

SOUTH BEND LATHE CATALOG 5800

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SOUTH BEND *Precision* MACHINE TOOLS

ENGINE LATHES • TOOLROOM LATHES • TURRET LATHES • MILLING MACHINES • SHAPERS • DRILL PRESSES • PEDESTAL GRINDERS

Precision Built for Precision Machine Work

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

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

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

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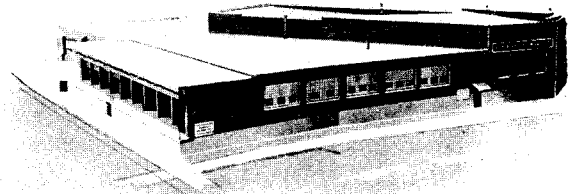
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SOUTH BEND LATHE WORKS

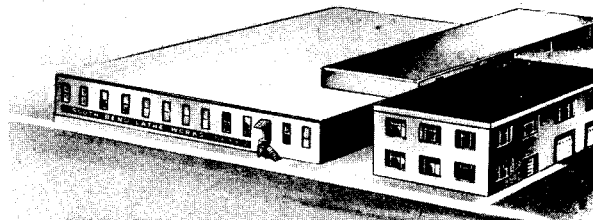
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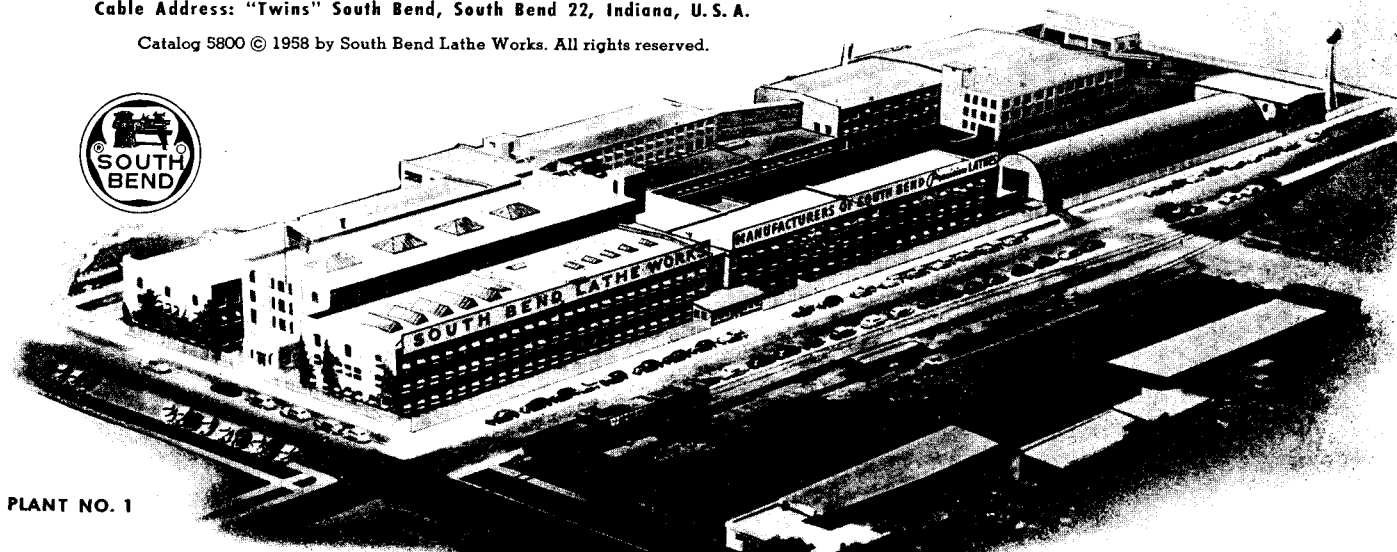
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PLANT NO. 3



PLANT NO. 2



PLANT NO. 1

Improved

SOUTH BEND Precision LATHES

FEATURES OF 10"-1 1/16" COLLET AND LARGER SIZES

DEPENDABLE QUALITY

You can depend on the quality of South Bend Lathes because they are designed and built by men who take pride in their craftsmanship. Each operation, each part, each assembly, each lathe is manufactured to exacting specifications. Inspection is frequent and rigid. Parts that do not "measure up" are discarded. Final tests are recorded on a factory test card similar to the one shown and are kept on file in our office permanently.

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

SMOOTH POWER

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

SUPERFINISHED SPINDLE

Headstock spindle bearing surfaces are hardened, ground and superfinished to a surface smoothness of five microinches (.000005") r.m.s. Spindle runs in bronze bearings which are precision bored and burnished to a smoothness of ten microinches (.000010") r.m.s. Large oil reservoirs and capillary wicks circulate clean filtered oil through the bearings. This bearing construction provides rigid support to the spindle and eliminates vibration which sometimes results when ball or roller bearings are used.

IMPROVED CARRIAGE

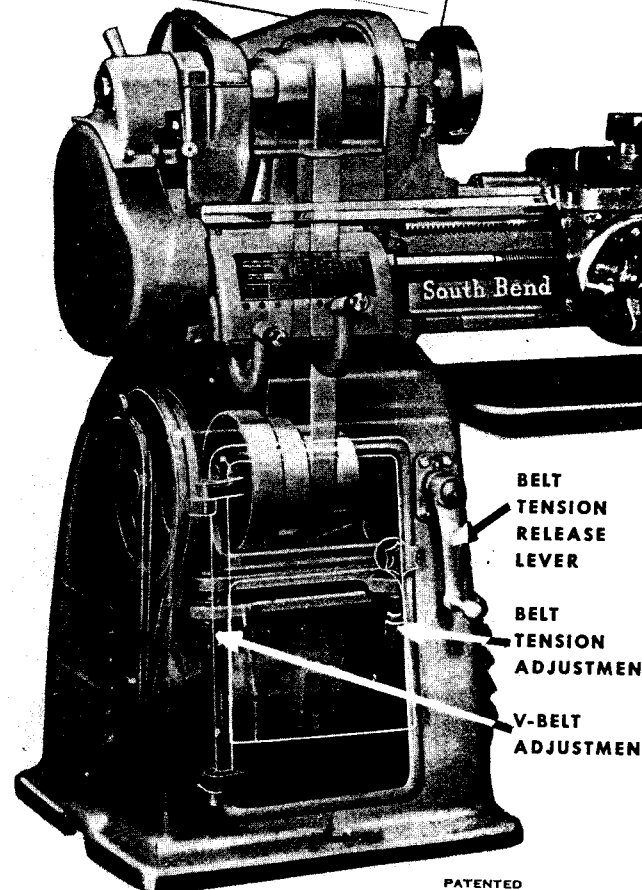
New time saving improvements developed by South Bend engineers add to the convenience and ease of operation of the improved carriage. Large, easy reading graduated collars on cross-feed and compound rest screws have non-glare satin finish chrome surface with black lines and figures. Cross-feed screw has ball thrust bearing for smooth, easy operation. Quick-acting lever operated clutch permits instant engagement or dis-

FACTORY TEST CARD
Lathes Tested Under Own Power
At Correct Spindle Speed

Size of Lathe: 14 1/2 x 6 Date: Apr. 4, 1955
Serial No. 2401 FKL 14 Cat. No. _____
Type of Drive _____ Type of Bed _____

TESTS		Time	Remarks
TEST	Result	min.	
HEADSTOCK SPINDLE			
Outer end of 12" Test Bar runs true	<u>888</u>		
12" Test Bar parallel with Bed (Top)	<u>0.002</u>		<u>M.H.</u>
12" Test Bar parallel with Bed (Side)	<u>0.004</u>		<u>M.H.</u>
End Play Test	<u>0.001</u>		<u>M.H.</u>
Shoulder Test (Cam action)	<u>OK</u>		<u>M.H.</u>
Bearing Adjustment (Lift Test) Front	<u>OK</u>		<u>M.H.</u>
Bearing Adjustment (Lift Test) Rear	<u>0.002</u>		<u>M.H.</u>
Running Test—High Spindle Speed	<u>OK</u>		<u>M.H.</u>
HEADSTOCK AND TAILSTOCK ALIGNMENT			
Parallel with Lathe Bed (Top)	<u>0.003</u>		<u>M.H.</u>
Tailstock Spindle In	<u>0.005</u>		<u>M.H.</u>
Parallel with Lathe Bed (Side)	<u>0.000</u>		<u>M.H.</u>
Tailstock Spindle In (Side)	<u>0.002</u>		<u>M.H.</u>
Parallel with Lathe Bed (Side)	<u>0.002</u>		<u>M.H.</u>
Tailstock Spindle Extended	<u>0.001</u>		<u>M.H.</u>
LEAD SCREW—End Play Test			
Cam Action, Forward	<u>0.001</u>		<u>M.H.</u>
Cam Action, Reverse	<u>0.000</u>		<u>M.H.</u>
SADDLE			
Cross Slide Test	<u>0.000</u>		<u>M.H.</u>
Bearing on Lathe Bed	<u>808</u>		<u>M.H.</u>
COMPOUND REST			
Bearing on Spindle	<u>OK</u>		<u>M.H.</u>
Bearing on Top Slide	<u>OK</u>		<u>M.H.</u>
TESTS FOR NOISE			
Back Gears	<u>OK</u>		<u>M.H.</u>
Conc.	<u>OK</u>		<u>M.H.</u>
Primary Gears	<u>OK</u>		<u>M.H.</u>
Gear Box	<u>OK</u>		<u>M.H.</u>

ASSEMBLED BY 519
GENERAL INSPECTION M.H.
DATE TESTED 6-11-55 OK'd by M.H.
FORM NO. 104-B-EX-11-55



PATENTED

engagement of power feeds. Ground thread cross-feed screw is optional at extra cost. Also available at extra cost is a fine feed apron handwheel with planetary gear reduction for positioning carriage on bed with extreme precision. See page 47. Saddle has long bearings on bed ways with convenient oilers and felt wipers. Both compound rest top and base dovetails have tapered gibs and compound rest swivel is accurately graduated 180°. Carriage lock is conveniently located on right saddle wing. Cross-feed crank and apron handwheel have swivel machine handles. Apron is of the rigid one-piece double wall construction with gear shafts supported on both ends. Large oil reservoir in apron provides automatic lubrication. Half-nuts are dovetailed into back wall of apron and have automatic interlock which prevents engaging power feeds and half-nuts at the same time.

IMPROVED QUICK CHANGE BOX

Years of research and testing resulted in the improved double tumbler quick change box, an exclusive South Bend feature. Compact, dependable, and easy to set for any desired thread or feed, this mechanism has been copied but never duplicated. The direct reading index chart shows positions of levers for each of 48 screw threads, 48 power longitudinal feeds and 48 power cross-feeds. Wide range quick change box (on 10" lathe only) has an additional 22 changes making a total of 70 threads or feeds. See index chart illustrations.

Standard screw threads are obtained by shifting the two tumbler levers on the gear box. Special stud and intermediate gearing can be supplied at extra cost for diametral pitch worm threads or other special pitches not shown on the index chart. Metric gear box and lead screw can be supplied in lieu of English (no extra cost) or metric transposing gears can be furnished (extra cost) for cutting metric threads. See page 59.

RIGID LATHE BED

Beds are heavily constructed with large braces cast in at short intervals. Bed castings are made of a special grade of iron with 30 to 70% steel (depending on size) which produces a hard, close-grained metal having unusual strength and long wearing qualities. Headstock, tailstock, and carriage are aligned on bed by three large V-ways and one flat way. Hardened bed ways are optional at small extra cost. See page 28.

Careful inspection is made to be sure that a uniform bearing is obtained the full length of the bed and that all ways are straight and parallel. A serial number is stamped between the front ways at the tailstock end as shown. A record of each lathe is kept and is filed under this number. When attachments or parts are ordered, the serial number of the lathe should always be stated.

MANUFACTURED BY SOUTH BEND LATHE WORKS SOUTH BEND IND. U.S.A.

SOUTH BEND PRECISION LATHE

CATALOG NO. _____
BED LENGTH _____
CHART NO. 1

STOP MACHINE BEFORE SHIFTING TUMBLER LEVERS

Screw Thread	Longitudinal Feed	Threads per Inch Feeds in Thousandths											
		4	5	6	7	8	9	10	11	12	13	14	15
24 A	0.010	4	5	6	7	8	9	10	11	12	13	14	15
24 B	0.016	16	18	20	22	23	24	26	28	30	32	34	36
24 C	0.032	32	36	40	44	46	48	52	56	60	64	68	72
24 D	0.064	64	72	80	88	92	96	104	112	120	128	136	144
24 E	0.128	128	144	160	176	184	192	208	224	240	256	272	288

POSITION: A B C D E

Index chart showing threads cut on 13" and larger lathes.

MANUFACTURED BY SOUTH BEND LATHE WORKS SOUTH BEND IND. U.S.A.

SOUTH BEND PRECISION LATHE

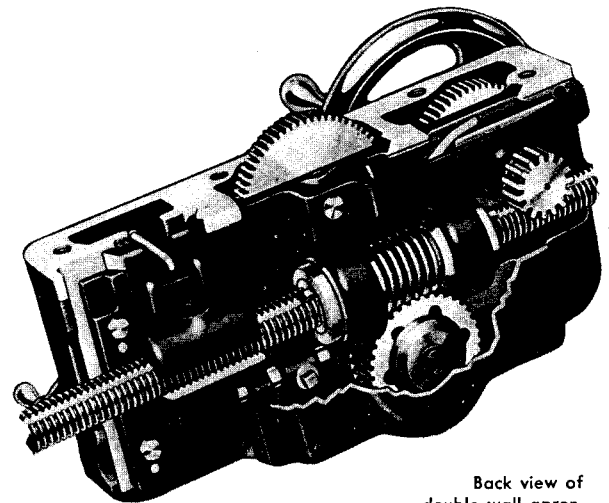
CATALOG NO. _____
BED LENGTH _____
CHART NO. 1

STOP MACHINE BEFORE SHIFTING TUMBLER LEVERS

Screw Thread	Longitudinal Feed	Threads per Inch Feeds in Thousandths											
		4	5	6	7	8	9	10	11	12	13	14	15
40 A	0.010	4	5	6	7	8	9	10	11	12	13	14	15
40 B	0.016	16	18	20	22	23	24	26	28	30	32	34	36
40 C	0.032	32	36	40	44	46	48	52	56	60	64	68	72
40 D	0.064	64	72	80	88	92	96	104	112	120	128	136	144
40 E	0.128	128	144	160	176	184	192	208	224	240	256	272	288
40 F	0.128	128	144	160	176	184	192	208	224	240	256	272	288
40 G	0.256	256	288	320	352	368	384	416	432	448	464	480	496

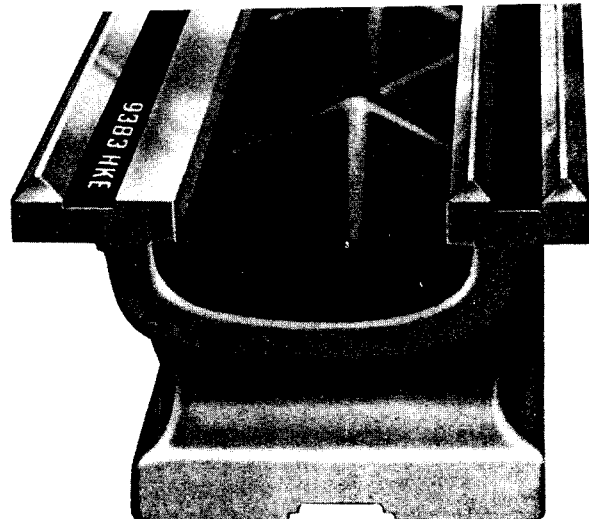
POSITION: A B C D E F G

Index chart showing threads cut on 10" lathes.



Back view of double wall apron.

Hardened and ground bed ways are optional at small extra cost. See page 28.



Specifications

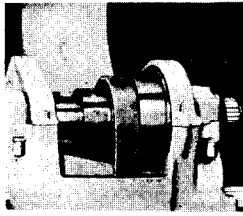
10" - 1 1/16" COLLET AND LARGER LATHES

	10"	13"	14 1/2"	16"	16-24"
Capacity					
Swing over bed and saddle wings.....	10-1/8"	13-1/8"	14-5/8"	16-1/4"	25-1/8"
Swing over cross slide, engine lathe.....	5-7/8"	7-3/4"	8-3/4"	9-5/8"	18-3/4"
Swing over cross slide, toolroom lathe.....	5-3/4"	8"	8-15/16"	9-5/8"	19-1/4"
Swing over cross slide without chip guard, engine lathe only.....	6-3/4"	8-3/4"	10-1/4"	11-1/8"	30", 42", 54"
Between centers (various bed lengths).....	14", 20", 27", 34"	16", 28", 40", 52"	24", 36", 48", 60"	33", 45", 57", 81", 105", 129"	78", 102", 126"
Headstock					
Capacity through spindle, nose type collet chuck or lathe chuck.....	1-3/8"	1-3/8"	1-3/8"	1-3/8"	1-3/8"
Maximum collet capacity, hand wheel or hand lever type.....	1-1/16"	1-1/16"	1-1/16"	1-1/16"	1-1/16"
Threaded spindle nose, diameter and threads per inch.....	2-1/4"-8	2-1/4"-8	2-3/8"-6	2-3/8"-6	2-3/8"-6
Cam lock spindle nose, size.....	4" type D1	4" type D1	4" type D1	4" type D1	4" type D1
Long taper key drive spindle nose, size.....	LOO	LOO	LOO	LOO	LOO
Center, Morse taper.....	No. 2	No. 3	No. 3	No. 3	No. 3
Width, each step of 4-step cone pulley.....	1-3/4"	1-3/4"	2-1/16"	2-1/4"	2-1/4"
Width, each step of 3-step cone pulley.....	1-5/16"	2-3/8"	2-25/32"	3"	3"
Spindle Speeds, Standard					
With 4-step cone pulley					
{ 1-speed motor	number.....	8	8	8	8
{ approx. range, r.p.m.....	.....	40-940	30-875	30-980	15-470
{ 2-speed motor	number.....	16	16	16	16
{ approx. range, r.p.m.....	.....	20-940	15-875	15-980	15-900
With 3-step cone pulley					
{ 1-speed motor	number.....	6	6	6	6
{ approx. range, r.p.m.....	.....	40-940	30-875	32-945	14-405
{ 2-speed motor	number.....	12	12	12	12
{ approx. range, r.p.m.....	.....	20-940	15-875	20-945	15-790
Higher spindle speeds available at extra cost, up to.....	2400 r.p.m.	1600 r.p.m.	1200 r.p.m.	1200 r.p.m.	.....
Threads and Feeds					
Number of changes for threads and feeds.....	70	48	48	48	48
Range of threads cut.....	4 to 480	4 to 224	4 to 224	4 to 224	4 to 224
Range of longitudinal feeds.....	.0007" to .0836"	.0015" to .0841"	.0015" to .0841"	.0015" to .0841"	.0015" to .0841"
Range of cross-feeds.....	.0003" to .0303"	.0006" to .0315"	.0006" to .0315"	.0006" to .0315"	.0006" to .0315"
Lead screw, 29° Acme thread, diameter and threads.....	3/4"-8	1"-6	1-1/8"-6	1-1/8"-6	1-1/8"-6
Compound Rest					
Cross slide travel, engine lathe model.....	6-1/4"	8-3/4"	10"	10-1/2"	10-1/2"
Cross slide travel, toolroom lathe model.....	5-7/8"	8-1/8"	9-1/2"	10-1/16"	10-1/16"
Angular hand feed, compound rest top slide.....	2"	3-1/8"	3-1/8"	3-3/4"	3-3/4"
Tool post opening for tool holder shank.....	3/8" x 13/16"	1/2" x 1-1/8"	5/8" x 1-3/8"	5/8" x 1-3/8"	5/8" x 1-3/8"
Tailstock					
Center, Morse taper.....	No. 2	No. 3	No. 3	No. 3	No. 3
Spindle travel.....	2-1/8"	4-1/4"	5-1/4"	5-3/4"	5-3/4"
Set-over of top for taper turning.....	11/16"	15/16"	15/16"	1"	1"
Motor					
Recommended size, one-speed.....	3/4 h.p.	1 h.p.	2 h.p.	2 h.p.	2 h.p.
Recommended size, two-speed.....	1 h.p., 1-1/2 h.p.	1-1/2 h.p., 3/4 h.p.	2 h.p., 1 h.p.	2 h.p., 1 h.p.	2 h.p., 1 h.p.
Optional size, one-speed.....	1 h.p.	1-1/2 h.p.	3 h.p.	3 h.p.	3 h.p.
Optional size, two-speed.....	.....	2 h.p.—1 h.p.	3 h.p.—1-1/2 h.p.	3 h.p.—1-1/2 h.p.	3 h.p.—1-1/2 h.p.

Only South Bend

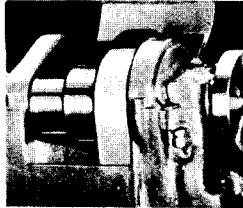
OFFERS ALL THESE

Optional Features



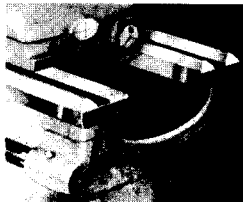
FOUR-STEP PULLEY (13" and larger lathes only)

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



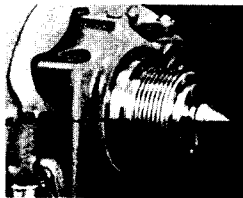
THREE-STEP PULLEY

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



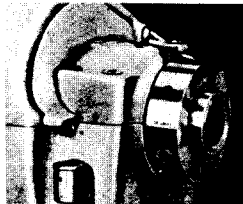
HARDENED BED WAYS

Hardened and ground bed ways resist wear and scoring. They are supplied to order in lieu of regular bed ways at extra cost. See page 28.



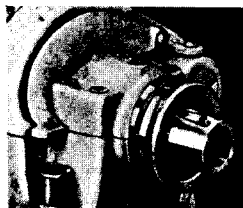
THREADED SPINDLE

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



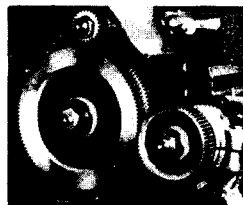
CAM LOCK SPINDLE

4" Type D1 Cam Lock Spindle supplied to order in lieu of regular threaded spindle at extra cost. Chucks, face plates and other accessories available. See pages 28 and 29.



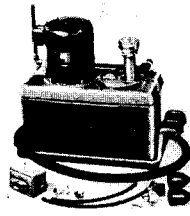
LONG TAPER SPINDLE

Size L00 Long Taper Key Drive Spindle supplied to order in lieu of regular threaded spindle at extra cost. Chucks, face plates, and other accessories available. See pages 28 and 29.



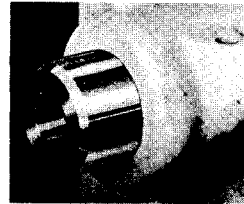
METRIC EQUIPMENT

Metric lead screw, metric quick change box and metric graduations supplied in lieu of English at no extra cost. Metric transposing gears at extra cost. See page 59.



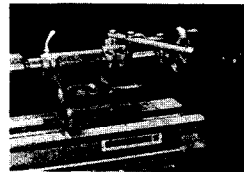
COOLANT EQUIPMENT

Coolant pump, reservoir, oil pan and piping speed production and improve finish on many classes of work. Supplied at extra cost. See page 44.



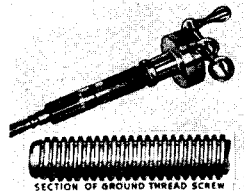
HARDENED TAILSTOCK TAPER

Tailstock spindle with hardened and precision ground taper furnished in lieu of regular at small extra cost. See page 47.



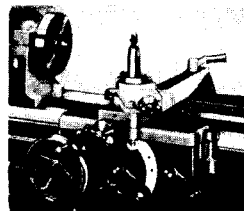
HANDLEVER TAILSTOCK

Supplied in lieu of regular tailstock at extra cost. Also available as an extra. Speeds drilling and reaming operations. See page 39.



GROUND THREAD CROSS-FEED SCREW

Special cross-feed screw assembly with hardened and ground thread supplied in lieu of regular at small extra cost. See page 47.



SPECIAL FINISH

Any desired color or combination of colors can be supplied in lieu of the regular gray enamel finish on South Bend Lathes. See page 38 for extra charges.

Standard Equipment —

ENGINE LATHES (10"-1 1/8" Collet and larger)

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

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

Wrenches, installation plan and manual
Prices of 10"-1 1/8" Collet Bench Lathes also include steel bench with built-in chip pan.
Electrical equipment is not included. See pages 60-63.

