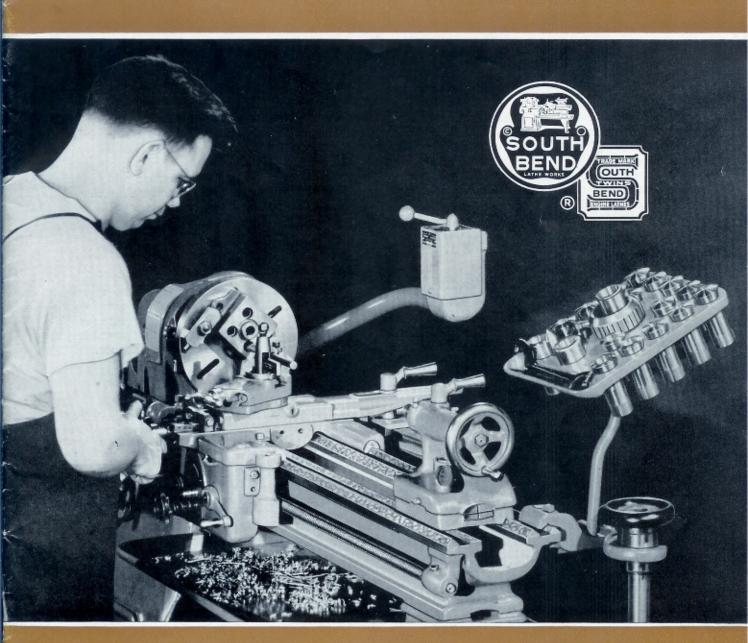
ATTACHMENTS AND ACCESSORIES for

SOUTH BEND LATHES DRILL PRESSES AND SHAPERS



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SOUTH BEND LATHE WORKS

Building Better Tools Since 1906 425 E. MADISON ST., SOUTH BEND 22, IND., U.S.A. Who is South Bend Lathe Works?



It is a machine tool company with offices and factory at South Bend, Indiana. Founded in 1906 and incorporated in 1914 it remained a closely held enterprise until its stock was listed in 1936 on one of the predecessor exchanges of the Midwest Stock Exchange, Chicago, where it is now listed. The South Bend Lathe Works is now owned by a diversified group of shareholders residing in all parts of the United States.

"South Bend" machine tools are used throughout the world. Such wide acceptance is the result of a long series of progressive developments to which the best efforts of the South Bend Lathe Works have been devoted for more than forty years. Thus every "South Bend" purchaser receives a product backed by an organization which is not only financially sound but strong in character, and rich in the machine tool tradition as well.

Attachments and Accessories for South Bend Machine Tools

Many practical attachments and accessories designed especially for South Bend machine tools are shown in this catalog. Most of them may be ordered, either with the machine or later. This complete line of attachments and accessories enables South Bend machines to handle many operations which otherwise might require special fixtures or machinery. Much time and expense can often be saved by selecting appropriate equipment. A complete assortment of chucks and tools is essential for efficient lathe operation. Complete equipment is just as important for the drill press and shaper.

Guarantee

The South Bend Lathe Works warrants its products to conform to or excel the specifications set forth in the manufacturer's catalogs in use at the time of sale and reserves the right, at its own discretion, without notice and without making similar changes in articles previously manufactured, to make changes in materials, design, finish, or specifications. The South Bend Lathe Works warrants products of its own factory against defects of material or workmanship for a period of

one year from the date of sale. The manufacturer's liability under this warranty shall be limited to replacing, free of charge, f.o.b., South Bend, Indiana, any such parts proving defective within the period of this warranty but the manufacturer will not be responsible for transportation charges or consequential damages. The South Bend Lathe Works makes no warranty with respect to electrical equipment or other Purchased Extras described in the manufacturer's catalogs.

How to Order Attachments

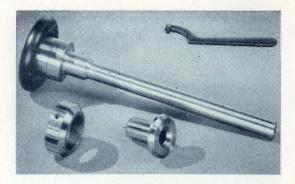
When ordering attachments, chucks, or tools for South Bend Lathes, always state the swing of the lathe and also give the serial number of the lathe, which is stamped on top of the lathe bed at the tailstock end between the front V-way and the flat way. When ordering attachments for a South Bend 14° Drill Press, state the model number which will be found on the switch plate attached to the left side of the drill press head. When ordering attachments for the South Bend 7° Shaper, give the model number which is stamped on the left side of the column near the base.



SOUTH BEND LATHE WORKS

Building Better Tools Since 1906

425 E. MADISON ST., SOUTH BEND 22, INDIANA, U.S. A.



Handwheel Collet Attachment

This attachment will save you time and trouble in mounting small work in the lathe. It is used for chucking small parts, for production, toolroom, and maintenance operations, especially when extremely accurate centering is required.

Bar and tube stock can be fed through the hollow draw bar which operates the collet. When the handwheel is tightened, the collet automatically grips and centers the work. Equipment includes steel draw-bar with handwheel, spindle nose cap, spanner wrench, and heat-treated steel closing sleeve. Collets are not included. See page 4.

Catalog Number	Size of Lathe	Collet Used	Max. Collet Cap.	Ship- ping Weight
CL4306N	9" and Series 900	No. 3	1/9"	5 lbs.
CL4306K	Light Ten	No. 6K	36"	5 lbs.
CL4306R	10"-11%" Collet	No. 2	11/6"	8 lbs.
CL4306L	10"-1" Col. & Ser. 1000	No. 5	1"	10 lbs.
CL4306Q	13"-1" Collet	No. 5	1"	14 lbs.
CL4306M	141/9"-1" Collet	No. 5	1"	14 lbs.
CL4306H	16", 16-24", & 2-H	No. 5	1"	15 lbs.

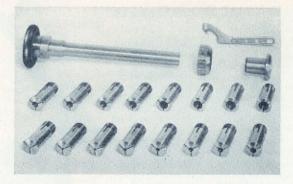


Handlever Collet Attachment

Speed and accuracy are combined in the Handlever Collet Attachment. Without stopping the lathe spindle, the collet can be released, bar stock fed through the spindle, and the collet tightened again. The gripping action of the collet is adjustable and can be set for any desired tension. For maximum production on bar stock use this attachment with the Pneumatic Bar Feed shown on page 12.

Equipment includes adjustable chuck closing mechanism and hollow draw-bar, spindle nose cap, spanner wrench for nose cap and heat-treated steel closing sleeve. Collets are not included. See page 4. This attachment should be ordered with the lathe so that it can be properly fitted to the lathe and tested before it is shipped from the factory.

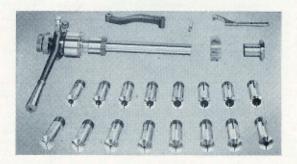
Catalog Number	Size of Lathe	Collet Used	Max. Collet Cap.	Ship- ping Weight
CL5206N	9" and Series 900	No. 3	34"	10 lbs.
CL5206K CL5206R	Light Ten 10"-11%" Collet	No. 6K No. 2	1000 11000 10000	10 lbs. 19 lbs.
CL5206L	10"-1" Col. & Ser. 1000	No. 5	1016	20 lbs.
CL5206Q	13"-1" Collet	No. 5	1"	25 lbs.
CL5206M	14 1/2"-1" Collet	No. 5	1"	31 lbs.
CL5206H	16", 16-24", & 2-H	No. 5	1"	32 lbs.



Handwheel Collet Attachment Complete With Collets

You can save time and money by ordering your collet attachment complete with collets as listed below. Price includes Handwheel Collet Attachment with complete set of steel collets in sixteenths, in sizes from \mathcal{V}_{16} ° capacity up to the maximum capacity shown in table. Each collet packed in individual plastic case. Additional collet sets in 32nds and 64ths may be selected from page 4.

Catalog Number	Size of Lathe	Number of Collets	Max. Collet Cap.	Ship- ping Weight
CL5415N	9" and Series 900	8	36"	9 lbs.
CL5415K	Light Ten	10	3/8"	10 lbs.
CL5415R	10"-11/6" Collet	11	11/6"	24 lbs.
CL5415L	10"-1" Col. & Ser. 1000	16	1"	28 lbs.
CL5415Q	13"-1" Collet	16	1"	33 lbs.
CL5415M	141/2"-1" Collet	16	1"	35 lbs.
CL5415H	16", 16-24", & 2-H	16	1"	35 lbs.



Handlever Collet Attachment Complete With Collets

To be complete, your collet equipment should include a set of collets in sixteenths. Delay caused by waiting for a missing collet size can be more costly than the complete equipment. Price includes handlever collet attachment with a complete set of steel collets in sixteenths, in sizes from ½6° capacity up to the maximum capacity shown in table. Each collet packed in individual plastic case. Additional collet sets in 32nds and 64ths may be selected from page 4. Also collets for square and hexagonal work.

Catalog Number	Size of Lathe	Number of Collets	Max. Collet Cap.	Ship- ping Weight
CL5416N	9" and Series 900	8	1/2"	14 lbs.
CL5416K	Light Ten	10	1/8"	15 lbs.
CL5416R	10"-11%" Collet	11	11,60	29 lbs.
CL5416L	10"-1" Col. & Ser. 1000	16	1"	35 lbs.
CL5416Q	13"-1" Collet	16	1"	44 lbs.
CL5416M	14 1/2"-1" Collet	16	1"	51 lbs.
CL5416H	16", 16-24", & 2-H	16	1"	52 lbs.

Steel and Brass Collets

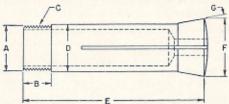
For Use With Collet Attachments

South Bend Collets, manufactured with the same exacting care as South Bend Lathes, deliver long, dependable service on precision work. Each collet is carefully inspected and tested, and packed in a substantial plastic box with transparent lid through which the size can be read for easy selection.

Steel Collets are carefully heattreated for maximum service and are precision ground to exceedingly close tolerances for size and concentricity.

Brass Collets, a South Bend innovation, have many practical applications. Their low cost makes them desirable for odd sizes or short run jobs. They give good service and can be readily machined on the job for holding tapered or irregular shapes. When worn, they can be rebored to larger diameters.





Specifications of Collets for South Bend Lathes

Collet No.	3	6K	2	5
Sizes of Lathes Used on*	9" & Series 900	Light Ten	10"-11'g" Collet	10"-1" Col. 13", 14½" 16", 16-24", & 2H
A, Thread Diameter, in. B, Thread Length, in. C, Threads per in. D, Body Diameter, in. E, Collet Length, in. F, Head Diameter, in. G, Angle of Head, deg.	.645 14 26 .6495 211 .852 12	.770 34 26 .8425 3 1.160 15	.850 11/6 20 .8595 31/6 1.095 15	1.245 34 20 1.2495 3% 1.482 10

^{*}Collets can also be used on any other lathe or machine which they will fit.

Collets With Standard Hole Sizes for Round Work

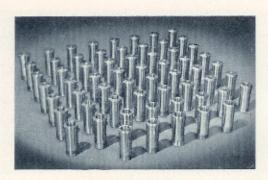
Col-	Collet Capacity	Brass		Steel Collets	
let No.	in 64ths for Round Work	Ship. Wt.	Cat. No.	Cat. No.	
3 6K 2 5	16" to 16" 16" to 56" 16" to 116"	6 cgs. 8 cgs. 8 cgs. 1 lb.	CE2825 CE2826 CE2827 CE2828	CE2830 CE2831 CE2832 CE2833	

Collets With Decimal Hole Sizes for Round Work

Col-			Brass Collets	Steel Collets
let	Collet Capacity	Ship.	Cat.	Cat.
No.	for Round Work	Wt.	No.	No.
3	.0625" to .500"	6 ozs.	CE2835	CE2841
6K	.0625" to .625"	8 ozs.	CE2836	CE2842
2	.0625" to .6875"	8 ozs.	CE2837	CE2843
5	.0625" to 1.000"	1 lb,	CE2838	CE2844

Collets With Metric Hole Sizes for Round Work

Col-	Collet Capacity	1	Brass Colle	ts Steel Collets
let	in 0.5 mm Steps	Ship.	Cat.	Cat.
No.	for Round Work	Wt.	No.	No.
3	1.5 mm to 12.5 mm	6 ozs.	CE2850	CE2855
6K	1.5 mm to 15.5 mm	8 ozs.	CE2851	CE2856
2	1.5 mm to 17.0 mm	8 ozs.	CE2852	CE2857
5	1.5 mm to 25.0 mm	1 lb.	CE2853	CE2858



Collets in Sets

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

Steel Collets in Sets

Collet No.	Catalog No.	Collets in Set	Size of Collets	Ship. Wt.
3	CE2047 CE2476 CE2477	8 7 14	1/6" to 1/2" in 16ths	3 lbs. 3 lbs. 6 lbs.
6K	CE2441 CE2442 CE2443	10 9 18	1/6" to 58" in 16ths	7 lbs. 7 lbs. 12 lbs.
2	CE2432 CE2478 CE2479	11 10 20	1/6" to 11/6" in 16ths 3/4" to 21/6" in odd 32nds 5/6" to 45/6" in odd 64ths	6 lbs. 6 lbs. 12 lbs.
5	CE2435 CE2482 CE2483	16 15 30	1/6" to 1" in 16ths	11 lbs. 11 lbs. 20 lbs.

Brass Collets in Sets

Collet	Catalog	Collets	Size of Collets	Ship.
No.	No.	in Set		Wt.
3	CE2235	8	1/4" to 1/2" in 16ths	3 lbs.
	CE2534	7	1/4" to 1/4" in odd 32nds	3 lbs.
	CE2535	14	1/4" to 11/4" in odd 64ths	6 lbs.
6K	CE2485 CE2486 CE2487	10 9 18	16" to 35" in 16ths	7 lbs. 7 lbs. 12 lbs.
2	CE2238	11	$\frac{1}{82}$ " to $\frac{11}{16}$ " in 16ths	6 lbs.
	CE2536	10	$\frac{8}{12}$ " to $\frac{21}{16}$ " in odd 32nds	6 lbs.
	CE2537	20	$\frac{6}{16}$ " to $\frac{41}{16}$ " in odd 64ths	12 lbs.
5	CE2241 CE2540 CE2541	16 15 30	1/6" to 1" in 16ths	11 lbs. 11 lbs. 20 lbs.

Collets for Square and Hexagon Work

Collets for holding square and hexagon stock can be supplied to order, as listed below. These collets are made of steel, and are properly heat-treated for long service. Collets are made in sixty-fourths, from ½ across flats up to maximum capacity shown in table.



Collet	Shipping	Collets for Square Work		Collets for Hexagon Work		
No.	Weight	Catalog No.	Max. Cap.	Catalog No.	Max. Cap.	
3 2 5	6 ozs. 8 ozs. 1 lb.	CE2176 CE2177 CE2178	11,4" 18,4" 28,2"	CE2181 CE2182 CE2183	19.62" 19.62"	



Collets will retain their accuracy indefinitely if protected from accidental damage, dirt, abrasive dust, and corrosion. Keep each collet in one of these substantial plastic boxes with time-saving transparent lid through which the collet size can easily be read. Boxes are square and can be stacked neatly on shelf as shown in illustration. Fitted with fibre lining tubes, any size of South Bend Collet will fit snugly into box. Can also be used for other makes not larger than No. 5 South Bend. See

any size of South Bend Collet will fit snugly into box. Can also be used for other makes not larger than No. 5 South Bend. See diagram on page 4. These boxes are $1\frac{1}{4}$ " x $2\frac{3}{4}$ " on inside and are ideal for keeping small tools and parts of all kinds.

Cat. No.	Description	Ship. Wt.	
CE2190 CE2191 CE2192 CE2193	One Collet Box	1 lb. 3 lbs. 5 lbs. 14 lbs.	



Collet Splash Guard

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

Cat. No.	Size and Type of Lathe	Ship. Wt.	
CL5223NK CL5200N CL5200K CL5223R CL5223T CL5223F CL5223F	9", Light Ten & Ser. 900 U.M.D. 9" Horizontal M.D. Light Ten H.M.D. 10" & Ser. 1000 U.M.D. 13" Underneath M.D. 141; Underneath M.D. 16", 16-24", & 2-H U.M.D.	2 lbs. 3 lbs.	

Collet Rack

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



Collet Racks for South Bend Lathes

Catalog	Size of Lathe	Rack	Ship.
Number		Holds	Wt.
DE1770N	9" and Series 900	19 Collets	9 lbs,
DE1770K	Light Ten	17 Collets	10 lbs,
DE1770R	10"-1"½" Collet	17 Collets	10 lbs,
DE1770L	10"-1" Collet & Series 1000	17 Collets	10 lbs,
DE1770Q	13"-1" Collet	17 Collets	12 lbs,
DE1770M	14'½".1" Collet	17 Collets	14 lbs,
DE1770H	16", 16-24", and No. 2-H.	17 Collets	15 lbs,



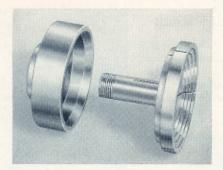
wooden chest for holding the handwheel collet attachment and up to 29 collets for a 9-inch South Bend Lathe. Hinged lid protects the collets and collet attachment from dust and dirt when not in use. Price does not include collet attachment or collets.

Cat. No. CE2225. Shipping weight 7 lbs.

Special Combination Sets Collet Chest With Collet Attachment and Collets

The Collet Chest illustrated and described above can be supplied fitted with the handwheel type collet attachment for the 9-inch South Bend Lathe and various assortments of steel or brass collets. Space is provided for a full set of 29 collets, regardless of the number of collets included in the price of each of the smaller assortments. This permits adding collets as desired, until a full set is acquired.

Cat. No.	Description
CE2220	Collet chest, 9" handwheel collet attachment, 29 steel collets for round work, 16" to 15" in 64ths. Shipping weight 14 lbs.
CE2228	Collet chest, 9" handwheel collet attachment, 8 steel col- lets for round work, ½" to ½" in 16ths. Shipping weight 12 lbs.
CE2290	Collet chest, 9" handwheel collet attachment, 29 brass collets for round work, \(\frac{1}{2} \text{ to } \)\(\frac{1}{2} in 64ths. Shipping weight 14 lbs.
CE2293	Collet chest, 9" handwheel collet attachment, 8 brass collets for round work ½" to ½" in 16ths. Shipping weight 12 bs.



Step Chuck Equipment

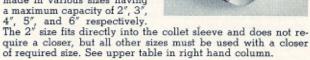
Step Chucks are used with either the handwheel type or the handlever type draw-in chuck attachment for holding discs, gear blanks, and similar round work. The construction of the step chuck is similar to that of the collet, except that it is designed for holding larger diameters. A closer screws onto the threaded end of the lathe spindle nose and the step chuck screws into the threaded hole in the draw bar of the draw-in collet chuck attachment. As the step chuck is drawn back into the closer by the draw-bar of the collet attachment, the three jaws of the step chuck are tightened on the work by the taper inside the step chuck closer.

The work is rigidly supported and can be chucked quickly and accurately. The large gripping surface prevents distor-tion of thin walled parts such as tubing, and also prevents marring the work. Locating pins may be placed in the step chuck closer, and clearance hole drilled through the step chuck, to position work so that it can be accurately machined to a predetermined length.

Step Chuck Blanks

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

Step chuck blanks are made in various sizes having



Step Chuck Blanks

Catalog Number	Nom- inal Size	Size Lathe	Max. Cap.	Shipping Weight
CE5916* CE5917 CE5918 CE5919 CE5920	2" 3" 4" 5" 6"	9" and Series 900	2" 3" 4" 6"	2 lbs. 3 lbs. 5 lbs. 8 lbs. 12 lbs.
CE5936* CE5937 CE5938 CE5939 CE5940	2" 3" 4" 5" 6"	Light Ten	2° 3° 4° 5° 6°	3 lbs. 4 lbs. 6 lbs. 8 lbs. 12 lbs.
CE5921° CE5922 CE5923 CE5924 CE5925	2" 3° 4° 5° 6°	10"-11/4" Collet	2" 3" 4" 5" 6"	4 lbs. 4 lbs. 5 lbs. 9 lbs. 13 lbs.
CE5926* CE5927 CE5928 CE5929 CE5930	2° 3° 4° 5° 6°	10", Series 1000, 13", 14 ½", 16", 16-24", & 2-H	2" 3" 4" 5" 6"	4 lbs. 4 lbs. 5 lbs. 9 lbs. 13 lbs.

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



Closers for Step Chucks

A closer is required for each size of step chuck, with the exception of the 2^{ℓ} size which fits directly into the collet sleeve included in the equipment of the collet attachment. Step chuck closers are made of cast iron or steel, and are threaded to fit the spindle nose of the lathe.

