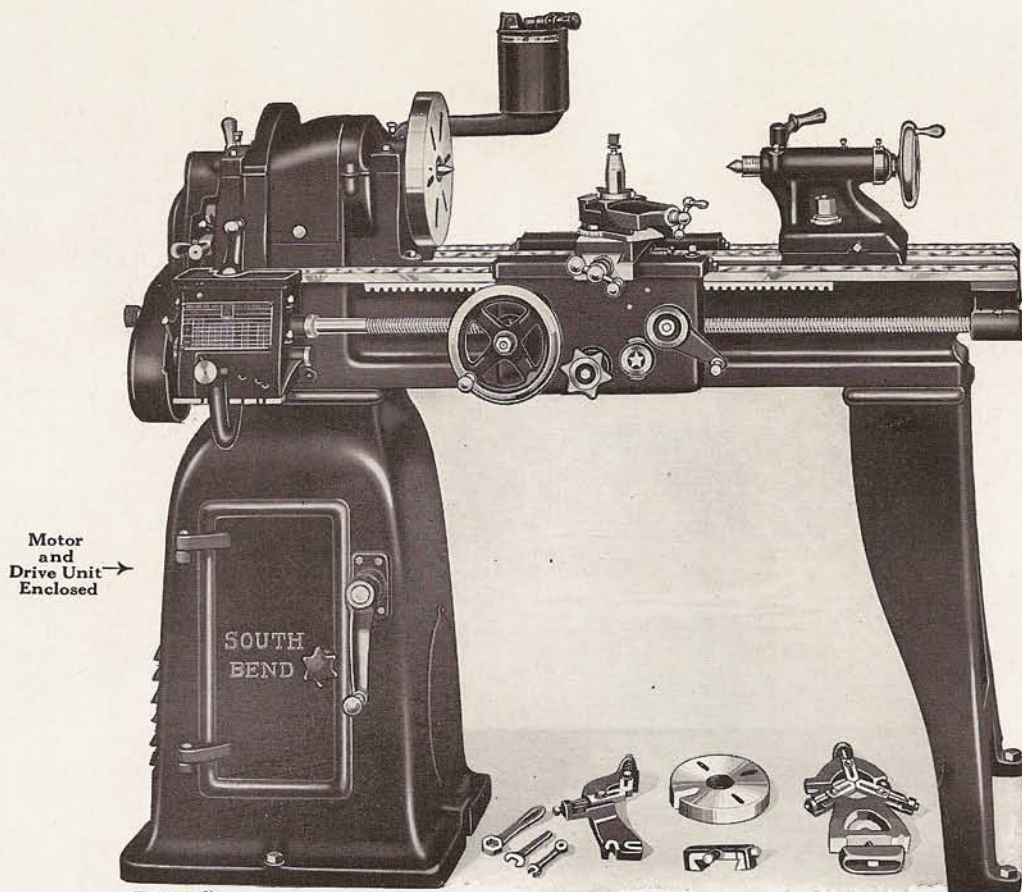


11" x 4' Quick Change Gear Bench Lathe.....\$348.00

Net Factory Prices 11-inch Series "O" South Bend Lathes Including Countershaft and Regular Equipment

Swing Over Bed Inches	Length of Bed Feet	Distance Between Centers Inches	Hole Thru Spindle Inches	Swing Over Carriage Inches	Cone Pulley Belt Inches	Counter-shaft Speed R.P.M.	Power Required H.P.	Standard Change Gear Lathes				Quick Change Gear Lathes			
								Cat. No.	Code Word	Weight Crated Pounds	Net Factory Price	Cat. No.	Code Word	Weight Crated Pounds	Net Factory Price
11 1/4	3	12	7/8	7 5/8	1 1/2	255	1/2	33-Y	Eazir	650	\$294.00	84-Y	Eabot	665	\$334.00
11 1/4	3 1/2	18	7/8	7 5/8	1 1/2	255	1/2	33-Z	Ebuka	680	306.00	84-Z	Elken	695	346.00
11 1/4	4	24	7/8	7 5/8	1 1/2	255	1/2	33-A	Ecsty	710	318.00	84-A	Emdor	725	358.00
11 1/4	5	36	7/8	7 5/8	1 1/2	255	1/2	33-B	Edres	780	330.00	84-B	Eolin	795	370.00
11 1/4	5 1/2	42	7/8	7 5/8	1 1/2	255	1/2	33-S	Efmot	815	342.00	84-S	Epmjo	830	382.00

If Countershaft is not wanted deduct \$14.00 from above prices. If Bench Legs are wanted instead of Floor Legs, deduct \$10.00.



(Patented)
11" x 4' Underneath Belt Motor Driven Quick Change Gear Lathe Including Equipment.. \$487.00

11-inch Series "O" South Bend Underneath Belt Motor Driven Lathe Back-Geared, Screw Cutting, Quick Change and Standard Change Gear Precision Lathes

The 11-inch Underneath Belt Motor Driven Quick Change Gear Lathe, shown above, is similar to the 11-inch Countershaft Driven Lathe illustrated on page 18, and has the same mechanical features and specifications; the only difference is that this lathe is equipped with Underneath Belt Motor Drive instead of Countershaft Drive.

Underneath Belt Motor Drive is a compact, self-contained unit, completely enclosed within the cabinet leg, under the headstock, away from dirt and chips. The motor and lower cone pulley are mounted on an adjustable tilting cradle which is controlled by the belt release crank on the front of the cabinet leg. A hinged guard covers the spindle cone pulley. For illustrations of the Underneath Belt Motor Drive mechanism and further description, see page 44.

Powerful and Efficient in Operation. Smooth even power is transmitted by V-belts from motor to lower drive unit and by flat leather belt to headstock cone pulley. This modern method of driving the lathe spindle is quiet, efficient, and powerful, and permits handling work with the greatest precision and accuracy.

Changing Spindle Speeds. The belt release crank on the front of the cabinet leg permits easy shifting of the belt from one step of the cone pulley to another for changing the spindle

speeds. A half turn of the belt release crank lifts the tilting cradle $1\frac{1}{2}$ inches and locks it in position, which permits the operator to place the belt on any step of spindle desired.

Belt Tension Adjustments are provided for regulating tension of V-belts from motor to driving unit and for obtaining any desired tension of the vertical belt between the lower drive unit and the headstock cone pulley.

Regular Equipment included in price of lathe consists of: Large and small face plates; tool post; thread cutting stop; two 60° lathe centers; spindle sleeve for headstock; center rest; follower rest; wrenches; lag screws and washers; installation plan blue print and book, "How to Run a Lathe."

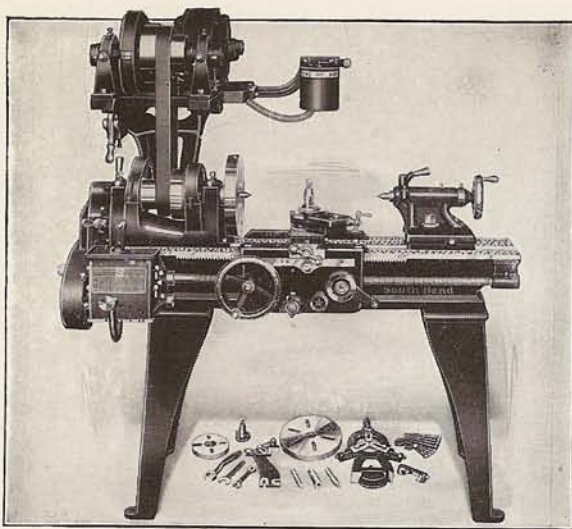
Electrical Equipment included in the price consists of: Motor drive mechanism mounted in cabinet leg under headstock; $\frac{1}{2}$ H.P., instant reversing motor (General Electric, Westinghouse or equal make); drum reversing switch; wiring enclosed in metal conduit; one V-belt, motor to drive pulley; double ply flat leather belt and wiring diagram blue print.

The 11-inch Underneath Belt Motor Driven Lathe, shown above, is also available in the Standard Change Gear type, which is priced in the tabulation below.

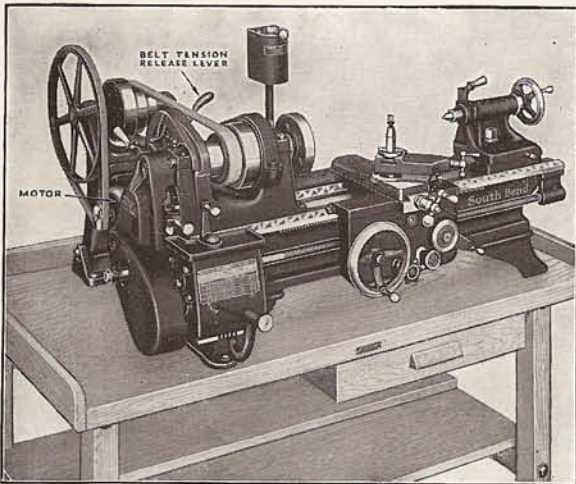
When Ordering a Motor Driven Lathe give specifications of the electric current to be used. See page 36.

Net Factory Prices 11-inch Series "O" South Bend Underneath Belt Motor Driven Lathes
Prices Include Regular Equipment, and Electrical Equipment as Listed Above

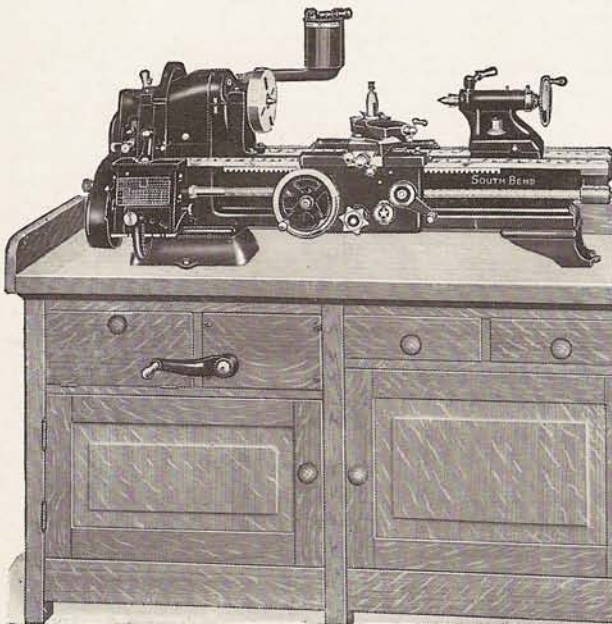
Swing Over Bed Inches	Length of Bed Feet	Distance Between Centers Inches	Hole Thru Spindle Inches	Swing Over Carriage Inches	Size Motor Used H.P.	Approx. Weight Crated Pounds	Standard Change Gear Lathes			Quick Change Gear Lathes						
							Cat. No.	Code Word	3-Phase 60-Cycle A.C. Motor	1-Phase 60-Cycle A.C. Motor	Direct Current Motor	Cat. No.	Code Word	3-Phase 60-Cycle A.C. Motor	1-Phase 60-Cycle A.C. Motor	Direct Current Motor
11½	3	12	7/8	7 5/8	½	905	133-Y	Datip	\$423.00	\$429.00	\$427.00	184-Y	Darup	\$463.00	\$469.00	\$467.00
11½	3½	18	7/8	7 5/8	½	935	133-Z	Datur	435.00	441.00	439.00	184-Z	Dasal	475.00	481.00	479.00
11½	4	24	7/8	7 5/8	½	965	133-A	Davan	447.00	453.00	451.00	184-A	Dasem	487.00	493.00	491.00
11½	5	36	7/8	7 5/8	½	1035	133-B	Davep	459.00	465.00	463.00	184-B	Dasop	499.00	505.00	503.00
11½	5½	42	7/8	7 5/8	½	1070	133-S	Davor	471.00	477.00	475.00	184-S	Datam	511.00	517.00	515.00



11"x4' South Bend Series "O" Silent V-Belt Motor Driven Lathe, Quick Change Gear Type.....\$445.00



11"x4' South Bend Series "O" Horizontal Motor Driven Bench Lathe, Quick Change Gear Type.....\$394.00
(Bench for Lathe is extra, see page 62.)



11"x4' South Bend Series "O" Underneath Belt Motor Driven Bench Lathe, Quick Change Gear Type.....\$477.00
(Bench for Lathe is extra, see page 62.)

11-inch Silent V-Belt Motor Driven Lathe

Quick Change—Standard Change—Bench or Floor Leg Type

The 11-inch Silent V-Belt Motor Driven Lathe, shown at left, is the same as the 11-inch Lathe illustrated on page 18, and has the same mechanical features and specifications; the only difference is that it has Silent V-Belt Motor Drive with tension adjustment and release for easy shifting of cone pulley belt as shown on page 36.

Regular Equipment included in price of lathe consists of: Silent motor drive unit; large face plate; small face plate; tool post; thread cutting stop; two 60° lathe centers; spindle sleeve; center rest; follower rest; wrenches; installation plan and book, "How to Run a Lathe."

Electrical Equipment included in the price of this lathe consists of: ½ H.P. instant reversing motor (Westinghouse, General Electric or equal make); drum reversing switch; wiring between motor and switch; conduit; wiring diagram; one V-belt and one flat leather belt.

Prices of 11-inch Silent V-Belt Motor Driven Lathes—Floor Leg Type

With ½ H.P. Instant Reversing 3-Phase, 60-Cycle, A.C. Motor

Swing Over Bed Inches	Length of Bed Feet	Distance Between Centers Inches	Approx. Weight Crated Pounds	Standard Change Gear			Quick Change Gear		
				Cat. No.	Code Word	Price	Cat. No.	Code Word	Price
11¼	3	12	860	333-Y	Eflam	\$381.00	384-Y	Eadov	\$421.00
11¼	3½	18	890	333-Z	Eguil	393.00	384-Z	Ebert	433.00
11¼	4	24	920	333-A	Ehams	405.00	384-A	Eerow	445.00
11¼	5	36	990	333-B	Eioaw	417.00	384-B	Edaze	457.00
11¼	5½	42	1025	333-S	Ejpbx	429.00	384-S	Efpik	469.00

For Bench Legs instead of Floor Legs, deduct \$7.00.

For Instant Reversing Motor: For 1-phase add \$16.00; for Direct Current, add \$7.00.

11-inch Horizontal V-Belt Motor Driven Lathe

Quick Change—Standard Change—Bench Lathe

The 11-inch Horizontal Motor Driven Bench Lathe, illustrated at left, is the same as the 11-inch Lathe illustrated on page 18, and has the same mechanical features and specifications; the only difference is that it has Improved Horizontal V-Belt Motor Drive with tension adjustment and release for easy shifting of cone pulley belt. See page 27.

Lathe, Motor Drive Unit, etc., are itemized in the tabulation below and may be ordered with the lathe or individually as desired.

Regular Equipment included in price of lathe consists of: Large face plate; small face plate; tool post; thread cutting stop; two 60° lathe centers; spindle sleeve; center rest; follower rest; wrenches; installation plan and book: "How to Run a Lathe."

Prices of 11-inch Horizontal Motor Driven Bench Lathe

11-inch South Bend Quick Change Gear Bench Lathe with Regular Equipment, but not Bench.....	11"x3' 484-YN Enyom	11"x3½' 484-ZN Enzak	11"x4' 484-AN Enzde	11"x5' 484-BN Enzel	11"x5½' 484-SN Enzlm
\$310.00	\$322.00	\$334.00	\$346.00	\$358.00	
Adjustable Belt Tension Countershaft....	15.00	15.00	15.00	15.00	15.00
Motor drive equipment consisting of: ¾ H.P. 1800 R.P.M. Instant Reversing Motor (3-phase, 60-cycle, A.C. 110 or 220-volt); V-Groove Pulley for Motor; Reversing Switch (Drum Type); Wiring (connected to switch and tagged for motor); Stand for supporting reversing switch; V-Belt, motor to drive unit; and Flat Leather Belt.....	45.00	45.00	45.00	45.00	45.00
Price, Lathe and Equipment, Complete..	\$370.00	\$382.00	\$394.00	\$406.00	\$418.00

Distance Between Centers of Lathe..... 12 in. 18 in. 24 in. 36 in. 42 in.
Weight Crated, Lathe and Drive Equip.. 655 lbs. 685 lbs. 715 lbs. 785 lbs. 820 lbs.

For Instant Reversing Motors: For 1-phase, add \$6.00; for Direct Current, add \$4.00.

If Standard Change Gear Lathe is wanted, deduct \$40.00 from above prices.

11-inch Underneath Belt Motor Driven Lathe

Quick Change—Standard Change—Bench Lathe

The 11-inch Underneath Belt Motor Driven Bench Lathe, illustrated at left, is similar to the 11-inch Lathe illustrated on page 18, and has the same mechanical features and specifications; the only difference is that it has Underneath Belt Motor Drive with tension adjustment and release for easy shifting of cone pulley belt as shown on page 45.

Regular Equipment included in price of lathe consists of: Underneath belt motor drive unit; large and small face plates; tool post; thread cutting stop; two 60° lathe centers; spindle sleeve; center rest; follower rest; wrenches; installation plan and book, "How to Run a Lathe."

Electrical Equipment included in the price of this lathe consists of: ½ H.P. instant reversing motor (Westinghouse, General Electric or equal make); drum reversing switch; wiring between motor and switch; conduit; wiring diagram; one V-belt and one flat leather belt.

Prices of 11-inch Underneath Belt Motor Driven Bench Lathes

With ½ H.P. Instant Reversing 3-phase, 60-cycle, A.C. Motor

Swing Over Bed Inches	Length of Bed Feet	Distance Between Centers Inches	Approx. Weight Crated Pounds	Standard Change Gear			Quick Change Gear		
				Cat. No.	Code Word	Price	Cat. No.	Code Word	Price
11¼	3	12	705	133-YB	Yahez	\$413.00	184-YB	Yagiz	\$453.00
11¼	3½	18	735	133-ZB	Yahib	425.00	184-ZB	Yagob	465.00
11¼	4	24	765	133-AB	Yahoc	437.00	184-AB	Yagwa	477.00
11¼	5	36	835	133-BB	Yahya	449.00	184-BB	Yagye	489.00
11¼	5½	42	870	133-SB	Yahze	461.00	184-SB	Yahco	501.00

For Instant Reversing Motor: For 1-phase, add \$6.00; for Direct Current, add \$4.00.

11-inch Tool Room Lathe—Countershaft Drive

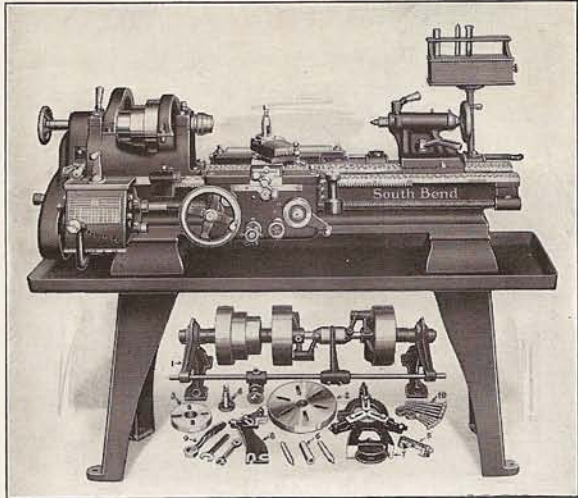
Quick Change, Back-Geared, Screw Cutting Lathe

The 11-inch South Bend Tool Room Precision Lathe, illustrated at left, has the accuracy and precision for the finest class of tool, jig and fixture work. It is practical for making precision master taps, thread gauges, dies, tools, etc. Built of same units as 11-inch Quick Change Gear Lathe described on page 18, and has same features and specifications. May be ordered as Oil Pan Lathe by omitting tool room attachments.

Regular Equipment included in price of lathe is same as listed with the 11-inch Quick Change Gear Lathe on page 18.

Prices 11-inch Tool Room Precision Lathe—Countershaft Drive

Size and Catalog Number.....	11" x 4' No. 884-A		11" x 5' No. 884-B		11" x 5 1/2' No. 884-S	
	Code Word	Price	Code Word	Price	Code Word	Price
11-inch Tool Room Lathe, Countershaft Drive, with Lathe Equipment but without Tool Room Attachments	Emdor	\$358.00	Eolin	\$370.00	Epmjo	\$382.00
TOOL ROOM ATTACHMENTS						
Draw-in Collet Chuck (Hand Wheel Type) with One Collet, Any Size.....	Abode	35.00	Abode	35.00	Abode	35.00
Extra Collets 3/8-inch up to 3/4-inch Capacity by 64ths. Each.....	Cello	3.50	Cello	3.50	Cello	3.50
Taper Attachment.....	Devor	65.00	Devor	65.00	Devor	65.00
Thread Indicator.....	Acres	10.00	Acres	10.00	Acres	10.00
Oil Pan.....	Oduim	27.00	Oduim	29.00	Oekon	30.00
Micrometer Carriage Stop.....	Ceded	12.00	Ceded	12.00	Ceded	12.00
Collet Cabinet and Bracket.....	Crome	12.00	Crome	12.00	Crome	12.00
Prices of Tool Room Lathe, Complete	Ewhot	\$522.50	Eafun	\$536.50	Eillex	\$549.50
Distance Between Centers of Lathe.....	24 in.		36 in.		42 in.	
Weight Crated, Lathe and Attachments.....	857 lbs.		927 lbs.		962 lbs.	



11"x4' South Bend Series "O" Tool Room Precision Lathe, Countershaft Drive\$522.50

11-inch Tool Room Lathe—Under Drive

Quick Change, Back-Geared, Screw Cutting Lathe

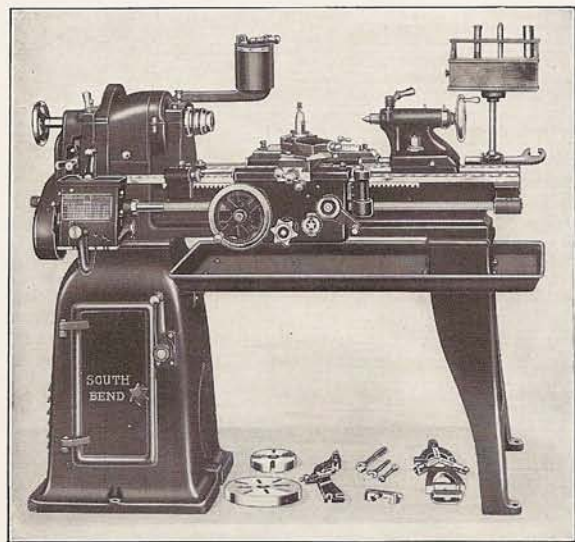
The 11-inch South Bend Tool Room Precision Lathe, illustrated at left, is similar to the 11-inch Countershaft Driven Tool Room Lathe shown above, and has the same mechanical features, specifications and lathe equipment; the only difference is that it is equipped with Underneath Belt Motor Drive instead of Overhead Countershaft Drive.

The Underneath Belt Motor Drive Mechanism, motor and switch used on this lathe are illustrated and further described on page 44.

Electrical Equipment included in the price of this lathe consists of: 1/2 H.P., instant reversing motor (Westinghouse, General Electric or equal make); drum reversing switch; wiring between motor and switch; conduit; wiring diagram; one V-belt and one flat leather belt.

Prices 11-inch Tool Room Precision Lathe—Underneath Belt Motor Drive

Catalog No. 1884-A—11"x4' Tool Room Lathe with Underneath Belt Motor Drive, Lathe Equipment and Electrical Equipment, but without Tool Room Attachments.....	With 3 Phase-60 Cycle A.C. Motor		With 1 Phase-60 Cycle A.C. Motor		With Direct Current Motor	
	Code Word	Price	Code Word	Price	Code Word	Price
.....	Dasem	\$487.00	Dasem	\$493.00	Dasem	\$491.00
TOOL ROOM ATTACHMENTS						
Draw-in Collet Chuck (Hand Wheel Type) with One Collet, Any Size.....	Abode	35.00	Abode	35.00	Abode	35.00
Extra Collets 3/8-inch up to 3/4-inch Capacity by 64ths. Each.....	Cello	3.50	Cello	3.50	Cello	3.50
Taper Attachment.....	Devor	65.00	Devor	65.00	Devor	65.00
Thread Indicator.....	Acres	10.00	Acres	10.00	Acres	10.00
Chip Pan.....	Bonul	19.00	Bonul	19.00	Bonul	19.00
Micrometer Carriage Stop.....	Ceded	12.00	Ceded	12.00	Ceded	12.00
Collet Cabinet and Bracket.....	Crome	12.00	Crome	12.00	Crome	12.00
Prices of Tool Room Lathe, Complete	Detar	\$643.50	Detor	\$649.50	Devas	\$647.50
Distance Between Centers of Lathe.....	24 in.		24 in.		24 in.	
Weight Crated, Lathe and Attachments.....	1075 lbs.		1085 lbs.		1085 lbs.	
For Lathe with 5 ft. bed and attachments add \$14.00. For 5 1/2 ft. bed add \$27.00.						



11"x4' South Bend Series "O" Tool Room Precision Lathe, Underneath Belt Motor Drive.....\$643.50

11-inch Standard Change Gear Floor Leg Lathe

Back-Geared, Screw Cutting Lathe—Countershaft Drive

The 11-inch Series "O" Standard Change Gear Precision Lathe is identical with the 11-inch Quick Change Gear Lathe, illustrated on page 18, except that the quick change gear box is replaced by a set of independent change gears. Features and specifications on page 18 apply to this Standard Change Gear Lathe.

Change Gears are used to cut standard screw threads, right or left-hand, from 4 to 40 per inch, and to provide a wide range of automatic longitudinal feeds and automatic cross feeds. Special change gear equipment for cutting screw threads from 44 to 80 per inch can be supplied at \$13.00 extra, when ordered with lathe.

Equipment Included in Price consists of: Countershaft; large and small face plates; tool post; thread cutting stop; two 60° lathe centers; spindle sleeve; center rest; follower rest; change gears; wrenches; installation plan and book, "How to Run a Lathe."

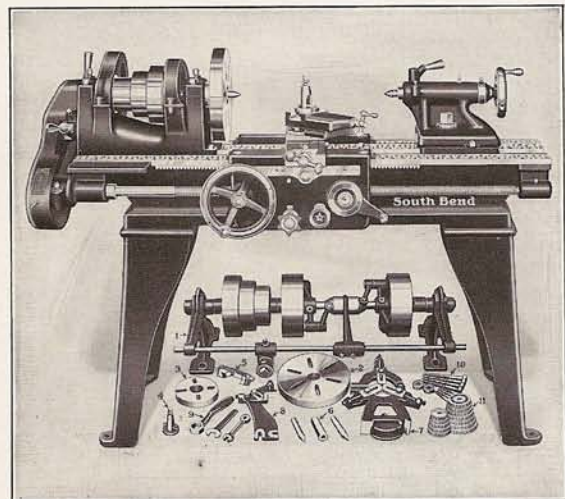
Prices of 11-inch Standard Change Gear Lathe

Cat. No.	Swing Over Bed Inches	Length of Bed Feet	Distance Between Centers Inches	Approx. Weight Crated Pounds	Code Word	Net Factory Price
33-Y	1 1/4	3	12	650	Eazir	\$294.00
33-Z	1 1/4	3 1/2	18	680	Ebuka	306.00
33-A	1 1/4	4	24	710	Ebesty	318.00
33-B	1 1/4	5	36	780	Edmes	330.00
33-S	1 1/4	5 1/2	42	815	Efmot	342.00

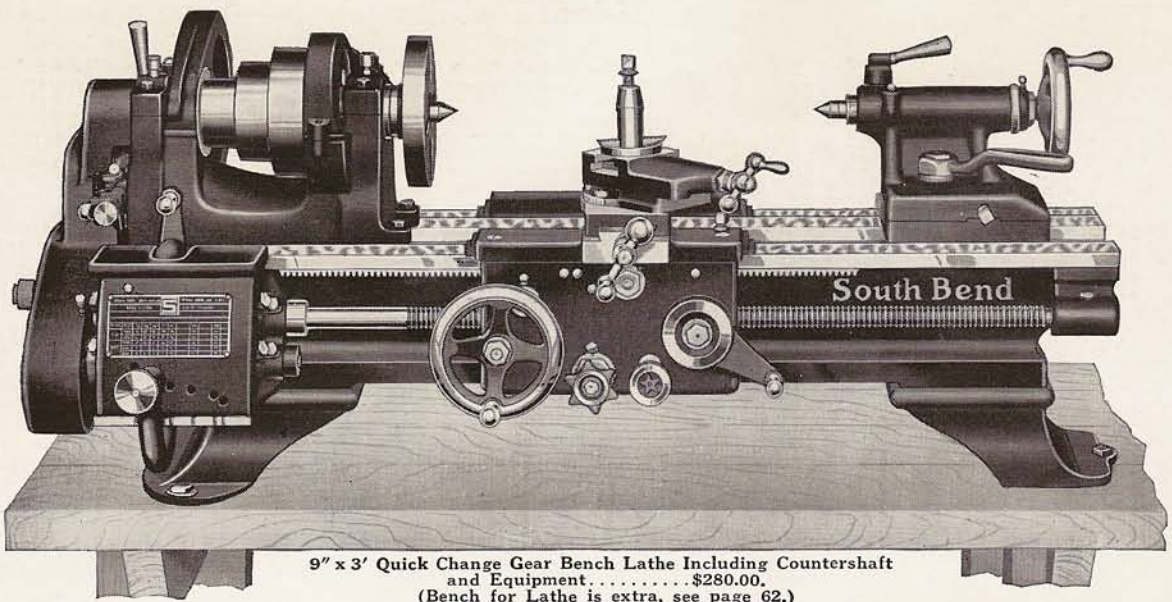
If Countershaft is not wanted, deduct \$14.00. If Bench Legs are wanted, deduct \$10.00.

SCREW THREAD CUTTING CHART		
STANDARD CHANGE GEAR LATHE		
THREAD PER INCH	"PITCH"	SCREW GEAR
4	64	32
5	64	40
6	64	48
7	64	56
8	64	64
9	64	72
10	32	40
11	32	48
11 1/2	32	46
12	32	48
13	32	52
14	32	56
16	32	64
18	32	72
20	32	80
22	16	44
24	16	48
26	16	52
27	16	54
28	16	56
30	16	60
32	16	64
36	16	72
40	16	80

Chart for Threads



11"x4' South Bend Series "O" Standard Change Gear Precision Lathe, Countershaft Drive.....\$318.00 (See description on page 42.)



9" x 3' Quick Change Gear Bench Lathe Including Countershaft and Equipment.....\$280.00.
(Bench for Lathe is extra, see page 62.)

9-inch Series "O" South Bend Bench Lathe—Countershaft Drive Back-Geared, Screw Cutting, Quick Change and Standard Change Gear Precision Lathes

The 9-inch Series "O" South Bend Back-Geared, Screw Cutting Precision Lathe is a practical tool for the shop machining small, accurate work. It has the precision and accuracy for the finest tool and gauge work and is practical for repair and maintenance work. This lathe has the power to reduce the diameter of a steel shaft $\frac{3}{8}$ " in one cut.

Mechanical Features described below apply to all types of 9-inch South Bend Lathes as illustrated on pages 22 to 25 inclusive. See specifications on page 37.

Back-Geared Headstock is hand-scraped to lathe bed; has three-step cone for $1\frac{1}{4}$ " belt; six changes of spindle speeds from 39 to 596 R.P.M., three direct and three back-geared; wrenchless bull gear lock, and spring latch reverse.

Headstock Spindle is made of high carbon steel, finish ground, and has a $\frac{3}{4}$ " hole its entire length. Collet capacity $\frac{1}{4}$ " to $\frac{1}{2}$ ". Spindle nose $1\frac{1}{2}$ " diam., 8 threads.

Phosphor Bronze Bearings for headstock spindle are line bored and lapped to a perfect bearing, and are adjustable for wear. An improved oiling system lubricates the bearings.

Quick Change Gear Box provides 48 changes for cutting screw threads from 2 to 112 per inch, right or left hand; and for automatic longitudinal feeds from .0030" to .0208" per revolution of spindle, and for automatic cross feeds from .0011" to .0078" per revolution of spindle. See page 41.

Tailstock is hand-scraped to bed; has set-over for taper turning; graduated spindle; double plug spindle lock; No. 2 Morse Taper spindle center, hardened, ground and self-ejecting; spindle travel $2\frac{1}{8}$ ". See page 38.

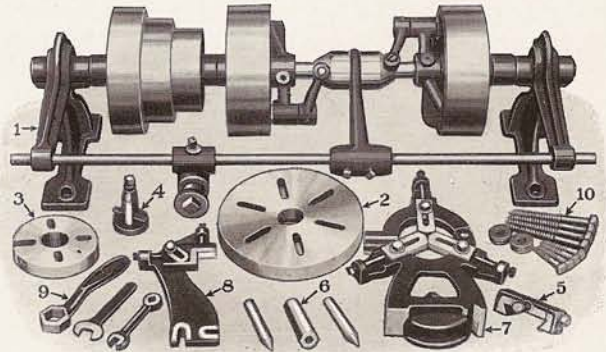
Apron has worm drive for both the automatic cross feeds and automatic longitudinal feeds. Half-nuts and lead screw thread are used only for screw thread cutting. An automatic safety device prevents engaging half-nuts and automatic feeds at the same time. See page 40.

Carriage has wide deep bridge hand-scraped to bed, provides rigid support for the tool rest; carriage lock for facing and cutting off; felt wipers for V-ways.

Precision Lead Screw $\frac{3}{4}$ " diameter, 8 Acme standard screw threads per inch; guaranteed to meet the most exacting requirements for cutting screw threads. See page 40.

Compound Rest graduated 180° ; swivels to any angle and has angular travel of $1\frac{7}{8}$ ". Compound rest screw and cross feed screw have micrometer collars graduated in thousandths. Tool holder shank $\frac{3}{8}$ " x $1\frac{1}{16}$ " for cutters $\frac{1}{4}$ " square.

Lathe Bed is 50% steel, heavily constructed and reinforced by box braces its entire length. Three V-ways and one flat way, accurately planed and hand-scraped, align and support the headstock, carriage and tailstock. See page 39.



Countershaft and Equipment Included in Price of Lathe.

Regular Equipment consists of: Countershaft; large and small face plates; tool post; thread cutting stop; two 60° lathe centers; spindle sleeve; center rest; follower rest; wrenches; installation plan and book, "How to Run a Lathe."

Attachments and Accessories such as collet chuck, taper attachment, etc., can be supplied, see pages 50 to 63.

The 9-inch Lathe is also available in the Standard Change Gear type as shown on page 24 and priced below.

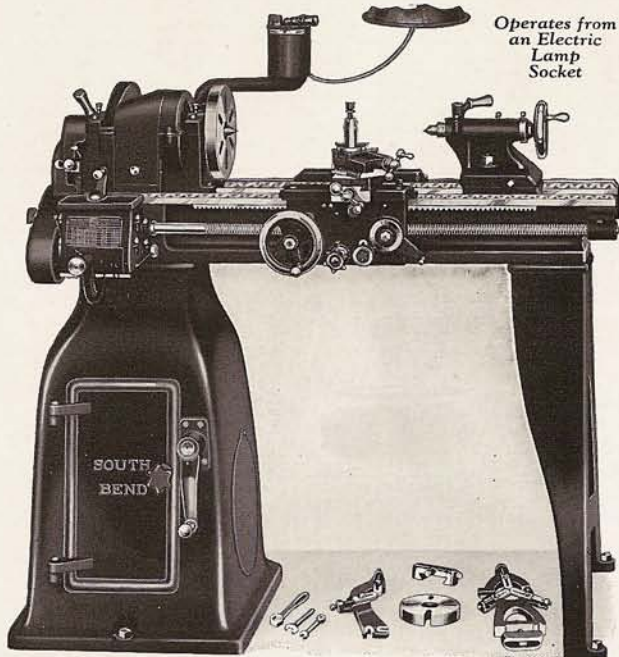
Net Factory Prices 9-inch Series "O" South Bend Bench Lathes Including Countershaft and Regular Equipment

Swing Over Bed Inches	Length of Bed Feet	Distance Between Centers Inches	Hole Thru Spindle Inches	Swing Over Carriage Inches	Cone Pulley Belt Inches	Counter-shaft Speed R.P.M.	Power Required H.P.	Standard Change Gear Lathes				Quick Change Gear Lathes			
								Cat No.	Code Word	Weight Crated Pounds	Net Factory Price	Cat No.	Code Word	Weight Crated Pounds	Net Factory Price
9 1/4	2 1/2	9 3/8	3/4	6 3/8	1 1/4	255	1/4	30-XB	Bakip	395	\$230.00	80-XB	Bahak	405	\$270.00
9 1/4	3	16 3/8	3/4	6 3/8	1 1/4	255	1/4	30-YB	Bakur	420	240.00	80-YB	Bagup	430	280.00
9 1/4	3 1/2	21 3/8	3/4	6 3/8	1 1/4	255	1/4	30-ZB	Bakys	445	250.00	80-ZB	Bahel	455	290.00
9 1/4	4	27 3/8	3/4	6 3/8	1 1/4	255	1/4	30-AB	Balan	470	260.00	80-AB	Bahon	480	300.00
9 1/4	4 1/2	34 3/8	3/4	6 3/8	1 1/4	255	1/4	30-RB	Balep	495	270.00	80-RB	Bahup	505	310.00

If Countershaft is not wanted, deduct \$13.00.

9-inch Series "O" Underneath Belt Motor Driven Floor Lathe

Back-Geared, Screw Cutting, Quick Change and Standard Change Gear Precision Lathes



9" x 3' Series "O" Underneath Belt Motor Driven Quick Change Gear Lathe with Regular Lathe Equipment.....\$383.00

The Underneath Belt Motor Driven Lathe is new in design, modern in appearance, powerful and noiseless in operation. Drive mechanism and spindle cone pulley are enclosed.

The 9-inch Underneath Belt Motor Driven Lathe illustrated at left, is similar to the 9-inch lathe shown on page 22 and has the same mechanical features and specifications; the only difference is that it has Underneath Belt Motor Drive and Floor Legs.

Underneath Motor Drive included in price of lathe consists of Motor and drive unit enclosed in cabinet leg under headstock. Drive is by V-belt from motor to drive unit and by flat belt to spindle cone pulley. A drum reversing switch controls the 1/4 H.P. instant reversing motor. Cone pulley belt has tension adjustment for any desired pulling power and release lever for easy shifting. V-Belt from motor to drive unit has independent tension adjustment. See page 44.

Regular Equipment included in price of lathe consists of: Underneath Motor Drive; large and small face plates; tool post; thread cutting stop; two 60° lathe centers; spindle sleeve; center rest; follower rest; wrenches; installation plan and book, "How to Run a Lathe."

Electrical Equipment included in the price of this lathe consists of: 1/4 H.P., instant reversing motor (Westinghouse, General Electric or equal make); drum reversing switch; wiring diagram; wiring enclosed in metal conduit; one V-belt and one flat belt.

Prices of 9-inch Underneath Motor Driven Lathe With 1/4 H.P. 1-phase, 60-cycle, A.C. Instant Reversing Motor

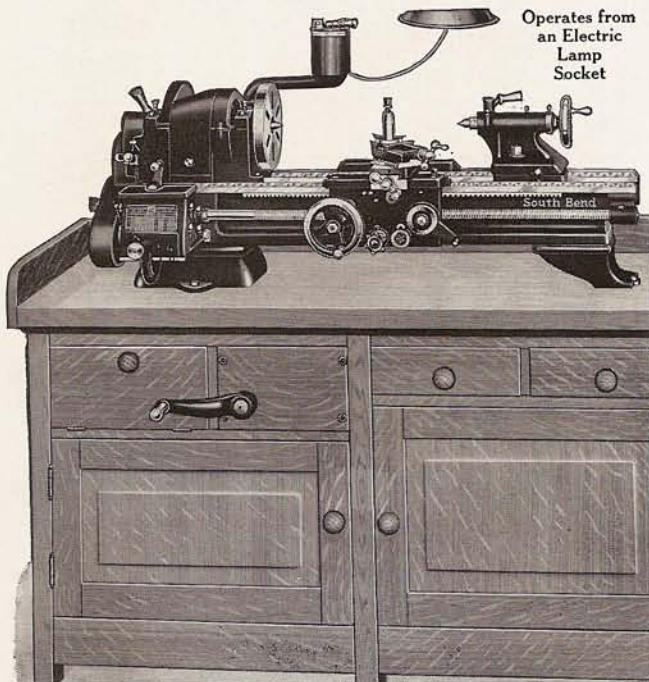
Swing Over Bed Inches	Length of Bed Feet	Distance Between Centers Inches	Approx. Weight Crated Pounds	Standard Change Gear			Quick Change Gear		
				Cat. No.	Code Word	Net Factory Price	Cat. No.	Code Word	Net Factory Price
9 1/4	2 1/2	9 3/8	770	130 X	Dapol	\$333.00	180 X	Damuk	\$373.00
9 1/4	3	16 3/8	795	130 Y	Dapum	343.00	180 Y	Danag	383.00
9 1/4	3 1/2	21 3/8	820	130 Z	Darak	353.00	180 Z	Danok	393.00
9 1/4	4	27 3/8	845	130 A	Darel	363.00	180 A	Danul	403.00
9 1/4	4 1/2	34 3/8	870	130 R	Daron	373.00	180 R	Dapah	413.00

Instant Reversing Motors: For 3-phase Motor deduct \$7.00; for D.C. Motor deduct \$2.00.

If Start-and-Stop Reversing Motor for 1-phase, 60-cycle, A.C. 110-volt, is wanted in lieu of Instant Reversing Motor, deduct \$21.00 from above prices.

9-inch Series "O" Underneath Belt Motor Driven Bench Lathe

Back-Geared, Screw Cutting, Quick Change and Standard Change Gear Precision Lathes



9" x 3' Series "O" Underneath Belt Motor Driven Quick Change Gear Precision Lathe, less Bench.....\$373.00

Bench is not included in the price of the above lathe but is extra. For prices, see page 62.

The 9-inch Underneath Belt Motor Driven Bench Lathe, illustrated at left, is similar to the 9-inch Lathe shown on page 22, and has the same mechanical features and specifications; the only difference is that it has Underneath Belt Motor Drive instead of Overhead Countershaft Drive.

Underneath Motor Drive included in price of lathe consists of motor and drive unit with bracket for mounting under bench. Drive is by V-belt from motor to drive unit and by flat belt to spindle cone pulley. A drum reversing switch controls the 1/4 H.P. instant reversing motor. Cone pulley belt has tension adjustment for any desired pulling power and release lever for easy shifting. V-belt from motor to drive unit has independent tension adjustment. See page 45.

Regular Equipment included in price of lathe consists of: Underneath motor drive unit; large face plate; small face plate; tool post; thread cutting stop; two 60° lathe centers; spindle sleeve; center rest; follower rest; wrenches; installation plan and book, "How to Run a Lathe."

Electrical Equipment included in the price of this lathe consists of: 1/4 H.P., instant reversing motor (Westinghouse, General Electric or equal make); drum reversing switch; wiring between motor and switch; conduit; wiring diagram; one V-belt and one flat leather belt.

9-inch Underneath Motor Driven Bench Lathe With 1/4 H.P. 1-phase, 60-cycle, A.C. Instant Reversing Motor

Swing Over Bed Inches	Length of Bed Feet	Distance Between Centers Inches	Approx. Weight Crated Pounds	Standard Change Gear			Quick Change Gear		
				Cat. No.	Code Word	Net Factory Price	Cat. No.	Code Word	Net Factory Price
9 1/4	2 1/2	9 3/8	570	130 XB	Eburf	\$323.00	180 XB	Eblet	\$363.00
9 1/4	3	16 3/8	595	130 YB	Ebvig	333.00	180 YB	Ebord	373.00
9 1/4	3 1/2	21 3/8	620	130 ZB	Ebzol	343.00	180 ZB	Ebrec	383.00
9 1/4	4	27 3/8	645	130 AB	Ecamp	353.00	180 AB	Ebsac	393.00
9 1/4	4 1/2	34 3/8	670	130 RB	Ecdul	363.00	180 RB	Ebtac	403.00

Instant Reversing Motors: For 3-phase Motor deduct \$7.00; for D.C. Motor deduct \$2.00.

If Start-and-Stop Reversing Motor for 1-phase, 60-cycle, A.C. 110-volt, is wanted in lieu of Instant Reversing Motor, deduct \$21.00 from above prices.

9-inch Silent V-Belt Motor Driven Lathe

Quick Change—Standard Change—Bench or Floor Leg Type

The 9-inch Silent V-Belt Motor Driven Lathe, shown at left, is the same as the 9-inch Lathe illustrated on page 22, and has the same mechanical features and specifications; the only difference is that it has floor legs; and Silent V-Belt Motor Drive with tension adjustment and release for easy shifting of cone pulley belt. See page 36.

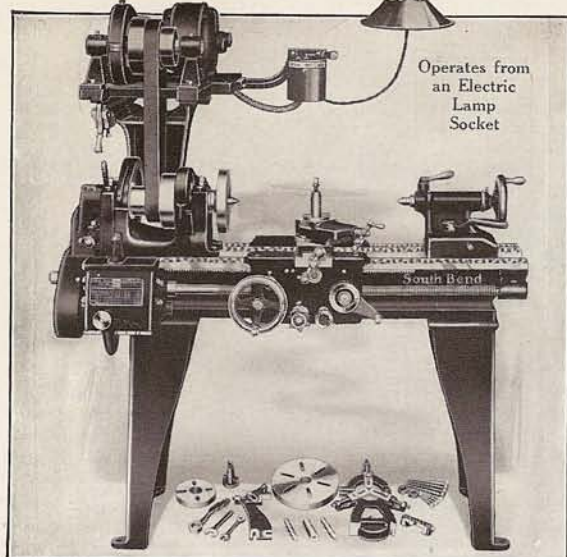
Silent Motor Drive Unit, 1/4 H.P. start-stop reversing motor and reversing switch are mounted on an adjustable table above the lathe. Drive is by V-belt from motor to drive pulley and by flat leather belt to lathe spindle cone. An adjustment provides for any desired belt tension.

Regular Equipment included in price of lathe consists of: Silent motor drive unit; large face plate; small face plate; tool post; thread cutting stop; two 60° lathe centers; spindle sleeve; center rest; follower rest; wrenches; installation plan and book, "How to Run a Lathe."

Prices of 9-inch Silent V-Belt Motor Driven Floor Leg Lathes

9-inch South Bend Quick Change Gear Floor Leg Lathe with Silent V-Belt Drive Unit and Regular Equipment	9"x2 1/2' 330-Y Bafum	9"x3' 330-Y Bamap	9"x3 1/2' 330-Z Banut	9"x4' 330-A Bajar	9"x4 1/2' 330-R Banur
Motor drive equipment consisting of: 1/4 H.P. Start-Stop Reversing Split-Phase Motor, 1725 R.P.M. (1-ph., 60-cv., A.C. 110-volt); V-Groove Pulley for Motor; Reversing Switch (Drum Type); Wiring connected to switch and to the motor; V-Belt, Motor to Drive Unit; and Flat Leather Belt.....	\$309.00	\$319.00	\$329.00	\$339.00	\$349.00
Price, Lathe and Equipment, Complete..	\$326.50	\$336.50	\$346.50	\$356.50	\$366.50

Distance Between Spindle Centers..... 9 3/4 in. 16 3/8 in. 21 3/8 in. 27 3/8 in. 34 3/8 in.
Weight Crated, Lathe and Drive Equipment..... 630 lbs. 653 lbs. 680 lbs. 703 lbs. 730 lbs.
Instant Reversing Motor add: For 3-phase \$14.00; for 1-phase \$21.00; for D.C. \$19.00.
If Standard Change Gear Lathe is wanted, deduct \$40.00 from above prices.
For Bench Legs in lieu of Floor Legs deduct \$7.00 from above prices.



9"x3' South Bend Series "O" Silent V-Belt Motor Driven Lathe, Quick Change Gear Type.....\$336.50

9-inch Quick Change Gear Floor Leg Lathe

Back-Geared, Screw Cutting Lathe—Countershaft Drive

The 9-inch Series "O" Quick Change Gear Precision Lathe, illustrated at left, is the same as the 9-inch Countershaft Driven Bench Lathe on page 22 and has the same mechanical features and specifications; the only difference is that this lathe has Floor Legs instead of Bench Legs.

The Quick Change Gear Box provides forty-eight changes for cutting standard screw threads, right or left-hand, from 2 to 112 per inch, including 1 1/2 pipe thread, and provides for a wide range of automatic longitudinal feeds and automatic cross feeds. See page 41.

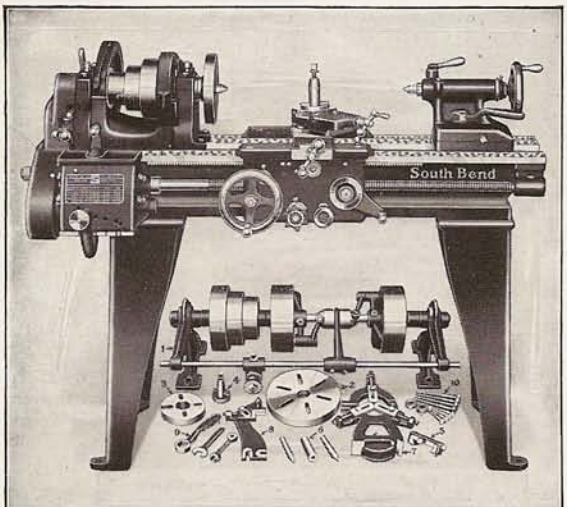
Regular Equipment included in price of lathe consists of: Double friction countershaft; large face plate; small face plate; tool post; thread cutting stop; two 60° lathe centers; spindle sleeve; center rest; follower rest; wrenches; installation plan and book, "How to Run a Lathe."

Double Friction Countershaft supplied with this 9-inch Lathe is equipped with two friction clutch pulleys, one of which is operated by a straight belt and the other by a crossed belt. This permits the lathe spindle to be rotated both forward and in reverse.

Prices of 9-inch Quick Change Gear Lathe—Countershaft Drive

Cat. No.	Swing Over Bed Inches	Length of Bed Feet	Distance Between Centers Inches	Hole Thru Spindle Inches	Swing Over Carriage Inches	Power Required H.P.	Approx. Weight Crated Pounds	Code Word	Net Factory Price
80-X	9 1/4	2 1/2	9 3/8	3/4	6 3/8	1/4	457	Bafol	\$280.00
80-Y	9 1/4	3	16 3/8	3/4	6 3/8	1/4	482	Bafum	290.00
80-Z	9 1/4	3 1/2	21 3/8	3/4	6 3/8	1/4	507	Bafyn	300.00
80-A	9 1/4	4	27 3/8	3/4	6 3/8	1/4	532	Bagaj	310.00
80-R	9 1/4	4 1/2	34 3/8	3/4	6 3/8	1/4	557	Bagek	320.00

If Countershaft is not wanted, deduct \$13.00.
If Bench Legs are wanted, deduct \$10.00.



9"x3' South Bend Series "O" Countershaft Driven Floor Leg Lathe, Quick Change Gear Type.....\$290.00

9-inch Standard Change Gear Floor Leg Lathe

Back-Geared, Screw Cutting Lathe—Countershaft Drive

The 9-inch Series "O" Standard Change Gear Precision Lathe is the same as the 9-inch Quick Change Gear Lathe shown on page 22, except that the quick change gear box is replaced by a set of independent change gears; and the lathe has floor legs instead of bench legs. For features and specifications see page 22.

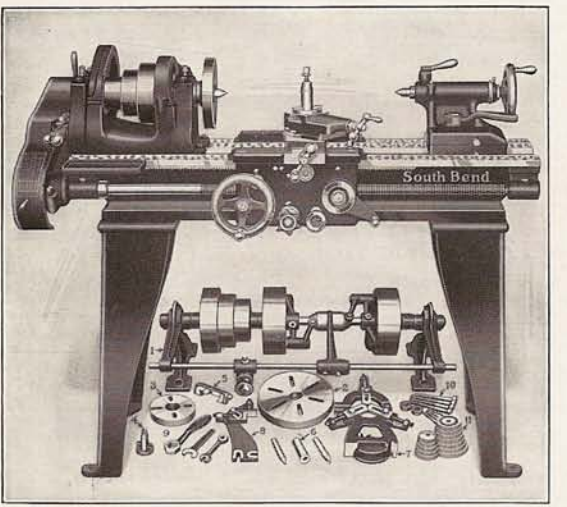
Change Gears are used to cut standard screw threads, right or left-hand, from 4 to 40 per inch, and for automatic longitudinal feeds and automatic cross feeds. Special change gear equipment for cutting screw threads from 44 to 80 per inch can be supplied at \$10.00 extra, when ordered with lathe.

Equipment Included in Price consists of: Countershaft; large and small face plates; tool post; thread cutting stop; two 60° lathe centers; spindle sleeve; center rest; follower rest; change gears; wrenches; installation plan and book, "How to Run a Lathe."

Prices of 9-inch Standard Change Gear Lathe

Cat. No.	Swing Over Bed Inches	Length of Bed Feet	Distance Between Centers Inches	Approx. Weight Crated Pounds	Code Word	Net Factory Price
30-X	9 1/4	2 1/2	9 3/8	447	Bajal	\$240.00
30-Y	9 1/4	3	16 3/8	472	Bajem	250.00
30-Z	9 1/4	3 1/2	21 3/8	497	Bajyr	260.00
30-A	9 1/4	4	27 3/8	522	Bakam	270.00
30-R	9 1/4	4 1/2	34 3/8	547	Baken	280.00

If Countershaft is not wanted, deduct \$13.00.
If Bench Legs are wanted in lieu of Floor Legs, deduct \$10.00.