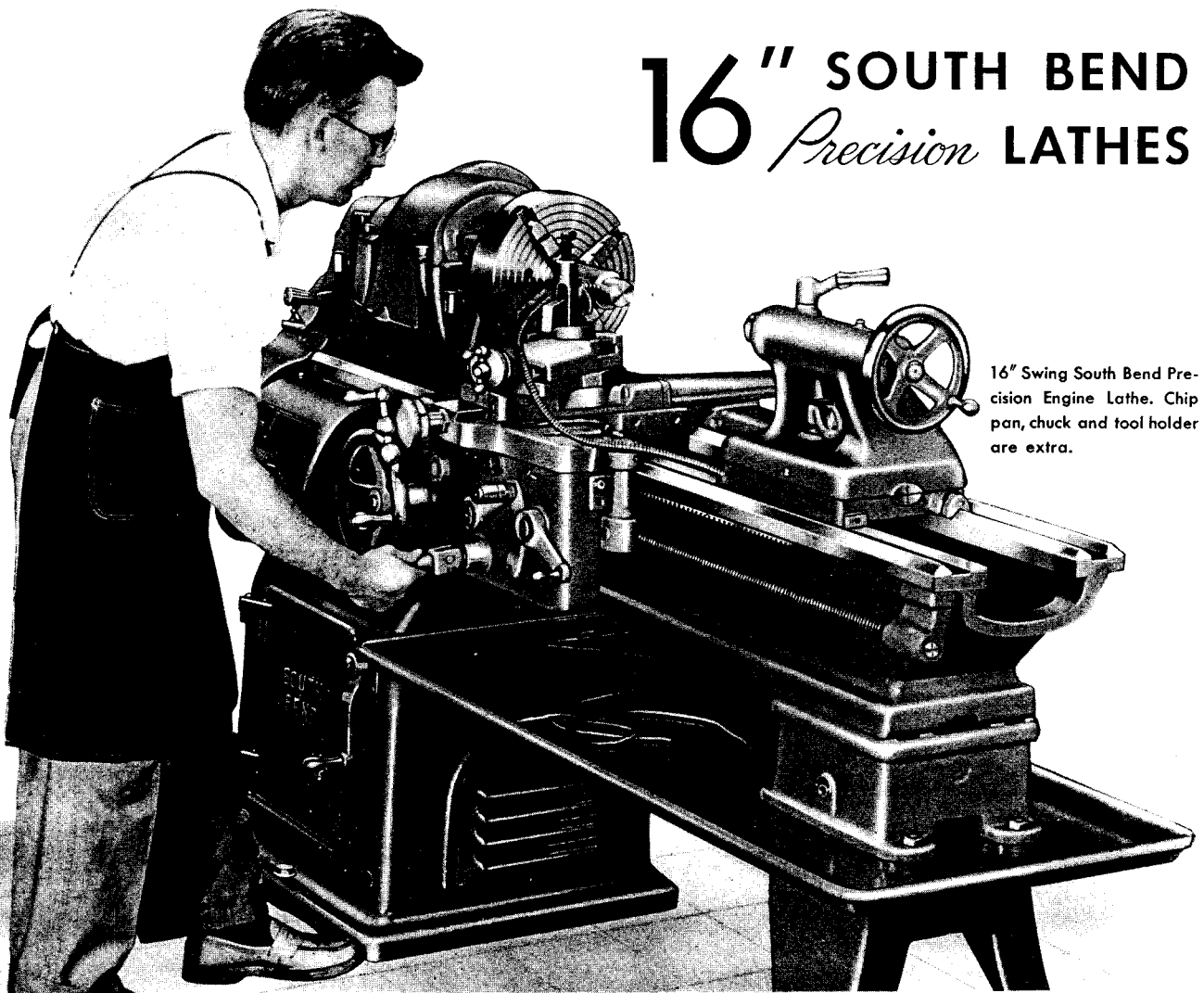
TOOLROOM LATHES (10"-1 1/8" Collet and larger)

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

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

Telescopic taper attachment
Large face plate
Chip pan
Micrometer carriage stop

16" SOUTH BEND *Precision* LATHES



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

Capable of heavy cuts at high speeds, South Bend 16" swing lathes are among the most popular for general production work. Because of their exceptionally smooth operation and ease of set-up

they are also widely used for toolroom and experimental work. They can be equipped with square turret tool block, bed turret, handlever collet attachment and many other time saving accessories.

TYPE OF LATHE	TYPE OF HEADSTOCK	CATALOG NUMBER	BED LENGTH FEET	BETWEEN CENTERS INCHES	CUBIC FEET BOXED	BOXED WEIGHT POUNDS	CRATED WEIGHT POUNDS	PRICE F.O.B. FACTORY	
ENGINE LATHES	THREE-STEP CONE PULLEY	CL155C	6	33	89	2700	2300	\$2468	
		CL155D	7	45	96	2950	2380	2530	
		CL155E	8	57	105	3150	2460	2592	
		CL155G	10*	81	123	3550	2800	2764	
		CL155H	12*	105	141	3900	2975	2936	
		CL155K	14*	129	167	4380	3200	3251	
	FOUR-STEP CONE PULLEY	CL117C	6	33	89	2700	2300	2468	
		CL117D	7	45	96	2950	2380	2530	
		CL117E	8	57	105	3150	2460	2592	
		CL117G	10*	81	123	3550	2800	2764	
		CL117H	12*	105	141	3900	2975	2936	
		CL117K	14*	129	167	4380	3200	3251	
	TOOLROOM LATHES	THREE-STEP CONE PULLEY	CL8155C	6	33	100	2925	2525	3077
			CL8155D	7	45	106	3175	2605	3147
CL8155E			8	57	117	3375	2685	3217	
FOUR-STEP CONE PULLEY		CL8117C	6	33	100	2925	2525	3077	
		CL8117D	7	45	106	3175	2605	3147	
		CL8117E	8	57	117	3375	2685	3217	

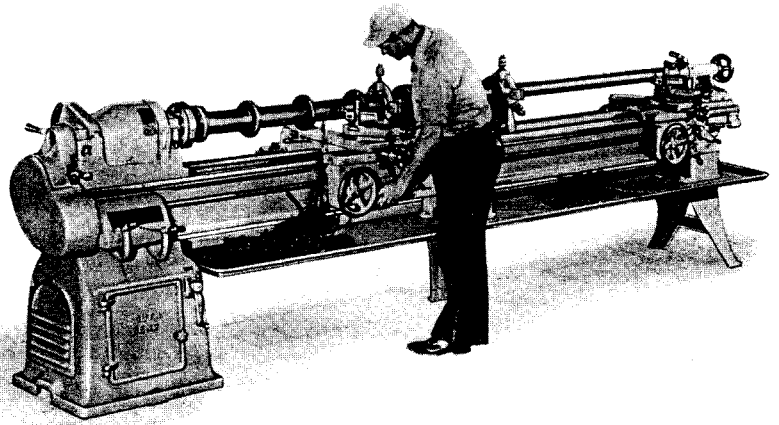
*Center leg is supplied with 10', 12', and 14' beds.

EXTRAS for 16" Lathes

Most commonly used attachments and accessories

Catalog Number	Description	See Page	Price
CL4306H	Handwheel Collet Attachment*	30	\$ 73.00
CL5206H	Handlever Collet Attachment...	30	178.00
CE3077	Set of 16 ←R-S-B← Steel Collets for Round Work.....	32	91.80
CE1770H	Collet Rack*	30	25.75
CL1545H	Taper Attachment.....	42	281.00
CL2400H	Telescoping Jaw Steady Rest	35	31.15
CL2395H	Telescoping Jaw Follower Rest	35	18.60
CL968FH	Micrometer Carriage Stop*....	45	28.00
CL4210MH	10" 4-Jaw Independent Chuck	52	128.00
CL3507MH	7½" 3-Jaw Universal Chuck...	52	146.00
CE1206	1" Drill Chuck.....	52	31.50
CE2307	Drill Chuck Arbor.....	52	1.85
CE2103	Set of 11 Safety Lathe Dogs	57	29.00
CE1475QH	Center Knock-out Bar.....	50	3.85
CE8535	Turning Tool Holder, Straight	53	8.93
CE884R	Cutting-off Tool Holder, R.H.	53	10.04
CE432	Boring Tool, Style "B".....	54	17.14
CE894	Knurling Tool.....	55	17.85
CE2815	Work Light.....	46	14.20
CE2698	Plastic Cover for Lathe (7' bed length).....	46	7.80
CE2218	12" Precision Level.....	46	13.50

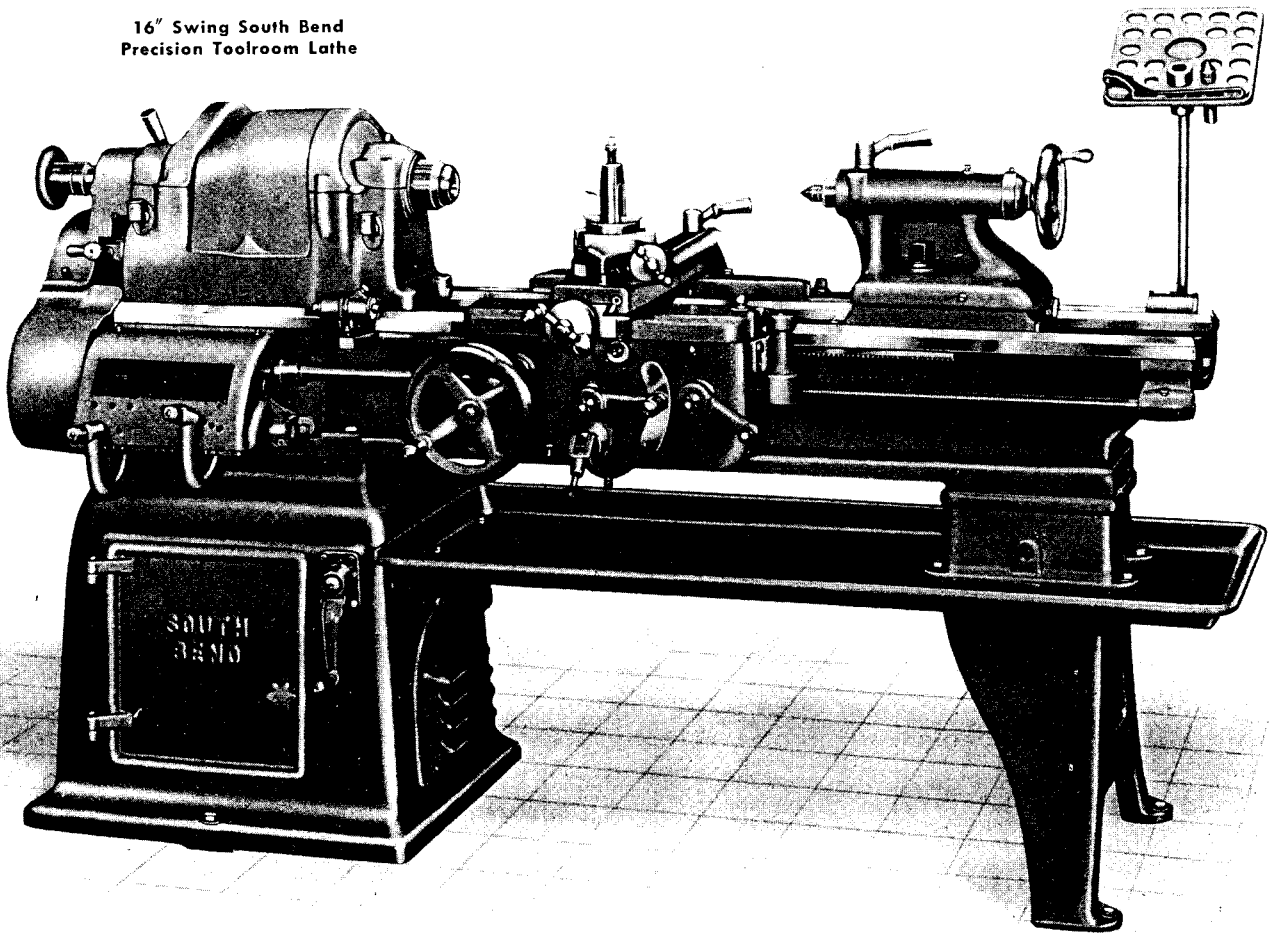
*These items are supplied with and included in prices of 16" Toolroom Lathes.

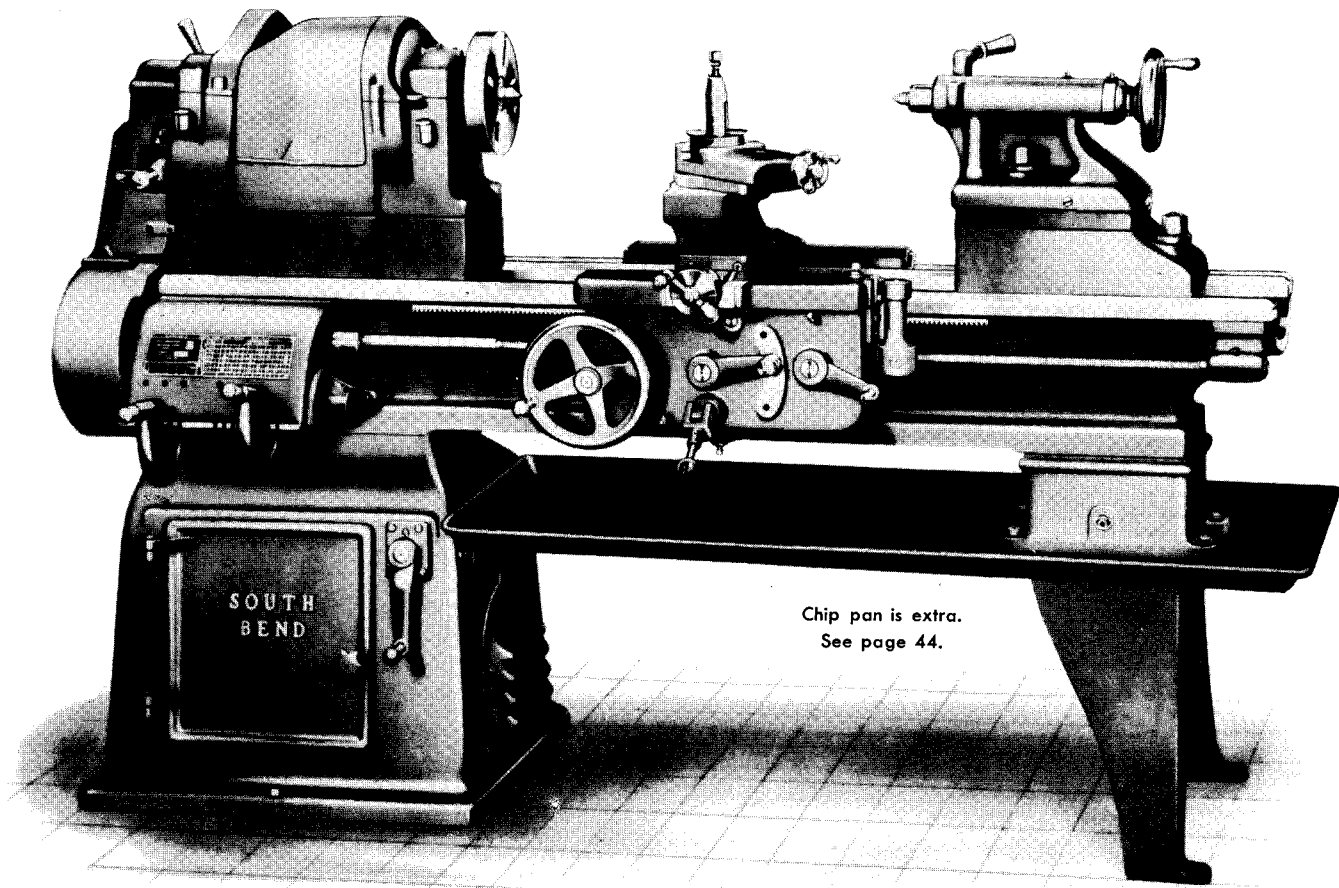


LONG BED DOUBLE CARRIAGE LATHE

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

16" Swing South Bend
Precision Toolroom Lathe





Chip pan is extra.
See page 44.

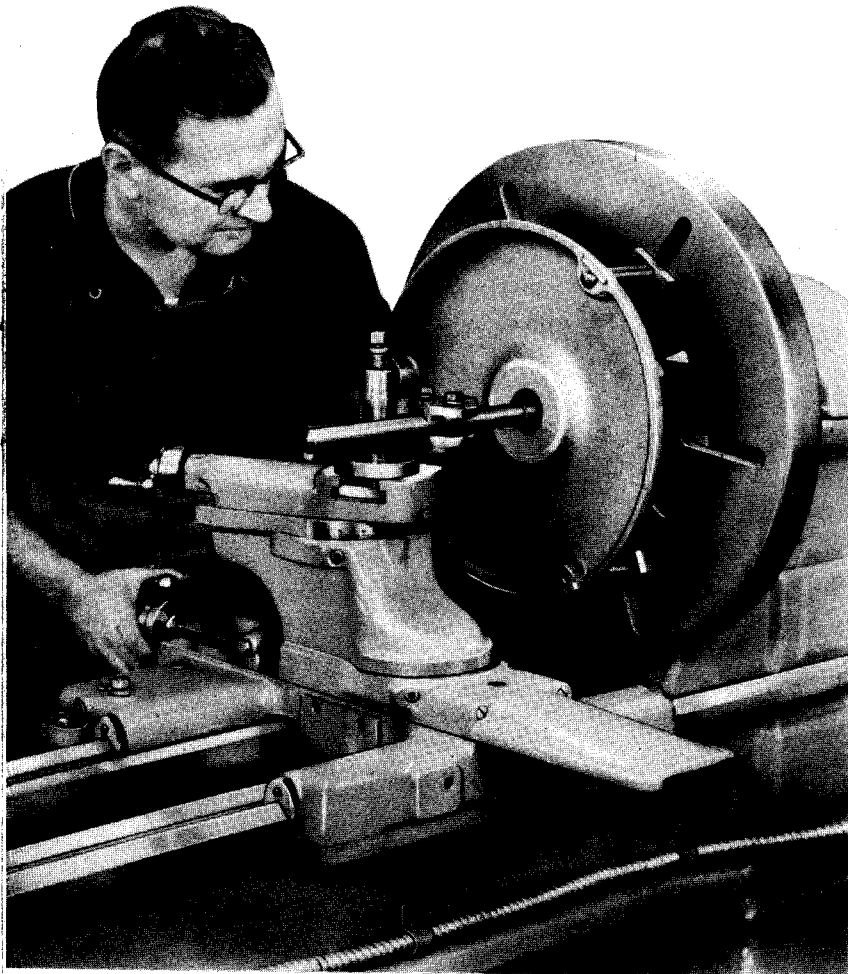
16-24" SOUTH BEND *Precision* LARGE SWING LATHE

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

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

DRIVE UNIT	CATALOG NUMBER		BED LENGTH FEET	BETWEEN CENTERS INCHES	CUBIC FEET BOXED	BOXED WEIGHT POUNDS	CRATED WEIGHT POUNDS	PRICE F.O.B. FACTORY
	THREE-STEP CONE PULLEY	FOUR-STEP CONE PULLEY						
FOR ONE-SPEED MOTOR	CL176C	CL198C	6	30	98	3100	2480	\$2795
	CL176D	CL198D	7	42	104	3200	2560	2857
	CL176E	CL198E	8	54	114	3300	2640	2919
	CL176G	CL198G	10*	78	134	3800	2980	3091
	CL176H	CL198H	12*	102	153	4100	3155	3263
	CL176K	CL198K	14*	126	182	4500	3350	3578
	CL195C	CL179C	6	30	98	3175	2555	2795
FOR TWO-SPEED MOTOR	CL195D	CL179D	7	42	104	3275	2635	2857
	CL195E	CL179E	8	54	114	3375	2715	2919
	CL195G	CL179G	10*	78	134	3875	3055	3091
	CL195H	CL179H	12*	102	153	4175	3230	3263
	CL195K	CL179K	14*	126	182	4575	3425	3578

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



EXTRAS for 16-24" Lathes

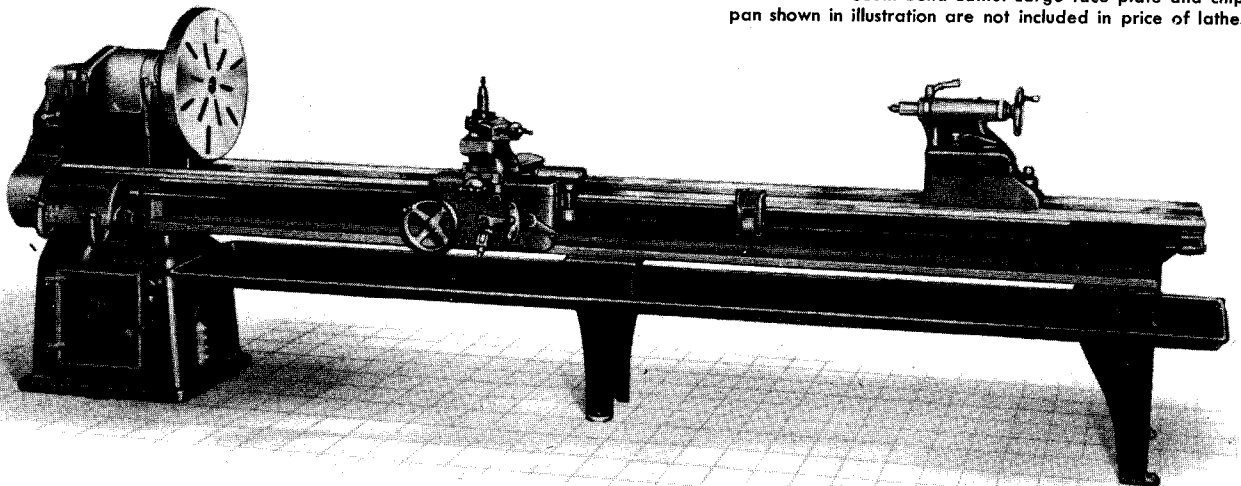
Most commonly used attachments and accessories

Catalog Number	Description	See Page	Price
CL4306H	Handwheel Collet Attachment...	30	\$ 73.00
CL5206H	Handlever Collet Attachment...	30	178.00
CE3077	Set of 16 R-S-B Steel Collets for Round Work.....	32	91.80
CE1770H	Collet Rack.....	30	25.75
CL1545H	Taper Attachment.....	42	281.00
CL2400V	Telescoping Jaw Steady Rest	35	41.00
CL2395V	Telescoping Jaw Follower Rest	35	25.40
CL968FH	Micrometer Carriage Stop.....	45	28.00
CL4210MH	10" 4-Jaw Independent Chuck	52	128.00
CL3507MH	7½" 3-Jaw Universal Chuck...	52	146.00
CE1206	1" Drill Chuck.....	52	31.50
CE2307	Drill Chuck Arbor.....	52	1.85
CE2103	Set of 11 Safety Lathe Dogs	57	29.00
CE1475QH	Center Knock-out Bar.....	50	3.85
CE8535	Turning Tool Holder, Straight	53	8.93
CE884R	Cutting-off Tool Holder, R.H....	53	10.04
CE432	Boring Tool, Style "B".....	54	17.14
CE894	Knurling Tool.....	55	17.85
CE2815	Work Light.....	46	14.20
CE2698	Plastic Cover for Lathe (7' bed length).....	46	7.80
CE2218	12" Precision Level.....	46	13.50

DOUBLE CARRIAGE LATHE

South Bend 16-24" Large Swing Lathes with 14-foot bed length can be supplied to order with double carriage, similar to double carriage equipment illustrated for 16" lathe on page 7. Write for information and prices.

16-24" x 14' South Bend Lathe. Large face plate and chip pan shown in illustration are not included in price of lathe.

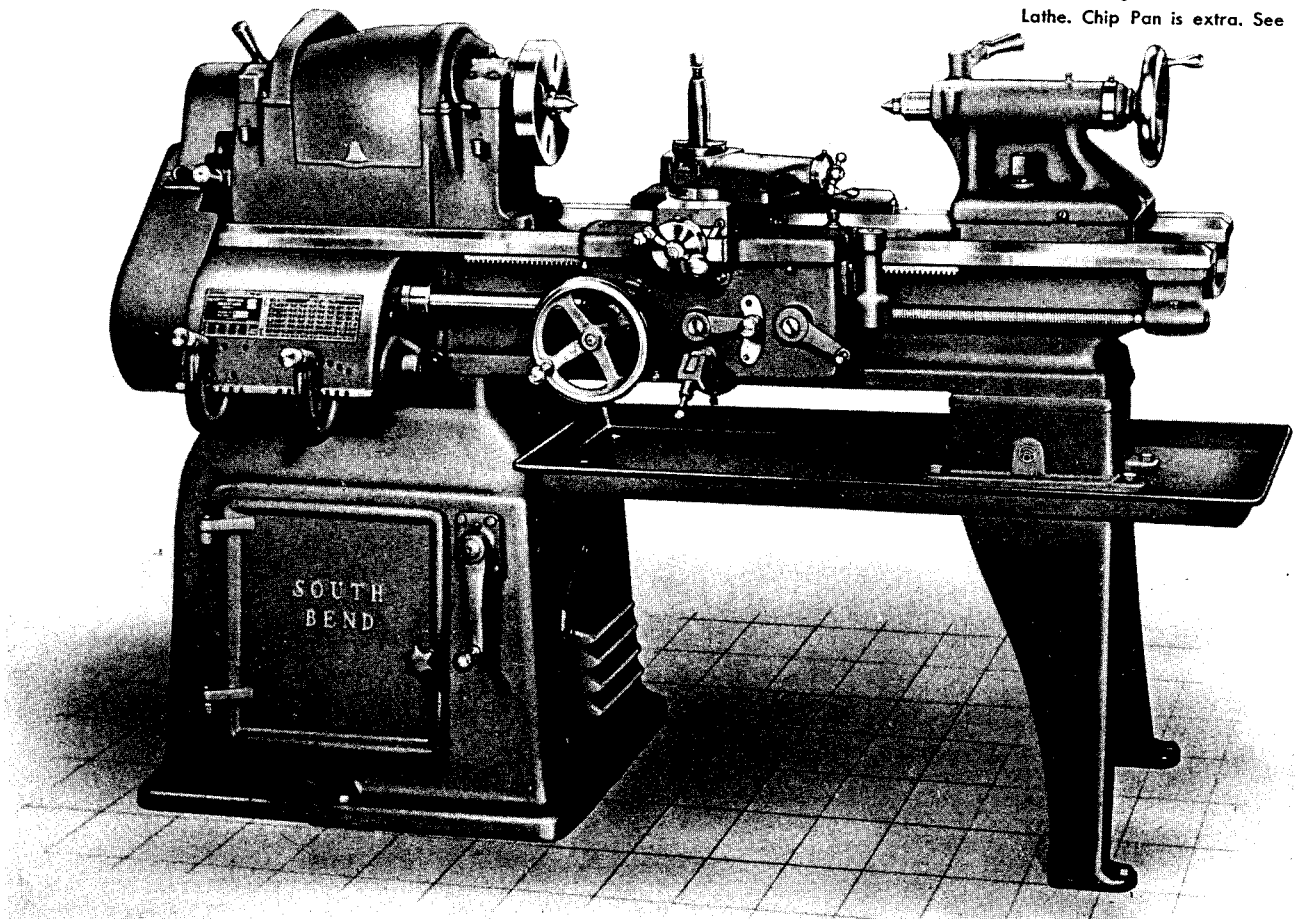


LONG BED 16-24" SOUTH BEND LATHE

The illustration above shows the 16-24" South Bend Lathe with 14' bed length which permits mounting work up to 126" long between centers. Maximum swing over saddle cross slide is 18¾", over bed 25⅛". Two carriages can be supplied to

order if needed. See illustration of 16" long bed lathe on page 7. For extra rigidity, the 14' bed is reinforced with heavy continuous X-bracing cast in the full length. Lead screw support bracket and center leg with leveling screws are supplied.