Step Chuck Closers

Catalog	Size Lathe	Takes Step	Shipping
Number		Chuck Sizes	Weight
L6309NK	9", Light Ten, &	3" and 4"	3 lbs.
L6311NK	Series 900	5" and 6"	5 lbs.
CL6309R	10"-11%" Collet	3" and 4"	4 lbs.
CL6311R		5" and 6"	5 lbs.
CL6309LQ	10", Series 1000	3" and 4"	4 lbs.
CL6311LQ	& 13"—1" Collet	5" and 6"	6 lbs.
CL6309MH	14½", 16", 16-24",	3" and 4"	5 lbs.
CL6311MH	& 2-H	5" and 6"	7 lbs.

Finished Step Chucks

Finished step chucks are the same as the step chuck blanks listed at left, except that the steps are finished to the diameters indicated in table below. Steps are 1/16" deep, and may be remachined as required to any larger diameter up to the maximum capacity of the step chuck.

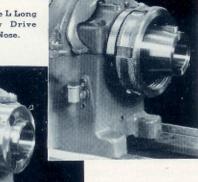


Finished Step Chucks

Cat. No.	Nom- inal Size	Size Lathe	Diameters of Steps	Ship. Wt. Lbs.
CE5960*	2"		2", 134", 134", 1"	2 lbs.
CE5961	3"	9" & Series	3", 234", 214", 214", 2", 114"	3 lbs.
CE5962	4"	900	4", 31/4", 31/4", 3", 23/4", 21/9"	5 lbs.
CE5963	5"		5", 41/2", 4", 31/2", 31/4", 3"	8 lbs.
CE5964	6"		6", 51/2", 5", 41/2", 41/4", 4"	12 lbs.
CE5965+	2"		2", 1%", 11/2", 1"	3 lbs.
CE5966	3"		3", 214", 214", 214", 2", 114"	4 lbs.
CE5967	4"	Light Ten	4", 314", 314", 3", 214", 214"	6 lbs.
CE5968	5"		5", 414", 4", 314", 314", 3"	8 lbs.
CE5969	6"		6", 5 1/4", 5", 4 1/4", 4 1/4", 4"	12 lbs.
CE5970*	2"	First Hills	2", 134", 134", 1"	4 lbs.
CE5971	3"		3", 234", 256", 254", 2", 156"	4 lbs.
CE5972	4"	10"-116" Col.	4", 314", 314", 3", 214", 214"	5 lbs.
CE5973	5"		5", 419", 4", 319", 314", 3"	9 lbs.
CE5974	6"		6", 51/2", 5", 41/2", 41/4", 4"	13 lbs.
CE5975*	2"	Series 1000,	2", 134", 134", 1"	4 lbs.
CE5976	3"	10", 13",	3", 234", 216", 214", 2", 116"	4 lbs.
CE5977	4"	14 14", 16",	4", 314", 314", 3", 234", 214"	5 lbs.
CE5978	5"	16-24", &	5", 419", 4", 319", 314", 3"	9 lbs.
CE5979	6"	2-H-1" Col.	6", 514", 5", 414", 414", 4"	13 lbs.

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

Right—Type L Long Taper Key Drive Spindle Nose.



Left-Type Dl Cam Lock Spindle Nose.

Type L and Type Dl Spindles for South Bend Lathes

All South Bend Lathes, 10"-1" Collet and larger, can be supplied with Type L Long Taper Key Drive Spindles, or Type D1 Cam Lock Spindles in lieu of the regular threaded spindles at extra cost. Price includes fitting large and small face plates which are supplied with the lathe, but does not include fitting chucks, draw-in collet attachments, or other accessories.

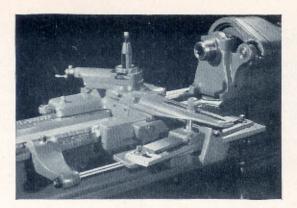
Size of Lathe	Spindle N Regula	oer Key Drive ose In Lieu o r Threaded dle Nose	Thread	Spindle of Reguled Spin Nose	ılar
Dutite	Cat. No.	Size	Cat. No.	Size	
10"-1" C. & Ser. 1000 13"-1" Collet 14 ½"-1" Collet 16", 16-24", & 2-H	CA8050L CA8050T CA8050F CA8050H	00 00 00 00	CB8050L CB8050T CB8050F CB8050H	4" 4" 4" 4"	

Accessories for Lathes With Type L Long Taper Key Drive Spindles

	For 10" Lathe	For 13" Lathe	For 14½" Lathe	For 16", 16-24", 2-H
Description	Catalog Number	Catalog Number	Catalog Number	Catalog Number
Handwheel Collet Attachment. Handlaver Collet Attachment. Closer for Step Chucks 3" and 4" maximum capacity. Closer for Step Chucks 5" and 6" maximum capacity. Small Face Plate. Large Face Plate. Fixture Plate. 6" 4-Jaw Independent Chuck. 6" 4-Jaw Independent Chuck. 714" 4-Jaw Independent Chuck. 10" 4-Jaw Independent Chuck. 10" 4-Jaw Independent Chuck. 12" 4-Jaw Independent Chuck. 12" 4-Jaw Independent Chuck. 5" 3-Jaw Universal Chuck with one set of reversible jaws. 5" 3-Jaw Universal Chuck with two sets of jaws—one pinion. 5" 3-Jaw Universal Chuck with two sets of jaws—three pinions. 6" 3-Jaw Universal Chuck with one set of reversible jaws. 6" 3-Jaw Universal Chuck with two sets of jaws—three pinions. 6" 3-Jaw Universal Chuck with two sets of jaws. 714" 3-Jaw Universal Chuck with two sets of jaws.	CA4306L CA5206L CA6309LH CA6311LH CA2175L CA2180L CA46LT CA4006 CA4206 CA4207 CA6005 CA3005 CA3005 CA3506 CA3506	CA4306T CA5206T CA5309LH CA6311LH CA2178T CA2180T CA46LT CA4206 CA4207 CA4209 CA6005 CA3006 CA3006 CA3506 CA3506 CA3506 CA3506 CA3507	CA4306F CA5206F CA6309LH CA6311LH CA2175FH CA2180FH CA46FH CA4207 CA4209 CA4210 CA3505 CA6506 CA3506 CA3507 CA3509	CA4306H CA6309LH CA6309LH CA6311LH CA2175FH CA2180FH CA46FH CA46FH CA4207 CA4209 CA4210 CA4212 CA3506 CA3506 CA3506 CA3507 CA3509
9° 3-Jaw Universal Chuck with two sets of jaws. Chuck Plate fitted to chuck. Semi-Machined Chuck Plate—5°, Semi-Machined Chuck Plate—6½°, Semi-Machined Chuck Plate—9°, Collet Splash Guard.	CA2935 CA2704RH CA2707RH CA2709RH	CA2935 CA2704RH CA2707RH CA2709RH CA5223T	CA2935 CA2704RH CA2707RH CA2709RH CA5223F	CA2935 CA2704RH CA2707RH CA2709RH CA5223H

Accessories for Lathes With Type Dl Cam Lock Spindles

The state of the s	For 10° Lathe For 13° Lathe		For 14½" Lathe	For 16", 16-24", 2-H	
Description	Catalog Number	Catalog Number	Catalog Number	Catalog Number	
Handwheel Collet Attachment. Handlever Collet Attachment. Closer for Step Chucks 3" and 4" maximum capacity. Closer for Step Chucks 5" and 6" maximum capacity. Small Face Plate. Large Face Plate. Fixture Plate. 6" 4-Jaw Independent Chuck. 6" 4-Jaw Independent Chuck. 7-Jaw Independent Chuck. 10" 4-Jaw Independent Chuck. 10" 4-Jaw Independent Chuck. 12" 4-Jaw Independent Chuck. 12" 3-Jaw Universal Chuck with one set of reversible jaws. 5" 3-Jaw Universal Chuck with two sets of jaws—one pinion. 5" 3-Jaw Universal Chuck with two sets of jaws—three pinions. 6" 3-Jaw Universal Chuck with two sets of jaws. 6" 3-Jaw Universal Chuck with two sets of jaws. 7-Jaw Universal Chuck with two sets of jaws. 7-Jaw Universal Chuck with two sets of jaws. 7-Jaw Universal Chuck with two sets of jaws. 9" 3-Jaw Universal Chuck with two sets of jaws. 5" 3-Jaw Universal Chuck with two sets of jaws. 5" 3-Jaw Universal Chuck with two sets of jaws. 5" 3-Jaw Universal Chuck with two sets of jaws. 5" 3-Jaw Universal Chuck with two sets of jaws. 5" 3-Jaw Universal Chuck with two sets of jaws. 5" 3-Jaw Universal Chuck with two sets of jaws. 5" 3-Jaw Universal Chuck with two sets of jaws. 5" 3-Jaw Universal Chuck with two sets of jaws.	CB5206L CB6309LH CB6311LH CB2175L CB2180L CB46LT CB4006 CB4207 CB6005 CB3005 CB3005 CB3005 CB3006 CB3506 CB3506 CB3506 CB3704RH CB2707RH	CB4306T CB5206T CB6309LH CB6311LH CB21175T CB2180T CB4206 CB4207 CB4209 CB6205 CB3005 CB3005 CB3506 CB3506 CB3506 CB3507 CB2704RH CB2707RH CB2709RH	CB4306F CB5206F CB6309LH CB6311LH CB2175FH CB2180FH CB46FH CB4207 CB4209 CB4210 CB3505 CB6306 CB3506 CB3506 CB3507 CB2935 CB2704RH CB2707RH CB2707RH CB2707RH CB2707RH CB2707RH	CB4306H CB6309LH CB6309LH CB6311LH CB2175FH CB2180FH CB46FH	



Taper Attachment

Taper turning and boring are as easily accomplished as straight turning on lathes equipped with the South Bend Telescopic Taper Attachment. The taper attachment swivel bar is graduated in degrees on one end and taper in inches per foot on the other end.

A telescopic taper attachment is supplied on $10^{\nu_-11}/6^{\nu}$ Collet and larger lathes. A telescopic cross-feed screw eliminates the necessity of disconnecting the cross-feed nut when the tapers are machined. The cross-feed screw may be used to adjust the lathe tool for the required diameter. When the binding lever is tightened, the cross slide base is rigidly locked to the taper attachment swivel slide, and the thrust is removed from the cross-feed screw.

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

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

The taper attachment must be fitted to lathe at factory.

Taper Attachment With English Graduations

	Size	Swing	Max	imum T	aper	Approx.	
Cat. No.	of Lathe	Over Cross Slide	At One Setting	Per Foot	In De- grees	Ship. Wt.	
CL428NK CL428NK CL1545R CL1545T CL1545F CL1545H CL1545H	9" Lt. 10 10" 13" 14 1/2" 16" 16-24"	5" 534" 8" 8" 8" 958"	7° 7" 834" 934" 934" 1132" 1132"	3 1/2" 3 1/2" 3 1/2" 3 1/2" 3 1/2" 3 1/2"	16 ½ 16 ½ 16 ½ 16 ½ 16 ½ 16 ½ 16 ½	35 lbs. 35 lbs. 40 lbs. 65 lbs. 80 lbs. 100 lbs. 100 lbs.	

Taper Attachment With Metric Graduations

Taper attachments similar to those described above can be supplied to order with metric graduations in addition to the usual English graduations. The metric graduations show the taper in mm per cm. Maximum taper is 3 mm per cm.

Taper Attachment With Metric Graduations

-	Size	Swing	Maxi	mum 7	laper	Approx.	
Catalog No.	of Lathe	Over Cross Slide	At One Setting	Per cm	In De- grees	Ship. Wt.	
CL42BNKME CL42BNKME CL1545RME CL1545TME CL1545FME CL1545HME CL1545HME	9" Lt. 10 10" 13" 14 14" 16"	5" 514" 514" 8" 8156" 956"	7" 7" 816" 914" 914" 1115" 1116"	3 mm 3 mm 3 mm 3 mm 3 mm 3 mm 3 mm	16 1/2 16 1/2 16 1/2 16 1/2 16 1/2 16 1/2 16 1/2	35 lbs. 35 lbs. 40 lbs. 65 lbs. 80 lbs. 100 lbs.	

Independent Power Feed Attachment

Extremely fine feeds can be obtained by using the independent power feed attachment for the 10-inch swing lathe. This attachment is especially desirable for manufacturing dental amalgum, diamond turning and diamond boring operations, and other work requiring extremely smooth, fine feeds, or high spindle speeds. It consists of a separate motor drive and



necessary gearing to permit operating the power carriage feed mechanism independently from the lathe spindle.

A 1/4 h.p. motor is mounted on the back of the lathe and geared directly to the quick change gear mechanism. The quick change gear box provides 48 changes for both the power longitudinal feeds and the power cross-feeds. The approximate range of power longitudinal feeds is from .725" to 40" per minute. Feeds travel to right or left, in or out,

The feed in thousandths of an inch per revolution of the spindle is obtained by dividing the feed per minute by the r.p.m. of the lathe spindle. Usually the lathe is operated at a spindle speed higher than standard in order to obtain extremely fine feeds. For example, when the spindle revolves at 2500 r.p.m., the approximate power longitudinal feeds range from .00029" to .016" per revolution of the spindle.

The independent power feed attachment can be disconnected when it is not needed, and the regular power feed gearing connected with the lathe spindle for cutting screw threads or regular turning feeds.

This attachment should be ordered with the lathe and fitted at the factory. Power feed attachments with popular motors are listed below. Write for information on attachments with motors for other current characteristics.

Independent Power Feed Attachment for 10-Inch Lathe

Catalog	Motor Specifications					
Number	Current	Phase	Cycle	Voltage		
CL333DR	A.C.	3	60	220		
CL333FR	A.C.		60	440		
CL331BR	A.C.	1 1	60	115		
CL331DR	A.C.		60	230		

Lubricating Oil

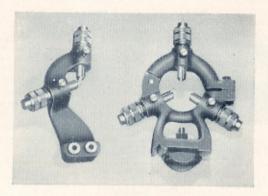
Recommended for South Bend Lathes and other machinery requiring a high quality lubricant.



Cat. No.	Quantity	Ship. Wt.	
Oil for Gene	eral Lubrication o	f Lathe and Other Me	schinery
CE1603	1 quart	3 lbs.	
CE1906	12 quarts	31 lbs.	

Oil for Spindle Bearings of 9" Lathes and Apron Clutch Mechanism of All Sizes of Lathes

CE1602 CE1904	1 quart 12 quarts	3 lbs. 31 lbs.	
I THE STATE OF THE			
Oil for	Spindle Bearings o	of 10" and Large	er Lathes
Oil for : CE1600	Spindle Bearings of	of 10° and Large 3 lbs.	er Lathes



Telescoping Jaw Steady Rest and Follower Rest

To provide quicker and more efficient operation, the Telescoping Jaw Follower Rest and Steady Rest have been developed. Principal features of both the Follower Rest and Steady Rest are wrenchless adjustment and locking of the telescoping jaws. Each jaw has a large knurled knob for adjusting the jaw position, and a thumb screw for locking. An ingeniously designed double acting compound screw thread provides approximately 3/16'' jaw movement for each revolution of the adjusting knob.

The jaws are made of brass and slide through precision steel sleeves which are pressed into the supporting frame. Manufactured to close tolerances throughout, the jaws and other parts are replaceable.

Steady Rest

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

Telescoping Jaw Steady Rest

Catalog Number	Size Lathe	Maximum Capacity	Minimum Capacity	Shipping Weight
CL2400N	9 inch	3 in.	3% in.	11 lbs.
CL2400K	Light Ten	3 in.	% in.	11 lbs.
CL2400R	10 inch	3 in.	36 in.	13 lbs.
CL2400T	13 inch	3% in.	3/6 in.	21 lbs.
CL2400F	14 1/2 inch	4% in.	% in.	28 lbs.
CL2400H	16° & 2-H	4% in.	% in.	30 lbs.
CL2400V	16-24"	4% in.	% in.	47 lbs.

Follower Rest

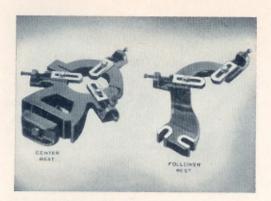
The Follower Rest is attached to the lathe carriage and travels with the carriage. The follower rest is used to support long, slender shafts while being machined between the lathe centers.

Telescoping Jaw Follower Rest

Catalog Number	Size Lathe	Maximum Capacity	Minimum Capacity	Shipping Weight
CL2395N	9 inch	2 in.	3/6 in.	7 lbs.
CL2395K	Light Ten	2 in.	% in.	7 lbs.
CL2395R	10 inch	234 in.	% in.	9 lbs.
CL2395T	13 inch	31/4 in.	% in.	11 lbs.
CL2395F	14 3% inch	41/4 in.	36 in.	15 lbs.
CL2395H	16" & 2-H	41/4 in.	3/6 in.	17 lbs.
CL2395V	16-24°	41/2 in.	3/6 in.	21 lbs.







Regular Steady Rest and Follower Rest

The Regular Steady Rest and Follower Rest are ruggedly designed to provide a rigid support for the work. The jaws are made of cast iron, are machined all over and have adjusting screws and lock screws for setting and securing them in the desired position.

Steady Rest

The Steady Rest clamps onto the inside ways of the lathe bed and is used for supporting long shafts, boring spindles, etc. The top of the center rest is hinged to facilitate inserting and removing shafts.

Regular Steady Rest

Catalog Number	Size Lathe		Minimum Capacity	Shipping Weight	
CL1177N	9 in.	3 in.	14 in.	10 lbs.	
	Light Ten				Not Made
CL1177R	10 in.	3 in.	14 in.	11 lbs.	1000
CL1177T	13 in.	334 in.	3% in.	19 lbs.	
CL1177F	1436 in.	434 in.	3% in.	27 lbs.	
CL1177H	16" & 2-H	4% in.	3% in.	29 lbs.	
CL1177V	16-24 in.	4% in.	3% in.	47 lbs.	

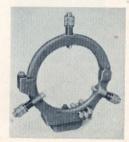
Follower Rest

The Follower Rest is attached to the lathe carriage and travels with the carriage. The Follower Rest is used to support long, slender shafts while being machined between the lathe centers. Slots used for attaching follower rest to carriage permit attaching or removing quickly as it is not necessary to remove the screws from the saddle.

Regular Follower Rest

Catalog Number	Size Lathe	Maximum Capacity	Minimum Capacity	Shipping Weight	4
CL1353N	9 in.	2 in.	% in.	4 lbs.	
	Light Ten				Not Made
CL1353R	10 in.	236 in.	% in.	6 lbs.	
CL1353T	13 in.	3½ in.	% in.	9 lbs.	
CL1353F	1416 in.	41/4 in.	% in.	12 lbs.	
CL1353H	16 in.	414 in.	3% in.	13 lbs.	
CL1353V	16-24 in.	4¾ in.	3% in.	18 lbs.	

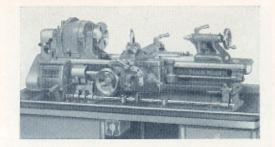
Extra Large Steady Rest



Similar to steady rests described above, but with capacity for large diameter work. Takes from 4-3/4" diameter to 10-3/4" diameter.

Cat. No.	La	the		SI	Wt.	
Telescopin	g Jaw	Extra	La	rge	Steady	Rest
CL2266H CL2266V		No. 2			lbs.	

| Regular Style Extra Large Steady Rest | CL2258H | 16" & No. 2-H | 75 lbs. | CL2258V | 16-24" | 95 lbs. |



Automatic Carriage Stop

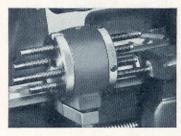
In shops where one man may operate two or more machines, it is sometimes desirable to have lathes equipped with automatic carriage stops, as shown above. This enables the operator to place the work in the lathe, engage the power longitudinal feed for the cut and then proceed to other work. When the end of the cut is reached, the power longitudinal carriage feed is automatically disconnected.

The automatic carriage stop is especially desirable for production operations which require fairly long cuts at one setting of the cutting tool. While a cut is being taken on one lathe, the operator can remove a finished piece from another lathe and replace it with a new piece. In this way both the machines and the operator are busy most of the time and the work is done efficiently.

This attachment must be ordered with the lathe so that it can be fitted to the lathe at the factory.

Cat. No.	Size Lathe	Cat. No.	Size Lathe	
CL1662R	10"	CL1662F	14 ½"	
CL1662T	13"	CL1662H	16" & 16-24"	

Four Position Carriage Stop



Much time can be saved in positioning the cutting tool for repetitive operations, by using this four position carriage stop. Each of the four adjustable stops may be set for a different tool position, and may be revolved into position to locate the carriage for each of four successive cuts. This attachment is especially

desirable for spacing shoulders in shafts and similar operations.