9"x3' South Bend Series "O" Standard Change Gear Precision Lathe, Countershaft Drive.....\$250.00

SCREW THREAD CUTTING CHART		
STANDARD CHANGE GEAR LATHE		
INCHES PER INCH	SWING OVER	SCREW CODE
4	64	32
5	64	40
6	64	48
7	64	56
8	64	64
9	64	72
10	32	40
11	32	44
12	32	48
13	32	52
14	32	56
16	32	64
18	32	72
20	32	80
22	16	44
24	16	48
26	16	52
28	16	56
30	16	60
32	16	64
36	16	72
40	16	80

Chart for Threads

9-inch Horizontal V-Belt Motor Driven Lathe

Quick Change—Standard Change—Bench Lathes

The 9-inch Horizontal Motor Driven Bench Lathe, illustrated at left, is the same as the lathe shown on page 22 and has the same mechanical features and specifications: the only difference is that it has Improved Horizontal V-Belt Motor Drive with tension adjustment and release for easy shifting of the cone pulley belt. See page 27.

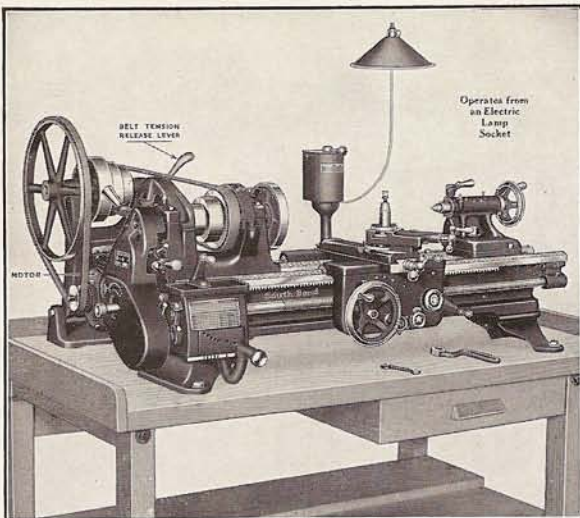
Prices of Lathe, Motor, Drive Unit, etc., are itemized in the tabulation below so that you may order them complete or individually as desired.

Regular Equipment included in price of lathe consists of: Large face plate; small face plate; tool post; thread cutting stop; two 60° lathe centers; spindle sleeve; center rest; follower rest; wrenches; installation plan and book, "How to Run a Lathe."

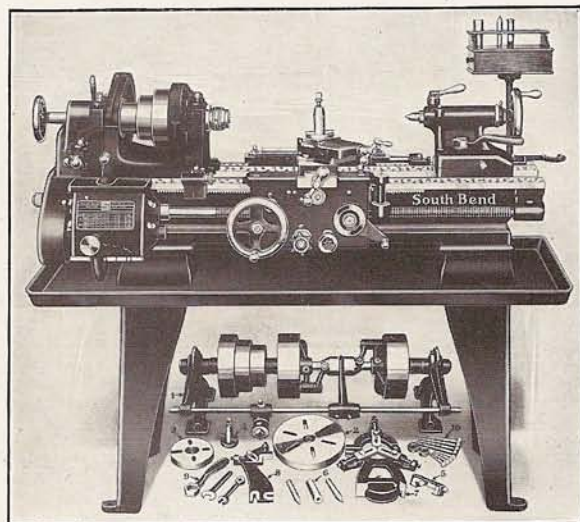
Prices of 9-inch Horizontal Motor Driven Bench Lathe

9-inch South Bend Quick Change Gear Bench Lathe with Graduated Compound Rest, Regular Equipment, but without Bench.....	9"x2 1/2' 480-XX Ensad	9"x3' 480-YN Ensig	9"x3 1/2' 480-ZN Entaf	9"x4' 480-AN Enteg	9"x4 1/2' 480-RN Entza
	\$257.00	\$267.00	\$277.00	\$287.00	\$297.00
Adjustable Belt Tension Countershaft....	14.00	14.00	14.00	14.00	14.00
Motor drive equipment consisting of: 1/4 H.P. 1725 R.P.M. Start-and-Stop Reversing Motor (1-phase, 60-cycle, A.C. 110-volt); V-Groove Pulley for Motor; Reversing Switch (Drum type); Wiring connected to switch—tagged for motor; Stand for Supporting Reversing Switch; V-Belt, Motor to Drive Unit; and Flat Leather Belt.....	\$19.50	\$19.50	\$19.50	\$19.50	\$19.50
Price, Lathe and Equipment, Complete..	\$290.50	\$300.50	\$310.50	\$320.50	\$330.50

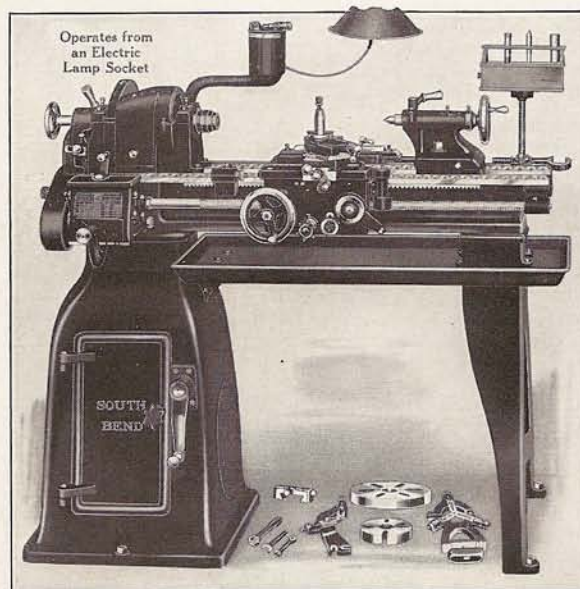
Distance Between Centers of Lathe.... 9% in. 16% in. 21% in. 27% in. 34% in.
Weight Crated, Lathe and Drive Equipment 446 lbs. 471 lbs. 496 lbs. 521 lbs. 546 lbs.
Instant Reversing Motor: For 3-phase, add \$14.00; for 1-phase, add \$21.00; for D.C., add \$19.00. If Standard Change Gear Lathe is wanted, deduct \$40.00.



9" x 3' Horizontal Motor Driven Bench Lathe, Quick Change Gear Type, Less Bench, Series "O".....\$300.50
(Bench for Lathe is extra, see page 62.)



9" x 3' South Bend Series "O" Tool Room Precision Lathe, Countershaft Drive.....\$432.25



9" x 3' South Bend Series "O" Tool Room Precision Lathe, Underneath Belt Motor Drive.....\$512.25

SOUTH BEND, INDIANA, U. S. A.

9-inch Tool Room Lathe—Countershaft Drive

Quick Change, Back-Geared, Screw Cutting Precision Lathe

The 9-inch South Bend Tool Room Precision Lathe, illustrated at left, has the accuracy and precision for the finest class of tool, jig and fixture work. It is practical for making precision master taps, thread gauges, dies, tools, etc. This lathe is built up of the same units as used on the 9-inch Quick Change Gear Lathe illustrated and described on page 22, and has the same mechanical features and specifications.

Regular Equipment included in price of lathe is the same as listed with the 9-inch Quick Change Gear Countershaft Drive Lathe on page 22.

Prices 9-inch Tool Room Precision Lathe—Countershaft Drive

Size and Catalog Number.....	9" x 3' No. 880-Y	9" x 4' No. 880-A	9" x 4 1/2' No. 880-R
Code Word	Bafum	Bagaj	Bagek
Price	\$290.00	\$310.00	\$320.00
9-inch Tool Room Quick Change Gear Precision Lathe, Countershaft Drive, with Regular Equipment, but without Tool Room Attachments....			
TOOL ROOM ATTACHMENTS			
Draw-in Collet Chuck (Hand Wheel Type) with One Collet, Any Size	Aaron	Aaron	Aaron
Extra Collets 1/2-inch up to 1/2-inch capacity by 6ths. Each.....	32.00	32.00	32.00
Taper Attachment.....	Cabot 3.25	Cabot 3.25	Cabot 3.25
Thread Indicator.....	Dashe 55.00	Dashe 55.00	Dashe 55.00
Oil Pan.....	Abaft 9.00	Abaft 9.00	Abaft 9.00
Micrometer Carriage Stop.....	Oasis 20.00	Odlum 22.00	Often 23.00
Collet Cabinet and Bracket.....	Calef 11.00	Calef 11.00	Calef 11.00
	Caged 12.00	Caged 12.00	Caged 12.00
Prices of Tool Room Lathe, Complete..	Bacup \$432.25	Bamoq \$454.25	Bljar \$465.25
Distance Between Spindle Centers....	16% in.	27% in.	34% in.
Weight Crated, Lathe and Attachments.	582 lbs.	632 lbs.	657 lbs.

9-inch Tool Room Lathe—Underneath Drive

Quick Change, Back-Geared, Screw Cutting Precision Lathe

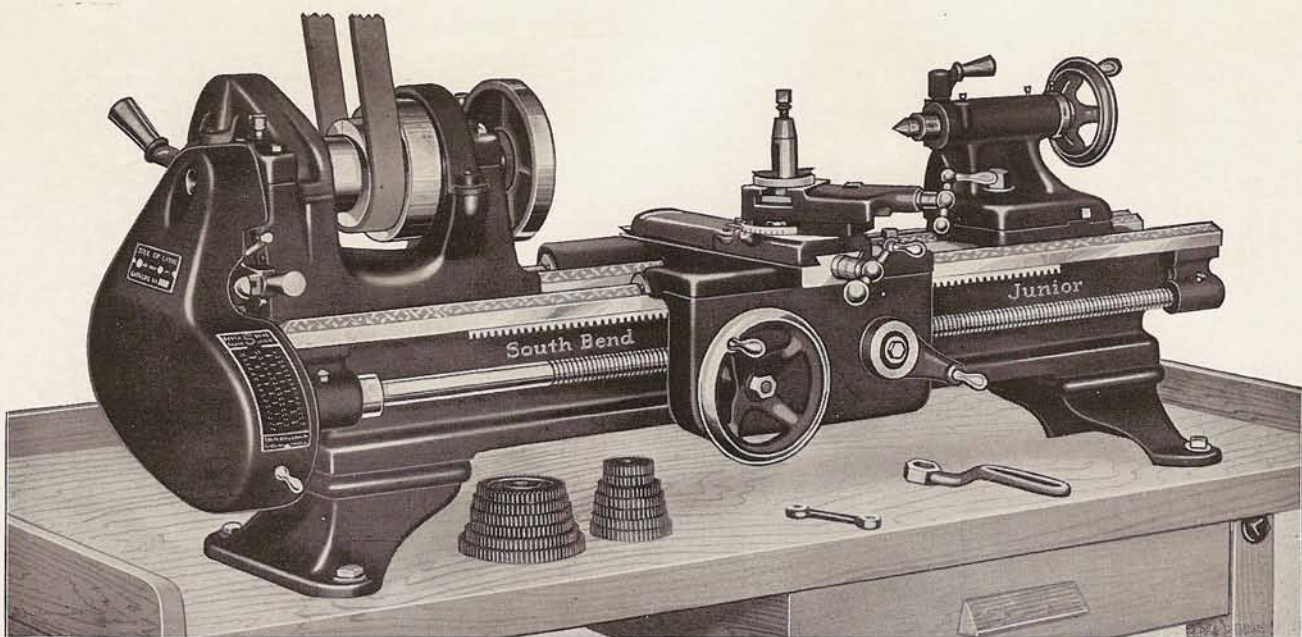
The 9-inch South Bend Tool Room Precision Lathe, illustrated at left, is the same as the 9-inch Countershaft Driven Tool Room Lathe shown above, and has the same mechanical features, specifications and lathe equipment; the only difference is that it is equipped with Underneath Belt Motor Drive instead of Overhead Countershaft Drive.

Underneath Belt Motor Drive mechanism used on this lathe is illustrated and described in detail on page 44 of this catalog.

Electrical Equipment included in the price of this lathe consists of: 1/4 H.P. instant reversing motor (Westinghouse, General Electric or equal make); drum reversing switch; wiring between motor and switch; conduit; wiring diagram; V-belt; and flat leather belt.

Prices 9-inch Tool Room Precision Lathe—Underneath Belt Motor Drive

Catalog No. 1880-Y—9" x 3' Tool Room Quick Change Gear Precision Lathe, with Underneath Belt Motor Drive, Regular Equipment and Electrical Equipment, but without Tool Room Attachments	With 3 Phase-60 Cycle A.C. Motor	With 1 Phase-60 Cycle A.C. Motor	With Direct Current Motor
Code Word	Danag	Danag	Danag
Price	\$376.00	\$383.00	\$381.00
TOOL ROOM ATTACHMENTS			
Draw-in Collet Chuck (Hand Wheel Type) with One Collet, Any Size	Aaron	Aaron	Aaron
Extra Collets 1/2-inch up to 1/2-inch capacity by 6ths. Each.....	32.00	32.00	32.00
Taper Attachment.....	Cabot 3.25	Cabot 3.25	Cabot 3.25
Thread Indicator.....	Dashe 55.00	Dashe 55.00	Dashe 55.00
Chip Pan.....	Abaft 9.00	Abaft 9.00	Abaft 9.00
Micrometer Carriage Stop.....	Bonny 14.00	Bonny 14.00	Bonny 14.00
Collet Cabinet and Bracket.....	Calef 11.00	Calef 11.00	Calef 11.00
	Caged 12.00	Caged 12.00	Caged 12.00
Prices of Tool Room Lathe, Complete..	Dokar \$512.25	Dokor \$519.25	Dolas \$517.25
Distance Between Spindle Centers....	16% in.	16% in.	16% in.
Weight Crated, Lathe and Attachments.	885 lbs.	885 lbs.	895 lbs.
For Lathe with 4 ft. bed add \$22.00. For 4 1/2 ft. add \$38.00.			



9" x 3' Junior Bench Lathe with Countershaft and Compound Rest, but less Bench... \$185.00

9-inch Junior Series "O" South Bend Countershaft Driven Bench Lathe Back-Gearred, Screw Cutting Precision Lathe—Automatic Longitudinal Geared Screw Feed

The 9-inch Junior Lathe is built of the same units as the 9-inch Standard and Quick Change Gear Lathes. (See page 22). Headstock, tailstock, bed, saddle, compound rest, lead screw, workmanship and inspection tests are identical. No sacrifice in quality, accuracy, power, or durability has been made to obtain the remarkably low price of the 9-inch Junior Lathe.

The 9-inch Junior South Bend Back-Gearred, Screw Cutting Lathe is a precision tool for machining all kinds of metal, wood, composition, fibre, etc. Has the power to reduce the diameter of a steel shaft $\frac{3}{8}$ " in one cut. It is an ideal tool for accurate work in the manufacturing plant, experimental shop, repair shop, home shop and laboratory.

Back-Gearred Headstock is hand-scraped to lathe bed; has three-step cone pulley for $1\frac{1}{4}$ " belt; six spindle speeds, 39 to 596 R.P.M., three direct and three back-gearred; wrenchless bull gear lock; and spring latch reverse for threads and feeds.

Headstock Spindle is made of high carbon steel, finish ground, and has a $\frac{3}{4}$ " hole its entire length. Spindle nose $1\frac{1}{2}$ " diam., 8 threads. Has No. 2 Morse Taper center. Bearings are phosphor bronze, lapped and adjustable for wear.

Carriage has wide deep bridge; is hand-scraped to bed; has lock for facing and cutting-off; and V-way wipers.

The large face plate, follower rest, center rest and thread cutting stop are omitted from the equipment of the Junior Lathe. Usually these accessories are not needed but they may be purchased separately, if required, see page 61. Power cross feed is also omitted and half-nut feed instead of worm drive is used for the power longitudinal carriage feeds.

Tailstock is hand-scraped to bed; has set-over for taper turning; graduated spindle; improved spindle lock; No. 2 Morse Taper spindle center, hardened, ground and self-ejecting; spindle travel $2\frac{1}{8}$ ". See page 38.

Precision Lead Screw, $\frac{3}{4}$ " diameter, 8 Acme threads per inch; guaranteed to meet most exacting requirements for cutting screw threads, making taps, dies, thread gauges, etc.

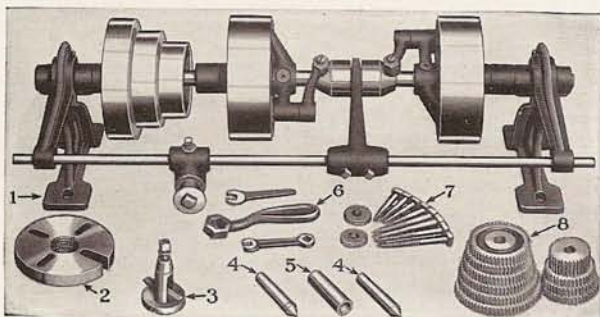
Screw Thread Cutting. Change gears are supplied for cutting right and left-hand threads 4 to 40 per inch, including $11\frac{1}{2}$ pipe thread. Index plate illustrated is attached to lathe. Change gears also provide for various feed changes from fine to coarse. Special change gear equipment for cutting standard screw threads from 44 to 80 per inch can be supplied at \$10.00 extra, when ordered with the lathe. See pp. 43 and 61.

Compound Rest is graduated 180° ; swivels to any angle, and has angular travel of $1\frac{1}{8}$ ". Compound rest screw and cross feed screw have micrometer collars graduated in thousandths. Takes tool shank $\frac{3}{8}$ " x $1\frac{3}{16}$ " for $\frac{1}{4}$ " sq. cutter bit.

Lathe Bed is one piece casting of gray iron with 50% steel mixture, heavily constructed and reinforced by box braces; has three V-ways and one flat way.

The Double Friction Countershaft has two friction clutch pulleys which permit lathe to be operated both forward and in reverse.

Regular Equipment included in price of lathe consists of: Double friction countershaft; change gears for screw threads and feeds; graduated compound rest; face plate; tool post; two 60° lathe centers; spindle sleeve; wrenches; installation plan and book, "How to Run a Lathe."



Countershaft and Equipment Included in Price of Lathe.

Prices 9-inch Junior South Bend Bench Lathes with Regular Lathe Equipment

Swing Over Bed Inches	Length of Bed Feet	Distance Between Centers Inches	Hole Thru Spindle Inches	Swing Over Carriage Inches	Power Required H.P.	Approx. Weight Crated Pounds	Without Countershaft		With Countershaft			
							Cat. No.	Code Word	Net Factory Price	Cat. No.	Code Word	Net Factory Price
9 1/4	2 1/2	9 3/4	3/4	6 3/4	1/4	350	22-XBW	Bydlo	\$162.00	22-XB	Babef	\$175.00
9 1/4	3	16 3/8	3/4	6 3/4	1/4	375	22-YBW	Bydum	172.00	22-YB	Babig	185.00
9 1/4	3 1/2	21 3/8	3/4	6 3/4	1/4	400	22-ZBW	Byfil	182.00	22-ZB	Bacaf	195.00
9 1/4	4	27 3/8	3/4	6 3/4	1/4	425	22-ABW	Byfimo	192.00	22-AB	Baceg	205.00
9 1/4	4 1/2	34 3/8	3/4	6 3/4	1/4	450	22-RBW	Bygel	202.00	22-RB	Bacoj	215.00

SCREW THREAD CUTTING CHART		
STANDARD CHANGE GEAR LATHE		
THREADS PER INCH	9"-11" SWG GEAR	SCREW GEAR
4	64	32
5	64	40
6	64	48
7	64	56
8	32	32
9	64	72
10	32	40
11	32	48
11 1/2	32	46
12	32	48
13	32	52
14	32	56
16	32	64
18	32	72
20	32	80
22	16	44
24	16	48
26	16	52
27	16	54
28	16	56
30	16	60
32	16	64
36	16	72
40	16	80

Chart for Threads



Operates from
an Electric
Lamp
Socket

9"x3' Junior Series "O" Horizontal Motor Driven Bench Lathe, with Motor Drive Equipment, but less Bench. \$204.50

9-inch Junior Series "O" Horizontal Motor Driven Bench Lathe

Back-Geared, Screw Cutting Precision Lathe—Automatic Longitudinal Geared Screw Feed

Lathe is Equipped With Adjustable Belt Tension Countershaft

The 9-inch Junior South Bend Horizontal Motor Driven Lathe illustrated above is the same as the 9-inch Junior Bench Lathe shown on the opposite page and has the same mechanical features and specifications. The only difference is that this lathe has the improved Horizontal Motor Drive instead of Countershaft Drive. For list of specifications applying to this lathe see page 37.

Improved Horizontal V-Belt Motor Drive, illustrated below, is a simple, powerful and efficient drive for the bench lathe. The motor drive unit is mounted on the bench, back of the lathe. A V-belt transmits the power from the motor to the drive pulley and a flat leather belt is used between the cone pulleys.

Adjustable Belt Tension Countershaft has a belt tension adjustment for both the cone pulley belt and motor belt, also a belt tension release for the cone pulley. The motor and drive pulley are attached to the countershaft frame. This arrangement requires a minimum amount of bench space.

Belt Release Lever (B Fig. 2) permits the countershaft to tilt forward on pivot (A Fig. 2) which relieves the cone pulley belt tension and permits easy shifting of the belt from one step of the cone pulley to another. A separate adjustment is provided for adjusting the belt tension for any desired pulling power and for taking up the stretch in the belt.

The 1/4 H.P. Reversing Motor has independent tension adjustment for the V-Belt (C Fig. 2). The motor may be connected to an electric lamp socket.

Drum Reversing Switch controls the starting, stopping or reversing of the motor. Switch is conveniently located on front of lathe by means of a bracket.

Screw Thread Cutting. Change gears are supplied for cutting standard screw threads from 4 to 40 per inch, right or left-hand, including 1 1/2 pipe thread. Change gears also provide for various feed changes from fine to coarse. Special change gear equipment for cutting standard screw threads from 44 to 80 per inch, can be supplied at \$10.00 extra when ordered with the lathe.

Regular Equipment included in price of lathe consists of: Graduated compound rest; change gears for screw threads and feeds; face plate; tool post; two 60° lathe centers; spindle sleeve; wrenches; installation plan and, "How to Run a Lathe."

Motor, Switch, Belting, etc., (itemized in the price tabulation below) may be purchased with lathe, or separately.

SCREW THREAD CUTTING CHART		
STANDARD CHANGE GEAR LATHE		
THREADS PER INCH	SHOULDER GEAR	SPINDLE GEAR
4	64	32
5	64	40
6	64	48
7	64	56
8	32	32
9	64	72
10	32	40
11	32	44
11 1/2	32	46
12	32	48
13	32	52
14	32	56
16	32	64
18	32	72
20	32	80
22	16	44
24	16	48
26	16	52
27	16	54
28	16	56
30	16	60
32	16	64
36	16	72
40	16	80

Chart for Threads

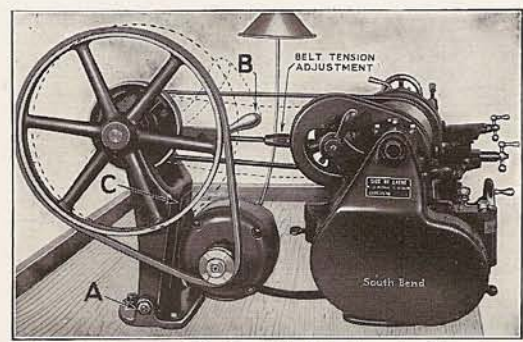
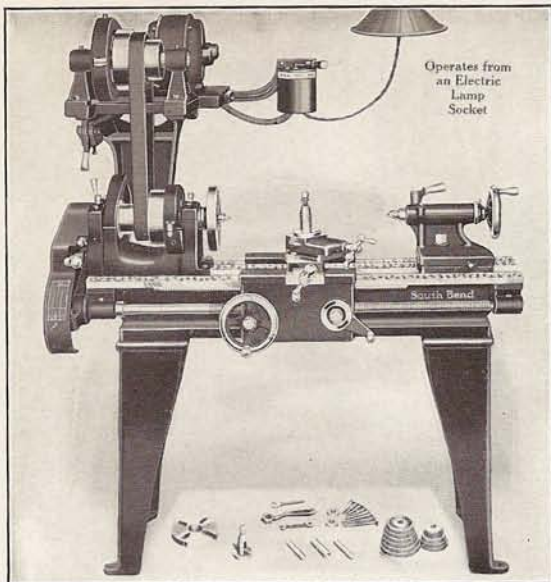


Fig. 2. Improved Adjustable Belt Tension Countershaft for Horizontal Motor Driven Lathe.

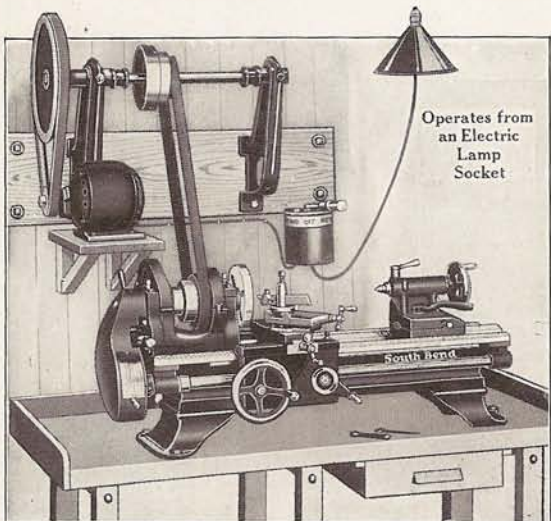
Prices of 9-inch Junior Horizontal V-Belt Motor Driven Bench Lathes

	9"x2 1/4' 422-XX Enkat	9"x3' 422-YN Enkoy	9"x3 1/2' 422-ZN Enlav	9"x4' 422-AN Enlix	9"x4 1/2' 422-RN Enloz
9-inch Junior South Bend Bench Lathe with Graduated Compound Tool Rest, Regular Equipment, but not Bench . . .	\$162.00	\$172.00	\$182.00	\$192.00	\$202.00
Adjustable Belt Tension Countershaft	14.00	14.00	14.00	14.00	14.00
Motor drive equipment consisting of: 1/4 H.P. Start-and-Stop Type Reversing Split-Phase Motor, 1725 R.P.M. (1-phase, 60-cycle, A.C. 110-volt); V-Groove Pulley for Motor; Reversing Switch (Drum Type); Bracket for Supporting Switch; Wiring (Wired to Switch and tagged for Motor); V-Belt, Motor to Drive Unit; and Flat Leather Belt	18.50	18.50	18.50	18.50	18.50
Price, Lathe and Equipment, Complete	\$194.50	\$204.50	\$214.50	\$224.50	\$234.50
Distance Between Spindle Centers of Lathe . . .	9 3/8 in.	16 3/8 in.	21 3/8 in.	27 3/8 in.	34 3/8 in.
Shipping Weight, Lathe and Drive Equipment . .	391 lbs.	416 lbs.	441 lbs.	466 lbs.	491 lbs.

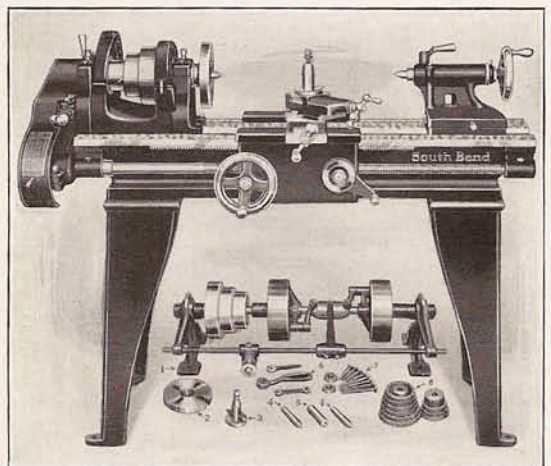
Instant Reversing Motor, in lieu of Start-and-Stop Type Motor: For 3-phase add \$14.00; for 1-phase add \$21.00; for Direct Current add \$19.00.



9" x 3' Junior Series "O" Silent V-Belt Motor Driven Lathe with Regular Equipment.....\$241.50



9" x 3' Junior Series "O" Simplex Motor Driven Bench Lathe with Regular Equipment.....\$199.50 (Bench for Lathe is extra, see page 62.)



9" x 3' Junior Series "O" South Bend Lathe with Overhead Countershaft Drive and Regular Equipment..\$195.00

Floor Legs are of sturdy construction and provide a substantial support for the lathe bed and save the expense and trouble of building or purchasing a bench.

9-inch Junior Silent V-Belt Motor Driven Lathe Back-Geared, Screw Cutting Lathe—Floor Leg or Bench Type

The 9-inch Junior Lathe illustrated at left is the same as the 9-inch Lathe shown on page 26 and has the same mechanical features and specifications; the only difference is that it has Silent V-Belt Motor Drive instead of Countershaft Drive and may be had with either bench or floor legs.

The Silent Motor Drive Unit and a 1/4 H.P. reversing motor are mounted above the lathe. A drum reversing switch controls motor which operates from an electric socket. Drive is by V-Belt from motor to driving pulley and by flat belt to spindle cone. Cone pulley belt has tension adjustment for any desired pulling power and release lever for easy shifting. See page 36.

Equipment Included in Price of lathe consists of: Silent Motor Drive Unit; graduated compound rest; face plate; tool post; two 60° lathe centers; spindle sleeve; change gears for screw threads and feeds; wrenches; lag screws; washers; installation plan and book, "How to Run a Lathe."

Prices of 9-inch Junior Silent V-Belt Motor Driven Lathes—Floor Leg Type

9-inch Junior South Bend Floor Leg Lathe with Graduated Compound Rest, Silent Drive Unit and Regular Equipment.....	9"x2 1/2' 322-X Begna	9"x3' 322-Y Begro	9"x3 1/2' 322-Z Besof	9"x4' 322-A Betde	9"x4 1/2' 322-R Bevda
	\$214.00	\$224.00	\$234.00	\$244.00	\$254.00

Motor drive equipment consisting of:
1/4 H.P. Start-and-Stop Type Reversing Split-Phase Motor, 1725 R.P.M. (1-phase, 60-cycle, A.C. 110-volt); V-Groove Pulley for Motor; Reversing Switch (Drum Type); Wiring (Connected to Switch and Motor); V-Belt, Motor to Drive Unit; and Flat Leather Belt.....

	17.50	17.50	17.50	17.50	17.50
Price, Lathe and Equipment, Complete....	\$231.50	\$241.50	\$251.50	\$261.50	\$271.50

Distance Between Spindle Centers of Lathe.. 9 3/4 in. 16 3/4 in. 21 3/4 in. 27 3/4 in. 34 3/4 in.
Shipping Weight Lathe and Drive Equipment 575 lbs. 600 lbs. 625 lbs. 650 lbs. 675 lbs.
Instant Reversing Motor, in lieu of Start-and-Stop Type Motor: For 3-phase add \$14.00; for 1-phase add \$21.00; for Direct Current add \$19.00.
For Bench Legs deduct \$7.00 from price of lathe

9-inch Junior Simplex Motor Driven Lathe Back-Geared, Screw Cutting Lathe—Floor Leg or Bench Type

The 9-inch Junior Simplex Motor Driven Lathe illustrated at left is the same as the Lathe shown on page 26 and has the same mechanical features and specifications. The only difference is that this lathe has Simplex V-Belt Motor Drive instead of Countershaft Drive.

The Simplex Motor Drive Countershaft may be mounted on wall as shown. Drive is by V-Belt from motor to drive unit and by flat leather belt to spindle cone. The 1725 R.P.M. 1/4 H.P. reversing motor may be operated from an electric lamp socket. A drum reversing switch controls the motor.

Equipment Included in Price of lathe consists of: Graduated compound rest; face plate; tool post; two 60° lathe centers; spindle sleeve; change gears; wrenches; installation plan and book, "How to Run a Lathe."

Prices of 9-inch Junior Simplex V-Belt Motor Driven Bench Lathes

9-inch Junior South Bend Bench Lathe, with Graduated Compound Tool Rest, Lathe Equipment, but not Bench.....	9"x2 1/2' 522-XB Bogud	9"x3' 522-YB Bogya	9"x3 1/2' 522-ZB Bogze	9"x4' 522-AB Bohaz	9"x4 1/2' 522-RB Bohdo
	\$162.00	\$172.00	\$182.00	\$192.00	\$202.00
Simplex Drive Unit.....	9.00	9.00	9.00	9.00	9.00

Motor drive equipment consisting of:
1/4 H.P. Start-and-Stop Type Reversing Split-Phase Motor, 1725 R.P.M. (1-phase, 60-cycle, A.C. 110-volt); V-Groove Pulley for Motor; Reversing Switch (Drum Type); Wiring (wired to switch—tagged for motor); V-Belt, Motor to Drive Unit; and Flat Leather Belt.....

	18.50	18.50	18.50	18.50	18.50
Price, Lathe and Equipment, Complete....	\$189.50	\$199.50	\$209.50	\$219.50	\$229.50

Distance Between Spindle Centers of Lathe.. 9 3/4 in. 16 3/4 in. 21 3/4 in. 27 3/4 in. 34 3/4 in.
Weight Crated, Lathe & Drive Equipment.. 387 lbs. 412 lbs. 437 lbs. 462 lbs. 487 lbs.
Instant Reversing Motor, in lieu of Start-and-Stop Type Motor: For 3-phase add \$14.00; for 1-phase add \$21.00; for Direct Current add \$19.00.
For Floor Legs add \$10.00 to price of lathe.

9-inch Junior Countershaft Driven Lathe Back-Geared, Screw Cutting Precision Lathe—Floor Leg Type

The 9-inch Junior Precision Lathe illustrated at left is the same as the 9-inch Countershaft Driven Lathe shown on page 26, and has the same mechanical features and specifications. The only difference is that it has Floor Legs instead of Bench Legs.

Equipment Included in Price of lathe consists of: Double friction countershaft; compound tool rest; face plate; tool post; two 60° lathe centers; spindle sleeve; change gears for screw thread cutting and automatic longitudinal feeds; wrenches; lag screws and washers; installation plan and book, "How to Run a Lathe."

Double Friction Countershaft is equipped with two friction clutch pulleys, one of which is operated by straight belt and the other by a crossed belt. This permits the lathe to be operated both forward and in reverse.

Prices of 9-inch Junior Floor Leg Lathes with Countershaft Drive

Swing Over Bed Inches	Length of Bed Feet	Distance Between Centers Inches	Hole Thru Spindle Inches	Swing Over Carriage Inches	Power Required H.P.	Approx. Weight Crated Pounds	Cat. No.	Code Word	Net Factory Price
9 1/4	2 1/2	9 3/4	3/4	6 3/8	1/4	402	22-X	Badag	\$185.00
9 1/4	3	16 3/8	3/4	6 3/8	1/4	427	22-Y	Badhe	195.00
9 1/4	3 1/2	21 3/8	3/4	6 3/8	1/4	452	22-Z	Badok	205.00
9 1/4	4	27 3/8	3/4	6 3/8	1/4	477	22-A	Badul	215.00
9 1/4	4 1/2	34 3/8	3/4	6 3/8	1/4	502	22-R	Bafah	225.00

If Countershaft is not wanted, deduct \$13.00 from above prices.

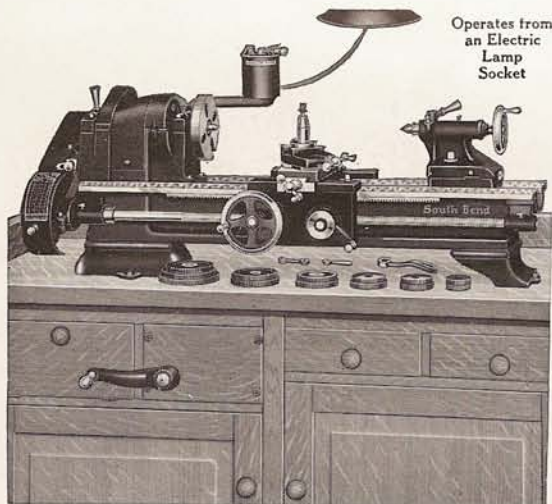
9-inch Junior Underneath Motor Driven Lathe

Back-Geared, Screw Cutting Precision Lathe—Bench Leg Type

The 9-inch Junior Underneath Belt Motor Driven Bench Lathe illustrated at left is similar to the lathe shown on page 26, and has the same mechanical features and specifications. The only difference is that this lathe has Underneath Belt Motor Drive instead of Countershaft Drive.

Underneath Motor Drive included in price of lathe consists of Motor and drive unit with bracket for mounting under bench. Drive is by V-belt from motor to drive unit and by flat belt to spindle cone pulley. A drum reversing switch controls the 1/4 H.P. reversing motor which may be operated from an electric lamp socket. Cone pulley belt has tension adjustment for any desired pulling power and release lever for easy shifting. V-Belt from motor to drive unit has independent tension adjustment. See page 45.

Equipment Included in Price of lathe consists of: Graduated compound rest; face plate; tool post; two 60° lathe centers; spindle sleeve; change gears for threads and feeds; wrenches; installation plan and "How to Run a Lathe."



Operates from an Electric Lamp Socket

9" x 3' Junior Series "O" Underneath Belt Motor Driven Bench Lathe with Regular Lathe Equipment...\$278.00

Prices of 9-inch Junior Underneath Motor Driven Bench Lathes

Swing Over Bed Inches	Length of Bed Feet	Distance Between Centers Inches	Approx. Weight Crated Pounds	Cat. No. of Lathe	Code Word	With Instant Reversing Motors		
						3-Phase 60-Cycle A.C. Motor	1-Phase 60-Cycle A.C. Motor	Direct Current Motor
9 1/4	2 1/2	9 3/8	515	122-XB	Ryrat	\$261.00	\$268.00	\$266.00
9 1/4	3	16 3/8	540	122-YB	Ryrev	271.00	278.00	276.00
9 1/4	3 1/2	21 3/8	565	122-ZB	Ryrooy	281.00	288.00	286.00
9 1/4	4	27 3/8	590	122-AB	Ryrta	291.00	298.00	296.00
9 1/4	4 1/2	34 3/8	615	122-RB	Ryruz	301.00	308.00	306.00

If 1-phase, 60-cycle, A.C. 110-volt Start-and-Stop Reversing Motor is wanted in lieu of Instant Reversing Motor, deduct \$21.00 from 1-phase prices.

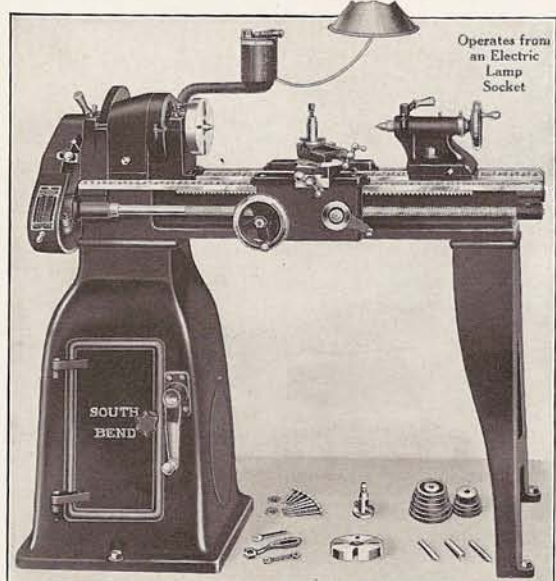
9-inch Junior Underneath Motor Driven Lathe

Back-Geared, Screw Cutting Precision Lathe—Floor Leg Type

The 9-inch Junior Underneath Belt Motor Driven Lathe illustrated at left is similar to the lathe shown on page 26, and has the same mechanical features and specifications. The only difference is that this lathe has Underneath Belt Motor Drive and Floor Legs.

Underneath Motor Drive included in price of lathe consists of Motor and drive unit enclosed in cabinet leg. Drive is by V-belt from motor to drive unit and by flat belt to spindle cone pulley. A drum reversing switch controls the 1/4 H.P. reversing motor which may be operated from an electric lamp socket. Cone pulley belt has tension adjustment for any desired pulling power and release lever for easy shifting. V-Belt from motor to drive unit has independent tension adjustment. See page 44.

Equipment Included in Price of lathe consists of: Graduated compound rest; face plate; tool post; two 60° lathe centers; spindle sleeve; change gears for screw threads and feeds; wrenches; installation plan and book, "How to Run a Lathe."



Operates from an Electric Lamp Socket

9" x 3' Junior Series "O" Underneath Belt Motor Driven Lathe with Regular Equipment.....\$288.00

Prices of 9-inch Junior Underneath Motor Driven Lathes—Floor Leg Type

Swing Over Bed Inches	Length of Bed Feet	Distance Between Centers Inches	Approx. Weight Crated Pounds	Cat. No. of Lathe	Code Word	With Instant Reversing Motors		
						3-Phase 60-Cycle A.C. Motor	1-Phase 60-Cycle A.C. Motor	Direct Current Motor
9 1/4	2 1/2	9 3/8	715	122-X	Facap	\$271.00	\$278.00	\$276.00
9 1/4	3	16 3/8	740	122-Y	Facir	281.00	288.00	286.00
9 1/4	3 1/2	21 3/8	765	122-Z	Facos	291.00	298.00	296.00
9 1/4	4	27 3/8	790	122-A	Faout	301.00	308.00	306.00
9 1/4	4 1/2	34 3/8	815	122-R	Fader	311.00	318.00	316.00

If 1-phase, 60-cycle A.C. 110-volt Start-and-Stop Reversing Motor is wanted in lieu of Instant Reversing Motor, deduct \$21.00 from 1-phase prices.

9-inch Junior South Bend Oil Pan Lathes

Countershaft Drive—Silent V-Belt Motor Drive

The 9-inch Junior Lathe, illustrated at left, is the same as the 9-inch Junior Lathe shown on page 26, except it is equipped with Floor Legs instead of Bench Legs and has Steel Oil Pan. The lathe may be operated by either Overhead Countershaft Drive or Silent V-Belt Motor Drive as shown on page 28.

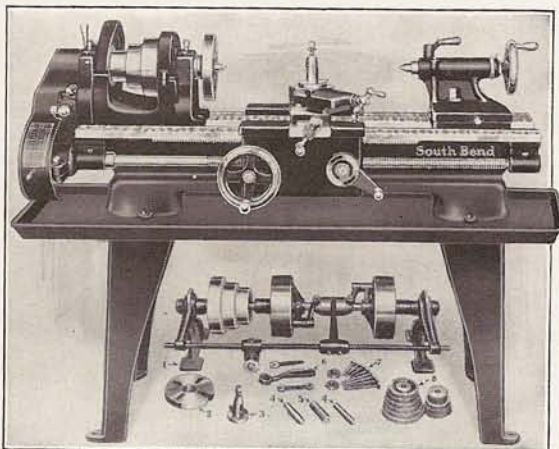
Regular Equipment consists of: Double friction countershaft (with countershaft drive lathe); silent motor drive unit (with silent motor drive lathe); graduated compound rest; face plate; tool post; two 60° lathe centers; spindle sleeve; change gears for thread cutting and automatic longitudinal feeds; wrenches; lag screws; washers; installation plan and "How to Run a Lathe."

Electrical Equipment included in price of Silent Motor Driven lathe consists of: 1/4 H.P. 1725 R.P.M. start-and-stop type reversing split-phase motor; V-groove pulley for motor; drum reversing switch; wiring (connected to switch and tagged for motor); one V-belt, motor to drive unit; and flat leather belt (1 1/4" x 36 3/4"); wiring diagram blue print.

Prices 9-inch Junior Oil Pan Lathes—Countershaft & Motor Drive

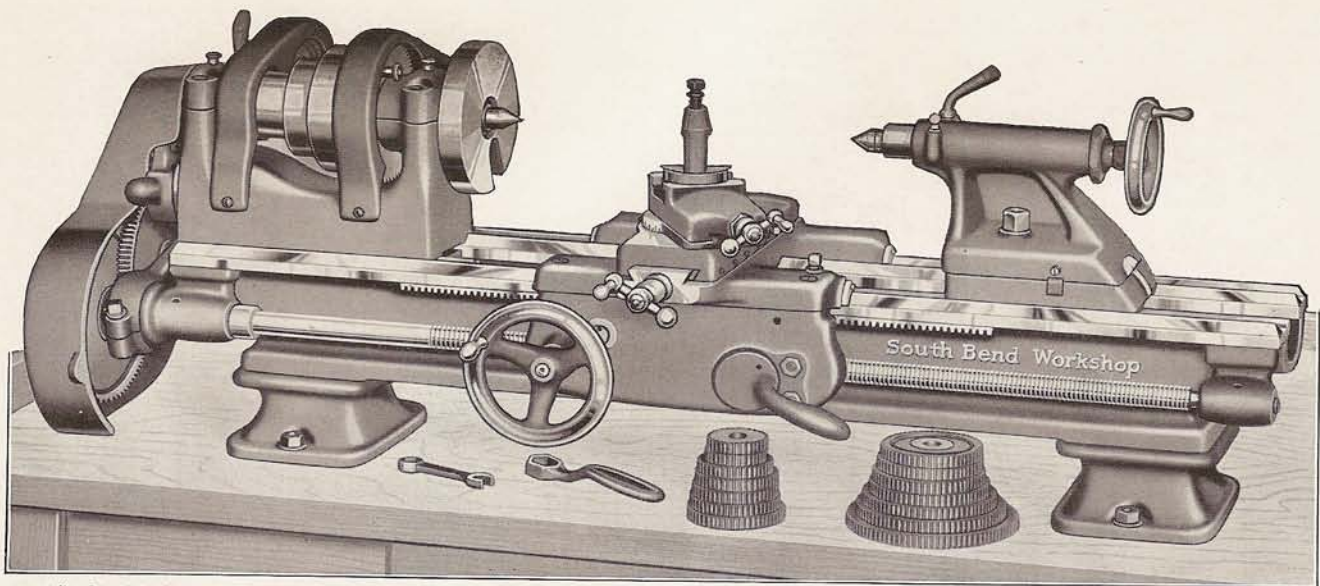
Swing Over Bed Inches	Length of Bed Feet	Distance Between Centers Inches	Swing Over Carriage Inches	Motor Drive Lathe Weight Crated Pounds*	Countershaft Drive			Silent Motor Drive		
					Cat. No.	Code Word	Net Factory Price	Cat. No.	Code Word	1-Phase 60-Cycle A.C. Motor
9 1/4	3	16 3/8	6 3/8	645	222-Y	Tiguc	\$215.00	3222-Y	Kekmo	\$261.50
9 1/4	3 1/2	21 3/8	6 3/8	670	222-Z	Tigwa	226.00	3222-Z	Kelak	272.50
9 1/4	4	27 3/8	6 3/8	695	222-A	Titheo	237.00	3222-A	Kelcl	283.50
9 1/4	4 1/2	34 3/8	6 3/8	720	222-R	Tithez	248.00	3222-R	Kelno	294.50

*Weights of Countershaft Drive Lathes are approximately 175 lbs. less.



9" x 3' Junior Series "O" Lathe with Oil Pan and Double Friction Countershaft\$215.00

Motors. The Silent Motor Driven Oil Pan Lathes, priced at right, include 1/4 H. P. start-and-stop type reversing motor for 1-phase, 60-cycle, A. C. For instant Reversing Motor, in lieu of Start-and-Stop Type Motor: For 3-phase add \$14.00; for 1-phase add \$21.00; for Direct Current add \$19.00.



9" x 3' "Workshop" Precision Lathe with Wrenches and Gears as Shown, but Without Bench or Drive Equipment.....\$75.00

9-inch 1936 Model "Workshop" South Bend Bench Lathe (Flat Belt Type)

Less Countershaft and Motor Drive Equipment

A Back-Geared, Screw Cutting Precision Lathe for the Working of Metals

The 9-inch "Workshop" Back-Geared, Screw Cutting Precision Lathe, illustrated above and referred to in this catalog, is the 1936 Model. It has ten major improvements and new features which make it the greatest value we have ever offered in our thirty years as builders of fine lathes.

New and Improved Features on the 9-inch "Workshop" Lathe include twin gear reverse for right and left-hand screw threads and automatic longitudinal feeds to carriage; ball thrust bearing on the headstock spindle; new and improved tailstock; improved compound rest; new and heavier designed saddle; simplified gearing for threads and feeds; polished hand wheel on tail stock and carriage; improved back gears; felt oilers and shear wipers on saddle.

Machines Metals of all kinds. The 9-inch "Workshop" Lathe will machine metals of all kinds, such as cast iron, steel, cast steel, steel forgings, wrought iron, brass, bronze, copper, babbitt, aluminum and the various alloy steels and metals. It is practical for working wood, hard rubber, cat-alin, celluloid, plastics, fibre and all other materials.

Standard Screw Threads 4 to 40 per inch, right or left hand, including 1 1/2 pipe thread can be cut on the 9-inch

"Workshop" Lathe. The accuracy and precision of this lathe are such that we guarantee it for machining the finest precision gauges, taps, tool and die work. See pages 43 and 61.

We recommend the "Workshop" Lathe for use in groups on production of small duplicate parts in the manufacturing plant, for the tool room, machine shop, auto service shop, laboratory, school shop, repair shop, and for all shops engaged in light, accurate machine work.

The Lathe Shown Above is identical with the lathes on pages 31 to 35, except that it is priced without countershaft and motor, so that the shop owner wishing to provide his own motor and drive arrangement can purchase the plain lathe.

Regular Equipment included in the price consists of: Graduated compound rest; face plate 5-inch diameter; forged steel tool post, ring and wedge; two 60-degree lathe centers No. 2 Morse Taper; headstock spindle sleeve; wrenches; set of independent change gears for screw thread cutting; large turning gears for various automatic longitudinal feeds to carriage; installation plan blue print and instruction book, "How to Run a Lathe."

"Workshop" Lathe Features

- Back-geared headstock, six spindle speeds
- Hollow steel spindle, 3/4" hole
- Reverse bracket for right and left-hand screw threads and automatic longitudinal feeds to carriage
- Compound rest graduated 180°, swivels to any angle
- Tailstock has 3/8" set-over for taper turning
- Micrometer graduations on compound rest screw
- Micrometer graduations on cross feed screw
- Automatic longitudinal power feeds to carriage
- Precision lead screw for screw thread cutting
- Half-nuts for screw thread cutting and power feeds
- Three V-ways and one flat-way on lathe bed
- Adjustable bearings for headstock spindle
- Adjustable gibs on cross feed and compound rest
- Ball thrust bearing for headstock spindle

"Workshop" Lathe Specifications

- Swing over bed.....9 1/2"
- Swing over carriage.....5 1/2"
- Collet Capacity.....1/4" to 3/8"
- Hole through spindle.....3/8"
- Standard screw thread cutting range.....4 to 40 per in.
- Spindle Speeds.....39, 68, 122, 202, 353, 630, RPM.
- Width of cone pulley belt.....1"
- Lathe tool shank 3/8" x 3/8".....Cutter bits.....1/4" x 1/4" x 2"
- Size of spindle nose.....1 1/2" diam. 8 threads
- Head and tail spindle lathe centers.....No. 2 Morse Taper.
- Lead Screw, Acme Thread.....3/4" diam. 8 threads
- Tool cross slide travel.....5 1/2"
- Angular travel compound rest top.....2 1/2"
- Tailstock spindle travel.....2"
- Automatic longitudinal feeds per revolution of spindle......0028"; .0056"; .0072"; .0008"; etc.

Prices of 9-inch "Workshop" Lathe (Flat Belt Type) with Regular Equipment, but Without Drive

Swing Over Bed Inches	Length of Bed Feet	Distance Between Centers Inches	Hole Through Spindle Inches	Swing Over Carriage Inches	Width Cone Pulley Belt Inches	Power Required H.P.	Approx. Ship. Wt. Crated Pounds	Cat. No.	Code Word	Price F.O.B. Factory
9 1/2	2 1/2	11	3/4	5 1/2	1	1/4	230	15-XB	Manpu	\$ 67.00
9 1/2	3	17	3/4	5 1/2	1	1/4	250	15-YB	Manpy	75.00
9 1/2	3 1/2	23	3/4	5 1/2	1	1/4	275	15-ZB	Manze	87.00
9 1/2	4	29	3/4	5 1/2	1	1/4	300	15-AB	Mapag	99.00
9 1/2	4 1/2	35	3/4	5 1/2	1	1/4	350	15-RB	Mapek	116.00

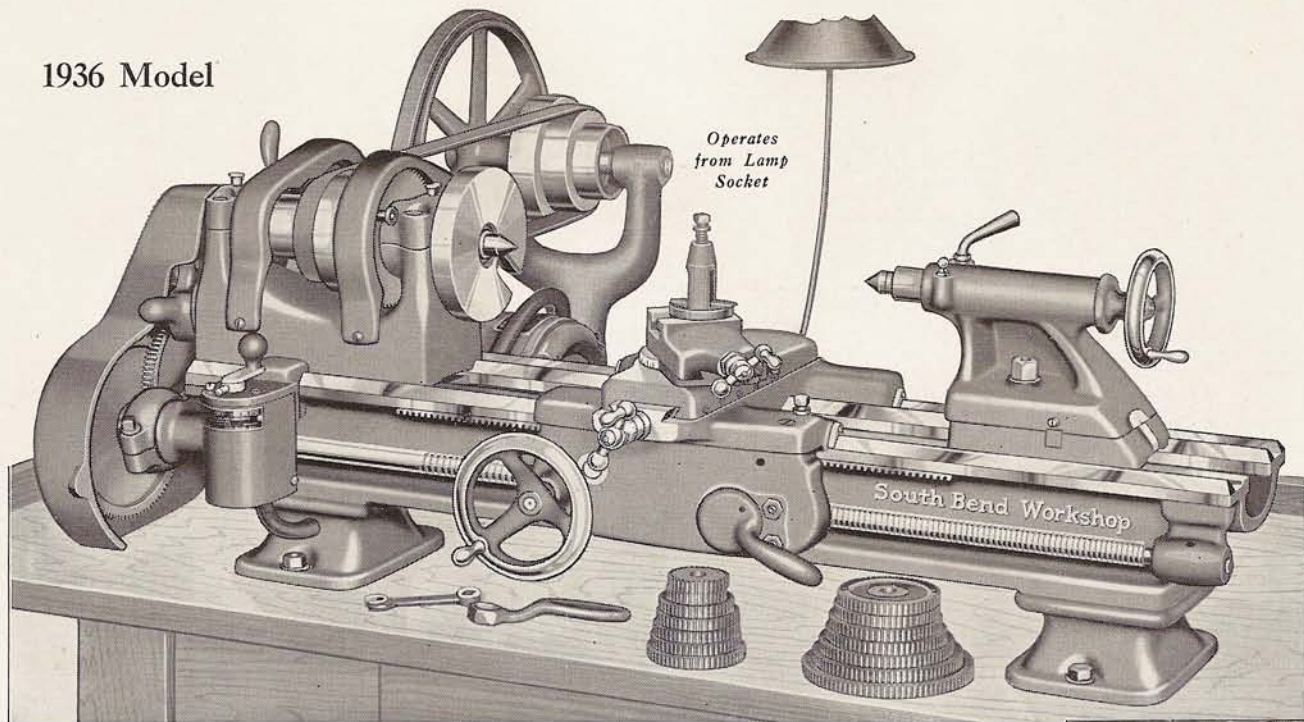
SCREW THREAD CUTTING CHART		
9-inch WORKSHOP LATHE		
THREADS TO CUT	STUD GEAR	SCREW GEAR
4	64	32
5	64	40
6	64	48
7	64	56
8	32	32
9	64	72
10	32	40
11	32	48
12	32	56
13	32	64
14	32	72
16	32	80
18	32	88
20	32	96
24	16	48
26	16	52
27	16	54
28	16	56
30	16	60
32	16	64
36	16	72
40	16	80

SOUTH BEND LATHE WORKS
SOUTH BEND, INDIANA, U. S. A.