14½" Swing South Bend Precision Engine
 Lathe. Chip Pan is extra. See page 44.

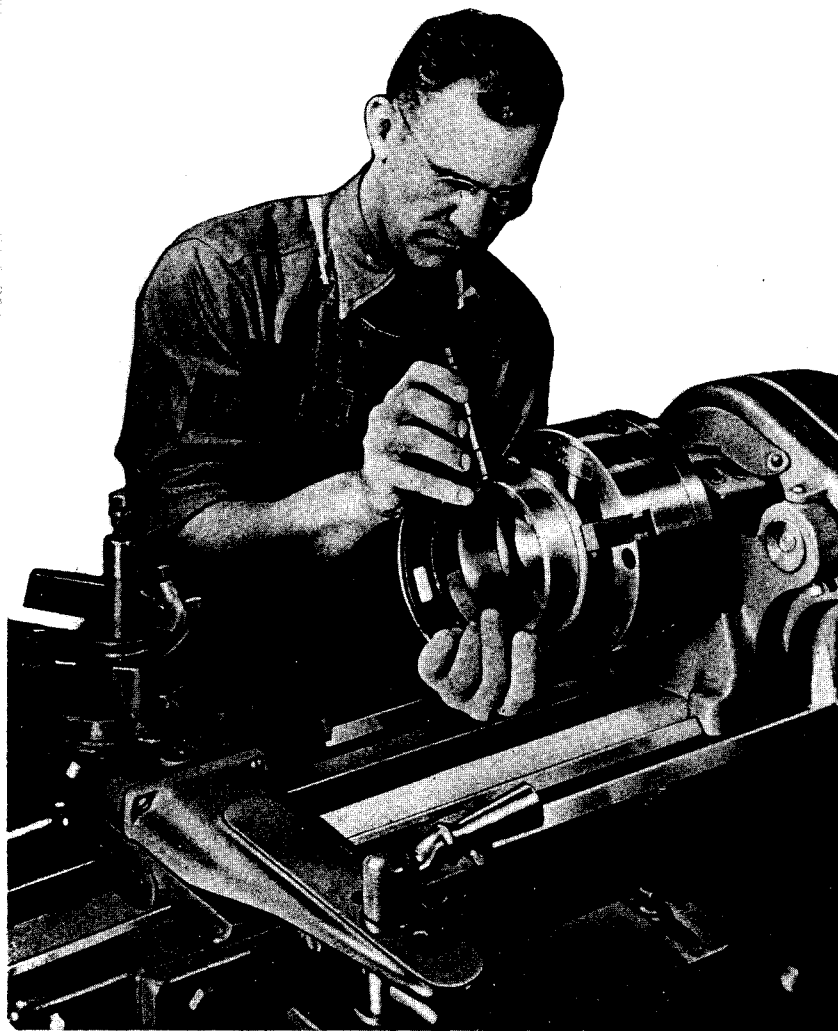


14½" SOUTH BEND *Precision* LATHES

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

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

TYPE OF LATHE	TYPE OF HEADSTOCK	CATALOG NUMBER	BED LENGTH FEET	BETWEEN CENTERS INCHES	CUBIC FEET BOXED	BOXED WEIGHT POUNDS	CRATED WEIGHT POUNDS	PRICE F.O.B. FACTORY
ENGINE LATHES	THREE-STEP CONE PULLEY	CL129B	5	24	82	2500	1995	\$2074
		CL129C	6	36	89	2600	2070	2134
		CL129D	7	48	96	2750	2145	2194
		CL129E	8	60	105	2900	2225	2254
	FOUR-STEP CONE PULLEY	CL185B	5	24	82	2500	1995	2074
		CL185C	6	36	89	2600	2070	2134
		CL185D	7	48	96	2750	2145	2194
		CL185E	8	60	105	2900	2225	2254
TOOLROOM LATHES	THREE-STEP CONE PULLEY	CL8129B	5	24	92	2685	2180	2629
		CL8129C	6	36	100	2785	2255	2696
		CL8129D	7	48	106	2935	2330	2763
		CL8129E	8	60	117	3085	2405	2830
	FOUR-STEP CONE PULLEY	CL8185B	5	24	92	2685	2180	2629
		CL8185C	6	36	100	2785	2255	2696
		CL8185D	7	48	106	2935	2330	2763
		CL8185E	8	60	117	3085	2405	2830



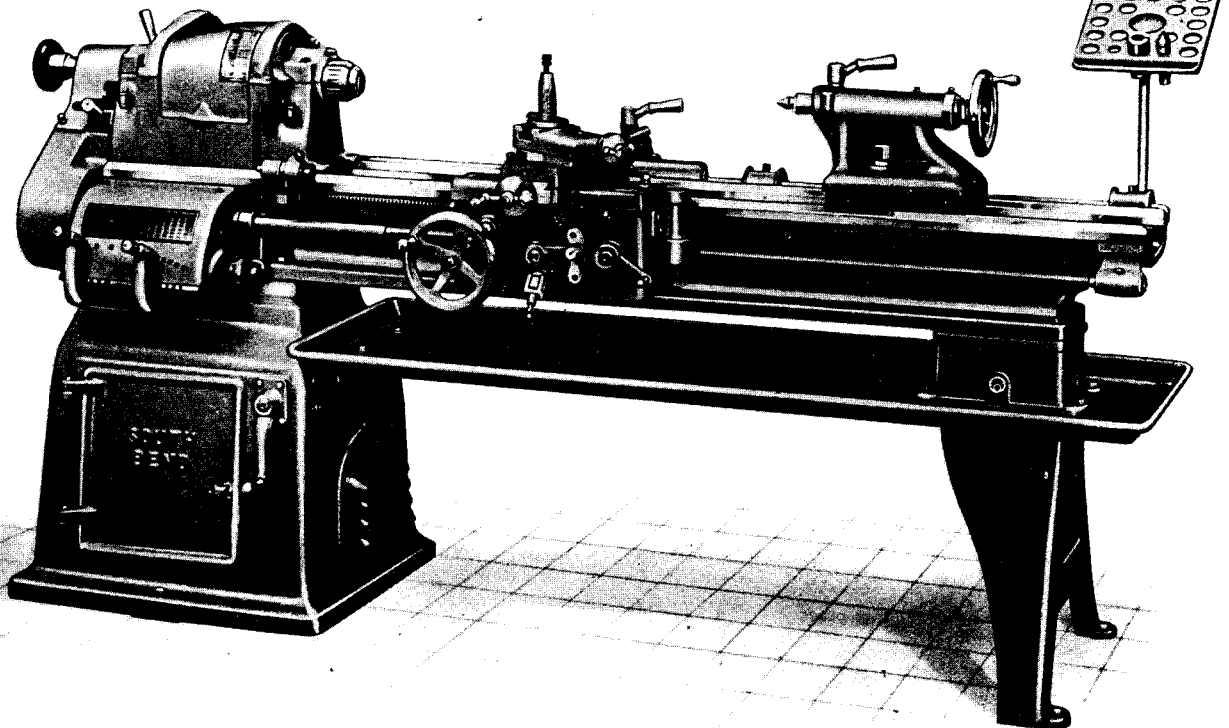
EXTRAS for 14½" Lathes

Most commonly used attachments and accessories

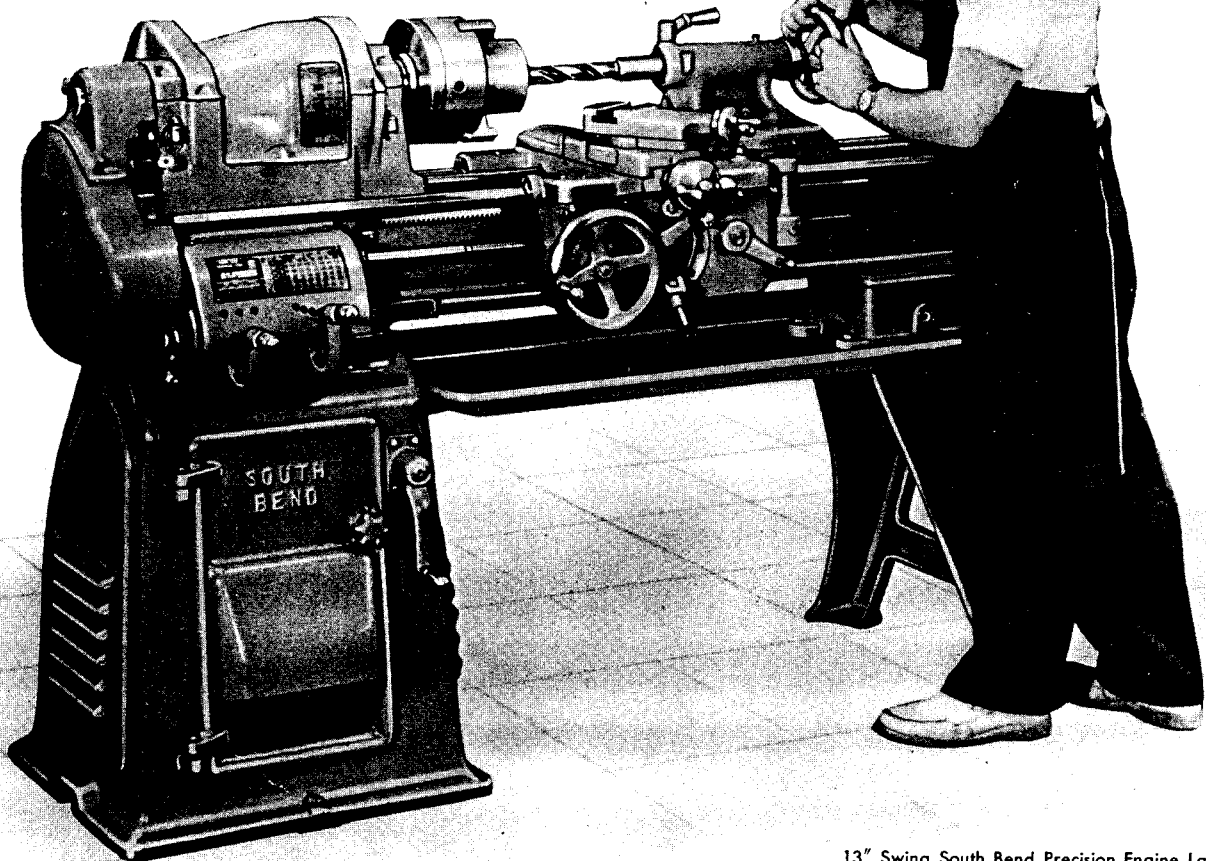
Catalog Number	Description	See Page	Price
CL4306M	Handwheel Collet Attachment*	30	\$ 70.00
CL5206M	Handlever Collet Attachment	30	164.00
CE3077	Set of 16 ←R-S-B← Steel Collets for round work.....	32	91.80
CE1770M	Collet Rack*.....	30	25.75
CL1545F	Taper Attachment*.....	42	251.00
CL2400F	Telescoping Jaw Steady Rest	35	28.00
CL2395F	Telescoping Jaw Follower Rest	35	17.00
CL968FH	Micrometer Carriage Stop*.....	45	28.00
CL4209MH	9" 4-Jaw Independent Chuck	52	118.00
CL3507MH	7½" 3-Jaw Universal Chuck.....	52	146.00
CE1202	¾" Drill Chuck.....	52	14.50
CE2305	Drill Chuck Arbor.....	52	1.85
CE2103	Set of 11 Safety Lathe Dogs	57	29.00
CE1475QH	Center Knock-out Bar.....	50	3.85
CE853S	Turning Tool Holder, Straight.....	53	8.93
CE884R	Cutting-off Tool Holder, R.H.....	53	10.04
CE432	Boring Tool, Style "B".....	54	17.14
CE894	Knurling Tool.....	55	17.85
CE2815	Work Light.....	46	14.20
CE2698	Plastic Cover for Lathe (7' bed).....	46	7.80
CE2218	12" Precision Level.....	46	13.50

*These items are supplied with and included in prices of 14½" Toolroom Lathes.

14½" Swing South Bend
Precision Toolroom Lathe.



13" SOUTH BEND *Precision* LATHES



13" Swing South Bend Precision Engine Lathe.
Chip Pan, chuck, and tools are extra.

The South Bend 13-inch Lathe is especially popular for small and medium sized jobs requiring speed and accuracy. Conveniently placed controls make for ease of operation that reduces fatigue to

a minimum. Special accuracy tests are made to assure extreme precision. Having greater sensitivity and speed than larger lathes, this lathe will save you time and effort on all work within its capacity.

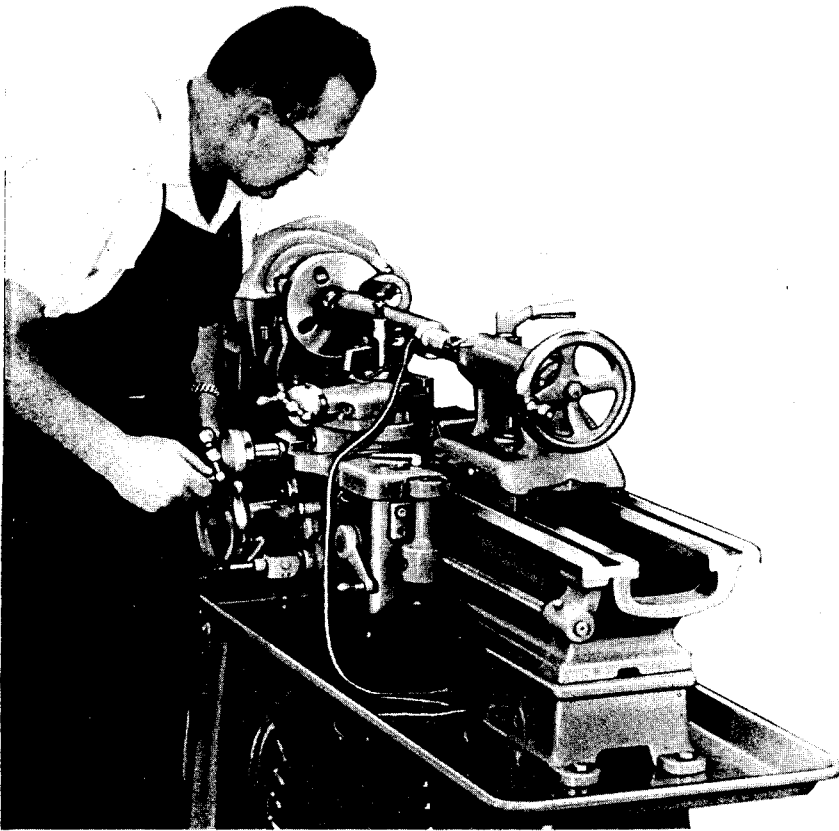
TYPE OF LATHE	TYPE OF HEADSTOCK	CATALOG NUMBER	BED LENGTH FEET	BETWEEN CENTERS INCHES	CUBIC FEET BOXED	BOXED WEIGHT POUNDS	CRATED WEIGHT POUNDS	PRICE F.O.B. FACTORY
ENGINE LATHES	THREE-STEP CONE PULLEY	CL175A	4	16	63	1835	1460	\$1675
		CL175B	5	28	73	1940	1510	1733
		CL175C	6	40	77	2045	1560	1791
		CL175D	7	52	82	2150	1615	1849
	FOUR-STEP CONE PULLEY	CL145A	4	16	63	1835	1460	1675
		CL145B	5	28	73	1940	1510	1733
		CL145C	6	40	77	2045	1560	1791
		CL145D	7	52	82	2150	1615	1849
TOOLROOM LATHES	THREE-STEP CONE PULLEY	CL8175B	5	28	84	1995	1665	2246
		CL8175C	6	40	89	2150	1715	2307
		CL8175D	7	52	96	2305	1770	2368
	FOUR-STEP CONE PULLEY	CL8145B	5	28	84	1995	1665	2246
		CL8145C	6	40	89	2150	1715	2307
		CL8145D	7	52	96	2305	1770	2368

EXTRAS for 13" Lathes

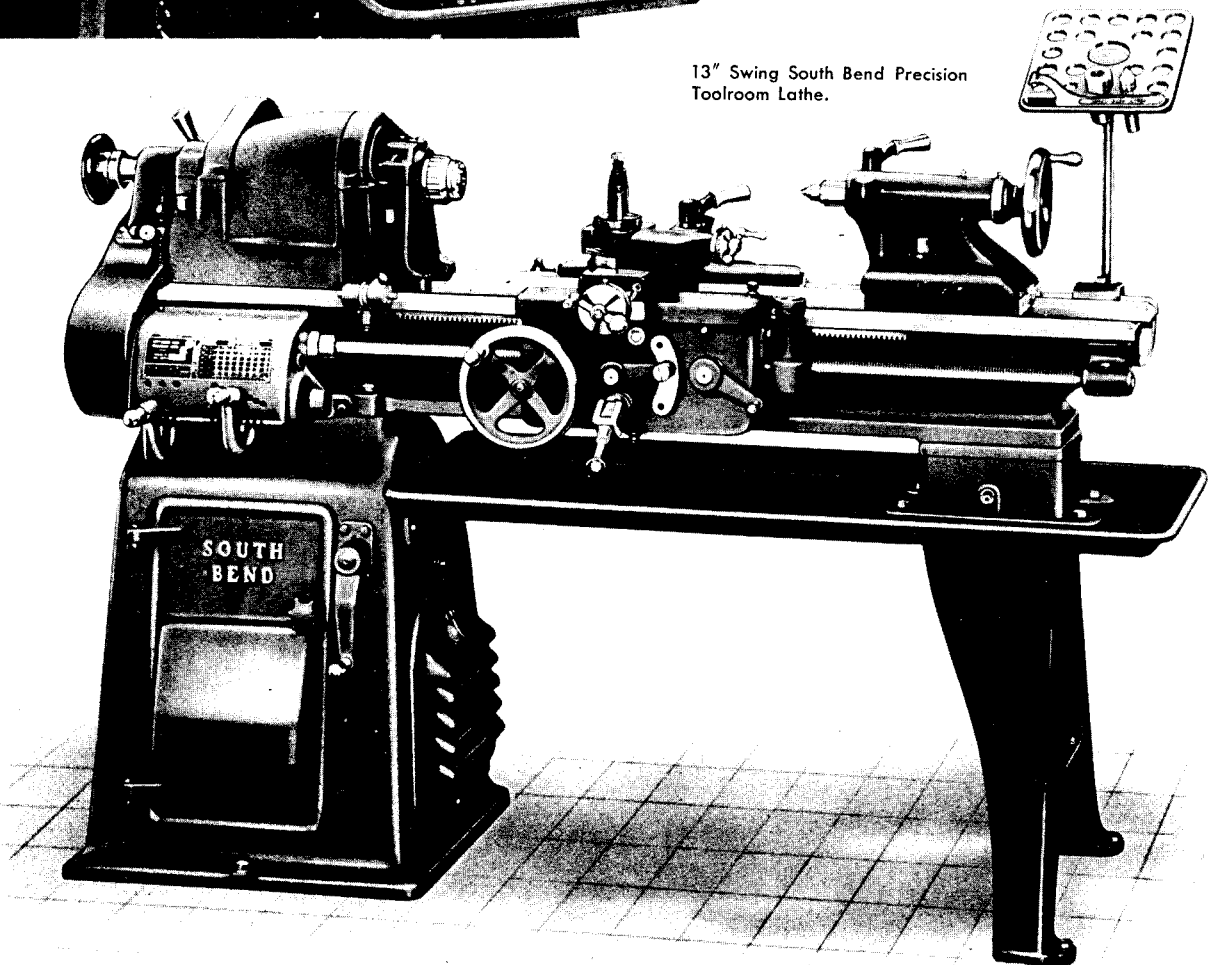
Most commonly used attachments and accessories

Catalog Number	Description	See Page	Price
CL4306Q	Handwheel Collet Attachment*	30	\$ 65.50
CL5206Q	Handlever Collet Attachment...	30	150.00
CE3077	Set of 16 ←R-S-B← Steel Collets for Round Work.....	32	91.80
CE1770Q	Collet Rack*.....	30	25.75
CL1545T	Taper Attachment*.....	42	233.00
CL2400T	Telescoping Jaw Steady Rest.....	35	24.00
CL2395T	Telescoping Jaw Follower Rest.....	35	14.20
CL968T	Micrometer Carriage Stop*.....	45	27.00
CL4207LQ	7½" 4-Jaw Independent Chuck.....	52	103.00
CL3506LQ	6" 3-Jaw Universal Chuck.....	52	128.00
CE1202	¾" Drill Chuck.....	52	14.50
CE2305	Drill Chuck Arbor.....	52	1.85
CE2103	Set of 11 Safety Lathe Dogs.....	57	29.00
CE1475QH	Center Knock-out Bar.....	50	3.85
CE852S	Turning Tool Holder, Straight.....	53	7.29
CE883R	Cutting-off Tool Holder, R.H.....	53	8.00
CE431	Boring Tool, Style "B".....	54	13.02
CE893	Knurling Tool.....	55	15.09
CE2815	Work Light.....	46	14.20
CE2698	Plastic Cover for Lathe (7' bed).....	46	7.80
CE2218	12" Precision Level.....	46	13.50

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



13" Swing South Bend Precision Toolroom Lathe.



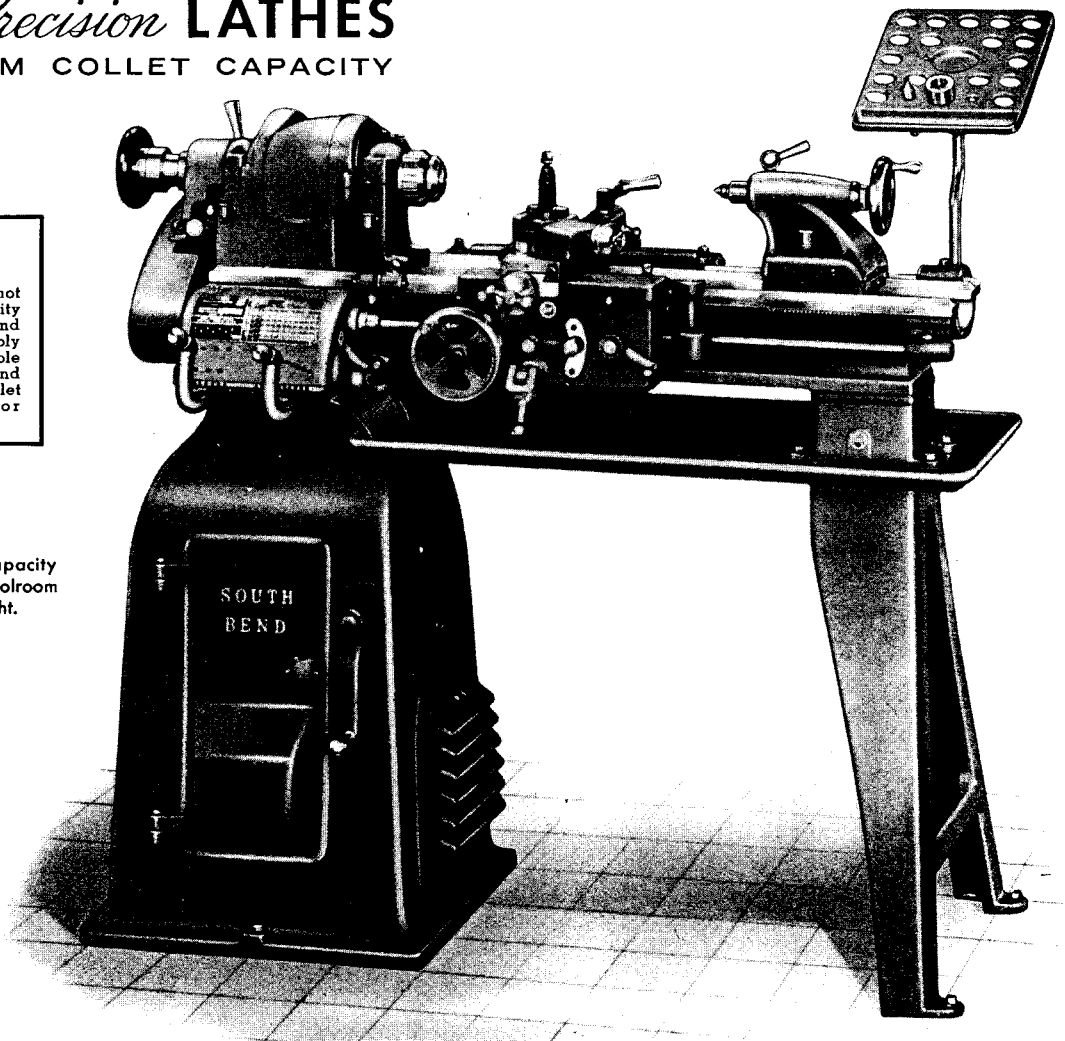
10" SOUTH BEND *Precision* LATHES

1 1/16" MAXIMUM COLLET CAPACITY

10"-1 1/16" COLLET LATHES

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

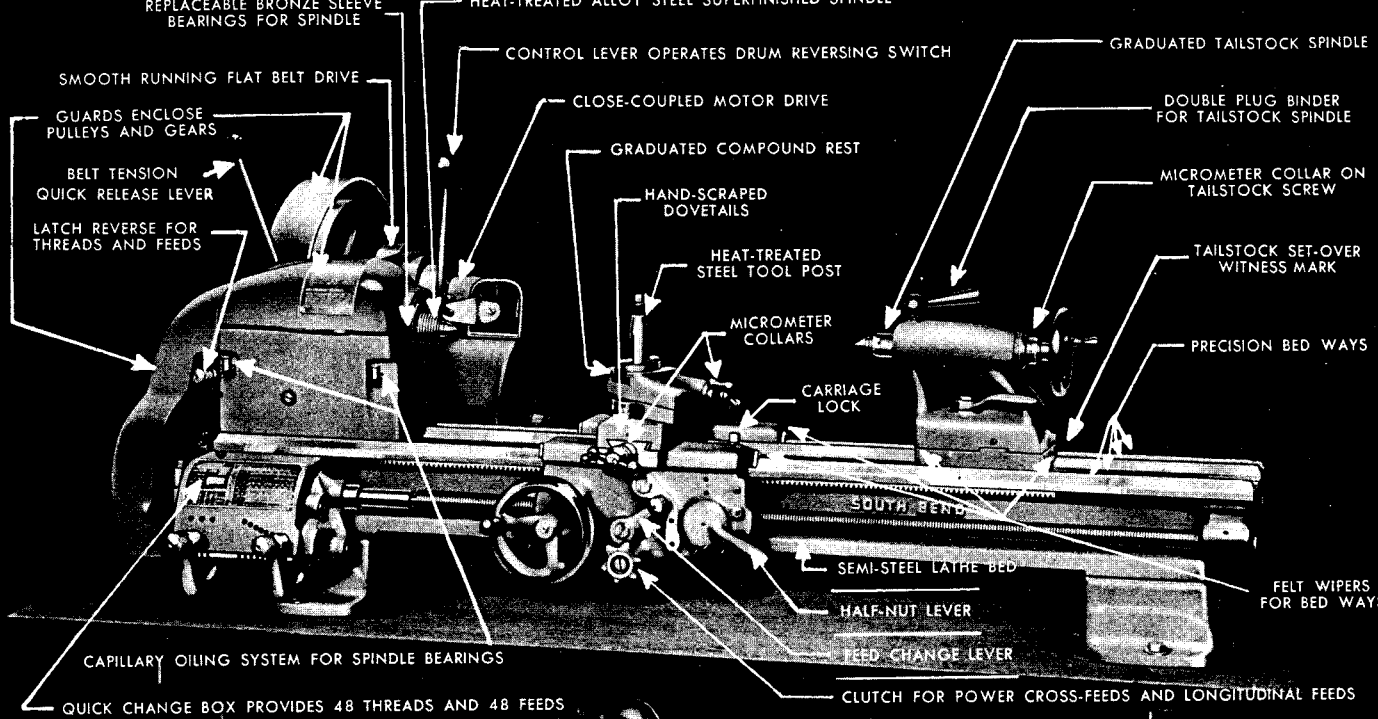
10" Swing 1 1/16" collet capacity
South Bend Precision Toolroom
Floor Lathe shown at right.