Catalog	Size	Shipping	
Number	Lathe	Weight	
CL2185NK	9° & Light Ten	6 lbs.	
CL2185RT	10° & 13°	6 lbs.	
CL2185FH	14½", 16°, 16-24", & 2-H	10 lbs.	

Thread Dial Indicator

Eliminates reversing of lathe spindle when cutting threads. Dial is numbered and graduated to show when to close half-nuts on lead screw to catch the thread on each successive cut, after returning carriage to the starting point. For English pitches only. See page 28 for metric thread dial.



	atalog umber	Size Lathe	Shipping Weight	
CL	BIONK BIOR BIOTH	9" & Light Ten 10" 13", 14 ½", 16", 16-24", 2-H	2 lbs. 3 lbs. 5 lbs.	

Micrometer Stop



This attachment is useful for accurate facing, turning, boring, etc. It is used for locating the carriage at any point along lathe bed. Can be used on either side of carriage. Has accurately graduated micrometer collar. Either English or metric graduations can be supplied.

The stop is hardened on both ends and may be locked for repetitive operations on duplicate work.

Size Lathe	Ship	English Graduation	Metric Graduations
Olde Dathe	Wt.	Cat. No.	Cat. No.
9" & Light Ten 10" 13" 1414", 16", 16-24", & 2-H	2 lbs. 4 lbs. 4 lbs. 7 lbs.	CL968NK CL968R CL968T CL968FH	CL968NKME CL968RME CL968TME CL968FHME

Plain Carriage Stop



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

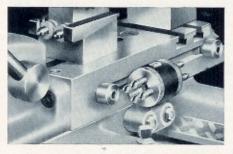
Catalog	Size	Shipping
Number	Lathe	Weight
CL758NK	9" & Light Ten	2 lbs.
CL758R	10"	4 lbs.
CL758T	13"	4 lbs.
CL758FH	1434", 16", 16-24", & 2-H	7 lbs.

Thread Cutting Stop



The Thread Cutting Stop is clamped onto the saddle crossslide dovetail and is used for regulating the depth of cut for each successive chip when cutting screw threads. Price includes stop complete with clamp and knurled thumb screw.

Catalog	Size	Shipping	
Number	Lathe	Weight	
CL2250NK	9" & Light Ten	1/2 lb.	
CL2250R	10"	1/2 lb.	
CL2250T	13"	1 lb.	
CL2250F	14 ½"	1 lb.	
CL2250H	16" & 16-24"	2 lbs.	

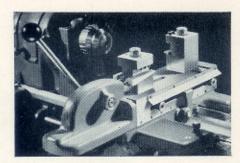


Four Position Cross Slide Stop

This stop fits onto the saddle and is used with the handlever double tool cross slide in place of the regular cross slide stop. It has four adjustable stops for locating the position of the cutting tools for each of four successive operations.

CL2154NR. Four Position Stop for Double Tool Cross Slide for 9'' and 10'' lathes. Shipping weight 2 lbs.

CL2154H. Four Position Stop for Double Tool Cross Slide for 16" and 2-H lathes. Shipping weight 3 lbs.

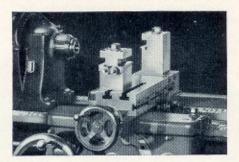


Handlever Double Tool Cross Slide for 9" and 10" South Bend Lathes

This Handlever Double Tool Cross Slide is mounted on the saddle cross slide dovetail in place of the compound rest assembly. It does not interfere with the power longitudinal carriage feeds. The power cross-feed can be used by removing the handlever and replacing it with the cross-feed screw. Cross-feed nut is supplied for either English or metric pitch thread. Adjustable stops limit the movement of the cross slide in either direction, in or out. The handlever can be used on either the right side or the left side of the cross slide.

This cross slide has front and back square tool blocks in which 1/16" square cutter bits can be mounted. T-slots in the cross slide base permit adjusting the positions of the tool blocks. The front tool block takes two cutter bits, and the back tool block takes one cutter bit. Tapered wedges and thumb screws provide precision adjustment for the height of the cutter bits.

Cat. No.	Size Lathe	Cross-Feed	Ship. Wt.	
CL2030N CL2030K CL2030R	9" Light Ten 10"	ENGLISH	36 lbs. 37 lbs. 45 lbs.	
CL2030NME CL2030KME CL2030RME	9" Light Ten 10"	METRIC	36 lbs. 37 lbs. 45 lbs.	



Screw Feed Double Tool Cross Slide for 13" and 16" South Bend Lathes

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

Adjustable stops are provided for locating the position of the front and rear tools for repetitive operations. The front tool block takes two square cutter bits and the back tool block takes one square cutter bit. Tapered wedges are provided for adjusting the height of the cutter bits. T-slots in the cross slide base are provided for adjusting the position of the tool blocks. Should be ordered with the lathe.

Catalog Number	Size Lathe	Cross- Feed	Size Bit	Shipping Weight	
CL2027T CL2027H	13" 16"	ENGLISH	%" sq.	60 lbs. 95 lbs.	
CL2027TME CL2027HME	13" 16"	METRIC	%" sq. %" sq.	60 lbs. 95 lbs.	



Patente

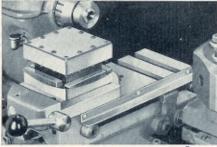
Square Turret Tool Block for Compound Cross Slide

The Square Turret Tool Block shown above is designed for use on the base of the compound cross slide. It cannot be used on the double tool cross slide.

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

Square Turret Tool Block for Compound Cross Slide

Catalog Number				
CL3375N	9" and Ser. 900	3"	38" x 36"	13 lbs.
CL3375K	Light Ten	3"	38" x 36"	14 lbs.
L3375R	10" and Ser. 1000	3"	36" x 36"	15 lbs.
L3375T	13"	3"	38" x 38"	24 lbs.
L3375F	141/9"	4"	58" x 56"	36 lbs.
CL3375H	16" and 16-24"	4"	36" x 36"	40 lbs.



Patente

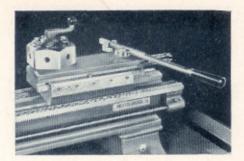
Square Turret Tool Block for Double Tool Cross Slide

The Square Turret Tool Block shown above is designed for use on the screw feed double tool cross slide. It cannot be used on the compound rest cross slide.

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

Square Turret Tool Block for Double Tool Slide

Catalog Number	Size of Lathe	Size Square	Takes Tools	Ship. Weight
CL3376NR	9", Series 900, 10" & Series 1000	3"	36" x 36"	10 lbs.
CL3376K	Light Ten	3"	36" x 36"	11 lbs.
CL3376T	13"	3"	36" x 36"	20 lbs.
CL3376H	16" & No. 2-H	4"	56" x 56"	28 lbs.



Handlever Bed Turret for 9", 10", and 13" South Bend Lathes

The Handlever Bed Turret mounts on the inside bed ways and can be locked in position at any point along the length of the bed. The turret base clears the saddle wings of the lathe carriage, which slides on the outer bed ways. This construction permits the turret to be placed close to the headstock and eliminates excessive overhang of the work or the turret tools.

With this turret mounted on the lathe, small precision parts can be economically manufactured. It equips the lathe for fast, efficient production, yet the lathe may easily be adapted to other classes of work.

The turret slide has gibs on both sides which provide adjustment for wear. The turret head indexes automatically when the feed lever is pushed to the extreme right. Each face of the turret has an independently adjustable feed stop screw which accurately regulates the length of the cut. The stop screw roll rotates automatically so that each screw is brought in line with the stop as the corresponding face of the turret head is revolved to the working position.

Accurate indexing of the turret head (within plus or minus .0005" measured 4" from turret face) is assured by the use of hardened, ground, and superfinished index pin which operates in heat-treated steel bushings. The index bushings are replaceable. The turret head may be back-indexed or spun when it is desired to skip tool positions. A substantial binder permits locking the turret head securely for taking heavy cuts.

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

Catalog	Size	Shipping	
Number	Lathe	Weight	
CL1611N	9"	76 lbs.	15-
CL1611K	Light Ten	76 lbs.	
CL1611R	10"	83 lbs.	
CL1611T	13"	130 lbs.	

*Can be supplied to order with 34" holes in turret face. No extra charge.

Compound Rest Cross Slide

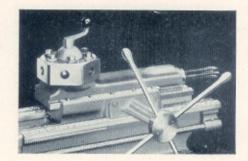
for No. 2-H Turret Lathe

The compound rest type cross slide can be supplied for use on the saddle cross slide dovetail of the No. 2-H Turret Lathe in place of the double tool cross slide. This compound rest is the same as is regularly supplied with the 16" swing lathe.



Price includes compound rest top, swivel, and base assembly complete with tool post and cross-feed screw. Cannot be used with double tool slide. When this unit is required, it must be ordered with the lathe and fitted at the factory.

Cat. No. CL2200P. Compound Rest Cross Slide for No. 2-H Turret Lathe. Ship. wt. 22 lbs.



Hand Feed Turnstile Bed Turret for 16" South Bend Lathe

The Hand Feed Turnstile Bed Turnet is mounted on the inside bed ways of the lathe. The large turnstile is provided for hand operated turnet slide feeds. No power feed is available*.

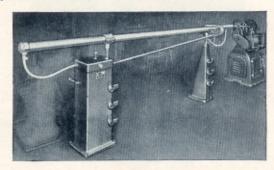
The turret head is hexagonal in shape, having six accurately machined faces. It indexes automatically when the turret slide is returned to the starting position. An individual feed stop is provided for each face of the turret. The stop accurately regulates the length of the cut. The turret head may be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

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

Effective feed of turret slide $6\frac{1}{8}$ ". Center of turret hole to top of turret slide $2\frac{1}{2}$ ". Takes standard turret tools with $1\frac{1}{2}$ " diameter shank. Distance between opposite turret flats is $9\frac{3}{8}$ ". Maximum distance between spindle nose and turret face at beginning of indexing movement is $28\frac{1}{4}$ " on 6' bed lathe. When turret is ordered separate from lathe, the purchaser must assume the responsibility of fitting and boring.

Cat. No. CL1917H. Hand Feed Turnstile Bed Turnet for 16" South Bend Lathe. Ship. wt. 505 lbs.

*If power feed is wanted, write for Turret Lathe catalog.



Pneumatic Bar Feed

This Pneumatic Bar Feed unit takes a twelve foot bar of stock, any shape or size, up to the maximum capacity through the bar feed cylinder, provided the bar is no larger than the hole through the lathe spindle or collet. Air pressure forces the stock forward instantly when the collet or chuck is opened. The stock is held firmly against the stop until the collet is closed.

Low air pressure is required for operating the pneumatic bar feed unit. (Price does not include air compressor). Shipped direct from factory in New York.

Cat. No. CE1881. Lipe Pneumatic Bar Feed Unit, 1" maximum bar capacity. Shipping weight 385 lbs.

Cat. No. CE1882. Lipe Pneumatic Bar Feed Unit, 2" maximum bar capacity. Shipping weight 410 lbs.



Coolant Pump and Reservoir

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

Coolant Pump and Reservoir Fitted to 10"-116" Collet or Larger Floor Leg Lathes, No. 2-H, or Series 1000 Floor Leg Turret Lathes

Cat. No.	Current	Phase	Cycle	Voltage
CL503C	A.C.	3	50	220
CL503D	A.C.	3	60	220
CL503E	A.C.	3	50	440
CL503F	A.C.	3	60	440
CL503G	A.C.	333333	50	550
CL503H	A.C.	3	60	550
CL502C	A.C.	2 2	50	220
CL502D	A.C.	2	60	220
CL501A	A.C.	1	50	115
CL501B	A.C.	1	60	115
CL501C	A.C.	1	50	230
CL501D	A.C.	1	60	230
CL500K	D.C.			115
CL500L	D.C.			230

Coolant Pump and Reservoir Fitted to 9", Light Ten or Series 900 U.M.D. Lathes, or 10" or Series 1000 Bench Lathes on Tubular Steel Bench

Cat. No.	Current	Phase	Cycle	Voltage
CL513C	A.C.	3	50	220
CL513D	A.C.	3 3	60	220
CL513E	A.C.	3	50	440
CL513F	A.C.	3	60	440
CL513G	A.C.	3	50	550
CL513H	A.C.	3	60	550
CL512C	A.C.	33322	50	220
CL512D	A.C.	2	60	220
CL511A	A.C.	1	50	115
CL511B	A.C.	1	60	115
CL511C	A.C.	1	50	230
CL511D	A.C.	1	60	230
CL510K	D.C.			115
CL510L	D.C.			230

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

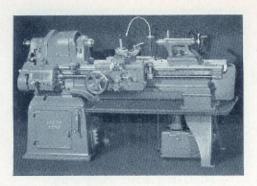
Cat. No. CL2195NK—Making chip pan oil tight on 9" or Light Ten Lathe,

Cat. No. CL2196R-Making chip pan oil tight on 10" Lathe.

Coolant Pump Not Fitted to Lathe

The above coolant equipment may be ordered for application to lathes, drill presses, or other machine tools. Reservoir may be set on floor or attached to machine. Equipment consists of: coolant pump, tubing, reservoir, tray, ¼ h.p. motor, switch, and wire for connecting motor and switch. Shipping weight approximately 110 lbs.

Cat. No.	Current	Phase	Cycle	Voltage	
CE2003C	A.C.	3	50	220	
CE2003D	A.C.	3	60	220	
CE2003E	A.C.	333	50	440	
CE2003F	A.C.	3	60	440	
CE2003G	A.C.	33322	50	550	
CE2003H	A.C.	3	60	550	
CE2002C	A.C.	2	50	220	
CE2002D	A.C.	2	60	220	
CE2001A	A.C.	1	50	115	
CE2001B	A.C.	1	60	115	
CE2001C	A.C.	1	50	230	
CE2001D	A.C.	1	60	230	
CE2000K	D.C.			115	
CE2000L	D.C.			230	



Oil Pans, Splash Pans, and Chip Pans

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

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

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

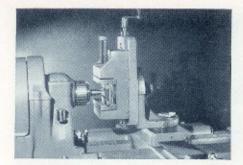
Chip Pans are intended for collecting chips only and are not necessarily oil tight. Chip pans extend from the headstock leg to the tailstock end of bed.

Pans for Floor Leg South Bend Lathes

Size	Oil Pan	Chip Pan	Splash Par
Lathe	Cat. No.	Cat. No.	Cat. No.
Series 900			CL2057Z
9" x 31%			CL2057Z
10" x 3"	CL2020Y	CL1987Y	CL2059Z
0" x 316"	CL2020Z	CL1987Z	CL2059Z
eries 1000			CL2059Z
0" x 4'	CL2020A	CL1987A	CL2059R
0" x 416"	CL2020R	CL1987R	CL-2059R
3" x 4"	CL2022A	CL1989A	CL-2060A
3" x 5'	CL2022B	CL1989B	CL2060B
3" x 6'	CL2022C	CL1989C	CL2060C
3" x 7'	CL2022D	CL1989D	CL2060D
1416" x 5"	CL2023B	CL1990B	CL2062B
414" x 6'	CL2023C	CL1990C	CL2062C
412" x 7"	CL2023D	CL1990D	CL2062D
414" 18"	CL2023E	CL1990E	CL2062H
6" x 6'	CL2024C	CL1991C	CL2062C
6" x 7'	CL2024D	CL1991D	CL2062D
6" x 8'	CL2024E	CL1991E	CL2062H
6" x 10"	CL2024G	CL1991G	CL2062H
6" x 12"	CL2024H	CL1991H	CL2062H
6-24" x 6"	Chaosen	CL1991C	Chaocan
16-24" x 7"		CL1991D	*******
16-24" x 8"		CL1991E	
16-24" x 10		CL1991G	
16-24" x 12		CL1991H	CT 0000C
2-H x 6'		*******	CL2062C
2-H x 7'		*******	CL2062D

Pans for South Bend Bench Lathes

Size	Oil F	an	Chip Pan	Splash Pan
Lathe	Cat. No.	Cat. No. Cat. No.	Cat. No.	
9" x 3'	100000		CL1297Y	CL2056Y
9" x 316"			CL1297Z	CL2057Z
9" x 4"			CL1297A	CL2057R
9" x 414"			CL1297R	CL2057R
10" x 3"			CL1377Y	CL2057Z
10" x 3 1/2"			CL1377Z	CL2057Z
Series 1000			221111111	CL2057Z
10" x 4"			CL1377A	CL2057R
10" x 4 1/2"			CL1377R	CL2057R



Milling and Keyway Cutting Attachment

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

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

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

Milling and Keyway Cutting Attachment

Cat. No.	Size Lathe Ins.	Vert. Feed Ins.	Cross- Feed Ins.	Vise Holds Ins.	Jaw Depth Ins.	Jaw Width Ins.	Ship. Wt. Lbs.
CL2680NK	9"-Lt.10	216	53%	136	13/6	3	13
CL2680R	10	3	578	134	15/6	31/2	25
CL2680T	13	41/4	81/8	23/8	111/6	436	40
CL2680F	141/2	6	10	4	2	5%	50
CL2680H	16	6	101/2	4	2	5%	65
CL2680H	16-24	6	1034	4	2	5%	65

Metric Milling Attachment

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

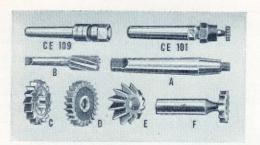
Catalog Number	Size Lathe	Catalog Number	Size Lathe
CL2680NKME CL2680RME	9" & Lt. Ten	CL2680FME	1432"
CL2680TME	13"	CL2680HME	16" & 16-24"



Milling Attachment Chest

This substantially constructed wooden chest holds the 9" and Light Ten milling attachment, milling attachment crank, and milling attachment wrench. This protects the attachment from dirt, dust, and other abuse, when it is not in use. Price does not include milling attachment.

CL2224. Hinged Wooden Chest for No. CL2680NK Milling and Keyway Cutting Attachment. Shipping wt. 4 lbs.



Milling Arbors and Cutters

Milling Arbors CE109, CE101, and A

All arbors and chucks listed below have No. 3 Morse taper shanks.

CE109. Plain Arbor for milling cutters with 1-inch hole. Shipping weight 3 lbs.

CE829. Screw Arbor (A) for Angular cutters (E) with right-hand thread. Shipping weight 2 lbs.

CE830. Screw Arbor (A) for angular cutters (E) with left-hand thread. Shipping weight 2 lbs.

CE101. Collet Chuck for Woodruff Cutters (F) with ½" diameter shank. Shipping weight 2 lbs.

Spiral End Mills (B)

High Speed Steel, Right-hand Cut, Right-hand Spiral

Cat.	Dia.	Morse	Cat.	Dia.	Morse
No.	Mill	Taper	No.	Mill	Taper
CE3893 CE3894 CE3896 CE3896 CE3897	140° 580° 840° 100°	No. 2 No. 2 No. 2 No. 2 No. 2 No. 2	CE3808 CE3809 CE3810 CE3811 CE3812	34° 78° 1'8° 134° 134°	No. 3 No. 3 No. 3 No. 3 No. 3

Plain Milling Cutters (C)

High Speed Steel With 1" Hole. Cut on Face Only

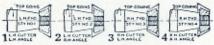
Cat. No.	Face Width	O.D.	Cat. No.	Face Width	O.D.
CE3920 CE3921 CE3922 CE3923	14.	21/2" 21/2" 21/2" 21/2"	CE3924 CE3925 CE3926 CE3927	7/6" 12" 13" 14"	214° 214° 214° 214° 214°

Side Milling Cutters (D)

High Speed Steel With 1" Hole. Cut on Face and Sides

Cat. No.	Face Width	O.D.	Cat. No.	Face Width	O.D.	
CE3930 CE3931 CE3932 CE3933	14° 516° 14° 14°	3" 3" 3"	CE3934 CE3935 CE3936	14" 84" 78"	3" 4" 4"	

Angular Cutters (E)



High Speed Steel With Threaded Hole 11/4" O.D., 1/2" Face, 60° Included Angle

Cat. No.	Style	Description
CE667S1	1	L.H. thread, L.H. angle.
CE667S2	2	L.H. thread, R.H. angle.
CE667S3	3	R.H. thread, L.H. angle.
CE667S4	4	R.H. thread, R.H. angle.