If Double Friction Countershaft is wanted for above lathe, add \$12.00 to prices shown. See page 57. For easy payment plan details see page 71.

Chart for Threads Attached to 9-inch "Workshop" Lathes

1936 Model



9" x 3' "Workshop" Bench Lathe with Horizontal Motor Drive, Motor, Switch and Lathe Equipment, less Bench.....\$98.25

9-inch "Workshop" Motor Drive Bench Lathe (Flat Belt Type)

With Horizontal Countershaft and Motor Drive Equipment
A Back-Geared, Screw Cutting Precision Lathe for the Working of Metals

The 9-inch "Workshop" South Bend Horizontal Motor Driven Bench Precision Lathe shown above is a complete unit consisting of the lathe, adjustable type or plain type horizontal countershaft, reversing motor, reversing switch and belting, as priced below, set up ready to operate when connected to an electric light socket.

The Plain Type Horizontal Countershaft illustrated with lathe above, and shown in Fig. "A" at right, is practical for shops handling a limited amount of machine work. The base of this countershaft and the base of the motor have slotted bolt holes which permit adjustments "to" and "from" the lathe to provide for any required tension of either the V-belt or the flat leather belt. This countershaft can be mounted on the bench or on the wall.

The Adjustable Type Horizontal Countershaft, shown in Fig. "B" at right, provides instant release of belt tension for easy shifting of cone pulley belt. The turnbuckle shown at "A" permits adjustment to any desired belt tension. Independent V-belt adjustment is accomplished by moving the motor "up" or "down" on the drive unit.

Prices of 9-inch "Workshop" Lathes equipped with plain type horizontal countershaft and adjustable type horizontal countershaft are shown in the tabulation below. The entire equipment may be purchased or any item may be omitted.

Regular Lathe Equipment included in the price consists of: Graduated compound rest; face plate 5-inch diameter; forged steel tool post, ring and wedge; two 60-degree lathe centers No. 2 Morse Taper; headstock spindle sleeve; wrenches; set of independent change gears for screw thread cutting; large turning gears for automatic longitudinal power feeds; installation plan blue print and book, "How to Run a Lathe."

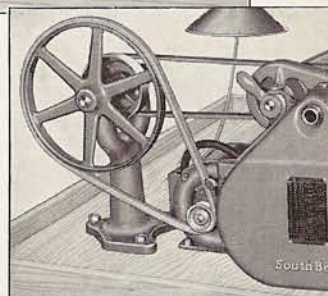


Fig. A. Horizontal Countershaft, Plain Type

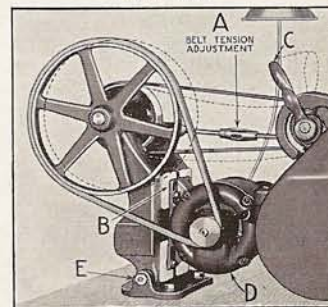
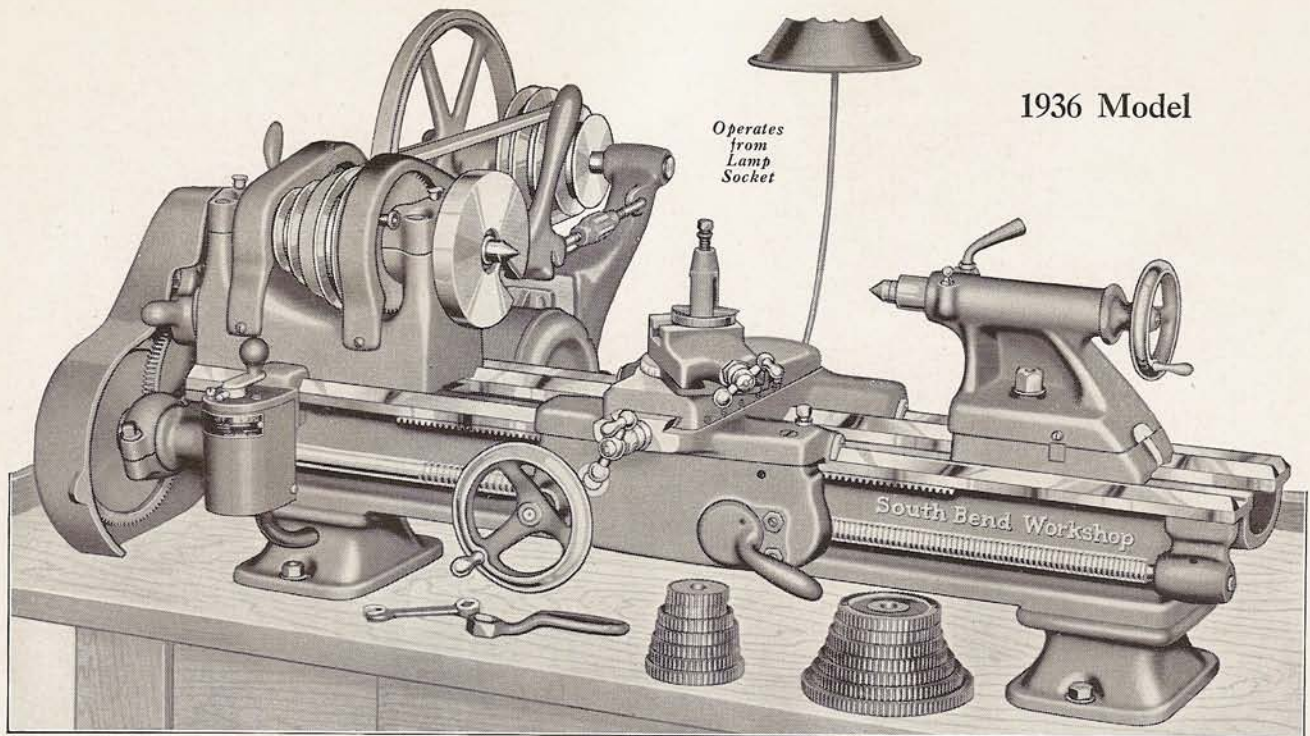


Fig. B. Horizontal Countershaft, Adjustable Type

Prices of 9-inch "Workshop" Horizontal Motor Driven Bench Lathe (Flat Belt Type)

No. 15. 9-inch "Workshop" South Bend Precision Bench Lathe Complete with Graduated Compound Rest and Regular Lathe Equipment, but without Motor Drive Equipment and Less Bench.....	Lathe with Horizontal Countershaft Plain Type				Lathe with Horizontal Countershaft Adjustable Type			
	9" x 3'	9" x 3 1/2'	9" x 4'	9" x 4 1/2'	9" x 3'	9" x 3 1/2'	9" x 4'	9" x 4 1/2'
	\$ 75.00	\$ 87.00	\$ 99.00	\$116.00	\$ 75.00	\$ 87.00	\$ 99.00	\$116.00
Prices of Motor Drive Equipment								
No. 836. Horizontal Motor Drive Countershaft, Plain Type	7.00	7.00	7.00	7.00	.....	.....	.....	.....
No. 238. Horizontal Motor Drive Countershaft, Adjustable	.....	.....	.....	.....	12.00	12.00	12.00	12.00
No. 127. 1/4 H.P. Start-Stop Reversing Split-Phase Motor, 1725 R.P.M. 1-ph. (60-cy., A.C. 110-v.)*	8.75	8.75	8.75	8.75	8.75	8.75	8.75	8.75
No. 217. V-Groove Pulley for Motor.....	.50	.50	.50	.50	.50	.50	.50	.50
No. 789. Drum Reversing Switch (Style R-12) and Bracket	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
No. 852. V-Belt, Motor to Drive Unit.....	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
No. 933. Flat Leather Belt and Lacing.....	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Total Price, Lathe with Motor Drive Equipment.....	\$ 98.25	\$110.25	\$122.25	\$139.25	\$103.25	\$115.25	\$127.25	\$144.25
Catalog Number, Lathe with Motor Drive Equipment.....	No. 415-Y	No. 415-Z	No. 415-A	No. 415-R	No. 415-YA	No. 415-ZA	No. 415-AA	No. 415-RA
Code Word, Lathe with Motor Drive Equipment.....	Macan	Macer	Mafab	Maget	Magla	Mahik	Manaf	Mandi
Distance Between Spindle Centers of Lathe.....	17 in.	23 in.	29 in.	35 in.	17 in.	23 in.	29 in.	35 in.
Shipping Wt., Lathe and Motor Drive Complete.....	310 lbs.	335 lbs.	360 lbs.	410 lbs.	320 lbs.	345 lbs.	370 lbs.	420 lbs.
Collet Capacity 1/4" up by 64ths to.....	1/2 in.	1/2 in.	1/2 in.	1/2 in.	1/2 in.	1/2 in.	1/2 in.	1/2 in.

*Price extra for heavy, rubber covered wiring for connecting motor with switch, together with 6-ft. extension cord and plug, \$1.75. For Easy Payment Terms see page 71.



1936 Model

Cat. No. 415-YV, 9"x3' "Workshop" Motor Drive Bench Lathe, (V-belt Type) complete as shown, but less bench (Ship. Wt. Crated 320 lbs.).....\$113.25

9-inch "Workshop" Motor Drive Bench Lathe (V-Belt Type)

With Adjustable Horizontal Countershaft and Motor Drive Equipment

A Back-Geared, Screw Cutting Precision Lathe for the Working of Metals

The 9-inch "Workshop" South Bend Adjustable Horizontal Motor Drive Lathe, (V-belt type), as illustrated above, is exactly the same as the lathe shown on page 31 except that it is equipped with the adjustable horizontal countershaft instead of the plain horizontal countershaft and V-belt cone pulley instead of flat belt cone pulley. Eight spindle speeds, four with open belt and four in back gear, are provided on this lathe as follows: 44, 60, 82, 113, 230, 313, 424, and 585 R.P.M.

We Recommend This V-Belt Type "Workshop" Lathe for use in manufacturing plants on production work and for shops desiring an efficient, practical and powerful lathe for small machine work of all kinds. It has the same features and specifications as the other 9-inch "Workshop" Lathes shown throughout this catalog. An end view of the adjustable horizontal countershaft used with the above "Workshop" lathe is shown at bottom of page.

Prices of Lathe and Motor Drive Equipment are itemized in the tabulation below so that customers can purchase them complete or can omit any item not wanted.

Regular Equipment included in price of lathe consists of: graduated compound rest; face plate 5" diameter; forged steel tool post, ring and wedge; two 60-degree lathe centers No. 2 Morse Taper; headstock spindle sleeve; wrenches; change gears for screw thread cutting and automatic longitudinal power feeds to carriage; installation plan blue print and instruction book, "How to Run a Lathe."

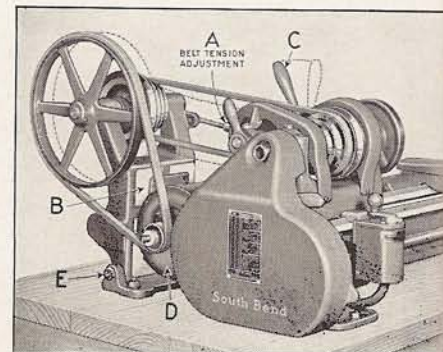
Other motor driven V-belt type "Workshop" Lathes are illustrated and priced on pages 33 and 34.

Attachments for Lathe. The same practical attachments can be fitted to this lathe as to other "Workshop" Lathes in this catalog. For information and prices on Attachments, Chucks and Tools, see pages 50 to 63.

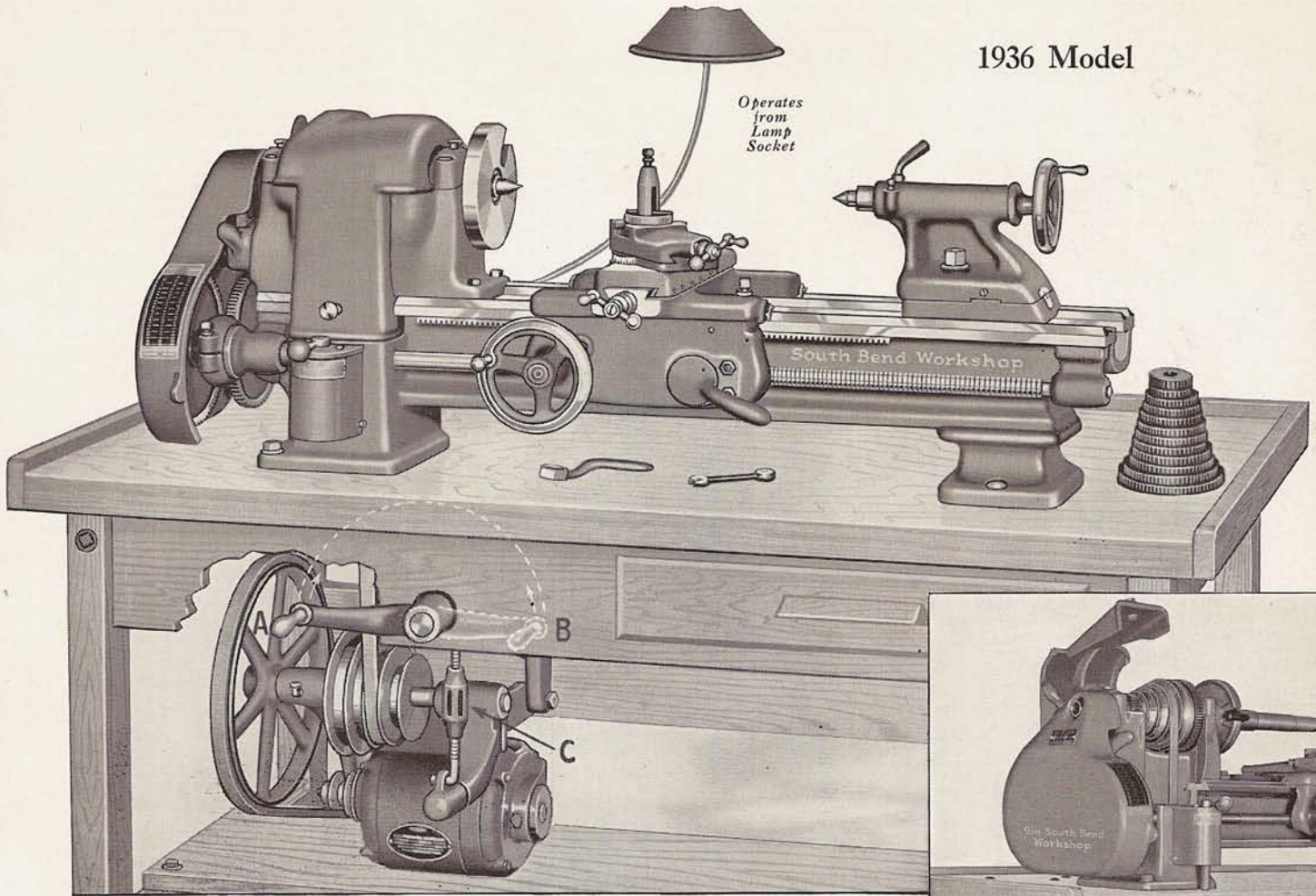
Prices of 9-inch "Workshop" Bench Lathe—(V-Belt Type)

No. 15-V, 9-inch "Workshop" South Bend Precision V-Belt Bench Lathe Complete with Graduated Compound Rest, and Regular Lathe Equipment, but without Motor Drive Equipment and Less Bench.....	Lathe with Adjustable Type Countershaft			
	9' x 3'	9' x 3 1/2'	9' x 4'	9' x 4 1/2'
	\$ 81.00	\$ 93.00	\$105.00	\$122.00
Prices of Motor Drive Equipment				
No. 389. Adjustable Type V-Belt Horizontal Countershaft.....	16.00	16.00	16.00	16.00
No. 127. 1/4 H.P. Start-and-Stop Reversing Split-Phase Motor, 1725 R.P.M. (1 ph., 60-cy., A.C. 110-V)*.....	8.75	8.75	8.75	8.75
No. 217. V-Groove Pulley for Motor.....	.50	.50	.50	.50
No. 789. Drum Reversing Switch (Style R-12) and Bracket....	5.00	5.00	5.00	5.00
No. 852. V-Belt, Motor to Drive Unit.....	1.00	1.00	1.00	1.00
No. 799. V-Belt, Lathe to Drive Unit.....	1.00	1.00	1.00	1.00
Total Price, Lathe with Motor Drive Equipment.....	\$113.25	\$125.25	\$137.25	\$154.25
Catalog Number, Lathe with Motor Drive Equipment.....	415-YV	415-ZV	415-AV	415-RV
Code Word, Lathe with Motor Drive Equipment.....	Kabli	Kabul	Kabro	Kacal
Distance Between Spindle Centers of Lathe.....	17 in.	23 in.	29 in.	35 in.
Shipping Weight, Lathe and Motor Drive Complete.....	320 lbs.	345 lbs.	370 lbs.	420 lbs.
Collet Capacity, 1/8" up by 64ths to.....	1/2 in.	1/2 in.	1/2 in.	1/2 in.

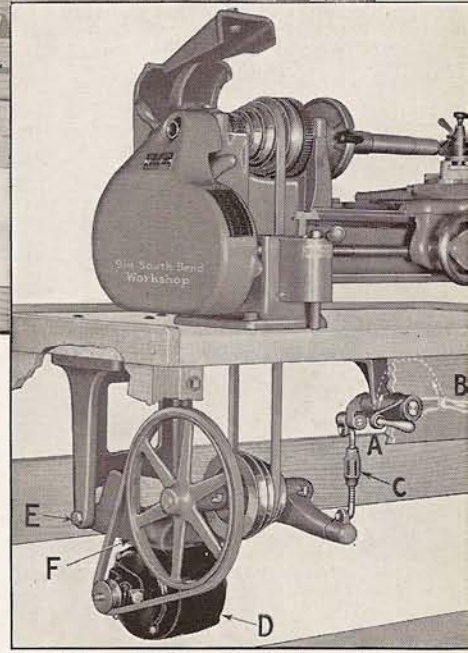
*Price extra for heavy, rubber covered wiring for connecting motor with switch, together with 6-ft. extension cord and plug, \$1.75.
For Easy Payment Terms see page 71.



End View of Adjustable Horizontal Motor Drive for V-belt Type "Workshop" Lathe



Cat. 115-YBV, 9" x 3' "Workshop" Motor Drive Bench Lathe (V-Belt type), Complete as Shown, but less frame bench (Ship. Wt. Crated 340 lbs.), \$165.00



End View of Adjustable Underneath Motor Drive for V-Belt and Flat Belt Type "Workshop" Lathe.

9-inch "Workshop" Motor Drive Bench Lathe (V-Belt Type)

With Adjustable Underneath Motor Drive

A Back-Geared, Screw Cutting Precision Lathe for the Machining of Metals

The 9-inch "Workshop" Lathe mounted on a frame bench illustrated above is the same as the other "Workshop" Lathes shown on pages 30, 31 and 32; the only difference is that this is an underneath motor driven bench lathe, V-belt type. The bed and bench legs of this lathe are cast integral. The headstock has a hinged cone pulley cover which may be raised for belt shifting.

Flat Belt and V-Belt Type Lathes. The Underneath Motor Driven Lathe can be supplied in the Flat Belt Type and V-Belt Type, both of which are priced below.

The Adjustable Underneath Motor Drive Unit and Motor are mounted on a frame and bolted to the underside of the bench top. The belt can be shifted by moving the crank handle "A" in a half circle to position "B"—this raises the entire under-carriage drive unit about 2 3/4 inches, for slacking the belt. Any desired tension of the belt be-

tween drive unit and lathe cone pulley can be obtained by adjusting the turnbuckle "C." Tension of motor belt may be independently adjusted.

Lathe Equipment and Electrical Equipment included in price of lathe are the same as for the lathe listed on page 32.

A Hardened and Ground Headstock Spindle can be supplied with this lathe for shops that intend to use the lathe on manufacturing work. Price of the hardened and ground spindle in lieu of the regular spindle, \$10.00.

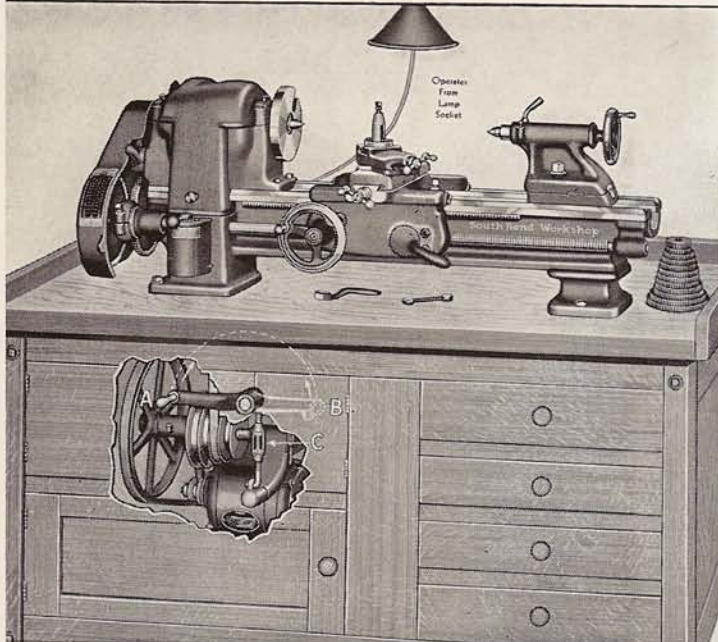
Attachments for Lathe. The same practical attachments can be fitted to this lathe as to other "Workshop" Lathes in this catalog. For prices, see pages 50 to 63.

Prices of 9-inch "Workshop" Bench Lathe with Adjustable Type Underneath Motor Drive—Less Bench

Swing Over Bed Inches	Length of Bed Feet	Distance Between Centers Inches	Hole Through Spindle Inches	Collet Capacity 1/8" up by 64ths to	Swing Over Carriage Inches	Size of Motor H.P.	Approx. Ship. Wt. Crated Pounds	Flat Belt Type Lathe			V-Belt Type Lathe		
								Cat. No.	Code Word	Price* F.O.B. Factory	Cat. No.	Code Word	Price* F.O.B. Factory
9 1/8	3	17	3/4	1 1/2"	5 1/2	1/4	340	115-YB	Edhar	\$155.00	115-YBV	Edbes	\$165.00
9 1/8	3 1/2	23	3/4	1 1/2"	5 1/2	1/4	365	115-ZB	Edhiz	167.00	115-ZBV	Edecg	177.00
9 1/8	4	29	3/4	1 1/2"	5 1/2	1/4	390	115-AB	Edhof	179.00	115-ABV	Edcik	189.00

*Bench is extra. For prices of frame and cabinet benches for lathe see page 62.

For details on Easy Payment Plan see page 71.



Cat. No. 115-YBV, 9" x 3' "Workshop" South Bend Precision Bench Lathe (V-belt type) with Adjustable Underneath V-belt Motor Drive, complete as shown, but less Bench.....\$165.00

9-inch "Workshop" Motor Drive Lathe

(V-Belt Type)

With Adjustable Underneath V-Belt Motor Drive
A Back-Geared, Screw Cutting Precision Lathe

The 1936 Model 9-inch "Workshop" South Bend Precision Lathe (V-belt type) with Adjustable Underneath Motor Drive, illustrated at left, is exactly the same lathe as shown on page 33, and has the same mechanical features, specifications, etc. The only difference is that this lathe is illustrated on a hard maple cabinet bench instead of on a frame bench. Lathe is also supplied in Flat Belt Type, see prices below.

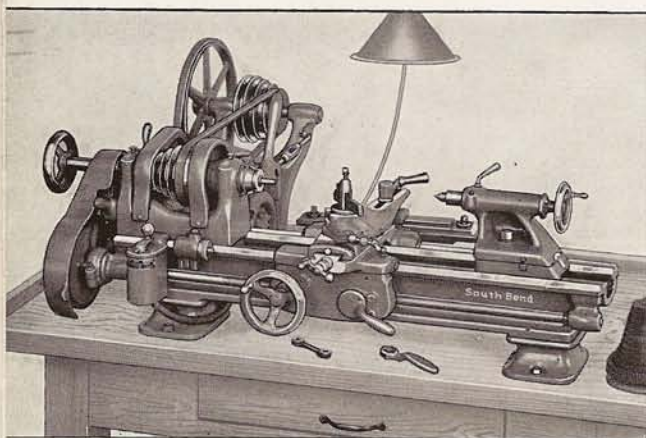
Scientific laboratories, school shops and tool rooms prefer the Adjustable Underneath Motor Driven Lathe, mounted on a cabinet bench, as shown at left. The unit makes a substantial and attractive piece of equipment for any shop.

Prices below are for the lathe only and do not include bench. Benches for Lathe are illustrated and priced on page 62.

Net Factory Prices, F.O.B. Cars, South Bend, Indiana

Swing Over Bed Inches	Length of Bed Feet	Distance Between Centers Inches	Approx. Ship. Wt. Crated Pounds	Flat Belt Type Lathe			V-Belt Type Lathe		
				Cat. No.	Code Word	Price F.O.B. Factory	Cat. No.	Code Word	Price F.O.B. Factory
9 1/8	3	17	340	115-YB	Edhar	\$155.00*	115-YBV	Edbes	\$165.00*
9 1/8	3 1/2	23	365	115-ZB	Edhiz	167.00*	115-ZBV	Edceg	177.00*
9 1/8	4	29	390	115-AB	Edhof	179.00*	115-ABV	Edcik	189.00*

Note: Prices do not include cabinet bench. For prices of benches see page 62. Price for mounting lathe on bench is \$5.00 extra.



Cat. No. 8415-YV, 9" x 3' "Workshop" Tool Room Precision Lathe (V-belt type) with Adjustable Horizontal Motor Drive, complete as shown, but less Bench.....\$193.25

9-inch "Workshop" Tool Room Lathe

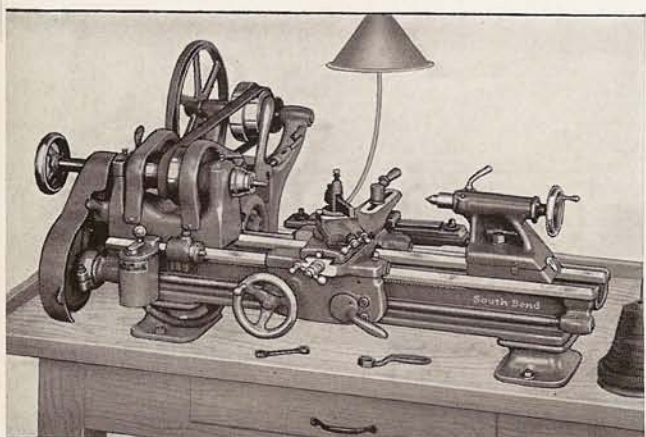
(V-Belt Type)

With Adjustable Horizontal Motor Drive
A Back-Geared, Screw Cutting Precision Lathe

The 1936 Model 9-inch "Workshop" South Bend Tool Room Precision Lathe (V-belt type) shown at left is the same as the "Workshop" Lathe illustrated and described on page 32 except that it is fitted with the following attachments for tool room work: Hand wheel draw-in collet chuck attachment with one round collet (choice of one of any hole size from 1/8 inch up to 1/2-inch by steps of 64ths); graduated taper attachment; micrometer carriage stop; and thread cutting stop. Bench is extra, see page 62.

Net Factory Prices, F.O.B. Cars, South Bend, Indiana

Swing Over Bed Inches	Length of Bed Feet	Distance Between Centers Inches	Hole Thru Spindle Inches	Collet Capacity 3/8" up by 64ths to	Size of Motor H.P.	Approx. Ship. Wt. Crated Pounds	Cat. No.	Code Word	Price F.O.B. Factory
9 1/8	3	17	3/4	1/2"	1/4	350	8415-YV	Edade	\$193.25*
9 1/8	3 1/2	23	3/4	1/2"	1/4	375	8415-ZV	Edano	205.25*
9 1/8	4	29	3/4	1/2"	1/4	400	8415-AV	Edars	217.25*
9 1/8	4 1/2	35	3/4	1/2"	1/4	450	8415-RV	Edast	234.25*



Cat. No. 8415-YA, 9" x 3' "Workshop" Tool Room Precision Lathe (Flat belt type) with Adjustable Horizontal Motor Drive, complete as shown, but less Bench.....\$183.25

9-inch "Workshop" Tool Room Lathe

(Flat Belt Type)

With Adjustable Horizontal Motor Drive
A Back-Geared, Screw Cutting Precision Lathe

The 1936 Model 9-inch "Workshop" South Bend Tool Room Precision Lathe (Flat belt type) shown at left is the same as the "Workshop" Lathe illustrated and described on page 31, except that it is fitted with attachments for tool room work, as itemized for the "Workshop" Tool Room Precision Lathe (V-belt type) as shown above. Bench is extra, for prices see page 62.

Net Factory Prices, F.O.B. Cars, South Bend, Indiana

Swing Over Bed Inches	Length of Bed Feet	Distance Between Centers Inches	Hole Thru Spindle Inches	Collet Capacity 3/8" up by 64ths to	Size of Motor H.P.	Approx. Ship. Wt. Crated Pounds	Cat. No.	Code Word	Price F.O.B. Factory
9 1/8	3	17	3/4	1/2"	1/4	350	8415-YA	Clawn	\$183.25*
9 1/8	3 1/2	23	3/4	1/2"	1/4	375	8415-ZA	Claxo	195.25*
9 1/8	4	29	3/4	1/2"	1/4	400	8415-AA	Clebu	207.25*
9 1/8	4 1/2	35	3/4	1/2"	1/4	450	8415-RA	Clefy	224.25*

*Prices include 1/4 H.P., 1-phase 60-cycle, A.C. Start-and-Stop Type Reversing Split Phase Motor, 1725 R.P.M., Drum Reversing Switch and Regular Equipment. For details on Easy Payment Plan see page 71.

9-inch "Workshop" Motor Driven Floor Leg Lathe

(Flat Belt Type)

With Wall Type Horizontal Motor Drive

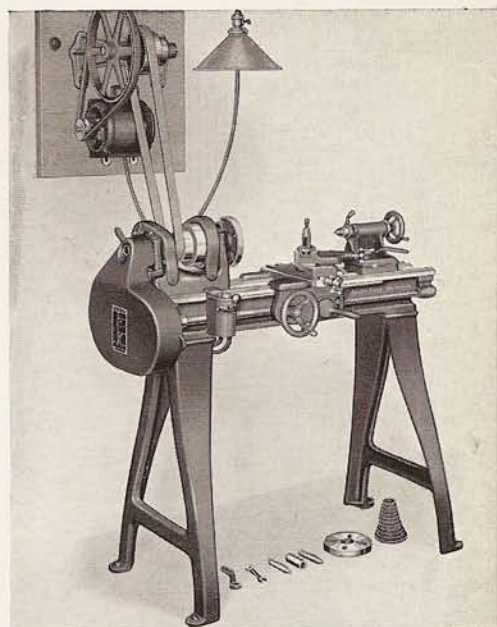
A Back-Geared, Screw Cutting Precision Lathe

The 9-inch 1936 Model "Workshop" South Bend Precision Lathe shown at the right is the same as the lathe illustrated and described on page 31 except that this lathe has floor legs instead of bench legs and the motor drive unit is mounted on the wall instead of on the bench. Features and specifications applying to this lathe are listed on page 30. Lathe cannot be supplied in V-belt type.

The Motor Drive Unit used for operating this lathe is the same as the improved plain type horizontal motor drive shown in Fig. A, page 31. The only difference is that there is a slight change in the oiling system to permit this drive to be used either on the wall or on the ceiling. When ordering lathe be sure to mention whether the drive is to be mounted on the wall or on the ceiling.

Net Factory Prices, F.O.B. Cars, South Bend, Indiana

Swing Over Bed Inches	Length of Bed Feet	Distance Between Centers Inches	Hole Thru Spindle Inches	Collet Capacity $\frac{3}{8}$ " up by 64ths to	Size of Motor H.P.	Approx. Ship. Wt. Crated Pounds	Cat. No.	Code Word	F.O.B. Price Factory
9 $\frac{1}{8}$	3	17	$\frac{3}{4}$	$\frac{1}{2}$ "	$\frac{1}{4}$	380	415-YF	Wupok	\$108.25*
9 $\frac{1}{8}$	3 $\frac{1}{2}$	23	$\frac{3}{4}$	$\frac{1}{2}$ "	$\frac{1}{4}$	405	415-ZF	Wurax	120.25*
9 $\frac{1}{8}$	4	29	$\frac{3}{4}$	$\frac{1}{2}$ "	$\frac{1}{4}$	430	415-AF	Wurby	132.25*
9 $\frac{1}{8}$	4 $\frac{1}{2}$	35	$\frac{3}{4}$	$\frac{1}{2}$ "	$\frac{1}{4}$	480	415-RF	Wurda	149.25*



Cat. No. 415-YF 9" x 3' "Workshop" Motor Driven Floor Leg Precision Lathe. . \$108.25

9-inch "Workshop" Countershaft Driven Floor Leg Lathe

(Flat Belt Type)

With Overhead Double Friction Countershaft

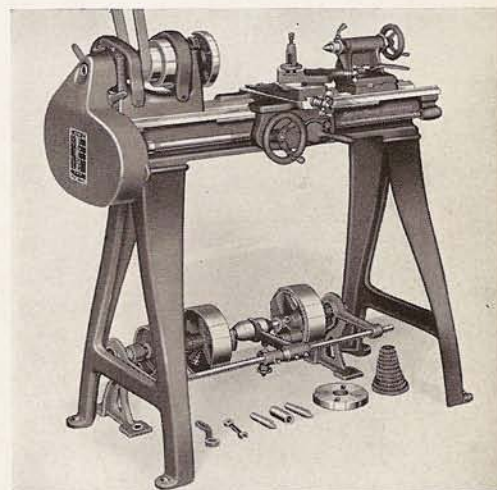
A Back-Geared, Screw Cutting Precision Lathe

9-inch 1936 Model "Workshop" South Bend Precision Lathe shown at the right is the same as the lathe illustrated and described on page 30, the only difference is that this lathe has floor legs instead of bench legs and is operated by a double friction countershaft. Features and specifications applying to this lathe are listed on page 30. The lathe cannot be supplied in V-belt type.

Double Friction Countershaft—a practical and efficient drive for operating the lathe in shops where line shafting is used. Countershaft has two friction clutch pulleys, one of which is operated by a straight belt and the other by a crossed belt to permit operating lathe either forward or in reverse.

Net Factory Prices, F.O.B. Cars, South Bend, Indiana

Swing Over Bed Inches	Length of Bed Feet	Distance Between Centers Inches	Hole Thru Spindle Inches	Collet Capacity $\frac{3}{8}$ " up by 64ths to	Counter-shaft Speed R.P.M.	Power Required H.P.	Approx. Ship. Wt. Crated Pounds	Cat. No.	Code Word	F.O.B. Price Factory
9 $\frac{1}{8}$	3	17	$\frac{3}{4}$	$\frac{1}{2}$ "	288	$\frac{1}{4}$	370	15-YW	Majil	\$ 97.00†
9 $\frac{1}{8}$	3 $\frac{1}{2}$	23	$\frac{3}{4}$	$\frac{1}{2}$ "	288	$\frac{1}{4}$	395	15-ZW	Majlo	109.00†
9 $\frac{1}{8}$	4	29	$\frac{3}{4}$	$\frac{1}{2}$ "	288	$\frac{1}{4}$	420	15-AW	Major	121.00†
9 $\frac{1}{8}$	4 $\frac{1}{2}$	35	$\frac{3}{4}$	$\frac{1}{2}$ "	288	$\frac{1}{4}$	470	15-RW	Majru	138.00†



Cat. No. 15-YW, 9" x 3' "Workshop" Countershaft Driven Floor Leg Lathe. \$97.00

9-inch "Workshop" Countershaft Driven Oil Pan Lathe

(Flat Belt Type)

With Overhead Double Friction Countershaft

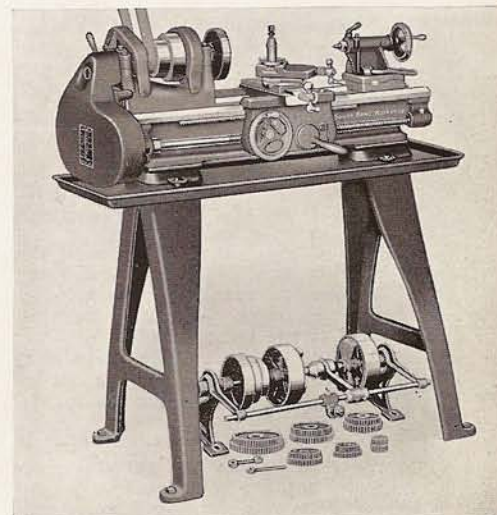
A Back-Geared, Screw Cutting Precision Lathe

9-inch 1936 Model "Workshop" South Bend Precision Lathe shown at the right is the same as the lathe illustrated and described above, except that this lathe is fitted with a pressed steel oil pan to catch oil and chips. Specifications and features are listed on page 30. Cannot be supplied in V-belt type.

Oil Pan and Special Oil Pan Legs can be fitted to the motor driven lathe shown at top of page, at the following prices when ordered with lathe: 9" x 3' lathe, \$19.00; 9" x 3 $\frac{1}{2}$ ' lathe, \$20.00; 9" x 4' lathe, \$21.00; 9" x 4 $\frac{1}{2}$ ' lathe, \$22.00.

Net Factory Prices, F.O.B. Cars, South Bend, Indiana

Swing Over Bed Inches	Length of Bed Feet	Distance Between Centers Inches	Hole Thru Spindle Inches	Collet Capacity $\frac{3}{8}$ " up by 64ths to	Counter-shaft Speed R.P.M.	Power Required H.P.	Approx. Ship. Wt. Crated Pounds	Cat. No.	Code Word	F.O.B. Price Factory
9 $\frac{1}{8}$	3	17	$\frac{3}{4}$	$\frac{1}{2}$ "	288	$\frac{1}{4}$	410	215-YW	Marel	\$116.00†
9 $\frac{1}{8}$	3 $\frac{1}{2}$	23	$\frac{3}{4}$	$\frac{1}{2}$ "	288	$\frac{1}{4}$	435	215-ZW	Marho	129.00†
9 $\frac{1}{8}$	4	29	$\frac{3}{4}$	$\frac{1}{2}$ "	288	$\frac{1}{4}$	460	215-AW	Marta	142.00†
9 $\frac{1}{8}$	4 $\frac{1}{2}$	35	$\frac{3}{4}$	$\frac{1}{2}$ "	288	$\frac{1}{4}$	510	215-RW	Marub	160.00†



Cat. No. 215-YW, 9" x 3' "Workshop" Countershaft Driven Oil Pan Lathe. \$116.00

†If Double Friction Countershaft is not wanted, deduct \$12.00 from above prices.

*Prices include $\frac{1}{4}$ H.P., 1-phase, 60 cycle, A.C. Start-and-Stop Type Reversing Split Phase Motor, 1725 R.P.M. Drum Reversing Switch, and Regular Lathe Equipment.

For details on Easy Payment Plan see page 71.

Silent V-Belt Motor Driven Lathes

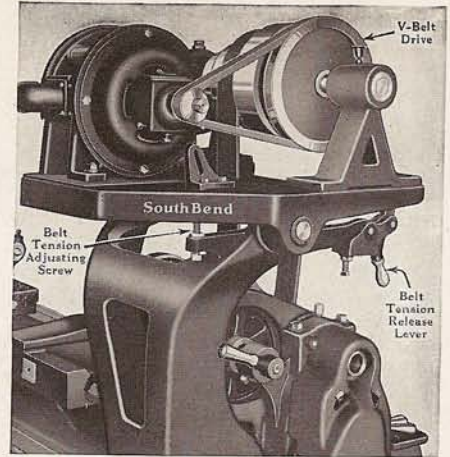
The Silent V-Belt Motor Drive, illustrated at right, is used on all Silent Motor Driven Lathes, 9-inch to 18-inch swing, shown throughout this catalog. This drive is practically noiseless in operation and thousands of them are giving excellent service in shops all over the United States.

Operation of the Silent V-Belt Motor Drive. Power is supplied by a reversing motor mounted on a tilting table directly above the headstock of the lathe. The tilting table is carefully balanced on the support bracket and is fitted with locking cam and belt adjustment. This cam provides for slacking the belt when changing from step to step on the cone pulleys. A belt guard covers the V-Belt and pulleys when in use.

Motor Driven Lathes Are Fully Assembled before shipment. Wiring is enclosed in flexible metal conduit (except on 9-inch "Workshop" Lathes) and the entire drive meets the requirements of Underwriter's Specifications.

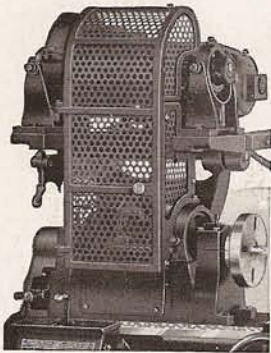
Multiple V-Belts Used. Five V-Belts are used on 18-inch Silent V-Belt Motor Driven Lathes from motor to driving shaft. Three V-Belts are used on 16-inch and 15-inch sizes. Two V-Belts on 13-inch size. Single V-Belt on 11-inch and 9-inch sizes.

Silent Chain Drive Optional. For those who prefer silent chain drive instead of V-Belt drive, we can supply it as an optional feature at no extra cost on 9-inch Junior lathes and larger.



Motor Drive with Belt Guard Removed, Showing Silent V-Belt Drive

Belt Guard for Motor Drive



Belt Guards similar to the guard shown in illustration at left can be supplied for South Bend Silent Motor Driven Lathes and South Bend Horizontal Motor Driven Lathes. The guard encloses the cone pulleys and the cone pulley belt.

Prices of Belt Guards

Size Lathe	Cat. No.	Code	Price
9 in.	590	Kelat	\$12.00
11 in.	591	Keros	13.50
13 in.	592	Korid	15.00
15 in.	593	Kurey	18.00
16 in.	594	Kimet	18.00
18 in.	595	Kajot	22.00

Drum Type Reversing Switches



Drum Type Reversing Switch for Reversing Motors

Drum Type Reversing Switches are supplied for reversing motors used on South Bend Motor Driven Lathes. This switch is standard equipment on South Bend Motor Driven Lathes and provides for starting, stopping and reversing lathe spindle.

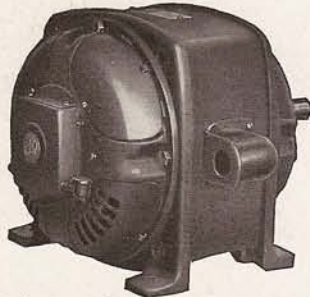
Prices of Drum Reversing Switches When Sold Separately

Cat. No.	Description	Code Word	Price
789	For 1/4 H.P. Start-Stop Motors only.	Atwig	\$ 5.00*
791	For 1/2 & 3/4 H.P. Instant Rev. Motors.	Zahet	7.00
792	For 3/4 to 3 H.P. Instant Rev. Motors.	Zahlv	14.85

*Price includes bracket for mounting switch to lathe bed. Note: No. 789 and 791 switches are for motor of 220 volts and less, 792 switch is for motor up to 550 volts.

Push Button and Magnetic Control switches having overload and undervoltage protection can be supplied at extra cost. Prices furnished on request.

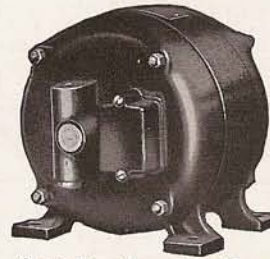
Instant Reversing Motors and Start-Stop Reversing Motors



Instant Reversing Motor for 1-Phase Alternating Current

The Instant Reversing Motor illustrated at left is furnished for all South Bend Lathes from 9-inch to 36-inch swing. The prices shown in this catalog are for lathes with 110 or 220 volt alternating current motors, either 50 or 60-cycle, or for lathes with 115 or 230 volt direct current motors.

Motors we furnish are Westinghouse, General Electric or equal make. We can supply motor driven lathes with special motors such as 30-cycle and 40-cycle A.C. or 32-volt D.C. for operation from home lighting plants. Prices of motor driven lathes with special motors will be furnished on request.



Start-Stop Reversing Type Split Phase Motor

The Start-Stop Reversing Motors used on all 9-inch Lathes listed in this catalog are for operation on 110-volt, 60-cycle, single-phase A.C. only. Similar motors for 50-cycle current or 220-volt current can be supplied at slightly higher prices. The motor will operate in either direction but must come to a full stop before the switch lever is thrown from forward to reverse, or vice versa.

Each South Bend Motor Driven Lathe is shipped with wiring diagram showing how to connect the electric lines to switch and motor. Should you wish to use your own motor we can supply the correct size pulley for the motor, if you will specify diameter of shaft, speed of motor and type of belt to be used.

How to Order South Bend Motor Driven Lathes—all Types

Electric Current Specifications

When ordering a Motor Driven Lathe give the following information regarding the electric current to be used, so that the proper style and type of reversing motor can be fitted to the lathe.

When giving voltage state the exact voltage of motor wanted. When ordering do not specify 110-220-volt motor as we cannot furnish motors for double voltage rating.

Always Give the Following Information:

—If Alternating Current state exact voltage, phase, cycle, and number of wires.

—If Direct Current state exact voltage only.

You can secure your current specifications from the electric power company furnishing your current.

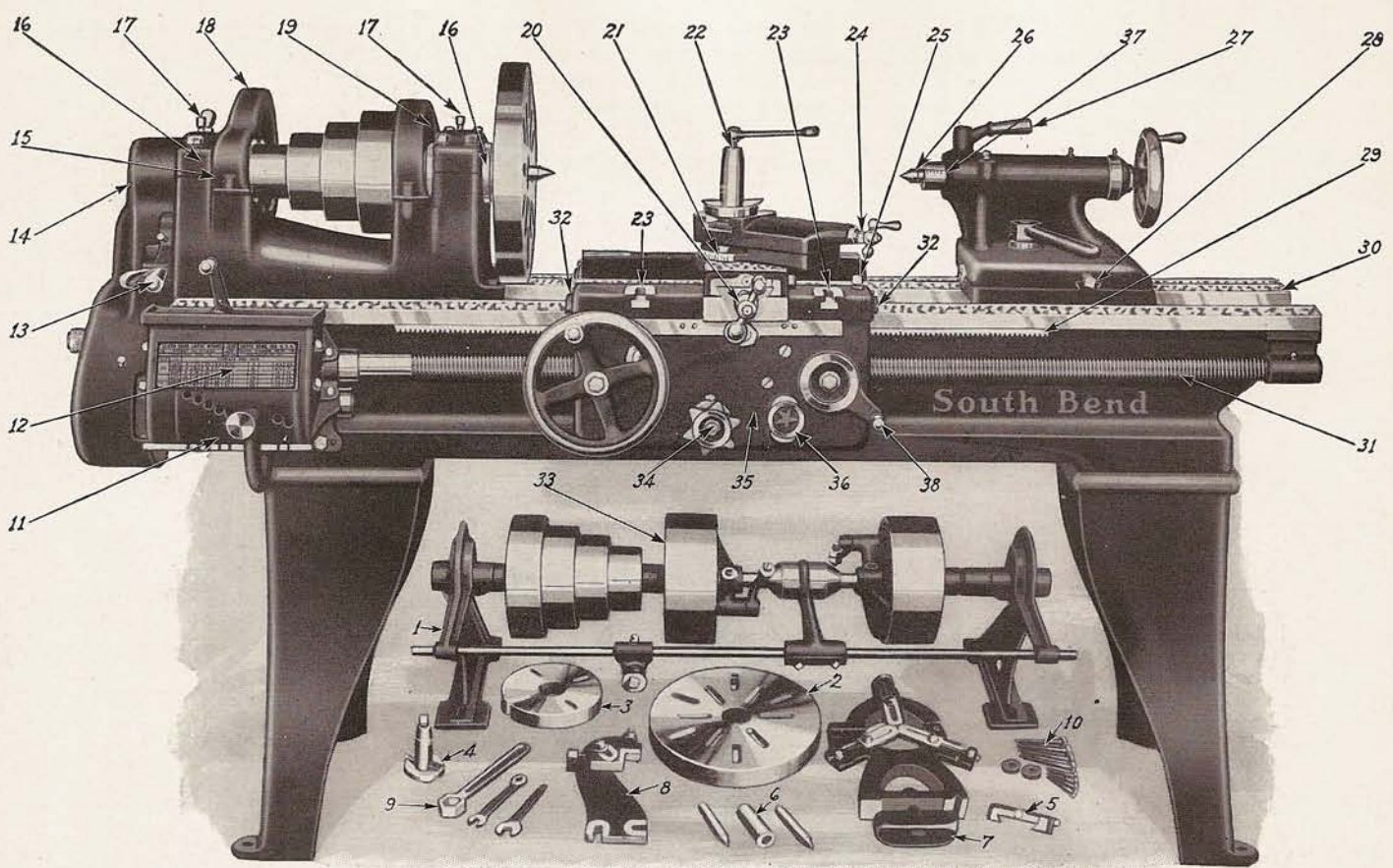
Use Code Words

When ordering Motor Driven Lathes by telegram or cablegram use code words below to indicate motor specifications. If your motor specifications differ from those that we list below, give us the exact voltage, phase and cycle.