Modern in design and built with extreme care, the South Bend 10" Engine and Toolroom Lathes are fast, accurate, and versatile. They have the high spindle speeds and rigidity required for efficient machining with carbide or diamond tipped

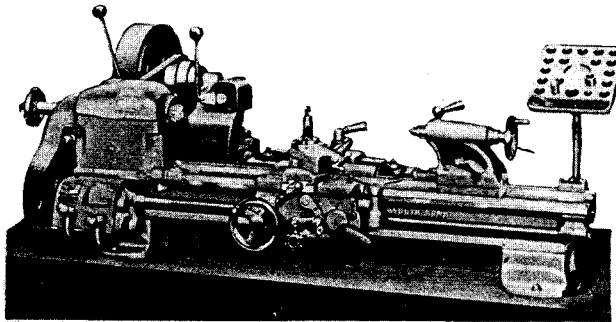
tools, and plenty of power for heavy roughing cuts. They are capable of finish turning and boring with such precision that subsequent grinding, honing, or lapping operations can often be eliminated. These lathes have 1 1/16" maximum collet capacity.

TYPE OF LATHE	TYPE OF MOUNTING	CATALOG NUMBER	BED LENGTH FEET	BETWEEN CENTERS INCHES	CUBIC FEET BOXED	BOXED WEIGHT POUNDS	CRATED WEIGHT POUNDS	PRICE F.O.B. FACTORY
ENGINE LATHES	FLOOR	CL187Y	3	14	50	1230	930	\$1282
		CL187Z	3 1/2	20	50	1250	950	1308
		CL187A	4	27	50	1270	970	1334
		CL187R	4 1/2	34	54	1290	990	1371
	BENCH	CL187YB	3	14	56	1200	850	1385
		CL187ZB	3 1/2	20	56	1250	880	1411
		CL187AB	4	27	68	1300	950	1451
		CL187RB	4 1/2	34	68	1350	980	1488
TOOLROOM LATHES	FLOOR	CL8187Y	3	14	54	1290	990	1698
		CL8187Z	3 1/2	20	54	1310	1010	1725
		CL8187A	4	27	54	1330	1030	1753
	BENCH	CL8187YB	3	14	56	1310	960	1760
		CL8187ZB	3 1/2	20	56	1360	990	1786
		CL8187AB	4	27	68	1410	1060	1826

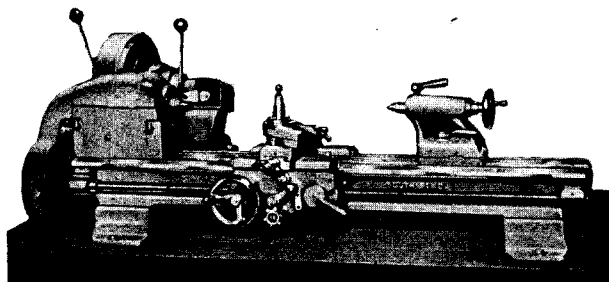


Model A South Bend 10-K Precision Bench Lathe

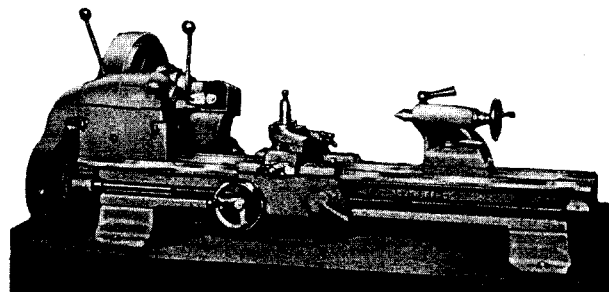
10-K SOUTH BEND *Precision* BENCH LATHES



South Bend 10-K Toolroom Bench Lathe



Model B South Bend 10-K Bench Lathe



Model C South Bend 10-K Bench Lathe

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

Four Models

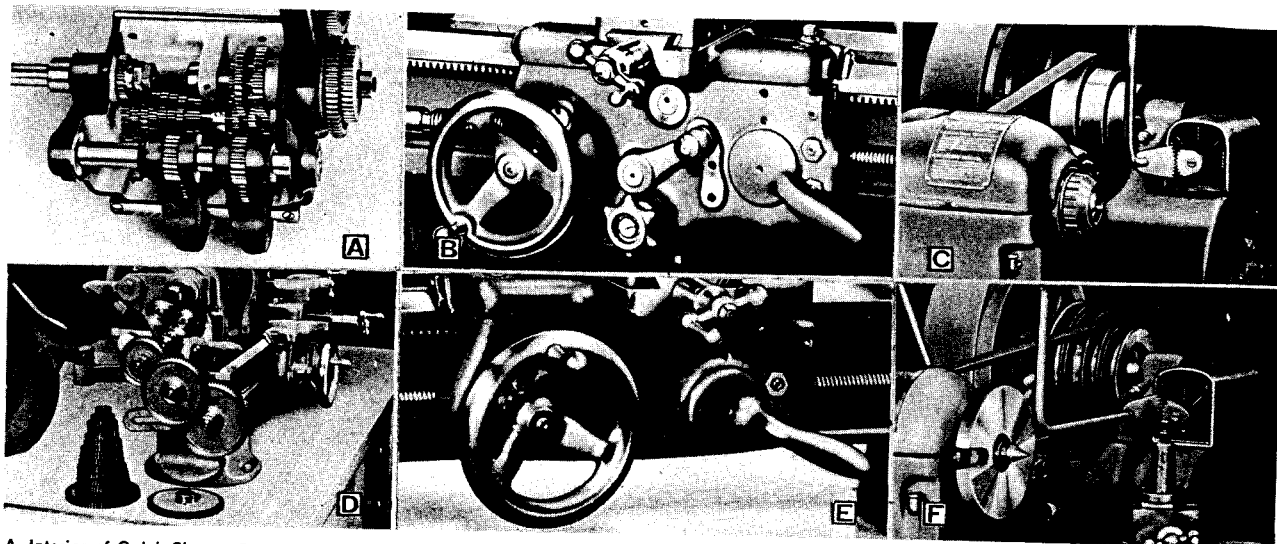
South Bend 10-K Bench Lathes are made in four models: Model A, Model B, Model C, and Toolroom.

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

Regular equipment included in price of Model A Lathe consists of: horizontal motor drive unit (patented); motor pulley with $\frac{5}{8}$ " hole; necessary belting; worm drive friction clutch power feed apron (patented); graduated compound rest; small face plate; heat-treated steel tool post; two 60-degree hardened tool steel centers; spindle sleeve; wrenches; quick change box; installation plan; and book "How to Run a Lathe". Bench and electrical equipment are not included. See pages 48 and 60.

MODEL B 10-K Bench Lathes are the same as Model A Lathes, except that instead of the quick change box a set of independent change gears is supplied for cutting screw threads and for power longitudinal feeds and power cross-feeds. Lathe equipment is the same except that the change gears are supplied instead of the gear box. Bench and electrical equipment are not included. See pages 48 and 60.

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



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

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

are hand-operated. Otherwise the equipment is the same. Bench and electrical equipment are not included. See pages 48 and 60 to 63.

TOOLROOM 10-K Bench Lathes are the same as Model A Lathes, and have the same regular equipment. In addition, the following toolroom attachments are supplied: precision lead screw; handwheel type draw-in collet attachment (without collets); collet rack; plain taper attachment; thread indicator; thread cutting stop; large face plate; and micrometer carriage stop. Bench and electrical equipment are not included. See pages 48 and 60 to 63.

TWO TYPES OF DRIVES Twelve or Sixteen Spindle Speeds

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

10-K South Bend Bench Lathes

MODEL	BED LENGTH FEET	BETWEEN CENTERS INCHES	CUBIC FEET BOXED	BOXED WEIGHT POUNDS	CRATED WEIGHT POUNDS	WITH 16-SPEED V-BELT HORIZONTAL MOTOR DRIVE		WITH 12-SPEED FLAT BELT HORIZONTAL MOTOR DRIVE	
						CAT. NO.	PRICE	CAT. NO.	PRICE
TOOLROOM	3	16	26	650	520	CL8770Y	\$793	CL8670Y	\$776
	3½	22	26	665	535	CL8770Z	817	CL8670Z	800
	4	28	29	690	550	CL8770A	841	CL8670A	824
MODEL A	3	16	22	600	490	CL770Y	563	CL670Y	546
	3½	22	22	615	505	CL770Z	587	CL670Z	570
	4	28	25	640	520	CL770A	611	CL670A	594
	4½	34	29	670	535	CL770R	645	CL670R	628
MODEL B	3	16	22	585	475	CL767Y	480	CL667Y	463
	3½	22	22	600	490	CL767Z	504	CL667Z	487
	4	28	25	625	505	CL767A	528	CL667A	511
	4½	34	29	655	520	CL767R	562	CL667R	545
MODEL C	3	16	22	575	465	CL753Y	403	CL653Y	388
	3½	22	22	590	480	CL753Z	427	CL653Z	412
	4	28	25	615	495	CL753A	451	CL653A	436
	4½	34	29	645	510	CL753R	485	CL653R	470

S P E C I F I C A T I O N S

CAPACITY OF LATHE

Swing over bed, maximum 10"
 Swing over saddle wings 9 1/16"
 Swing over cross slide, (models A, B, C) 6 1/4"
 Swing over cross slide, (toolroom lathe) 5 7/8"

TAILSTOCK

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

COMPOUND REST

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

TOOL POST

Size of tool holder shank 3/8" x 13/16"
 Size of cutter bit for tool holder 1/4" sq.

SPINDLE SPEEDS (approximate, not exact)

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

HEADSTOCK

Hole through spindle 2 7/32"
 Maximum collet capacity 3/8"
 Spindle nose diameter and threads per inch 1 1/2" x 8
 Size of center, Morse taper No. 2
 Width of cone pulley step for flat belt 1"
 Small face plate diameter 5 1/8"
 Front spindle bearing diameter 1 1/16"

THREAD CUTTING RANGE

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

POWER LONGITUDINAL FEEDS

Toolroom and Model A—
 48 feeds0015" to .0853"
 Model B—26 feeds0021" to .0155"
 Model C—14 feeds0021" to .0156"

POWER CROSS-FEEDS

Toolroom and Model A—
 48 feeds0004" to .0255"
 Model B—23 feeds0009" to .0046"

MOTOR

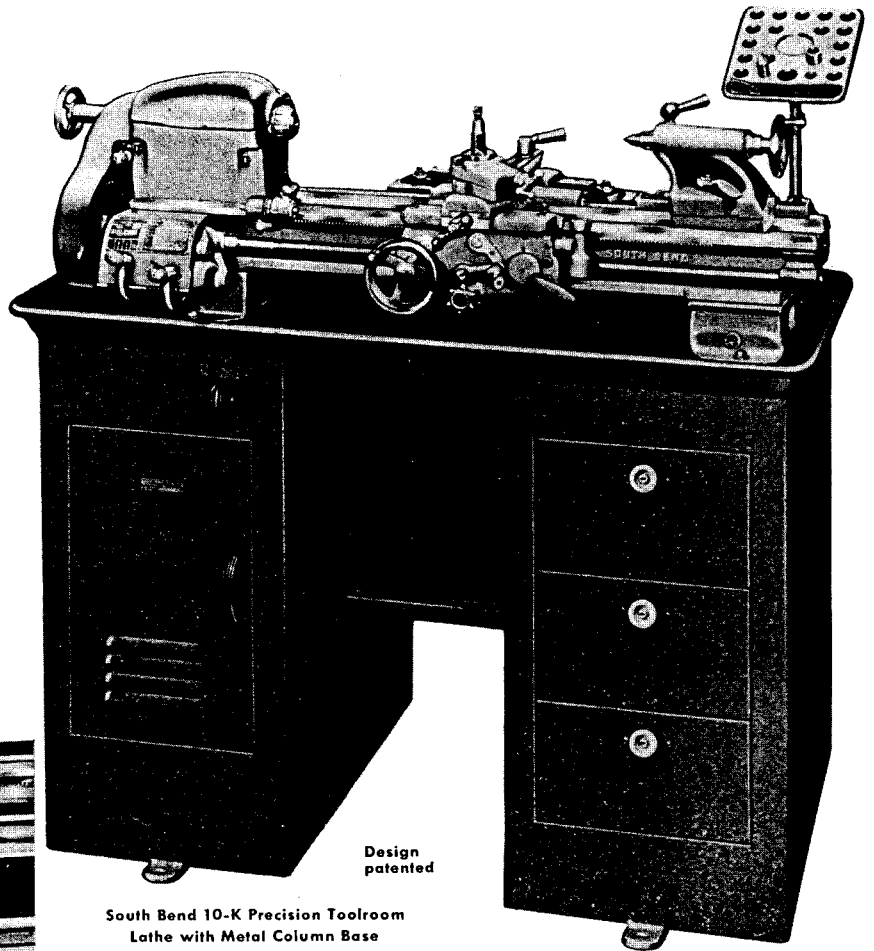
Standard size of motor recommended 1/2 h.p.

10-K

SOUTH BEND

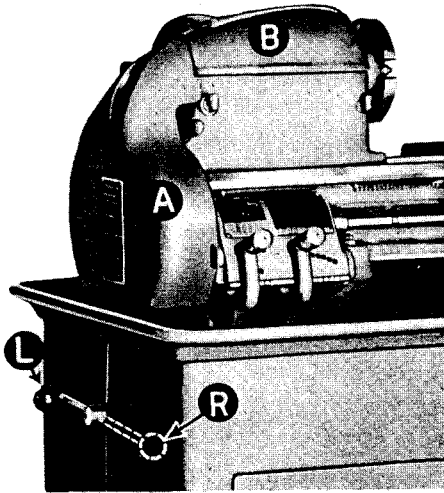
Precision

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



Design patented

South Bend 10-K Precision Toolroom Lathe with Metal Column Base



UNUSUAL SAFETY FEATURES

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

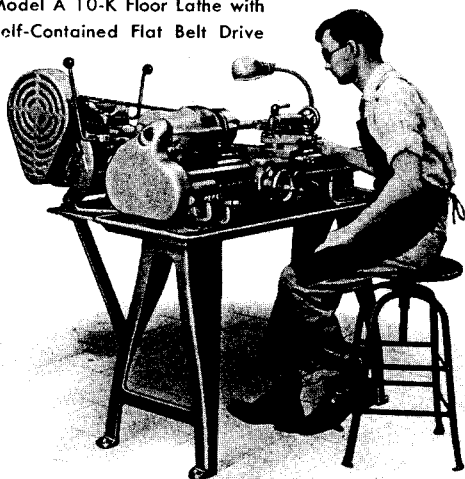
These lathes are the same as corresponding models of 10-K Bench Lathes except for the underneath motor drive and the necessary alterations in the headstock. Lathe is supplied with headstock and drive shaft cone pulleys for either V-belt or flat belt drive. Fully enclosed in the metal column base, the motor and driving mechanism are protected from dust, dirt and chips. Base is available with three drawers, 10 $\frac{3}{4}$ " x 5 $\frac{1}{2}$ " x 14" as shown in illustration, or without drawers* A built-in chip pan with $\frac{5}{8}$ " bead around the edge forms the top of the metal column base. Equipment included in price of lathe is same as for corresponding models of bench lathes listed on preceding pages. Electrical equipment is not included in price of lathe. See pages 60 to 63.

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

MODEL	BED LENGTH FEET	BETWEEN CENTERS INCHES	CUBIC FEET BOXED	BOXED WEIGHT POUNDS	CRATED WEIGHT POUNDS	WITH 16-SPEED V-BELT UNDERNEATH MOTOR DRIVE		WITH 12-SPEED FLAT BELT UNDERNEATH MOTOR DRIVE	
						CAT. NO.	PRICE	CAT. NO.	PRICE
TOOLROOM	3 $\frac{1}{2}$	22	56	940	750	CL78370ZD	\$1135	CL8370ZD	\$1117
	4	28	68	1000	780	CL78370AD	1167	CL8370AD	1149
MODEL A	3 $\frac{1}{2}$	22	56	910	720	CL7370ZD	905	CL370ZD	887
	4	28	68	960	750	CL7370AD	937	CL370AD	919
	4 $\frac{1}{2}$	34	68	970	760	CL7370RD	972	CL370RD	954
MODEL B	3 $\frac{1}{2}$	22	56	895	705	CL7367ZD	821	CL367ZD	803
	4	28	68	945	730	CL7367AD	853	CL367AD	835
	4 $\frac{1}{2}$	34	68	955	740	CL7367RD	888	CL367RD	870
MODEL C	3 $\frac{1}{2}$	22	56	895	695	CL7353ZD	745	CL353ZD	727
	4	28	68	940	720	CL7353AD	777	CL353AD	759
	4 $\frac{1}{2}$	34	68	950	730	CL7353RD	812	CL353RD	794

*The 3' and 3 $\frac{1}{2}$ ' bed lengths can be supplied without drawers, deduct \$38.00. 4' and 4 $\frac{1}{2}$ ' bed lengths without drawers, deduct \$38.00.

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



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

The 10-K Self-Contained Motor Drive Floor Lathe is made in four models, Model A, Model B, Model C and Toolroom. These lathes are the same and have the same equipment as corresponding models of 10-K Bench Lathes described on the preceding pages 16 and 17, with the exception of the self-contained drive equipment, chip pan and floor legs. Specifications are the same except for shipping weights and cubic feet boxed.

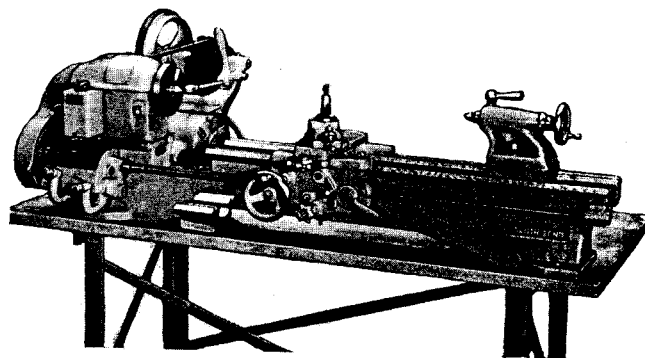
Self-contained drive equipment is permanently mounted back of the lathe headstock and consists of the self-contained motor drive unit (patented) for 1/2 h.p. motor, motor pulley with 5/8" hole, belt guard for motor belt and necessary belting.

Either flat belt or V-belt cone pulleys are supplied for the headstock. The flat belt drive transmits power with extreme smoothness required for high precision and fine finish. The V-belt drive is well adapted to production work, especially for heavy roughing cuts at slow speeds. See page 17.

MODEL	BED LENGTH FEET	BETWEEN CENTERS INCHES	CUBIC FEET BOXED	BOXED WEIGHT POUNDS	CRATED WEIGHT POUNDS	WITH 16-SPEED V-BELT SELF-CONTAINED DRIVE		WITH 12-SPEED FLAT BELT SELF-CONTAINED DRIVE	
						CAT. NO.	PRICE	CAT. NO.	PRICE
TOOLROOM	3	16	33	875	700	CL8270Y	\$905	CL8970Y	\$889
	3 1/2	22	33	900	725	CL8270Z	935	CL8970Z	919
	4	28	37	925	750	CL8270A	965	CL8970A	949
MODEL A	3	16	33	825	650	CL270Y	675	CL970Y	659
	3 1/2	22	33	850	675	CL270Z	705	CL970Z	689
	4	28	37	875	700	CL270A	735	CL970A	719
	4 1/2	34	37	900	725	CL270R	777	CL970R	761
MODEL B	3	16	33	805	630	CL267Y	592	CL967Y	576
	3 1/2	22	33	830	655	CL267Z	622	CL967Z	606
	4	28	37	855	680	CL267A	652	CL967A	636
	4 1/2	34	37	880	705	CL267R	694	CL967R	678
MODEL C	3	16	33	795	620	CL253Y	516	CL953Y	500
	3 1/2	22	33	820	645	CL253Z	546	CL953Z	530
	4	28	37	845	670	CL253A	576	CL953A	560
	4 1/2	34	37	870	695	CL253R	618	CL953R	602

10-K SOUTH BEND GAP BED PRECISION BENCH LATHES

The 10-K Gap Bed Bench Lathe is made with 4 1/2* foot bed and is available in three models. Model A, Model B and Model C. Also available in the Self-Contained Motor Drive Lathes with Model A, Model B and Model C. (See copy above.) The 10-K Gap Bed Lathes have a 1" gap measured from the face plate when bed insert is in place. When 4" insert is removed, the 5" gap allows 1 7/8" swing capacity. Ideal for larger work requiring boring and facing operation. All models of the 10-K Gap Bed Lathe can be supplied with either flat belt or V-belt cone pulleys for the headstock. These lathes are the same and have the same equipment as the corresponding models of 10-K Bench Lathes described on the preceding pages. All other specifications are the same except for shipping weights. See pages 18 and 19.



South Bend 10-K Gap Bed Bench Lathe

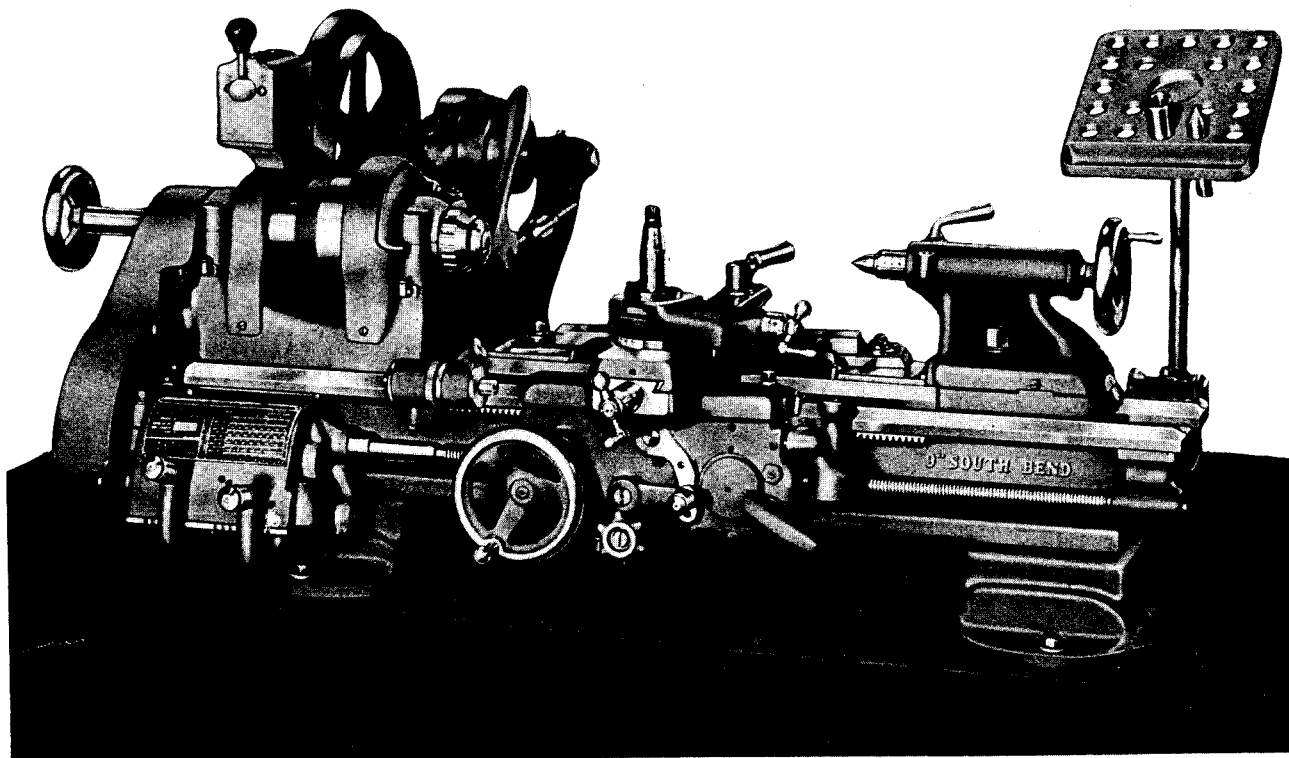
10-K HORIZONTAL MOTOR DRIVE GAP BED LATHES

Model	Bed Length Feet	Between Centers Inches	Cubic Feet Boxed	Boxed Weight Pounds	Crated Weight Pounds	With 16-Speed V-belt Self-Contained Drive		With 12-Speed Flat Belt Self-Contained Drive	
						Cat. No.	Price	Cat. No.	Price
A	4 1/2	34	29	700	565	CL770RG	\$680	CL670RG	\$663
B	4 1/2	34	29	685	550	CL767RG	597	CL667RG	580
C	4 1/2	34	29	675	540	CL753RG	520	CL653RG	505

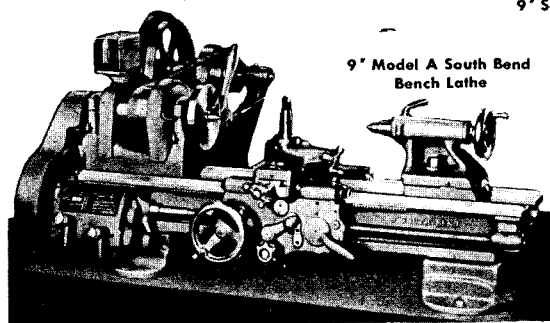
10-K SELF-CONTAINED DRIVE GAP BED LATHES

A	4 1/2	34	37	930	755	CL270RG	\$812	CL970RG	\$796
B	4 1/2	34	37	910	735	CL267RG	729	CL967RG	713
C	4 1/2	34	37	900	725	CL253RG	653	CL953RG	637

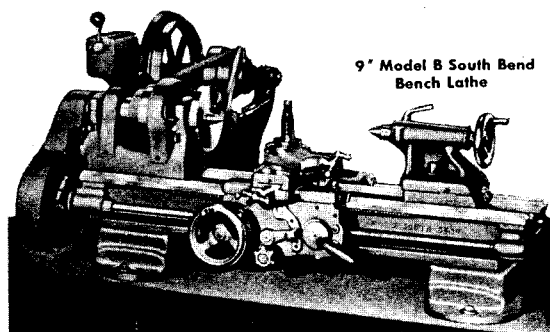
* Available in only 4 1/2 Bed Lengths.