Woodruff Keyseat Cutters (F)

High Speed Steel With 1/2" Diameter Straight Shanks Right-hand Cutters

Cat. No.	Cutter Dia.	Cutter Face	Cat. No.	Cutter Dia.	Cutter Face
CE3940 CE3941	35%	160	CE3948 CE3949	1"	14".
CE3942	38"	18"	CE3950	116"	216 216"
CE3943 CE3944	124	27.	CE3951 CE3952	118"	200
CE3945 CE3946	78.	14"	CE3953 CE3954	112"	118"
CE3947	1"	270	CE3955	114"	32"



Off-set Base for Milling Attachment

To increase the capacity of the milling attachment for the 9" and Light Ten lathes, the off-set base illustrated above is used. The base consists of a steel plate which is mounted between the compound rest base of the lathe and the milling attachment base. When the off-set base is used, the position of the milling attachment is 1 ½" farther

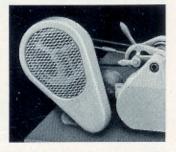


away from the center line of the lathe spindle. This permits milling parts that might otherwise be too large for machining. See illustration at right. Price of off-set base includes necessary screws.

CL2408NK. Off-set Base for milling attachment. Fits 9" and Light Ten lathes only. Shipping weight 5 lbs.

Motor Belt Guard for 9" Bench Lathe

Fabricated of expanded metal cast into a rigid frame, this guard is designed to enclose the motor pulley, motor V-belt, and countershaft drive pulley of 9-inch Horizontal Motor Driven Bench Lathes. It can be used with any 9-inch Horizontal Motor Drive Unit made since Feb. Unit made is attached to the motor drive frame



by a cap screw or bolt and a dowel pin. Frame must be drilled for pin and bolt or tapped for screw.

CL2885. Motor Belt Guard for 9" Horizontal Motor Drive with 1/3 h.p. or 1/4 h.p. motor. Ship. wt. 26 lbs.

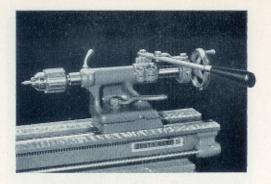
CL2886. Motor Belt Guard for 9" Horizontal Motor Drive with ½ h.p. motor. Ship. wt. 27 lbs.

Extra Tool Posts

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



Catalog	Size	D	imensions	Ship.	
Number	Lathe	Dia.	Opening	Block	Wt.
CE2450NK CE2450R CE2450T CE2450F CE2450H	9" & Lt. Ten 10" 13" 14 ½" 16"	\$561 \$1/2 13/8 111/2 13/9	13/2 x 3/8 14/2 x 1 15/2 x 13/4 21/2 x 13/4 23/2 x 13/4	14 x 14 x 136 14 x 136 x 1 16 15 x 1 34 x 1 16 15 x 2 2 4 x 2 16 15 x 2 14 x 2 16	2 lbs. 2 lbs. 3 lbs. 4 lbs. 5 lbs.

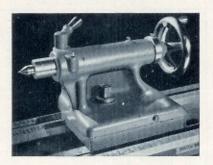


Handlever Tailstock

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

Handlever Tailstock for South Bend Lathes

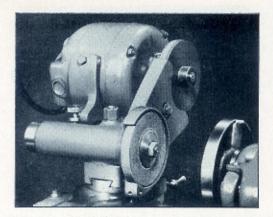
Size Lathe	Lgth. of Feed	Shpg. Weight	In Lieu Regular Tai	In Addition Regular Tails	
Latne	Inches	Lbs.	Cat. No.	Cat. No.	Ser.
9" Light Ten 10"	25% 25% 25%	25 25 33	CL519N CL519K CL519R	CL1197N CL1197K CL1197R	



Tailstock for South Bend Turret Lathes

Prices of South Bend No. 2-H, Series 900, and Series 1000 Turret Lathes do not include tailstock, but a standard set-over type tailstock as illustrated above can be supplied to order. The tailstock mounts on the lathe bed, in place of the turret, for machining work between centers. Tailstock spindle is graduated in 16ths of an inch, and is fitted with a 60° hardened center. Tailstock top has set-over for taper turning. This unit should be ordered with the lathe and fitted at the factory.

Catalog	Size	Size	Shipping	
No.	Lathe	Center	Weight	
CL2036P	No. 2-H	No. 3 M.T.	133 lbs.	
CL2036R	Series 1000	No. 2 M.T.	42 lbs.	
CL2036N	Series 900	No. 2 M.T.	22 lbs.	



External Grinding Attachment

This powerful and efficient grinding attachment is recommended for refacing valves, sharpening reamers and cutters, and other external grinding. Designed to fit the various sizes of South Bend Lathes, it is easily adaptable for use on other makes of lathes. The spindle revolves in pre-lubricated, precision ball bearings which are sealed to protect them from damage by dust, grit and metal particles produced when grinding. Supplied with ½ h.p., constant speed continuous duty motor, and 4" x ½" No. CE2759 general purpose grinding wheel. Grinders with popular motors are listed below. Write for information on grinders having motors with other current characteristics. Shipping weight approximately 55 lbs.

External Grinding Attachment and Motors

Catalog	Size	Dia.	Motor Sp	ecificat	ions	
Number	Lathe	Will	Volts	Phase	Cycle	The
CE300KNK CE300LNK CE301ANK CE301BNK CE301DNK CE303CNK CE303CNK CE303FNK	9" and Light Ten	5514 × 55	115 D.C. 230 D.C. 115 A.C. 115 A.C. 230 A.C. 230 A.C. 220 A.C. 220 A.C. 440 A.C.		50 60 50 60 50 60 60 60	
CE300KR CE300LR CE301AR CE301BR CE301CR CE301DR CE303CR CE303CR CE303FR	10*	57/4" 57/4" 57/4" 57/4" 57/4" 57/4" 57/4" 57/4"	115 D.C. 230 D.C. 115 A.C. 115 A.C. 230 A.C. 230 A.C. 220 A.C. 220 A.C. 440 A.C.	111133333	50 60 50 60 50 60 60	
CE300KT CE300LT CE301AT CE301BT CE301CT CE301DT CE303CT CE303DT CE303TT	13"	8" 8" 8" 8" 8" 8" 8"	115 D.C. 230 D.C. 115 A.C. 115 A.C. 230 A.C. 230 A.C. 220 A.C. 220 A.C. 440 A.C.		50 60 50 60 50 60 60	
CE300KF CE300LF CE301AF CE301BF CE301CF CE301DF CE303CF CE303CF CE303FF	141/2"	9" 9" 9" 9" 9" 9"	115 D.C. 230 D.C. 115 A.C. 115 A.C. 230 A.C. 230 A.C. 220 A.C. 220 A.C. 440 A.C.	1 1 1 3 3 3 3 3	50 60 50 60 50 60 60	
CE300KH CE300LH CE301AH CE301BH CE301CH CE301DH CE303CH CE303CH CE303TH	16"	91/2" 91/2" 91/2" 91/2" 91/2" 91/2" 91/2"	115 D.C. 230 D.C. 115 A.C. 115 A.C. 230 A.C. 230 A.C. 220 A.C. 220 A.C. 440 A.C.	 1 1 1 1 1 3 3 3	50 60 50 60 50 60 60	
CE300KH CE301AH CE301AH CE301CH CE301CH CE303CH CE303CH CE303CH CE303TH	16-24"	1814" 1814" 1814" 1814" 1814" 1814" 1814" 1814" 1814"	115 D.C. 230 D.C. 115 A.C. 115 A.C. 230 A.C. 230 A.C. 220 A.C. 220 A.C. 440 A.C.	1 1 1 3 3 3 3	50 60 50 60 50 60 60 60	

Extra Grinding Wheels



For rapid grinding and smooth finish, the correct grade of grinding wheel should be selected. The grinding wheels listed cover the more important classes of work. Wheels listed in table are 4" in diameter with ½" face and ½" hole, to fit external grinding attachment. Shipping weight 2 lbs.

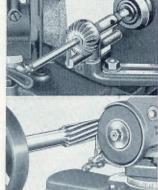
Cat. No.	Type of Work	Class of Work	
CE2759 CE2758 CE2774 CE2757 CE2769	General Work Cutting Tools Automobile Valves Cast Iron Soft Steel	Rough or Finish Rough or Finish Rough or Finish Finish Grinding Finish Grinding	

No. CE3236. Cup Grinding Wheel, $3\frac{1}{4}$ O.D., 3 I.D., $1\frac{1}{4}$ face, $\frac{1}{2}$ hole for sharpening reamers and cutters.

Reamer Grinding Stops

For sharpening reamers, milling cutters, etc., having either straight or spiral flutes. Also used for holding the No. CE18 Diamond Dresser listed below.

			_
Cat.	Size	Ship.	
No.	Lathe	Wt.	
CE1512N	9"	7 lbs.	
CE1512K	Lt. Ten	8 lbs.	
CE1512R	10"	9 lbs.	
CE1512T	13"	14 lbs.	
CE1512F	14 14"	20 lbs.	
CE1512H	16"	24 lbs.	
CE1512V	16-24"	30 lbs.	



Diamond Dresser

For satisfactory operation, the grinding wheel should be trued frequently with a diamond dresser. This dresser must be mounted in the Reamer Grinding Stop fixture, listed above. Price does not include the fixture.

No. CE18. Diamond Dresser only. Shipping weight 1 lb.



Tailstock Diamond Holding Fixture

Clamps to tailstock spindle of lathe for holding the No. CE406 diamond dresser (shown in inset) for truing grinding wheel. Cannot be used while work is mounted between the lathe centers. Price does not include diamond dresser, which is listed below.

Cat.	Size	Ship.	
No.	Lathe	Wt.	
CE91NK	9" & Lt. Ten	3 lbs.	
CE91R	10"	3 lbs.	
CE91T	13"	4 lbs.	
CE91F	1414"	4 lbs.	
CE91H	16" & 16-24"	5 lbs.	



No. CE406. Diamond Dresser. Shipping weight 1/2 lb.



Internal Grinding Attachment

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

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

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

This grinder can be easily adapted for use on other makes of lathes or on other machine tools. Grinders have 1 ph., 60 cy., 115 v., A.C. motor, and accessories as listed below under specifications. Shipping weight 51 lbs.

Specifications

Grinding wheel speed
Accessories supplied:
Four 14" wheel arbors; lengths 21/4", 215/4", 31/4", and 47/4".
Four grinding wheels: ¼" bore; ¼" face; ½", ¾", ¾", and 1" diameters.
One chuck for mounted wheels
Eight-foot extension cord, plug, and switch.

Catalog Number	Lathe Size	Base to Center of Wheel
CE601BNK	9" & Light Ten	1½ in.
CE601BR	10 in.	11/2 in.
CE601BT	13 in.	15% in.
CE601BF	14 1/2 in.	127 4 in.
CE601BH	16" & 16-24"	21 in.

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



Dust Collecting Unit for Electric Grinding Attachment

Abrasive dust from the grinding wheel and grindings from the work can be collected and filtered from the air with this unit. This provides greater comfort for the operator and protects the lathe from the abrasive action of emery dust and grindings.

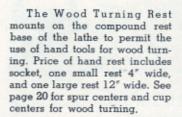
The dust collecting unit consists of a steel cabinet containing highly efficient chemically treated spark resistant filters and a powerful blower driven by a 1/3 h.p. electric motor. A non-collapsible flexible exhaust tube carries the dust from the grinding wheel to the dust collecting unit. The grinding wheel is almost totally enclosed in a guard to which the exhaust tube is connected.

Equipment included in price consists of dust collecting unit complete with motor, switch, blower, filters, exhaust tube, and special grinding wheel guard, but does not include grinding attachment.

Dust Collecting Unit for Use With Electric Grinding Attachment

Cat. No.	Current	Phase	Cycle	Voltage	Ship. Wt.	
CE311B	A.C.	1	60	115	160 lbs.	
CE311D	A.C.	1	60	230	160 lbs.	
CE313D	A.C.	3	60 60	220	160 lbs.	
CE313F	A.C.	3	60	440	160 lbs.	
CE313K	A.C.	3	25	220	160 lbs.	1
CE313VA	A.C.	3	25	440	160 lbs.	

Wood Turning Rest





Cat. No.	Size Lathe	Shipping Weight	
CL896N	9"	6 lbs.	
CL896K	Light Ten	6 lbs.	
CL896R	10"	7 lbs.	
CL896T	13"	9 lbs.	
CL896F	14 16"	12 lbs.	
CL896H	16" & 16-24"	14 lbs.	



Standard and Safety Lathe Dogs

Lathe dogs should correspond in capacity to the diameter of the work if the work is to be held securely. These lathe dogs are made of heavy malleable iron and are properly designed for maximum strength and long service. Tail of dog is shaped to fit slot in drive plate. The Standard Lathe Dog has square head alloy steel set screw. The Safety Lathe Dog has a headless alloy steel set screw. Wrenches required for headless set screws are listed in right-hand columns.

Lathe Dogs for 13" and Larger Lathes

Cap.	Ship.	STANDARD	SAFETY	Wrenches for Safety Dogs
In. Wt.	Cat. No.	Cat. No.	Cat. No.	
36	1 lb.	CE3843	CE3826	CE2385
34	1 lb.	CE3844	CE3827	CE2386
1	2 lbs.	CE3845	CE3828	CE2387
134	2 lbs.	CE3846	CE3829	CE2388
134	3 lbs.	CE3847	CE3830	CE2389
134	3 lbs.	CE3848	CE3831	CE2389
2	4 lbs.	CE3849	CE3832	CE2389
234	5 lbs.	CE3850	CE3833	CE2390
3	6 lbs.	CE3851	CE3834	CE2390
334	7 lbs.	CE3852	CE3835	CE2390
4	9 lbs.	CE3853	CE3836	CE2390

Lathe Dogs for 9" and 10" Lathes

Cap.	Ship.	STANDARD	SAFETY	Wrenches for Safety Dogs
In.	Wt.	Cat. No.	Cat. No.	Cat. No.
3%	1 lb.	CE3837	CE3820	CE2385
1/2	1 lb.	CE3838	CE3821	CE2385
34	2 lbs.	CE3839	CE3822	CE2386
1	2 lbs.	CE3840	CE3823	CE2387
134	3 lbs.	CE3841	CE3824	CE2388
134	3 lbs.	CE3842	CE3825	CE2388

Clamp Lathe Dog

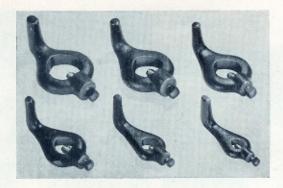
Made of heavy drop-forged steel, carefully machined and hardened. Practical for holding round, hexagonal or rectangular work. Screws have U. S. Standard thread and are hardened and tempered. The nuts permit adjusting screws for minimum projection of screw heads beyond



mum projection of screw heads beyond body of lathe dog. Each clamp lathe dog is boxed separately.

Clamp Lathe Dogs

	Cap	acity	Size		
Catalog Number	Maxi- mum Opening	Distance Between Screws	Lathe Used With	Shipping Weight	
CE160	156"	154"	9" & larger	1 lb.	
CE161	13%"	214"	13" & larger	2 lbs.	
CE162	234"	234"	13" & larger	3 lbs.	
CE163	314"	31/2"	14 1/2" & larger	4 lbs.	



Sets of Lathe Dogs

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

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

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

Cat. No. CE2105. Set of 6 Standard Lathe Dogs, 3/8" to 11/2" capacity for 9" and 10" lathes. Ship wt. 6 lbs.

Cat. No. CE2107. Set of 6 Safety Lathe Dogs, 38" to 11/2" capacity for 9" and 10" lathes. Ship. wt. 6 lbs.

Center Gauge

The center gauge is a useful tool for the lathe operator. The 60° included



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

No. CE650 Center Gauge. Shipping weight 2 ozs.

Screw Thread Pitch Gauges

With one of these handy gauges you can check the pitches of internal and external screw threads quickly and accurately. Made of steel, with each blade marked to indicate threads



per inch. Each blade has standard 60° U. S. thread form accurately milled and held well within commercial tolerances. Can be used for checking V, American National, and U. S. Standard threads.

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

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

Mica Undercutting Attachment



PATENTED

Any shop that repairs armatures for motors, generators or starters will have a lot of use for this practical attachment. It attaches to the saddle of the lathe for undercutting armature commutators. Hand operated, easy to use, and efficient. Cutter blade can be aligned with commutator segments, even though they are not parallel with the armature shaft.

This prevents cutting into copper and throwing up burrs. A screw adjustment is provided for regulating the depth of the cut. Maximum length of stroke is 3°. When not in use, the undercutter may be tilted back out of the way. Price includes one cutter blade .020" thick.

Catalog No	Size Lathe	Ship, Weight	
CL675N	9"	7 lbs.	
CL675KR	Lt. Ten & 10"	10 lbs.	
CL675T	13"	12 lbs.	
CL675F	141/2"	15 lbs.	
CL675H	16"	17 lbs.	

CE2028. Extra cutter .015" thick. Ship. wt. ½ lb. CE2029. Extra cutter .020" thick. Ship. wt. ½ lb.

Adjustable Collet Bushing Chuck



The adjustable Collet Bushing Chuck provides an extremely accurate, but inexpensive equipment for mounting centerless armature shafts, and similar parts in the lathe. Can be used in either head or tail spindle of lathe. Collets are made of brass, and may be adjusted



for either running fit or driving fit on shaft.

Description	Cat. No.	Shank	Shipping Weight
Adjustable Collet Bushing	CE1615NR	No. 2	2 lbs.
Chuck only	CE1615TH	No. 3	2 lbs.
Adjustable Collet Bushing Chuck with set of 3 collets,	CLIOOSIVIC	No. 2	3 lbs.
1/4", 1/4", and .637" capacity for popular armatures.	CE1608TH	No. 3	4 lbs.

Cat. No. CE1659. Extra Collets for round work, any capacity 1/8" to 1" round by 16ths, ship. wt. 1 lb.

Complete Armature Service Equipment Kit

Consisting of mica undercutting attachment with two cutter blades; adjustable collet bushing chuck with set of three collets; drill chuck, 1/8" to 3/4" capacity for driving armatures; taper shank arbor with No. 3 shank for drill chuck; straight shank turning tool with cutter bit and wrench; and cutter bit ground for truing commutators.

Catalog No.	Size Lathe	Shipping Weight	
CL2330N	9°	20 lbs.	
CL2330K	Light Ten	22 lbs.	
CL2330R	10°	22 lbs.	
CL2330T	13°	26 lbs.	
CL2330F	14 ½°	28 lbs.	
CL2330H	16°	30 lbs.	



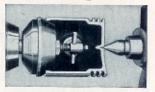
Adapter Shank

Cone Ring

Driving Dog

Self-Centering Piston Adapter

The Self-Centering Piston Adapter, shown at right is used for mounting semi-machined pistons in the lathe for machining to finished size. The long tapered shank fits into the lathe spindle and the short pilot centers various



sizes of cone rings. The driving dog screws into the threaded hole in the end of the adapter, and is adjustable for driving any size of piston having a center hole in head.

Cat. No. CE144. Self-Centering Piston Adapter complete, consisting of Adapter Shank with No. 3 Morse taper, No. CE3645 Cone Ring for pistons 2½" to 3½" in dia., and Driving Dog. Shipping weight 7 lbs.

Extra Cone Rings

Cone Rings are used on the piston adapter, shown above, to center pistons in the lathe. Cone rings are listed below for centering

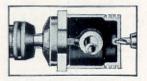


pistons from 2½" to 5" outside diameter. The No. CE3645 Cone Ring is included in the price of the piston adapter listed above.

Catalog	For Pistons	Shipping	
Number	Diameter	Weight	
CE3645	21%" to 31%"	2 lbs.	
CE3646	31%" to 31%"	3 lbs.	
CE3647	31%" to 41%"	3 lbs.	
CE3648	41%" to 5"	4 lbs.	

Piston Centering Ring

The Piston Centering Ring and Eye Bolt Driver are used with the No. CE144 Piston



Adapter shank for holding pistons when it is necessary to drill a center hole in the head of the piston in order to mount it in the lathe. Centering Ring is 5% in diameter.

Cat. No. CE3644. Centering Ring and Eye Bolt Driver. Shipping weight 8 lbs.

Jacobs Valve Chuck

Chuck has 1½"—8 thread to fit spindle nose of 9" and Light Ten lathes only. Has hollow body for holding automobile engine valves for refacing. Also used for holding small rods,

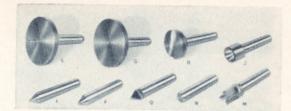


bars, and tubes for machining. 5 chuck can be used in tailstock of lathe when fitted with solid arbor No. CE2304 or CE2305. Price and weight includes pinion key.