Code Word

Zapin	1-phase, 60-cycle, 110-volt, A.C. Ins't. Rev. Motor
Zbras	1-phase, 60-cycle, 220-volt, A.C. Ins't. Rev. Motor
Zingo	3-phase, 60-cycle, 110-volt, A.C. Ins't. Rev. Motor
Zompe	3-phase, 60-cycle, 220-volt, A.C. Ins't. Rev. Motor
Zurik	115-volt D.C. Ins't. Rev. Motor
Zuwel	230-volt D.C. Ins't. Rev. Motor
Zados	1-phase, 60-cycle, 110-volt, Start-Stop A.C. Motor
Zalob	1-phase, 60-cycle, 220-volt, Start-Stop A.C. Motor

Current Specifications

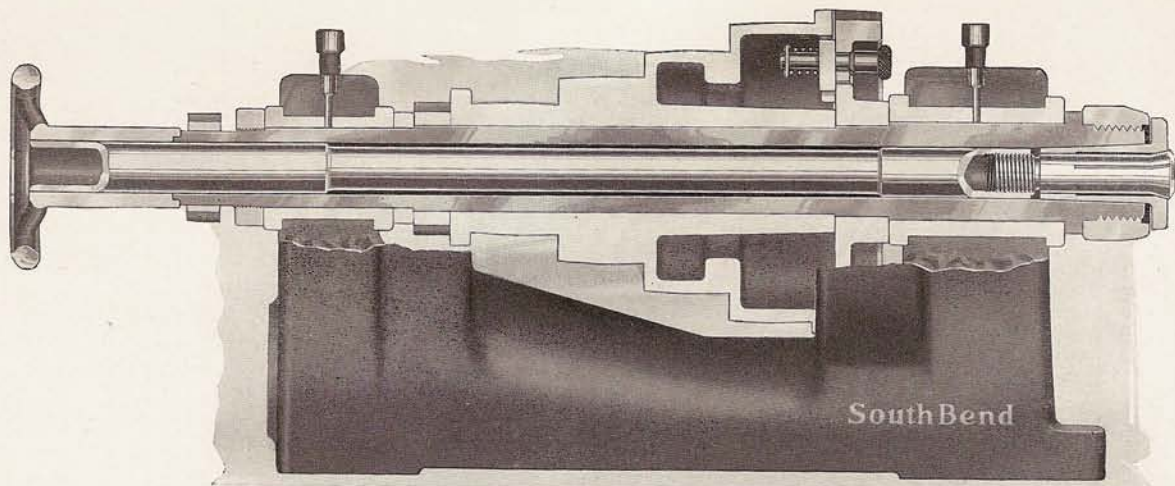


Series "O" South Bend Back-Geared, Screw Cutting Lathe Showing Principal Parts of Standard and Quick Change Gear Lathes

- | | | |
|--|---|--|
| 1 to 10. Equipment included in price. | 19. Wrenchless bull gear clamp. | 29. Steel rack, cut from solid bar. |
| 11. Quick change gear box. | 20. Micrometer collar on cross feed screw. | 30. Semi-steel seasoned lathe bed. |
| 12. Index plate for threads and feeds. | 21. Compound rest graduated 180°. | 31. Precision lead screw, Acme thread. |
| 13. Quick-acting spring latch reverse for feeds and threads. | 22. Forged steel adjustable tool post. | 32. Felt shear wipers and oilers. |
| 14. Hollow spindle, high carbon steel. | 23. T-slots for clamping work on carriage. | 33. Double friction countershaft. |
| 15. Hardened & ground steel thrust collar. | 24. Micrometer collar on compound rest screw. | 34. Automatic friction feed clutch. |
| 16. Large phosphor bronze bearings. | 25. Carriage lock for facing and cutting off. | 35. Safety device for threads and feeds. |
| 17. Patent oil cups. | 26. Tool steel lathe centers. | 36. Knob for automatic friction feeds. |
| 18. Back-gears are guarded. | 27. Tailstock spindle lock. | 37. Graduated tailstock spindle. |
| | 28. Set-over tailstock for taper turning. | 38. Half-nut lever for thread cutting. |

Specifications of South Bend Lathes 9" to 36" Swing, Inclusive

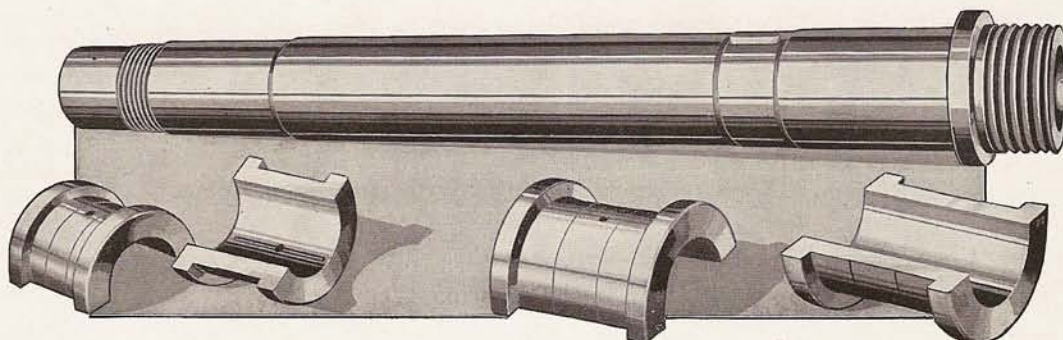
SIZE AND TYPE OF LATHE	9-inch Workshop	9-inch Junior, Quick, & Standard	11-inch Quick and Standard	13-inch Quick and Standard	15-inch Quick and Standard	16-inch Quick and Standard	18-inch Quick and Standard	16-24" Quick and Standard	36-inch Quick and Standard
Swing over bed	9 1/8 in.	9 1/4 in.	11 1/4 in.	13 1/4 in.	15 1/4 in.	16 1/4 in.	18 1/4 in.	24 1/4 in.	36 1/4 in.
Swing over carriage	5 1/2 in.	6 3/8 in.	7 3/8 in.	9 in.	10 3/8 in.	11 3/8 in.	12 3/8 in.	17 in.	17 3/8 in.
Hole through spindle	3/4 in.	3/4 in.	7/8 in.	1 in.	1 1/8 in.	1 3/8 in.	1 1/2 in.	1 3/8 in.	1 3/8 in.
Countershaft speed R.P.M.	288	255	255	250	225	225	167	150	150
Spindle speed range R.P.M.	39-630	39-596	34-512	23-605	20-579	18-598	16-383	12-398	12-398
Width of cone pulley belt	1 1/2 in.	1 1/2 in.	1 1/2 in.	1 3/4 in.	2 in.	2 1/4 in.	2 1/2 in.	2 1/4 in.	2 1/4 in.
Spindle nose diam. and threads	1 1/8"-8	1 1/8"-8	1 1/8"-8	1 1/8"-8	2 1/4"-6	2 3/8"-6	2 3/8"-6	2 1/4"-6	2 3/8"-6
Lathe centers, Morse taper	No. 2	No. 2	No. 2	No. 3	No. 3	No. 3	No. 3	No. 3	No. 3
Collet capacity minimum and maximum	1/16" - 3/8"	1/16" - 3/8"	1/8" - 3/8"	1/8" - 3/8"	1/16" - 3/8"	1/16" - 3/8"	1/16" - 3/8"	1/16" - 3/8"	1/16" - 3/8"
Lead screw Acme thread, diam. and threads	3/4"-8	3/4"-8	7/8"-8	1"-6	1 1/8"-6	1 1/8"-6	1 3/8"-4	1 1/8"-6	1 1/8"-6
Angular travel compound rest top	1 1/2 in.	1 3/8 in.	2 3/8 in.	3 in.	3 3/8 in.	3 3/8 in.	4 3/8 in.	3 3/8 in.	3 3/8 in.
Tool cross slide travel	5 1/2 in.	7 1/8 in.	8 3/8 in.	9 in.	10 in.	10 3/8 in.	14 3/8 in.	10 3/8 in.	10 3/8 in.
Size of motor used	1/4 H.P.	1/4 H.P.	1/2 H.P.	3/4 H.P.	1 H.P.	1 H.P.	1 H.P.	1 H.P.	1 H.P.
Size of lathe tool holder shank	3/8" x 1 1/16"	3/8" x 1 1/16"	3/8" x 1 1/16"	1/2" x 1 1/8"	1/2" x 1 1/8"	5/8" x 1 3/8"	5/8" x 1 3/8"	5/8" x 1 3/8"	5/8" x 1 3/8"
Size of turning tool cutter	3/4" sq.	3/4" sq.	3/4" sq.	5/16" sq.	5/16" sq.	3/8" sq.	3/8" sq.	3/8" sq.	3/8" sq.
Back gear ratio	5-1	5.4-1	6-1	7-1	7-1	8-1	7-1	8-1	8-1
Countershaft friction pulley size	6 7/8" x 2 3/16"	6 7/8" x 2 3/16"	6 7/8" x 2 3/16"	8" x 2 3/16"	10" x 3 5/8"	10" x 3 5/8"	12" x 4 1/2"	10" x 3 5/8"	10" x 3 5/8"
Tailstock spindle travel	2 in.	2 1/8 in.	3 in.	4 1/4 in.	5 1/4 in.	5 3/4 in.	5 3/4 in.	5 3/4 in.	5 3/4 in.
Tailstock set-over	5/8 in.	3/4 in.	7/8 in.	1 1/2 in.	1 5/8 in.	1 in.	1 1/8 in.	1 in.	1 in.
Power to Reduce Diam. of Steel Shaft in one cut	3/8 in.	3/8 in.	1/2 in.	5/8 in.	1 1/16 in.	3/4 in.	7/8 in.	3/4 in.	3/4 in.



Back-Geared Headstock

The illustration above shows a cross section view of the back-geared headstock used on all sizes of Series "O" South Bend Quick Change Gear, Standard Change Gear and 9-inch Junior Lathes. The headstock is back-geared, reinforced and webbed, insuring strength and rigidity. The headstock base is accurately hand-scraped and fitted to the lathe bed. Many practical features are embodied in the headstock of the South Bend Lathe, the most important of which are listed in the column at right.

Eight spindle speeds (13", 15", 16", 18", 16-24" and 36" Lathes).
 Six spindle speeds (9" and 11" Lathes).
 Hollow spindle for machining bar stock.
 Back-gears for slow speeds and power.
 Spindle cone and bull gear balanced for high speeds.
 Quick-acting bull gear lock for engaging back-gears.
 Spring latch reverse for feeds and threads on 9" Jr. and larger.
 Hardened and ground spindle thrust collar.
 Three-step spindle cone is supplied on 9" and 11" Lathes.
 Four-step spindle cone (13", 15", 16", 18", 16-24" & 36" Lathes).



Headstock Spindle and Bearings

The headstock spindle is made of special quality spindle steel, and has a large hole its entire length through which rods and bars may pass to the lathe chuck and draw-in collet chuck for machining. The taper is accurately bored and is fitted with a taper reducing sleeve for the lathe center. Bearing surfaces of the spindle are ground to master gauges. Threads on end of spindle nose are cut to a precision gauge to insure interchangeability of chucks and face plates. A hardened and ground thrust collar takes thrust of spindle against rear bearing.

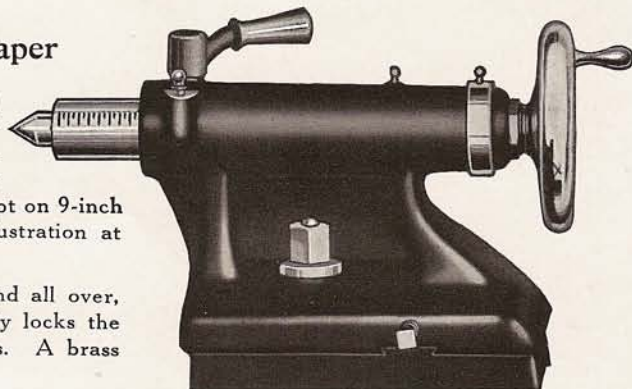
Headstock bearings for lathe spindle (except 9-inch "Workshop") are of high quality phosphor bronze, carefully fitted to the housing, line bored and lapped in position. Lubrication is provided by an improved oiling system through patented oil cups. Adjustment for wear is provided by laminated shims under the bearing caps.

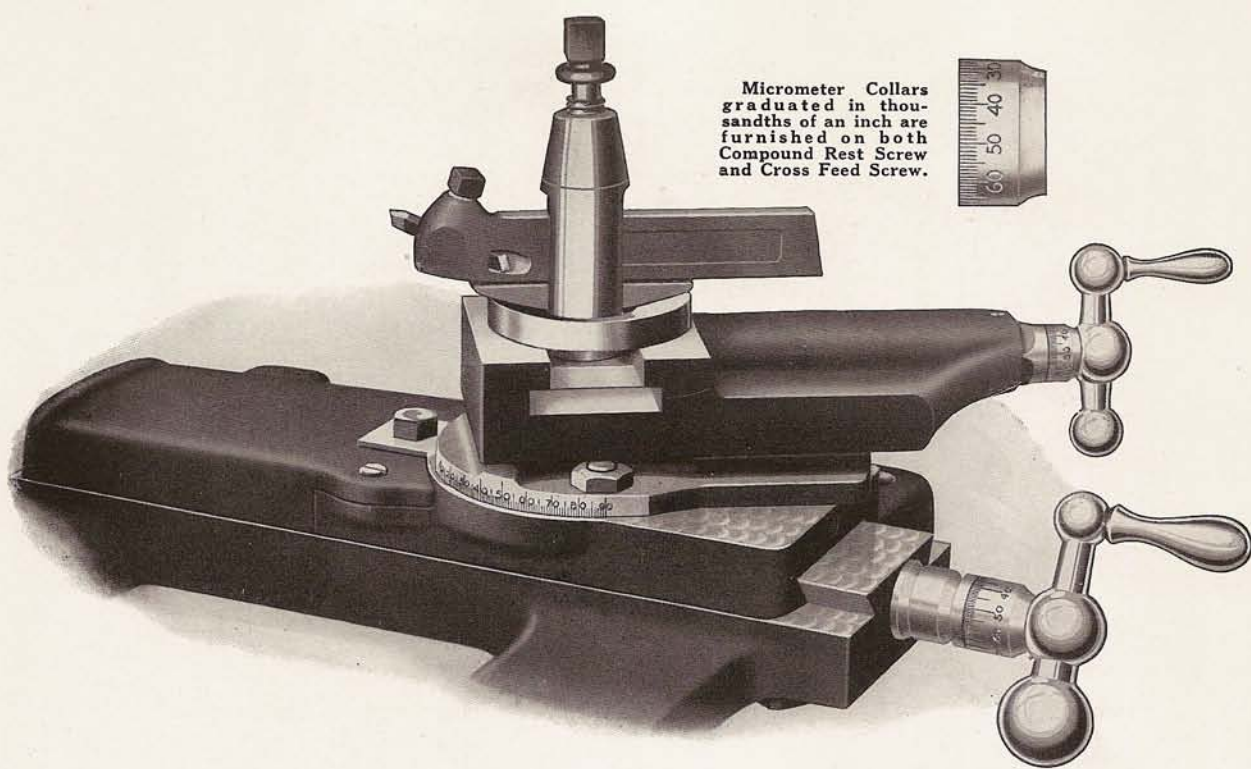
Bearings for 9-inch "Workshop" Lathes are nickel-iron alloy, cast integral with headstock and are line bored and lapped to fit spindle. Lubrication is by improved felt wick oiling system and bearings are adjustable for wear.

Tailstock with Set-Over for Turning Taper

The tailstock is of an improved design with long bearing on the bed. The tailstock top is offset to allow the compound rest to swivel parallel to the bed, and has set-over for taper turning. The spindle is made of steel, ground and lapped to fit the tailstock barrel, and is graduated in sixteenths of an inch (except on 9-inch "Workshop" Lathe) for drilling to accurate depths. The illustration at right shows tailstock used on the 16-inch South Bend Lathe.

The lathe center is made of tool steel, hardened and ground all over, and is self-ejecting. An improved double plug binder securely locks the tailstock spindle without altering the alignment of the centers. A brass quill and oil well are provided for oiling the center.





Micrometer Collars graduated in thousandths of an inch are furnished on both Compound Rest Screw and Cross Feed Screw.

Graduated Compound Rest

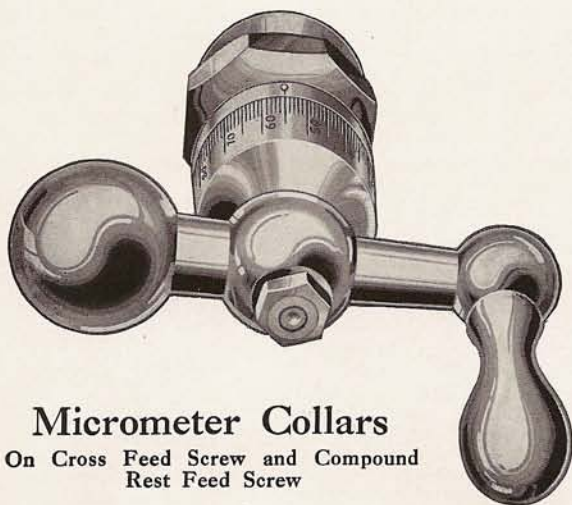
The compound rest swivel is graduated 180 degrees and swivels to any angle on a large central stud. It can be clamped at any desired angle for machining and for turning or boring short tapers. For angular travel of compound rest see specifications shown with each size lathe.

The illustration of the compound rest mounted on the saddle of the lathe shows the advantage of the two feed screws—the compound rest feed screw and the cross feed screw of the saddle. In combination, these two feed screws permit the operator to do all kinds of straight or taper

work, as the cutting tool may be fed in any direction. The micrometer graduated collars are described below.

A large T-slot is provided at the top of the compound rest for holding the tool post, boring bars and other attachments. The compound rest base and swivel are surfaced, then hand-scraped and fitted with adjustable gib. Top slide dovetail is hand-scraped and fitted with adjustable gib.

The 9" "Workshop" compound rest is held in place on the base slide by a gib and inverted cone, and is locked in position by two binding screws one on each side of cross slide.



Micrometer Collars

On Cross Feed Screw and Compound Rest Feed Screw

The cross feed screw of the saddle and the compound rest feed screw are each equipped with a micrometer graduated collar, graduated in thousandths of an inch, for adjusting the depth of the cut in turning and boring. An adjustment is provided so that the operator can set the collar at zero whenever desired. The graduated collars on the cross feed screw and the compound rest feed screw permit these screws to be used to advantage on fine, accurate work.

Lathe Beds

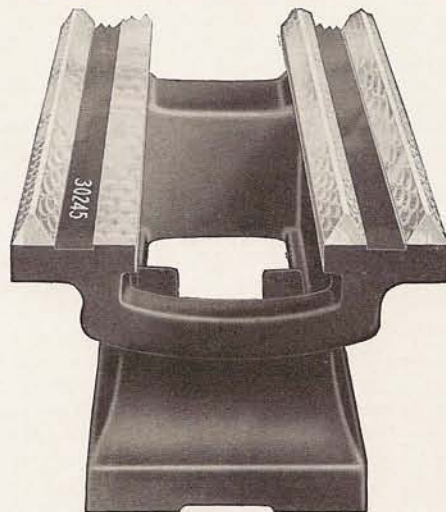
For All Sizes and Types of South Bend Lathes

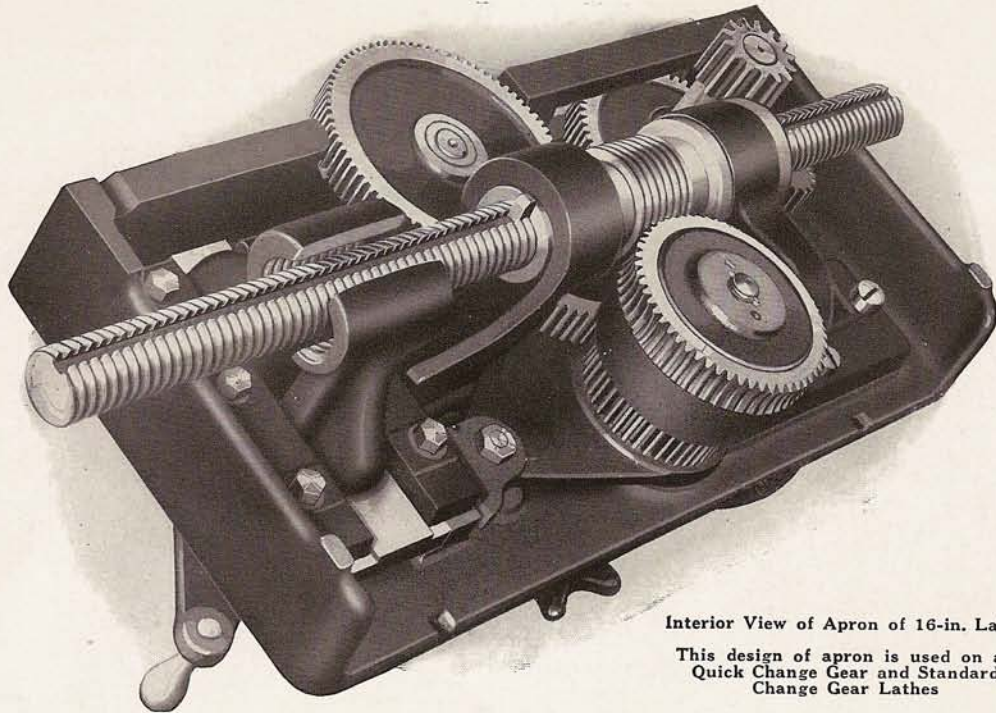
Lathe beds are made of a hard, close-grained mixture of grey iron containing 50% steel which gives them strength and wearing qualities. Beds are of heavy construction, reinforced by box braces cast in at short intervals the entire length.

Lathe Beds Seasoned

After rough planing, the lathe bed is permitted to season thoroughly before it is finish planed. All lathe beds are machined, hand-scraped and finished by experienced workmen.

The lathe bed is fitted with three "prismatic V-ways" and one flat way as shown by the illustration. The carriage slides on the two large outer V-ways of the bed. The inner V-way and flat way align the headstock and tailstock on the bed.





Interior View of Apron of 16-in. Lathe

This design of apron is used on all Quick Change Gear and Standard Change Gear Lathes

Apron on the Series "O" South Bend Lathe

Construction Features

The illustration above shows an interior view of the apron used on Quick Change Gear and Standard Change Gear Series "O" South Bend Lathes, all sizes and types. The apron is strong, powerful and of simple construction. Note the double worm bracket which supports the steel worm drive for automatic feeds; this feature provides great power.

Automatic Turning Feeds

An automatic friction clutch knob controls both the automatic longitudinal feed and the automatic cross feed. A change from automatic longitudinal feed to automatic cross feed is obtained by means of a feed lever knob which has three positions. "Up" position for automatic longitudinal feed, "down" position for automatic cross feed, and "central" position for neutral when neither feed is in action.

Splined Lead Screw and Feed Rod

The lead screw is splined which permits it to serve as a feed rod for operating the automatic cross feed and the automatic longitudinal feeds. The lead screw is geared direct to the spindle and permits a wide variety of automatic feed changes.

Automatic Safety Device

An automatic safety device is provided in the apron of all size South Bend Lathes and prevents either of the automatic feeds from being placed in action while the half-nuts are engaged with the lead screw, for cutting screw threads. Vice versa, the safety device prevents the half-nuts from being engaged with the lead screw while either of the automatic feeds are in action; when either one of the automatic feeds is engaged, the other is locked.

Precision Lead Screw of the South Bend Lathe

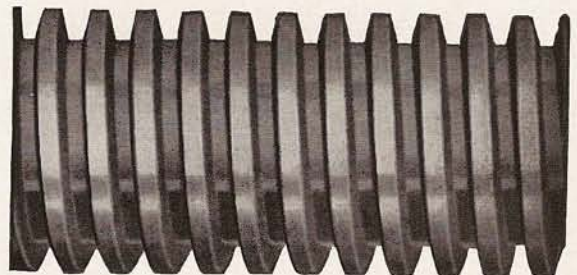
The lead screw of each South Bend Lathe is made of special quality steel and has acme standard threads. The threads are cut with precision-accuracy on a special machine equipped with a Pratt and Whitney master lead screw. Each lead screw is tested for accuracy of lead, form of thread and pitch diameter; and will meet the most exacting requirements in making the finest precision thread gauges, master taps, dies, jigs, etc.

The Threads of the Lead Screw

Are Not Used for Driving Either of the Automatic Friction Feeds

The threads of the lead screw on the South Bend Quick Change Gear and Standard Change Gear Lathes are not used for driving either the automatic longitudinal feed or the automatic cross feed as both feeds are driven by the spline in the lead screw.

When cutting screw threads on a South Bend Lathe, the two half-nuts in the apron are engaged on the lead screw by a cam lever on front of apron. The threads of the lead screw on a South Bend Lathe, with the proper care and attention, should last a lifetime.

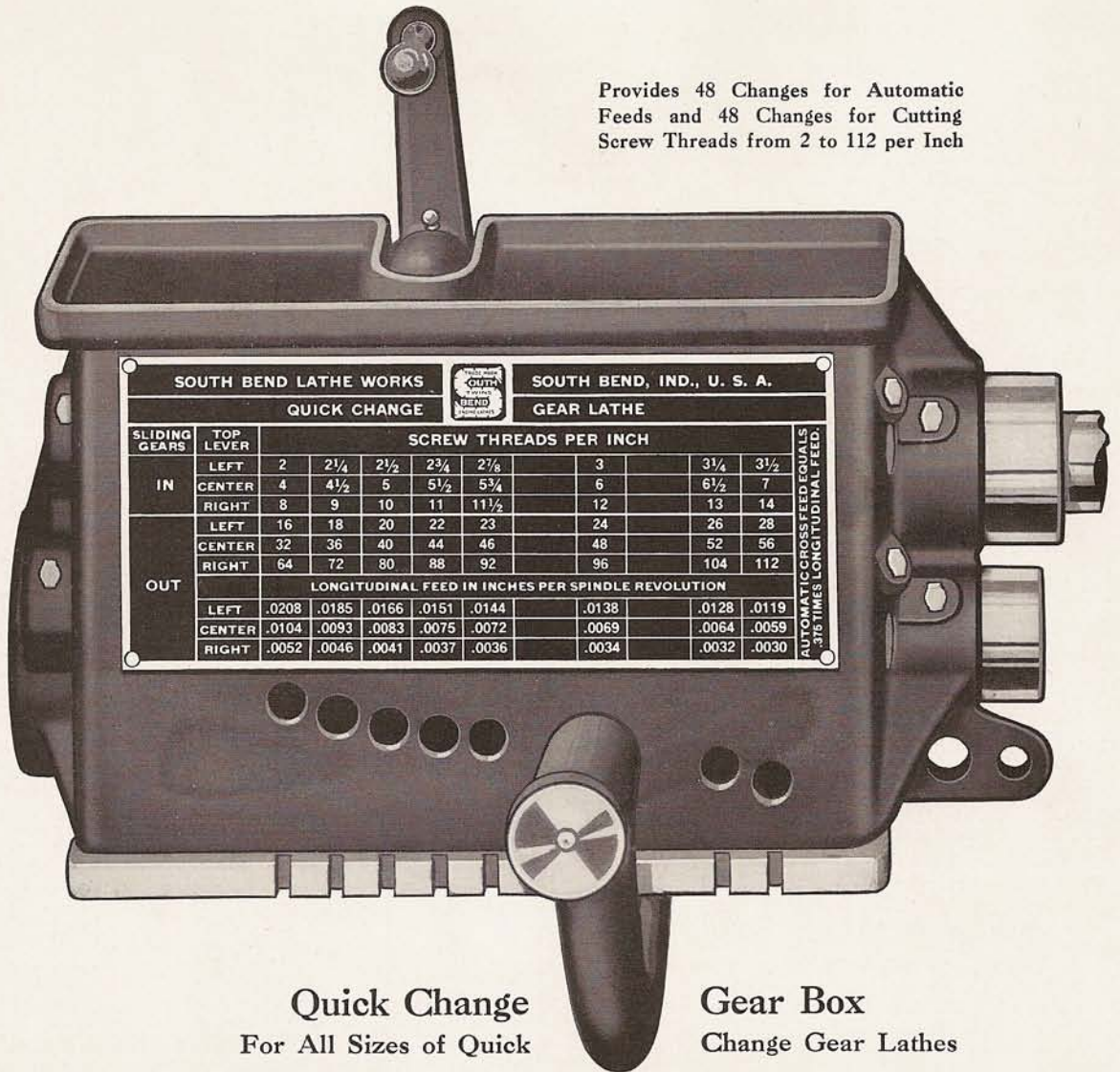


Section of lead screw, actual diameter, used on the 18-inch South Bend Lathe. It is 1 3/8-inch in diameter, 4-pitch

The Spline in the Lead Screw Is Used for Operating the Automatic Feeds

The spline in the lead screw (on Standard and Quick Change Gear Lathes) is used to drive a worm and worm gearing which operates the automatic cross feed and automatic longitudinal feed of the apron. This is the most modern practice as it develops a powerful geared feed and eliminates the delicate mechanism used in our older type of lathe that was equipped with a separate feed rod.

Provides 48 Changes for Automatic Feeds and 48 Changes for Cutting Screw Threads from 2 to 112 per Inch



Quick Change
For All Sizes of Quick

Gear Box
Change Gear Lathes

The illustration above shows the quick change gear box with a metal chart attached, indicating the arrangement of the plunger and top lever for cutting screw threads and for obtaining automatic longitudinal feeds and automatic cross feeds on all sizes of South Bend Quick Change Gear Lathes. The size of gear box differs on each size lathe.

The Improved Sliding Gear

The sliding gear that meshes with the gear box pinion and with the spindle stud, determines the "in" and "out" position as shown on the index plate. This gear has been improved in that it now has a neutral position between the "in" and "out" adjustments, so that the gear is completely out of mesh with one gear before it can mesh with the other gear. This improvement will be found on all South Bend Quick Change Gear Lathes listed in this catalog.

Standard Screw Thread Cutting Range

The quick change gear box provides forty-eight (48) changes for cutting right or left-hand screw threads from 2 to 112 per inch, including 1 1/2 pipe thread, without removing a gear. The following screw threads can be cut as shown on the quick change gear box chart: 2, 2 1/4, 2 1/2, 2 3/4, 2 7/8, 3, 3 1/4, 3 1/2, 4, 4 1/2, 5, 5 1/2, 5 3/4, 6, 6 1/2, 7, 8, 9, 10, 11, 11 1/2, 12, 13, 14, 16, 18, 20, 22, 23, 24, 26, 28, 32, 36, 40, 44, 46, 48, 52, 56, 64, 72, 80, 88, 92, 96, 104 and 112.

Automatic Longitudinal Feed Range

Twenty-four (24) automatic longitudinal feeds can be obtained through the quick change gear box as shown on

the lower bracket of the chart. All these feed changes can be made without removing a gear. The automatic longitudinal feeds can be operated in either direction, right or left. The range of automatic longitudinal feeds can be obtained from .003" (3/1000 of an inch) to .020" (20/1000 of an inch) per each revolution of spindle as follows: .0030"; .0032"; .0034"; .0036"; .0037"; .0041"; .0046"; .0052"; .0059"; .0064"; .0069"; .0072"; .0075"; .0083"; .0093"; .0104"; .0119"; .0128"; .0138"; .0144"; .0151"; .0166"; .0185", and .0208".

Twenty-four (24) additional coarse automatic longitudinal feeds can be obtained through the quick change gear box by placing the sliding gears in the "in" position as shown in the upper bracket. These coarse feeds are seldom needed except on special work.

Automatic Cross Feed Range

Twenty-four (24) automatic cross feeds may be obtained through the quick change gear box without removing a gear. These feeds range from .001" (1/1000 of an inch) to .007" (7/1000 of an inch) per revolution of spindle as follows: .0011"; .0012"; .0013"; .00135"; .0014"; .0015"; .0018"; .0020"; .0022"; .0024"; .0026"; .0027"; .0028"; .0031"; .0036"; .0039"; .0045"; .0048"; .0052"; .0054"; .0057"; .0062"; .0069", and .0078".

The Automatic Cross Feeds, as listed in the paragraph above, are obtained by multiplying the automatic longitudinal feeds indicated in the lower bracket of the chart by .375. The resulting figures represent the amount that the cutting tool will travel automatically across the face of the work in thousandths of an inch each revolution of spindle.

Comparison of Quick Change Gear Lathe and Standard Change Lathe

The Mechanical Units of the Quick Change Gear Lathes and Standard Change Gear Lathes shown throughout this catalog, are identical on lathes of the same size, whether Countershaft Drive, Underneath Belt Motor Drive or Silent V-Belt Motor Drive. For example, the headstock, tailstock, saddle, apron, compound rest and lead screw, are the same on all 16-inch Standard Change Gear and Quick Change Gear lathes, with all types of drive. Similarly, the mechanical units of the 18-inch lathe are common to all 18-inch lathes regardless of type or drive and so on for each of the other size lathes illustrated and described.

The Only Difference between the Quick Change Gear and Standard Change Gear Lathes is in the equipment used for cutting screw threads and for the operation of the automatic turning feeds. The Quick Change Gear Lathe is equipped with a gear box providing 48 changes for cutting screw threads; 48 automatic friction longitudinal feeds; and 48 automatic cross feeds without changing or removing a gear. The Standard Change Gear Lathe has a set of independent change gears for cutting screw threads and for obtaining automatic longitudinal and automatic cross feeds. These gears are changed by hand when a different thread or feed is desired.

Quick Change Gear Lathe Screw Thread Cutting and Turning Feeds

Screw Threads are Cut on the Quick Change Gear Lathe by engaging the apron half-nuts with the lead screw. The pitch of the thread to be cut is determined by shifting the "sliding gear" A, "top lever" B and "tumbler lever" C of the quick change gear box (see Fig. 1) in accordance with the thread cutting chart which is illustrated at the right. The apron half-nuts and the threads of the lead screw are used only when cutting screw threads.

The Screw Thread Chart is read directly as "threads per inch" when cutting screw threads. For example, Fig. No. 1 at right has the three gear box levers set to cut 24 threads to the inch.

Thread Cutting Range. All Quick Change Gear South Bend Lathes will cut right and left-hand screw threads from 2 to 112 per inch including 11½ pipe thread. Gears can be supplied at extra cost for cutting special threads not shown on index plate.

Automatic Turning Feeds, that is, automatic friction longitudinal feeds and automatic cross feeds are obtained by the use of the automatic friction clutch in the apron, which is operated through a worm gear, driven by a spline in the leadscrew. The fineness or coarseness of the feed is determined by changing the same gear box levers as when cutting screw threads.

The Automatic Feed Chart is read directly in "thousandths of an inch per revolution of lathe spindle" when using the automatic longitudinal friction feed. For example, the gear box in Fig. 1 has the gear box levers set for a longitudinal feed of .0138-inches or an automatic cross feed of .0052-inches. To obtain automatic cross feeds multiply the automatic longitudinal feed by .375.

The Quick Change Gear Lathe is popular in the tool room and machine shop because changes in threads and feeds can be made quickly and easily. To set up lathe for any feed or thread, it is only necessary to shift levers.

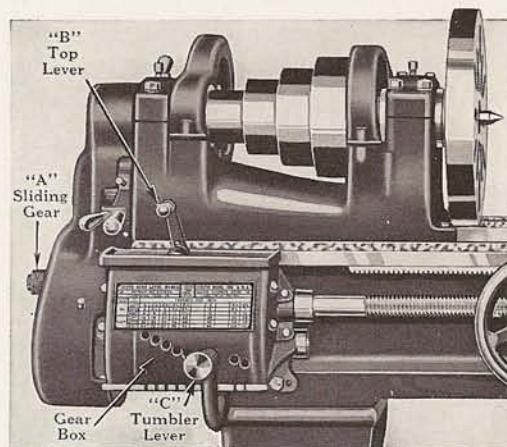


Fig. 1. Quick Change Gear Mechanism used on all South Bend Quick Change Gear Lathes. (See Gear Box Description on Page 41)

SLIDING GEARS		TOP LEVER		SCREW THREADS PER INCH										AUTOMATIC CROSS FEED EQUALS .375 TIME LONGITUDINAL FEED	
IN	LEFT	2	2½	2½	2½	2½	3	3½	3½						
	CENTER	4	4½	5	5½	5½	6	6½	7						
	RIGHT	8	8	10	11	11½	12	13	14						
OUT	LEFT	16	13	20	22	23	24	26	28						
	CENTER	32	36	40	44	46	48	52	56						
	RIGHT	64	72	80	88	92	96	104	112						
												LONGITUDINAL FEED IN INCHES PER SPINDLE REVOLUTION			
		LEFT	.0208	.0185	.0166	.0151	.0144	.0138	.0128	.0119					
		CENTER	.0104	.0093	.0083	.0075	.0072	.0069	.0064	.0059					
		RIGHT	.0052	.0046	.0041	.0037	.0036	.0034	.0032	.0030					

Fig. 2. Direct Reading Metal Index Chart Attached to Quick Change Gear Lathes.

Standard Change Gear Lathe Screw Thread Cutting and Turning Feeds

Screw Threads are Cut on the Standard Change Gear Lathe by engaging the apron half-nuts with the lead screw. The pitch of the thread to be cut is determined by changing independent gears, by hand, at the headstock end of the lathe in accordance with the screw thread chart which is illustrated at the right. The apron half-nuts and the threads of the lead screw are used only when cutting threads.

Thread Cutting Range. All 9" and 11" Standard Change Gear South Bend Lathes will cut right and left-hand threads from 4 to 40 per inch including 11½ pipe thread. All 13" and larger Standard lathes will cut right and left-hand threads from 2 to 40 per inch including 11½ pipe thread. Gears can be supplied at extra cost for cutting special threads not shown on index plate.

Special Change Gear Equipment for cutting fine pitch screw threads up to 80 per inch is available for all South Bend Standard Change Gear Lathes at small extra cost. See page 61 for prices. South Bend Lathes with special change gears for cutting screw threads as fine as 1000 per inch are used in several manufacturing plants.

Automatic Turning Feeds, that is, automatic friction longitudinal feeds and automatic cross feeds are obtained by the use of the automatic friction feed clutch in the apron which is operated through a worm gear driven by a spline in the lead screw. The fineness or coarseness of the feed is determined by changing the independent change gears the same as when cutting screw threads. A large gear is furnished with the Standard Change Gear lathe for obtaining very fine turning feeds for finishing.



Change Gears

SCREW THREAD CUTTING CHART		
STANDARD CHANGE GEAR LATHE		
13"-15"-16"		
THREADS PER INCH	STUD GEAR	SCREW GEAR
2	72	24
3	48	24
4	48	32
5	48	40
6	48	48
7	48	56
8	48	64
9	48	72
10	48	80
11	24	44
11½	24	45
12	24	48
13	24	52
14	24	56
16	24	64
18	24	72
20	24	80
22	24-1-2	44
24	24-1-2	48
26	24-1-2	52
27	24-1-2	54
28	24-1-2	56
30	24-1-2	60
32	24-1-2	64
36	24-1-2	72
40	24-1-2	80

Fig. 3. Metal Index Chart Attached to Standard Change Gear Lathe

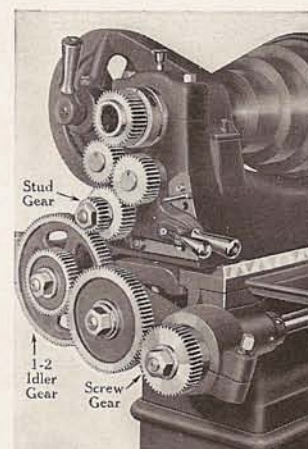


Fig. 4. Change Gear Equipment Used on Standard Change Gear Lathes.

The Screw Thread Cutting Chart, Fig. 3, shows the arrangement of change gears for cutting various pitches of screw threads. For example to cut 24 threads per inch, a 24-tooth "stud gear" and a 48-tooth "screw gear" are used with a 1-2 compound idler gear and an intermediate gear between them, as shown in Fig. 4.

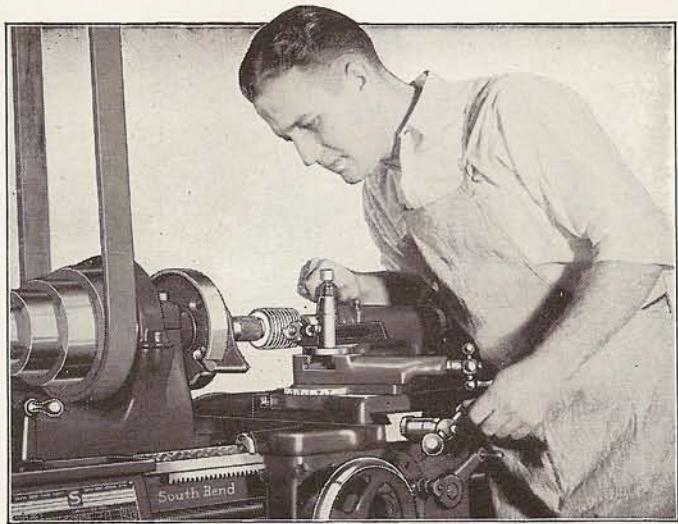
Screw Threads Cut on the Series "O" South Bend Lathe

All Standard Screw Threads, right or left, including National Coarse (U.S.S.); National Fine (S.A.E.); Sharp "V"; Whitworth; Acme; Square; including pipe thread 11 1/2 threads per inch, can be cut on all sizes and types of South Bend Back-Geared, Screw Cutting Lathes. All the above threads can be cut single or multiple, for example, double, triple, etc. These lathes are capable of making the finest precision master thread gauges, limit thread gauges, finest precision taps and dies. See precision lead screw, page 40.

Quick Change Gear South Bend Lathes, all sizes, are equipped with a quick change gear box for cutting standard screw threads from 2 to 112 per inch, right or left. For a list of these threads see page 41.

Standard Change Gear Lathes, all sizes, and Junior and "Workshop" South Bend Lathes are supplied with a set of independent change gears for cutting standard screw threads from 4 to 40 per inch on the 9" and 11" Lathes, and from 2 to 40 per inch on the 13" and larger size Lathes. For further information, see page 42.

Special and Fine Screw Threads can be cut on the Standard, Junior and "Workshop" Lathes by using special change gear equipment. For further details see page 61.



Cutting a Master Tap in the Lathe



Internal Square Thread



Master Thread Gauge



"V" Thread Tap



Limit Thread Gauge



Acme Thread Tap



Internal U. S. Standard Thread



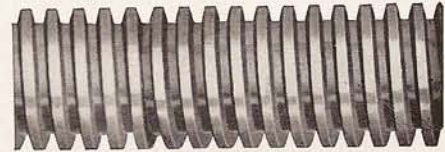
Right Hand Acme Double Screw Thread



National Coarse (U. S. S.) Screw Thread

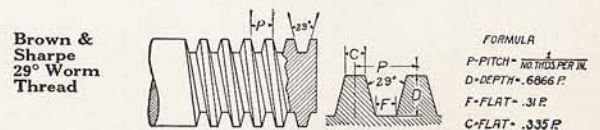
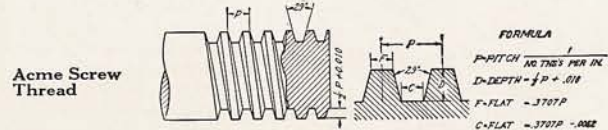
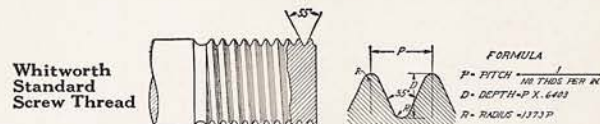
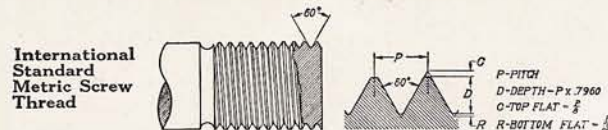
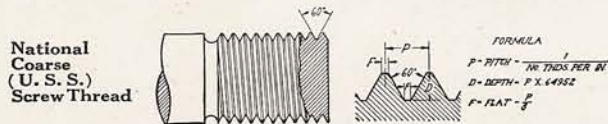


Special Screw Showing Various Types of Threads



Acme Screw Thread

STANDARD SCREW THREAD FORMULAS



South Bend Underneath Belt Motor Drive

Applying to All Sizes of Underneath Belt Motor Driven Lathes

The Underneath Belt Motor Driven Lathe is an entirely new development. The new drive is a remarkable improvement in the method of driving a back geared screw cutting lathe, being perhaps the most outstanding improvement made on a back geared screw cutting lathe in the last decade. It is the lathe of the Future and marks the greatest forward step in lathe design since the back geared screw cutting lathe was developed.

This New Original Design was first developed in our plant in 1931 and since that time more than 1700 South Bend Underneath Belt Motor Driven Lathes have been placed in use throughout the United States. The engineers in these plants and shops, some of which are the largest in America, are loud in their praise of the power and efficiency of this lathe.

Power, Efficiency and Modern Design are outstanding in this new lathe, and it makes an attractive appearance in any shop. Compare the Underneath Belt Motor Driven Lathe with any other lathe of similar size for power, accuracy and appearance.

Features of This New Drive include (1) Down drive to spindle, (2) Clear vision because of no overhead obstructions, (3) Silent, powerful efficient drive, (4) Fully enclosed, no moving parts exposed, (5) Belt Tension adjustments for any desired pulling power, (6) Belt Tension Release for shifting belt to change spindle speeds.

Motor and Driving Unit are enclosed in the cabinet leg under the headstock. Attached to Cradle (G) Fig. 1, are the countershaft and electric motor. The belt tension release lever (B) controls the position of the cradle and countershaft. When lever (B) is in the "Up" position the entire driving unit is lifted vertically about 1 1/2" so the spindle belt may be shifted. When lever (B) is in the "down" position the driving unit is in position for the operation of the lathe. (A) and (E) are oil cups for lubricating bearings.

Belt Tension on the Driving Belt is adjusted by means of two separate adjustment screws (C) and (H). These two adjustments provide a tension from 1 lb. and upward and when the desired tension is obtained the mechanism may be locked at that point. Adjusting screw (D) takes care of the belt tension on the V-belts from the motor to the countershaft and is entirely independent of the driving belt tension adjustment.

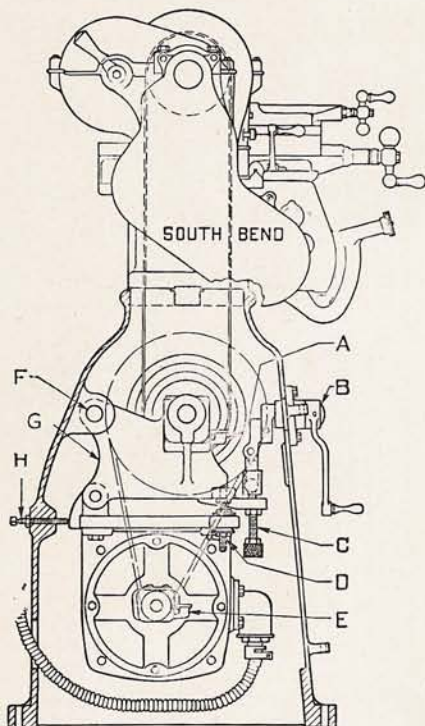


Fig. 1. Cross Section End View of Underneath Belt Motor Driven Lathe.

The Motor Drive Mechanism and Cradle Assembly used on the 18-inch Underneath Belt Motor Driven Lathes, shown on pages 3 and 5, is mounted in a horizontal position instead of a vertical position as shown below; this causes the cabinet leg to extend to the rear, using slightly more floor space than the illustrations below indicate.

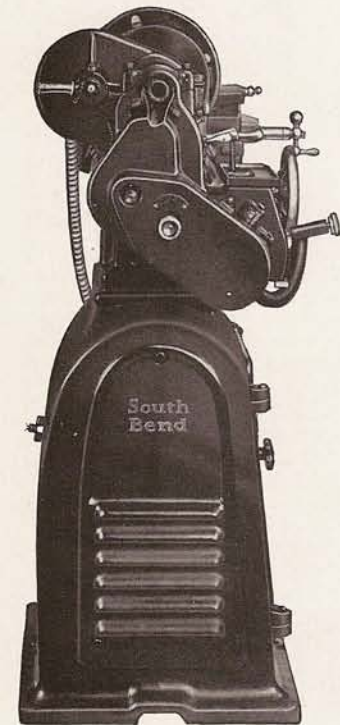


Fig. 2. End view of Underneath Belt Motor Driven Lathe, showing removable ventilated end plate

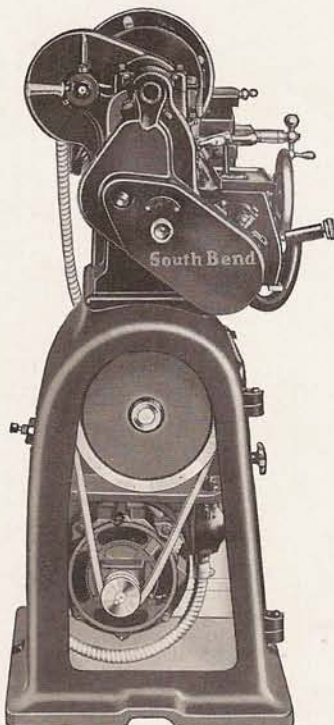
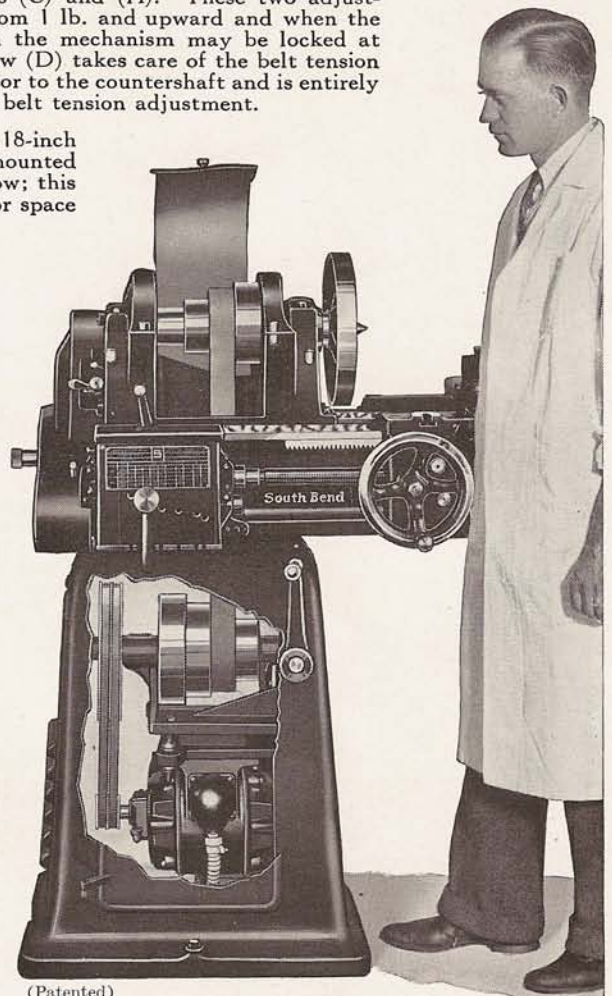


Fig. 3. End view of lathe with end plate removed to show multiple "V" belt drive from motor



(Patented)

Fig. 4. Front view of 13" lathe with door cut away, showing arrangement of driving mechanism

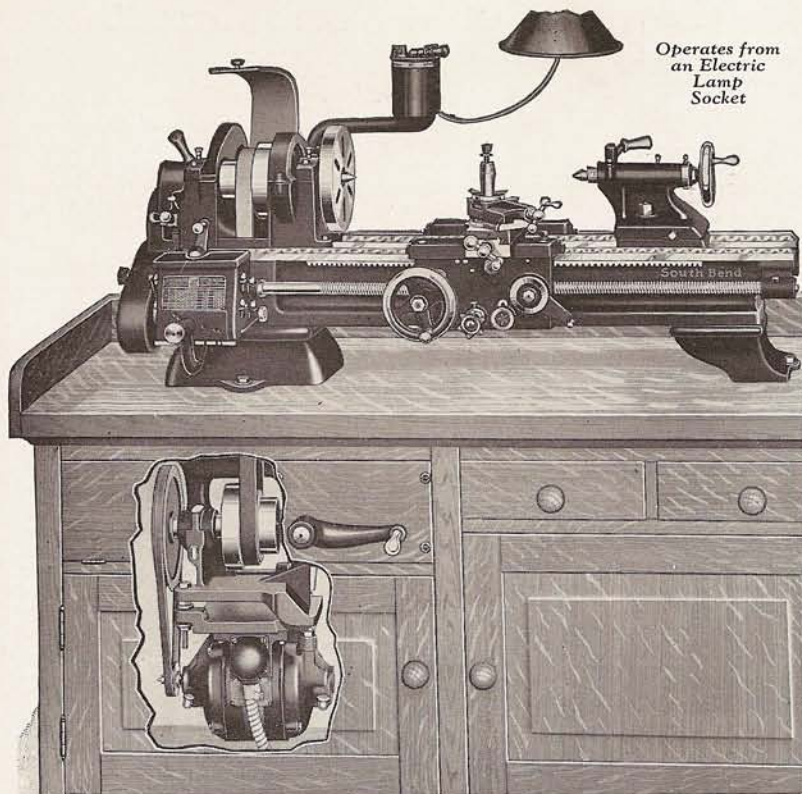


Fig. 1. South Bend Underneath Belt Motor Driven Bench Lathe with Section of Bench Front Cut Away to Show Drive Mechanism. Bench used is illustrated and described on page 62.

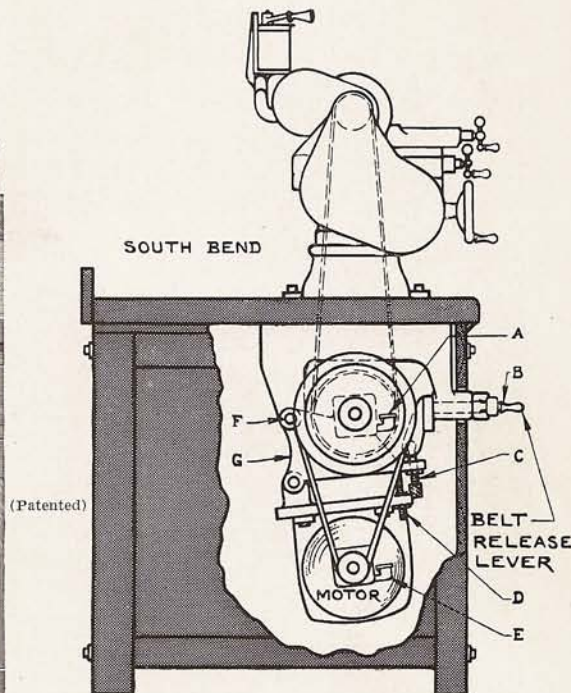


Fig. 2. Cross Section End View of Underneath Belt Motor Driven Bench Lathe.

Underneath Belt Motor Drive for 9", 11" and 13" Bench Lathes

Has Cone Pulley Belt Tension Adjustment and Tension Release Lever

The New Bench Motor Drive illustrated and described here is recommended for the shop doing all classes of fine accurate work in the cutting of metals. The lathe and drive mechanism when installed on a rigid bench become a self-contained unit that is exceptionally quiet running, smooth and vibrationless at all speeds. The laboratory, machine shop, manufacturing plant and school shop will find the New Underneath Belt Motor Driven Bench Lathe the most outstanding Bench Lathe on the market today regardless of price.

The Underneath Belt Motor Drive for 9", 11" and 13" South Bend Bench Lathes is similar to the Underneath Belt Motor Drive for Floor Leg Lathes which is illustrated and described on opposite page. This new drive eliminates all overhead belts and pulleys and is a big improvement over motor drive equipment previously available for bench lathes.

The Underneath Belt Motor Driven Bench Lathe, as illustrated above, is supplied in the following sizes and types: 9" Junior; 9" Standard and Quick Change Gear; 11" Standard and Quick Change Gear; and 13" Standard and Quick Change Gear. With the exception of the 13" size, these Underneath Belt Motor Drive Bench Lathes are illustrated, described and priced on pages 20, 23 and 29 of this catalog.

Features of this new Drive include: (1) Down Drive to spindle. (2) Clear vision because there are no overhead obstructions. (3) Silent, powerful, efficient drive. (4) Fully enclosed, no moving parts exposed. (5) Screw type belt tension adjustments. (6) Belt Tension Release for easy shifting of cone pulley belt to change spindle speeds.

Power is transmitted by V-Belt from reversing motor to driving cone shaft and a flat belt is used between the cone pulleys. The reversing motor and three step cone pulleys with the back-geared headstock of the lathe provide six changes of spindle speeds, both forward and in reverse.

Motor and Driving Unit are enclosed in the cabinet type bench under the headstock of lathe. Cradle (G) Fig. 2, is supported by a frame bolted under the bench top. The belt tension release lever (B) controls the position of the cradle (G) which carries the motor and countershaft. When lever (B) is in the "Right" horizontal position the countershaft cone pulley is lifted vertically about $1\frac{1}{2}$ " so the cone pulley belt is loose and may be shifted easily. When lever (B) is in the "Left" horizontal position the cone pulley belt is tight and the lathe is ready for operation.