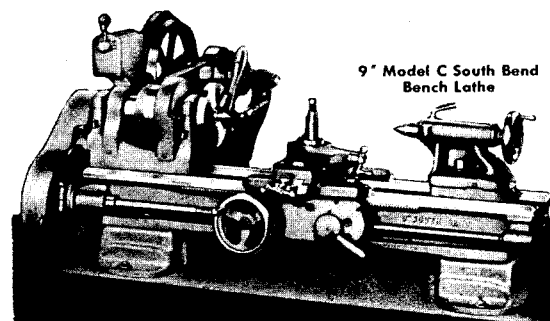
9" South Bend Toolroom Bench Lathe



9" Model A South Bend Bench Lathe



9" Model B South Bend Bench Lathe



9" Model C South Bend Bench Lathe

9" SOUTH BEND *Precision* LATHES

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

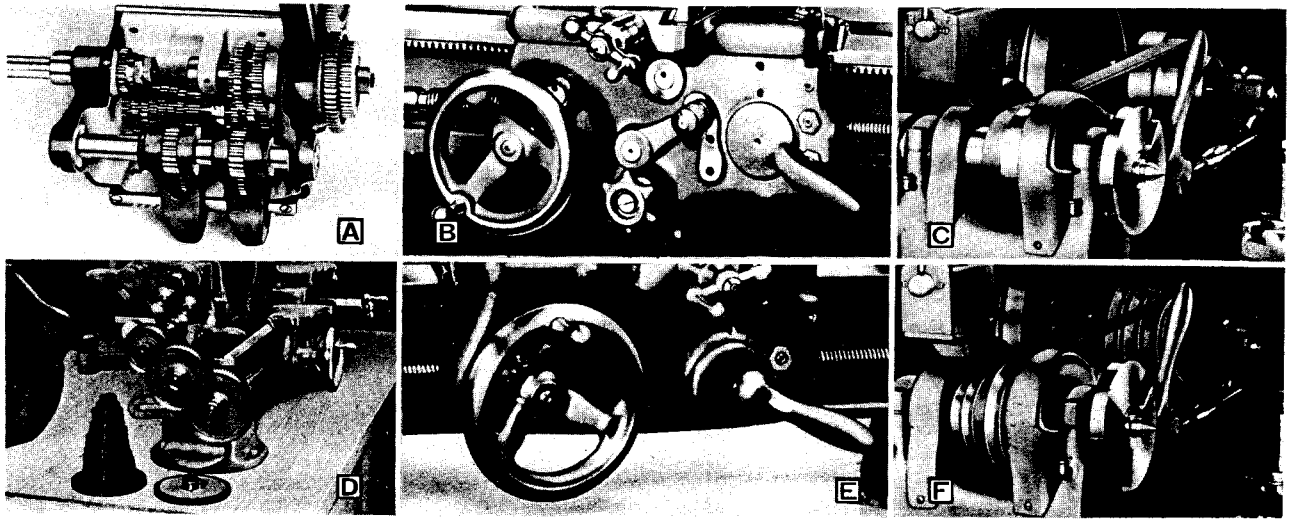
Four Models

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

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

Regular equipment included in price of Model A Lathe consists of: horizontal motor drive unit (patented); motor pulley with $\frac{5}{8}$ " hole; necessary belting; worm drive friction clutch power feed apron (patented); graduated compound rest; small face plate; heat-treated steel tool post; two 60-degree hardened tool steel centers; spindle sleeve; wrenches; quick change box; installation plan; and book "How to Run a Lathe". Bench and electrical equipment are not included. See pages 48 and 60 to 63.

MODEL B 9" Bench Lathes are the same as Model A Lathes, except that instead of the quick change box a set of independent change gears is supplied for cutting screw threads and for power longitudinal feeds and power cross-feeds. Lathe equipment is the same except that the change gears are supplied instead of the quick change box. Bench and electrical equipment are not included. See pages 48 and 60 to 63.



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

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

MODEL C 9" Bench Lathes are the same as the Model B Lathes, except that they do not have the worm drive and clutch in the apron for operating the power feeds. Lead screw and half-nuts are used for power longitudinal feeds and the cross-feeds are hand-operated. Otherwise the equipment is the same. Bench and electrical equipment are not included. See pages 48 and 60.

TOOLROOM 9" Bench Lathes are the same as Model A Lathes, and have the same regular equipment. In addition, the following toolroom attachments are supplied: precision lead screw; handwheel type draw-in collet attachment (without collets); collet rack; plain taper attachment; thread indicator dial; thread cutting stop; large face plate; and micrometer carriage stop. Bench and electrical equipment are not included in price of lathe. See pages 48 and 60 to 63.

TWO TYPES OF DRIVES Twelve or Sixteen Spindle Speeds

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

9-inch South Bend Bench Lathes

MODEL	BED LENGTH FEET	BETWEEN CENTERS INCHES	CUBIC FEET BOXED	BOXED WEIGHT POUNDS	CRATED WEIGHT POUNDS	WITH 16-SPEED V-BELT HORIZONTAL MOTOR DRIVE		WITH 12-SPEED FLAT BELT HORIZONTAL MOTOR DRIVE	
						CAT. NO.	PRICE	CAT. NO.	PRICE
TOOLROOM	3	16	21	550	440	CL8744Y	\$709	CL8644Y	\$691
	3½	22	21	565	455	CL8744Z	733	CL8644Z	715
	4	28	23	580	470	CL8744A	757	CL8644A	739
MODEL A	3	16	20	500	390	CL744Y	484	CL644Y	466
	3½	22	20	515	404	CL744Z	508	CL644Z	490
	4	28	21	530	420	CL744A	532	CL644A	514
	4½	34	24	545	435	CL744R	566	CL644R	548
MODEL B	3	16	20	485	375	CL777Y	393	CL677Y	375
	3½	22	20	500	390	CL777Z	417	CL677Z	399
	4	28	21	515	405	CL777A	441	CL677A	423
	4½	34	24	530	420	CL777R	475	CL677R	457
MODEL C	3	16	20	475	365	CL715Y	308	CL615Y	290
	3½	22	20	490	380	CL715Z	332	CL615Z	314
	4	28	21	505	395	CL715A	356	CL615A	338
	4½	34	24	520	410	CL715R	390	CL615R	372

Note: Above lathes are equipped with our standard drive unit which accommodates most ½ h.p. motors sold by us. For ½ h.p. motors Frame NEMA No. 66 and larger requiring a larger drive unit, such drive will be supplied at no extra charge when lathe is ordered with motor. If lathe is ordered less motor, we will supply a standard drive unless requested to supply the larger drive unit for which an additional charge of \$11.00 will be made.

S P E C I F I C A T I O N S

CAPACITY OF LATHE

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

TAILSTOCK

- Size of center, Morse taper No. 2
- Spindle travel 2⅞"
- Each graduation on tailstock spindle ⅛"
- Tailstock top set-over for taper turning ⅝"

COMPOUND REST

- Cross slide travel (models A, B, C) 5⅞"
- Cross slide travel (toolroom lathe) 5⅝"
- Angular hand feed of compound rest top slide . . . 2¼"

TOOL POST

- Size of tool holder shank ⅜" x 1⅜"
- Size of cutter bit for tool holder ¼" sq.

SPINDLE SPEEDS (approximate, not exact)

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

HEADSTOCK

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

THREAD CUTTING RANGE

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

POWER LONGITUDINAL FEEDS

- Toolroom and Model A—48 feeds0015" to .0853"
- Model B—26 feeds0021" to .0155"
- Model C—14 feeds0021" to .0156"

POWER CROSS-FEEDS

- Toolroom and Model A—48 feeds0004" to .0255"
- Model B—23 feeds0009" to .0046"

MOTOR

- Standard size of motor recommended ½ h.p.

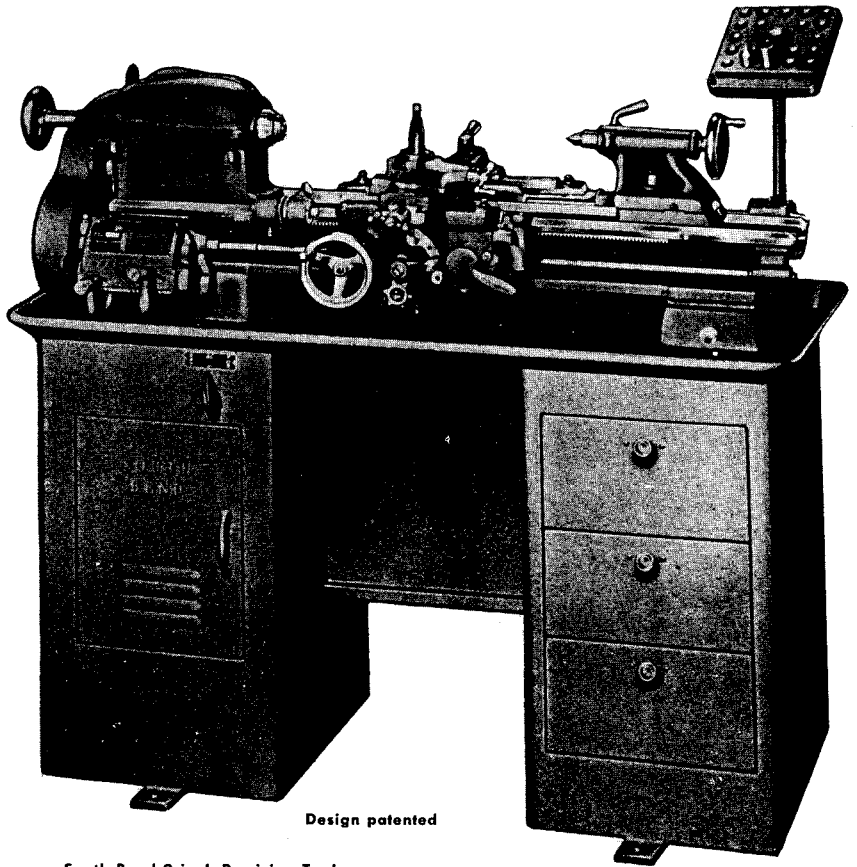
9"

SOUTH BEND

Precision

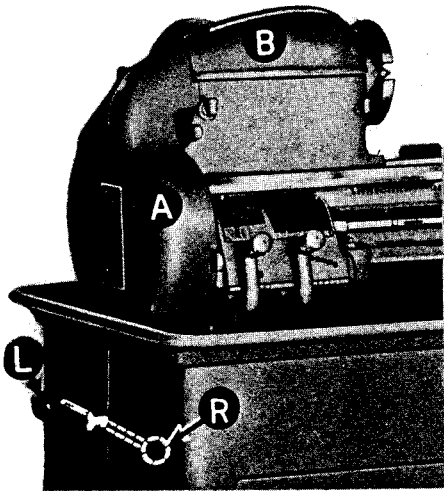
FLOOR LATHES

WITH METAL COLUMN
BASE UNDERNEATH
MOTOR DRIVE



Design patented

South Bend 9-inch Precision Toolroom
Lathe with Metal Column Base



UNUSUAL SAFETY FEATURES

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

These lathes are the same as corresponding models of 9-inch Bench Lathes, except for the underneath motor drive and the necessary alterations in the headstock. Lathe is supplied with headstock and drive shaft cone pulleys for either V-belt or flat belt drive. Fully enclosed in the metal column base, the motor and driving mechanism are protected from dust, dirt, and chips. Base is available with three drawers, 10 $\frac{3}{4}$ " x 5 $\frac{1}{2}$ " x 14" as shown in illustration, or without drawers. A built-in chip pan with $\frac{5}{8}$ " bead around the edge forms the top of the metal column base. Regular equipment included in price of lathe is same as for corresponding models of bench lathes listed on preceding pages. Electrical equipment is not included in the price of lathe. See pages 60 to 63.

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

MODEL	BED LENGTH FEET	BETWEEN CENTERS INCHES	CUBIC FEET BOXED	BOXED WEIGHT POUNDS	CRATED WEIGHT POUNDS	WITH 16-SPEED V-BELT UNDERNEATH MOTOR DRIVE		WITH 12-SPEED FLAT BELT UNDERNEATH MOTOR DRIVE	
						CAT. NO.	PRICE	CAT. NO.	PRICE
TOOLROOM	3 $\frac{1}{2}$	22	56	930	740	CL78344ZD	\$1006	CL8344ZD	\$ 988
	4	28	68	960	760	CL78344AD	1038	CL8344AD	1020
MODEL A	3 $\frac{1}{2}$	22	56	900	710	CL7344ZD	781	CL344ZD	763
	4	28	68	930	720	CL7344AD	813	CL344AD	795
	4 $\frac{1}{2}$	34	68	950	730	CL7344RD	848	CL344RD	830
MODEL B	3 $\frac{1}{2}$	22	56	885	695	CL7377ZD	689	CL377ZD	672
	4	28	68	915	705	CL7377AD	721	CL377AD	704
	4 $\frac{1}{2}$	34	68	935	715	CL7377RD	756	CL377RD	739
MODEL C	3 $\frac{1}{2}$	22	56	880	685	CL7315ZD	604	CL315ZD	586
	4	28	68	910	690	CL7315AD	636	CL315AD	618
	4 $\frac{1}{2}$	34	68	930	695	CL7315RD	671	CL315RD	653

*The 3' and 3 $\frac{1}{2}$ ' bed lengths can be supplied without drawers, deduct \$38.00. 4' and 4 $\frac{1}{2}$ ' bed lengths without drawers, deduct \$38.00.

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



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

The 9-inch Self-Contained Motor Drive Floor Lathe is made in four models, Model A, Model B, Model C and Toolroom. These lathes are the same and have the same equipment as corresponding models of 9-inch Bench Lathes described on the preceding pages 20 and 21, with the exception of the self-contained drive equipment, chip pan and floor legs. Specifications are the same except for shipping weights.

Self-contained drive equipment is permanently mounted back of the lathe headstock and consists of the self-contained motor drive unit (patented) for 1/2 h.p. motor, motor pulley with 5/8" hole, belt guard for motor belt and necessary belting.

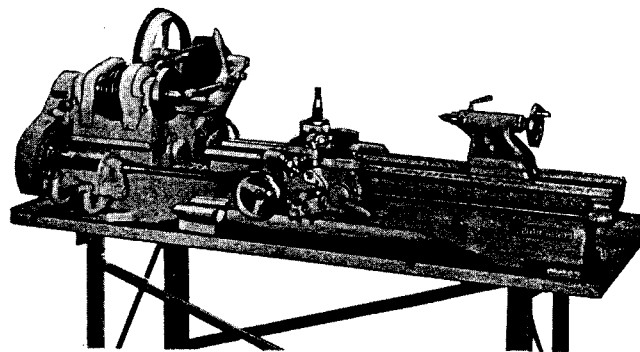
Either flat belt or V-belt pulleys are supplied for the headstock. The flat belt drive transmits power with the extreme smoothness required for high precision and fine finish. The V-belt drive is well adapted to production work, especially for heavy roughing cuts at slow speeds. See Page 21.

Model	Bed Length Feet	Between Centers Inches	Cubic Feet Boxed	Boxed Weight Pounds	Crated Weight Pounds	With 16-Speed V-belt Self-Contained Drive		With 12-Speed Flat Belt Self-Contained Drive	
						Cat. No.	Price	Cat. No.	Price
TOOLROOM	3	16	30	835	660	CL8244Y	\$808	CL8944Y	\$790
	3 1/2	22	30	860	685	CL8244Z	833	CL8944Z	815
	4	28	34	885	710	CL8244A	858	CL8944A	840
MODEL A	3	16	30	775	600	CL244Y	583	CL944Y	565
	3 1/2	22	30	800	625	CL244Z	608	CL944Z	590
	4	28	34	825	650	CL244A	633	CL944A	615
	4 1/2	34	34	850	675	CL244R	668	CL944R	650
MODEL B	3	16	30	760	585	CL277Y	492	CL977Y	474
	3 1/2	22	30	785	615	CL277Z	517	CL977Z	499
	4	28	34	815	635	CL277A	542	CL977A	524
	4 1/2	34	34	835	660	CL277R	577	CL977R	559
MODEL C	3	16	30	740	575	CL215Y	407	CL915Y	389
	3 1/2	22	30	775	605	CL215Z	432	CL915Z	414
	4	28	34	805	625	CL215A	457	CL915A	439
	4 1/2	34	34	825	659	CL215R	492	CL915R	474

9" SOUTH BEND GAP BED PRECISION BENCH LATHES

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

All models of the 9-inch Gap Bed Lathe can be supplied with either flat belt or V-belt cone pulleys for the headstock. These Lathes are the same and have the same equipment as the corresponding models of 9-inch Bench Lathes described on the preceding pages. All other specifications are the same except for shipping weights. See pages 20 and 21.



9-inch Gap Bed Bench Lathe

9" HORIZONTAL MOTOR DRIVE GAP BED LATHES

Model	Bed Length Feet	Between Centers Inches	Cubic Feet Boxed	Boxed Weight Pounds	Crated Weight Pounds	With 16-Speed V-belt Self-Contained Drive		With 12-Speed Flat Belt Self-Contained Drive	
						Cat. No.	Price	Cat. No.	Price
A	4 1/2	34	24	575	465	CL744RG	\$616	CL644RG	\$598
B	4 1/2	34	24	560	450	CL777RG	525	CL677RG	507
C	4 1/2	34	24	550	440	CL715RG	440	CL615RG	422

9" SELF-CONTAINED DRIVE GAP BED LATHES

A	4 1/2	34	34	880	705	CL244RG	\$718	CL944RG	\$700
B	4 1/2	34	34	865	690	CL277RG	627	CL977RG	609
C	4 1/2	34	34	855	689	CL215RG	542	CL915RG	524

* Available in only 4 1/2 Bed Lengths.

SOUTH BEND *Precision* TURRET LATHES

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

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

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

order. The large diameter micrometer graduated collar on the cross slide handwheel permits adjusting the cutting tools with extreme accuracy.

TURRET LATHE EQUIPMENT

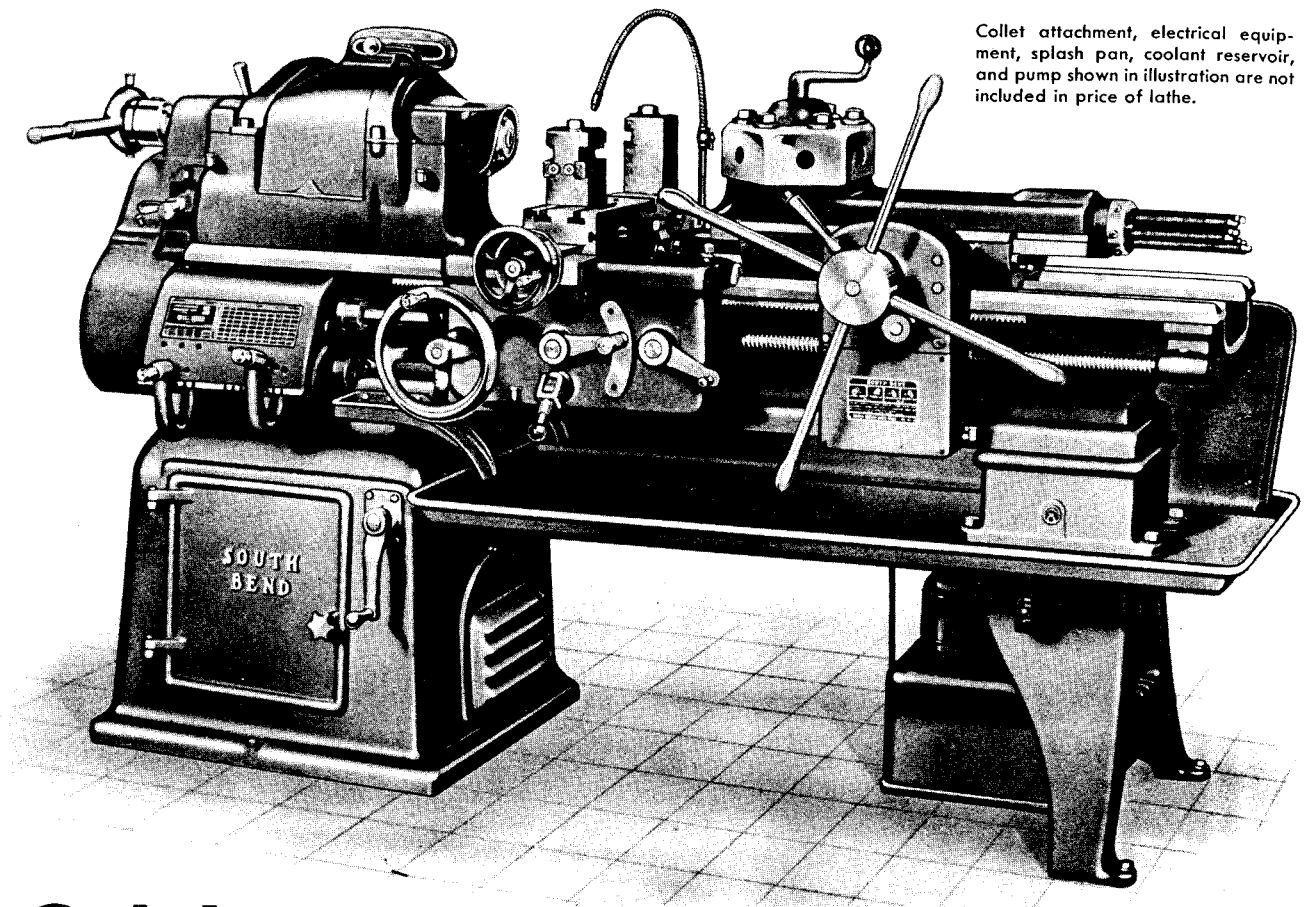
Equipment included in the price of each 13" or 2-H South Bend Turret Lathe consists of: universal carriage with screw feed double tool slide having front and rear square tool blocks; power feed ram-type turret; quick change box; oil pan; coolant return troughs; wrenches; and installation plan. Electrical equipment, handlever collet attachment, collet splash guard, coolant reservoir, coolant pump, splash pan, and piping are not included in price of lathe. See page 60 for motors and controls.

10" Turret Lathes have the same equipment, except that instead of the power feed turret a handlever operated turret is supplied. In addition to the screw-feed double tool slide equipment a handlever mechanism is furnished (see illustrations page 27). 10" Bench Turret Lathes are mounted on a rigidly constructed steel bench.

SPECIFICATIONS

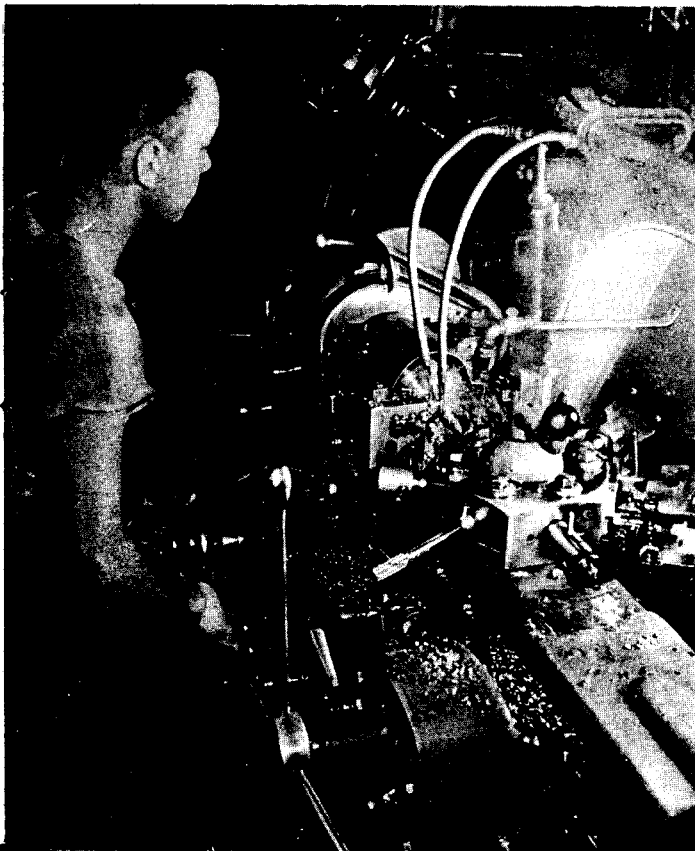
	10"	13"	2-H
Capacity			
Swing over bed and saddle wings	10-1/8"	13-1/8"	16-1/4"
Swing over double tool cross slide	3-9/16"	6-7/8"	6-7/8"
Headstock			
Capacity through spindle, nose type collet chuck or lathe chuck	1-3/8"	1-3/8"	1-3/8"
Maximum handlever collet capacity	1-1/16"	1-1/16"	1-1/16"
Spindle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

*Can be supplied to order with 3/4" holes in turret head. No extra charge.