Cat. No.	Capacity	Ship. Wt.	
CE907	1/4" to 5/4"	3¾ lbs.	
CE925	1/6" to 3/4"	4¼ lbs.	

Ground Cutter Bits for Truing Commutators

Size	S	ingle Bit	Lo	t of Six Bits
of Bit	Cat.	Ship.	Cat.	Ship.
	No.	Wt.	No.	Wt.
4" sq.	CE1363	4 ozs.	CE1744	10 ozs.
4" sq.	CE1365	5 ozs.	CE1746	10½ ozs.
8" sq.	CE1366	5 ozs.	CE1747	11 ozs.



Lathe Centers and Drill Pads

G Drill Pad, used in tailstock to support flat work for drilling.
H—Crotch Center, used in tailstock for drilling round work.
I—60° Center made of tool steel, heat-treated, hardened, and ground all over. For use in headstock or tailstock.
J=60° Hollow Center for supporting centerless armature shafts, etc.
L—Screw Center for wood turning.
M—Spur Center for wood turning.
N—Cup Center for wood turning.
P—Carbide Tipped Center for heavy duty use in tailstock.
O—Half Center, used in tailstock for facing ends of shafts.

Catalog Number	Description	Morse Taper	Ship. Wt.
CE2396	G—Drill Pad	No. 2	3 lbs.
CE2397	G-Drill Pad	No. 3	4 lbs.
CE2398	H-Crotch Center	No. 2	2 lbs.
CE2399	H-Crotch Center	No. 3	
CE2401	I-60° Center	No. 2	3 lbs.
CE2402	I-60° Center		1 lb.
CE1896	J—Hollow Center	No. 3	2 lbs.
CE1897	J—Hollow Center	No. 2	2 lbs.
CE2413	T C Center	No. 3	2 lbs.
CE2414	L—Screw Center	No. 2	3 lbs.
CE2416	L—Screw Center	No. 3	4 lbs.
CE2417		No. 2	2 lbs.
CE2422	M—Spur Center	No. 3	5 lbs.
CE2423	N-Cup Center	No. 2	1 lb.
	N-Cup Center	No. 3	2 lbs.
CE1889	P—Carbide Center	No. 2	1 lb.
CE1890	P—Carbide Center	No. 3	2 lbs.
CE2424	Q—Half Center	No. 2	1 lb.
CE2425	Q—Half Center	No. 3	2 lbs.

Ball Bearing Live Centers

Designed for maximum strength and rigidity, the Ball Bearing Live Centers are recommended for high speeds and heavy roughing cuts. Two styles are available, one having a 60° external point as shown above at right, and one having a 60° hollow as shown in the lower illustration. Both styles are made with No. 2 and No. 3 Morse standard tapers. The substantial precision ball bearing in which the center runs is easily replaceable.





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

Die Holder

For holding standard 1" or 11/2" diameter button dies in tailstock spindle of lathe for cutting screw threads

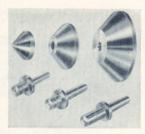


on work held in lathe chuck. Die holder has 1/2" hole, 3" deep for stock clearance. Made of a single piece of steel.

Catalog	Takes	Taper	Shipping	
Number	Dies	Shank	Weight	
CE1829	1" diameter	No. 2	2 lbs.	
CE1834	1" diameter	No. 3	3 lbs.	
CE1838	1½" diameter	No. 2	2 lbs.	
CE1839	1½" diameter	No. 3	3 lbs.	

Pipe Centers

For mounting tubing, pipe, etc., between the lathe centers for machining. Centers have accurately ground 45° cone, and revolve on steel shanks.



Pipe Centers

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

Pipe Center Shanks

Cat.	Shank	Take	Shipping	
No.	Taper	Centers	Weight	
CE2172	No. 2	CE2160 & CE2161	2 lbs.	
CE2174	No. 3	CE2160 & CE2161	3 lbs.	
CE2173	No. 3	CE2162	4 lbs.	



Knock-out

For removing headstock center and sleeve from spindle. Made of steel, with knurled handle and brass bushing.

Catalog	Size	Outside	Total	Ship.	
Number	Lathe	Dia.	Length	Weight	
CE1475NK CE1475R CE1475L CE1475QH	9" & Lt. Ten 10".11" Col. 10".1" Col. 13", 1414", 16", 16-24" & 2-H	1" 136" 136"	16" 1718" 1718" 2818"	4 lbs. 5 lbs. 7 lbs. 7 lbs.	

Combination Center Drill and Countersink



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

Dia. of Dia. of		Si	Single Drill		Lot of Twelve	
Drill	Body	Cat. No.	Ship. Wt.	Cat. No.	Ship. Wt.	
14" 16" 16" 15" 15" 15"	116" 1154" 1364" 302" 302"	CE2087 CE2041 CE2088 CE2042 CE2043 CE2044	4 ozs. 4 ozs. 4 ozs. 4 ozs. 4 ozs. 6 ozs.	CE2555 CE2556 CE2567 CE2568 CE2559 CE2560	8 ozs. 8 ozs. 8 ozs. 8 ozs. 1 lb. 2 lbs.	

Cat. No. CE2554—Set of 6 Combination Center Drills and Countersinks, one of each.

Center Drill Holder



The Center Drill Holder is designed for greater accuracy in center drilling operations. Holds drill rigidly.

Catalog	Taper	Diameter	Shipping	
Number	Shank	Will Hold	Weight	
CE2338 CE2340 CE2339 CE2341 CE2342 CE2346 CE2343 CE2347 CE2347	No. 2 No. 2 No. 2 No. 2 No. 3 No. 3 No. 3	16" 136" 156" 302" 76" 136" 136" 136" 302"	1 lb. 1 lb. 1 lb. 1 lb. 1 lb. 2 lbs. 2 lbs. 2 lbs.	+



Face Plates

Face Plates are heavily constructed and ribbed on the back. Threaded to fit spindle nose of the lathe. Large Face Plates have slots for clamping work or special face plate fixtures. Small Face Plates have slots for driving lathe dog.

Small Face Plates for South Bend Lathes

Catalog Number	Size Lathe	Out- side Dia.	Thread	Ship- ping Weight
CL2175 NK	9", Lt. Ten & Series 900	51%"	136"-8	4 lbs.
CL2175R	10"-11" Collet	55%"	178"-8	5 lbs.
CL2178L	10"-1" Collet & Series 1000	55%"	21/4"-8	S lbs.
CL2175Q	13"-1" Collet	696"	214"-8	8 lbs.
CL2175MH	14½", 16", 16-24", 1" Collet, & No. 2-H	81/4"	23%"—6	13 lbs.

Large Face Plates for South Bend Lathes

Catalog Number	Size Lathe	Out- side Dia.	Thread	Ship- ping Weight
CL2180 NK	9", Lt. Ten & Series 900	73%	136"-8	8 lbs.
CL2180R	10"-11" Collet	83%"	17/4"-8	10 lbs.
CL2180L	10"-1" Collet & Series 1000	81%"	214"-8	10 lbs.
CL2180Q	13"-1" Collet	1034"	214"-8	19 lbs.
CL2180MH	1416", 16", 16-24", & 2-H	13%"	2360-6	38 lbs.
CL2180V*	16-24"	2236"	234"-6	96 1/4 lbs.

[&]quot;This is an extra large face plate for mounting large diameter work in 16-24" lathe only.



Multi-Tapped Face Plate

This heavily constructed face plate has six slots and thirty tapped holes for clamping work or special work holding fixtures. The cored slots are $\frac{7}{16}$ wide, and the tapped holes have $\frac{9}{16}$ —18 threads. The face plate is made of cast iron, and is accurately machined all over. It has a precision milled thread for the spindle nose of the lathe, and is $\frac{7}{16}$ thick.

Catalog Number	Size Lathe	Outside Dia.	Spindle Thread		
CL1483NK	9", Lt. Ten & Ser. 900	814"	1½"—8 1½"—8	13 lbs.	- 4
CL1483R	10"-11" Col.	81/20	17/8"-8	13 lbs.	
CL1483LQ	10° & 13°, 1° Col. & Ser. 1000	8320	21/4"—8	13 lbs.	

Sleeve for 10"-11/16" Collet Lathe



Cat. No. CL205RT. Special Spindle Sleeve with No. 3 Morse taper inside for fitting Piston Adapter Shank, Milling Arbor

etc. to spindle of 10"-1116" Collet Lathe. Shipping weight, 1 lb.

Taper Reducing Sleeve

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



Caralan Na	Morse	Taper	Shipping	
Catalog No.	Outside	Inside	Weight	
CE2525	2	1	8 ozs.	Yan III
CE2526	3	1	12 ozs.	
CE2527	3	2	12 ozs.	

(2)

Fixture Plate

This Fixture Plate is used for mounting special fixtures, jigs, holding devices, and tools on the spindle nose of the lathe. Being accurately machined all over, and threaded to fit the spindle nose of the lathe, its use will save much time and expense

when tooling up a lathe for a production operation which calls for a special holding fixture fitted to the spindle nose.

Catalog Number	Size Lathe	Out- side Dia.	Spindle Thread	Ship- ping Weight
CL46NK	9", Lt. Ten & Ser. 900	714"	11/2"—8	9 lbs.
CL46R	10"-116" Col.	9"	13%"-8	14 lbs.
CL46L	10"-1" Col. & Ser. 1000	9"	214"-8	14 lbs.
CL460	13"-1" Collet	101/4"	21/4-8	22 lbs.
CL46MH	14½", 16", 16-24", & No. 2-H	1134"	23%"—6	29 lbs.

Threaded Chuck Plate

Semi-machined threaded chuck plates are supplied for those who wish to fit their own chucks to South Bend Lathes. These are heavily constructed cast-iron plates, accurately threaded to fit the spindle nose of the lathe.



The back of the plate is finished, and the outside diameter and face are rough machined. When ordering, be sure to specify the correct plate to fit the diameter of the recess in back of chuck. Stock is allowed for finishing to diameter shown in the table.

Catalog Number	Size Lathe	Spindle Nose Th'd	O.D. of Plate	Shipping Weight
CE2703NK CE2704NK CE2709NK	9", Lt. Ten and Series 900	11/9"—8	3½" 5" 7½"	3 lbs. 4 lbs. 10 lbs.
CE2703LQ CE2704LQ CE2706LQ CE2707LQ CE2708LQ CE2709LQ CE2710LQ	10"-1" Col. 13"-1" Col. Ser. 1000	214"—8	3½" 5" 5½" 6¼" 7½" 9"	4 lbs. 5 lbs. 6 lbs. 7 lbs. 11 lbs. 13 lbs. 18 lbs.
CE2703RT CE2704RT CE2705RT CE2707RT CE2708RT CE2709RT CE2710RT	10°-11/4° Col.	176"—8	31/2" 5" 51/2" 61/4" 71/4" 9"	4 lbs. 6 lbs. 8 lbs. 9 lbs. 12 lbs. 16 lbs. 20 lbs.
CE2704MH CE2706MH CE2706MH CE2707MH CE2708MH CE2710MH CE2711MH	14½", 16", 16:24", 1" Col., & 2-H	23%"—6	5" 514" 6" 614" 714" 1014"	8 lbs. 8 lbs. 9 lbs. 9 lbs. 13 lbs. 20 lbs. 24 lbs.

Chuck Plates Fitted to Chucks

Catalog numbers listed below cover fitting charges when chucks are shipped to us to be fitted with chuck plates threaded to fit South Bend Lathes. Fitting charges do not include transportation costs.



Catalog Number	Size Lathe	
CE2935NK CE2935RT CE2935LQ CE2935MH	9", Light Ten, & Series 900	

4-Jaw Independent Lathe Chucks

These chucks have four reversible jaws with individual screw adjustment. Chuck body is ground and chuck jaws are hardened and ground.

Price includes wrench, and chuck plate fitted to lathe spindle and chuck. Size chuck recommended for each size lathe is shown in **bold face type**.



Catalog Number	Size of Chuck	Size of Lathe	Ship. Wt.
CL4006NK	6"	9" and Light Ten	13 lbs.
CL4206NK	6"	9" and Light Ten	18 lbs.
CL4006R	6"	10"-11/6" Collet	13 lbs.
CL4206R	6"	10"-11%" Collet	18 lbs.
CL4207R	739"	10"-11'8" Collet	37 lbs
CL4006L	6"	10"-1" Collet	13 lbs.
CL4206LQ	6"	10"-1" Collet	18 lbs.
CL4207LQ	736"	10"-1" Collet	38 lbs.
CL4206LQ	6"	13"-1" Collet	18 lbs.
CL4207LQ	734"	13"-1" Collet	38 lbs.
CL4209Q	9"	13"-1" Collet	46 lbs.
CL4207MH	71/2"	14 1/9"-1" Collet	38 lbs.
CL4209MH	9"	1412"-1" Collet	46 lbs.
CL4210MH	10"	141/2"-1" Collet	57 lbs.
CL4207MH	714"	16", 16-24", & 2-H	38 lbs.
CL4209MH	9"	16", 16-24", & 2-H	46 lbs.
CL4210MH	10"	16", 16-24", & 2-H	57 lbs.
CL4212H	12"	16", 16-24", & 2-H	96 lbs.

3-Jaw Universal Lathe Chucks

Universal Chucks are supplied either with two sets of jaws or with one set of reversible jaws as indicated in table below. Chuck body is ground and

jaws are hardened. Chuck jaws are moved simultaneously by a scroll, and work is automatically centered. Price includes wrench and threaded chuck

plate fitted to lathe spindle. Size of chuck recommended for each size lathe is shown in **bold face type**.

Catalog Number	Size of Chuck	Size of Lathe	Ship. Wt.	
Universal	Chucks V	With One Set of I	Reversible	Jaws
CL6005NK	5"	9" and Light Ten	12 lbs.	
CL6506NK	6"	9" and Light Ten	26 lbs.	
CL6005R	5"	10"-11%" Collet	12 lbs.	
CL6005LQ	5"	10"-1" Collet	12 lbs.	
CL6506R	6"	10"-116" Collet	26 lbs.	
CL6506LQ	6"	10"-1" Collet	26 lbs.	
CL6005LQ	5"	13"-1" Collet	12 lbs.	
CL6506LQ	6"	13"-1" Collet	26 lbs.	

Universal Chucks With Two Sets of Jaws

CL3005NK	5"	9" and Light Ten	13 lbs.	
CL3505NK	5"	9" and Light Ten	19 lbs.	
CL3506NK	6"	9" and Light Ten		
CL3005R	5"	10"-11" Collet	13 lbs.	
CL3505R	5"	10"-11" Collet	19 lbs.	
CL3506R	6"	10"-11" Collet	28 lbs.	
CL3005L	5"	10"-1" Collet	13 lbs.	
CL3505LQ	5"	10"-1" Collet	19 lbs.	
CL3506LQ	6"	10"-1" Collet	28 lbs.	
CL3505LQ	5"	13"-1" Collet	19 lbs.	
CL3506LQ	6"	13"-1" Collet	28 lbs.	
CL3507Q	734"	13"-1" Collet	47 lbs.	
CL3505MH	5"	14 1/2"-1" Collet	19 lbs.	
CL3506MH	6"	14 34"-1" Collet	28 lbs.	
CL3507MH	736"	141/2"-1" Collet	47 lbs.	
CL3509MH	9"	14 16"-1" Collet	59 lbs.	
CL3505MH	5"	16", 16-24", & 2-H		
CL3506MH	6"	16", 16-24", & 2-H		
CL3507MH	71/5"	16", 16-24", & 2-H		
CL3509MH	9"	16", 16-24", & 2-H		



Face Plate Chuck

This inexpensive Face Plate Chuck can be used for holding round, square, or irregular work. Maximum capacity for round work is 7½" in diameter. Face plate is 8" in diameter, with annular lines to aid in centering.

Catalog	Size of	Spindle	Shipping	
Number	Lathe	Thread	Weight	
CL2155NK	9" and Lt. Ten	1½"—8	14 lbs.	
CL2155R	10"-1",6" Col.	1½"—8	16 lbs.	
CL2155L	10"-1" Collet	2¼"—8	16 lbs.	

3-Jaw Drill Chucks

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



Cat.	Make of	Capacity	Net Wt.	Ship, Wt.	
No.	Chuck	of Chuck	Lbs.	Lbs.	
CE1200	Jacobs	0 to ½ in.	11/6	178	
CE1201	Jacobs	0 to ½ in.	13/4	238	
CE1202	Jacobs	½ to ½ in.	31/6	312	
CE1206	Jacobs	38 to 1 in.	65/8	712	
CE219	Almond	0 to 3% in.	134	176	
CE220	Almond	0 to 3% in.	134	236	
CE327	Almond	1% to 3% in.	334	334	
CE328	Almond	3% to 1 in.	554	638	

Taper Arbors for Drill Chucks

For fitting drill chuck to taper of lathe headstock spindle or tailstock spindle.



For No.		Morse Taper	No.	No. 3 Morse Tapes	
Chuck	Cat. No.	Ship.Wt.	Cat. No.	Ship.Wt.	
CE1200 CE1201 CE1202 CE1206 CE219 CE220 CE327 CE328	CE2300 CE2302 CE2304 CE2306 CE2300 CE2302 CE2308 CE2308	36 lb. 1/2 lb. 1/2 lb. 1 1/6 lbs. 1/2 lb. 1/4 lb. 1/4 lb. 1/4 lb.	CE2301 CE2303 CE2305 CE2307 CE2301 CE2303 CE2309 CE2309	34 lb. 34 lb. 34 lb. 1 32 lbs. 34 lb. 1 lb. 1 lb. 1 lb. 1 lb. 1 lb.	

Straight Arbors for Drill Chucks

For Fitting Drill Chuck to Hole in Turret Head

For Drill	%" Diamete	r 1/2 Diameter	1½° Diameter
Chucks	Cat. No.	Cat. No.	Cat. No.
CE1200 or CE219 CE1201 or CE220 CE1202 CE1206 CE327 or CE328	CE2360 CE2362 CE2364 CE2366 CE2368	CE2361 CE2363 CE2365 CE2367 CE2369	CE2377 CE2378 CE2379 CE2380 CE2381

Semi-Machined Drill Chuck Arbors

For fitting drill chucks and other tools to lathe spindle or turret head. Must be machined to fit drill chuck or other tool.

Cat. No.	Shank	Ship. Wt.	
CE1500	No. 2 Morse Taper	1 lb.	
CE1501	No. 3 Morse Taper	2 lbs.	
CE2325	58" Diameter Straight	1 lb.	
CE2326	34" Diameter Straight	1 lb.	



Chuck and Tool Assortments

The chucks and tools in the assortments listed are recommended for use with the various sizes of South Bend Lathes. They include the basic equipment required for the average shop for general machine work, such as turning, boring, drilling, cutting-off, chucking, etc.

11-Tool Assortment with Independent Lathe Chuck

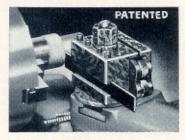
Item	Description
1	4-Jaw Independent Lathe Chuck fitted to lathe. Sizes: 6 in. on 9° and 10° Lathes; 7 ½ in. on 13° Lathe; 9 in. on 14 ½° Lathe; 10 in. on 16° and 16-24° Lathes.
2	Jacobs 3-Jaw Drill Chuck. Sizes: ½ in. on 9° and 10° Lathes; ¾ in. on 13° and 14½° Lathes; 1 in. on 16° and 16-24° Lathes.
3	Arbor Fitted to above Drill Chuck.
3 4 5 6 7	10 in 1 Tool Holder with medium diamond knurls.
5	4 Ground Cutter Bits for 10 in 1 Tool Holder.
6	Cut-off Blade for 10 in 1 Tool Holder.
7	Sleeve Boring Bar for 10 in 1 Tool Holder.
8-11	4 Malleable Lathe Dogs. Sizes: ½", ¾", 1", and 1¼" on 9" and 10" Lathes; ½", ¾", 1", and 1½" on all others.

Complete Assortments as Listed Above

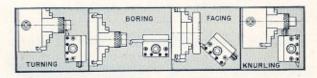
Catalog	Size	Shipping	
Number	Lathe	Weight	
CL2820NK	9° & Lt. Ten	25 lbs.	
CL2820R	10°.1½° Collet	30 lbs.	
CL2820L	10°.1° Collet	31 lbs.	
CL2820Q	13°.1° Collet	52 lbs.	
CL2820M	14½°.1° Collet	75 lbs.	
CL2820H	16° & 16.24°	89 lbs.	