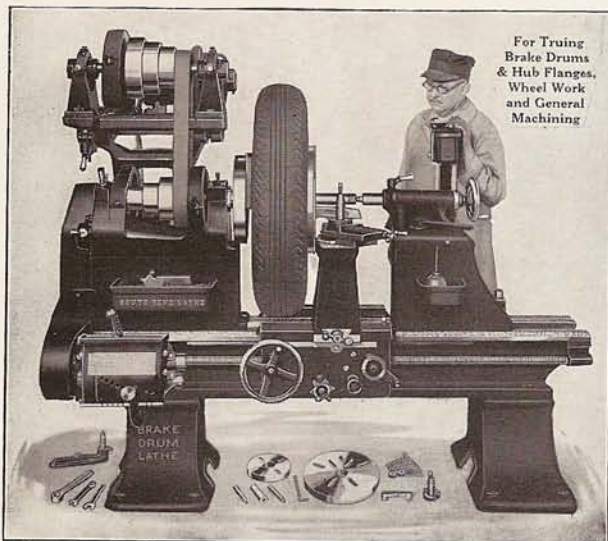
Belt Tension Adjustment for the Cone Pulley Belt is provided by means of Adjusting Screw (C). This adjustment provides any desired pulling power and also takes up the stretch of the belt. Adjusting screw (D) provides belt tension adjustment for the V-belt from the motor to the countershaft and is entirely independent of the cone pulley belt tension adjustment.

The Entire Mechanism of lathe and drive is fully enclosed for safety, to the operator of the lathe and to the mechanism itself. Dust and dirt cannot get into the windings of the motor, pulleys or belts. Bearings are equipped with oil cups (A) and (E). The operator of the lathe is protected from all moving parts of the lathe and driving mechanism. Control switch is enclosed drum type located conveniently for starting, stopping and reversing the lathe spindle.

Benches for Underneath Belt Motor Driven Bench Lathes. The cabinet bench (Type "C"), illustrated above, is recommended for bench lathes equipped with Underneath Belt Motor Drive. The cabinet is specially constructed to house the drive mechanism and to permit easy access to the moving parts. This type of bench is further described and priced on page 62. Bench may be purchased from us complete or may be built from blue prints which we will supply, free of charge, with each lathe.

36-inch Brake Drum and General Service Lathe—Silent Motor Drive

Supplied in Quick Change Gear and Standard Change Gear Types



36" x 6' Quick Change Gear Brake Drum Lathe with Silent Chain Motor Drive.....\$902.00

The 36-inch South Bend Brake Drum Lathe with Silent Chain Motor Drive, shown at left, will swing all types of wheels, single and dual, with tire attached, up to 36 1/4-inches in diameter. All types of brake drums up to 23 1/2-inches in diameter, including drums with hub and axle attached, can be trued in this lathe, which uses the self-centering mandrel and adapter method explained on the opposite page.

General Servicing Work such as machining flywheels, differentials and clutch faces, and all general machine work and screw thread cutting, can be done with this lathe, in addition to all kinds of brake drum and wheel work.

Equipment Included in Price of Lathe consists of: Large face plate; small face plate; tool post; thread cutting stop; two 60° lathe centers; spindle sleeve; wrenches; driver for wheels and drums; change gears (with Standard Change Gear Lathe); installation plan; and directions for operating.

Electrical Equipment included in price of Lathe consists of: Silent chain motor drive unit; 1 H.P. 1200 R.P.M. instant reversing motor; reversing drum switch; wiring between motor and switch enclosed in flexible metal conduit; one flat leather belt; and complete directions for wiring.

Full Details concerning the different sizes and types of South Bend Brake Drum Lathes are contained in Bulletin No. 4, "How to True Brake Drums," described on the opposite page.

Net Factory Prices 36-inch Series "O" South Bend Brake Drum and General Service Lathe—Silent Chain Motor Drive

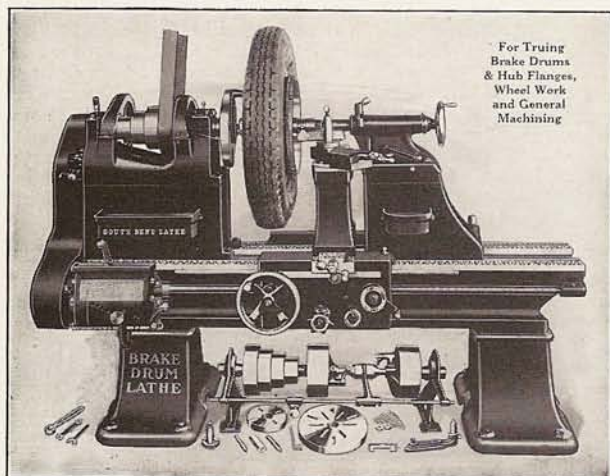
Prices Include Lathe Equipment, Instant Reversing Motor, Reversing Switch and Belting

Swings Wheel Tire Attached Inches	Length of Bed Feet	Distance Between Centers Inches	Power Required H.P.	Approx. Weight Crated Pounds	Standard Change Gear Lathes					Quick Change Gear Lathes				
					Cat. No.	Code Word	3-Phase 60-Cycle A.C. Motor	1-Phase 60-Cycle A.C. Motor	Direct Current Motor	Cat. No.	Code Word	3-Phase 60-Cycle A.C. Motor	1-Phase 60-Cycle A.C. Motor	Direct Current Motor
36 1/4	6	27	1	2620	302-C	Claud	\$ 842.00	\$ 880.00	\$ 908.00	304-C	Cajul	\$ 902.00	\$ 940.00	\$ 968.00
36 1/4	7	39	1	2700	302-D	Coast	863.00	901.00	929.00	304-D	Cakah	923.00	961.00	989.00
36 1/4	8	51	1	2780	302-E	Croze	884.00	922.00	950.00	304-E	Cakik	944.00	982.00	1010.00
36 1/4	10	75	1	2940	302-G	Culex	930.00	968.00	996.00	304-G	Cakje	990.00	1028.00	1056.00
36 1/4	12	99	1	3170	302-H	Conge	995.00	1033.00	1061.00	304-H	Conif	1055.00	1093.00	1121.00
36 1/4	14	123	1	3395	302-K	Cofse	1052.00	1090.00	1118.00	304-K	Cokiz	1112.00	1150.00	1178.00

Lathe with 12-foot and 14-foot bed is equipped with center leg, which is included in price of the lathe.

36-inch Brake Drum and General Service Lathe—Countershaft Drive

Supplied in Quick Change Gear and Standard Change Gear Types



36" x 6' South Bend Quick Change Gear Brake Drum Lathe, with Countershaft and Equipment.....\$710.00

The 36-inch South Bend Brake Drum Lathe with Over-head Countershaft Drive, shown at left, will swing all types of wheels, single and dual, with tire attached, up to 36 1/4-inches in diameter. All types of brake drums up to 23 1/2-inches in diameter, including drums with axles attached, can be trued in this lathe, which uses the self-centering mandrel and adapter method explained on the opposite page.

General Servicing Work such as machining flywheels, differentials and clutch faces, and all general machine work and screw thread cutting can be done with this lathe, in addition to all kinds of brake drum and wheel work.

Equipment Included in Price of lathe consists of: Countershaft; large face plate; small face plate; tool post; thread cutting stop; driver for wheels and drums; two 60° lathe centers; spindle sleeve; change gears (with Standard Change Gear Lathe); wrenches; installation plan; complete directions for operating lathe and handling brake drum and wheel work.

Full Details concerning the different sizes and types of South Bend Brake Drum Lathes are contained in Bulletin No. 4, "How to True Brake Drums," which also shows the latest methods for mounting and truing brake drums and describes the proper equipment. See opposite page.

Net Factory Prices 36-inch Series "O" South Bend Brake Drum and General Service Lathe—Countershaft Drive

Swings Wheel Tire Attached Inches	Length of Bed Feet	Distance Between Centers Inches	Swing Over Carriage Inches	Hole Thru Spindle Inches	Power Required H.P.	Standard Change Gear Lathes				Quick Change Gear Lathes			
						Cat. No.	Code Word	Weight Crated Pounds	Net Factory Price	Cat. No.	Code Word	Weight Crated Pounds	Net Factory Price
36 1/4	6	27	17	1 1/8	1	2-C	Cocoa	2160	\$650.00	4-C	Cajka	2195	\$710.00
36 1/4	7	39	17	1 1/8	1	2-D	Cario	2240	671.00	4-D	Cahe	2275	731.00
36 1/4	8	51	17	1 1/8	1	2-E	Cuxom	2320	692.00	4-E	Cajki	2355	752.00
36 1/4	10	75	17	1 1/8	1	2-G	Cialr	2480	738.00	4-G	Cajko	2515	798.00
36 1/4	12	99	17	1 1/8	1	2-H	Cojal	2710	803.00	4-H	Camra	2745	863.00
36 1/4	14	123	17	1 1/8	1	2-K	Cofal	2935	860.00	4-K	Capma	2970	920.00

Lathe with 12-foot and 14-foot bed is equipped with center leg which is included in price of lathe.

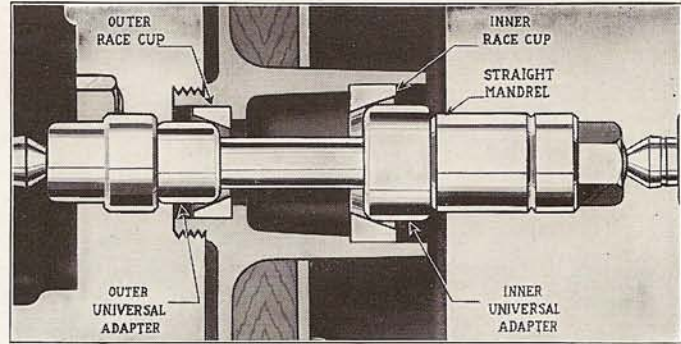
South Bend Self-Centering Mandrel and Universal Adapter Method

For Accurately Mounting Brake Drums Between Centers in the Lathe

Mounting Front Wheels in the Lathe

The Self-Centering Mandrel and Adapter Method—an exclusive South Bend feature—is the method used for obtaining absolute accuracy in mounting the wheels of autos, buses and trucks between centers in the lathe for testing, truing and machining brake drums and hubs. The method is practical, fast and economical.

For Mounting Front Wheels, with but a few exceptions, the Straight Mandrel with Universal Bearing Adapters is used. The adapters fit Timken races or the ball-races in the hub of the wheel so that when the wheel is mounted in the lathe, any machining on the brake drum will be concentric with the axis of the hub. It is the accuracy of the South Bend method of truing brake drums which makes the method so popular with large service shops.

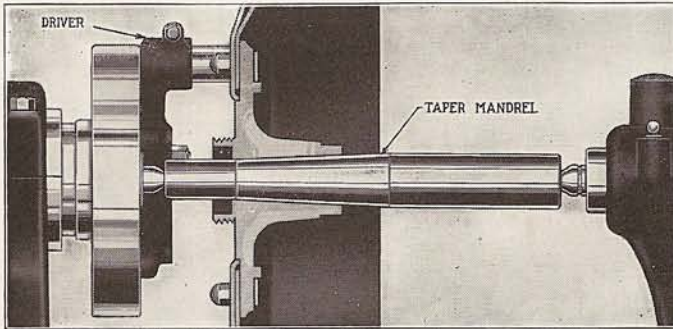


Front Wheel Mounted on Straight Mandrel and Universal Adapters

Mounting Rear Wheels in the Lathe

For Mounting Rear Wheels either the Straight Mandrel and Adapters or the Self-Centering Taper Mandrel are used. Since the taper of the mandrel is exactly the same as that of the axle of the car, the wheel is concentrically mounted for truing the brake drum.

Each Taper Mandrel will fit the rear wheels of several cars and one Straight Mandrel with Universal Adapters will fit the front wheels of practically all cars. Because of this, a small assortment of mandrels and adapters will handle the brake drums from practically all of the cars in common use. Each mandrel and adapter is stamped with an identifying number. A chart which we supply lists the mandrels and adapters required for all cars.

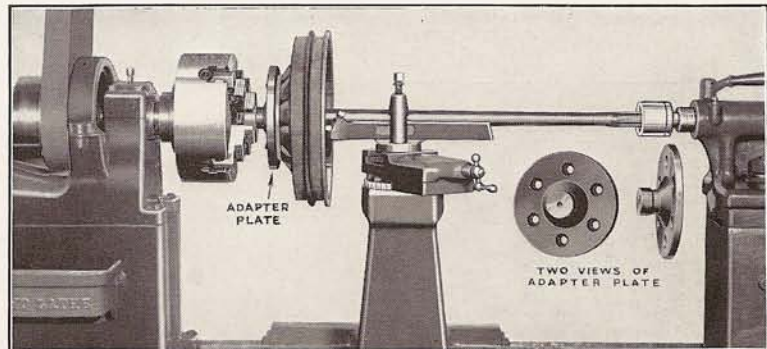


Rear Wheel Mounted on a Self-Centering Taper Mandrel

Mounting Drums of Cars with Hub and Axle Integral

Brake Drums of cars having hub and axle integral, such as are now being used by Pontiac, Buick and Chevrolet, are easily machined true in a South Bend Brake Drum Lathe. The hub of the axle with brake drum attached is bolted to an Adapter Plate (shown in illustration at right) which has bolt holes drilled in it corresponding to those in the wheel. The regular bolts and nuts used to fasten the wheel to hub are used when bolting the Adapter Plate to hub. The end of the Adapter Plate is centered in the lathe chuck with the opposite end of the axle shaft centered in a cup center held in the tailstock of the lathe. The brake drum can be machined true and concentric in about five minutes.

(When ordering Adapter Plate for mounting Brake Drums, specify make and model of car so that plate can be supplied with bolt holes drilled in correct position to fit the bolt holes in the hub).



No. 112 Adapter Plate for mounting brake drums of cars with hub and axle integral (code word "Larko"). Price.....\$4.00

General Mandrel and Adapter Assortment

Handles 85% of the Cars on the Road Today



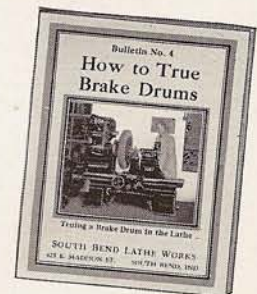
General Mandrel and Adapter Assortment No. 6.....\$74.00

For the General Shop handling the truing of brake drums on all cars, light buses and light trucks, General Assortment No. 6 shown above, consisting of one straight mandrel, ten adapters and eight taper mandrels, is highly practical since it will take care of 85% of all makes, including all of the popular priced cars, buses and trucks. For description and prices of all mandrels and adapters, see page 63.

Brake Drum Bulletin No. 4

"How to True Brake Drums"

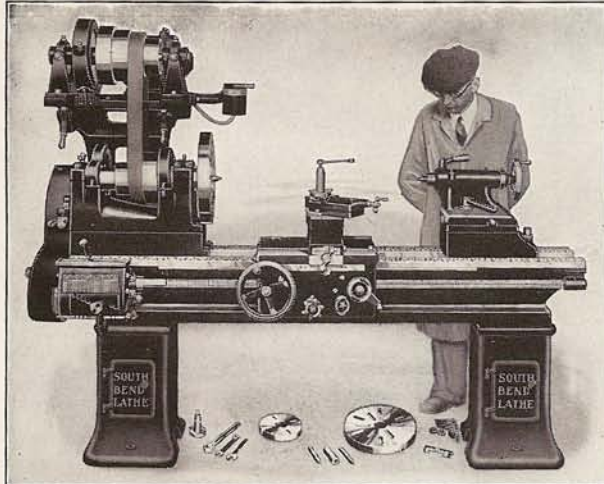
For the Shop already engaged in handling brake and wheel work and for the shop considering entering this line, the 16-page bulletin shown at right will be a valuable reference book. Bulletin No. 4 shows the latest precision methods for doing brake drum truing and wheel servicing work. It also contains a chart listing the proper mandrels and adapters to be used for mounting the wheels of different makes in the lathe.



Contains 35 Illustrations

Bulletin No. 4 also illustrates, describes and prices the different sizes and types of lathes available for different types of shops. Mailed upon request, postpaid.

16-24" General Purpose Lathe—Countershaft Drive and Motor Drive Supplied in Quick Change Gear and Standard Change Gear Types



16-24" x 8' South Bend Quick Change Gear, Silent Chain Motor Driven General Purpose Lathe.....\$874.00

The 16-24-inch General Purpose Lathe, shown at left, is the regular 16-inch South Bend Lathe equipped with permanent raising blocks under the headstock, tailstock and tool rest to increase the swing of the lathe to 24-inches. Repair Shops, Machine Shops and Motor Service Shops find this lathe practical and efficient for all average machine work, as well as occasional turning and boring operations on jobs of large diameter.

Principal Features and Specifications of this lathe are the same (except swing sizes) as those listed under the 16-inch lathe described on page 6.

Equipment Included in Price of the 16-24-inch General Purpose Lathe: Silent motor drive unit (with motor drive lathes); countershaft (with countershaft drive lathes); large and small face plates; tool post; thread cutting stop; two 60° lathe centers; spindle sleeve; change gears (with Standard Change Gear Lathes); wrenches; installation plan and book, "How to Run a Lathe."

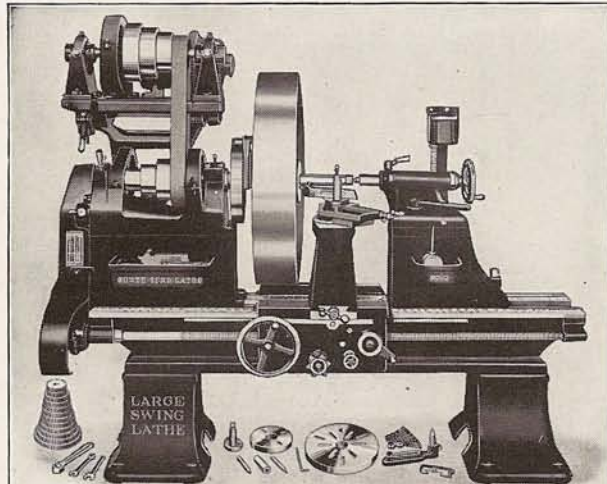
Electrical Equipment included in price of the 16-24-inch Silent Chain Motor Driven Lathe consists of: 1 H.P. 1200 R.P.M. reversing motor; reversing switch; wiring between motor and switch enclosed in flexible metal conduit; the necessary driving belts; and complete directions for wiring.

Net Factory Prices 16-24-inch Series "O" South Bend General Purpose Lathes

Swing Over Bed Inches	Length of Bed Feet	Distance Between Centers Inches	Swing Over Carriage Inches	Power Required H.P.	COUNTERSHAFT DRIVE LATHES				SILENT CHAIN MOTOR DRIVE LATHES					
					Approx. Weight Crated Pounds	Standard Change Gear Lathe		Quick Change Gear Lathe		Approx. Weight Crated Pounds	Standard Change Gear Lathe		Quick Change Gear Lathe	
						Cat. No.	Price	Cat. No.	Price		Cat. No.	3-Phase 60-Cycle A.C. Motor	Cat. No.	3-Phase 60-Cycle A.C. Motor
24 1/4	6	30	17	1	2025	58-C	\$580.00	76-C	\$640.00	2485	358-C	\$772.00	376-C	\$832.00
24 1/4	7	42	17	1	2105	58-D	601.00	76-D	661.00	2565	358-D	793.00	376-D	853.00
24 1/4	8	54	17	1	2185	58-E	622.00	76-E	682.00	2645	358-E	814.00	376-E	874.00
24 1/4	10	78	17	1	2345	58-G	668.00	76-G	728.00	2805	358-G	860.00	376-G	920.00
24 1/4	12	102	17	1	2575	58-H	733.00	76-H	793.00	3035	358-H	925.00	376-H	985.00
24 1/4	14	126	17	1	2800	58-K	790.00	76-K	850.00	3260	358-K	982.00	376-K	1042.00

Lathe with 12-foot and 14-foot bed is equipped with center leg which is included in price of the lathe. For 1-phase Instant Reversing Motor, add \$38.00 to above prices. For Direct Current Instant Reversing Motor and Reversing Switch, add \$66.00.

36-inch General Purpose Lathe—Countershaft Drive and Motor Drive Supplied in Quick Change Gear and Standard Change Gear Types



36" x 6' South Bend Standard Change Gear, Silent Chain Motor Driven General Purpose Lathe.....\$842.00

The 36-inch General Purpose Lathe, shown at left, is the regular 16-inch South Bend Lathe equipped with permanent raising blocks under the headstock, tailstock and tool rest to increase the swing of the lathe to 36-inches. Repair shops, machine shops and motor service shops find this lathe practical and efficient for all average machine work, as well as occasional turning and boring operations on jobs of large diameter.

Principal Features and Specifications of this lathe are the same (except swing sizes) as those listed under the 16-inch lathe described on page 6.

Equipment Included in Price of the 36-inch General Purpose Lathe: Silent motor drive unit (with motor drive lathes); countershaft (with countershaft drive lathes); large and small face plates; tool post; thread cutting stop; two 60° lathe centers; spindle sleeve; special driver; change gears (with Standard Change Lathes); wrenches; installation plan and book, "How to Run a Lathe."

Electrical Equipment included in price of the 36-inch Silent Chain Motor Driven Lathe consists of: 1 H.P. 1200 R.P.M. reversing motor; reversing switch; wiring between motor and switch enclosed in flexible metal conduit; the necessary driving belts; and complete directions for wiring.

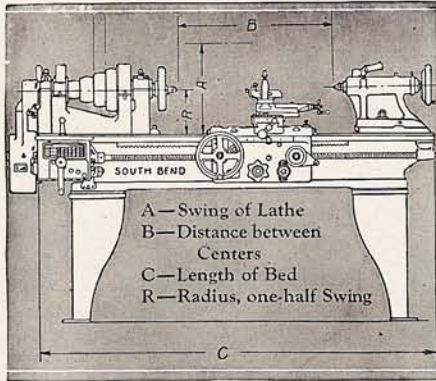
Net Factory Prices 36-inch Series "O" South Bend General Purpose Lathes

Swing Over Bed Inches	Length of Bed Feet	Distance Between Centers Inches	Swing Over Carriage Inches	Power Required H.P.	COUNTERSHAFT DRIVE LATHES				SILENT CHAIN MOTOR DRIVE LATHES					
					Approx. Weight Crated Pounds	Standard Change Gear Lathe		Quick Change Gear Lathe		Approx. Weight Crated Pounds	Standard Change Gear Lathe		Quick Change Gear Lathe	
						Cat. No.	Price	Cat. No.	Price		Cat. No.	3-Phase 60-Cycle A.C. Motor	Cat. No.	3-Phase 60-Cycle A.C. Motor
36 1/4	6	27	17	1	2195	2-C	\$650.00	4-C	\$710.00	2620	302-C	\$842.00	304-C	\$902.00
36 1/4	7	39	17	1	2275	2-D	671.00	4-D	731.00	2700	302-D	863.00	304-D	923.00
36 1/4	8	51	17	1	2355	2-E	692.00	4-E	752.00	2780	302-E	884.00	304-E	944.00
36 1/4	10	75	17	1	2515	2-G	738.00	4-G	798.00	2940	302-G	930.00	304-G	990.00
36 1/4	12	99	17	1	2745	2-H	803.00	4-H	863.00	3170	302-H	995.00	304-H	1055.00
36 1/4	14	123	17	1	2970	2-K	860.00	4-K	920.00	3395	302-K	1052.00	304-K	1112.00

Lathe with 12-foot and 14-foot bed is equipped with center leg, which is included in price of the lathe. For 1-phase Instant Reversing Motor, add \$38.00 to above prices. For Direct Current Instant Reversing Motor and Reversing Switch, add \$66.00.

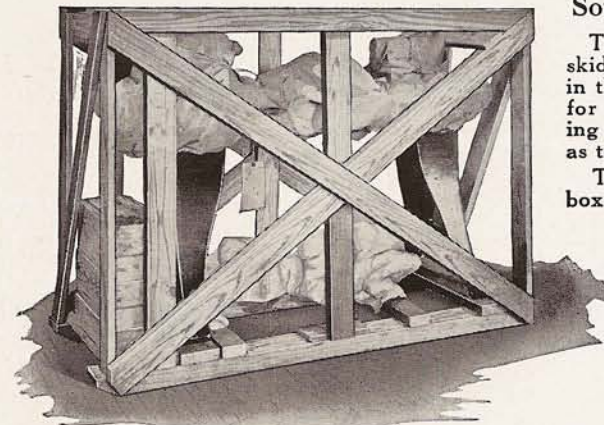
Selecting the Lathe—Erection Plans—Shipping Information

Selecting the Correct Size of Lathe



When selecting the size of lathe for your work, take into consideration the largest diameter and the greatest length of the work to be handled as at "A" and "B" in the illustration at left. Then select the lathe that has a swing over bed and distance between centers at least 10% greater than the dimensions of the largest work to be handled.

The size of a Screw Cutting Lathe is determined by the swing over bed "A", and the length of bed "C". European tool manufacturers determine the size of a lathe by its radius or center distance "R". What the European terms an 8-inch center lathe, United States manufacturers term a 16-inch swing lathe.



Lathe Crated for Domestic Shipment

South Bend Lathes Are Packed Carefully for Shipment

The illustration at left shows a Series "O" South Bend 16-inch Lathe skidded and crated for domestic shipment, that is, by rail to any point in the United States, Canada or Northern Mexico. In preparing lathes for shipment all finished or polished parts are greased to prevent rusting and each unit is wrapped securely with heavy waterproof paper so as to prevent dust or dirt accumulating in the mechanism.

The lathe is skidded and crated and the small parts are packed in a box which is nailed to the skids.

Lathes for domestic shipment are not knocked down but are crated and shipped completely assembled. All that is necessary on arrival is to remove the crating and wrapping and install the lathe in its proper place.

We Guarantee Safe Delivery in U. S. A.

We guarantee safe delivery of your South Bend Lathe to the freight depot in your city and protect you against any loss or damage while in transit. In case of accident or theft while in transit on the railroads we will duplicate the shipment as the railroads are responsible for all damages and thefts on their lines.

Lowest Freight Rates Are Figured

Freight charges on the lathe you select can be closely estimated by using the freight rate from South Bend to the city nearest your shipping point (see list below). The weight of the lathe crated is shown in each lathe price tabulation throughout this catalog.

All shipments are made over the most direct and least expensive route. In long distance shipping to certain sections of the United States our Traffic Department often secures lower freight rates for our customers by the use of consolidated or package car.

How to Figure Freight Charges

Use the freight rate applying to the city nearest your shipping point—see list of cities below. Multiply the total weight of your order by the rate given per hundred pounds and the result will be the approximate freight charges on your order.

Example—To find freight charges to Omaha, Neb., on the 9' x 3' Junior Bench Lathe shown on page 26.

Freight rate to Omaha, \$1.57 per 100 lbs.

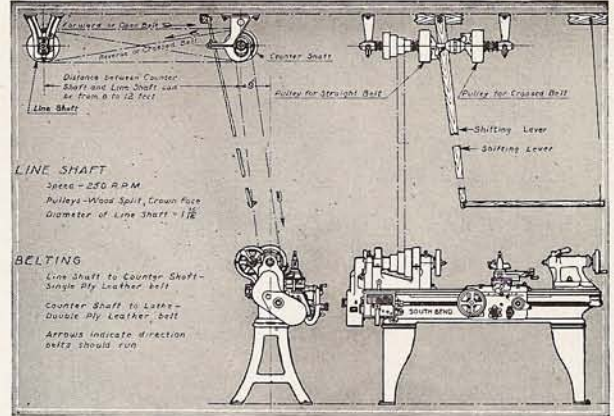
Weight of lathe, 375 lbs.

Approximate freight charges: 375 lbs. x \$1.57 = \$5.89.

Approximate Freight Rates From South Bend to Principal Cities

City	State	Rate per 100 lbs.	City	State	Rate per 100 lbs.	City	State	Rate per 100 lbs.
Albuquerque	New Mexico	\$3.66	Fargo	North Dakota	\$1.96	Philadelphia	Pennsylvania	\$1.26
Atlanta	Georgia	1.71	Hartford	Connecticut	1.32	Phoenix	Arizona	4.71
Baltimore	Maryland	1.20	Helena	Montana	4.69	Pittsburgh	Pennsylvania	.84
Boise	Idaho	4.68	Los Angeles	California	5.36	Portland	Oregon	5.36
Boston	Massachusetts	1.36	Louisville	Kentucky	.71	Portland	Maine	1.41
Cedar Rapids	Iowa	1.07	Memphis	Tennessee	1.68	Reno	Nevada	4.69
Charleston	South Carolina	2.00	Miami	Florida	2.67	Richmond	Virginia	1.29
Cheyenne	Wyoming	2.55	Milwaukee	Wisconsin	.60	St. Louis	Missouri	.81
Chicago	Illinois	.48	Minneapolis	Minnesota	1.48	San Antonio	Texas	3.00
Cincinnati	Ohio	.68	Montgomery	Alabama	1.73	San Francisco	California	5.36
Cleveland	Ohio	.71	Natchez	Mississippi	2.20	Seattle	Washington	5.36
Decatur	Illinois	.66	New York	New York	1.32	Sioux Falls	South Dakota	1.77
Denver	Colorado	2.58	New Orleans	Louisiana	1.99	Tampa	Florida	2.43
Detroit	Michigan	.61	Oklahoma City	Oklahoma	2.45	Wichita	Kansas	1.97
			Omaha	Nebraska	1.57			

Installation Plan Blue Prints



The Installation Plan Blue Print gives the principal dimensions of the lathe, location of bolt holes, information on the erection and installation of the lathe, proper speed and size of pulleys, line shaft speed and location of hangers is also given. An installation plan blue print is included with each size and type South Bend Lathe.

Attachments for Series "O" South Bend Lathes

38 Practical Lathe Attachments for Each Size Lathe

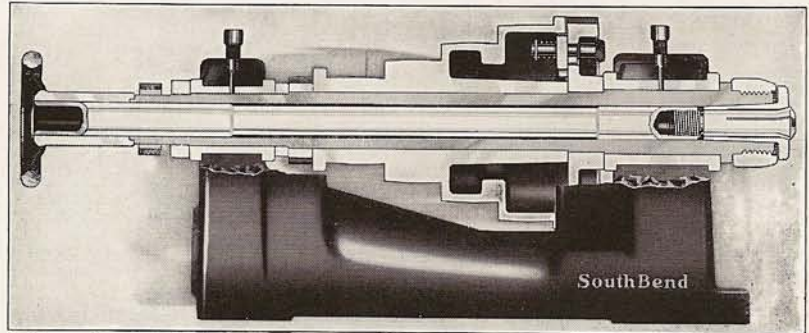
South Bend Lathes are noted for the number of practical attachments with which they can be equipped to take care of such work as milling, keyway cutting, grinding, turning tapers, etc., in the tool room, manufacturing plant or general machine shop. Most of these attachments may be pur-

chased with the lathe or ordered later when needed. These attachments are illustrated, described and priced on the following pages for each size South Bend Lathe. Many of the attachments listed are designed for use only on South Bend Lathes and cannot be fitted to lathes of other makes.

Draw-in Collet Chuck Attachments for South Bend Lathes

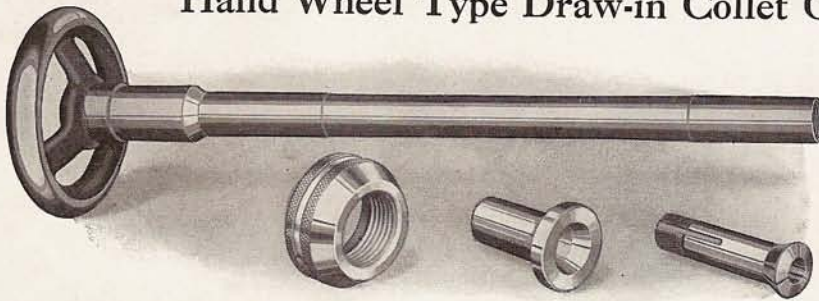
The Draw-in Collet Chuck is used on the lathe in the tool room for making small accurate tools and in the manufacturing plant for making small parts for watches, typewriters, sewing machines, radios, etc. It is the most accurate type of chuck made and will center any small work instantly. The hollow draw bar permits bars and rods to be passed through the lathe spindle and held in the chuck for machining.

The Hollow Draw Bar extends through the lathe spindle and is threaded at one end, which causes the hardened and ground steel split collet to tighten or release the work when the draw bar is rotated.



A Cross Section of the Lathe Headstock Showing Hand Wheel Draw-in Collet Chuck

Hand Wheel Type Draw-in Collet Chuck Attachment



Hand Wheel Type Draw-in Collet Chuck with One Split Collet, Tapered Closing Sleeve, and Nose Cap for Protecting Spindle Nose Threads

Prices of Hand Wheel Draw-in Collet Chuck with One Round Split Collet*

Size of Lathe	Catalog No.	Hole in Lathe Spindle	Collet Capacity in Sixty-Fourths (for Round Work)	Code Word	Price Complete with One Collet
"Workshop"	4306W	3/4 in.	3/4 in. up to 1/2 in.	Acrut	\$25.00
9 in.	4309	3/4 in.	3/4 in. up to 1/2 in.	Aaron	32.00
11 in.	4311	7/8 in.	3/4 in. up to 1/2 in.	Abode	35.00
13 in.	4313	1 in.	3/4 in. up to 3/8 in.	About	40.00
15 in.	4315	1 1/8 in.	3/4 in. up to 3/8 in.	Above	45.00
16 in.	4316	1 3/8 in.	3/4 in. up to 3/8 in.	Adore	50.00
18 in.	4318	1 7/8 in.	3/4 in. up to 1 in.	Adult	55.00

*For prices of extra collets see page 51.

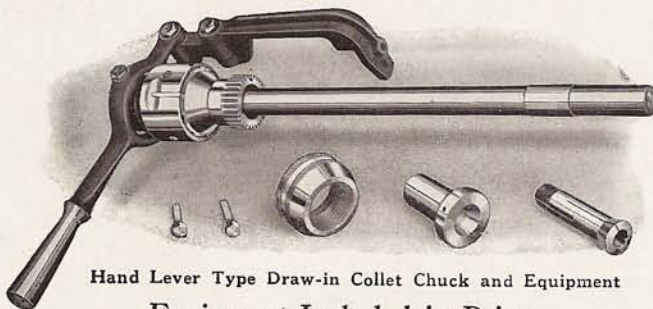
The Hand Wheel Type Draw-in Collet Chuck attachment is used to great advantage in the tool room in making small tools and parts where accuracy is essential. It is also suitable for small lot production work in the manufacturing plant. The work is held in the collet chuck by turning the hand wheel to the right and released by turning it to the left. It is necessary to stop the lathe spindle in order to open or close the chuck.

The capacity of the draw-in collet chuck is limited by the size of the hole in the spindle of the lathe on which it is used. See tabulation at left.

Equipment Included In Price

The price of the attachment includes hand wheel and hollow draw bar, spindle nose cap and spanner wrench, tapered closing sleeve of tool steel, hardened and ground, and one round split collet of any one size desired up to the maximum capacity of the lathe.

Hand Lever Type Draw-in Collet Chuck Attachment



Hand Lever Type Draw-in Collet Chuck and Equipment

Equipment Included in Price

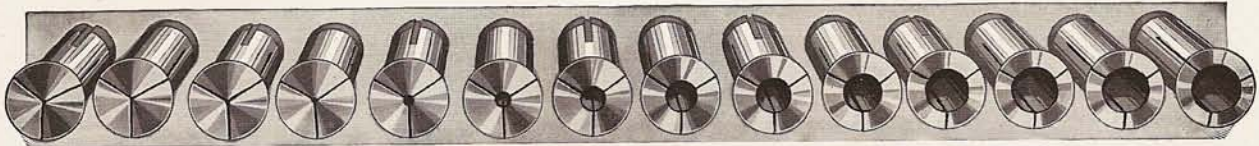
The price of the attachment includes adjustable chuck closing mechanism and hollow draw bar, spindle nose cap and spanner wrench, tapered closing sleeve of tool steel, hardened and ground, and one round split collet of any one size desired up to the maximum capacity of the lathe.

The Hand Lever Type Draw-in Collet Chuck is recommended for rapid production work in manufacturing small interchangeable parts where accuracy and precision are required. This chuck permits releasing and feeding bar stock through the collet without stopping the lathe. This is accomplished by means of an adjustable chuck closer. The gripping action of the collet can be adjusted to any desired tension by regulating the cylinder of the chuck closer.

Net Factory Prices of Hand Lever Draw-in Collet Chuck Attachment with One Round Split Collet*

Size of Lathe	Catalog No.	Hole in Lathe Spindle	Collet Capacity in 64ths (for Round Work)	Code Word	Price Complete with One Collet
"Workshop"	5206W	3/4 in.	3/4 in. up to 1/2 in.	Abpat	\$70.00
9 in.	5209	3/4 in.	3/4 in. up to 1/2 in.	Allen	80.00
11 in.	5211	7/8 in.	3/4 in. up to 1/2 in.	Among	90.00
13 in.	5213	1 in.	3/4 in. up to 3/8 in.	Andes	105.00
15 in.	5215	1 1/8 in.	3/4 in. up to 3/8 in.	Askew	120.00
16 in.	5216	1 3/8 in.	3/4 in. up to 3/8 in.	Aster	130.00
18 in.	5218	1 7/8 in.	3/4 in. up to 1 in.	Atoll	160.00

*For prices of extra collets see page 51.

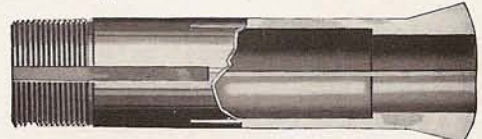


A Group of Collets with Hole Sizes Ranging from $\frac{1}{16}$ -inch up by Steps of 64ths of an inch.

Split Collets for Round Work

Used in Draw-in Collet Chuck Attachments

Split Collets for round work, as illustrated at left, are widely used for manufacturing and in the tool room. Collets for Draw-in Collet Chuck Attachments used on all South Bend Lathes are made of tool steel, hardened and tempered. They are ground both outside and inside to insure accuracy. The left end is threaded for the hollow draw bar of the draw-in chuck and has a keyway to prevent the collet from turning while holding the work. The other end is tapered to conform to the tapered closing sleeve of the attachment. Three slots divide the tapered end of the collet into segments. This permits the collet to grip or release the work as it is drawn in to or released from the tapered closing sleeve in the lathe spindle.



Cross Section View of Split Collet showing its accurate construction

Split Collet for Round Work

Prices of Split Collets for Round Work

Size of Lathe	Catalog No.	Hole in Spindle	Collet Capacity in Sixty-Fourths	Code Word	Price Each
Workshop	609-W	$\frac{3}{8}$ in.	$\frac{1}{16}$ in. up to $\frac{1}{2}$ in.	Catra	\$3.25*
9 in.	609	$\frac{3}{8}$ in.	$\frac{1}{16}$ in. up to $\frac{1}{2}$ in.	Cabot	3.25*
11 in.	611	$\frac{7}{8}$ in.	$\frac{1}{16}$ in. up to $\frac{1}{2}$ in.	Cello	3.50*
13 in.	613	1 in.	$\frac{1}{16}$ in. up to $\frac{5}{8}$ in.	Chose	4.00*
15 in.	615	$1\frac{1}{8}$ in.	$\frac{1}{16}$ in. up to $\frac{3}{4}$ in.	Civit	4.25*
16 in.	616	$1\frac{3}{8}$ in.	$\frac{1}{16}$ in. up to $\frac{7}{8}$ in.	Clear	4.75*
18 in.	618	$1\frac{1}{2}$ in.	$\frac{1}{16}$ in. up to 1 in.	Comet	5.00*

*Price of Split Collets $\frac{3}{8}$ ", $\frac{7}{8}$ ", and 1" capacity by 64ths, \$0.50 extra. No. 609 $\frac{1}{2}$ —Special Collet for "Workshop" and 9-inch lathes, has $\frac{1}{8}$ -inch hole in front end for holding Jewelers' Plunger Blanks. \$3.75 No. 611 $\frac{1}{2}$ —Special Collet for 11-inch lathes, $\frac{5}{8}$ " capacity...\$4.00 No. 613 $\frac{1}{2}$ —Special Collet for 13-inch lathes, $\frac{3}{4}$ " capacity...\$4.50

Range of Collet Sizes for South Bend Lathes

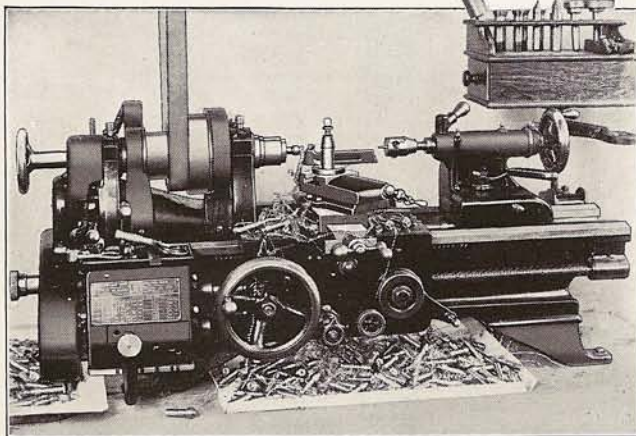
Collets for round work can be supplied with standard hole sizes ranging from $\frac{1}{16}$ -inch hole diameter up by 64ths, 32nds and 16ths of an inch to the capacity of the hollow draw bar of the draw-in chuck attachment. A separate collet must be used for each step of increase or decrease of diameter of the work. For example a $\frac{1}{4}$ -inch round split collet will hold work that is exactly .250-inch in diameter or .001-inch undersize (.249-inch diameter). For larger or smaller work, additional collets will be required.

Round Collets with Special Hole Sizes. Collets for round work with holes measured in thousandths of an inch or in millimeters, also collets for odd diameter drills and wire gauges, can be supplied for each size South Bend Lathe at an additional charge of \$0.50 each. For example: A collet with standard hole size for the 13-inch lathe is priced above at \$4.00. The same collet with special hole size will be \$4.50.

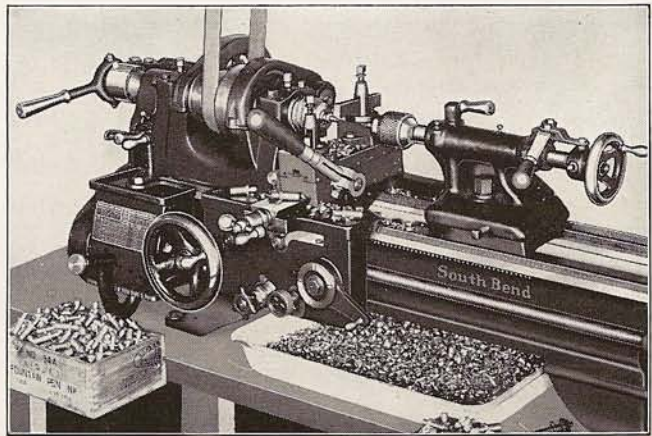


Special Split Collets

The illustrations above show three special split collets for holding square, hexagonal or round stock. Prices quoted on request.



9-inch South Bend Bench Lathe Equipped with a Hand Wheel Draw-in Collet Chuck Attachment for Manufacturing Small Screws



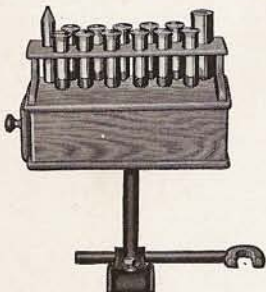
Forming and Cutting-Off Duplicate Parts Held in the Hand Lever Type Draw-in Collet Chuck Attachment

Collet Cabinet and Bracket

Holds collets, centers, wrenches, small tools, etc. Made of oak, finished in natural color with two coats of shellac. Price includes cabinet, rack for holding draw bar of draw-in collet chuck, and bracket for attaching cabinet to lathe. Collets shown are not included in price of cabinet.

Prices of Collet Cabinet and Bracket

Size Lathe	Cat. No.	Code	Price
"Workshop"	1078W	Cuyjd	\$12.00
9 in.	1081	Caged	12.00
11 in.	1082	Crome	12.00
13 in.	1083	Cnoke	12.00
15 in.	1084	Cnarl	15.00
16 in.	1085	Cadro	15.00
18 in.	1086	Catch	15.00

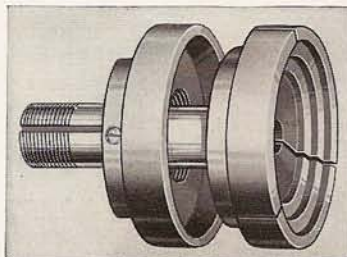


Collet Cabinet and Bracket

Step Chuck and Closer

The step chuck is used for rapid and accurate chucking of gear blanks and other round work. Operates similar to the split collets described above and is used with either hand wheel or hand lever type draw-in chuck mechanism.

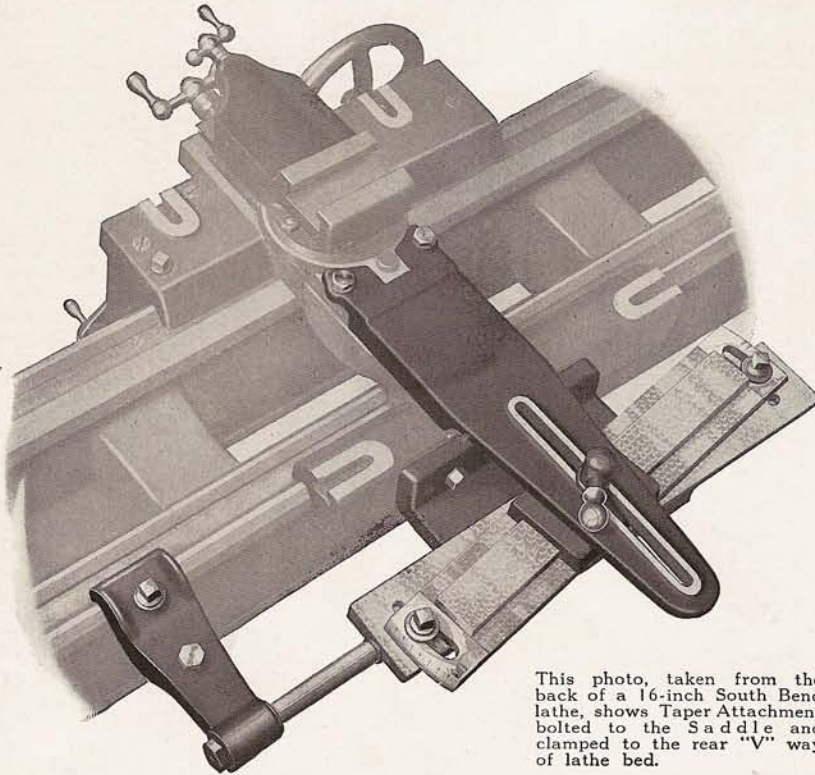
Step chucks are supplied to order, either stepped and ready to use or blanks which are split but not stepped and may be bored to the required diameter. Step chucks are made of steel, cast iron, or brass. Prices on application.



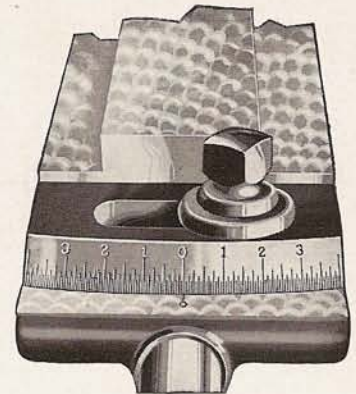
Step Chuck and Closer for Holding Discs and Other Round Flat Work

Graduated Taper Attachment for South Bend Lathes

For Turning and Boring All Classes of Taper Work



This photo, taken from the back of a 16-inch South Bend lathe, shows Taper Attachment bolted to the Saddle and clamped to the rear "V" way of lathe bed.



Close-up of Graduation On End of Swivel Bar

The Swivel Bar, which controls the Taper, is graduated—one end in inches per foot of taper and the other end in degrees. The attachment can be set for any Taper up to 3 inches per foot.

The Taper Attachment is used for tool room work, manufacturing and production work for turning and boring all classes of taper work. It is especially practical on production work where a large number of duplicate parts are to be tapered machined by turning or boring. The attachment may be left on the lathe at all times when doing either taper or straight work. It requires only a couple of minutes to change the taper attachment from straight to taper machining or vice versa. The attachment is of the same general design for each size lathe, differing only in dimension.

Fitting the Taper Attachment

It is advisable to order the Graduated Taper Attachment with the lathe so that it can be accurately fitted at factory; however, it can be purchased and fitted by the customer any time after the lathe is in operation in his shop as the back of the saddle is planed and drilled to receive it.

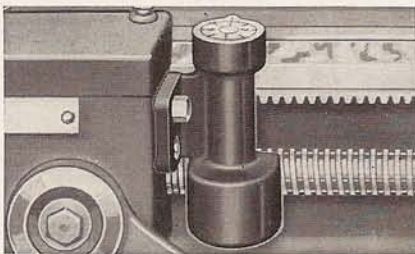
Attachment Operates Entire Length of Bed

The Taper Attachment is bolted to the Lathe carriage and can be set for taper turning or boring at any position along the entire length of the lathe bed. The Attachment does not interfere with straight turning as it does not operate unless the clamp on the back "V" of the bed is locked.

Net Factory Prices of Graduated Taper Attachment

Size of Lathe	Catalog No.	Maximum Taper			Approx. Shipping Weight	Code Word	Price Attachment
		At One Setting	Per Foot	In Degrees			
*Workshop	428-W	7 in.	3 in.	14	35 lbs.	Hapwo	*\$45.00
9 in.	209	9 in.	3 in.	14	40 lbs.	Dashe	55.00
11 in.	211	9 in.	3 in.	14	50 lbs.	Devor	65.00
13 in.	213	10 in.	3 in.	14	65 lbs.	Digit	75.00
15 in.	215	10 in.	3 in.	14	80 lbs.	Doted	85.00
16 in.	216	12 in.	3 in.	14	100 lbs.	Dress	90.00
18 in.	218	12 in.	3 in.	14	120 lbs.	Dunns	100.00

*Must be fitted to lathe in our factory.

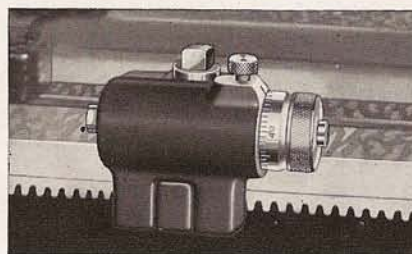


Thread Dial Indicator

This attachment eliminates the necessity of reversing the lathe to return the carriage to the starting point to catch the thread at the beginning of each successive cut that is taken. The dial is numbered and graduated to show when to clamp the half-nuts on the lead screw for the next cut.

Prices of Thread Dial Indicator

Size of Lathe	Cat. No.	Code Word	Price	Size of Lathe	Cat. No.	Code Word	Price
Workshop	810-W	Adnok	\$5.00	13 in.	813	Advls	\$11.00
9 in.	809	Abart	9.00	15 in.	815	Aesop	12.00
11 in.	811	Acres	10.00	16 in.	816	Aflot	13.00
				18 in.	818	Agrol	15.00



Micrometer Carriage Stop

This attachment is useful in accurate facing, turning, boring, etc. It is used for stopping the carriage at any point along lathe bed. Can be used on either side of carriage. Has a micrometer adjustment. The stop is hardened on both ends and may be locked for doing duplicate work.

Prices of Micrometer Carriage Stop

Size of Lathe	Cat. No.	Code Word	Price	Size of Lathe	Cat. No.	Code Word	Price
Workshop	968W	Capys	\$8.00	13 in.	973	Chain	\$13.00
9 in.	971	Calef	11.00	15 in.	974	Cigar	14.00
11 in.	972	Ceded	12.00	16 in.	975	Clmb	15.00
				18 in.	976	Coral	17.00



Plain Carriage Stop

A practical and inexpensive carriage stop for general facing, turning, boring, etc. Can be used on either side of carriage, at any point along the lathe bed. Attachment has positive clamp with collar screw which locks stop to front V-way of bed without marring the hand-scraped surface.

Prices of Plain Carriage Stop

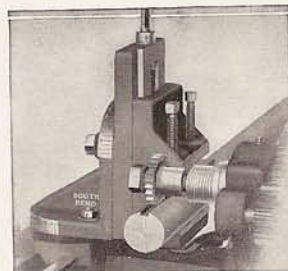
Size of Lathe	Cat. No.	Code Word	Price	Size of Lathe	Cat. No.	Code Word	Price
Workshop	758-W	Tahro	\$2.25	13 in.	754	Takto	\$3.00
9 in.	752	Tajut	2.50	15 in.	755	Takwy	3.50
11 in.	753	Takre	2.75	16 in.	756	Talit	4.00
				18 in.	757	Talov	4.50

Milling and Keyway Cutting Attachment

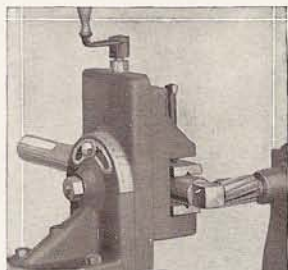
The Milling and Keyway Cutting Attachment is made for all sizes of South Bend Lathes from 9-inch to 36-inch. It fits on compound rest base, swivels all the way around in a horizontal plane like the compound rest and is graduated 180 degrees. In addition, the upright Angle Plate to which the vise is attached swivels in a vertical plane, and is graduated 180 degrees. The vertical adjusting screw at the top of the attachment is equipped with a micrometer graduated collar. The automatic cross and longitudinal feeds of the carriage can be used as well as the hand feeds.

A lathe fitted with a milling and keyway cutting attachment makes an excellent equipment for the small shop that has not enough work to invest in an expensive milling machine.

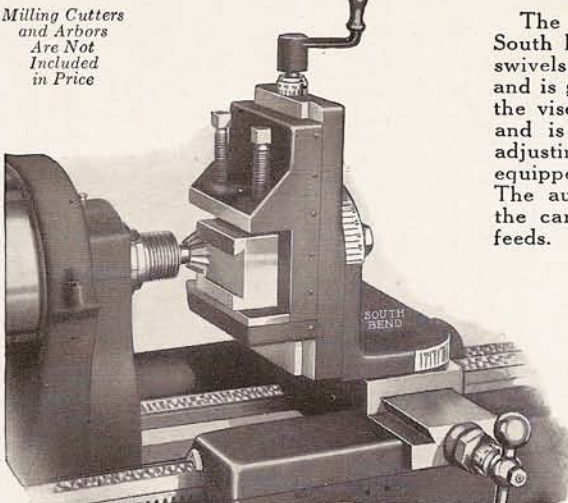
The Equipment consists of milling attachment, two standard V-blocks for holding round work, one crank handle for feed screw, one double end wrench, T-bolts and nuts for installing.