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

2-H SOUTH BEND *Precision* TURRET LATHES



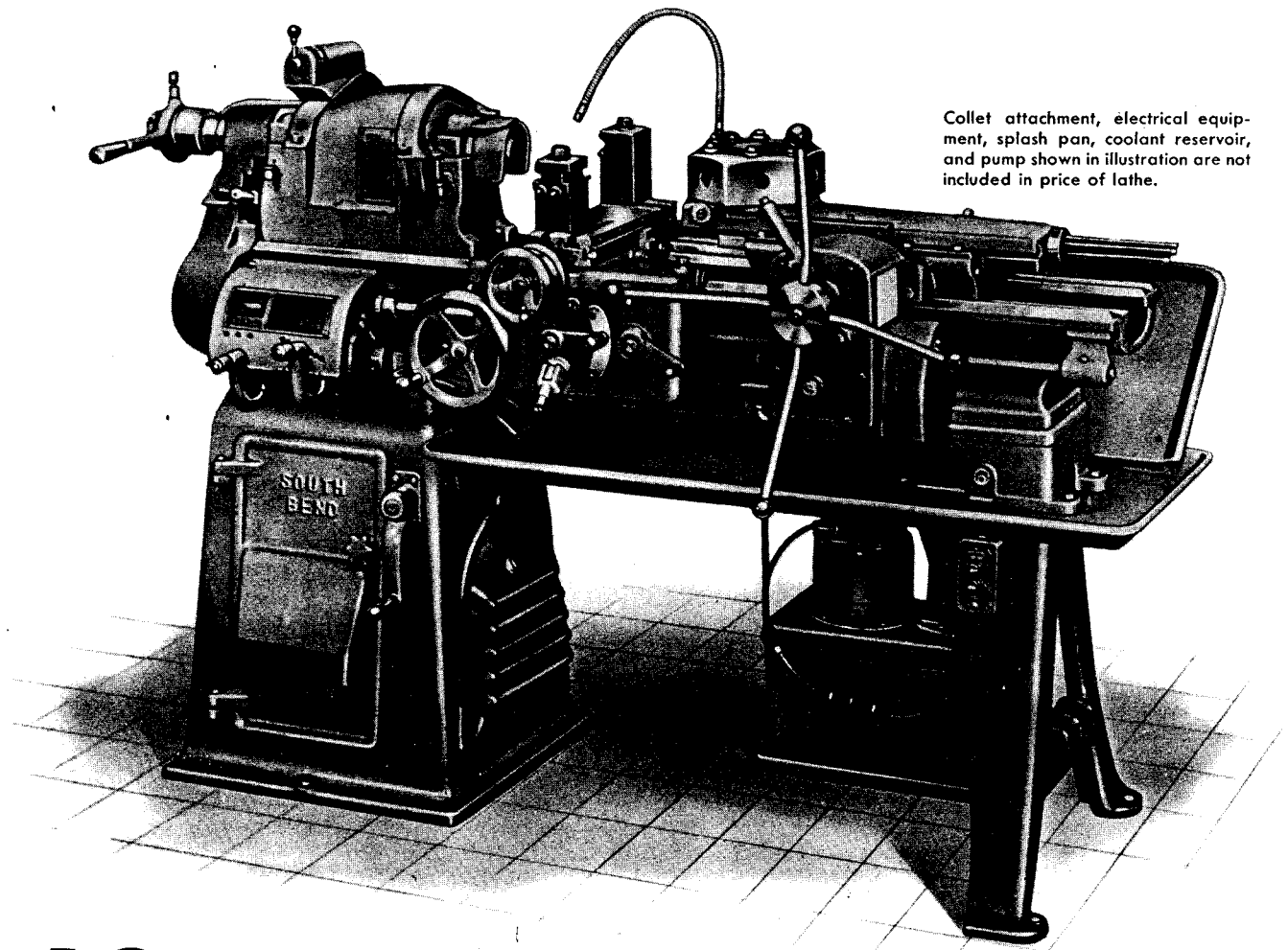
Designed for the efficient production of duplicate parts, the South Bend No. 2-H Turret Lathe has the precision for exacting close-tolerance operations, smooth power for producing a fine finish, and versatility that reduces set-up time to a minimum.

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

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

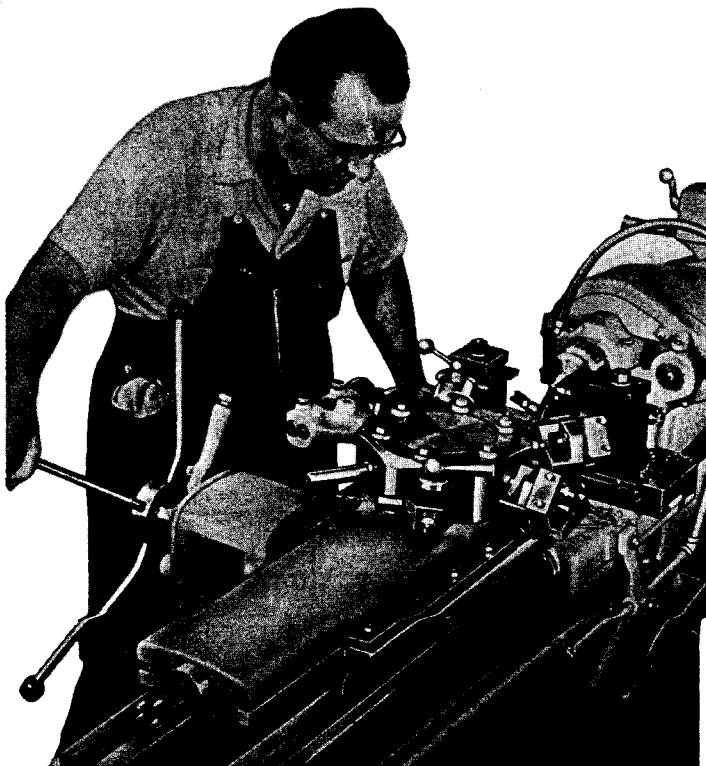
CATALOG NUMBER	BED LENGTH FEET	CUBIC FEET BOXED	BOXED WEIGHT POUNDS	CRATED WEIGHT POUNDS	PRICE F.O.B. FACTORY
CL2CT	6	115	3175	2810	\$3658
CL2DT	7	130	3300	2900	3727

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



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

13" SOUTH BEND *Precision* TURRET LATHES



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

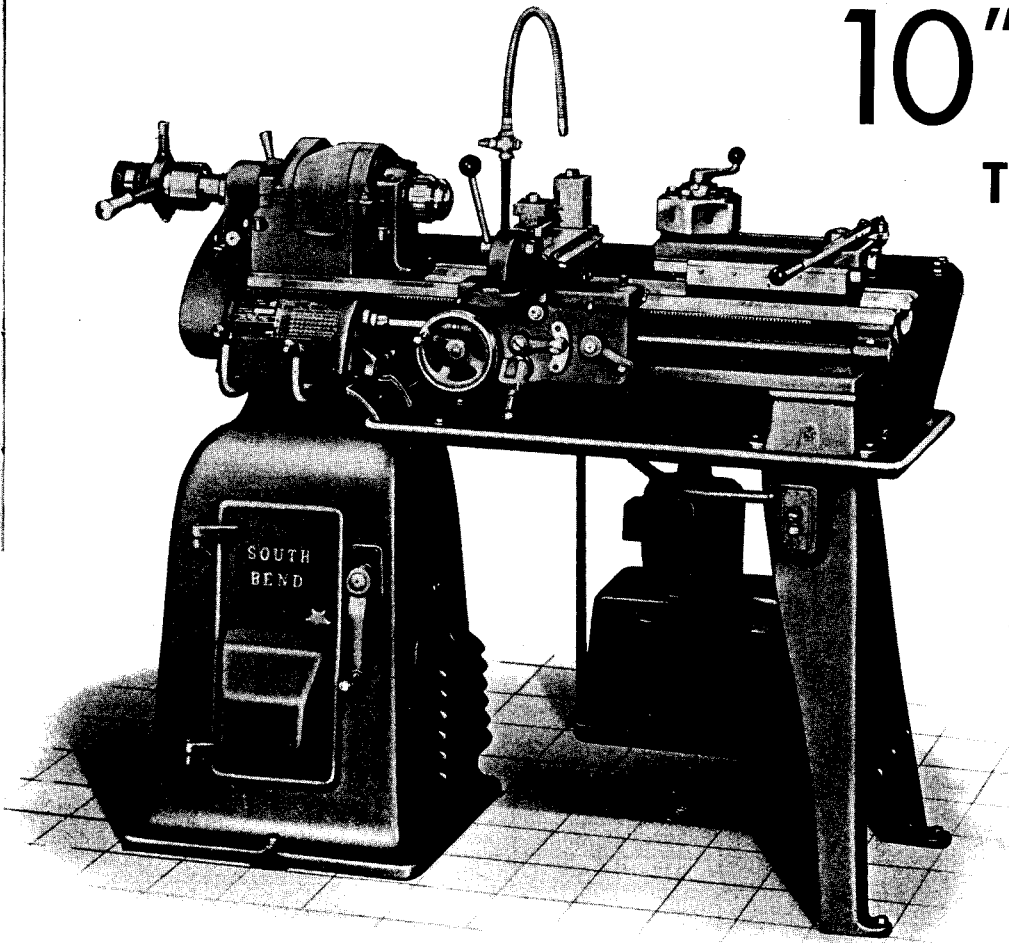
Power feeds for the turret slide are driven by a lever operated friction clutch, permitting instant engagement and disengagement. Quick change box of lathe provides 144 power turret feeds .0006" to .1093". Lever shift gears in turret apron permit quick selection of fast, intermediate or slow feeds. Direction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

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

CATALOG NUMBER	BED LENGTH FEET	CUBIC FEET BOXED	BOXED WEIGHT POUNDS	CRATED WEIGHT POUNDS	PRICE F.O.B. FACTORY
CL1BT	5	88	1875	1570	\$2560
CL1CT	6	103	1950	1620	2618
CL1DT	7	117	2025	1670	2676

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

10" SOUTH BEND *Precision* TURRET LATHES



South Bend 10" Precision Turret Lathe with Floor Mounting.

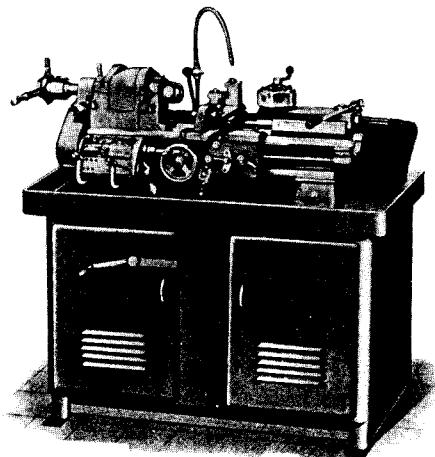
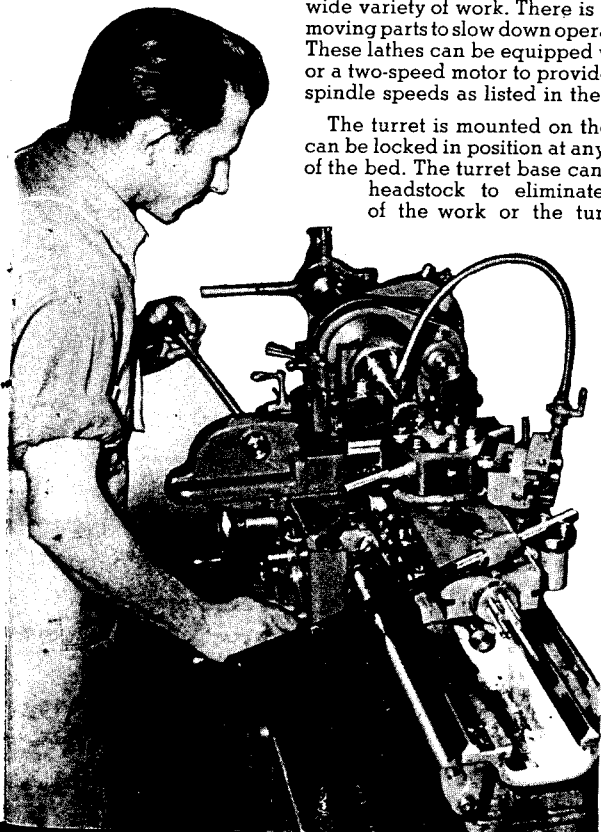
The bed turret, double tool cross slide and other accessories supplied with this lathe are also sold separately and are listed in attachment section of catalog.

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

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

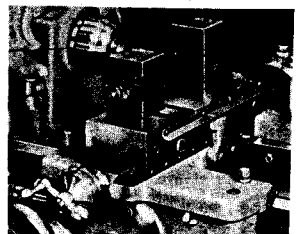
indexes automatically when the lever is moved to the extreme right, and has individual stops for each of the six turret faces. The turret head will index within plus or minus .0005", measured 4" from turret face and it may be back indexed or spun to skip tool positions. Turret ram slide can be locked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

CATALOG NUMBER	TYPE OF MOUNTING	CUBIC FEET BOXED	BOXED WEIGHT POUNDS	CRATED WEIGHT POUNDS	PRICE F.O.B. FACTORY
CL1006Z	Floor	59	1350	1050	\$1748
CL1005Z	Bench	56	1250	950	1792



South Bend 10" Bench Turret Lathe.

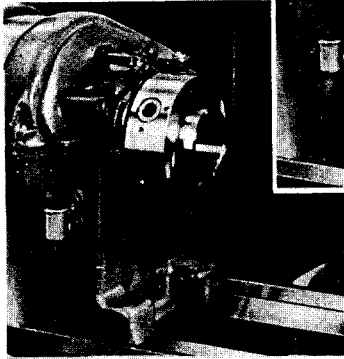
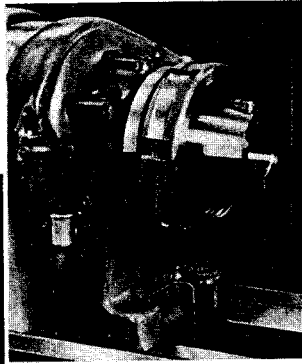
NOTE: Splash pan, tailstock, compound rest, centers, spindle sleeve, face plates, draw-in collet chuck attachment, lathe chuck, thread cutting stop, coolant equipment, and electrical equipment are not included in price of lathe. See attachment section of catalog for these accessories.



Double Tool Slide with Screw Feed.

Cam Lock and Long Taper Key Drive Spindles

Right—Type L00 Long Taper Key Drive Spindle Nose.



Left—Type D1 Cam Lock Spindle Nose.

All South Bend Lathes, 10"-1 1/8" Collet and larger, can be supplied with 4" Type D1 Cam Lock Spindles or Size L00 Type L Long Taper Key Drive Spindles, in lieu of the regular threaded spindles at extra cost. Price includes small face plate which is supplied with the lathe, but does not include large face plate, chucks, draw-in collet attachments, or other accessories. Spindle nose dimensions conform with ASA standards, but spindle bore and inside taper are larger to accommodate South Bend collet equipment, spindle sleeves, and centers. See attachment section of catalog for descriptions of chucks, collet equipment, and other accessories for these lathes.

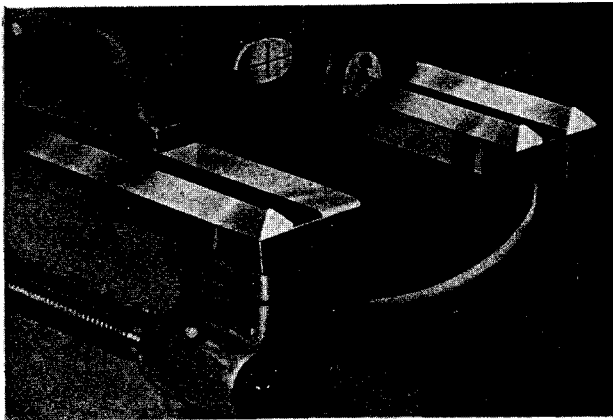
Size of Lathe	Size L00 Long Taper Key Drive Spindle Nose in Lieu of Regular Threaded Spindle Nose		4" Cam Lock Spindle Nose in Lieu of Regular Threaded Spindle Nose	
	Cat. No.	Price	Cat. No.	Price
10"	CA8050L	\$23.75	CB8050L	\$31.50
13"	CA8050T	33.50	CB8050T	33.50
14 1/2"	CA8050F	41.00	CB8050F	41.00
16", 16-24", & 2-H	CA8050H	47.25	CB8050H	47.25

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

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

* 26" with Cam Lock Spindle.

Hardened and Ground Bed Ways

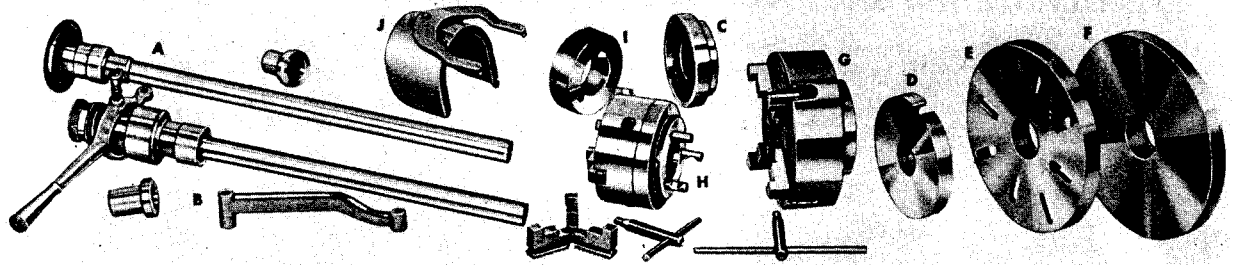


South Bend Lathes 10" and larger can be supplied with hardened and ground bed ways in lieu of regular bed ways at extra cost as listed in tabulation below. Heat-treating produces a hardness of 50-55 Rockwell C to a depth of 1/8" on the surface of all bed ways throughout the wearing area of the bed. After a period of seasoning, the bed ways are finished by precision grinding on equipment especially designed and built for the purpose.

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

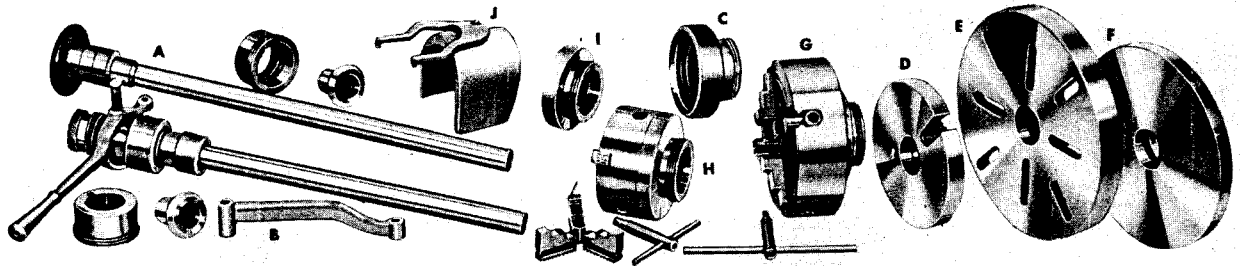
Catalog Number	Size	Bed Length Feet	Price
CL4955Y	10"	3	\$157
CL4955Z	10"	3 1/2	163
CL4955A	10"	4	168
CL4955R	10"	4 1/2	173
CL4956A	13"	4	191
CL4956B	13"	5	204
CL4956C	13"	6	216
CL4956D	13"	7	229

Catalog Number	Size	Bed Length Feet	Price
CL4957B	14 1/2"	5	\$218
CL4957C	14 1/2"	6	232
CL4957D	14 1/2"	7	246
CL4957E	14 1/2"	8	258
CL4958C	16", 16-24" & 2-H	6	245
CL4958D	16", 16-24" & 2-H	7	260
CL4958E	16", 16-24"	8	276
CL4958G	16", 16-24"	10	307
CL4958H	16", 16-24"	12	337
CL4958K	16", 16-24"	14	407



ACCESSORIES FOR LATHES WITH 4" TYPE D1 CAM LOCK SPINDLES

Description	For 10" Lathe		For 13" Lathe		For 14½" Lathe		For 16", 16-24", 2-H	
	Catalog Number	Price	Catalog Number	Price	Catalog Number	Price	Catalog Number	Price
A Handwheel Collet Attachment	CB4306L	\$ 66.65	CB4306T	\$ 72.10	CB4306F	\$ 76.45	CB4306H	\$ 79.75
B Handlever Collet Attachment	CB5206L	141.50	CB5206T	156.20	CB5206F	170.50	CB5206H	184.50
C Closer for Step Chucks 3" and 4" maximum capacity	CB6309LH	14.45	CB6309LH	14.45	CB6309LH	14.45	CB6309LH	14.45
D Small Face Plate	CB6311LH	19.15	CB6311LH	19.15	CB6311LH	19.15	CB6311LH	19.15
E Large Face Plate	CB2175LT	20.25	CB2175LT	20.25	CB2175FH	30.00	CB2175FH	30.00
Extra Large Face Plate for 16-24" Lathe only	CB2180L	27.60	CB2180T	30.00	CB2180FH	40.70	CB2180FH	40.70
F Fixture Plate	CB46L	19.15	CB46T	20.75	CB46FH	22.40	CB46FH	22.40
G 6" 4-Jaw Independent Chuck	CB4006	55.00	CB4206	92.00	CB4207	107.00	CB4207	107.00
7½" 4-Jaw Independent Chuck	CB4206	92.00	CB4207	107.00	CB4209	123.00	CB4209	123.00
9" 4-Jaw Independent Chuck	CB4207	107.00	CB4209	123.00	CB4210	134.00	CB4210	134.00
10" 4-Jaw Independent Chuck							CB4212	173.00
12" 4-Jaw Independent Chuck								
5" 3-Jaw Universal Chuck with two sets of jaws—1 pinion	CB3005	75.00	CB3005	75.00	CB3505	124.00	CB3505	124.00
5" 3-Jaw Universal Chuck with two sets of jaws—3 pinions	CB3505	124.00	CB3505	124.00	CB3506	133.00	CB3506	133.00
H 6" 3-Jaw Universal Chuck with two sets of jaws	CB3506	133.00	CB3506	133.00	CB3507	150.00	CB3507	150.00
7½" 3-Jaw Universal Chuck with two sets of jaws								
9" 3-Jaw Universal Chuck with two sets of jaws								
Chuck Plate fitted to chuck	CB2935	30.00	CB2935	30.00	CB2935	30.00	CB2935	30.00
I Semi-Machined Chuck Plate—5"	CB2704RH	19.15	CB2704RH	19.15	CB2704RH	19.15	CB2704RH	19.15
Semi-Machined Chuck Plate—6¼"	CB2707RH	20.25	CB2707RH	20.25	CB2707RH	20.25	CB2707RH	20.25
Semi-Machined Chuck Plate—9"	CB2709RH	21.35	CB2709RH	21.35	CB2709RH	21.35	CB2709RH	21.35
J Collet Splash Guard	CB5223L	4.95	CB5223T	5.20	CB5223F	6.05	CB5223H	7.70

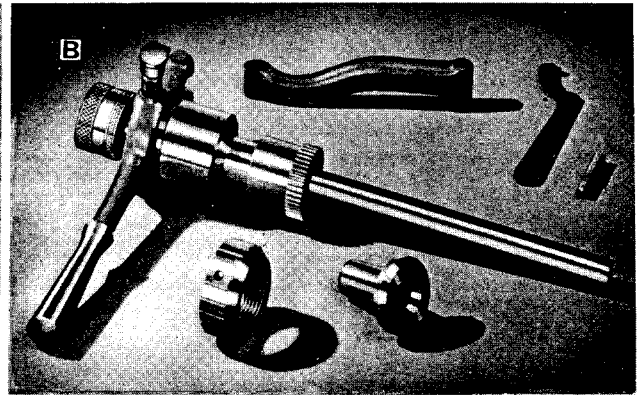
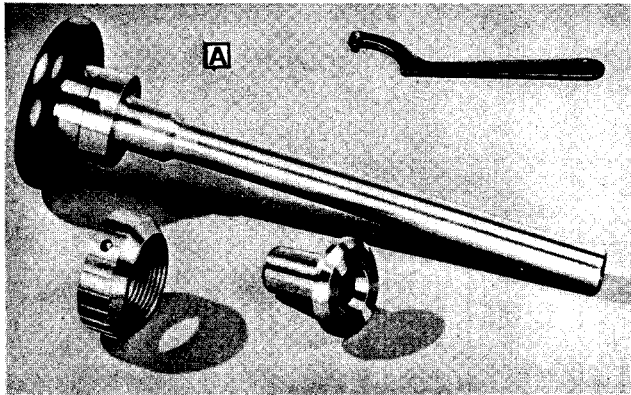


ACCESSORIES FOR LATHES WITH TYPE LOO LONG TAPER KEY DRIVE SPINDLES

Description	For 10" Lathe		For 13" Lathe		For 14½" Lathe		For 16", 16-24", 2-H	
	Catalog Number	Price	Catalog Number	Price	Catalog Number	Price	Catalog Number	Price
A Handwheel Collet Attachment	CA4306L	\$ 66.65	CA4306T	\$ 72.10	CA4306F	\$ 76.45	CA4306H	\$ 79.75
B Handlever Collet Attachment	CA5206L	141.50	CA5206T	156.20	CA5206F	170.50	CA5206H	184.50
C Closer for Step Chucks 3" and 4" maximum capacity	CA6309LH	14.45	CA6309LH	14.45	CA6309LH	14.45	CA6309LH	14.45
D Small Face Plate	CA6311LH	19.15	CA6311LH	19.15	CA6311LH	19.15	CA6311LH	19.15
E Large Face Plate	CA2175L	20.25	CA2175T	20.25	CA2175FH	30.00	CA2175FH	30.00
Extra Large Face Plate for 16-24" Lathe only	CA2180L	27.60	CA2180T	30.00	CA2180FH	40.70	CA2180FH	40.70
F Fixture Plate	CA46L	19.15	CA46T	20.75	CA46FH	22.40	CA46FH	22.40
G 6" 4-Jaw Independent Chuck	CA4006	55.00	CA4206	92.00	CA4207	107.00	CA4207	107.00
7½" 4-Jaw Independent Chuck	CA4206	92.00	CA4207	107.00	CA4209	123.00	CA4209	123.00
9" 4-Jaw Independent Chuck	CA4207	107.00	CA4209	123.00	CA4210	134.00	CA4210	134.00
10" 4-Jaw Independent Chuck							CA4212	173.00
12" 4-Jaw Independent Chuck								
5" 3-Jaw Universal Chuck with two sets of jaws—1 pinion	CA3005	75.00	CA3005	75.00	CA3505	124.00	CA3505	124.00
5" 3-Jaw Universal Chuck with two sets of jaws—3 pinions	CA3505	124.00	CA3505	124.00	CA3506	133.00	CA3506	133.00
H 6" 3-Jaw Universal Chuck with two sets of jaws	CA3506	133.00	CA3506	133.00	CA3507	150.00	CA3507	150.00
7½" 3-Jaw Universal Chuck with two sets of jaws								
9" 3-Jaw Universal Chuck with two sets of jaws								
Chuck Plate fitted to chuck	CA2935	30.00	CA2935	30.00	CA2935	30.00	CA2935	30.00
I Semi-Machined Chuck Plate—5"	CA2704RH	19.15	CA2704RH	19.15	CA2704RH	19.15	CA2704RH	19.15
Semi-Machined Chuck Plate—6¼"	CA2707RH	20.25	CA2707RH	20.25	CA2707RH	20.25	CA2707RH	20.25
Semi-Machined Chuck Plate—9"	CA2709RH	21.35	CA2709RH	21.35	CA2709RH	21.35	CA2709RH	21.35
J Collet Splash Guard	CA5223L	4.95	CA5223T	5.20	CA5223F	6.05	CA5223H	7.70

Attachments and Accessories for South Bend Lathes

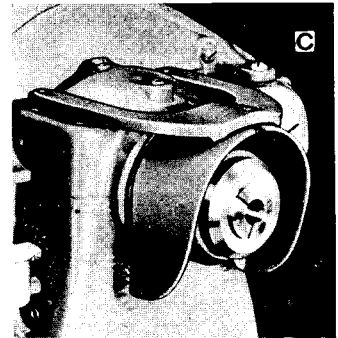
A complete assortment of attachments and accessories greatly increases the adaptability of any lathe. Often a careful selection of equipment will save much loss of time and the expense of making special tools or fixtures. It is recommended that attachments and accessories be ordered with the lathe so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



HANDWHEEL COLLET ATTACHMENT

A This attachment is a great time saver in mounting small work in the lathe for production, toolroom, and maintenance operations, especially when extremely accurate centering is required. Bar and tube stock can be fed through the hollow draw-bar which operates the collet. When the handwheel is tightened, the collet automatically grips and centers the work. Equipment includes steel draw-bar with handwheel, spindle nose cap, spanner wrench, and heat-treated steel closing sleeve if required. Collets are not included. See page 31.