10 in 1 Tool Holder

The 10 in 1 Tool Holder replaces the conventional tool post and various tool holders ordinarily used for general lathe work. It provides rigid support for turning, boring, threading, and cut-off tool bits. In addition, it is equipped with a self-aligning knurling head having No. CE3151 medium dia-



mond knurls. Screw adjustments for tool height are easily made, and they stay put. No readjustment is required when replacing tools. This tool block can be adapted to fit other makes of lathes.



Catalog Number	Size Lathe Inches	Holds Cutter Bits Inch	Holds Boring Bars Inches	Holds Cut-off Blades Inch	Ship. Wt. Lbs.	
CE1413NK CE1413R CE1413T CE1413F CE1413H	9 & Lt. Ten 10 13 14 ½ 16 & 16-24	16 x 16 36 x 36 16 x 16 56 x 58 56 x 58	% to % 1	14 x .595 54 x .595 35 x .735 35 x .870 38 x .870	5 7 10 10	



15-Tool Assortment for 9" and Light Ten Lathes

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

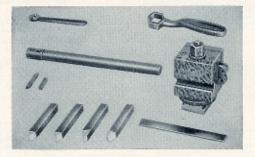
Item	Cat. No.	Description
1	CL4006NK	6" Four-Jaw Independent Lathe Chuck, fitted
2	CL6005NK	5" Three-Jaw Universal Lathe Chuck, fitted
3	CE1201	Jacobs Three-Jaw Drill Chuck, 14" capacity
1 2 3 4	CE2302	Taper Shank Arbor (No. 2 M.T.) fitted to Dril Chuck
5	CE1413NK	10 in 1 Tool Holder equipped with self-align ing knurling head having medium diamond knurls
6	CE2776	Set of 4 Ground Cutter Bits for 10 in 1 Too Holder
7	CE876	Cutting-off Blade for 10 in 1 Tool Holder
8	CE2419	Sleeve Boring Bar for 10 in 1 Tool Holder
9	CE3837	34" Malleable Lathe Dog
10	CE3838	34" Malleable Lathe Dog
11	CE3839	34" Malleable Lathe Dog
12	CE3840	1" Malleable Lathe Dog
13	CE3841	11/4" Malleable Lathe Dog
14	CE3842	1 1/2" Malleable Lathe Dog
15	CE2169	Cutter Bit Grinding Gauge

CL2845NK. Fifteen Tool Assortment as listed above. Shipping weight 38 lbs.

11-Tool Assortment With Universal Chuck For 9-inch and Light Ten Lathes Only

This assortment is exactly the same as the No. CL2820NK assortment listed at left, except that a No. CL6005NK, 5" 3-jaw universal chuck is supplied in lieu of the 6" 4-jaw independent chuck.

CL2840NK. Eleven Tool Assortment with Universal Chuck for 9-inch and Light Ten Lathes. Ship. wt. 20 lbs.



10 in 1 Tool Holder Kit

You can save money by purchasing this 10 in 1 Tool Holder Kit complete with boring bar, cut-off blade, and set of four ground high speed steel cutter bits. Price also includes knurling head, bolt clamp, and all other equipment regularly supplied with the 10 in 1 tool holder.

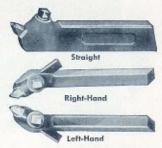
For specifications of tool holder see column at left. Descriptions and illustrations of cutter bits, boring bars, cut-off blades, and extra knurls, see pages 24 and 25.

0.1	Size of	Items Included in Kit			CL
Catalog	Lathe	Cutter	Boring	Cut-off	Ship.
No. of Kit		Bits	Bar	Blade	Weight
CE2930NK	9" & Light 10	CE2776	CE2419	CE876	7 lbs.
CE2930R	10"	CE2776	CE2419	CE876	7 lbs.
CE2930T	13"	CE2777	CE2420	CE878	12 lbs.
CE2930F		CE2778	CE2421	CE879	18 lbs.
CE2930H	16" & 16-24"	CE2778	CE2421	CE879	18 lbs.

Turning Tool Holders

Drop-forged steel, heattreated and hardened lathe tool holders. Supplied in three styles: straight, right-hand, and left-hand as illustrated.

Price includes: tool holder with hardened steel set screw, one unground hardened highspeed steel cutter bit, and a hardened drop-forged steel wrench.



Cat.	Size	Size	Size	Ship.
No.	Lathe	Shank	Cutter	Wt.
	Straight Shank	Turning To	ol Holders	
CE847S	9", Lt. Ten, & 10"	38" x 136"	14" x 14"	1 lb.
CE846S	9", Lt. Ten, & 10"	38" x 136"	14" x 14"	2 lbs.
CE852S	13"	16" x 116"	16" x 16"	3 lbs.
CE853S	14½", 16" & 16-24"	58" x 136"	58" x 58"	3 lbs.

a de cartino de la				
Left-Hand	Turning	Tool	Ho	lders

CE847L	9", Lt. Ten, & 10"	16" x 118"	14" x 14"	1 lb.
CE846L	9", Lt. Ten, & 10"		14" x 14"	2 lbs.
CE852L	13"		16" x 16"	3 lbs.
CE853L	143", 16" & 16-24"		36" x 36"	3 lbs.

Cutting-off Tool Holders

9", Lt. Ten, & 10" 9", Lt. Ten, & 10"

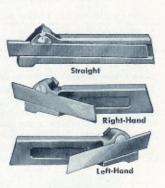
13" 16" & 16-24"

CE847R CE846R CE852R

CE853R

Cutting-off tool holders are made of drop-forged steel, heat-treated and hardened. Supplied in three styles: straight, right-hand, and lefthand as illustrated.

Price includes: tool holder, one cutter blade, and wrench.



2 lbs.

Straight Shank Cutting-off Tool H	
the second secon	lders
CE736S 9", Lt. Ten, & 10" 1/4" x 11/4" 1/4" x CE883S 13" 1/4" x 11/4" 1/4" x	95" 1 lb. 75" 2 lbs. 35" 3 lbs. 70" 3 lbs.

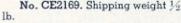
CE833R	9", Lt. Ten, & 10"	3/4" x 13/6"	1/4" x .595"	1 lb.	
CE736R	9", Lt. Ten, & 10"	18 x 136"	"x .475"	2 lbs.	
CE883R	9", Lt. Ten, & 10" 9", Lt. Ten, & 10" 13" 141%", 16" & 16-24"	20 × 1380	16" x 870"	3 lbs.	
CESSAR	1472, 10 0 10-24	78 X 178	78 X .070	5 ms.	_

Left-Hand Cutting-off Tool Holders

CE736L 9", Lt. Ten, & 10"	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	8.
CE884L 1434", 16" & 16-24"	%" x 158" 18" x .870" 3 lbs	s.

Cutter Bit Grinding Gauge

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

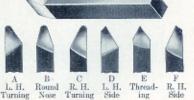




Ground Cutter Bits for Forged Turning Tool Holders

These cutter bits are made of good quality high speed steel and are heat-treated and hardened.

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



Ground High Speed Steel Cutter Bits

Size	Length	8	ingle Bit	Se	et of 6 Bits
Sguare	Cutter	Cat.	Ship.	Cat.	Ship.
Inch	Inches	No.	Wt.	No.	Wt.
14	2	CE1305	4 ozs.	CE1779	
16	2½	CE1313	5 ozs.	CE1777	
38	3	CE1316	5 ozs.	CE1778	

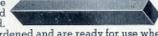
Ground Cutter Bits for 10 in 1 Tool Holders

High speed steel cutter bits ground for use in 10 in 1 tool holder listed on page 23. Made in four shapes: T for turning, H for threading, R for facing on right side of work, and L for facing on left side of work. When ordering single bits be sure to specify shape wanted.

Size	ze Length Single Bit		Set	of 4 Bits	
Square Inch	Cutter Inches	Cat. No.	Ship. Wt.	Cat. No.	Ship. Wt.
9/8 1/9	3 4 4%	CE2267 CE2268 CE2269	5 ozs. 8 ozs. 1 lb.	CE2776 CE2777 CE2778	1 lb. 2 lbs. 3 lbs.

Unground Cutter Bits

These cutter bits are the same quality as those listed above but they are not ground.



They are heat-treated and hardened and are ready for use when sharpened. Specify catalog number and size when ordering cutter bits.

Unground High Speed Steel Cutter Bits

Catalog Number	Size Square	Length Cutter	Shipping Weight	
CE3531 CE3532	2/6"	1" 114"	3 ozs. 3 ozs.	
CE3533 CE3534	13"	21g" 21g" 3"	4 ozs. 5 ozs.	
CE3535 CE3536	38"	31/4"	5 ozs. 7 ozs.	1
CE3537 CE3538	32"	43%"	12 ozs. 1 lb.	

Unground High Speed Steel Cutter Bits in Lots

Size	Length	L	ot of 6 Bits	Lo	t of 24 Bits
Square Inch	Cutter Inches	Cat. No.	Ship. Wt.	Cat. No.	Ship. Wt.
8/18 8/18 8/18 8/18 8/18 8/18 8/18 8/18	1 11/2 2 21/3 3 31/4 4 43/4	CE1629 CE1632 CE1633 CE2501 CE2502 CE2503	11 ozs. 2 lbs.	CE2370 CE2371 CE2372 CE2373 CE2374 CE2375 CE2393 CE2376	1 lb. 1 lb. 2 lbs. 3 lbs. 4 lbs. 6 lbs. 13 lbs. 15 lbs.

Blades for Cutting-off Tool Holders

Made from high-speed steel, heat-treated, hardened, ground on the edges, ready to use in tool holders or 10 in 1 Tool Holder.



Cat. No.	Size of Blade	Ship, Wt.
CE876	%4" x .595" x 5"	5 ozs.
CE1192	%4" x .475" x 4 ½"	5 ozs.
CE878	½" x .735" x 6"	6 ozs.
CE879	½" x .870" x 7"	8 ozs.

Style "B" Boring Tool

Made of drop-forged steel. Cutter can be set either straight or at a 4Sdegree angle. Price includes: drop-forged steel



boring tool holder with hardened steel set screws, sleeve bar, end cap, two wrenches, and two unground high speed steel cutter bits. Will take the following sizes of boring bars: No. CE423, ½" to ½"; No. CE431, ¼" to ¾"; No. CE432, ¾s" to 1".

Cat. No.	Size of Lathe	Size of Shank, Inches	Size Bar Inches	Size of Cutter, Inch	
CE423	9", Lt. 10, & 10"	5/8 x 3/4	1/2 x 75/8	3/6 X 3/6	2
CE431	13"	1/2 x 11/8	3/4 x 11	1/4 X 1/4	5
CE432	1434", 16", 16-24"	1/8 x 13/8	15/6 x 131/4	1/6 X 3/6	8

Style "D" Boring Tool

For boring or threading work of small internal diameter. Price includes dropforged steel boring tool holder, one boring bar, and wrench. Will take the following sizes of boring bars: No.



ing sizes of boring bars: No. CE3175, 1/8" to 1/2"; No. CE3176, 1/4" to 3/4"; No. CE3177, 3/8" to 1".

Cat. No.	Size of Lathe	Size of Shank, Inches	Size Bar, Inches	Ship. Wt. Lbs.	
CE3175 CE3176 CE3177	9", Lt. 10, & 10" 13" 14 1/7", 16", 16-24"	56 x 14 12 x 118 96 x 136	14 x 5	2 4 6	

Solid Boring Bar

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

Cat. No.	Bar Inches	Ship.
CE3856	1/6 x 4	3 ozs.
CE3857	1/6 x 4 1/2	4 ozs.
CE3858	1/4 x 5	5 ozs.
CE3859	1/2 x 6	5 ozs.
CE3860	1/4 x 7	8 ozs.
CE3861	1/4 x 8	1 lb.

Sleeve Boring Bar

For use with Style "B" and "D" Boring Tools, and in the 10 in 1 Tool Holder.



Sleeve can be adjusted to hold square high speed steel cutter bit at 45° and 90° angles for boring and inside thread cutting operations. Price includes two cutter bits and wrench.

Cat. No.	Size of Bar	Size of Cutter Bit	Ship. Wt.	
CE2419	16" x 756"	140° x 140°	1 lb.	
CE2420	14" x 11"	140° x 140°	2 lbs.	
CE2421	156" x 1316"	140° x 140°	4 lbs.	

Plain Boring Bar

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



Cat. No.	Bar Size	Cutter Bit	Ship. Wt.
CE2119	14" x 121/8"	14" x 14"	3 lbs.
CE2121	114" x 18"		8 lbs.

Knurling Tool

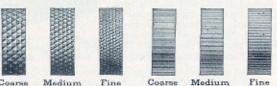
Knurling tool holder is made of drop-forged steel, heattreated and hardened. Knurls are made of tool steel, hardened



and tempered. Price includes: holder with choice of knurls in coarse, medium, or fine; straight, or diamond shape. When ordering specify pattern of knurls wanted; otherwise medium diamond knurls will be supplied.

Cat. No.	Size Lathe	Shank Size	Ship Wt.	
CE820	9", Lt. 10, & 10"	36" x 34"	2 lbs.	
CE665	9", Lt. 10, & 10"	56" x 34"	2 lbs.	
CE893	13"	14" x 114"	2 lbs.	
CE894	14 ½", 16", & 16-24"	56" x 134"	3 lbs.	

Extra Knurls for Knurling Tool



Diamond Pattern

Straight Pattern

For use with Knurling Tool listed above, and with 10 in 1 Tool Holder listed on page 23. Illustrations above show actual size of knurling produced. Supplied in pairs.

Cat. No.	Pattern	Size	Fits Knurling Tools	Ship. Wt.
CE3150+ CE3151+ CE3152+ CE3153+ CE3155+ CE3155+ CE3156- CE3157- CE3158- CE3158- CE3159- CE3160- CE3161	Fine Diamond. Med. Diamond. Coarse Diamond. Fine Straight. Med. Straight. Fine Diamond. Fine Diamond. Med. Diamond. Coarse Diamond. Fine Straight. Med. Straight. Med. Straight. Coarse Straight. Coarse Straight.	100 X 100 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	CE820 & CE665 CE820 & CE665 CE820 & CE665 CE820 & CE665 CE820 & CE665 CE820 & CE665 CE893 & CE894 CE893 & CE894 CE893 & CE894 CE893 & CE894 CE893 & CE894 CE893 & CE894	4 ozs. 4 ozs. 4 ozs. 4 ozs. 4 ozs. 5 ozs. 5 ozs. 5 ozs. 5 ozs. 5 ozs. 5 ozs. 5 ozs.

Fits all sizes of 10 in 1 Tool Holders.

Threading Tool

Made of drop-forged steel. Cutter requires grinding on top edge only to sharpen. Price includes: threading tool holder with hardened steel set screw;



wrench; and one high speed steel single point cutter. Choice of 60° cutter for U.S. Standard, V, or metric thread; or 55° cutter for Whitworth Standard thread. When ordering specify cutter wanted. The 60° cutter will be furnished unless otherwise specified.

Cat. No.	Size of Lathe	Size of Shank	Ship. Wt.	
CE845	9", Lt. 10, & 10"	36" x 34"	2 lbs.	
CE848	9", Lt. 10, & 10"	56" x 34"	2 lbs.	
CE867	13"	16" x 116"	3 lbs.	
CE868	1412", 16", & 16-24"	56" x 134"	4 lbs.	

Extra Cutters for Threading Tool

For use with Threading Tools listed above. Made of high speed steel, thread angle ground to correct form and backed off for proper clearance. 60° cutters are for U.S. Standard, V, or metric threads. 55° cutters are for Whitworth Standard threads.



Catalog Number		Catalog Number Fits Thread		ing	
60" Angle	55° Angle	Tools	Weight		
CE3480 CE3481 CE3482	CE3483 CE3484 CE3485	CE845 & CE648 CE867 CE868	3 ozs. 4 ozs. 5 ozs.	The state of	

How to Run a Lathe

A Practical Handbook on Lathe Operation

"How to Run a Lathe" is a complete reference book and manual on the care and operation of the back-geared screw-cutting lathe. It is a practical handbook for the machinist, lathe operator, apprentice, or shop man. Clearly written in simple, non-technical language, the instruction material is easy for the beginner to understand. This authoritative text is illustrated with more than 360 photographs, diagrams, and sketches.

Now in its 50th edition, this book has been improved and perfected by suggestions, criticisms, and ideas that have been submitted by hun-

that have been submitted by hundreds of practical shop men. The latest shop practices and methods used in modern industry are accurately described.



Partial List of Contents

History of the Lathe
Erecting and Leveling the Lathe
Operation of Lathe Controls
Lathe Tools and Their Application
How to Take Accurate
Measurements

Machining Work Between Centers Chuck Work Taper Turning and Boring Drilling, Reaming, and Tapping Cutting Screw Threads Special Classes of Work

How to Run a Lathe—Edition 50, 128 pages $5\frac{1}{8}$ " x $7\frac{1}{8}$ ", more than 360 illustrations. Price postpaid to any address 25c in paper binding, \$1.00 in leatherette binding.



Motion Picture Films On Lathe Operation

The South Bend motion pictures on lathe operation may be borrowed without charge by industrial organizations, industrial and vocational schools, colleges, universities, Army and Navy training schools, industrial apprentice schools, and other recognized organizations teaching machine shop practice. When films are sup-

plied on a free loan basis, the borrower pays the shipping charges both ways. All films supplied on a free loan basis are 16 mm sound films in full color.

Those who desire to keep these films permanently may purchase them at prices listed below. English language films are available in either color or black and white. Spanish and French language films are available in full color only. All are on 16mm sound film.

0.114	Black an Filr		Color Films	
Subject	Catalog Number	Factory Price	Catalog Number	Factory Price
English	Language	Films		N. C.
Film No. I, "The Metal Work- ing Lathe". Film No. II, "Plain Turning". Film No. III, "Grinding Cutter	CE1620B CE1621B	\$40.00 43.00	CE1620C CE1621C	\$100.00 110.00
Bits"	CE1663B	47.00	CE1663C	115.00
	Language	Films		
Film No. I, "The Metal Work- ing Lathe". Film No. II, "Plain Turning" Film No. III, "Grinding Cutter Bits".			CE2714C CE2715C CE2716C	\$100.00 110.00 115.00
French	Language	Films		
Film No. I, "The Metal Work- ing Lathe"			CE2717C	\$100.00

How to Run a Drill Press

This book tells how to lay out work, set up jobs, sharpen drills, and use drill press attachments and accessories. It identifies the various parts of the drill press, explains their functions and adjustment. Special classes of work such as drilling glass, buffing, mortising, etc., are included. Contains 32 pages 5½ x 7½° and more than 75 illustrations. Price postpaid \$0.25.



How to Run a Shaper

The care and operation of the small metal working bench shaper are fully covered in this manual. Clearly written text tells how to set up jobs and grind cutting tools. Various types of shaper operations are illustrated and described. Contains 32 pages 51% x 71%, and 70 illustrations. Price postpaid \$0.25.



Machine Shop Book

The South Bend Machine Shop Course books are published in the English, French, Spanish, and Portuguese languages. They contain a series of projects ranging from simple articles beginners can make to useful tools requiring considerable skill and experience. Drawings show all dimensions clearly. Instruction sheets guide



the student step by step through all operations for each project. These books are widely used by leading vocational schools.

Book No. 39-B. Printed in English, 32 pages, $8\frac{1}{2}$ " x 11", twelve projects. Price postpaid, U. S. money \$0.50

Book No. 39-P. Printed in Portuguese, 24 pages, 8½" x 11", ten projects. Price postpaid, U. S. money \$0.25



Machinery's Handbook

An engineering reference book for machinists, students, designers, engineers, and executives. It is a practical guide for use in conjunction with engineering and vocational courses. Has 1911 pages, 1310 illustrations.

Cat. No. CE700, Machinery's Handbook,

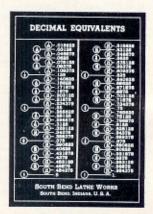
Wall Charts

These wall charts are printed on heavy paper, deep blue with white lines to simulate blue-prints. Suitable for framing.

Wall Chart CE250, "How to Become a Machinist." Size 13" wide by 22" high. Price each postpaid....10c

Wall Chart CE777, "Decimal Equivalents." Size 13" wide by 19" high, Price each postpaid......10c

Wall Chart CE890, "Principal Parts of a Lathe." Size 21¾" wide by 17¾" high. Price each postpaid...10c



Chuck Wrenches

	Shipping Weight	Size Square	Catalog Number
	2 lbs.	.250"	CE2741
	2 lbs.	.277"	CE2748
	1 lb.	.297"	CE2742
	2 lbs.	.375"	CE2743
	2 lbs.	.400"	CE2749
	2 lbs.	.420"	CE2744
	2 lbs.	.437"	CE2745
	2 lbs.	.570"	CE2746



Tool Post Wrenches

							1177
Catalog Number	Size Lathe	Open End	Closed End	Lgth.	Thick- ness	Ship. Wt.	
CE2650NK CE2650R CE2650T CE2650FH	9" 10" 13" 14)4", 16", & 16-24"	34" 74" 34"	36° 16° 32° 96°	4° 4″ 6″ 6″	36" 36" 36"	4 ozs. 6 ozs. 1 lb.	