Milling a Standard Keyway



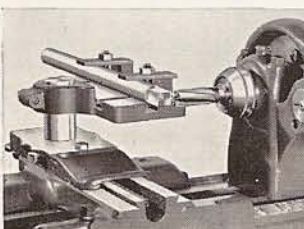
Squaring the End of a Shaft



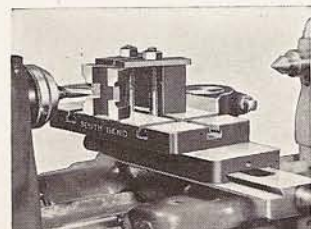
Milling a Dovetail on a Lathe Using the Milling Attachment

Net Factory Prices of Milling and Keyway Cutting Attachment

Size of Lathe	Cat. No.	Vertical Feed	Cross Feed	Vise Will Hold	Depth of Jaws	Width of Jaws	Weight Each	Code Word	Price Each
Workshop	9-W	2 1/2 in.	5 1/2 in.	1 3/4 in.	1 3/8 in.	3 in.	13 lbs.	Vabif	\$35.00
9 in.	1	3 in.	7 in.	1 3/4 in.	1 3/8 in.	3 1/2 in.	25 lbs.	Vagon	45.00
11 in.	2	4 in.	8 in.	1 3/4 in.	1 3/8 in.	3 3/4 in.	30 lbs.	Valet	50.00
13 in.	3	4 1/2 in.	9 in.	2 7/8 in.	1 1/2 in.	4 1/4 in.	40 lbs.	Victo	55.00
15 in.	4	6 in.	9 3/4 in.	4 in.	2 in.	5 1/4 in.	50 lbs.	Visit	65.00
16 in.	5	6 in.	9 3/4 in.	4 in.	2 in.	5 3/4 in.	65 lbs.	Varen	75.00
18 in.	5 1/2	6 1/2 in.	14 in.	4 in.	2 in.	5 3/4 in.	75 lbs.	Voxar	90.00



Squaring End of Steel Shaft



Milling Face of Bronze Bearing

Milling and Boring Table for Lathe

The adjustable milling and boring table is practical for light milling, boring, keyway cutting, squaring end of shafts, etc. The table swivels on a post attached to compound rest base and is adjustable for height. Has 3 T-slots for clamping work.

T-slots take 1/8" bolts. Table size 3 1/2"x7 1/2". Maximum distance from table top to center line of lathe 1 3/8". Clamps and bolts not furnished. No. 904, Milling and Boring Table for 9-inch Workshop Lathes, Code Word, "Yason." Ship. Wt. 8 lbs. . . . \$12.50

Milling Cutters and Arbors for Milling Attachment

Plain Milling Cutters
Made of High Speed Steel, hardened and ground. Cut on face only. Have standard keyway.

Net Factory Prices of Plain Milling Cutters

Cat. No.	Face Width	Cutter Diam.	Hole Diam.	Price Each
849-A	3/8 in.	2 1/2 in.	1 in.	\$1.85
849-B	3/8 in.	2 1/2 in.	1 in.	2.45
849-C	3/8 in.	2 1/2 in.	1 in.	2.60
849-D	3/8 in.	2 1/2 in.	1 in.	2.75
849-E	3/8 in.	2 1/2 in.	1 in.	2.95
849-F	3/8 in.	2 1/2 in.	1 in.	3.05
849-G	3/8 in.	2 1/2 in.	1 in.	3.35
849-H	3/8 in.	2 1/2 in.	1 in.	3.60

Arbor for Side and Plain Milling Cutters

For holding cutters with standard 1-inch hole. Capacity between nut and shoulder is 1 1/2 inches. Three spacing collars and hardened nut are furnished with each arbor. The Taper Shank is ground to fit the head spindle of the lathe.

Net Factory Prices of Arbors for Milling Cutters

Size of Lathe	Cat. No.	Morse Taper	Price Each	Size of Lathe	Cat. No.	Morse Taper	Price Each
"Workshop"	109-W	No. 3	\$5.00	15 in.	115-M	No. 3	\$5.00
9 in.	109-M	No. 3	5.00	16 in.	116-M	No. 3	5.00
11 in.	111-M	Special	5.00	18 in.	118-M	No. 3	5.00
13 in.	113-M	No. 3	5.00				

Spiral End Mills
High Speed Steel, hardened and ground. Furnished in right-hand cut, right-hand spiral only.

Net Factory Prices of Spiral End Mills

Cat. No.	Diam. of Mill	Morse Taper	Price Each	Cat. No.	Diam. of Mill	Morse Taper	Price Each
868-B	3/8 in.	No. 2	\$2.90	870-A	3/8 in.	No. 3	\$4.20
868-D	3/8 in.	No. 2	2.95	870-B	3/8 in.	No. 3	4.20
868-E	3/8 in.	No. 2	2.95	870-C	1/2 in.	No. 3	4.40
868-F	3/8 in.	No. 2	3.45	870-D	1 1/2 in.	No. 3	5.05
868-G	1 in.	No. 2	3.95	870-E	1 1/2 in.	No. 3	5.75

Side Milling Cutters
Made of High Speed Steel, hardened and ground. Cut on face and both sides. Have standard keyway.

Net Factory Prices of Side Milling Cutters

Cat. No.	Face Width	Cutter Diam.	Hole Diam.	Price Each
850-A	1/4 in.	3 in.	1 in.	\$3.90
850-B	3/8 in.	3 in.	1 in.	4.15
850-C	3/8 in.	3 in.	1 in.	4.35
850-D	3/8 in.	3 in.	1 in.	4.55
850-E	3/8 in.	3 in.	1 in.	4.80
850-G	3/8 in.	4 in.	1 in.	8.00
850-H	3/8 in.	4 in.	1 in.	8.60

Woodruff System Keyway Cutters

Made of High Speed Steel, hardened and ground. Have straight shanks 1/2-inch in diameter. Right-hand cutters only are carried in stock. Prices of left-hand cutters quoted on request.

Net Factory Prices Woodruff System Milling Cutters

Cat. No.	Diam.	Width	Price Each	Cat. No.	Diam.	Width	Price Each
897-A	1/2 in.	3/8 in.	\$1.70	897-I	1 in.	3/4 in.	\$2.30
897-B	1/2 in.	1/2 in.	1.70	897-J	1 in.	3/8 in.	2.40
897-C	3/4 in.	3/8 in.	1.70	897-K	1 1/2 in.	3/8 in.	2.55
897-D	3/4 in.	1/2 in.	1.85	897-L	1 1/2 in.	1/2 in.	2.55
897-E	3/4 in.	3/4 in.	1.85	897-M	1 1/2 in.	3/4 in.	2.65
897-F	3/4 in.	3/8 in.	2.05	897-N	1 1/2 in.	3/8 in.	2.75
897-G	3/4 in.	1/2 in.	2.05	897-O	1 1/2 in.	1/2 in.	2.75
897-H	1 in.	3/8 in.	2.30	897-P	1 1/2 in.	3/8 in.	2.95

Angular Cutters with Threaded Holes
Furnished R.H. or L.H. angle and with either R.H. or L.H. threaded hole. Have 60° included angle. When ordering specify whether style No. 1, 2, 3 or 4 is wanted.

Cat. No.	Diam.	Thick-ness	Hole	Thread	Price per In. Each
667	1 1/4"	3/16"	3/8"	24 NF	\$3.25

Collet Chuck for Woodruff Cutters



Prices of Chuck for Woodruff Cutters (without cutter)

Size Lathe:	9" W.S.*	9"	11"	13"	15"	16"	18"
Cat. No. . . .	101-W	101-A	102-A	103-A	104-A	105-A	106-A
Morse Taper	2	2	2	3	3	3	3
Price	\$3.50	\$3.50	\$3.50	\$4.00	\$4.00	\$4.00	\$4.00

*9-inch Workshop Lathe.

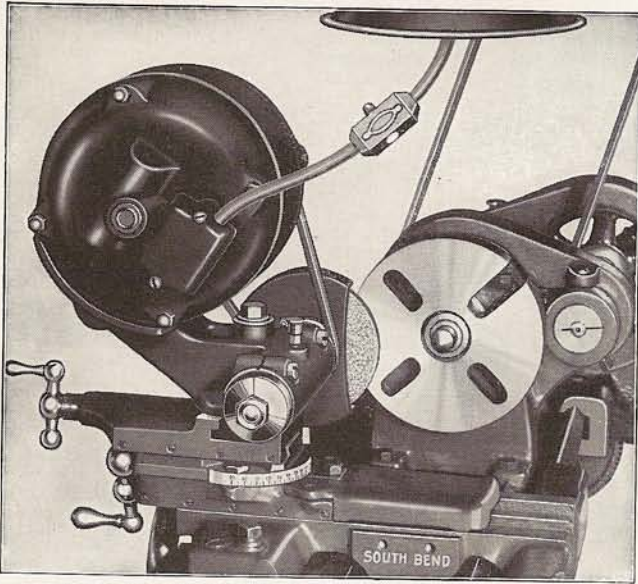
Screw Arbors for Angular Cutters



When ordering arbor only give catalog number and style number of cutter the arbor is to be used with.
No. 829-A. Arbor for Workshop and 9" lathes. . . . \$2.00
No. 829-B. Arbor for 11" lathes. 2.00
No. 829-C. Arbor for 13", 15", 16", 18" lathes. . . . 2.00

No. 75 Electric Grinder for South Bend Lathes

For Grinding Hardened or Tempered Tools and Parts



No. 75 Electric Grinder Mounted on Compound Rest of Lathe

The No. 75 Electric Grinder makes a valuable addition to the screw cutting lathe in any shop that is not equipped with a modern tool room cutter and reamer grinder. It is practical for grinding straight, taper or spiral reamers, lathe centers, milling cutters, taps, dies, valves, pistons, bushings, hardened and tempered tools, parts, etc., but is not intended for grinding lathe tool bits, drills, etc.

Operates from Electric Light Socket

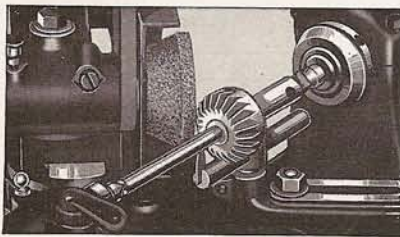
Price of grinder includes 1-phase, 60-cycle, 110-volt, A.C. motor. If 3-phase motor or D.C. motor is wanted add \$13.00 to prices shown. When ordering specify voltage and current required.

Equipment for Grinder

Prices include 1/4 H.P. motor, V-belt, belt guard, one Alundum grinding wheel (Grain 46-N, Grade 5-B), extension cord, switch, and clamp for mounting to compound rest.

Net Factory Prices of No. 75 Electric Grinder

Size of Lathe	Cat. No.	Size Grind. Wheel	Diam. Will Grind	Motor Speed R.P.M.	Spindle Speed R.P.M.	Code Word	Price, Each
Workshop	75-W	4"x1/2"	4 3/4 in.	1725	4000	Gyfax	\$40.00
9 in.	75-B	4"x1/2"	5 1/2 in.	1725	4000	Gyfel	50.00
11 in.	75-C	4"x1/2"	7 1/2 in.	1725	4000	Gyfib	55.00
13 in.	75-D	4"x1/2"	9 in.	1725	4000	Gyfil	55.00
15 in.	75-F	4"x1/2"	10 1/2 in.	1725	4000	Gyfol	55.00
16 in.	75-G	4"x1/2"	11 in.	1725	4000	Gyfro	60.00
18 in.	75-H	4"x1/2"	12 1/2 in.	1725	4000	Gyfsp	60.00



Sharpening a Valve Seat Reamer

Sharpening a Valve Seat Reamer

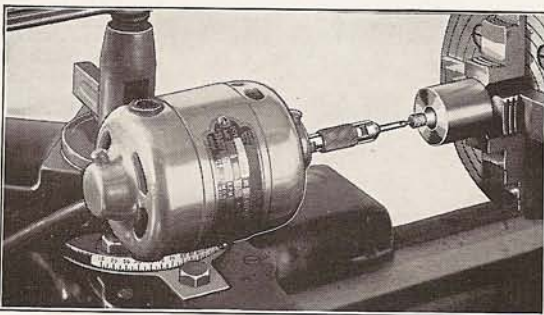
Valve seat reamers of any angle, valve seat counterboring cutters, valve guide reamers, straight and taper reamers and adjustable reamers can be sharpened quickly and accurately in the lathe using the No. 75 Electric Grinder priced above.



Sharpening a Straight Reamer

Sharpening a Straight Reamer

The illustration shows lathe and grinder set up for sharpening a straight reamer, using the No. 75 Electric Grinder, adjustable holding fixture, spring cutter stop, and regular grinding wheel. A cup grinding wheel may also be used for this work.



Light Duty Electric Grinder Fitted to Tool Post of Lathe

Light Duty Electric Grinder

This light weight grinder for the lathe does internal and external grinding to the finest limits. It is attached to tool post of lathe by means of a special shank which is adjustable for different centers. Motor is of the universal type. Maximum speed 20,000 R.P.M. Full load speed 10,000 R.P.M. A specially designed collet chuck attached direct to armature shaft takes round shank 3/8" to 5/8" in size. Chuck will accommodate drills from No. 42 to No. 22 inclusive. **Equipment:** 6 mounted pencil wheels, for finish work: No. 60 Grit, No. 0 Grade, 1x1/8"; 3/4x1/8"; 1/2x1/4"; 1/4x1/4"; 1/8x1/4"; 1/8x1/4". Shank 1 7/8x1/8" diameter; two wrenches, 8-ft. rubber covered cord, molded rubber plug and switch. Net weight 2 lbs.

No. 166, Light Duty Electric Grinder for Workshop, 9-inch and 11-inch Lathes. Code word "Obpol." Price.....\$24.00

Adjustable Holding Fixture for Diamond Dresser



Truing a Grinding Wheel with a Dresser Mounted in Holding Fixture

The No. 19 Adjustable Holding Fixture, as illustrated at left, will hold the industrial diamond dresser for truing grinding wheels and will also hold the reamer and cutter stop which is supplied with the fixture.

The fixture clamps directly to the bed of the lathe so that the carriage has free movement both when truing grinding wheels and sharpening reamers and cutters.

Net Factory Prices of Adjustable Holding Fixture

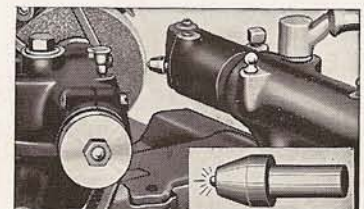
Size of Lathe.	Workshop	9 in.	11 in.	13 in.	15 in.	16 in.	18 in.
Catalog No....	19-W	19	19-B	19-C	19-D	19-E	19-F
Code Word....	Abnog	Quenc	Quarz	Quest	Quick	Quirt	Quota
Price, Each...	\$8.00	\$8.00	\$9.00	\$10.00	\$12.00	\$13.00	\$15.00

Industrial Diamond Dresser



Industrial Diamond Dresser

No. 18, Industrial Diamond, special metal mount, 1/2 carat. Code word "Quaft." Price each.....\$6.00



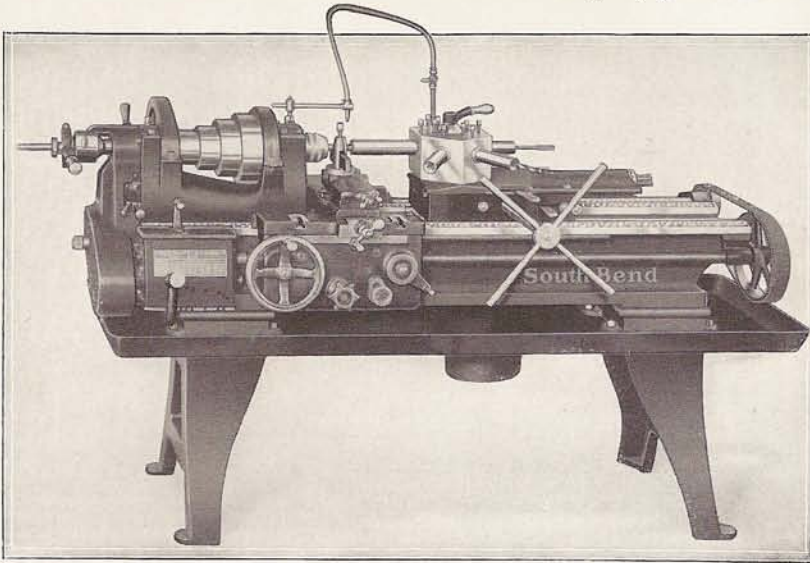
Diamond Holding Fixture

Clamps to tail-spindle. Holds No. 406 diamond dresser for truing grinders used for valve or general work.

Size Lathe	Cat. No.	Code Word	Price Each	Size Lathe	Cat. No.	Code Word	Price Each
W.S.	*91-W	Klrbat	\$2.00	13"	91-D	Klirav	\$2.75
9"	91-B	Klripet	2.25	15"	91-E	Klirix	3.25
11"	91-C	Klirpte	2.25	16, 18"	91-F	Klirroz	3.50

No. 406, Diamond Dresser, Code "Kirwe" \$6.00 *9-inch Workshop Lathe.

The South Bend Lathe Equipped for Manufacturing Work



16-inch South Bend Lathe Equipped with Special Attachments for Production Work

The South Bend Back-Geared, Screw Cutting Lathe can be fitted with practical attachments and used for manufacturing operations. A lathe thus equipped serves the purpose of a special machine and when the attachments are removed, the lathe can be used for regular work. Many modern industrial plants are using lathes in groups on production work in manufacturing.

The Back-Geared, Screw Cutting Lathe is a universal tool which can be equipped at a small expense with a set of tools for manufacturing operations and machining duplicate parts. Any size South Bend Lathe, from 9-inch to 18-inch swing inclusive, may be equipped with attachments for production work. For prices of attachments see pages 50 to 63.

If you will specify the product you wish to manufacture, our Engineering Department will be glad to assist you in selecting the proper class of attachments for doing the work and give you any other information you may desire. Our thirty years of experience in this work is at your service.

Oil Pans and Chip Pans for Lathes

Pressed steel oil pans and chip pans are of heavy one-piece construction. Oil pans are used on regular floor leg lathes. See illustration above. Chip pans are used on Underneath Belt Motor Driven Lathes. See page 5. Pans should be fitted to lathe at factory. Prices are for pans and special legs instead of regular legs.

Prices of Oil Pans for Straight and Gap Bed Floor Leg Lathes

Size of Lathe	Cat. No.	LENGTH OF BED									
		3'	3½'	4'	4½'	5'	5½'	6'	7'	8'	10'
9" W.S.*	274	\$19	\$20	\$21	\$22	...	...	...	...	...	...
9 in.	282	20	21	22	23	...	...	...	...	...	...
11 in.	284	25	26	27	...	\$29	\$30	...	...	...	...
13 in.	286	...	...	35	...	38	...	\$41	\$44	\$47	...
15 in.	288	...	...	...	...	45	...	49	53	57	\$65
16 in.	292	...	...	...	...	...	...	50	55	60	70
18 in.	294	...	...	...	...	...	...	55	60	65	75
Code		Oasis	Oback	Odlum	Often	Ohern	Oekon	Okres	Olean	Omens	Oaleh

Prices of Chip Pans for Underneath Belt Motor Driven Lathes

9 in.	134	\$14	\$15	\$16	\$17	...	...	...	...	...	...
11 in.	135	17	18	19	...	\$21	\$22	...	...	...	...
13 in.	136	...	...	24	...	27	...	\$30	\$33	\$36	...
15 in.	137	...	...	...	...	30	...	34	38	42	\$50
16 in.	138	...	...	...	...	...	...	35	40	45	55
18 in.	139	...	...	...	...	...	...	37	42	47	57
Code		Bonny	Bonok	Bonul	Bopah	Bonga	Bopik	Boplo	Bopny	Bopol	Bopum

*9-inch "Workshop" Lathe.

Oil Pump, Reservoir and Piping

For Countershaft Drive and Silent Motor Drive Lathes

Prices below include geared oil pump, reservoir and piping. A leather belt for driving pump is supplied with motor drive lathes. The flexible piping permits nozzle to travel with lathe carriage and transmit the coolant to cutting tool. Reservoir is made of cast iron, has a screened top and a plug in bottom for drainage. See prices of oil pan at left.

Net Factory Prices

Size of Lathe..	"Workshop"	9 in.	11 in.	13 in.	15 in.	16 in.	18 in.
Catalog No. ...	1060	1051	1052	1053	1054	1055	1056
Code Word ...	Balpi	Habit	Hedge	Heron	Hopes	Huber	Hymen
Price, Complete	\$35.00	\$35.00	\$35.00	\$40.00	\$46.00	\$45.00	\$45.00

Oil Pump, Reservoir and Piping

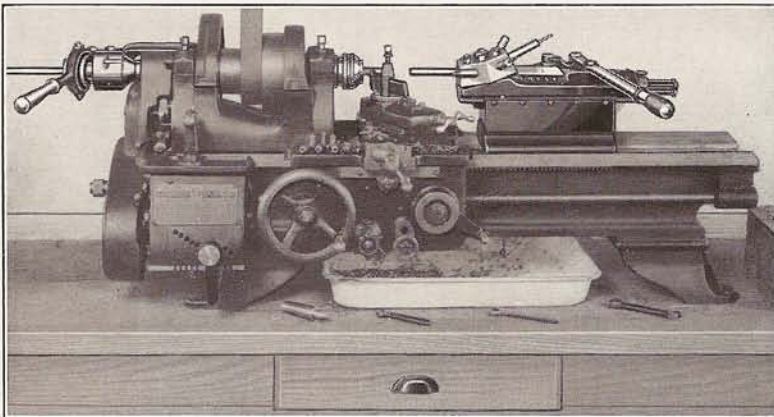
For Underneath Belt Motor Drive Lathes

The prices shown below include geared oil pump, reservoir, back splash pan and special fittings around headstock and gear box together with special flexible drive shaft for pump. Prices do not include chip pan—see tabulation at left.

Net Factory Prices

Size of Lathe..	9" W.S.	9 in.	11 in.	13 in.	15 in.	16 in.	18 in.
Catalog No. ...	Not	1726	1727	1728	1729	1730	1731
Code Word ...	Supplied	Pazel	Pebit	Perox	Pear	Pobat	Porax
Price	.....	\$90.00	\$90.00	\$100.00	\$100.00	\$100.00	\$125.00

South Bend Bench Lathes Equipped for Manufacturing



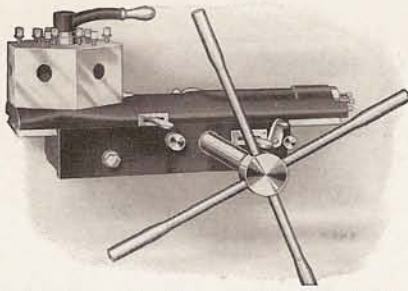
9-inch South Bend Bench Lathe Equipped with a Hand Lever Draw-in Collet Chuck Attachment and Hand Lever Bed Turret for Quantity Production of Small Accurate Parts.

The ready adaptability of the South Bend Bench Lathe for use in manufacturing plants of all kinds is recognized by leading engineers and production superintendents. It is a common sight in many of the large plants to find one mechanic operating two or more South Bend Bench Lathes on production work.

Many manufacturers have installed the South Bend Bench Lathe in batteries of 2 to 50 in their plants where a variety of small accurate parts are produced in large quantities. The wide application of the lathe for production on various classes of work and its ease and simplicity of operation make it the ideal tool for the modern manufacturing plant.

For low first cost and economy of operation and upkeep, little or no equipment can compare with the small Back-Geared, Screw Cutting Lathe for certain manufacturing operations.

Attachments and Accessories for South Bend Lathes



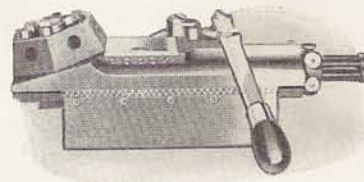
Semi-Automatic Turnstile Bed Turret

The Turnstile Bed Turret revolves automatically one-sixth of a turn on the return stroke of each hand revolution of the turnstile. Adjustable stops for each of the six faces of the turret regulate the depth of each tool operation. The feed of the turret slide is controlled by turning the turnstile by hand. Power feed is extra. Prices on request.

Prices of Turnstile Bed Turret (Hand Feed)

Size of Lathe	Cat. No.	Hole Size Finished	Hole, Center to Slide Top	Max. Feed	Code Word	Price Not Fitted	Price Fitted*
15 in.	415	1 in.	2 1/4 in.	9 in.	Fight	\$275.00	\$300.00
16 in.	416	1 in.	2 1/4 in.	9 in.	Flown	275.00	300.00
18 in.	418	1 1/4 in.	2 3/4 in.	12 in.	Fort	330.00	365.00

*Price includes fitting turret to lathe bed only. Finish boring of the six turret holes is \$6.00 extra.



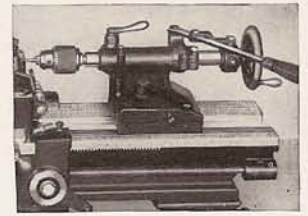
Hand Lever Bed Turret

The Semi-Automatic Hand Lever Bed Turret automatically indexes one-sixth of a turn by the backward movement of the hand lever. Adjustable stops are provided for each of the six faces of the turret for regulating the depth of each tool. The feed of the turret slide is controlled by the hand lever. Power feed cannot be supplied. Price of turret includes special turret base.

Prices of Semi-Automatic Bed Turret

Size of Lathe	Cat. No.	Std. Turret Hole	Length Turret Base	Max. Turret Feed	Code Word	Price Not Fitted	Price Fitted*
"Workshop"	.....	.....	.....	.....	.....	.....	.....
9 in.	1509	5/8 in.	9 1/2 in.	1/4 in.	Jaber	\$217.50	\$225.00
11 in.	1511	5/8 in.	9 1/2 in.	1/4 in.	Jenks	217.50	230.00
13 in.	1513	5/8 in.	9 1/2 in.	1/4 in.	Jilts	217.50	235.00

*Price includes fitting turret to lathe bed only. Finish boring of the six turret holes is \$6.00 extra. Finish boring turret holes can be done either in our factory or in your own shop.



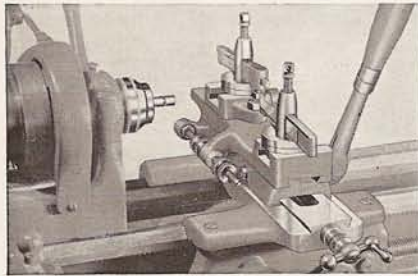
Hand Lever Tailstock

This is a practical lathe attachment for quantity centering and drilling operations in manufacturing production work. Either the hand lever or the hand wheel may be used. Prices are for the hand lever tailstock in lieu of the regular tailstock. Attachment must be fitted to lathe at factory.

Prices Hand Lever Tailstock

Size Lathe	9" W.S.	9 in.	11 in.	13 in.
Cat. No.	519	900	901	902
Code Word ..	Jibet	Jiden	Jilat	Jebot
Price	\$30.00	\$35.00	\$37.00	\$40.00

Double Tool Slides—Screw and Hand Lever Types

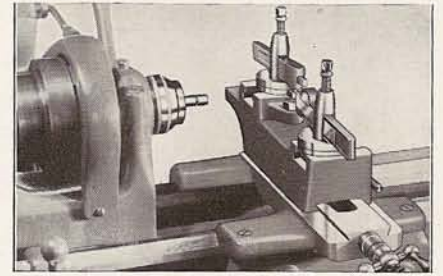


Hand Lever Double Tool Slide

The Screw Feed Tool Slide is controlled by the lathe cross feed screw, the Hand Lever Tool Slide by a hand lever. Prices include front and back tool rest, adjustable stop, and one tool post—the other tool post is furnished with lathe.

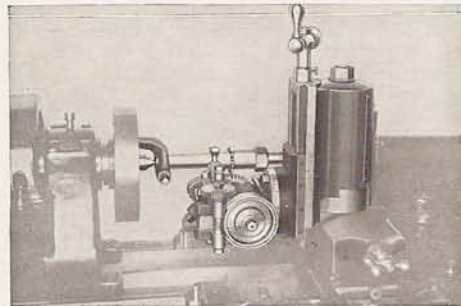
Prices of Double Tool Slides

Size of Lathe	Screw Feed Type			Hand Lever Type		
	Cat. No.	Code Word	Price	Cat. No.	Code Word	Price
9" W.S.	958	Bemor	\$35.00	738	Abotz	\$60.00
9 in.	981	Dakin	35.00	744	Daple	60.00
11 in.	982	Denis	40.00	745	Debit	65.00
13 in.	983	Diyot	45.00	746	Died	75.00
15 in.	984	Dobin	50.00	747	Doles	80.00
16 in.	985	Drips	55.00	748	Drain	85.00
18 in.	986	Ducts	60.00	749	Dufer	90.00



Screw Feed Double Tool Slide

Gear Cutting Attachment for South Bend Lathes



Attachment Mounted on Compound Rest

The Garrett Millerette Attachment for the lathe is equipped with a milling machine dividing head which enables it to be used for cutting gears of all kinds—spur, bevel, and angle. It will do graduating and milling, external key seating of all

kinds, cutting at angle, splining, slotting and milling of small light work.

Attachment is mounted on cross slide of lathe. Holds work in any position. Work can be spaced by turning it through any desired part of a revolution with the dividing head changeable gears.

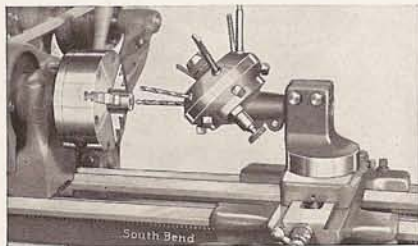
An index plate on attachment shows the proper gears to use for division from 2 to 360 and the number of turns required of the index lever.

Equipment Includes: 2 wrenches, 1 cutter arbor, 1 work arbor with draw bolt, 1 straight clamp, 1 concave clamp, 1 dog center, 1 outboard support and 1 set of 24 change gears.

Net Factory Prices of Gear Cutting Attachment

Size of Lathe	Cat. No.	Travel of Down Slide	Shipping Weight	Code Word	Price Fitted*
"Workshop"	270W	6 1/2 in.	45 lbs.	Hapno	\$165.00
9 in.	260	6 1/2 in.	45 lbs.	Hilot	165.00
11 in.	261	6 1/2 in.	45 lbs.	Heles	165.00
13 in.	262	6 1/2 in.	45 lbs.	Hamin	180.00
15 in.	263	7 1/2 in.	60 lbs.	Hajim	180.00
16 in.	264	7 1/2 in.	60 lbs.	Helup	180.00
18 in.	265	9 in.	100 lbs.	Hineq	200.00

*Prices include fitting of attachment to lathe.

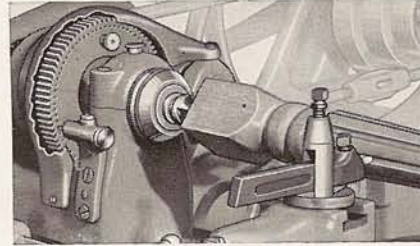


Six Tool Turret

The six tool turret mounted on saddle above indexes by hand only. Six tools shown not included in price. Prices for turret less bracket, not fitted...\$39.00

Turret and Bracket Only

Size of Lathe	Cat. No.	Price
9" W.S.	1566	\$42.00
9"	1567	43.00
11"	1568	44.00
13"	1569	45.00
16"	1570	45.00

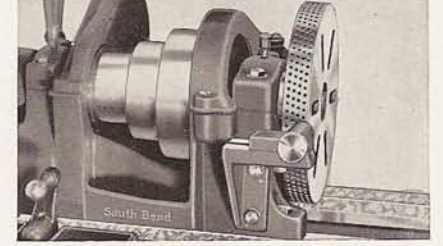


Dividing Gear (72 Holes)

The dividing gear with 72 holes is an efficient and economical attachment for locating and indexing work. It must be fitted to the lathe at factory.

Prices Fitted at Factory

Size of Lathe	Cat. No.	Price
W.S.	1335	\$15.00
9"	1337	16.00
11"	1338	17.00
13"	1339	18.00
16"	1345	20.00



Indexing Face Plate

360 holes in 4 rows (90 in each row) permit indexing throughout entire range of 360°. Fewer holes may be drilled in 1, 2, or 3 rows. Prices on request.

Prices of Indexing Plate

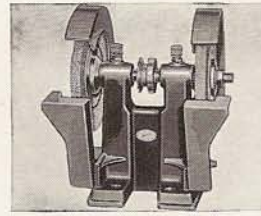
Type of Lathe	Cat. No.	360 Holes
9" W.S.	99-W	\$35.00
9"	1754	35.00
11"	1755	40.00
13"	1756	45.00
16"	1757	50.00

Tools, Attachments and Accessories for South Bend Lathes



Electric Tool Grinder

Electric Tool Grinder
A high grade bench grinder for grinding tool bits, drills, etc. Has 1/4 H.P. 1-ph., 60 cy., 110-V., A.C. ball bearing motor, 3450 R.P.M.; 2 abrasive wheels, 6"x1/2" x 1/2", 60 and 36 grit; 2 wheel guards; 2 rests; switch; 10-ft. cord and plug.
No. 655. Code, "Jadax." Shipping wt. 54 lbs. \$16.50



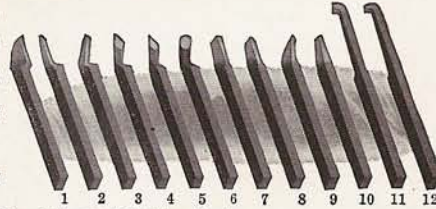
V-Belt Drive Tool Grinder

Tool Grinder (V-Belt Drive)
A practical bench grinder for the mechanic who wishes to furnish his own driving motor and equipment. Grinds tool bits, drills, etc. Price includes 2 abrasive wheels, 6"x1/2"x1/2", 60 and 36 grit; 2 guards and rests.
Cat. No. 710-B. "Jerub." Shipping wt. 13 lbs. \$6.00

Hand Forged Lathe Tools

These tools are properly forged to shape, tempered and ground and are ready for use. If ordering less than one complete set, be sure to state both Shape No. and Catalog No.

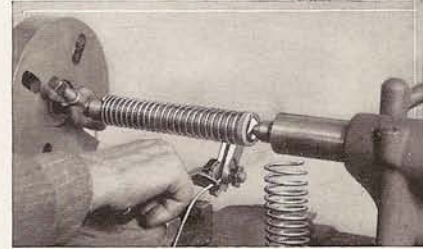
- | | |
|------------------------|---------------------------|
| 1. L. H. Side Tool | 7. Cutting-Off Tool |
| 2. R. H. Side Tool | 8. Threading Tool |
| 3. R. H. Bent Tool | 9. Bent Threading Tool |
| 4. R. H. Diamond Point | 10. Roughing Tool |
| 5. L. H. Diamond Point | 11. Boring Tool |
| 6. Round Nose Tool | 12. Inside Threading Tool |



Net Factory Prices of Hand Forged Lathe Tools

Size of Lathe, Inches	Size of Shank, Inches	Carbon Steel				High Speed Steel			
		Single Tool		Set of 12		Single Tool		Set of 12	
		Cat. No.	Price	Cat. No.	Price	Cat. No.	Price	Cat. No.	Price
9" W.S.	5/8 x 5/8	437-CW	\$0.50	269-CW	\$ 5.50	437-HSV	\$2.00	269-HSV	\$22.00
9	3/8 x 3/8	438-C	.50	270-C	5.50	438-HS	2.00	270-HS	22.00
11	3/8 x 3/8	439-C	.60	271-C	6.60	439-HS	2.80	271-HS	31.00
13	1/2 x 1	440-C	1.00	272-C	11.00	440-HS	4.20	272-HS	47.00
15	5/8 x 1	443-C	1.30	273-C	14.30	443-HS	5.85	273-HS	65.00
16, 18	3/4 x 1 1/2	441-C	1.50	274-C	16.50	441-HS	7.20	274-HS	80.00

Spring Winder for Lathe

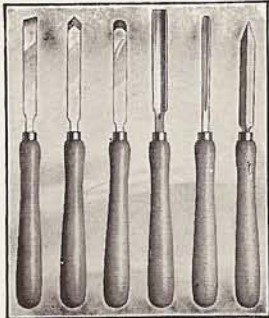


Winding a Steel Spring in the Lathe.

Attachment makes Springs from wire 0" to 1/8" in diam. Fits all sizes and types of South Bend Lathes.

Cat. No. 367. "Balun." Ship. Wt. 2 lbs. \$4.00

Wood Working Chisels



(A) (B) (C) (D) (E) (F)

Designed for use in the home work shop, etc. Made of good quality cutlery steel, carefully sharpened. The set at left consists of six tools as follows:

- (A) 1/2" Skew
- (B) 1/2" Diamond Nose
- (C) 1/2" Round Nose
- (D) 1/2" Gouge
- (E) 1/4" Gouge
- (F) 1/2" Parting Tool

No. 278. Set of six chisels. Code Word, "Afer." Price. \$4.20
Single Chisels, each.75

When ordering single chisels be sure you specify the shape of chisel wanted. Use convenient letters assigned in the illustration.

Hand Rests for Wood Work

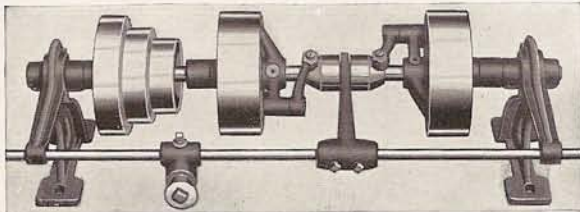


Hand Rest for Wood Turning (With 2 "T" Rests and Clamp)

Size Lathe	Cat. No.	Price	Size Lathe	Cat. No.	Price
9" W.S.*	\$96-W	\$4.00†	15 in.	1074	\$11.00
9 in.	1071	8.00	16 in.	1075	11.00
11 in.	1072	8.00	18 in.	1076	11.00
13 in.	1073	9.00			

*Compound Rest. Type, complete with base and three "T" Rests.

The Hand Rest outfit shown and priced at the left may be easily and quickly fitted to the lathe for wood turning and turning composition and materials of all kinds. We carry a complete line of wood working tools, accessories and equipment for the South Bend Lathe. Write for information and prices.



Double Friction Countershaft for 9-inch "Workshop" Lathes.

Double Friction Countershaft

For 9-inch "Workshop" Lathes

The Double Friction Countershaft shown at left is practical and powerful. It is recommended for "Workshop" lathes operating from a lineshaft. May be used with any "Workshop" bench or floor leg lathe. Two friction clutch pulleys, one driven by direct belt from the line shaft and one driven by crossed belt from the line shaft, permit lathe to be operated both forward and in reverse.

Cat. No. 289. Code, "Afget." Shipping Weight, 60 lbs. . \$12.00

For prices of Double Friction Countershaft for other South Bend Lathes see page on which lathe is discussed.



Precision Level

A sensitive level 12" long with accurately ground and graduated vial. Recommended for leveling South Bend Lathes.

Shipping Weight 5 lbs.
No. 977. Code, "Netaf". \$7.50

Oil and Oiler

A high quality machine oil especially selected for oiling South Bend Lathes. Oiler is of extra heavy steel.

No. 935. 1 Qt. Oil and Oiler, wt. 1 1/2 lbs.
"Oswah" \$0.50



Oil and Oiler.

Center Gauge

The popular low priced center gauge shown at the right greatly simplifies the setting of the cutter bit for screw thread cutting. It is also used for testing lathe centers.



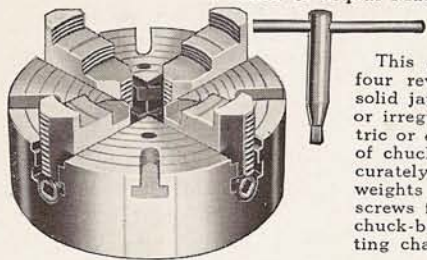
Tempered Center Gauge.

No. 650. Code, "Xutje." Shipping Wt. 3 oz. \$0.50

*The abbreviation W. S. used above means "Workshop" Lathe.

Lathe Chucks for Manufacturing and General Machine Work

Four-Jaw Independent Lathe Chuck* Skinner or Equal Make

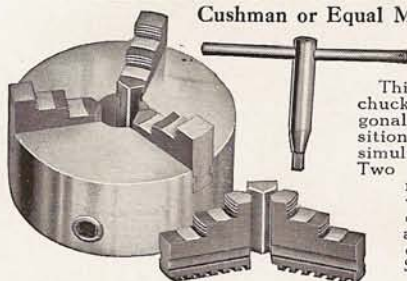


**Heavy
Duty**

This precision chuck has four reversible independent solid jaws for chucking round or irregular work in a concentric or eccentric position. Face of chuck is ground and is accurately graduated. Prices and weights include wrench and screws for chuck-back but not chuck-back or fitting. See fitting charges below.

Cat. No.	Capacity	Hole Through Chuck	Width of Jaws	Net Wt. Lbs.	Ship. Wt. Lbs.	Code Word	Price
4404	4 1/2"	1"	3/4"	9 1/8	9 1/4	Bawle	\$27.00
4406	6"	1 1/2"	1 1/8"	15 1/4	18 3/4	Beach	32.00
4408	8"	1 3/4"	1 3/8"	31 1/2	37 1/2	Buzir	37.00
4409	9"	1 3/4"	1 3/8"	44	44	Baito	40.00
4410	10"	2"	1 3/8"	44 1/2	51 1/2	Balda	47.00
4412	12"	2 3/4"	1 7/8"	73 1/8	83 1/2	Baled	56.00

Three-Jaw Universal Lathe Chuck* Cushman or Equal Make

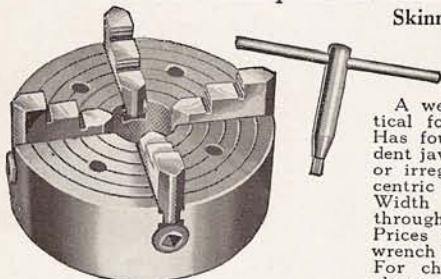


**Heavy
Duty**

This self-centering precision chuck holds round and hexagonal work in a concentric position. The jaws are moved simultaneously by a scroll. Two sets of jaws are furnished: One set grips work on the outside, the other holds work internally. Prices and weights include wrench and screws. See fitting charges below.

Cat. No.	Capacity	Hole Through Chuck	Width of Jaws	Net Wt. Lbs.	Ship. Wt. Lbs.	Code Word	Price
3403	3"	5/8"	3/4"	3 1/4	3 1/2	Panel	\$29.00
3404	4"	1"	7/8"	7 3/4	8	Paras	33.00
3405	5"	1 1/4"	1 1/8"	11 1/4	12	Parot	36.00
3406	6"	1 3/8"	1 1/4"	15 1/2	18	Pasto	41.00
3407	7 1/2"	2"	1 3/8"	29 3/4	32 1/4	Patri	48.00
3409	9"	2 1/2"	1 3/8"	55 1/2	61 1/2	Pedal	57.00
3410	10 1/2"	3"	1 3/8"	69 1/4	75 3/4	Perag	64.00

Four-Jaw Independent Lathe Chuck* Skinner or Equal Make

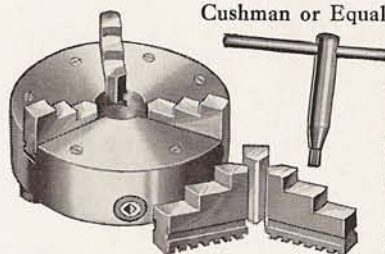


**Medium
Duty**

A well built chuck, practical for light machining. Has four reversible independent jaws for chucking round or irregular work in a concentric or eccentric position. Width of jaws 3/8", hole through chuck 1 1/8" in diam. Prices and weights include wrench and screws for fitting. For chuck-back and fitting charges see prices below.

Cat. No. 4806. Chuck, 6-inch capacity, "Rapno".....\$18.00
(Net weight 11 lbs., shipping weight 11 1/2 lbs.)

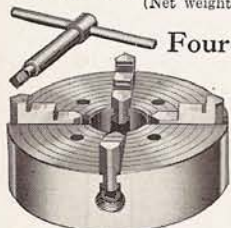
Three-Jaw Universal Lathe Chuck* Cushman or Equal Make



Medium Duty

An excellent, well built, self-centering chuck practical for light machining. Chuck has two sets of jaws; one set for gripping work on the outside, the other set for holding work internally. Width of jaws 1 1/8", hole through chuck 1 1/8" in diam. Prices and weights include wrench and screws for fitting. See fitting charges below.

Cat. No. 3805. Chuck, 5-inch capacity, "Rasep".....\$20.00
(Net weight 6 1/2 lbs., shipping weight 7 lbs.)



Four-Jaw Independent Lathe Chuck*

Light Duty

This low priced, light duty chuck has four reversible independent jaws. Width of jaws 5/8", hole through chuck 1 1/8" in diam. This chuck is usually selected by those who have very little metal chucking to do. Price and weight include wrench and screws for fitting chuck-back. See fitting charges below.

Cat. No. 4906. Chuck, 6-inch capacity, "Abhod".....\$10.00
(Net weight 8 3/4 lbs., shipping weight 9 lbs.)

Three-Jaw Universal Lathe Chuck*

Light Duty

This is a low priced light duty chuck. Has two sets of jaws: One for outside chucking, the other for inside chucking. Width of jaws 1 1/8", hole through chuck 1 1/8" in diam. Practical for shops having very little metal chucking to do. Price and weight include wrench and screws. See chuck-back and fitting charges below.

Cat. No. 3905. Chuck, 5-inch capacity, "Abhix".....\$13.00
(Net weight 6 1/2 lbs., shipping weight 6 1/2 lbs.)

The Practical Sizes of Chucks for All Sizes and Types of South Bend Lathes

To assist those who wish to select the correct sizes of chucks for South Bend Lathes we list in the table at the right the sizes of chucks most practical for general work with each size lathe. We also show the maximum sizes which are the largest possible to use on each lathe.

Size of Lathe	4-Jaw Independent Chuck		3-Jaw Universal Chuck		3-Jaw Drill Chuck	
	Recommended	Maximum	Recommended	Maximum	Recommended	Maximum
"Workshop".	6 in. Med. Duty	6 in.	5 in. Med. Duty	5 in.	1/2 in.	5/8 in.
9-in. lathe..	6 in. Med. Duty	6 in.	5 in. Med. Duty	5 in.	1/2 in.	5/8 in.
11-in. lathe..	6 in. Hvy. Duty	8 in.	5 in. Hvy. Duty	7 1/2 in.	1/2 in.	5/8 in.
13-in. lathe..	8 in. Hvy. Duty	10 in.	6 in. Hvy. Duty	9 in.	3/4 in.	3/4 in.
15-in. lathe..	9 in. Hvy. Duty	12 in.	7 1/2 in. Hvy. Duty	10 1/2 in.	3/4 in.	3/4 in.
16, 16-24, 36"	10 in. Hvy. Duty	12 in.	9 in. Hvy. Duty	10 1/2 in.	1 in.	1 in.
18-in. lathe..	12 in. Hvy. Duty	14 in.	10 1/2 in. Hvy. Duty	12 in.	1 in.	1 in.

*Prices for Fitting Chucks to Lathes

In order to mount a chuck on the lathe, the chuck must be fitted with a chuck-back. Figures A, B and C at the right show three steps in fitting a chuck to the lathe. The chuck-back must fit the spindle nose accurately in order to have the chuck run true when fitted to the lathe. This is a difficult job for the average mechanic because special tool equipment is required for doing the work. If you purchase a lathe and include the Lathe Chuck with the order, we recommend that the chuck be fitted to the lathe in our factory.

When ordering a chuck-back without chuck specify serial number of lathe, also give minimum diameter of chuck-back required.

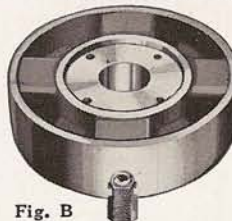


Fig. B
Recess Machined in Chuck for Chuck-Back



Fig. A
Semi-Machined Chuck-Back Threaded to Spindle

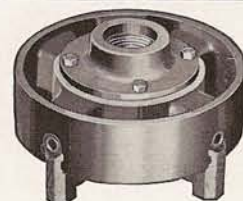


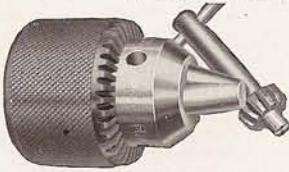
Fig. C
Chuck with Chuck-Back Attached, ready for use

Sizes of South Bend Lathes.....	9 in. "Workshop"	9 in.	11 in.	13 in.	15 in.	16 in.	18 in.	16-24 in.	36 in.
Prices of Semi-machined Chuck-Back.....	\$2.50	\$4.00	\$4.25	\$4.50	\$4.75	\$5.00	\$5.50	\$5.00	\$5.00
Code Word for Semi-machined Chuck-Back.....	Acmin	Conat	Cavor	Cekam	Cimer	Clame	Cuban	Clame	Clame
Fitting Chuck-Back to Chuck and to Lathe.....	\$1.50	\$2.50	\$3.00	\$3.50	\$3.75	\$4.00	\$4.50	\$4.00	\$4.00
Total for Chuck-Back fitted to Chuck and to Lathe....	\$4.00	\$6.50	\$7.25	\$8.00	\$8.50	\$9.00	\$10.00	\$9.00	\$9.00
Code Word for Chuck-Back fitted to Chuck and to Lathe.	Acors	Efago	Eodar	Ender	Eldon	Eliza	Elsie	Eliza	Eliza
Catalog No. for Chuck-Back fitted to Chuck and Lathe....	258-W	295-A	295-B	295-C	295-D	295-E	295-F	295-E	295-E

Drill Chucks for Manufacturing and General Machine Work

For All Sizes and Types of South Bend Lathes

Jacobs Three-Jaw Drill Chuck

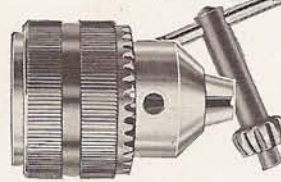


This Chuck is practical for general drilling work in the lathe. The jaws are of tempered steel and are operated by a heavy screw. The geared sleeve and key assure a powerful grip. Price and weight include pinion key, but not arbors, which are listed below.

Prices of Three-Jaw Drill Chuck

Cat. No.	Capacity	Diam.	Length	Net Wt.	Ship. Wt.	Code	Price
1200	0 to 3/8 in.	1 3/4 in.	2 1/4 in.	1 1/2 lbs.	1 1/2 lbs.	Cleve	\$ 4.25
1201	0 to 1/2 in.	2 1/8 in.	2 3/8 in.	1 3/4 lbs.	2 3/8 lbs.	Wauko	6.75
1202	3/8 to 3/4 in.	2 3/4 in.	3 1/2 in.	3 1/2 lbs.	3 1/2 lbs.	Faloo	9.00
1203	3/4 to 1 in.	3 1/2 in.	5 1/2 in.	7 1/2 lbs.	8 lbs.	Frank	12.00

Almond Three-Jaw Drill Chuck



This chuck is practical, powerful, well-balanced and accurate for all drilling work in the lathe. The jaws are of tempered steel and are operated by a heavy screw. Price and weight include pinion key, but not arbors which are listed below.

Prices of Three-Jaw Drill Chuck

Cat. No.	Capacity	Diam.	Length	Net Wt.	Ship. Wt.	Code	Price
219	0 to 3/8 in.	1 7/8 in.	2 1/4 in.	1 3/8 lbs.	1 7/8 lbs.	Acpen	\$ 3.85
220	0 to 1/2 in.	2 1/4 in.	2 5/8 in.	1 3/4 lbs.	2 1/4 lbs.	Acpien	5.25
327	1/2 to 3/4 in.	2 1/2 in.	3 3/8 in.	3 1/4 lbs.	3 3/4 lbs.	Rulid	7.50
328	3/4 to 1 in.	3 in.	4 1/2 in.	5 1/2 lbs.	6 3/8 lbs.	Rulof	10.00

Jacobs Hollow Spindle Chuck

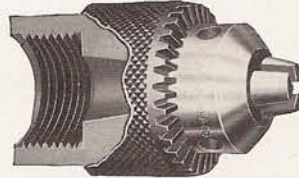


This is an ideal chuck for holding small rods and bar work for machining in the lathe. It is also practical for holding all kinds of engine valves, centered and centerless, for refacing in the lathe. Price and weight include pinion key and hollow steel arbor.

Prices of Hollow Spindle Chuck

Cat. No.	Size Lathe	Capacity	Net Wt.	Ship. Wt.	Code	Price
354-A	13", 15", 16", 18"	1/8" to 5/8"	2 1/2 lbs.	3 1/4 lbs.	Tavif	\$10.50
354-B	13", 15", 16", 18"	3/8" to 3/4"	4 1/2 lbs.	5 1/2 lbs.	Taved	14.25

Headstock Spindle Chuck



Screws on spindle nose of lathe. Has hollow body for holding small rods, bars and automobile engine valves for refacing. Can also be used in tailstock of lathe, as chuck has taper hole in body which can be fitted with arbor.