Catalog Number	Size of Lathe	Collet Used	Max. Collet Cap.	Shipping Weight	Price
CL4306N	9"	No. 3	1/2"	5 lbs.	\$21.50
CL4306K	10-K	No. 6K	5/8"	5 lbs.	24.50
CL4306R	10"-1 1/4" Collet	No. 2	1 1/8"	8 lbs.	57.00
CL4306L	10"-1 1/8" Collet	No. 5	1 1/8"	10 lbs.	60.00
CL4306Q	13"	No. 5	1 1/8"	14 lbs.	65.50
CL4306M	14 1/2"	No. 5	1 1/8"	14 lbs.	70.00
CL4306H	16", 16-24", & 2-H	No. 5	1 1/8"	15 lbs.	73.00

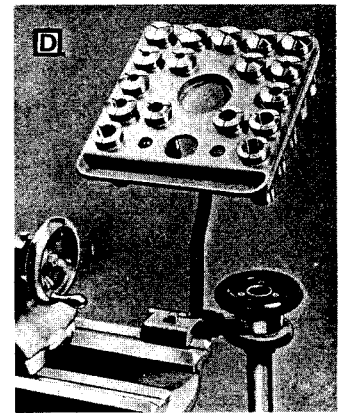


HANDLEVER COLLET ATTACHMENT

B Speed and accuracy are combined in the Handlever Collet Attachment. Without stopping the lathe spindle, the collet can be released, bar stock fed through the spindle, and the collet tightened again. Equipment includes adjustable chuck closing mechanism and hollow draw-bar, spindle nose cap, spanner wrench and heat-treated steel closing sleeve if required. Collets are not included. See pages 31, 32, and 33.

This attachment should be ordered with the lathe so that it can be properly fitted at the factory.

Catalog Number	Size of Lathe	Collet Used	Max. Collet Cap.	Shipping Weight	Price
CL5206N	9"	No. 3	1/2"	10 lbs.	\$85.50
CL5206K	10-K	No. 6K	5/8"	10 lbs.	101.00
CL5206R	10"-1 1/4" Collet	No. 2	1 1/8"	19 lbs.	121.00
CL5206L	10"-1 1/8" Collet	No. 5	1 1/8"	20 lbs.	135.00
CL5206Q	13"	No. 5	1 1/8"	25 lbs.	150.00
CL5206M	14 1/2"	No. 5	1 1/8"	31 lbs.	164.00
CL5206H	16", 16-24", & 2-H	No. 5	1 1/8"	32 lbs.	178.00



COLLET SPLASH GUARD

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

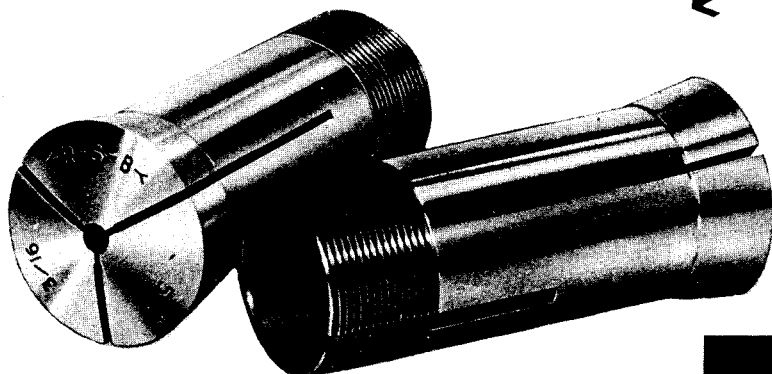
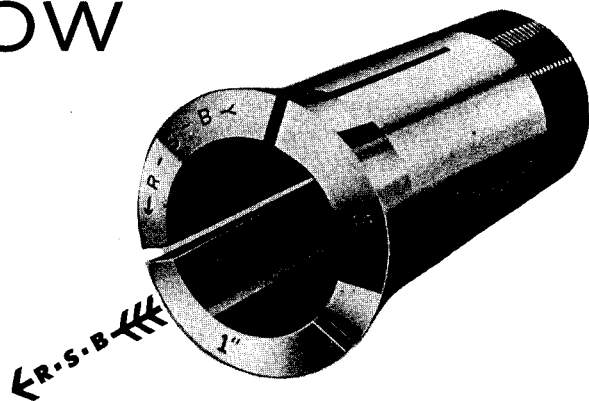
Cat. No.	Size and Type of Lathe	Ship Wt.	Price
CL5223NK	9" & 10-K Underneath M. D.	2 lbs.	\$3.20
CL5200N	9" Horizontal M. D.	2 lbs.	3.30
CL5200K	10-K H. M. D.	2 lbs.	3.60
CL5223R	10" Underneath M. D.	2 lbs.	3.85
CL5223T	13" Underneath M. D.	2 lbs.	4.15
CL5223F	14 1/2" Underneath M. D.	3 lbs.	5.10
CL5223H	16", 16-24", & 2-H U. M. D.	3 lbs.	6.30

COLLET RACK

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

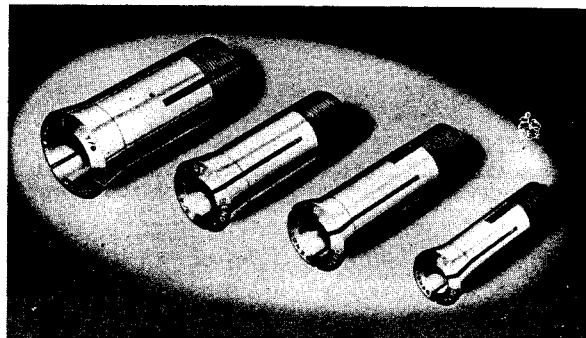
Catalog Number	Size of Lathe	Rack Holds	Ship. Wt.	Price
CE1770N	9"	19 Collets	9 lbs.	\$18.75
CE1770K	10-K	17 Collets	10 lbs.	20.25
CE1770R	10"-1 1/4" Collet	17 Collets	10 lbs.	22.50
CE1770L	10"-1 1/8" Collet	17 Collets	10 lbs.	25.75
CE1770Q	13"-1 1/8" Collet	17 Collets	12 lbs.	25.75
CE1770M	14 1/2"-1 1/8" Collet	17 Collets	14 lbs.	25.75
CE1770H	16", 16-24", No. 2-H	17 Collets	15 lbs.	25.75

New RED ARROW SOUTH BEND Precision COLLETS



- GRIP TRUE
- RUN TRUE
- STAY TRUE
- Thread ground from solid after heat-treating

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



RED ARROW ←R-S-B← SOUTH BEND STEEL COLLETS

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

State capacity of each collet wanted

CE3050	3	9"	1/16" to 1/2" in 64ths.	6 ozs.	\$4.80
CE3051	6K	10-K	1/16" to 3/8" in 64ths.	8 ozs.	4.95
CE3052	2	10" & 13"-1 1/16" Col.	1/16" to 1 1/16" in 64ths.	8 ozs.	5.00
CE3053	4	14 1/2"-3/4" Col.	1/16" to 3/4" in 64ths.	8 ozs.	5.40
CE3054	5	10", 13", 14 1/2", 16", 16-24" & 2-H 1 1/16" Col.	1/16" to 1 1/16" in 64ths.	1 lb.	5.95

COLLETS WITH DECIMAL HOLE SIZES FOR ROUND WORK

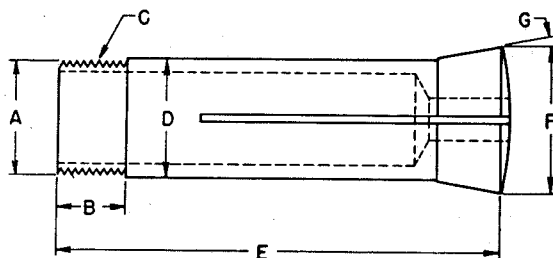
State capacity of each collet wanted

CE3055	3	9"	.0625" to .500"	6 ozs.	\$5.05
CE3056	6K	10-K	.0625" to .625"	8 ozs.	5.20
CE3057	2	10" & 13"-1 1/16" Col.	.0625" to .6875"	8 ozs.	5.30
CE3058	4	14 1/2"-3/4" Col.	.0625" to .750"	8 ozs.	5.75
CE3059	5	10", 13", 14 1/2", 16", 16-24" & 2-H 1 1/16" Col.	.0625" to 1.063"	1 lb.	6.25

COLLETS WITH METRIC HOLE SIZES FOR ROUND WORK

State capacity of each collet wanted

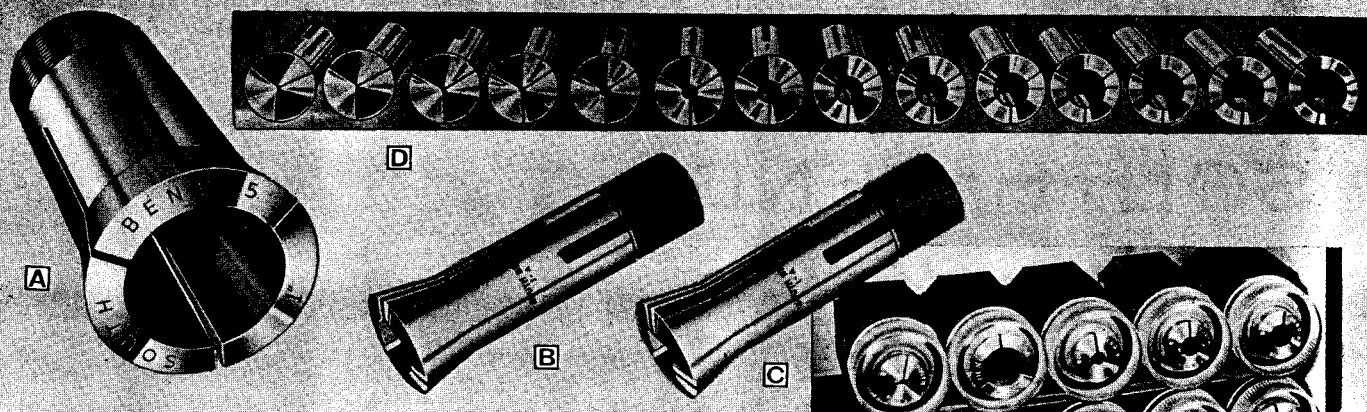
CE3060	3	9"	1.5 mm to 12.5 mm	6 ozs.	\$5.05
CE3061	6K	10-K	1.5 mm to 15.5 mm	8 ozs.	5.20
CE3062	2	10" & 13"-1 1/16" Col.	1.5 mm to 17.0 mm	8 ozs.	5.30
CE3063	4	14 1/2"-3/4" Col.	1.5 mm to 19.0 mm	8 ozs.	5.75
CE3064	5	10", 13", 14 1/2", 16", 16-24" & 2-H 1 1/16" Col.	1.5 mm to 27.0 mm	1 lb.	6.25



COLLET SPECIFICATIONS

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

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



LOW COST BRASS COLLETS

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

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

State capacity of each collet wanted.

CE2825	3	9"	1/8" to 1/2" in 64ths.	6 ozs.	\$1.95
CE2826	6K	10-K	1/8" to 5/8" in 64ths.	8 ozs.	2.30
CE2827	2	10" & 13"-1 1/8" Col.	1/8" to 1 1/8" in 64ths.	8 ozs.	2.60
CE2829	4	14 1/2" - 3/4" Col.	1/8" to 3/4" in 64ths.	8 ozs.	2.75
CE2828	5	10", 13", 14 1/2", 16", 16-24" & 2-H 1 1/8" Col.	1/8" to 1 1/8" in 64ths.	1 lb.	3.20

COLLETS WITH DECIMAL HOLE SIZES FOR ROUND WORK

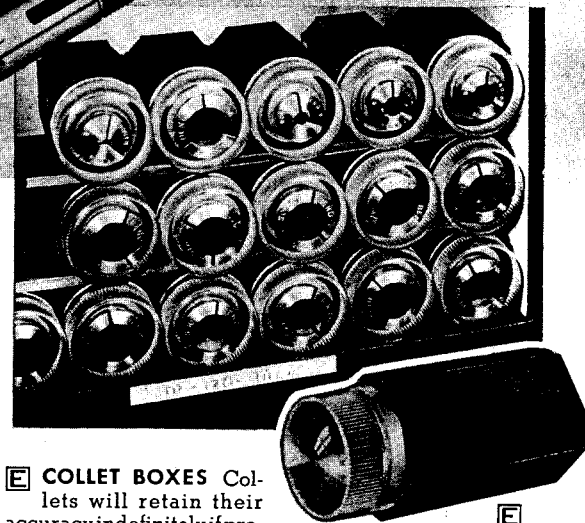
State capacity of each collet wanted.

CE2835	3	9"	.0625" to .500"	6 ozs.	\$2.10
CE2836	6K	10-K	.0625" to .625"	8 ozs.	2.65
CE2837	2	10" & 13"-1 1/8" Col.	.0625" to .6875"	8 ozs.	2.75
CE2839	4	14 1/2" - 3/4" Col.	.0625" to .750"	8 ozs.	3.00
CE2838	5	10", 13", 14 1/2", 16", 16-24" & 2-H 1 1/8" Col.	.0625" to 1.063"	1 lb.	3.40

COLLETS WITH METRIC HOLE SIZES FOR ROUND WORK

State capacity of each collet wanted.

CE2850	3	9"	1.5 mm to 12.5 mm	6 ozs.	\$2.10
CE2851	6K	10-K	1.5 mm to 15.5 mm	8 ozs.	2.65
CE2852	2	10" & 13"-1 1/8" Col.	1.5 mm to 17.0 mm	8 ozs.	2.75
CE2854	4	14 1/2" - 3/4" Col.	1.5 mm to 19.0 mm	8 ozs.	3.00
CE2853	5	10", 13", 14 1/2", 16", 16-24" & 2-H 1 1/8" Col.	1.5 mm to 27.0 mm	1 lb.	3.40



E COLLET BOXES Collets will retain their accuracy indefinitely if protected from accidental damage, dirt, abrasive dust, and corrosion. Keep each collet in one of these substantial plastic boxes with time-saving transparent lid through which the collet size can be easily read. Boxes are square and can be stacked neatly on shelf as shown in illustration. Can also be used for other makes not larger than No. 5 South Bend. See diagram on page 31. These boxes are 1 1/4" diameter x 2 3/4" deep on inside and are ideal for keeping small tools and parts of all kinds.

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

COLLETS FOR SQUARE AND HEXAGONAL WORK

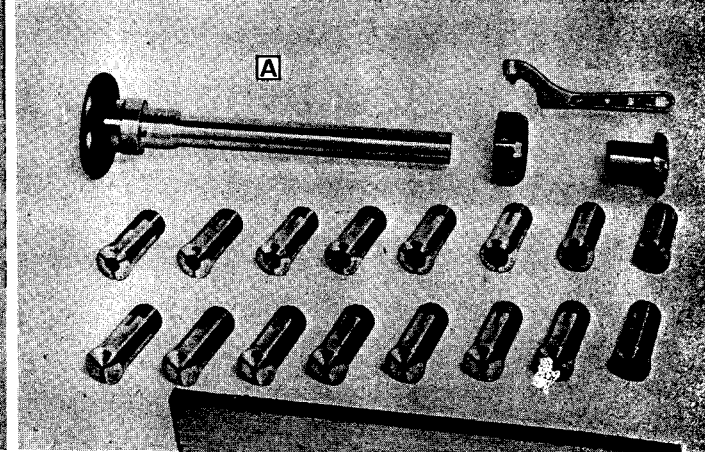
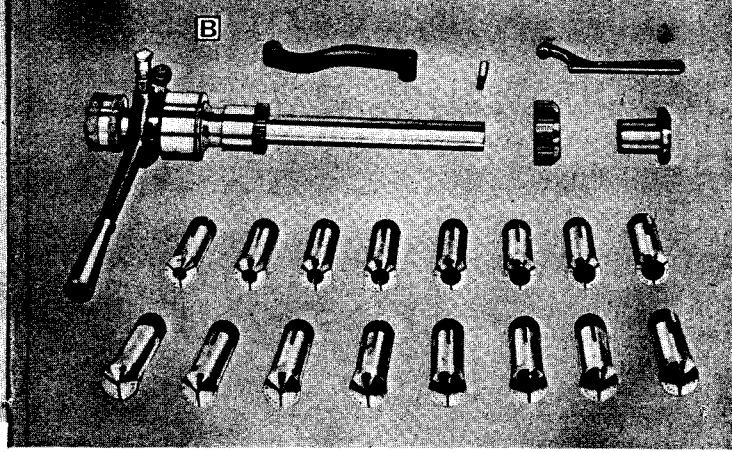
B Collets for holding square and hexagonal stock can be supplied in either **R-S-B** Steel or Brass. Standard sizes of collets are made in sixteenths from 1/8" across flats up to maximum capacity shown in table. State capacity of each collet wanted. Write for information on other sizes.

Collet No.	Ship. Wt.	Collets for Square Work						Collets for Hexagon Work			
		Max. Cap.	Brass		R-S-B Steel		Max. Cap.	Brass		R-S-B Steel	
			Cat. No.	Price Each	Cat. No.	Price Each		Cat. No.	Price Each	Cat. No.	Price Each
3	6 ozs.	5/16"	CE2891	\$4.35	CE3080	\$7.95	7/16"	CE2971	\$4.35	CE3085	\$7.95
6K	8 ozs.	3/8"	CE2892	4.70	CE3081	8.10	1/2"	CE2972	4.70	CE3086	8.10
2	8 ozs.	7/16"	CE2893	4.90	CE3082	8.20	9/16"	CE2973	4.90	CR3087	8.20
4	8 ozs.	1/2"	CE2894	5.15	CE3083	8.80	5/8"	CE2974	5.15	CE3088	8.80
5	1 lb.	11/16"	CE2895	5.50	CE3084	9.30	3/4"	CE2975	5.50	CE3089	9.30

FOR ECONOMY AND CONVENIENCE BUY COLLETS IN COMPLETE SETS

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

Collet No.	Collets in Set	Ship. Wt. Lbs.	Sizes of Collets	Brass Collets		R-S-B Collets	
				Catalog No.	Price	Catalog No.	Price
3	8	3	1/8" to 1/2" in 16ths.	CE2235	\$15.25	CE3065	\$37.10
	7	3	3/32" to 15/32" in odd 32nds	CE2534	13.35	CE3066	32.45
	14	6	5/64" to 3/4" in odd 64ths	CE2535	26.60	CE3067	64.80
6K	10	7	1/8" to 5/8" in 16ths.	CE2485	22.45	CE3068	47.80
	9	7	3/32" to 1 1/32" in odd 32nds	CE2486	20.20	CE3069	43.00
	18	12	5/64" to 3/8" in odd 64ths	CE2487	40.30	CE3070	85.80
2	11	6	1/16" to 1 1/16" in 16ths.	CE2238	27.90	CE3071	53.10
	10	6	3/32" to 2 1/32" in odd 32nds	CE2536	25.35	CE3072	48.25
	20	12	5/64" to 4/16" in odd 64ths	CE2537	50.60	CE3073	96.30
4	12	7	1/16" to 3/4" in 16ths.	CE2244	32.20	CE3074	62.55
	11	7	3/32" to 2 3/32" in odd 32nds	CE2538	29.50	CE3075	57.30
	22	12	5/64" to 4/16" in odd 64ths	CE2539	58.85	CE3076	114.40
5	16	11	1/16" to 1" in 16ths.	CE2241	49.85	CE3077	91.80
	15	11	3/32" to 3 1/32" in odd 32nds	CE2540	46.75	CE3078	86.00
	30	20	5/64" to 3/8" in odd 64ths	CE2541	93.30	CE3079	171.75



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

A HANDWHEEL COLLET ATTACHMENT WITH COLLETS.

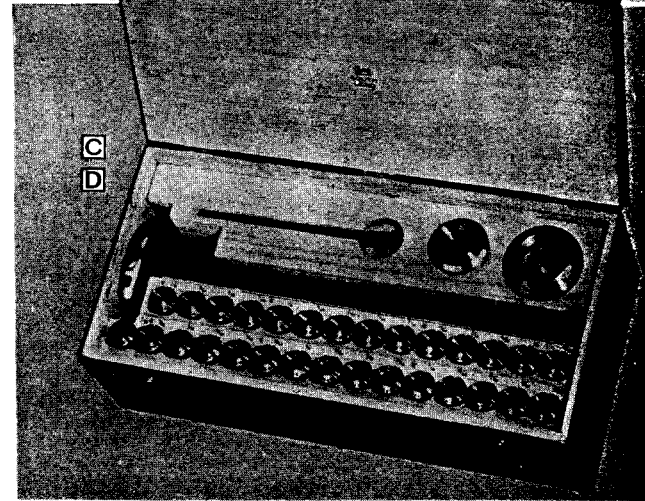
You can save time and money by ordering your collet attachment complete with collets as listed below. Prices include Handwheel Collet Attachment with complete set of **←R-S-B←** Collets in sixteenths, in sizes from 1/16" capacity up to the maximum capacity shown in table. Each collet packed in individual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

Catalog Number	Size of Lathe	Number of Collets	Max. Collet Cap.	Shipping Weight	Price f.o.b. Factory
CL5417N	9"	8	1/2"	9 lbs.	\$ 57.50
CL5417K	10K	10	3/8"	10 lbs.	71.00
CL5417R	10"—1 1/16" Collet	11	1 1/16"	24 lbs.	109.00
CL5417L	10"—1 1/16" Collet	16	1"	28 lbs.	150.00
CL5417Q	13"—1 1/16" Collet	16	1"	33 lbs.	155.00
CL5417M	14 1/2"—1 1/16" Collet	16	1"	35 lbs.	159.50
CL5417H	16", 16-24", & 2-H 1 1/16" Collet	16	1"	35 lbs.	162.50

B HANDLEVER COLLET ATTACHMENT WITH COLLETS.