Tailstock Wrenches



Catalog Number	Size Lathe	Open- ing	Ex- treme Lgth.	Thick- ness	Ship. Wt.	
CE2653NK CE2653R CE2653T CE2663FH	9" 10" 13" 143'4", 16", & 16-24"	13/6" 28/2" 13/2" 13/2"	516° 658″ 778″ 912″	10% 10% 10%	6 ozs. 1 lb. 2 lbs. 2 lbs.	

Spanner Wrenches



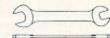
Catalog	Circle	Extreme	Pin	Shipping	
No.	Diameter	Length	Size	Weight	
CE2739 CE2740 CE2734 CE2735 CE2736 CE2737 CE2738	114" 214" 23" 33"	4" 5" 614" 714" 814"	3/6" 7/2" 17/4" 19/4" 19/4" 5/6 21/4" 11/4"	5 ozs. 6 ozs. 1 lb, 1 lb. 1 lb. 1 lb. 2 lbs.	

Hollow Hexagon Head Set Screw Wrenches



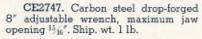
Catalog Number	Size Hex.	Extreme	Extreme Height	Shipping Weight
CE2391 CE2392	3/2° 1/2°	314"	36"	3 ozs. 3 ozs.
CE2386 CE2386	340	238	11/2"	3 ozs. 4 ozs.
CE2387 CE2388	14"	214" 316"	154"	4 ozs. 4 ozs.
CE2389 CE2390	315"	416"	1136	4 ozs. 6 ozs.

Double End Wrenches



Catalog No.	Large Opening	Small Opening	Length	Thick- ness	Shipping Weight	
CE2655 CE2656	24"	34"	476° 632°	17/4"	8 ozs. 1 lb.	

8" Adjustable Wrench



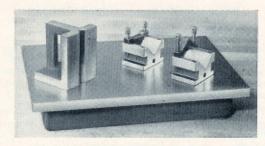




12" Precision Level

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

Cat. No. CE2218. Precision Level. Packed in wooden case. Shipping weight 5 lbs.



Surface Plate

A heavy cast iron surface plate for laying out work, surfacing, checking flat surfaces, and general shop use. Top surface is precision ground and has wooden cover. Edges are machined and under side of edge is finished all around. Size 12" x 17" x 3", with top 34" thick. Approximate net wt. 64 lbs. CE2215. Shipping weight 75 lbs.

V-Blocks

These toolmaker's V-Blocks provide a rigid support for holding cylindrical parts and shafts for laying out and machining. Made of hardened steel with all surfaces precision ground. Each block is 2-15/16° wide, 1-15/16° high, $2\frac{1}{4}$ ° long. Holds round work $\frac{1}{4}$ ° to 2° in diameter. Sold only in numbered sets. CE2216. Set of two V-Blocks. Shipping weight 8 lbs.

Angle Plate

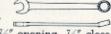
Precision ground on six sides, this rigidly constructed cast iron angle plate has many uses. It serves as a square for laying out and setting up work. Size $3\frac{1}{4}$ " x $3\frac{1}{4}$ " x $4\frac{1}{4}$ " with $5\frac{1}{8}$ " V-groove.

CE2214. Shipping weight 7 lbs.

Economy Surface Plate Kit

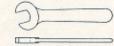
CE2931. Complete kit including Surface Plate, V-Blocks, and Angle Plate as described above. Shipping weight 90 lbs.

Open End Box Wrench

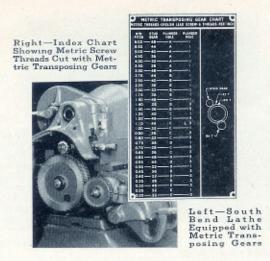


CE2675. Open End Box Wrench. 3/8" op 1/2" thick, 101/2" long. Shipping weight 1 lb. opening, 7/8" close.

Single End Wrenches



Catalog Number	Opening	Length	Thickness	Shipping Weight	
CE2657 CE2658 CE2670 CE2671	16.00 11.000	514" 534" 656" 814"	21.61° 21.61° 14° 516°	7 ozs. 8 ozs. 1 lb. 1 lb.	



Metric Transposing Gears For Cutting Metric Screw Threads

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

When lathes are ordered with metric transposing gears, the graduations on the tailstock spindle, the cross-feed screw, and the compound rest screw can be supplied to read in the metric system, or in the English system, as desired.

Metric Transposing Gears Ordered With Lathe

Size of Lathe	With Metric Graduations	With English Graduations
	Cat. No.	Cat. No.
9" Model A 9" Model B 9" Model C Light Ten Model A Light Ten Model B Light Ten Model C 10" Quick Change 13" Quick Change 14\2" Quick Change 6", 16-24", & 2-H Q.C.	CL1941NK CL2263N CL12263N CL1941NK CL2263K CL12263K CL1941R CL1941T CL1941F CL1941H	CL1955NK CL2261N CL2261N CL1955NK CL2261K CL2261K CL1955R CL1955T CL1955F CL1955F

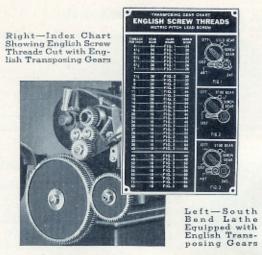
Metric Transposing Gears Ordered Separate From Lathe

Ship. Wt.	Cat. No.
8 lbs. 21 lbs.	CL1957NK CL1961N
8 lbs.	CL1957NK CL1961K
51 lbs.	CL1957R CL1957T
121 lbs.	CL1957F CL1957H
	8 lbs. 21 lbs. 8 lbs. 21 lbs. 51 lbs. 73 lbs.

Spanish and Portuguese Catalogs

Catalogs describing South Bend Lathes and accessories are available in both the Spanish and Portuguese languages. These condensed catalogs contain illustrations, specifications, and brief descriptions of popular sizes and types of lathes and attachments. Specify size and type of lathe, or other equipment, in which you are interested. Mailed to any address on request.





English Transposing Gears

For Cutting English Screw Threads

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

When lathes are ordered with English transposing gears, the graduated collars on the tailstock spindle, the cross-feed screw, and the compound rest screw can be supplied to read in the English system, or in the metric system, as desired.

English Transposing Gears Ordered With Lathe

Size of Lathe	With Metric Graduations	With English Graduations
	Cat. No.	Cat. No.
9" Model A 9" Model B 9" Model B 9" Model C Light Ten Model A Light Ten Model B Light Ten Model C 10" Quick Change 13" Quick Change 4\frac{1}{2}" Quick Change 3", 16-24", & 2-H Q.C.	CL2284NK CL2255N CL12256N CL1971NK CL2255K CL2256K CL2284R CL2284T CL2284F CL2284H	CL2288NK CL2253N CL2254N CL2254N CL2253K CL2254K CL2288R CL2288R CL2288T CL2288T CL2288H

English Transposing Gears Ordered Separate From Lathe

Size of Lathe	Ship. Wt.	Cat. No.	
9" Model A	8 lbs.	CL2289NK	
9" Model B	21 lbs.	CL2183N	
9" Model C	21 lbs.	CL1284N	
Light Ten Model A	8 lbs.	CL2289NK	
Light Ten Model B	21 lbs.	CL1283K	
Light Ten Model C	21 lbs.	CL1284K	
10° Quick Change	51 lbs.	CL2289R	
13" Ouick Change	73 lbs.	CL2289T	
1414 Ouick Change	121 lbs.	CL2289F	
6", 16-24", & 2-H Q.C.	65 lbs.	CL2289H	

Metric Thread Dial

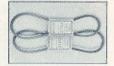
This attachment saves much time when cutting long screw threads. Instead of reversing the lathe to return the cutting tool to the starting point, the half-nuts may be opened and the carriage moved quickly by hand. The graduated dial shows when to engage the halfnuts so the cutting tool will follow the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



Cat. No. CL2265NK. Metric Thread Dial for 9" and Light Ten South Bend Lathes with metric lead screw. Shipping weight 3 lbs.

V-Belts

Rubber V-Belts for use with South Bend Lathes and other power driven machinery. Specify catalog number, maximum width, and outside circum-



ference when ordering. Ship. wt. each, approximately ½ lb.

Catalog Number	Maximum Width	Outside Circumference
CE4521A	13 g in.	21 in.
CE4522A	11/2 in.	22 in.
CE4523A	18 in.	23 in.
CE4527A	15 in.	27 in.
CE4527B	17% in.	27 in.
CE4528B	17/2 in.	28 in.
CE4529B	17 % in.	29 in.
CE4530B	17 in.	30 in.
CE4531B	17 /2 in.	31 in.
CE4532B	17 in.	32 in.
CE4535C	11/6 in.	35 in.
CE4537C	11/6 in.	37 in.
CE4538C	The in.	38 in.
CE4540C	11/6 in.	40 in.
CE4541C	11/2 in.	41 in.
CE4542C	11/6 in.	42 in.
CE4543C	11/6 in.	43 in.
CE4544B	17/2 in.	44 in.
CE4544C	Il in.	44 in.
CE4545B	17/2 in.	45 in.
CE4545C	11 is in.	45 in.
CE4546B	17/2 in.	46 in.
CE4546C	11/6 in.	46 in.
CE4547B	17 in.	47 in.
CE4548B	17% in.	48 in.
CE4549B	17/2 in.	49 in.
CE4549C	11 in.	49 in.
CE4550C	11 in in.	50 in.
CE4551C	11/g in.	51 in.
CE4552C	Il in,	52 in.
CE4553B	17 in.	53 in.
CE4554B	17/2 in.	54 in.
CE4554C	11/g in.	54 in.
CE4555C		
CE4556B	11/6 in.	55 in. 56 in.
CE4558B		
	13/2 in.	58 in.
CE4559C	11/16 in.	59 in.
CE4560B	17 22 in.	60 in.
CE4564B	17 22 in.	64 in.
CE4568B	17 in.	68 in.
CE4570B	17/22 in.	70 in.
CE4571B	17 in.	71 in.
CE4578B	17 m in.	78 in.
CE4580B	17/22 in.	80 in.
CE4598B	17/22 in.	98 in.

Motor Pulleys for V-Belts

These motor pulleys are machined all over and have accurately reamed holes so that they will fit standard sizes of motor shafts properly and will run true. They are made of cast iron or aluminum, depending on size. Pulleys having ½° bore have a set screw for locking to motor shaft, all others have standard keyways.



Cat. No.	Dia.	Bore	Cat. No.	Dia.	Bore
Approx. sh	ip. wts.,		ulleys for 11/4" V "pulleys ½ lb., 3		" pulleys 1% lbs
CE6342 CE6343 CE6344 CE6345 CE6346 CE6347	23.4° 23.4° 24.5° 215.4° 215.4° 215.4° 215.4°	14° 55° 14° 14° 55°	CE6348 CE6349 CE6350 CE6351 CE6352 CE6353	3" 3" 3" 3"6" 3"6"	14° 66° 84° 14° 55° 34°
Ар	prox. shi		ulleys for ½" V pulleys 1½ lbs.,		alleys 2 lbs.
CE6354 CE6355 CE6356	2174" 2174" 2174"	\$4" \$8" 1"	CE6357 CE6358 CE6359	2636" 2636" 2636"	34° 75° 1°
Approx. sh	ip. wts.,		ulleys for ½" V g" pulleys 2 lbs., 3		34%" pulleys 4 lbs
CE6360 CE6361 CE6362 CE6363 CE6364 CE6365	211/2" 211/2" 211/2" 264/4" 268/4" 268/4"	34" 24" 1" 34" 34" 34" 1"	CE6366 CE6367 CE6368 CE6369 CE6370 CE6371	314" 314" 314" 314" 314" 314"	34° 58° 1° 1° 54° 54° 1°

Flat Leather Belts

Price includes belt lace and lacing instructions. Belts are long enough to permit skiving and gluing if desired. Ship, wt, each, approx. $\frac{1}{2}$ lb.



Catalog Number	Flat Leather Belt For Use On	Size and Kind of Belting
CE2323N	9" Horiz, M.D. Lathes with 1/2 h.p. motor	Single Ply—Oak Tan
CE2312N	9" Horiz, M.D. Lathes with 1/2 h.p. motor	Double Ply-Vim Oak
CE2323K	Light Ten Horiz, M.D. Lathes with 1/2 h.p. motor	Single Ply—Oak Tan
CE2314K	Light Ten Horiz, M.D. Lathes with taper attachment, 1/2 h.p. motor	Single Ply—Oak Tan
CE2312K	Light Ten Horiz, M.D. Lathes with 1/2 h.p. motor.	Double Ply—Vim Oak
CE2313K	Light Ten Horiz. M.D. Lathes with taper attachment, 1/2	Double Ply—Vim Oak
CE2315N	h.p. motor	Double Ply—Vim Oak
CE2315K	Light 10 UMD Lathes	Double Ply—Vim Oak
CE2315R	10" UMD Bench Lathes	Double Ply-Vim Oak
CE2316R	10" UMD Floor Lathes	Double Ply—Vim Oak
CE2316T	13" UMD Lathes	Double Ply-Vim Oak
CE2316F	14½" UMD Lathes	Double Ply—Vim Oak
CE2316H	16" UMD Lathes	Double Ply—Vim Oak
CE2316V	16-24° UMD Lathes	Double Ply-Vim Oak
CE2317H	16" UMD Lathes with 3 step cone pulley, or 2-H Turret Lathes	Double Ply—Vim Oak 276° x 74 1/2"

Belt Splicing Cement

Waterproof belt splicing cement for gluing endless leather belts with lapped joint. Four ounce can. Cannot be shipped by parcel post. CE1433. Shipping weight 6 ozs.



Touch-Up Enamel

For touching up and refinishing South Bend Lathes, Drill Presses, Shapers, and other machine tools. Made in two shades, light gray for current models, and dark gray to match older models of lathes. Cannot be shipped by parcel post.



Catalog	Number	Size	Number	Ship.
Light Gray	Dark Gray	Can	of Cans	Wt.
CE2640	CE2455	Pint	1	2 lbs.
CE2641	CE2456	Quart	1	4 lbs.
CE2642	CE2457	Gallon	1	12 lbs.
CE2643	CE2470	Pint	6	10 lbs.
CE2644	CE2471	Pint	12	19 lbs.
CE2645	CE2472	Quart	6	19 lbs.
CE2646	CE2473	Quart	12	39 lbs.
CE2647	CE2474	Gallon	2	24 lbs.
CE2648	CE2475	Gallon	4	50 lbs.

Shop Aprons

Made of good quality 8 oz. white duck. Short apron (illustrated) is 22" long, 18" wide, with two roomy pouch type side pockets and one small center pocket 634" deep suitable for carrying scale, calipers, micrometer, etc. Long apron (not illustrated) is 41" long, 28" wide, with one large pocket and two smaller pockets.

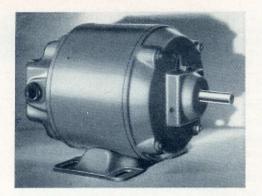


CE8520. Short Shop Apron. Ship. wt. 1 lb.

CE8521. Lot of six Short Shop Aprons. Ship. wt. 3 lbs.

CE8522. Long Shop Apron. Ship. wt. 1 lb.

CE8523. Lot of six Long Shop Aprons. Ship. wt. 31/2 lbs.



Motors for South Bend Lathes

All motors listed below are of the instant reversing type with the exception of Cat. No. CE3256B, which is a start-stop reversing motor. Single-phase A.C. motors 3/4 h.p. and smaller are capacitor type with the exception of CE3256B which is split-phase. Information on motors for current characteristics other than those listed below supplied on request.

Catalog		Current C.	haracteristi	cs
Number	Current	Phase	Cycle	Volts
2-1	h.p. 2-spee	d Motors	for 16" and	16-24" Lathes
CE2130	A.C.	3	60	220
13	h.p. Moto	rs for 16",	16-24" and	14½" Lathes
CE2545D CE2548B CE2548D	A.C. A.C. A.C.	3 1 1	60 60 60	220 115 230
	1 h	p. Motors	for 13" Lat	hes
CE2625D CE2628B CE2628D	A.C. A.C. A.C.	3 1 1	60 60 60	220 115 230
	34 h	.p. Motor	s for 10" Lat	hes
CE2801D CE2804 CE2805	A.C. A.C. A.C.	3 1 1	60 60 60	220 115 230
	36 h	.p. Motor	s for 9" Lat	hes
CE3227D CE3228*	A.C. A.C.	3 1	60 60	220 115
5-641-5	1/4	h.p. Moto	rs for 9" La	thes
CE3250D CE3256B† CE3252* CE3253	A.C. A.C. A.C. A.C.	3 1 1 1	60 60 60 60	220 115 115 230

^{*}Equipped with 6-ft. extension cord and plug when ordered with lathe. (This is a $\frac{1}{2}$ h.p. split-phase motor.

Controls for Operating Motors

CE790. Heavy Duty Drum Reversing Control Switch for ½ h.p. to 1½ h.p. motors.

CE789. Drum Reversing Control Switch for use with ¼ h.p. and ½ h.p. 115 v. motors for 9" and Light Ten Horizontal Motor Driven Bench Lathes only.



CE2567. Push-button operated Linestarter for 2-1 h.p. motor No. CE2130 only.

Motors for Drill Presses

CE4910B. Capacitor type $\frac{1}{3}$ h.p. motor for 115 v., 1 ph., 60 cy., A.C. Shipping weight 40 lbs.

CE3256B. Split-phase 1/3 h.p. motor for 115 v., 1 ph., 60 cy., A.C. Shipping weight 40 lbs.

CE4920B. Capacitor type ½ h.p. motor for 115 v., 1 ph., 60 cy., A.C. Shipping weight 50 lbs.

Motors for Shapers

CS4910B. Capacitor type $\frac{1}{3}$ h.p. motor for 115 v., 1 ph., 60 cy., A.C. Shipping weight 40 lbs.

CS3256B. Split-phase 1/3 h.p. motor for 115 v., 1 ph., 60 cy., A.C. Shipping weight 40 lbs.

CS4920B. Capacitor type ½ h.p. motor for 115 v., 1 ph., 60 cy., A.C. Shipping weight 50 lbs.



Patented Design

Tubular Steel Benches

Designed especially for our 9" and Light Ten Bench Lathes with horizontal motor drive, this sturdily constructed all steel bench will give your lathe the rigid support it needs for the most satisfactory operation. Bench is 32" high, 32" wide and 51½" long, large enough for lathes having beds up to 3½" long. May also be used for many other purposes.

Heavy gauge sheet metal panels are securely welded into the tubular frame. A built-in chip pan with \(^{5}\epsilon^{\sigma}\) bead around the edge forms the top of the bench. This permits using a coolant if desired, and prevents chips from falling to the floor. Six drawers 10\frac{1}{2}^{\sigma}\) wide, 15'' long, 5\frac{1}{2}^{\sigma}\) deep (inside dimensions) provide ample storage space for chucks, tools, lathe accessories, etc. Bench is nicely finished in gray wrinkle enamel.

CE1737. Tubular Steel Bench, 32" high, 32" wide, $51\frac{1}{2}$ " long, for 9" and Light Ten Horizontal Motor Driven Bench Lathes with 3' or $3\frac{1}{2}$ " bed lengths. Shipping weight 336 lbs.



Angle Steel Bench With Wood Top

Heavy angle steel construction, $29\%''_6$ high, with hardwood top $26'' \times 60'' \times 1\%''_6$ thick. For 9'' and Light Ten Horizontal Motor Driven Bench Lathes, any bed length. This also makes an ideal work bench for general shop use. Bench top is edge glued and has oil finish. Price does not include drawer, which is listed separately below.

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

CE1780. Steel Bench with wood top (less drawer). Shipping weight, 84 lbs.

Drawer for Bench

CE1780D. Drawer for above bench, 201/8" wide, 14" long, 33/16" deep. Shipping weight 9 lbs.

Steel Machine Stand

This sturdy, welded steel stand provides rigid support for a bench shaper, drill press, vise, jig saw, or other ma-chine. Top has bolt holes punched for mounting shaper. A built-in chip pan forms the top of the stand permitting the use of coolant if desired. Three drawers $10\frac{1}{2}$ " x $5\frac{1}{2}$ " x $15\frac{3}{4}$ " inside, with key locks provide plenty of storage space for work, tools and accessories. Nicely finished



with gray wrinkle enamel. Width 19", depth 36", height 25". Shipping weight 150 pounds.