Prices of Headstock Spindle Chuck

Cat. No.	Size Lathe	Capacity	Net Wt.	Ship. Wt.	Code	Price
907-W	"Workshop"	1/8" to 5/8"	3 1/2 lbs.	3 3/4 lbs.	Robal	\$ 9.00
907-A	9-in. Reg.	1/8" to 5/8"	3 1/2 lbs.	3 3/4 lbs.	Robop	9.00
925-A	9-in.	3/8" to 3/4"	3 3/4 lbs.	4 1/4 lbs.	Rodna	11.25
925-B	11-in.	3/8" to 3/4"	3 3/4 lbs.	4 1/4 lbs.	Rodpe	11.25
925-C	13-in.	1/2" to 3/4"	3 3/4 lbs.	4 1/4 lbs.	Rodro	11.25

Solid Arbors for Fitting Drill Chucks to South Bend Lathes



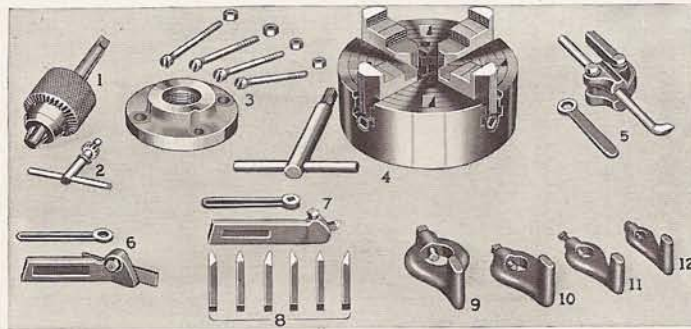
Solid Arbor for Fitting Drill Chuck to Lathe

Solid Arbors are used for fitting drill chucks to lathe. When ordering drill chuck arbor only, state size and make of drill chuck, diameter and depth of arbor socket and size of lathe on which the chuck is to be used so that we can supply the correct size arbor.

Size Lathe	Morse Taper	Cat. No.	Net Wt.	Ship. Wt.	Code	Price
"Workshop"	No. 2	709-W	1/2 lb.	3/4 lb.	Achuk	\$1.00
9-in.	No. 2	709	1/2 lb.	3/4 lb.	Abner	1.00
11-in.	No. 2	707	1/2 lb.	3/4 lb.	Abner	1.00
13-15 in.	No. 3	713	7/8 lb.	1 lb.	Adams	1.50
16-18 in.	No. 3	716	7/8 lb.	1 lb.	Agate	1.50

Chuck and Tool Assortments for General Machine Work

For Use on All Sizes and Types of South Bend Lathes



The assortments listed herewith include chucks and tools most practical for use on each size and type of South Bend Lathe for general machine work. These assortments meet the demands of the repair shop for economy and general utility. They are the result of our 30 years' experience in equipping shops of various kinds. See illustration at left.

Each size lathe requires a different Chuck and Tool Assortment as listed below. If you desire additional chucks and tools they may be added to the cost of the assortment or any tool not wanted may be omitted.

The 4-jaw Independent lathe chuck is listed in each assortment because this chuck will handle round, square and irregular shaped work. However if a 3-jaw Universal chuck is wanted instead it can be furnished at additional cost.

The Chuck and Tool Assortment is the basic equipment for general machine work and is not to be confused with the attachments and tools, shown in this catalog, which equip the lathe for production work and special machine work.

Assortment for Each Size Lathe.	Workshop	9-inch	11-inch	13-inch	15-inch	16-inch	18-inch	16-24-inch	36-inch
4-Jaw Independent Lathe Chuck.....	\$18.00*	\$18.00*	\$18.00*	\$37.00	\$40.00	\$47.00	\$56.00	\$47.00	\$47.00
Size of above Lathe Chuck.....	6 in.	6 in.	6 in.	8 in.	9 in.	10 in.	12 in.	10 in.	10 in.
Fitting Chuck to Lathe including semi-machined chuck back.....	4.00	6.50	7.25	8.00	8.50	9.00	10.00	9.00	9.00
3-Jaw Drill Chuck.....	5.25	5.25	5.25	7.50	9.00	12.00	12.00	12.00	12.00
Capacity of Drill Chuck.....	1/2 in.	1/2 in.	1/2 in.	3/4 in.	3/4 in.	1 in.	1 in.	1 in.	1 in.
Arbor Fitted to Drill Chuck.....	1.00	1.00	1.00	1.50	1.50	1.50	1.50	1.50	1.50
Straight Shank Tool Holder.....	1.25	2.05	2.15	2.45	2.45	3.00	3.00	3.00	3.00
Six Ground Cutters, for Tool Holders	1.40	1.40	1.40	2.00	2.00	2.90	2.90	2.90	2.90
Boring Tool Holder, Style D.....	3.00	3.00	3.50	4.35	4.35	5.75	5.75	5.75	5.75
Boring Tool Holder, Style B.....	.....	2.15	2.25	2.70	2.70	3.40	3.40	3.40	3.40
Cutting-Off Tool, right hand.....	1.50	2.15	2.60	3.15	3.15	3.15	4.70	3.15	3.15
Four Malleable Lathe Dogs.....	2.25	2.60	2.60	3.15	3.15	3.15	4.70	3.15	3.15
Size of Lathe Dogs.....	3/8, 1, 1 1/2"	3/8, 1, 1 1/2"	3/8, 1, 1 1/2"	3/8, 1, 1 1/2"	3/8, 1, 1 1/2"	3/8, 1, 1 1/2"	3/8, 1 1/2, 2, 2 1/2"	3/8, 1, 1 1/2"	3/8, 1, 1 1/2"
Assortments, Complete.....	\$37.65	\$41.95	\$43.40	\$68.65	\$73.65	\$87.70	\$99.25	\$87.70	\$87.70
Catalog No., Assortment Complete.....	105-W	109	111	113	115	116	118	116	116
Code Word, Assortment Complete.....	Axtro	Borle	Cehir	Dopob	Edmon	Fidex	Giplo	Fidex	Fidex

*This is a Medium Duty Chuck. All other chucks listed in the Assortments are Heavy Duty Chucks.

Lathe Dogs, Centers and Accessories for South Bend Lathes



Standard Lathe Dogs Safety Lathe Dogs
Made of heavy malleable iron and are properly designed for strength and service. The Standard Dog has square head alloy steel set screw. The Safety Dog has a headless alloy steel set screw and wrench.

Prices of Heavy Type Lathe Dogs
For 11-inch to 36-inch Swing Lathes

Capacity of Lathe Dog	Standard Lathe Dogs		Safety Lathe Dogs	
	Cat. No.	Price, Each	Cat. No.	Price, Each
3/8 in.	1-M	\$0.50	1-MH	\$0.60
1/2 in.	2-MJ	.70	2-MH	.70
3/4 in.	4-M	.80	4-MH	.80
1 in.	6-M	.90	6-MH	.90
1 1/4 in.	8-M	.90	8-MH	1.00
1 3/4 in.	10-M	1.05	10-MH	1.15
2 in.	11-M	1.20	11-MH	1.30
2 1/2 in.	12-M	1.35	12-MH	1.45
3 in.	14-M	1.60	14-MH	1.70
3 1/2 in.	15-M	1.75	15-MH	1.90
4 in.	16-M	1.95	16-MH	2.10
	17-M	2.25	17-MH	2.40

Light Pattern Lathe Dogs
For 9-inch and 11-inch Swing Lathes Only

Cap.	Cat. No.	Price Each	Cat. No.	Price Each
3/8 in.	1-MJ	\$0.45	1-JH	\$0.55
1/2 in.	2-MJ	.50	2-JH	.60
3/4 in.	4-MJ	.60	4-JH	.70
1 in.	6-MJ	.70	6-JH	.80
1 1/4 in.	8-MJ	.80	8-JH	.90
1 3/4 in.	10-MJ	.95	10-JH	1.05

Light Pattern Lathe Dogs
For 9-inch "Workshop" Lathes

Cap.	Cat. No.	Price Each	Cap.	Cat. No.	Price Each
3/8 in.	1-WJ	\$0.40	1 1/4 in.	8-WJ	\$0.60
1/2 in.	2-WJ	.45	1 1/2 in.	8-WJ	.70
3/4 in.	4-WJ	.50	1 3/4 in.	10-WJ	.80



Drop Forged Steel

Capacity	Cat. No.	Price, Each
1 3/4 in.	160	\$1.80
2 1/4 in.	161	2.40
2 3/4 in.	162	3.00
3 1/2 in.	163	4.25



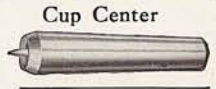
Prices of Head Spindle Lathe Center

Size Lathe	9" W.S.	9 in.	11 in.	13 in.	15 in.	16 in.	18 in.
Cat. No.	725-W	725-A	725-B	725-C	725-D	725-E	725-F
Price, each	\$2.00	\$2.00	\$2.00	\$2.75	\$2.75	\$2.75	\$2.75



Spur Center

Size of Lathe	Cat. No.	Net Price
9" W.S.	732-W	\$2.50
9 in.	732-A	2.50
11 in.	732-B	2.50
13 in.	732-C	3.25
15 in.	732-D	3.25
16 in.	732-E	3.25
18 in.	732-F	3.25



Cup Center

Size of Lathe	Cat. No.	Net Price
9" W.S.	733-W	\$2.00
9 in.	733-A	2.00
11 in.	733-B	2.00
13 in.	733-C	2.75
15 in.	733-D	2.75
16 in.	733-E	2.75
18 in.	733-F	2.75



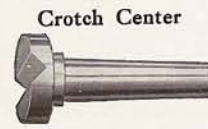
Drill Pad

Size of Lathe	Cat. No.	Net Price
9" W.S.	727-W	\$2.00
9 in.	727-A	2.00
11 in.	727-B	2.00
13 in.	727-C	2.75
15 in.	727-D	2.75
16 in.	727-E	2.75
18 in.	727-F	2.75



Screw Center

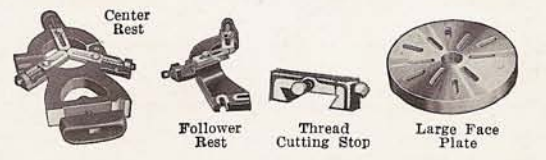
Size of Lathe	Cat. No.	Net Price
9" W.S.	731-W	\$2.50
9 in.	731-A	2.50
11 in.	731-B	2.50
13 in.	731-C	3.25
15 in.	731-D	3.25
16 in.	731-E	3.25
18 in.	731-F	3.25



Crotch Center

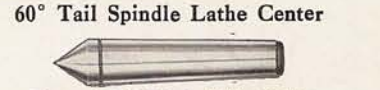
Size of Lathe	Cat. No.	Net Price
9" W.S.	728-W	\$2.50
9 in.	728-A	2.50
11 in.	728-B	2.50
13 in.	728-C	3.25
15 in.	728-D	3.25
16 in.	728-E	3.25
18 in.	728-F	3.25

Extra Equipment for 9" Jr. & 9" Workshop Lathes



Description	9" Junior Lathe		9" Workshop Lathe	
	Cat. No.	Price	Cat. No.	Price
Center Rest	125	\$8.00	125-W	\$6.00
Follower Rest	130	4.00	34-W	4.00*
Thread Cutting Stop		87	67-W	2.00
Large Diam. Face Plate	40	6.00	40-W	6.00

*Must be fitted to lathe at factory.



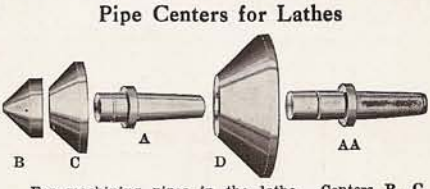
Prices of Tail Spindle Lathe Center

Size Lathe	9" W.S.	9 in.	11 in.	13 in.	15 in.	16 in.	18 in.
Cat. No.	726-W	726-A	726-B	726-C	726-D	726-E	726-F
Price, each	\$2.25	\$2.25	\$2.25	\$3.00	\$3.00	\$3.00	\$3.00



Prices of Morse Taper Sleeve

Cat. No.	Size Morse Taper	Taper of Bore	Outside Taper	Price, Each
118-A	No. 1 to 2	No. 1 Morse	No. 2 Morse	\$0.60
118-B	No. 1 to 3	No. 1 Morse	No. 3 Morse	.75
118-C	No. 1 to 4	No. 1 Morse	No. 4 Morse	.95
118-D	No. 2 to 3	No. 2 Morse	No. 3 Morse	.75
118-E	No. 2 to 4	No. 2 Morse	No. 4 Morse	.95
118-F	No. 3 to 4	No. 3 Morse	No. 4 Morse	.95



For machining pipes in the lathe. Centers B, C, and D, which fit within the head and tail spindle and AA, which fit within the head and tail spindle of the lathe. Shank A is used with Centers B and C; Shank AA with Center D. Prices of centers larger than those listed will be furnished on request.

Prices of Taper Shanks and Pipe Centers

Size of Lathe	Taper Shank A and Center B† for Pipe 1/2" to 3"		Taper Shank AA and Center D for Pipe 5" to 8"	
	Cat. No.	Price	Cat. No.	Price
9" W.S.	663-W	\$7.00	Not Made	Not Made
9" 11"	663-A	7.00	Not Made	Not Made
13" 15"	663-B	8.00	929-A	\$16.50
16" 18"	663-C	8.50	929-B	17.00

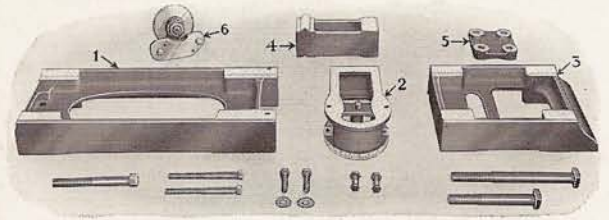
†Extra for No. 912-C Center C, for pipe 3" to 5", \$6.00.

Combination Center Drill & Countersink



For drilling center hole and countersinking 60° angle for lathe center. Made of carbon tool steel, hardened and ground. Table shows the correct size center drill for various sizes of work.

Diam. of Work	Diam. of Drill	Diam. of Body	Single Drill	
			Cat. No.	Price
3/8" to 1/2"	3/8 in.	3/8 in.	898-A	\$0.30
1/2" to 3/4"	1/2 in.	1/2 in.	898-B	.35
3/4" to 1"	3/4 in.	3/4 in.	898-C	.40
1" to 1 1/4"	1 in.	1 in.	898-D	.45



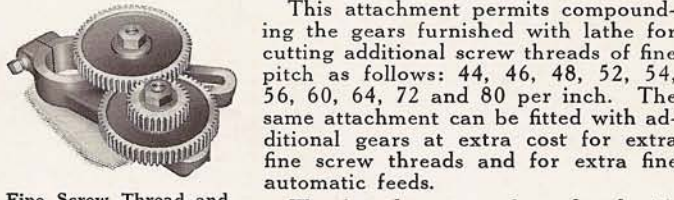
Raising Blocks for South Bend Lathes*
Raising Blocks can be supplied for straight bed and gap bed lathes in Quick Change, Standard Change Gear and Junior types to increase the swing the entire distance between centers, and permit the lathe to be used for light machining on work of large diameter.

Increase in Swing Over Bed		Raising Blocks for Quick Change Gear		Raising Blocks for Standard, Jr., and Workshop Lathes	
Straight Bed Lathes	Gap Bed Lathes	Cat. No.	Price	Cat. No.	Price
9 1/2 in. W.S.	11 1/2 in.	1121	made	1001-W	\$25.00
9 1/2 in.	12 in.	1122	40.00	1001	35.00
11 1/4 in.	14 in.	1123	48.00	1002	40.00
13 1/4 in.	18 in.	1124	65.00	1003	55.00
15 1/4 in.	20 in.	1125	77.00	1004	65.00
16 1/4 in.	22 in.	1126	89.00	1005	75.00
18 1/4 in.	24 in.		101.00	1006	85.00

*Cannot be supplied for Silent or Underneath Belt Motor Driven Lathes.

Fine Thread Cutting Attachment

For Fine Threads 44 to 80 per Inch and for Fine Feeds



This attachment permits compounding the gears furnished with lathe for cutting additional screw threads of fine pitch as follows: 44, 46, 48, 52, 54, 56, 60, 64, 72 and 80 per inch. The same attachment can be fitted with additional gears at extra cost for extra fine screw threads and for extra fine automatic feeds.

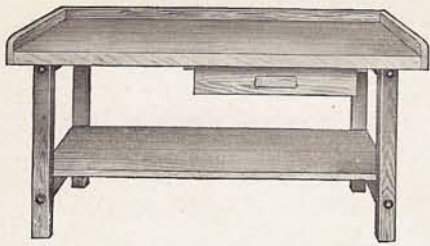
Prices Fine Thread Cutting Attachment

Size of Lathe	Price When Ordered with Lathe		Price When Ordered Extra	
	Cat. No.	Price	Cat. No.	Price
9" W.S.	1565W	\$ 8.00	1670W	\$10.00
9 in.	309	10.00	1050	15.00
11 in.	313	13.00	1090	18.00
13 in.	314	14.00	1091	20.00
15 in.	315	17.00	1092	25.00
16 in.	317	17.00	1093	25.00
18 in.	319	20.00	1094	30.00

The Attachment can be ordered with the lathe and fitted at factory, or it can be purchased later as extra equipment. When ordered with the lathe the gear bracket regularly supplied with the lathe is omitted.

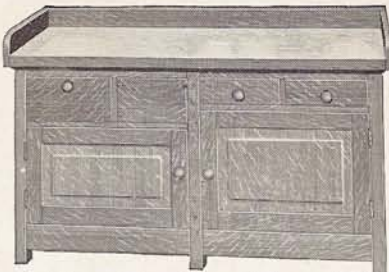
Equipment includes a double arm bracket, one 1 to 2 compound gear, intermediate gear, thread chart, bushings, bolts and nuts.

Benches for South Bend Bench Lathes



Frame Benches—Type "A"

This bench is supplied in heavy duty and light duty designs. The heavy duty can be had in both hard maple and hard pine. The light duty is made in hard pine only. The bench is constructed with take-up bolts on frame work to provide for shrinkage or service in the future. The drawer is mortised and grooved. Finished thickness of bench top is 1½" or more. Shipped knocked down to save freight charges. Benches 72" and 96" long have center legs.



Cabinet Benches—Type "C"

This type of cabinet bench is recommended for Standard and Quick Change Gear Underneath Belt Motor Driven Bench Lathes as the panels in the left-hand side are arranged for easy access to the drive mechanism. Made in either hard maple or hard pine. Bench is constructed with take-up bolts on frame work to provide for shrinkage or service in the future. Drawers and panels are mortised and grooved. The bench top thickness is 1½" or more. This bench is shipped completely assembled.



Cabinet Benches—Type "E"

This type of bench is recommended for "Workshop" Underneath Belt Motor Driven Bench Lathes because the panels in the left side are arranged for easy access to the drive mechanism. Supplied in either hard maple or hard pine. Bench is constructed with take-up bolts on frame work to provide for shrinkage or service in the future. Drawers and panels are mortised and grooved. Bench top thickness 1½" or more. Bench is shipped completely assembled.

Prices of Frame and Cabinet Benches (Hard Maple and Hard Pine) for 9-inch, 11-inch and 13-inch Lathes

Size Bench Top		9" Lathes—All Types		11" and 13" Lathes		Frame Benches—Type "A"				Cabinet Benches—Type "C"				Cabinet Benches—Type "E"			
Width Bench Top	Length Bench Top	All Countershaft, and Motor Drive Bench Lathes	Countershaft Drive and Silent Motor Drive	Horizontal Motor Drive	Heavy Duty		Light Duty**		Hard Maple	Hard Pine	Hard Maple	Hard Pine	Hard Maple	Hard Pine	Hard Maple	Hard Pine	
					Hard Maple	Hard Pine	Hard Pine										
					Cat. No.	Price	Cat. No.	Price	Cat. No.	Price	Cat. No.	Price	Cat. No.	Price	Cat. No.	Price	Cat. No.	Price
28 in.	48 in.	21½" to 3'						916	\$18.00					419-N	\$72.00	599-N	\$46.00
28 in.	54 in.	21½" to 3½"						917	20.00					419-M	76.00	599-M	47.00
28 in.	60 in.	21½" to 4'						922	21.00†					419-K	81.00	599-K	49.00
32 in.	54 in.	21½" to 3½"	3', 3½"		128-X	\$41.00	918	\$26.00		942-X	\$84.00	704-X	\$53.00				
32 in.	60 in.	21½" to 4'	3' to 4'		128-I	46.00	912	28.00		942-I	89.00	704-I	56.00				
32 in.	72 in.	21½" to 4½"	3' to 4'		*128-A	50.00	919	31.00		942-A	94.00	704-A	59.00				
32 in.	96 in.		3' up		*128-V	63.00	914	33.00		942-V	109.00	704-V	68.00				
40 in.	60 in.			3' to 4'	128-H	56.00	921	33.00		942-H	97.00	704-H	64.00				
40 in.	72 in.			3' to 5'	*128-J	59.00	923	36.00		942-J	106.00	704-J	69.00				
40 in.	96 in.			3' up	*128-G	73.00	924	38.00		942-G	109.00	704-G	78.00				

*Furnished with center leg. **If wanted without drawer deduct \$2.00. †This price includes bench 28" wide x 66" long.
 NOTE: Mounting Lathe on any of the benches listed above is \$5.00 extra. When ordering Bench specify size and type of lathe to be mounted on it.
 Height of Benches for lathes: 9" "Workshop" 30½"; Junior and 9" Regular Lathes, 27½"; 11" Lathes, 25½"; 13" Lathes, 23½".

Low Cost Knocked-Down Benches



Knocked-Down Bench Assembled

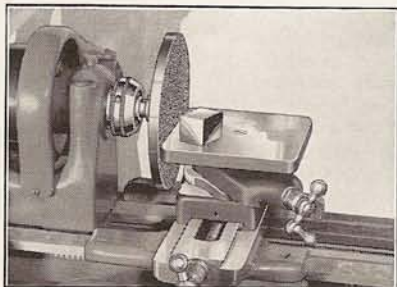
All material for knocked-down bench is shipped from the factory accurately cut to size ready for assembling, but is left unfinished. See Fig. "B," at right. Material is provided for a drawer, 12" wide x 20" long x 3" deep. Drawer is not assembled. Top is made of 1½" thick x 5½" wide, hard pine. Legs are 1½" thick x 6" wide, hard pine. Height of bench 30½". A blue print is supplied showing how to set up the bench. No hardware is furnished. Shipping weight 160 lbs.



Fig. B. Knocked-Down Bench Material

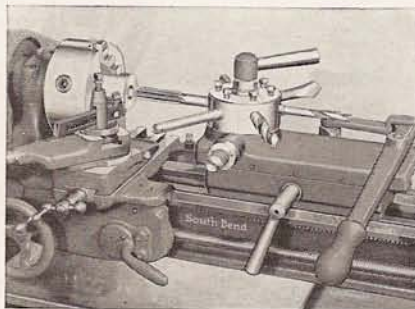
Prices of Low Cost Knocked-Down Bench Material

Cat. No. 89-L. Top 28" x 48". Code "Bydar"... \$7.50
 Cat. No. 89-N. Top 28" x 54". Code "Bydev"... 8.25
 Cat. No. 89-Q. Top 28" x 66". Code "Bydiz"... 9.00



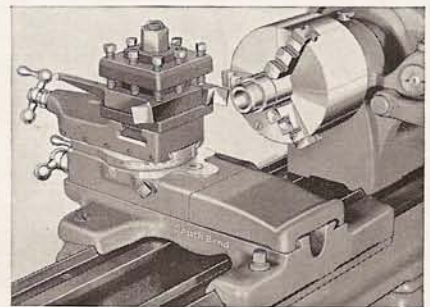
Polishing Disc and Table

Sanding and Polishing Disc and Table for "Workshop" Lathe for polishing wood, steel.
 Cat. No. 943-W. Sanding Disc. 6" diam. with taper shank. Code "Dylax". Wt. 5 lbs. \$3.50
 Cat. No. 1129-W. Table for Compound Rest. Code "Atata". Wt. 4 lbs. \$2.50



Hand Lever Bed Turret

Hand Lever Bed Turret for "Workshop" Lathe takes six tools. Indexes by hand only.
 Cat. No. 176-W. Turret only. \$115.00 Fitted



Four Way Tool Post Turret

Four-Way Tool Post Turret. Mounts in "T"-slot of Compound Rest.
 Cat. No. 179-W. Turret only. \$73.00 Fitted

Automotive Attachments for South Bend Lathes

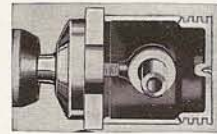
South Bend Lathes, when fitted with a few attachments, can be used for servicing the following automotive jobs: Flywheels, brake drums, hubs, wheels, differentials, axles, connecting rods, armatures, valves, pistons and bushings. A service bulletin is available for each of these jobs—price 10 cents each, postpaid.

A few additional automotive attachments, not listed below, are shown on the following pages of this catalog: Valve Work—Valve grinder, diamond dresser, and holding fixture page 54, precision valve chuck on page 59; Armature Work—3-jaw drill chuck page 59; Bushing Work—See chuck and tool assortment page 59.

Piston Adapter, Adapter Rings and Skirt Reamer



The Self-Centering Piston Adapter is used for mounting pistons in the lathe. The long tapered shank fits the lathe spindle and the short shank receives the adapter rings and skirt reamers. Cone rings are used for pistons with center hole in head. Centering rings shown at right, are used for pistons without center hole in head.

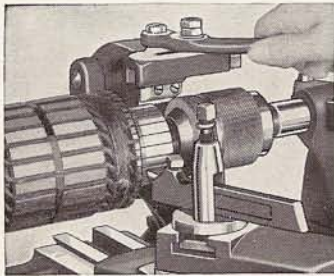


Cross Section of Piston Showing Application of Driver and Centering Ring.

Price No. 44 Adapter			Price Extra Cone Rings			Prices of Piston Skirt Reamers		
Size Lathe	Cat. No.	Price Complete*	Cone Rings for Pistons Outside Dia.	Cat. No.	Price Each	Cat. No.	For Piston Outside Dia.	Price Each
Workshop	44-W	\$10.00	2 1/2 to 3 1/2 in.	1D	\$2.00	1R	2 3/8 to 3 1/2 in.	\$ 7.50
9"	44-A	10.00	3 1/2 to 3 3/4 in.	2D	2.25	2R	3 1/8 to 3 3/4 in.	9.00
11"	44-B	10.00	3 3/4 to 4 in.	3D	2.50	3R	3 3/8 to 4 in.	10.00
13", 15"	44-C	10.00	4 to 5 in.	4D	3.00	4R	4 1/8 to 5 in.	12.00
16", 18"	44-E	10.00	No. 1-Z, Centering Ring and Driver.....\$2.50					

*Includes Shank, Dog A, & No. 1-D Cone Ring.

Hand Type Mica Undercutter



Undercutting Mica and Truing Commutator in Lathe in One Set-up.

Attachment Undercuts commutators of all sizes and types. Fastens on side of saddle. The cutter consists of a piece of hack saw blade which is moved by the hand lever. An adjustment regulates depth of cut. One hack saw cutter blade .25" thick supplied. Attachment can be turned back out of the way when not in use. Both truing and undercutting operations may be handled with one set-up. The average time for truing a commutator and undercutting mica is about twenty minutes.

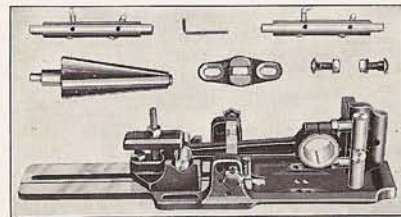
Prices of Hand Type Mica Undercutter					
Size Lathe	No.	Price	Size Lathe	No.	Price
Workshop	673	\$15.00	15 in.	678	\$17.00
9 in.	675	15.00	16 in.	679	17.50
11 in.	676	16.00	18 in.	680	19.00
13 in.	677	16.00			



Support Chuck for Centerless Armatures.

Armature Support Chuck

For mounting centerless armatures in the lathe. Has brass jaws. Will take centerless armature shafts from 3/8" to 3/4" in diameter. Used in the tailstock. Prices include Arbor. No. 340. Chuck for "Workshop," 9" and 11" Lathes\$9.00
No. 340-A. Chuck for 13", 15", 16", and 18" Lathes\$9.50



Equipment for Servicing Connecting Rods



Facing and Rounding Cutter, 45° Chamfer Forming Cutter, Trimming Cutter, Boring Cutter, Ground Cutter Bits for Connecting Rod Work

Connecting Rod Servicing Equipment

The equipment for 9-in. and 11-in. Lathes handles connecting rods of all passenger cars and some buses, while the equipment for 13-in. to 18-in. Lathes handles all sizes of connecting rods including those of large tractors, trucks, buses and passenger cars.

The equipment includes a connecting rod boring attachment (with holding jig, V-block, extension nuts for bearing caps and adjustable clamping device), two boring bars (one for roughing, the other for finishing), cutters, etc., for boring, facing, rounding and trimming connecting rod bearings.

Size of Lathe	9-inch		11-inch		13-inch		15-inch		16-inch		18-inch	
	No.	Price	No.	Price	No.	Price	No.	Price	No.	Price	No.	Price
Attachment for rods 12" between bearings and 5" across lugs....	**	\$45.00	1230	\$50.00	*	*	*	*	*	*	*	*
Attachment for rods 22" between bearings and 6 1/4" across lugs..	*	*	*	*	1231	\$65.00	1232	\$70.00	1233	\$75.00	1234	\$80.00
2 Boring Bars for 1 1/4" to 2 1/2" bearings	461-B	17.00	461-B	17.00	461-B	17.00	461-B	17.00	461-B	17.00	461-B	17.00
2 Boring Bars for 2 1/2" to 4" bearings	*	*	*	*	517	22.00	517	22.00	517	22.00	517	22.00
Centering Cone for 1 1/4" to 2 1/2" bearings	581	2.50	581	2.50	581	2.50	581	2.50	581	2.50	581	2.50
Centering Cone for 2 1/2" to 4" bearings	*	*	*	*	927	3.00	927	3.00	927	3.00	927	3.00
Driver for Boring Bars.....	228	1.00	228	1.00	229	1.25	229	1.25	229	1.25	229	1.25

*Not made. **Cat. Nos.: For 9" Workshop, No. 1229-W; 9" Regular Lathes, No. 1229.

Self-Centering Straight Mandrels

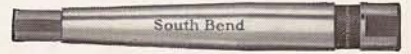
Used with the universal bearing adapters shown below to mount all front wheels and many rear wheels, single and dual, for testing the wheels and for truing brake drums of all types and makes of automobiles, buses and trucks. The mandrel serves as a temporary axle for the wheel while it is being machined in the lathe.



Specifications and Prices of Self-Centering Straight Mandrels					
Catalog No.	Diam. of Mandrel	Length of Mandrel	Fits Adapters with	Used for	Price Each
1800	1 1/4"	12"	1 1/4" hole	Automobiles Chiefly	\$11.00
1810	1 3/8"	18"	1 3/8" hole	Trucks Chiefly	18.00
1840	2 1/2"	26"	2 1/2" hole	Heavy Trucks	30.00

Self-Centering Taper Mandrels

For mounting rear wheels (semi-floating type) of automobiles, buses, and trucks between centers in the lathe for testing, truing and machining brake drums and wheels. The mandrel is ground to the same taper as used on the car, bus or truck axle, and centers the wheels perfectly.



Specifications and Prices of Self-Centering Taper Mandrels					
Cat. No.	Diam. of Mandrel	Length of Mandrel	Taper per Foot	Used for	Price Each
1820	1" to 1 1/4"	13 1/2"	3/4"	Autos and Trucks	\$4.50
1820-B	1 1/8" to 1 3/4"	15 1/2"	1"	Autos and Trucks	5.00
1821	1 1/2" to 1 3/4"	11 1/2"	1"	Autos and Trucks	4.50
1822	1 3/4" to 1 3/4"	13 1/2"	1"	Autos and Trucks	4.50
1823	1 3/4" to 1 3/4"	15"	1"	Autos and Trucks	5.00
1824	1 3/4" to 1 3/4"	11 1/2"	1 1/2"	Autos and Trucks	4.50
1825	1 3/4" to 2"	15 1/2"	1 1/2"	Trucks Mostly	7.50

Universal Bearing Adapters

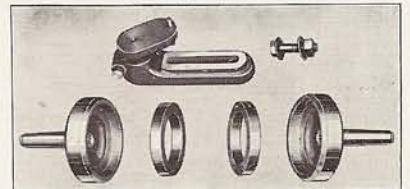
Used on the Self-Centering Straight Mandrel above for mounting all types and makes of front wheels, and for rear wheels with three-quarter or full floating axles. The rounded portion of the adapter conforms to ball bearing cups and to tapered roller (Timken) bearing cups.



Specifications and Prices of Universal Bearing Adapters					
Cat. No.	To Fit Mandrel	Diameters Furnished	Diam. of Adapter Hole	Used for	Price Each
1801	No. 1800	1 1/2" to 3 3/4" in 8ths	1 1/4"	Autos Chiefly	\$1.50
1811	No. 1810	2 1/8" to 4 1/4" in 4ths	1 3/8"	Trucks Chiefly	2.00
1841	No. 1840	3 1/2" to 7" in 4ths	2 1/2"	Heavy Trucks	3.00

Differential Servicing Equipment

For mounting and centering differentials in the lathe for machining the flange, pilot, etc. Handles differentials of most models of twenty-five makes of automobiles and light trucks, including the following: Chevrolet, Essex, Terraplane, Pontiac, Chrysler, Dodge, Buick, Studebaker, Oldsmobile, Oakland, Hudson, Whippet, Willys, Willys-Overland, Auburn, Hupmobile, Rockne, Reo, Durant, Graham-Paige, Jordan, Marmon, Continental, Cadillac, LaSalle.



Equipment for Servicing Differentials.

Size of Lathe	9-inch		11-inch		13-inch		16-inch	
	No.	Price	No.	Price	No.	Price	No.	Price
2 Centering Supports with shafts	540-B	\$10.00	540-C	\$10.00	540-D	\$11.00	540-F	\$11.00
2 Centering Adapters	283-A	3.00	283-A	3.00	283-A	3.00	283-A	3.00
1 Universal Driver	267	2.00	267	2.00	267	2.00	267	2.00

Export Information on South Bend Lathes

Informes con Respecto a la Exportación de Tornos South Bend

South Bend Lathes Have Been Exported to all parts of the world for more than twenty-seven years. In that time shipments have been made to 96 different countries or colonies which are shown on the page opposite. The reputation of South Bend Lathes is, therefore, world-wide and users everywhere can testify to their high quality.

Export Prices F.O.B. South Bend. All prices quoted in this catalog are the latest net prices f.o.b. our factory and include proper packing and boxing for ocean shipment where necessary.

Note: An extra charge of \$7.00 is made for boxing 9" Workshop Lathes.

The Latest Export Information is available to our friends overseas at all times. We maintain a special department in our offices having the latest information on steamship rates, shipping data, insurance premiums, consular charges, and other details that our customers may be interested in when purchasing a lathe. The services of this department are extended free of cost or obligation to our friends in other countries.

C.I.F. Prices to Various Ports. Write to us specifying the size and type of lathe in which you are interested and we will send you a detailed itemized C.I.F. quotation to your nearest port. Or you may determine approximate C.I.F. price of any lathe in this catalog by consulting the table of approximate rates given on page 66.

Correspondence in Any Language. You may write us in any language you wish and we will respond in your own language, the English language, or in any other you specify. We have competent translators in our Export Department for correspondence in various languages.

Boxing for Export Shipment. When boxing South Bend Lathes for export shipment, the lathe is dismantled and all parts removed are oiled, greased, wrapped and packed in one strong case as illustrated above. All parts are blocked and fastened solidly inside the case to prevent moving while in transit. The box is lined inside with waterproof paper, and bound with steel tape outside.

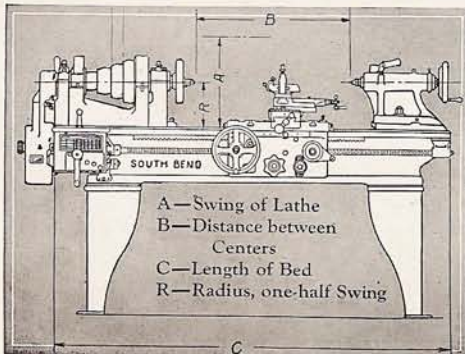
Mule Back Packing. When desired, we can pack South Bend Lathes for shipment in small boxes or cases suitable for mule back transportation. An additional charge of 5% is made for this special packing. For example, a charge of \$25.00 additional would be made on a lathe costing \$500.00. The lathe beds must be packed in one case.

Sizes of Packing Cases. The approximate dimensions and weights of cases in which South Bend Lathes are packed for ocean shipment are shown on page 67.

The Size of a Lathe

The size of a Screw Cutting Lathe is determined by the Swing over the Bed and Length of the bed as indicated by the illustration below.

European tool manufacturers determine the size of a lathe by its radius or center distance: for example, an 8" center lathe is a lathe having a radius of 8 inches. What the European terms an 8" center Lathe, United States manufacturers term a 16-inch swing lathe.



Los Tornos South Bend han sido exportados a todos los rincones del mundo durante los últimos veinte y siete años. Durante este tiempo, se han hecho despachos a noventa y seis países los cuales aparecen en la página opuesta. La reputación de los Tornos South Bend es, por lo tanto, mundial, y todos los que usan nuestros tornos pueden testificar su alta calidad y su adaptabilidad a todo trabajo fino y de gran exactitud.

Tenemos a su disposición los informes mas recientes sobre la exportación de nuestros productos a cualquier país. Tenemos un departamento dedicado a obtener los últimos informes sobre las tarifas de las compañías de vapores, los derechos consulares, las primas de seguro y otros detalles en los cuales nuestros clientes están interesados al comprar tornos. Los servicios de este departamento son enteramente gratis.

Los Precios son Franco a Bordo. Todos los precios indicados en este catálogo son los precios más recientes, franco a bordo, nuestra fábrica en South Bend e incluyen el empaque y el encajonamiento para transporte marítimo. No concedemos ningun descuento sobre estos precios. La maquinaria destinada a la Republica Mejicana se empacka del mismo modo que si fuera enviada dentro del país, o sea, en cajas hechas de tabillas de madera. Vasea página 66. Los envíos a Mejico se hacen por Ferrocarril.

Nota: Se cargará \$7.00 extra por encajonamiento de los Tornos "Workshop" de 9".

Cotizaciones con Precios Costo, Seguro y flete hasta cualquier puerto serán suministradas a solicitud. Sírvase escribirnos indicando el tamaño y tipo de torno en el cual Ud. está interesado que nosotros le enviaremos una cotización, costo seguro y flete hasta su puerto más cercano. Ud. puede determinar el precio costo, seguro y flete de cualquier torno consultando la tabla de gastos aproximados en la página 66.

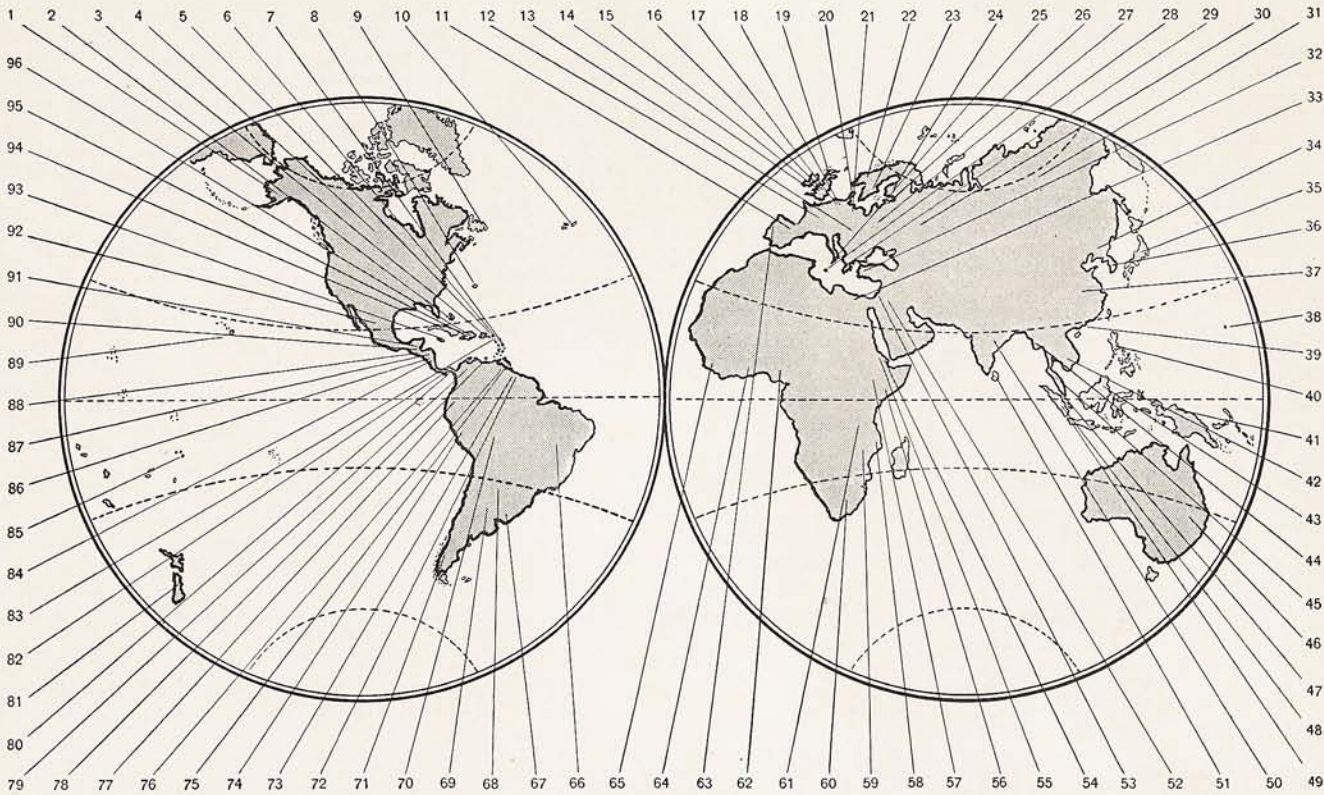
Correspondemos en cualquier idioma. Puede. Ud. escribirnos en cualquier idioma que nosotros le contestaremos en su lengua propia, en inglés, o en cualquier otro idioma que Ud. nos indique. Tenemos traductores de español, francés, y portugués en nuestro departamento de exportación. Podemos corresponder en los otros idiomas pues tenemos relaciones con traductores adiestrados.

El Empaque para Transporte Marítimo. Al encajonar los Tornos South Bend para transporte marítimo, se desarmar y todas sus partes, se aceitan, engrasan, envuelven y empackan en una caja fuerte como se puede ver en la ilustración de arriba. Todas las partes se fijan sólidamente en la caja para evitar su movimiento durante el tiempo que las maquinas estan en camino. Las cajas tienen forros de papel impermeable, y están reforzadas por cintas de acero. Las cajas están marcadas de acuerdo con las indicaciones de nuestros clientes sin costo adicional de su parte.

Encajonamiento para transporte a lomo de mula. A solicitud, podemos empackar Tornos South Bend en cajas pequeñas para permitir su transporte a lomo de mula. Se exige un pago adicional de 5% por dicho empaque. Por ejemplo, se cobrarían \$25.00 por un torno de \$500.00. La bancada del torno debe ser empackada en una sola caja.

Tamaños de las Cajas. Las dimensiones y pesos aproximados de las cajas en las cuales los Tornos South Bend están empackados para transporte marítimo están indicados en la página 67. Para cada uno de los tamaños de los Tornos South Bend, de transmisión por contraeje o a motor provistos de patas largas o de tipo para banco, las dimensiones están indicadas en milímetros y pulgadas; y los pesos en kilogramos y libras. Estas dimensiones y pesos aproximados pueden ser usados para determinar los gastos del transporte y despacho. Al calcular el flete marítimo es mejor usar la tarifa por pie cúbico pues las compañías de vapores reservan la opción de calcular por peso o por medida, cualquiera produzca la mayor entrada.

South Bend Lathes are Used in 96 Countries



The map above shows the 96 different countries, colonies and territories where South Bend Lathes are in use. To find the name of any country in the map above, follow the refer-

ence lines from the country to the numbers on the margin. The name of the country can then be found opposite that number in the table below.

- | | | | |
|-------------------------|-------------------------------|----------------------------|----------------------------|
| 1. Territory of Alaska | 25. Kingdom of Italy | 49. Island of Java | 73. British Guiana |
| 2. Bahama Islands | 26. Republic of Estonia | 50. India | 74. Republic of Peru |
| 3. Puerto Rico | 27. Republic of Poland | 51. Ceylon | 75. Island of Trinidad |
| 4. Dominion of Canada | 28. Island of Malta | 52. Syria | 76. Republic of Venezuela |
| 5. Virgin Islands | 29. Republic of Greece | 53. Palestine | 77. Republic of Ecuador |
| 6. Island of Guadeloupe | 30. U.S.S.R. (Russia) | 54. French Somaliland | 78. Island of Curacao |
| 7. Island of Barbados | 31. Siberia | 55. Kingdom of Abyssinia | 79. Republic of Colombia |
| 8. Bermuda Islands | 32. Republic of Turkey | 56. Kenya Colony | 80. Canal Zone |
| 9. Newfoundland | 33. Kingdom of Egypt | 57. Uganda | 81. New Zealand |
| 10. Azores Islands | 34. Manchukuo | 58. Portuguese East Africa | 82. Republic of Panama |
| 11. Republic of Spain | 35. Japanese Empire | 59. South Rhodesia | 83. Island of Martinique |
| 12. Republic of France | 36. Korea | 60. Union of South Africa | 84. Republic of Costa Rica |
| 13. Republic of Austria | 37. Republic of China | 61. North Rhodesia | 85. Samoan Islands |
| 14. Irish Free State | 38. Island of Guam | 62. Nigeria | 86. Republic of Nicaragua |
| 15. Wales | 39. Territory of Hong Kong | 63. Republic of Portugal | 87. Republic of Honduras |
| 16. England | 40. Philippine Islands | 64. Gold Coast Colony | 88. Republic of Salvador |
| 17. The Netherlands | 41. Island of New Guiana | 65. Republic of Liberia | 89. Territory of Hawaii |
| 18. Kingdom of Belgium | 42. French Indo China | 66. Republic of Brazil | 90. Republic of Guatemala |
| 19. Scotland | 43. Island of Borneo | 67. Republic of Uruguay | 91. British Honduras |
| 20. Kingdom of Denmark | 44. Burma | 68. Republic of Paraguay | 92. Republic of Mexico |
| 21. Republic of Germany | 45. Federated Malay States | 69. Argentine Republic | 93. Island of Jamaica |
| 22. Kingdom of Norway | 46. Commonwealth of Australia | 70. Republic of Bolivia | 94. Republic of Cuba |
| 23. Kingdom of Sweden | 47. Straits Settlements | 71. Republic of Chile | 95. Republic of Haiti |
| 24. Republic of Finland | 48. Island of Sumatra | 72. Dutch Guiana | 96. Dominican Republic |



Manual del Tornero
Escrito en Español.

“Manual del Tornero”—Edición No. 28

Manera de Instalar, Cuidar y Manejar un Torno para Cortar Tornillos

El libro “El Manual del Tornero,” es sumamente autoritativo y describe los principios fundamentales sobre el manejo del torno con engranajes de dobles velocidades para cortar tornillos. Este libro tiene ilustraciones de 200 métodos de utilizar el torno en la práctica. Es un libro de referencias de gran valor, pues es la mayor autoridad en tornería de metales y se están usando más de un millón doscientos cincuenta mil ejemplares por todo el mundo.

Este libro contiene instrucciones completas sobre el montaje y la operación del torno y describe detalladamente las maneras de centrar y amolar herramientas, cortar metales de distintas clases, cortar tornillos de todos estilos, y otras operaciones de mayor importancia.

Se ha preparado éste libro para el uso de los aprendices en los talleres de mecánica. Es uno de los libros más completos en tornería de metales que se puede conseguir. Representa la experiencia de sus autores quienes trabajaron por más de 30 años como ingenieros y mecánicos expertos en varias industrias de labrar metales.

Approximate Cost of Shipping South Bend Lathes to Various Countries

Los Gastos Aproximados de Despachar Tornos South Bend a Algunos Países

The table below shows approximate transportation, insurance and forwarding expenses from our factory in South Bend, Indiana, to some of the important ports and trade centers throughout the world. These estimates are given on three of the representative size South Bend Lathes. From these amounts you can readily determine the approximate shipping expenses on any other lathe.

Freight and Transportation. All export shipments are made from our factory at South Bend, Indiana, which is seven hundred fifty miles West of the port of New York City. The estimates below, therefore, include railroad freight to New York, cartage from railroad terminal to steamship pier and ocean freight from New York except where other ports are indicated. All shipments are insured under the conventional "all risk" insurance policy.

Consular Fees are sometimes levied by various countries in addition to or in place of customs duties. The consular duties are not included in the following estimates. For information write to us for C.I.F. quotations and we will itemize the consular fees, if any, according to the latest rulings of the country in which you are located.

La tabla siguiente contiene los gastos aproximados de transporte, seguro y despacho, desde South Bend hasta algunos puertos principales del mundo, de tres tamaños de Tornos South Bend. De estos cálculos puede Ud. determinar fácilmente los gastos de transporte aproximados de cualquier otro torno.

Flete y transporte. Todos los despachos al exterior son efectuados de nuestra fábrica en South Bend, Indiana, la cual está a más de setecientos cincuenta millas al oeste del Puerto de Nueva York. Las tarifas a continuación incluyen el flete terrestre hasta Nueva York, el acarreo desde la estación terminal del ferrocarril al lado del vapor, el flete marítimo desde Nueva York hasta los puertos indicados y el seguro contra todo riesgo.

Derechos consulares son exigidos por algunos países en vez de o además de derechos de aduana. Estos derechos no están incluidos en los cálculos siguientes. Sírvase escribirnos solicitando una cotización costo, seguro y flete hasta su puerto más cercano, y con gusto le especificaremos estos derechos de acuerdo con los reglamentos más recientes del gobierno de ese país.

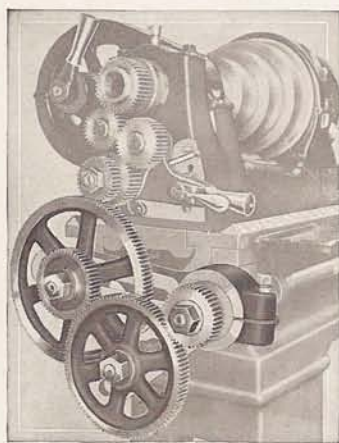
Approximate Transportation, Insurance and Forwarding Charges to World's Leading Ports

Gastos aproximados de transportación y Seguro a los puertos principales del mundo

NAME OF PORT	9"x3' "Workshop" Lathe			NAME OF PORT	9"x3' "Workshop" Lathe		
	13"x6' Lathe	16"x8' Lathe	13"x6' Lathe		16"x8' Lathe		
Acajutla, Salvador, via N. Y.	\$26.00	\$65.00	\$91.00	Manzanillo, Mexico, via N. Y.	\$17.00	\$48.00	\$69.00
Alexandria, Egypt, via N. Y.	29.00	48.00	69.00	Melbourne, Australia, via N. Y.	17.00	45.00	78.00
Amapala, Honduras, via N. Y.	16.00	50.00	71.00	Mollendo, Peru, via N. Y.	27.00	59.00	83.00
Antofagasta, Chile, via N. Y.	24.00	67.00	98.00	Montevideo, Uruguay, via N. Y.	20.00	48.00	69.00
Auckland, New Zealand, via N. Y.	17.00	58.00	89.00	Nogales, Arizona (crated and shipped via rail)	18.00	47.00	81.00
Barcelona, Spain, via N. Y.	19.00	45.00	65.00	Panama City, Panama, via N. Y.	16.00	40.00	59.00
Belize, Br. Honduras, via N. Y.	15.00	49.00	70.00	Pernambuco, Brazil, via N. Y.	20.00	43.00	63.00
Bluefields, Nicaragua, via New Orleans	15.00	45.00	65.00	Port-au-Prince, Haiti, via N. Y.	18.00	42.00	61.00
Bombay, India, via N. Y.	15.00	44.00	65.00	Port Limon, Costa Rica, via N. Y.	16.00	48.00	68.00
Bridgetown, Barbados, via N. Y.	14.00	48.00	70.00	Port of Spain, Trinidad, via N. Y.	15.00	45.00	65.00
Buenaventura, Colombia, via N. Y.	21.00	67.00	93.00	Progreso, Mexico, via N. Y.	18.00	39.00	63.00
Buenos Aires, Argentina, via N. Y.	20.00	48.00	69.00	Puerto Barrios, Guatemala, via N. Y.	18.00	50.00	71.00
Calcutta, India, via N. Y.	15.00	44.00	65.00	Puerto Cabello, Venezuela, via N. Y.	18.00	49.00	70.00
Callao, Peru, via N. Y.	21.00	59.00	83.00	Puerto Colombia, Colombia, via N. Y.	20.00	40.00	71.00
Capetown, S. Africa, via N. Y.	16.00	45.00	66.00	Puntarenas, Costa Rica, via N. Y.	17.00	54.00	76.00
Corinto, Nicaragua, via N. Y.	18.00	53.00	76.00	Rio de Janeiro, Brazil, via N. Y.	22.00	42.00	61.00
El Paso, Texas (crated and shipped via rail)	14.00	35.00	61.00	San Jose, Guatemala, via N. Y.	18.00	65.00	90.00
Guayaquil, Ecuador, via N. Y.	22.00	66.00	92.00	San Juan, Puerto Rico, via N. Y.	13.00	36.00	55.00
Havana, Cuba, via Key West	17.00	43.00	68.00	Santiago de Cuba, Cuba, via N. Y.	18.00	38.00	62.00
Hong Kong, China, via San Francisco	18.00	52.00	81.00	Santo Domingo, Dominican Republic, via N. Y.	19.00	44.00	64.00
Honolulu, Hawaii, via S. F.	13.00	48.00	75.00	Santos, Brazil, via N. Y.	22.00	41.00	58.00
Ketchikan, Alaska, via S. F.	17.00	35.00	52.00	Seward, Alaska, via Seattle	17.00	61.00	92.00
Kingston, Jamaica, via N. Y.	15.00	38.00	56.00	Shanghai, China, via S. F.	18.00	54.00	84.00
Laredo, Texas (crated and shipped via rail)	8.00	35.00	61.00	Singapore, Straits Settlements, via N. Y.	15.00	46.00	68.00
Lisbon, Portugal, via N. Y.	24.00	49.00	69.00	Valparaiso, Chile, via N. Y.	21.00	60.00	84.00
Liverpool, England, via N. Y.	16.00	48.00	70.00	Vera Cruz, Mexico, via N. Y.	18.00	52.00	87.00
Lourenco Marques, P. E. Africa, via N. Y.	19.00	52.00	75.00	Wellington, New Zealand, via N. Y.	17.00	58.00	89.00
Maracaibo, Venezuela, via N. Y.	19.00	49.00	70.00				

Transposing Gear Attachment for Cutting Metric Screw Threads

For South Bend Lathes with English Pitch Lead Screws



Transposing Gears for South Bend Standard Change Gear, Junior and "Workshop" Lathes

The Transposing Gear Attachment is used on the lathe for cutting screw threads in millimeter pitch. May be fitted to Quick Change Gear Lathe, Standard Change Gear Lathe, Junior and "Workshop" Lathes.