CS9600. Steel Stand for Shaper.

Indexing Table

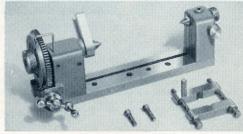
You will find this rotary indexing table a great con-venience for mounting small work on the milling machine, drill press, or shaper. Used for accurately spacing bolt holes, indexing clutch teeth, machining square, hexagonal



PATENT APPLIED FOR

or octagonal shapes, milling circular grooves or T-slots, etc. Table is $4\frac{1}{2}$ " in diameter and has three T-slots for clamping work. Edge of table is graduated 360°. Table is turned by worm gearing having graduated collar and ball crank. Each graduation indicates a table movement of 3 minutes. One complete revolution of the ball crank turns the table 5 degrees. Clamping device is provided for locking table in any position. Top of table is precision ground. Base has two bolt holes for clamping to machine table. Price includes eight clamping bolts with nuts and washers.

CE9144. Indexing Table. Shipping weight 14 lbs.



PATENT APPLIED FOR

Indexing Centers

This is an indispensable device for cutting splines or flutes in shafts, laying out work, accurate cross drilling, gear cutting, milling or shaping hexagons, squares, etc. Base has bolt holes for clamping on table of drill press, milling machine or shaper. Takes work between centers up to 5" in diameter, 53%" long. Revolving center has large dial graduated 360°. Center is turned by worm gearing having graduated collar and ball crank. Each graduation indicates a center movement of 3 minutes. One complete revolution of the ball crank turns the center 5°. Worm gear can be disengaged for quick positioning of indexing center. Clamping device is provided for locking center in any position. Base has two bolt holes for clamping to machine table. Price includes two clamping bolts.

CE9635. Indexing Centers. Shipping weight 12 lbs.

Extension Shaper Tool

A rigid forged steel tool holder for internal work. Adapted for die work, internal keyways or for any work on the shaper in which extra clearance is needed. Size of bar is 1/2" x 71/2". Takes cutter bit 316" x 16". Shipping weight 2 pounds.

CS9631. Extension Shaper Tool.

Wood Top Machine Stand

This is a heavily constructed angle steel stand 293 high for mounting the bench shaper, drill press, or for other small machines. The glued wood top is 20" x 32" and is 1316" thick. Steel parts are finished in gray enamel. Ship-ping weight 52 lbs.

CE9141. Wood Top Machine Stand (less drawer).



Drawer for Machine Stand

Handy for keeping small tools, wrenches, etc. Finished to match stand CE9141. Drawer is $20\frac{1}{8}$ wide, 14 long, $3\frac{3}{6}$ deep. Price includes metal pull and wood slides. Shipping weight 9 lbs.

CE1780D. Drawer for use with Machine Stand.



Swivel Machine Vise

For holding work on drill press table, milling machine, shaper, etc. Swivel is graduated 180° to permit setting vise at any angle with slots in table. Jaws are hardened and are replaceable. Jaws are 4" wide and 1" deep. Maximum jaw opening is 4".

CE9100. Swivel Drill Press Vise. Shipping weight 18

Tapping Attachment

Jarvis Torqomatic Tapping Heads convert South Bend 14" Drill Presses into high speed, highly accurate tapping machines. Automatic reverse speed is twice forward speed. Quill mounting and No. 2 Morse taper spindle types shipped complete ready for use.

CE9145. Tapping head No. 0 to No. 10 tap capacity with No. 2 Morse taper arbor. Shipping weight 6 lbs.

CE9146. Tapping head No. 10 to 16" tap capacity with No. 2 Morse taper arbor. Shipping weight 7½ lbs.

CD9147. Tapping head No. 0 to No. 10 tap capacity, quill mounting. Shipping weight 6 lbs

CD9148. Tapping head No. 10 to $\frac{5}{16}$ " tap capacity, quill mounting. Shipping weight $7\frac{1}{2}$ lbs.



Shaper Tool Holder

An extremely rigid forged steel tool holder for 1/4" square cutter bits. Adjustable to work at all angles. Head can be swiveled and locked at eight different positions for machin-

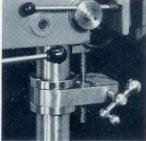


ing many odd shapes and for cutting various angles without shifting the work. Shipping weight 1 lb.

CS9630. Adjustable Shaper Tool Holder.

Head Positioning Attachment

The Head Positioning Attachment provides a quick and convenient means for adjusting the position of the drill press head on the column. The attachment can be used at any point on the column, and provides four inches of vertical adjustment at one setting. Enclosed worm gearing operated by a steel ball crank assures smooth, easy operation. The head positioning attachment can be swiveled around the column with



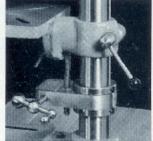
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the head to any desired angle. Designed for use with South Bend 14" Drill Presses, but can be fitted to any drill press having 234" column.

CE9131. Head Positioning Attachment. Shipping weight 10 lbs. Price f.o.b. factory.

Table Positioning Attachment

This Table Positioning Attachment raises or lowers the drill press table. It provides precision adjustment and can be fitted to any drill press having a 234" diameter column. The attachment consists of a vertical screw operated by a steel ball crank through worm gearing. It is positioned on column by adjusting two lock rings and provides 4" of adjustment without resetting. The end of screw fits into a socket provided in table



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brackets of all South Bend Drill Presses. Table and attachment may be swiveled on column at any setting.

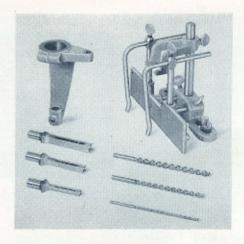
CE9130. Table Positioning Attachment. Shipping weight 10 lbs. Price f.o.b. factory.

Protect Your Machinery With Waterproof Service Covers

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

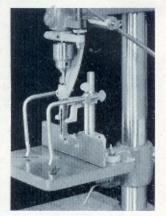


Catalog		se, Inch	es	Suggested	Ship.	
Number	Wdth.	Lgth.	Ht.	for	Wt.	
CE2693 CE2694 CE2695	12 21 32	28 37 48	28 24 17	14" Drill Press 7" Shaper 9" & 10" Lathe,	2 lbs. 2 lbs.	
CE2696	32	60	17	3' & 3 1/2' Bed 9" & 10" Lathe	2 lbs.	
CE2697	38	72	25	4' & 412' Bed 13" & 1412' Lathe,	3 lbs.	
CE2698	38	96	25	4' & 5' Bed 13", 14½", 16", 16-24" & 2-H Lathe, 6' & 7' Bed	3 lbs.	
A COLUMN TO				O or / Bed	3 lbs.	



Mortising Attachment

This new South Bend Mortising Attachment converts any South Bend 14" Drill Press equipped with a ½" drill chuck into an efficient mortising machine. The improved fence assembly adjusts quickly and accurately for different thickness stock. The base clamps to the table and the fence adjusts on two steel posts. This design aids in eliminating alignment errors in the work. Two guide arms mount directly on the fence and are separately adjustable. A forked work hold down also adjusts on a vertical steel post mounted on the base. This fence assembly has many uses for quiding work.



many uses for guiding work other than mortising. It may be purchased separately.

The mortising chisel holder clamps on the drill press quill taking the place of the depth stop clamp.

Specifications

Capaci Distanc	ty g	uid	e	roc	is:	to f	en	ce	, m	aaa	cim	un	n					 				 .47
Distanc	e fe	no	9 8	dj	ust	5 W	rith	101	at 1	mo	win	pe	bas	e o	n i	tal	de					
Workin	ar d	ept	h	of	chi	isel	50															
Workin	ng d	ept	h (of	chi																	

Cat. No.

Description

CE9181. Mortising Attachment Fence Assembly. Ship. wt. 10 lbs. CD9182. Mortising Chisel Holder. Shipping weight 3 lbs. CE9183. ½" Mortising Chisel and Bit. Shipping weight ½ lb. CE9184. ½" Mortising Chisel and Bit. Shipping weight ½ lb. CE9185. ½" Mortising Chisel and Bit. Shipping weight 1 lb.

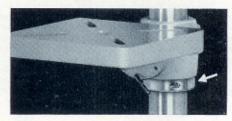


Table Support Ring

Clamped on the column beneath the drill press table, this support ring permits releasing the table clamp and swinging the table around the column to any position without danger of the table dropping down. Very convenient for surface grinding with cup wheel mounted in drill press spindle, and similar surfacing operations on wood or metal parts. Can also be used under drill press head.

CE9140. Table Support Ring. Ship. wt. 11/2 lbs.

Multi-Speed Attachment

The Multi-Speed Attachment for South Bend 14" Precision Model and Economy Model Drill Presses provides twelve spindle speeds 380 to 8,010 r.p.m. when used with 1725 r.p.m. motor. The attachment consists of an eccentric



spindle, which is mounted in the drill press column to support a 4-step auxiliary cone pulley with two V-belts.

This attachment cannot be used with split phase motor No. CE3256B. Price includes eccentric spindle, 4-step cone pulley and two V-belts. Shipping weight 8 lbs.

CD9135A, For 1/2 h.p. motor. CD9135B, For 1/2 h.p. motor.

Belt Guard

This belt guard provides complete enclosure for V-belt. Guard is hinged and may be raised for changing spindle speeds. May be used with or without Multi-Speed Attachment.



CD9136, Belt Guard for use with Precision Model Drill Press only. Shipping weight 16 lbs.

CD9137. Belt Guard for use with Economy Model Drill Press only, when supplied with drill press in lieu of regular guard.

CD9138. Belt Guard for use with Economy Model Drill Press only, when supplied separate from drill press. Shipping weight 50 lbs.

Balanced Pulleys for Economy

Model Drill Press

Accurately machined and balanced spindle and motor pulleys for smooth operation at high speeds. Recommended



for use with Multi-Speed Attachment on Economy Model Drill Presses. (Supplied as standard equipment on Precision Model Drill Presses.) Specify diameter of motor shaft when ordering. Shipping weight 8½ lbs.

CE9133. Pair of pulleys with drill press in lieu of regular pulleys.

CE9160. Balanced Spindle Pulley only. Shipping weight 3 lbs.

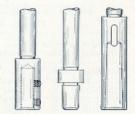
CE9161. Balanced Motor Pulley with 34° hole. Ship. wt. 3 lbs.

CE9162. Balanced Motor Pulley with 54" hole. Ship. wt. 3 lbs.

CE9163. Balanced Motor Pulley with 34" hole. Ship. wt. 3 lbs.

Extra Spindles for Drill Presses

Extra spindles are interchangeable with regular drill press spindles supplied with either the Economy Model or Precision Model Drill Presses.



CD9125, Spindle with No. 2 Morse taper hole for holding taper shank tools. Drift included. Shipping weight 3 lbs.

CD9126. Utility spindle with $\frac{1}{2}$ ° x $1\frac{5}{5}$ ° deep straight hole for holding routing tools, etc. Shipping weight 3 lbs.

CD9127. Spindle with short taper for ½" Drill Chuck No. CE1201. (Jacobs No. 34). Shipping weight 2 lbs.

Chuck and Arbor for Drill Press

This drill chuck and arbor are recommended for use with drill presses having spindles with No. 2 Morse taper.



CE1201. Jacobs 3-jaw smooth body drill chuck, 0 to $\frac{1}{2}$ capacity with pinion key. Shipping weight 2% pounds.

CE9110. No. 2 Morse taper shank arbor with tang, for fitting above chuck to drill press spindle No. CD9125. Shipping weight ¾ lb.



PATENT APPLIED FOR

Universal Table

Both upper and lower slides have graduated swivels and may be turned through full 360°. Slides can be used without graduated swivels to reduce height if desired. They can be positioned at any angle with each other and may be turned individually or together. Each slide has feed screw with micrometer collar reading in thousandths of an



inch. Dovetails are equipped with full length gibs for take-up. The precision ground work surface is 4" x 87%" and maximum travel is 4" for either slide. Table has four slots for clamping work. Clamp bolts fit snugly into round slots in such a way that there is little danger of breaking out or otherwise damaging the slots. Supplied with base for use on drill press, milling machines, etc., also with a specially designed base for mounting on the South Bend 7" Shaper. Slides and bases may be purchased separately if desired.

CE9156. Universal Table complete with base for South Bend Drill Press other machine tool, two slides, two graduated swivels, and eight clamp bolts with nuts. Shipping weight 43 lbs.

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

CE9157. Single Table with one graduated swivel and four clamp bolts with nuts. Shipping weight $19 \, \mathrm{lbs}$.

CE9158. Base only for adapting single table to South Bend 7^{σ} Shaper. Shipping weight 3 lbs.

CE9159. Base only for adapting single table to South Bend Drill Press or other machine tool, Shipping weight $8~{\rm lbs}$.

Angle Plate

A heavy cast iron angle plate for clamping work on shaper, drill press, milling machine, face plate of lathe, etc. Size 4½" x 3" x 2".





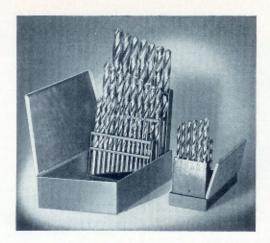
Tap and Die Sets

This is a Henry L. Hanson lightweight tap and die set packed in a compact tough composition case that will withstand hard usage. Set consists of one each No. 25 Die Stock,



No. 88 Tap and Reamer Wrench, No. 1E Tap wrench, No. 1E Tap wrench, No. 514 Screw Pitch Gauge, Screw Driver, and one each carbon steel Tap and Die in following sizes: 4 x 36, 6 x 32, 8 x 32, 10 x 24, 10 x 32, and 12 x 24 machine screw standard; 1/4 x 20, 5/6 x 14, and 1/2 x 13 NC (U.S. Standard); 1/4 x 28, 5/6 x 24, 3/6 x 26 and 1/2 x 20 NF (SAE Standard, and 1/6 pipe thread. Dies are 1 outside diameter. Dies are supplied in adjustable type as listed. Shipping weight 6 lbs.

CE2187. Tap and Die Set with Adjustable Dies.



Twist Drill Sets

South Bend straight shank jobber length twist drills are made of high quality, high speed steel and are properly heattreated for maximum strength and durability. Each drill is carefully finished and ground, and is stamped indicating its size. Drills are coated with rust resisting compound and packed in conveniently indexed steel cases. The drill size and decimal equivalent of each drill are clearly stamped in the case, indicating the hole into which the drill fits. The case for the number drill set is also stamped with tap drill and body drill sizes used for screw threads from No. 2-56 to No. 14-20 inclusive. Sold only in sets as listed. Individual drills are not supplied.

Sets of High Speed Steel Jobber Length Straight Shank Twist Drills in Metal Cases

Catalog Number	Description	Shipping Weight
CE6129	Set of 29 drills, fractional sizes, 1/16" to 1/2" inclusive by 64ths	5 lbs.
CE6113	Set of 13 drills, fractional sizes, 1/2" to 1/4" inclusive by 64ths.	1 lb.
CE6121	Set of 21 drills, fractional sizes, 1/16" to 3/8" inclusive by 64ths.	3 lbs.
CE6115	Set of 15 drills, fractional sizes, ½° to ½° inclusive by 32nds.	3 lbs.
CE6260	Set of 60 drills, No. 1 to No. 60 inclusive	2 lbs.
CE6326	Set of 26 drills, A to Z letter sizes, inclusive	5 lbs.

FRACTIONAL SIZES OF TWIST DRILLS

Each lot packed in paper envelope

Catalog	Frac.	Dec.	Length	Quan.	Shipping	
Number	Size	Equiv.	Over-all	in Pkg.	Weight	
CE6112.4 CE6112.5 CE6112.7 CE6112.7 CE6112.7 CE6112.10 CE6112.11 CE6112.13 CE6112.13 CE6112.14 CE6112.15 CE6112.15 CE6112.15 CE6112.16 CE6112.17 CE6112.18 CE6106.20 CE6106.20 CE6106.20 CE6106.25 CE6106.25 CE6106.25 CE6106.27 CE6106.27 CE6106.28 CE6106.29 CE6106.29 CE6106.29 CE6106.20		.0625 .0781 .0937 .1093 .125 .140 .156 .171 .187 .203 .218 .234 .250 .265 .281 .296 .328 .348 .349 .379 .379 .406 .421 .437 .453 .468 .484 .484 .484 .484 .484 .486 .486	NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN	12 12 12 12 12 12 12 12 12 12 12 12 12 1	14 oz. 12 oz. 13 oz. 14 ozs. 134 ozs. 234 ozs. 234 ozs. 234 ozs. 4 ozs. 4 ozs. 4 ozs. 5 ozs. 5 ozs. 5 ozs. 7 ozs. 8 ozs. 7 ozs. 8 ozs. 7 ozs. 8 ozs. 14 ozs. 11 ozs.	

NUMBER SIZES OF TWIST DRILLS

Each lot packed in paper envelope

Catalog	Gauge	Dec.	Length	Quan.	Shipping	
Number	No.	Equiv.	Over-all	in Pkg.	Weight	
CE6212.1 CE6212.2 CE6212.3 CE6212.4 CE6212.6 CE6212.7 CE6212.16 CE6212.17 CE6212.10 CE6212.11 CE6212.21 CE6212.21 CE6212.22 CE6212.23 CE6212.23 CE6212.24 CE6212.31 CE6212.41 CE6212.42 CE6212.42 CE6212.41 CE6212.42 CE6212.45 CE6212.45 CE6212.55	1 2 3 4 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 12 22 23 24 25 26 27 28 29 30 31 33 33 44 45 46 47 48 49 49 49 49 49 49 49 49 49 49 49 49 49	.2280 .2210 .2130 .2090 .2055 .2040 .2010 .1990 .1990 .1990 .1990 .1890 .0890 .0980	489978999999999999999999999999999999999	12 12 12 12 12 12 12 12 12 12 12 12 12 1	6 ORS. 6 ORS. 6 ORS. 5 ORS. 5 ORS. 5 ORS. 5 ORS. 5 ORS. 5 ORS. 4 ORS. 6 ORS. 6 ORS. 7 ORS.	

LETTER SIZES OF TWIST DRILLS

Each lot packed in paper envelope

Catalog Number	Letter Size	Dec. Equiv.	Length Over-all	Quan. in Pkg.	Shipping Weight
CE6312A	A	.234	3%"	12	71/2 ozs.
CE6212B	В	.238	37/8"	12	736 ozs.
CE6312C	C	.242	37/8"	12	734 ozs.
CE6312D	D	.246	4"	12	734 ozs.
CE6312E	E	.250	4"	12	8 ozs.
CE6312F	F	.257	436"	12	81/8 ozs.
CE6312G	G	.261	43/8"	12	8% ozs.
CE6312H	H	.266	43%	12	9 ozs.
CE6312I	I	.272	41/2"	12	9½ ozs.
CE6312J	J	.277	43/8"	12	9% ozs.
CE6312K	K	.281	41/4"	12	101/4 ozs.
CE6306L	L	.290	41/4"	6	5 1/8 ozs.
CE6306M	M	.295	4360	6	6 ozs.
CE6306N	N	.302	43%"	6	61/4 ozs.
CE6306O	0 -	.316	41/20	6	6% ozs.
CE6306P	P	.323	45%	6	714 ozs.
CE6306Q	0	.332	434"	6	7 1/2 ogs.
CE6306R	R	.339	434"	6	8½ ozs.
CE6306S	S	.348	43/4"	6	87% ogs.
CE6306T	T	.358	47/8"	6	9 1/2 ozs.
CE6306U	U	.368	5"	6	10 ozs.
CE6306V	v	.377	5"	6	10 % ozs.
CE6306W	w	,386	534"	6	11 ozs.
CE6306X	X	.397	51/4"	6	12 ozs.
CE6306Y	Y	.404	514"	6	12 % ozs.
CE6306Z	Z	.413	514"	6	13¼ ozs.

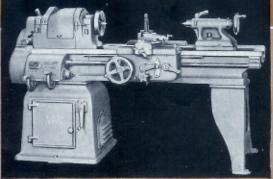
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City	County	state			
	Buyer's Signature	Name of Truck Line	Name of Truck Line or Railroad		
By	if Partnership, Officer if Corpora				

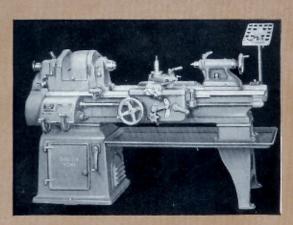
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