The index plate at the right shows range of threads and feeds obtainable on the Quick Change Gear Lathes. Charts for Standard Change Gear and Junior and "Workshop" Lathes are similar and provide for similar screw threads and automatic feeds.

Price includes all equipment necessary for the threads and feeds as indicated on the index charts.

Net Factory Prices Metric Transposing Gear Attachment

Size Lathe	Quick Change Gear Lathe			Standard Change Gear, Junior and "Workshop" Lathes		
	Cat. No.	Code Word	Price	Cat. No.	Code Word	Price
"Workshop"				1640	Tytar	\$15.00*
9 in.	1435	Tanom	\$30.00	1442	Tibol	25.00
11 in.	1436	Tasid	35.00	1443	Tigem	30.00
13 in.	1437	Tadus	40.00	1444	Tohis	35.00
15 in.	1438	Tesol	45.00	1445	Tojar	40.00
16 in.	1439	Texis	50.00	1446	Tokas	45.00
18 in.	1440	Tegam	55.00	1447	Tolim	50.00

*When fitted to lathe in lieu of regular equipment, \$12.00.

QUICK CHANGE LATHE METRIC TRANSPOSING CHART

M/M PITCH	STUD GEAR	PLUNGER HOLE	TOP LEVER
.5	24	6	RIGHT
.75	24	1	RIGHT
1.	24	6	CENTER
1.25	60	6	RIGHT
1.5	60	3	RIGHT
1.75	56	1	RIGHT
2.	56	8	CENTER
2.5	60	6	CENTER
3.	60	3	CENTER
3.5	56	1	CENTER
4.	56	8	LEFT
4.5	36	1	LEFT
5.	60	6	LEFT
5.5	44	1	LEFT
6.	60	3	LEFT
6.5	52	1	LEFT
7.	56	1	LEFT
7.5	60	1	LEFT
8.	64	1	LEFT

Metric Chart for 13", 15", 16", 18", 24" and 36" Lathes

Dimensions and Weights of South Bend Lathes Boxed for Export

Dimensiones y Pesos (Aproximados) de los Tornos South Bend Encajonados para Transporte Marítimo

Swing Over Bed Volteo sobre la Bancada		Length of Bed Largo de la Bancada		Countershaft Driven Floor Leg Lathes Tornos de transmisión por contraeje provistos de patas largas				Motor Driven Floor Leg Lathes Tornos de transmisión a motor provistos de patas largas			
				Dimensions of Case Dimensiones de la Caja		Weight of Case Peso de la Caja		Dimensions of Case Dimensiones de la Caja		Weight of Case Peso de la Caja	
				Inches	mm.	Inches	mm.	Lbs.	Kilos	Inches	mm.	Lbs.	Kilos
9-Inch Workshop Lathes with Floor Legs											
9 1/8	231	2 1/2	762	60x22x21	152x56x53	440	200	66x23x21	168x58x53	750	340
9 1/8	231	3	914	66x22x21	168x56x53	473	215	72x23x21	183x58x53	775	352
9 1/8	231	3 1/2	1067	72x22x21	183x56x53	506	230	78x23x21	198x58x53	800	365
9 1/8	231	4	1219	78x22x21	198x56x53	539	245	84x23x21	213x58x53	825	374
9 1/8	231	4 1/2	1372	84x22x21	213x56x53	572	260	90x23x21	229x58x53	850	386
9-Inch Junior, Quick Change Gear and Standard Change Gear Lathes with Floor Legs											
9 1/4	235	2 1/2	762	60x23x24	152x58x61	600	272	72x24x24	183x61x61	880	399
9 1/4	235	3	914	66x23x24	168x58x61	630	286	78x24x24	198x61x61	910	413
9 1/4	235	3 1/2	1067	72x23x24	183x58x61	660	299	84x24x24	213x61x61	940	426
9 1/4	235	4	1219	78x23x24	198x58x61	690	313	90x24x24	229x61x61	970	440
9 1/4	235	4 1/2	1372	84x23x24	213x58x61	720	327	96x24x24	244x61x61	1000	454
11-Inch Quick Change Gear and Standard Change Gear Lathes with Floor Legs											
11 1/4	286	3	914	66x25x26	168x64x66	810	368	78x25x26	198x64x66	1145	519
11 1/4	286	3 1/2	1067	72x25x26	183x64x66	850	386	84x25x26	213x64x66	1185	538
11 1/4	286	4	1219	78x25x26	198x64x66	890	403	90x25x26	229x64x66	1225	556
11 1/4	286	5	1524	90x25x26	229x64x66	970	440	102x25x26	259x64x66	1305	592
11 1/4	286	5 1/2	1676	96x25x26	244x64x66	1010	458	108x25x26	274x64x66	1345	610
13-Inch Quick Change Gear and Standard Change Gear Lathes with Floor Legs											
13 1/4	336	4	1219	76x26x28	193x66x71	1290	586	92x28x30	234x71x76	1860	844
13 1/4	336	5	1524	88x26x28	224x66x71	1380	627	104x28x30	264x71x76	1950	885
13 1/4	336	6	1829	100x26x28	254x66x71	1470	667	116x28x30	295x71x76	2040	925
13 1/4	336	7	2134	112x26x28	284x66x71	1560	708	128x28x30	325x71x76	2130	966
13 1/4	336	8	2438	124x26x28	315x66x71	1650	749	140x28x30	355x71x76	2220	1007
15-Inch Quick Change Gear and Standard Change Gear Lathes with Floor Legs											
15 1/4	387	5	1524	88x30x30	224x76x76	1800	817	106x33x33	269x84x84	2475	1123
15 1/4	387	6	1829	100x30x30	254x76x76	1925	873	118x33x33	300x84x84	2600	1179
15 1/4	387	7	2134	112x30x30	284x76x76	2050	930	130x33x33	330x84x84	2725	1236
15 1/4	387	8	2438	124x30x30	315x76x76	2175	987	142x33x33	361x84x84	2850	1284
15 1/4	387	10	3048	148x30x30	376x76x76	2425	1100	166x33x33	421x84x84	3100	1406
16-Inch Quick Change Gear and Standard Change Gear Lathes with Floor Legs											
16 1/4	413	6	1829	100x31x32	254x79x81	2140	971	118x33x35	300x84x89	3000	1361
16 1/4	413	7	2134	112x31x32	284x79x81	2340	1061	130x33x35	330x84x89	3200	1451
16 1/4	413	8	2438	124x31x32	315x79x81	2540	1152	142x33x35	361x84x89	3400	1542
16 1/4	413	10	3048	148x31x32	376x79x81	2940	1334	166x33x35	421x84x89	3800	1724
16 1/4	413	12	3658	172x31x32	437x79x81	3340	1515	190x33x35	483x84x89	4200	1905
18-Inch Quick Change Gear and Standard Change Gear Lathes with Floor Legs											
18 1/4	463	6	1829	100x33x36	254x84x91	3100	1406	118x35x40	300x89x102	4140	1878
18 1/4	463	7	2134	112x33x36	284x84x91	3350	1520	130x35x40	330x89x102	4390	1991
18 1/4	463	8	2438	124x33x36	315x84x91	3600	1633	142x35x40	361x89x102	4640	2105
18 1/4	463	10	3048	148x33x36	376x84x91	4100	1860	166x35x40	421x89x102	5140	2331
18 1/4	463	12	3658	172x33x36	437x84x91	4600	2087	190x35x40	483x89x102	5640	2558
18 1/4	463	14	4267	196x33x36	497x84x91	5100	2313	214x35x40	543x89x102	6140	2785
24-Inch Quick Change Gear and Standard Change Gear Lathes with Floor Legs											
24 1/4	616	6	1829	100x35x32	254x89x81	2260	1025	118x33x40	300x84x102	3200	1451
24 1/4	616	7	2134	112x35x32	284x89x81	2460	1116	130x33x40	330x84x102	3400	1542
24 1/4	616	8	2438	124x35x32	315x89x81	2660	1207	142x33x40	361x84x102	3600	1633
24 1/4	616	10	3048	148x35x32	376x89x81	3060	1388	166x33x40	421x84x102	4000	1814
24 1/4	616	12	3658	172x35x32	437x89x81	3460	1569	190x33x40	483x84x102	4400	1996
36-Inch Quick Change Gear and Standard Change Gear Lathes with Floor Legs											
36 1/4	920	6	1829	100x40x31	254x102x79	2480	1125	118x35x45	300x89x114	3350	1520
36 1/4	920	7	2134	112x40x31	284x102x79	2680	1216	130x35x45	330x89x114	3550	1610
36 1/4	920	8	2438	124x40x31	315x102x79	2880	1306	142x35x45	361x89x114	3750	1701
36 1/4	920	10	3048	148x40x31	376x102x79	3280	1488	166x35x45	421x89x114	4150	1882
36 1/4	920	12	3658	172x40x31	437x102x79	3680	1669	190x35x45	483x89x114	4550	2064

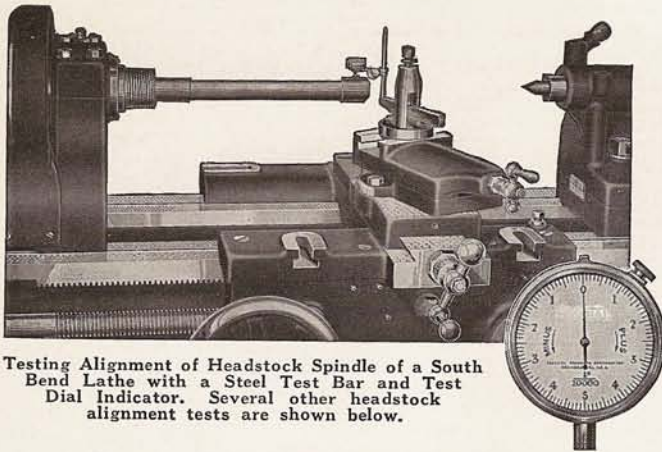
Dimensions and Weights of South Bend Bench Lathes Boxed and Packed for Ocean Shipment

Dimensiones y Pesos (Aproximados) de los Tornos South Bend Encajonados para Transporte Marítimo

Swing Over Bed Volteo sobre la Bancada		Length of Bed Largo de la Bancada		Countershaft Driven Bench Lathes Tornos del tipo para banco de transmisión por contraeje				Motor Driven Bench Lathes Tornos del tipo para banco de transmisión a motor			
				Dimensions of Case Dimensiones de la Caja		Weight of Case Peso de la Caja		Dimensions of Case Dimensiones de la Caja		Weight of Case Peso de la Caja	
				Inches	mm.	Inches	mm.	Lbs.	Kilos	Inches	mm.	Lbs.	Kilos
9-Inch Workshop Lathes with Bench Legs											
9 1/8	231	2 1/2	762	50x21x21	127x53x53	374	170	62x22x21	158x56x53	400	182
9 1/8	231	3	914	56x21x21	142x53x53	407	185	68x22x21	173x56x53	436	198
9 1/8	231	3 1/2	1067	62x21x21	158x53x53	440	200	74x22x21	188x56x53	471	214
9 1/8	231	4	1219	68x21x21	173x53x53	473	215	80x22x21	203x56x53	506	230
9 1/8	231	4 1/2	1372	74x21x21	188x53x53	506	230	85x22x21	218x56x53	541	246
9-Inch Junior, Quick Change Gear and Standard Change Gear Lathes with Bench Legs											
9 1/4	235	2 1/2	762	54x23x24	137x58x61	550	249	66x24x24	168x61x61	700	318
9 1/4	235	3	914	60x23x24	152x58x61	580	263	72x24x24	183x61x61	730	331
9 1/4	235	3 1/2	1067	66x23x24	168x58x61	610	277	78x24x24	198x61x61	760	345
9 1/4	235	4	1219	72x23x24	183x58x61	640	290	84x24x24	213x61x61	790	358
9 1/4	235	4 1/2	1372	78x23x24	198x58x61	670	304	90x24x24	229x61x61	820	372
11-Inch Quick Change Gear and Standard Change Gear Lathes with Bench Legs											
11 1/4	286	3	914	62x24x25	158x61x64	735	333	74x25x25	188x64x64	935	424
11 1/4	286	3 1/2	1067	68x24x25	173x61x64	775	352	80x25x25	203x64x64	975	442
11 1/4	286	4	1219	74x24x25	188x61x64	815	370	86x25x25	218x64x64	1015	460
11 1/4	286	5	1524	86x24x25	218x61x64	895	406	98x25x25	249x64x64	1095	497
11 1/4	286	5 1/2	1676	92x24x25	234x61x64	935	424	104x25x25	264x64x64	1135	515

Accuracy and Precision of Series "O" South Bend Lathes

64 Accuracy Tests with Precision Instruments Made on Each Size Lathe



Testing Alignment of Headstock Spindle of a South Bend Lathe with a Steel Test Bar and Test Dial Indicator. Several other headstock alignment tests are shown below.

Every South Bend Lathe is built with precision-accuracy. The highest standards of accuracy are maintained, from the planing of the lathe bed to the final inspection tests of the lathe in actual operation.

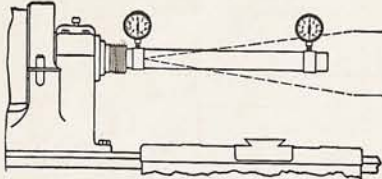
Sixty-four Major Accuracy Tests are made on various parts and units of each South Bend Lathe during the process of manufacture and when being assembled. The most accurate measuring instruments, special gauges, test bars, master templets, etc., are used constantly throughout the process of construction to insure precision and interchangeability. These tests assure the highest degree of precision-accuracy in the finished lathe.

Special Machinery and Equipment. Our plant is equipped with a large number of special machines designed for the manufacture of South Bend Lathes, exclusively. This permits us to build units of the various sizes of lathes such as the headstock, tailstock, carriage, etc., in lots of 200, 300 and 500 at a time. These methods insure accuracy, increase production and lower the cost.

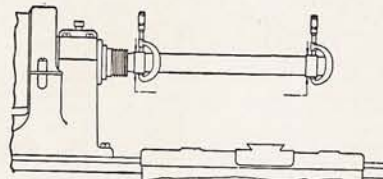
Precision-Accuracy Tests

Made on the Lathe

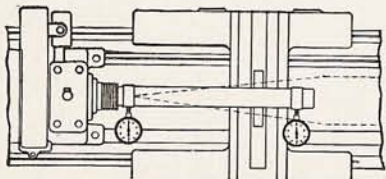
In making the dial indicator tests illustrated below, a 12-inch steel test bar, hardened and accurately ground to fit the spindle, is used. The test indicator will detect an error of one ten-thousandths of an inch. In Tests No. 7 and No. 8, the diameter of the test bar is checked with a micrometer after a trial cut has been taken.



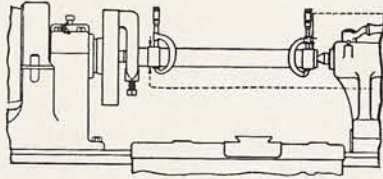
Test 1.—Testing Alignment of Headstock Spindle



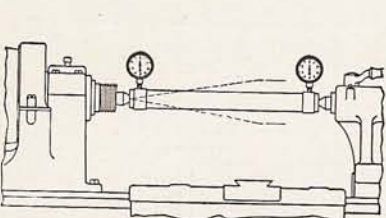
Test 7.—Micrometer Test of Headstock Spindle Alignment



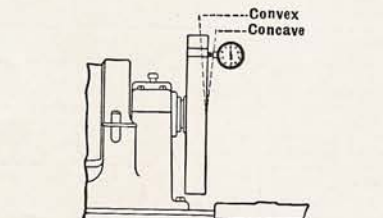
Test 2.—Testing Alignment of Headstock and Tailstock Spindle



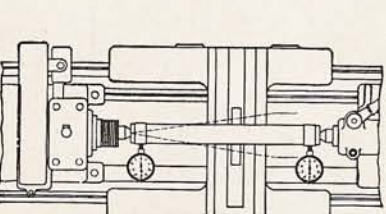
Test 8.—Micrometer Test of Headstock and Tailstock Spindle Alignment



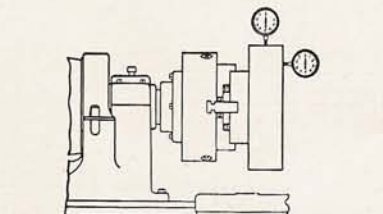
Test 3.—Testing Alignment of Tailstock Spindle with Headstock Spindle



Test 10.—Saddle Cross Slide Indicator Test on Face Plate Cut



Test 4.—Testing Alignment of Tailstock Spindle with Headstock Spindle

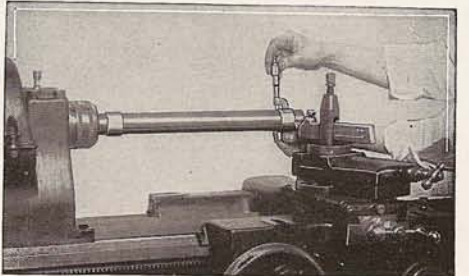


Tests 11 and 12.—Testing Accuracy of Chuck Jaws on Diameter and Face

Maximum error allowed on above tests is .001". Chucks are held to chuck manufacturers' limits.



Hand Scraping Tailstock Base to Lathe Bed



Taking Trial Cut to Test Alignment of Headstock with Lathe Bed

Factory Precision Tests

Made on South Bend Lathes

Be Sure Lathe is Perfectly Level Before Making Tests

Size of Lathe: 16 x 8" Catalog No. 92-E

Test No.	DIAL INDICATOR TESTS	Test Record
1.	Testing Alignment of Headstock Spindle, Vertical Plane	.0002" High
2.	Testing Alignment of Headstock Spindle, Horizontal Plane	.0003" Low
3.	Testing Alignment of Tailstock Spindle With Headstock Spindle, in Vertical Plane	.0002" High
4.	Testing Alignment of Tailstock Spindle With Headstock Spindle, in Horizontal Plane	.0002" Low
5.	Testing Alignment of Tailstock Spindle with Headstock Spindle in Vertical Plane (Spindle Extended)	.0003" High
6.	Testing Alignment of Tailstock Spindle with Headstock Spindle, in Horizontal Plane (Spindle Extended)	.0002" Low
Test No.	TRIAL CUT TESTS WITH LATHE IN OPERATION	Test Record
7.	Micrometer Test of Headstock and Tailstock Spindle Alignment	.0005"
8.	Micrometer Test of Headstock and Tailstock Spindle Alignment (Spindle Extended)	.0004"
9.	Micrometer Test of Headstock and Tailstock Spindle Alignment (Spindle Extended)	.0005"
10.	Saddle Cross Slide Indicator Test on Face Plate Cut	.001" Low
11.	Testing Accuracy of Chuck Jaws on Diameter	.0015"
12.	Testing Accuracy of Chuck Jaws on Face	.002"
13.	Lead Screw First Lead Test	0.11"
14.	Saddle Bearing on Cross Slide	0.11"
15.	Saddle Bearing on Lathe Bed	0.11"
	Countershaft Clutch Test	0.11"
Assembled By <i>H. J. Gremert</i> Date <i>2-10-33</i>		
Tested By <i>R. S. Young</i> Date <i>2-10-33</i>		
SOUTH BEND LATHE WORKS		

FACTORY TEST CARD

The illustration above is a reproduction of a factory test card on which records are kept of the final inspection tests of each South Bend Lathe. This test card is filed in our office for permanent record when the lathe is shipped.

Space Required for Installing South Bend Lathes

Applying to All Sizes and Types of Bench and Floor Leg Lathes

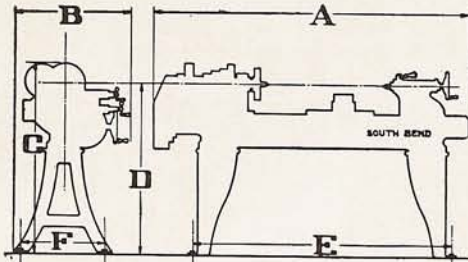


Fig. 1. Floor Leg Lathe, Countershaft Drive

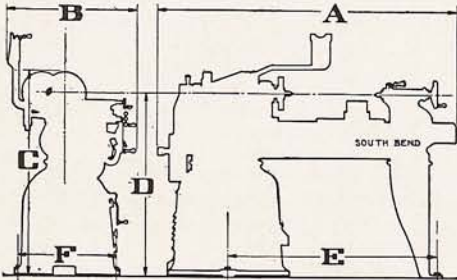


Fig. 2. Underneath Belt Motor Drive Lathe

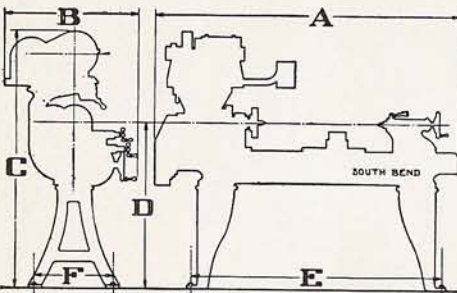


Fig. 3. Floor Leg Lathe, Silent Motor Drive

To find the space required for installing a particular size and type of South Bend Lathe, consult the drawings at left and the table below. "A" equals the over-all length; "B" equals the width; "C" the height, etc.

The most popular size bed length is shown with each size lathe. The space required for a lathe with longer bed length than that given is the same in every dimension except length of lathe. By adding the extra inches to the length listed, you have the length of the lathe desired.

Bench Lathes take up approximately the same space on a bench as a floor leg lathe, of similar size, does on the floor.

Space Required for Various Sizes and Types of Lathes

Size of Lathe Inches	Length of Bed Feet	Floor Space Required		Height of Lathe Inches	Height to Center Inches	Approx. Distance Between Bolts in Inches	
		Length of Lathe Inches	Width of Lathe Inches			E	F
		A	B	C	D	E	F

Floor Leg Lathes—Countershaft Drive (See Fig. 1)

"Workshop"	3	39 $\frac{3}{8}$	18 $\frac{1}{2}$	44 $\frac{1}{2}$	41 $\frac{17}{32}$	34 $\frac{7}{8}$	16
9	3	41	20 $\frac{3}{4}$	44 $\frac{1}{2}$	41	35	18
11	4	52 $\frac{1}{2}$	22 $\frac{1}{2}$	44 $\frac{1}{2}$	41	45	18 $\frac{3}{4}$
13	5	64 $\frac{3}{4}$	26 $\frac{1}{2}$	45 $\frac{1}{2}$	41 $\frac{1}{2}$	52 $\frac{1}{2}$	21
15	5	65 $\frac{1}{2}$	27 $\frac{1}{2}$	46 $\frac{1}{2}$	42	50 $\frac{1}{2}$	21
16	6	77 $\frac{3}{4}$	29 $\frac{1}{2}$	46 $\frac{3}{4}$	42	63 $\frac{1}{2}$	20 $\frac{3}{4}$
18	8	103 $\frac{1}{4}$	31 $\frac{1}{2}$	47 $\frac{1}{2}$	42	87 $\frac{1}{2}$	20 $\frac{1}{2}$
16-24	8	102	29 $\frac{1}{2}$	48 $\frac{1}{2}$	43	75 $\frac{3}{8}$	21 $\frac{3}{4}$
36	8	102	29 $\frac{1}{2}$	46 $\frac{3}{4}$	42	75 $\frac{3}{8}$	21 $\frac{1}{2}$

Underneath Belt Motor Driven Lathes (See Fig. 2)

9	3	45	24	44 $\frac{1}{2}$	41	33	16 $\frac{3}{4}$
11	4	56 $\frac{1}{2}$	26 $\frac{1}{4}$	44 $\frac{3}{4}$	41	42 $\frac{1}{4}$	19
13	5	68 $\frac{1}{2}$	28	45 $\frac{1}{2}$	41 $\frac{1}{2}$	50 $\frac{1}{4}$	19 $\frac{1}{2}$
15	5	70	30	46 $\frac{1}{2}$	42	47	22 $\frac{1}{2}$
16	6	83	30	46 $\frac{3}{4}$	42	59 $\frac{1}{4}$	22 $\frac{1}{2}$
18	8	110	44 $\frac{1}{2}$	47 $\frac{1}{2}$	42	73 $\frac{3}{4}$	22 $\frac{3}{4}$

Floor Leg Lathes—Silent Motor Drive (See Fig. 3)

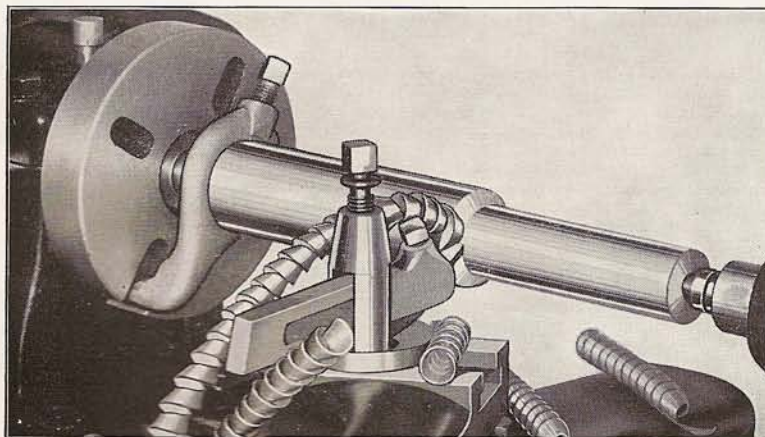
9	3	41	23 $\frac{3}{4}$	60 $\frac{1}{2}$	41	35	18
11	4	52 $\frac{1}{2}$	26	62	41	45	18 $\frac{3}{4}$
13	5	64 $\frac{3}{4}$	28 $\frac{1}{2}$	63 $\frac{3}{4}$	41 $\frac{1}{2}$	52 $\frac{1}{2}$	21
15	5	65 $\frac{1}{2}$	32	65 $\frac{1}{2}$	42	50 $\frac{1}{4}$	21
16	6	77 $\frac{3}{4}$	34 $\frac{3}{4}$	67 $\frac{1}{4}$	42	63 $\frac{1}{2}$	20 $\frac{3}{4}$
18	8	103 $\frac{1}{4}$	39 $\frac{1}{4}$	69 $\frac{1}{2}$	42	87 $\frac{1}{2}$	20 $\frac{1}{2}$
16-24	8	102	34 $\frac{3}{4}$	67 $\frac{3}{4}$	43	75 $\frac{3}{8}$	21 $\frac{3}{4}$
36	8	102	36	67 $\frac{3}{4}$	42	75 $\frac{1}{4}$	21 $\frac{3}{4}$

The Cutting Power of South Bend Lathes

Depth of Chip which can be Taken by Lathes of Various Sizes

The machining power of South Bend Lathes is shown in the chart below, which lists the power of the various size Countershaft Drive and Motor Drive Lathes when in operation machining a bar of machinery steel. The illustration

below shows a shaft of machinery steel being turned between centers in a 16-inch South Bend Lathe. The chip taken is $\frac{3}{8}$ " in depth, which reduces the diameter of the shaft $\frac{3}{4}$ " in one cut.



Close-up of 16" Lathe Reducing Diameter of Machinery Steel Bar $\frac{3}{4}$ -inch

Chart Showing Cutting Power of South Bend Lathes

Size and Type of Lathe	Reduces diameter of steel shaft in one cut
9" "Workshop"	$\frac{3}{8}$ inches
9" Junior	$\frac{3}{8}$ inches
9" Quick & Standard	$\frac{3}{8}$ inches
11" Quick & Standard	$\frac{1}{2}$ inches
13" Quick & Standard	$\frac{5}{8}$ inches
15" Quick & Standard	$1\frac{1}{16}$ inches
16" Quick & Standard	$\frac{3}{4}$ inches
18" Quick & Standard	$\frac{7}{8}$ inches

Get One or More of These Valuable Books

Listed below are 9 of the most interesting and valuable reference books covering all classes of lathe work and showing application of lathe in the latest shop practice in metal working shops.

The mechanic and the shop owner planning on installing a lathe in the shop will find these books and bulletins of great value. The experienced machinist, the mechanic and the apprentice will appreciate the modern, technical information they contain. Write to us for the book in which you are interested. Copies are mailed, postpaid, on request.

"How to Run a Lathe"—32nd Edition—25c

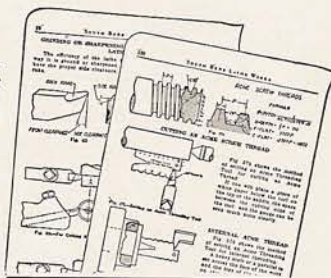
Copy Free with Each Lathe

"How to Run a Lathe" is an authoritative and instructive manual completely covering the care and operation of a back-gear, screw cutting lathe and gives the fundamentals of lathe operation in detail with illustrations. The book contains 160 pages, 5½" x 8", and more than 300 illustrations.

Students in educational institutions and apprentices in industrial plants, railroads and machine shops use "How to Run a Lathe" as a textbook. The book is the most popular text on lathe work in the world.

One and one-half million copies are in use throughout the United States and all countries throughout the entire world. Editions have been printed in English, Spanish, Portuguese and Chinese.

A copy of "How to Run a Lathe" will be mailed anywhere in the world postpaid, 25c for the paper bound copy and 75c for the leatherette bound copy. Coin or stamps of any country accepted.



Two Sample Pages.

PARTIAL LIST OF CONTENTS

Operating Automatic Feed
Reading Micrometer Calipers
Using Outside and Inside Calipers
Aligning Lathe Centers
Drilling, Boring, Reaming, Tapping
Grinding and Setting Lathe Tools
300 Shop Kinks

Turning and Boring Tapers
Grinding and Milling Work
Chucks and Face Plates
Cutting Speeds and Feeds
How to Set up the Lathe
How to Lay Out a Shop
How to Level a Lathe

How to Hang a Countershaft
Calculating Size and Speed of Pulleys
How to Lace a Belt
Methods of Centering Work
Tables of Information for Machinists
Screw Thread Cutting
Information on Gears

These Valuable Books Sent Free, Postpaid

"Auto Service and Electric Shops"

—Bulletin No. 6-G is an illustrated 12-page 8½"x11" book showing the latest approved methods and equipment for handling six of the most important service jobs in the auto service and electrical shop, such as servicing armatures, grinding valves, finishing semi-machined pistons, making bushings and sleeve bearings, etc. A copy of this interesting book will be sent to any one interested, free, postpaid.

"The Home Workshop"

—Booklet No. 11-W, contains a wealth of information for the homeshop owner. Shows actual photographs of homeshops, layouts of equipment for homeshops, contains list of projects that can be built in the homeshop, and contains an entire section devoted to information on where supplies, blueprints and other materials can be obtained. Every homeshop owner should have a copy. Sent free, postpaid.

"Modern School Shops"

—Booklet No. 55-W, is a 24-page 6" x 9" bulletin containing actual photographs of some of the most outstanding school machine shops throughout the world. This bulletin will be of interest and of value to every vocational director, supervisor and instructor in shop work. A copy will be sent postpaid, to any school official.

"Interesting Installations of South Bend Lathes"

—Booklet No. 71. This 24-page booklet size 6"x9" contains a series of illustrated descriptions of some of the more interesting and unusual shops all over the world where South Bend Lathes are an important part of the mechanical equipment. The installations include manufacturing plants, U. S. Government shops, scientific laboratories, and large and small shops of all kinds. Sent postpaid, no charge, on request.

"What Users Say About Their South Bend Lathes"

—Booklet No. 4-N, is a 24-page book, 6" x 9" containing actual photographs of South Bend Lathe installations and actual reproductions of letters we have received from hundreds of customers telling of the results they have received in their own shops with South Bend Lathes. A copy of this interesting book will be sent to anyone interested, free, postpaid.

"Factory Views of South Bend Lathe Works"

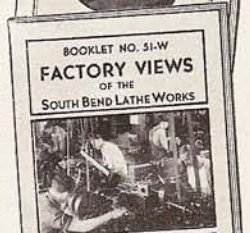
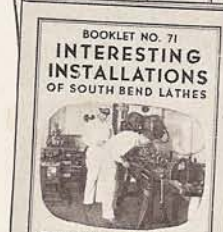
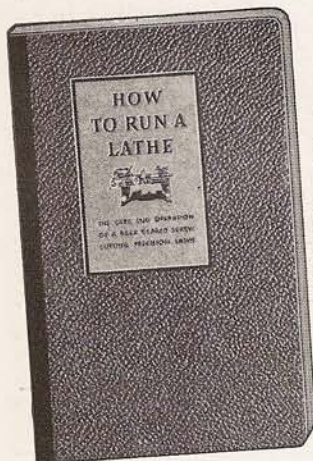
—Booklet No. 51-W, is the next thing to a personal visit to our plant. This 24-page, 6" x 9" book contains actual photographs of the Manufacturing, Engineering and Assembling Departments in our factory, showing South Bend Lathes during the various stages of manufacture. A copy will be sent free, postpaid, to anyone interested in lathes.

"Easy Payment Plan"

—Booklet No. 10-N, contains complete information on the South Bend Easy Payment Plan of purchasing all sizes and types of South Bend Lathes, attachments and tools. Write for a copy of this booklet and use the same convenient terms that ten thousand and more South Bend Lathe customers have used in buying their equipment. Sent free postpaid, to any address.

"Exporting to 96 Countries"

—Booklet No. 96-W is not only interesting but a very valuable book to those interested in lathes and located outside the United States. In this book will be found complete information on the methods used in handling export shipments, transportation expenses, insurance charges, ways to remit money, etc. A copy will be mailed free of charge to any address outside continental United States, postpaid.



South Bend Easy Payment Terms

For the Purchase of South Bend Lathes, Attachments and Tools

12 to 19 Months to Pay

Any of our customers in the U. S. A. may install any size or type South Bend Lathe with attachments, chucks and tools on the convenient South Bend Easy Payment Plan. You make one small down payment with the order and take care of the balance in regular monthly payments.

You Deal Direct with Factory

All Easy Payment accounts are carried in our own office and we have no connections with finance corporations. You merely mail your order, with check for down payment, and when received, the lathe will be promptly shipped.

Down Payment and Monthly Payments

The Easy Payment Schedule at right shows the amount of down payment, the amount of each monthly payment, the amount of the financing charge, and the number of months to pay, on all orders for lathes and equipment.

The first monthly payment will not be due until thirty days after the lathe has been shipped to you.

No Increase in Prices

The South Bend Easy Payment Plan is economical, as our low financing charge covers the entire cost for the service rendered. There is no increase in price and there is no sacrifice in quality when you purchase a South Bend lathe on this plan. We manufacture but one quality lathe and sell it at the same low price to all.

How to Use the Schedule

In the first column of the schedule of easy payment terms shown at right, find the amount nearest the total price of your order. On the same line you will find the amount of the down payment, the amount for monthly payments, the amount for financing the balance, and the number of monthly payments.

Easy Payment Plan Example

Here is an example of using the Easy Payment Plan Schedule in buying a No. 92-E, 16" x 8' Series "O" South Bend Quick Change Gear Lathe with chucks and tools:

Example Order

1 No. 92-E, 16" x 8' Series "O" South Bend Quick Change Gear Lathe, Countershaft Drive (complete with countershaft and regular lathe equipment) as listed on page 6.	
Price f.o.b. cars South Bend, Indiana.....	\$580.00
1 No. 4410, 10" 4-Jaw Independent Lathe Chuck with four reversible jaws	47.00
Fitting chuck to lathe including chuck back.....	9.00
1 No. 1203, 1" 3-Jaw Drill Chuck.....	12.00
1 No. 716, Drill Chuck Arbor.....	1.50
1 No. 853-S Turning Tool, straight shank.....	3.00
1 set (4) Malleable Lathe Dogs, 1/2", 3/4", 1", 1 1/2".....	3.15
TOTAL f.o.b. cars South Bend, Indiana.....	\$655.65

Explanation of Above Order

Total Amount of Above Order (see column 1 of Schedule)...	\$655.65
Amount of Down Payment (see column 2 of Schedule).....	135.00
Balance Due	\$520.65
Amount for Financing Balance (see column 4 of Schedule)...	50.00
Amount to be paid in Monthly Installments.....	\$570.65
Payments Each Month (see column 3 of Schedule).....	37.00
Number of Months to Pay (see column 5 of Schedule)...	16 Months

Schedule of Easy Payment Terms

If Total Price of Your Order Amounts to (1)	Amount of Down Payment (2)	Payment Each Month (3)	Amount to Add for Financing (4)	No. of Payments* (5)
\$ 70.00 to \$ 80.00	\$19.00	\$6.50	\$6.00	10
80.01 to 90.00	21.00	7.00	6.50	10
90.01 to 100.00	24.00	7.00	7.00	11
100.01 to 110.00	28.00	7.00	7.50	12
110.01 to 120.00	29.00	8.00	7.50	12
120.01 to 130.00	30.00	8.50	8.00	12
130.01 to 140.00	31.00	9.00	8.50	12
140.01 to 150.00	32.00	10.00	9.00	12
150.01 to 175.00	35.00	11.50	10.00	12
175.01 to 200.00	40.00	13.00	11.50	12
200.01 to 225.00	45.00	15.50	13.00	12
225.01 to 250.00	50.00	17.00	14.50	12
250.01 to 275.00	55.00	18.50	16.00	12
275.01 to 300.00	60.00	19.50	17.50	12
300.01 to 325.00	65.00	22.00	19.00	12
325.01 to 350.00	70.00	24.00	20.50	12
350.01 to 375.00	75.00	25.00	23.50	13
375.01 to 400.00	80.00	26.00	25.00	13
400.01 to 450.00	90.00	26.00	29.00	14
450.01 to 500.00	100.00	29.00	32.50	14
500.01 to 550.00	107.50	30.50	38.00	15
550.01 to 600.00	115.00	33.50	41.00	15
600.01 to 650.00	125.00	34.00	47.00	16
650.01 to 700.00	135.00	37.00	50.00	16
700.01 to 750.00	145.00	40.00	54.00	16
750.01 to 800.00	155.00	40.00	61.00	17
800.01 to 850.00	165.00	42.50	65.00	17
850.01 to 900.00	175.00	45.00	69.00	17
900.01 to 950.00	185.00	45.00	77.00	18
950.01 to 1000.00	195.00	48.00	81.00	18
1000.01 to 1100.00	210.00	52.00	87.50	18
1100.01 to 1200.00	230.00	54.00	100.00	19
1200.01 to 1300.00	250.00	58.50	110.00	19
1300.01 to 1400.00	270.00	63.00	120.00	19

*The approximate number of payments is given. In some cases it will be one more or less than the number listed because of the difference in the total order.

Write for Itemized Quotation

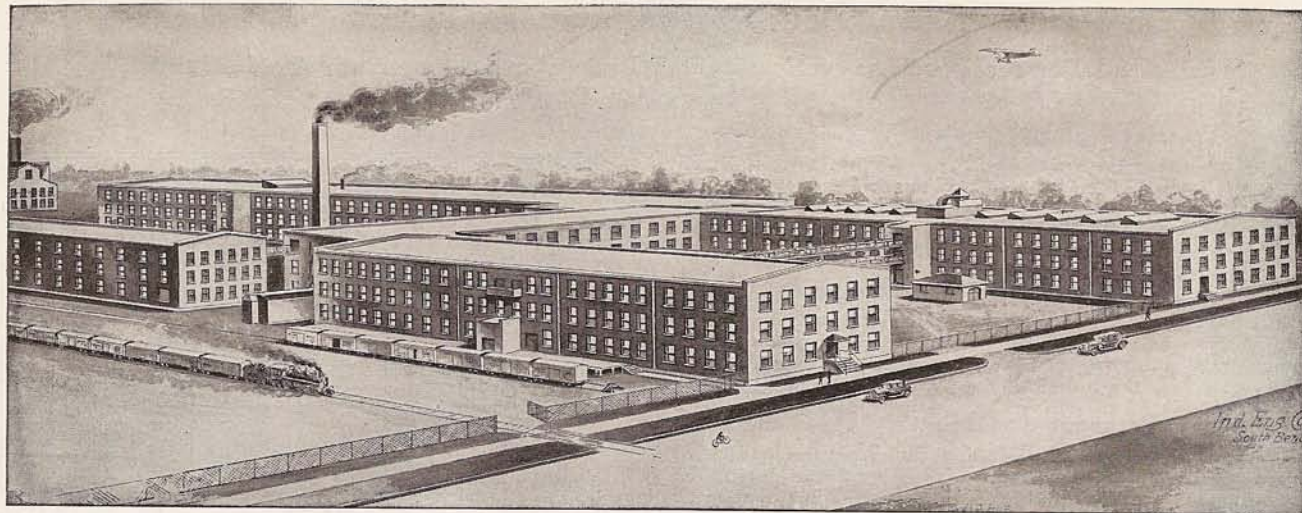
If you are interested in any size or type of lathe and you are not sure of what the price of the lathe and attachments would amount to, write us and we will send you an itemized quotation on the size and type of lathe and attachments in which you are interested. The itemized quotation will show the cash price of the total order. If you wish to buy on the Easy Payment Plan, it will show the down payment, monthly payments and the number of months to pay. This will put you under no obligation to us whatever, as you can then decide whether or not you wish to purchase.

Factory Display and Demonstration Floor

The illustration at the left shows the Factory Display and Demonstration Floor of the South Bend Lathe Works. Here the various sizes and types of lathes shown throughout this catalog are set up ready to operate for demonstration and inspection. Attachments and Tools for handling Manufacture, Tool Room Work, Special Machine Jobs, Automotive Service, etc., are also fitted to lathes and shown in this room.

This display room is open every week day from 8 A. M. until 5 P. M. and an expert machinist is in attendance to demonstrate lathes and attachments at all times. Visitors are always welcome.

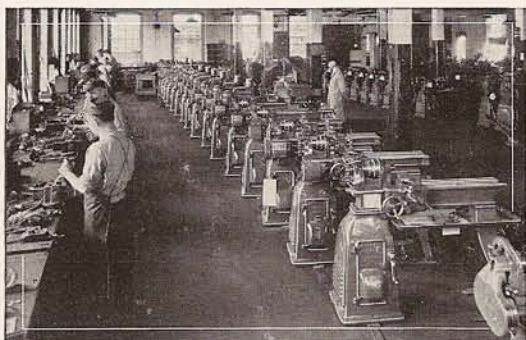




Factory Where South Bend Lathes Are Built

The South Bend Lathe Works, an illustration of which is shown above, was established in South Bend, Indiana, November 1, 1906, and has operated continuously for thirty years under the same management. The ground area is slightly more than four (4) acres and the floor space of the buildings is about 180,000 square feet.

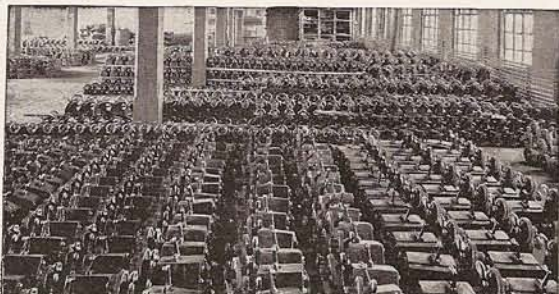
Visit Our Factory When in South Bend
 South Bend is located in northern Indiana, eighty-six (86) miles east of Chicago on several railroads and national highways. We have an excellent exhibit room in our factory where all types of South Bend Lathes are demonstrated. Visitors are always welcome.



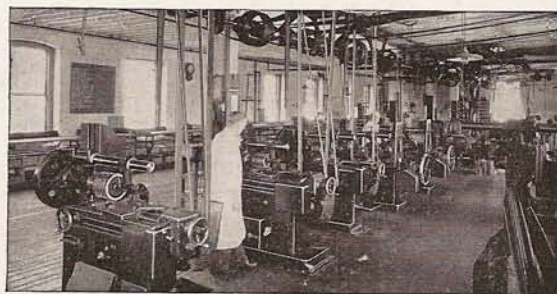
A view of the assembling line. Twenty-five lathes of one size are assembled at one time



A group of South Bend Lathes in our plant on production work



Headstocks, tailstocks, carriages, gear boxes, etc., carried in stock ready for assembly on the lathe



Group of Gear Cutting Machines used for Cutting Gears for South Bend Lathes



Employees and Office Force of the South Bend Lathe Works

INDEX

Series "O" South Bend Precision Lathes

Countershaft and Motor Drive Types

Quick Change Gear and Standard Change Gear Lathes

18-inch South Bend Floor Leg Lathes, all types	2-5
16-inch South Bend Floor Leg Lathes, all types	6-9
15-inch South Bend Floor Leg Lathes, all types	10-13
13-inch South Bend Bench and Floor Leg Lathes, all types.....	14-17
11-inch South Bend Bench and Floor Leg Lathes, all types.....	18-21
9-inch South Bend Bench and Floor Leg Lathes, all types.....	22-25

Junior and "Workshop" Lathes

9-inch Junior Bench and Floor Leg Lathes, all types.....	26-29
9-inch "Workshop" Bench and Floor Leg Lathes, all types.....	30-35

Special Lathes and General Service Lathes

36-inch Brake Drum and General Service Lathes	46
16-24" and 36" General Purpose Lathes	48

Attachments for South Bend Lathes

Carriage Stops, Micrometer and Plain.....	52	Oil Pump, Reservoir and Pipe Fittings....	55
Collets for Round, Square, Hexagonal Work	51	Raising Blocks for Lathes.....	61
Draw-in Collet Chuck Attachments.....	50	Special Change Gear Equip. for Fine Threads	61
Gear Cutting Attachment for Lathes.....	56	Indexing Attachments	56
Grinders for Lathes, Electric.....	54	Step Chuck and Closer.....	51
Holding Fixtures for Diamond Dresser....	54	Tailstock, Hand Lever Type.....	56
Metric Transposing Gear Attachment.....	66	Taper Attachment, Graduated.....	52
Milling and Keyway Cutting Attachments..	53	Thread Dial Indicator.....	52
Milling Cutters and Arbors.....	53	Tool Slides, Double.....	56
Oil Pans and Chip Pans for Lathes.....	55	Turrets for Lathes.....	56, 62

Chucks, Tools and Accessories for South Bend Lathes

Benches for Bench Lathes.....	62	Chucks: Drill Chucks and Arbors.....	58-59
Center Rest, Follower Rest, Face Plate and Thread Cutting Stop for 9" Lathes.....	61	Chuck and Tool Assortments.....	59
Centers (Lathe): Spur, Cup, Drill Pad, Screw Center, Crotch Center, etc.....	61	Pipe Centers, Morse Taper Sleeve, etc....	61
		Tool Holders, Dogs, Boring Tools.....	60-61
		Wood Turning Accessories.....	57

Manufacturing: Lathe equipment for Industrial and Manufacturing Plants.....	55
Automotive: Lathe equipment for Servicing Automobiles, Buses and Trucks.....	47, 63
Export Information on South Bend Lathes: Shipping Costs, Weights, Dimensions, etc.....	64-67

General Information

Underneath Belt Motor Drive Mechanism.....	44-45
Silent Motor Drive Mechanism.....	36
Motors and Reversing Switches.....	36
Belt Guard for Motor Drive Lathes.....	36
Specifications and Features of South Bend Lathes	37-42
Screw Threads Cut on the South Bend Lathe.....	43
Accuracy and Precision of South Bend Lathes.....	68
Space Required for Installing Lathes.....	69
Erection Plans, Shipping Information, Freight Rates	49
Selecting Correct Size Lathe.....	49
Factory Guarantee and Thirty Day Free Trial.....	1
Users of South Bend Lathes.....	Cover 4
Easy Payment Terms for Purchase of Lathes and Attachments	71
Factory Where South Bend Lathes Are Built.....	72

A Partial List of Industries Using South Bend Lathes

Names taken from a list of more than 70,000 users

Aircraft Industry

Pan-American Airways
Universal Aviation Corp.
Fokker Aircraft Corp. of Amer.
Goodyear Zeppelin Corp.
Pratt & Whitney Aircraft Co.

Machinery Industry

Champion Shoe Machinery Co.
Simplicity Manufacturing Co.
Edlund Machinery Co., Inc.
Singer Mfg. Co., Inc.
American Laundry Machinery Co.
The Lester & Walsey Co., Inc.
Burroughs Adding Machine Co.

Automobile Manufacturers

Auburn Automobile Co.
Buick Motor Co.
Cadillac Motor Car Co.
Chevrolet Motor Co.
Chrysler Corp.
Ford Motor Co.
Hudson Motor Co.
Lincoln Motor Car Co.
Nash Motors Co.
Olds Motor Works
Packard Motor Car Co.
Pierce-Arrow Motor Car Co.
Reo Motor Car Co.
Studebaker Corp. of America
White Motor Company

Accessory Manufacturers

A. C. Spark Plug Co.
Arrow Head Steel Products Co.
Bendix Aviation Corp.
Budd Wheel Co.
Firestone Tire & Rubber Co.
Fisher Body Corp.
Goodyear Tire & Rubber Co.
Trico Products Corp.

Electric Motor Manufacturers

General Electric Co.
Emerson Electric Mfg. Co.
Wagner Electric Corp.
Allis-Chalmers Mfg. Co.
Westinghouse Elec. & Mfg. Co.

Steel Industry

Bethlehem Steel Co.
Cambria Steel Co.
Carnegie Steel Co.
Inland Steel Co.
Steel & Tube Co. of America
U. S. Steel Corp.
Crucible Steel Co.
Youngstown Sheet & Tube Co.

Tool and Die Shops

Ajax Tool & Die Co.
Arrow Tool & Reamer Co.
Buhr Machine Tool Co.
Doehler Die Casting Co.
Elco Tool & Screw Corp.
Eureka Tool & Die Co.

Radio Manufacturers

Atwater Kent Mfg. Co.
Crosley Radio Corp.
Majestic Radio Co.
Philco Radio & Television Corp.
Radio-Victor Corp.
Sparks-Withington Co.
Radio Corp. of America

Broadcasting Stations

WEAF—New York City
KOA—Denver, Colorado
WHK—Cleveland, Ohio
WBBM—Chicago, Illinois
WMAQ—Chicago, Illinois

Mining Industry

Anaconda Copper Mining Co.
Alaska Juneau Gold Mining Co.
Crescent Mining Co.
Morris Run Coal Mining Co.

Paper Industry

American Stationery Co.
Heco Envelope Co.
International Paper Co.
Kalamazoo Vegetable Parchment Co.
Keystone Paper Products, Inc.

Motion Picture Industry

Agfa-Anso Corp.
DuPont VitaColor Corp.
Warner Bros. Pictures, Inc.



Oil Industry

Atlantic Refining Co.
Ethyl Gasoline Corp.
Gulf Refining Co.
Phillips Petroleum Co.
Shell Oil Co.
Sinclair Refining Co.
Standard Oil Co.
Sun Oil Co.

Scientific

Instrument Manufacturers

Acme International X-Ray Co.
Aurora X-Ray Corp.
Eastman Kodak Co.
General Electric X-Ray Corp.
Leeds & Northrup Co.
Eugene Dietzgen Co.

U. S. Government

U. S. Bureau of Standards
U. S. Coast and Geodetic Survey
U. S. Geological Survey
U. S. Army
U. S. Signal Corps
U. S. Navy Yards and Vessels
U. S. Post Office
U. S. Capitol (Building)
U. S. Marine Corps
U. S. Naval Observatory
U. S. Veterans Bureau
U. S. Coast Guard
Smithsonian Institution
West Point Military Academy

Textile Industry

Amoskeag Mfg. Co.
Chenango Textile Corp.
Patchogue—Plymouth Mills Corp.
Southern Worsted Corp.
Clinton Cotton Mills
Atlantic Mills
American Enka Corp.

Shipbuilders

American Shipbuilding Co.
Union Shipbuilding Co.
Bethlehem Shipbuilding Corp., Ltd.
Federal Shipbuilding & Dry Dock Co.
Newport News Shipbuilding & Dry Dock Co.
Pusey & Jones Corp.
Sun Shipbuilding & Drydock Co.

Steamship Companies

American Hawaiian S. S. Co.
Dollar Steamship Lines
Munson Steamship Lines
Panama Mail Steamship Co.
Peninsular & Occidental S. S. Co.
Pittsburgh Steamship Co.
Wilson Transit Co.

Chemical Industry

American Cyanamid Co.
Climalene Co.
Davis, H. B., Co.
Dow Chemical Co.
E. I. duPont de Nemours & Co., Inc.
Lambert Pharmacal Co.
Squibbs & Sons, Inc., E. R.
Victor Chemical Works, Inc.

Printing Industry

Chicago Tribune
New York Times
Philadelphia Inquirer
Popular Mechanics Magazine
Miami Herald
Florida Times Union
Buffalo Courier Express
Cleveland Plain Dealer

Office Equipment Mfrs.

Parker Pen Co.
Ditto, Inc.
L. C. Smith & Corona Typewriter, Inc.

Railroads

New York Central R. R.
A. T. & S. F. R. R.
Michigan Central R. R.
Pennsylvania R. R.
Union Pacific R. R.
Northern Pacific R. R.
Southern Pacific R. R.
Great Northern Railway Co.
Baltimore & Ohio R. R.

Appliance Manufacturers

Frigidaire Corp.
The Hoover Co.
Kelvinator Corp.
Serval, Inc.
Gibson Refrigerator Co.

Power Companies

Brooklyn Edison Co., Inc.
Commonwealth-Edison Co.
Detroit Edison Co.
Minnesota Power & Light Co.
Georgia Power Company