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

Catalog Number	Size of Lathe	Number of Collets	Max. Collet Cap.	Shipping Weight	Price f.o.b. Factory
CL5418N	9"	8	1/2"	14 lbs.	\$121.00
CL5418K	10K	10	3/8"	15 lbs.	147.00
CL5418R	10"—1 1/16" Collet	11	1 1/16"	29 lbs.	172.50
CL5418L	10"—1 1/16" Collet	16	1"	35 lbs.	225.00
CL5418Q	13"—1 1/16" Collet	16	1"	44 lbs.	239.50
CL5418M	14 1/2"—1 1/16" Collet	16	1"	51 lbs.	253.50
CL5418H	16", 16-24", & 2-H 1 1/16" Collet	16	1"	52 lbs.	267.50



SPECIAL COMBINATION SETS FOR 9" SWING LATHES

C COLLET CHEST AND COLLETS. Chest is made of wood

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

Cat. No.	Description	Shp. Wt. Lbs.	Price
CE2233	Collet chest, 9" handwheel collet attachment, 29 ←R-S-B← Steel Collets for round work, 1/16" to 1/2" in 64ths.	14	\$162.00
CE2234	Collet chest, 9" handwheel collet attachment, 8 ←R-S-B← Steel Collets for round work, 1/16" to 1/2" in 16ths.	12	65.00
CE2290	Collet chest, 9" handwheel collet attachment, 29 Brass Collets for round work, 1/16" to 1/2" in 64ths.	14	84.00
CE2293	Collet chest, 9" handwheel collet attachment, 8 Brass Collets for round work, 1/16" to 1/2" in 16ths.	12	45.00

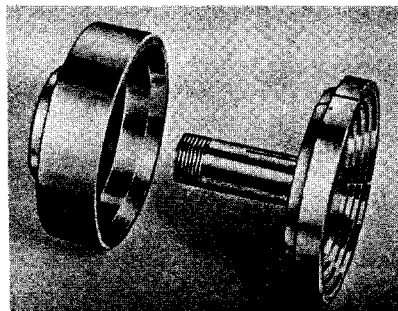
D CHEST ONLY FOR 9" COLLET EQUIPMENT. This is a

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

CE2225 Shipping weight 7 lbs. \$9.75

STEP CHUCK EQUIPMENT FOR SOUTH BEND LATHES

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



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

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

CLOSERS FOR STEP CHUCKS

Catalog Number	Size Lathe	Takes Step Chuck Sizes	Shipping Weight	Price
CL6309NK CL6311NK	9" & 10-K	3" and 4" 5" and 6"	3 lbs. 5 lbs.	\$ 6.30 9.80
CL6309R CL6311R	10" — 1 1/16" Collet	3" and 4" 5" and 6"	4 lbs. 5 lbs.	7.35 10.90
CL6309LQ CL6311LQ	10" and 13" 1 1/16" Collet	3" and 4" 5" and 6"	4 lbs. 6 lbs.	9.30 12.55
CL6309MH CL6311MH	14 1/2", 16", 16-24" & 2-H 1 1/16" Collet	3" and 4" 5" and 6"	5 lbs. 7 lbs.	10.40 14.50

FINISHED STEP CHUCKS

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



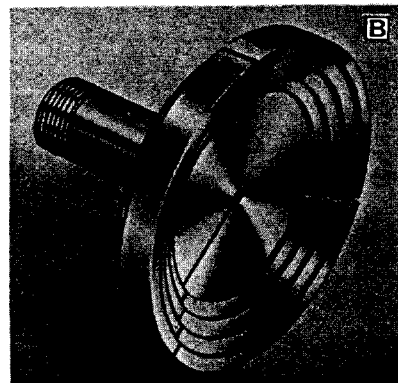
Cat. No.	Size Lathe	Nominal Size	Diameters of Steps	Ship. Wt.	Price
CE5960*	9"	2"	2", 1 3/4", 1 1/2", 1"	2 lbs.	\$12.05
CE5961		3"	3", 2 3/4", 2 1/2", 2 1/4", 2", 1 1/2"	3 lbs.	17.25
CE5962		4"	4", 3 1/2", 3 1/4", 3", 2 3/4", 2 1/2"	5 lbs.	18.85
CE5963		5"	5", 4 1/2", 4", 3 1/2", 3 1/4", 3"	8 lbs.	20.75
CE5964		6"	6", 5 1/2", 5", 4 1/2", 4 1/4", 4"	12 lbs.	23.50
CE5965*	10-K	2"	2", 1 3/4", 1 1/2", 1"	3 lbs.	12.55
CE5966		3"	3", 2 3/4", 2 1/2", 2 1/4", 2", 1 1/2"	4 lbs.	17.25
CE5967		4"	4", 3 1/2", 3 1/4", 3", 2 3/4", 2 1/2"	6 lbs.	19.15
CE5968		5"	5", 4 1/2", 4", 3 1/2", 3 1/4", 3"	8 lbs.	21.35
CE5969		6"	6", 5 1/2", 5", 4 1/2", 4 1/4", 4"	12 lbs.	24.35
CE5970*	10" — 1 1/16" Col.	2"	2", 1 3/4", 1 1/2", 1"	4 lbs.	12.85
CE5971		3"	3", 2 3/4", 2 1/2", 2 1/4", 2", 1 1/2"	4 lbs.	17.25
CE5972		4"	4", 3 1/2", 3 1/4", 3", 2 3/4", 2 1/2"	5 lbs.	19.15
CE5973		5"	5", 4 1/2", 4", 3 1/2", 3 1/4", 3"	9 lbs.	22.10
CE5974		6"	6", 5 1/2", 5", 4 1/2", 4 1/4", 4"	13 lbs.	24.35
CE5975*	10", 13", 14 1/2", 16", 16-24", & 2-H 1 1/16" Collet	2"	2", 1 3/4", 1 1/2", 1"	4 lbs.	13.40
CE5976		3"	3", 2 3/4", 2 1/2", 2 1/4", 2", 1 1/2"	4 lbs.	18.60
CE5977		4"	4", 3 1/2", 3 1/4", 3", 2 3/4", 2 1/2"	5 lbs.	20.75
CE5978		5"	5", 4 1/2", 4", 3 1/2", 3 1/4", 3"	9 lbs.	23.25
CE5979		6"	6", 5 1/2", 5", 4 1/2", 4 1/4", 4"	13 lbs.	24.85

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

STEP CHUCK BLANKS

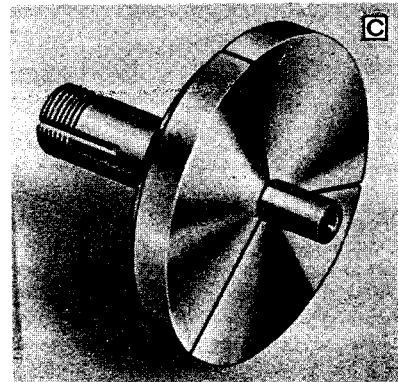
C Extreme precision can be attained by mounting a step chuck blank in the closer of the lathe on which it is to be used and machining either multiple steps or a single cavity to receive the work. The cavity obviously will run dead true and should chuck the work to be machined with perfect concentricity.

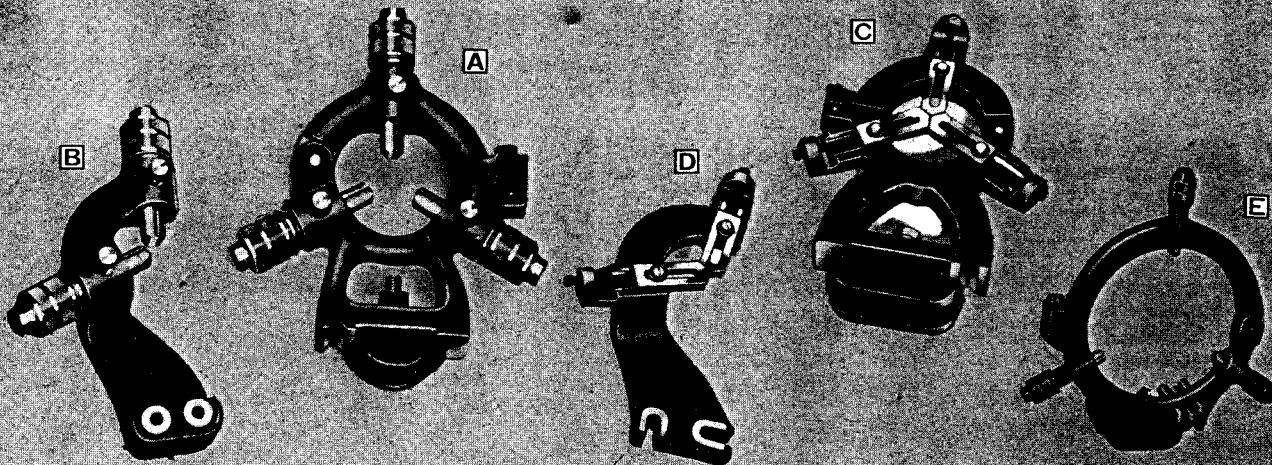
Step chuck blanks are made in various sizes having a maximum capacity of 2", 3", 4", 5", and 6" respectively. The 2" size fits directly into the collet sleeve and does not require a closer, but all other sizes must be used with a closer of required size.



Catalog Number	Size Lathe	Nominal Size	Max. Cap.	Shipping Weight	Price
CE5916*	9"	2"	2"	2 lbs.	\$ 9.05
CE5917		3"	3"	3 lbs.	12.30
CE5918		4"	4"	5 lbs.	13.95
CE5919		5"	5"	8 lbs.	15.90
CE5920		6"	6"	12 lbs.	18.85
CE5936*	10-K	2"	2"	3 lbs.	9.60
CE5937		3"	3"	4 lbs.	12.55
CE5938		4"	4"	6 lbs.	14.50
CE5939		5"	5"	8 lbs.	16.65
CE5940		6"	6"	12 lbs.	19.40
CE5921*	10" — 1 1/16" Collet	2"	2"	4 lbs.	9.85
CE5922		3"	3"	4 lbs.	12.55
CE5923		4"	4"	5 lbs.	14.50
CE5924		5"	5"	9 lbs.	17.25
CE5925		6"	6"	13 lbs.	19.40
CE5926*	10", 13", 14 1/2", 16", 16-24", & 2-H 1 1/16" Collet	2"	2"	4 lbs.	10.40
CE5927		3"	3"	4 lbs.	13.65
CE5928		4"	4"	5 lbs.	15.90
CE5929		5"	5"	9 lbs.	18.30
CE5930		6"	6"	13 lbs.	20.25

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





STEADY RESTS AND FOLLOWER RESTS

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

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

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

Catalog Number	Size Lathe	Maximum Capacity	Minimum Capacity	Shipping Weight	Price
CL2400N	9 inch	3 in.	$\frac{3}{16}$ in.	11 lbs.	\$15.85
CL2400K	10-K	3 in.	$\frac{3}{16}$ in.	11 lbs.	17.25
CL2400R	10 inch	3 in.	$\frac{3}{16}$ in.	13 lbs.	19.75
CL2400T	13 inch	$3\frac{3}{4}$ in.	$\frac{3}{16}$ in.	21 lbs.	24.00
CL2400F	$14\frac{1}{2}$ inch	$4\frac{3}{4}$ in.	$\frac{3}{16}$ in.	28 lbs.	28.00
CL2400H	16" & 2-H	$4\frac{3}{4}$ in.	$\frac{3}{16}$ in.	30 lbs.	31.15
CL2400V	16-24"	$4\frac{3}{4}$ in.	$\frac{3}{16}$ in.	47 lbs.	41.00

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

Catalog Number	Size Lathe	Maximum Capacity	Minimum Capacity	Shipping Weight	Price
CL2395N	9 inch	2 in.	$\frac{3}{16}$ in.	7 lbs.	\$10.10
CL2395K	10-K	2 in.	$\frac{3}{16}$ in.	7 lbs.	11.45
CL2395R	10 inch	$2\frac{1}{2}$ in.	$\frac{3}{16}$ in.	9 lbs.	12.55
CL2395T	13 inch	$3\frac{3}{4}$ in.	$\frac{3}{16}$ in.	11 lbs.	14.20
CL2395F	$14\frac{1}{2}$ inch	$4\frac{1}{4}$ in.	$\frac{3}{16}$ in.	15 lbs.	17.00
CL2395H	16" & 2-H	$4\frac{1}{4}$ in.	$\frac{3}{16}$ in.	17 lbs.	18.60
CL2395V	16-24"	$4\frac{1}{4}$ in.	$\frac{3}{16}$ in.	21 lbs.	25.40

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

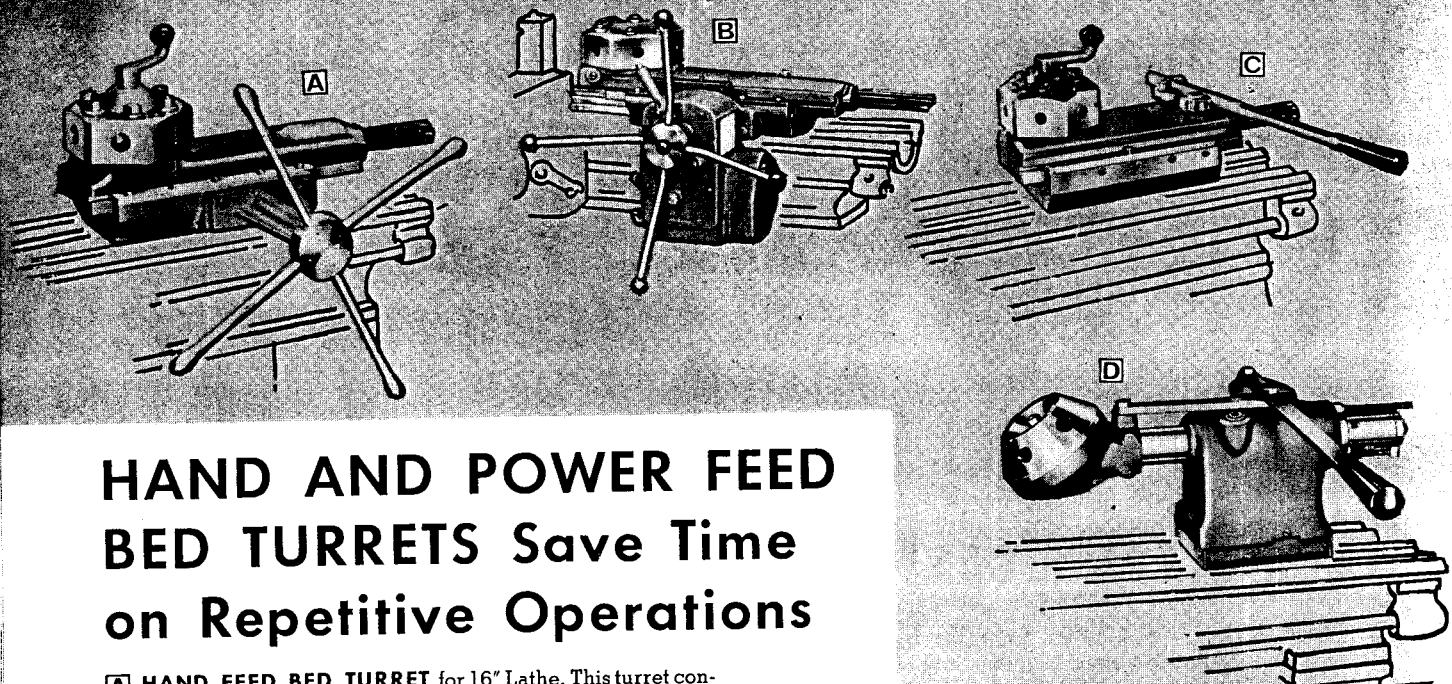
Catalog Number	Size Lathe	Maximum Capacity	Minimum Capacity	Shipping Weight	Price
CL1177N	9 inch	3 in.	$\frac{1}{4}$ in.	10 lbs.	\$10.75
CL1177R	10-K	3 in.	$\frac{1}{4}$ in.	11 lbs.	Not Made
CL1177T	10 inch	3 in.	$\frac{1}{4}$ in.	11 lbs.	15.50
CL1177F	13 inch	$3\frac{3}{4}$ in.	$\frac{3}{8}$ in.	19 lbs.	19.75
CL1177H	$14\frac{1}{2}$ inch	$4\frac{3}{4}$ in.	$\frac{3}{8}$ in.	27 lbs.	24.00
CL1177V	16" & 2-H	$4\frac{3}{4}$ in.	$\frac{3}{8}$ in.	29 lbs.	27.00
CL1177V	16-24 inch	$4\frac{3}{4}$ in.	$\frac{3}{8}$ in.	47 lbs.	36.75

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

Catalog Number	Size Lathe	Maximum Capacity	Minimum Capacity	Shipping Weight	Price
CL1353N	9 inch	2 in.	$\frac{3}{16}$ in.	4 lbs.	\$ 7.00
CL1353R	10-K	2 in.	$\frac{3}{16}$ in.	4 lbs.	Not Made
CL1353T	10 inch	$2\frac{1}{2}$ in.	$\frac{3}{16}$ in.	6 lbs.	10.75
CL1353F	13 inch	$3\frac{3}{4}$ in.	$\frac{3}{16}$ in.	9 lbs.	12.00
CL1353H	$14\frac{1}{2}$ inch	$4\frac{1}{4}$ in.	$\frac{3}{16}$ in.	12 lbs.	14.25
CL1353V	16" & 2-H	$4\frac{1}{4}$ in.	$\frac{3}{16}$ in.	13 lbs.	15.50
CL1353V	16-24 inch	$4\frac{1}{4}$ in.	$\frac{3}{16}$ in.	18 lbs.	22.25

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

Cat No.	Lathe	Capacity	Ship. Wt.	Price
Telescoping Jaw Extra Large Steady Rest				
CL2266H	16" & No. 2-H	$4\frac{3}{4}$ " to $10\frac{3}{4}$ "	65 lbs.	\$61.50
CL2266V	16-24"	$4\frac{3}{4}$ " to $10\frac{3}{4}$ "	85 lbs.	71.00
Regular Style Extra Large Steady Rest				
CL2258H	16" & No. 2-H	5" to 11"	75 lbs.	\$46.00
CL2258V	16-24"	5" to 11"	95 lbs.	55.50



HAND AND POWER FEED BED TURRETS Save Time on Repetitive Operations

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

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

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

Effective feed of turret slide 8⁷/₈". Center of turret hole to top of turret slide 2¹/₂". Takes standard turret tools with 1¹/₂" diameter shank. Distance between opposite turret flats is 9³/₈". When turret is ordered separate from lathe, the purchaser must assume the responsibility of fitting and boring.

CL1917H. Hand Feed Turnstile Bed Turret for 16" South Bend Lathe. Ship. wt. 505 lbs. Price..... **\$745.00**

B HAND AND POWER FEED BED TURRETS for 13" Lathe. Power feed turret is illustrated, hand feed turret is similar but does not have power feeds for the turret slide. Effective feed of turret slide is 6¹/₂". Turret head revolves on a precision ball bearing and has six 1" diameter holes for tools. Turret head indexes to within plus or minus .0005" measured 4" from turret face and locks automatically on the return stroke of the turret slide. Turret ram lock is provided. Clearance from center of tool hole to top of turret slide is 1⁷/₈".

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

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

CL1917T. Hand Feed Turnstile Bed Turret for 13" South Bend Lathe. Approx. ship. wt. 346 lbs. Price..... **\$540.00**

CL2620T. Power Feed Turnstile Bed Turret for 13" South Bend Lathe. Approx. ship. wt. 414 lbs. Price..... **\$762.00**

C HANDLEVER BED TURRETS for 9", 10", and 13" lathes.

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

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

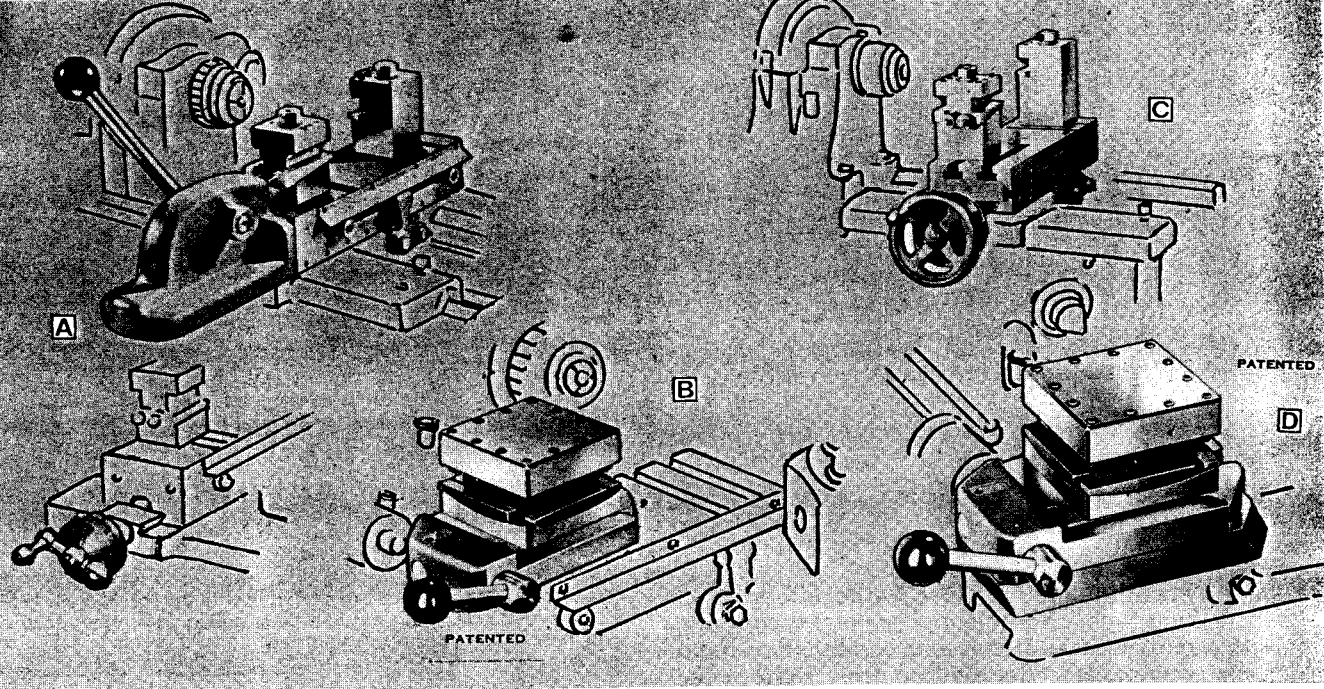
The effective feed of the turret slide is 4". Center of turret hole to top of turret slide 1¹/₂". Takes standard turret tools with 5/8" diameter shank*. Distance between opposite flats on turret head is 4⁷/₈". When turret is ordered separate from lathe, the purchaser must assume the responsibility of fitting turret to lathe and boring turret head.

Catalog Number	Size Lathe	Shipping Weight	Price
CL1611N	9"	76 lbs.	\$284.00
CL1611K	10-K	76 lbs.	291.00
CL1611R	10"	83 lbs.	298.00
CL1611T	13"	130 lbs.	320.00

*Can be supplied to order with 3/4" holes in turret face. No extra charge.

D HANDLEVER TURRET, Tailstock Type, for 9", 10", and 13" Lathes. This handlever turret is mounted on the lathe bed in place of the tailstock. The turret head has six holes for tools with 5/8" diameter shanks. Adjustable stops are provided for each of the six turret holes. The turret head is geared to the stop roll so that the stop is brought in line with each stop screw as the corresponding tool in the turret head is revolved to the working position. The indexing mechanism is of high carbon heat-treated steel. Index lock releases automatically at the end of the return movement of the turret slide. The turret head is revolved by hand. The maximum length of stroke is 3³/₄ inches. When ordered separate from lathe, purchaser must assume the responsibility of fitting and boring.

Cat. No.	Size Lathe	Shipping Weight	Price
CL2045N	9"	50 lbs.	\$126.50
CL2045K	10-K	50 lbs.	134.50
CL2045R	10"	60 lbs.	146.50
CL2045T	13"	90 lbs.	175.50



SQUARE TURRETS • DOUBLE TOOL SLIDES

Speed Production for Greater Profits

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

This cross slide has front and back square tool blocks in which $\frac{1}{4}$ " square cutter bits can be mounted. T-slots in the cross slide base permit adjusting the positions of the tool blocks. The front tool block takes two cutter bits, and the back tool block takes one cutter bit. Tapered wedges and thumb screws provide adjustment for the height of cutter bits.

Cat. No.	Size Lathe	Swing over Cross Slide	Cross Feed	Ship. Wt.	Price*
CL2030N	9"	3 $\frac{1}{4}$ "	ENGLISH	36 lbs.	\$ 98.50
CL2030K	10-K	3 $\frac{1}{4}$ "		37 lbs.	104.50
CL2030R	10"	3 $\frac{1}{4}$ "		45 lbs.	115.00
CL2030NME	9"	3 $\frac{1}{4}$ "	METRIC	36 lbs.	98.50
CL2030KME	10-K	3 $\frac{1}{4}$ "		37 lbs.	104.50
CL2030RME	10"	3 $\frac{1}{4}$ "		45 lbs.	115.00

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

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

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

Catalog Number	Size of Lathe	Size Square	Takes Tools	Ship. Weight	Price
CL3376NR	9" and 10"	3"	$\frac{3}{8}$ " x $\frac{3}{8}$ "	10 lbs.	\$39.50
CL3376K	10-K	3"	$\frac{3}{8}$ " x $\frac{3}{8}$ "	11 lbs.	39.50
CL3376T	13"	3"	$\frac{3}{8}$ " x $\frac{3}{8}$ "	20 lbs.	58.00
CL3376H	16" & No. 2-H	4"	$\frac{3}{8}$ " x $\frac{3}{8}$ "	28 lbs.	85.00

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

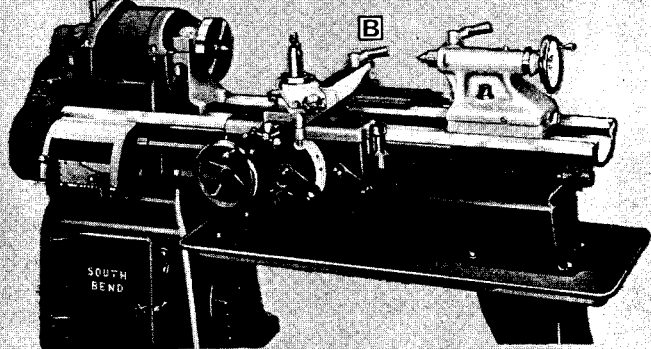
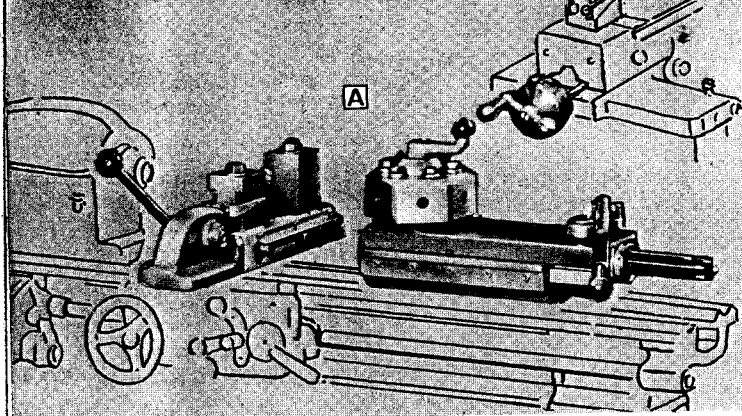
This cross slide fits on the saddle dovetail in place of the compound rest assembly. The cross-feed may be operated by power through the friction clutch in the apron, as well as by the cross-feed handwheel. A large diameter micrometer graduated collar permits adjusting the cutting tools with extreme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

Adjustable stops are provided for locating the position of the front and rear tools for repetitive operations. See page 39 for four-position stop. The front tool block takes two square cutter bits and the back tool block takes one square cutter bit. Tapered wedges are provided for adjusting the height of the cutter bits. T-slots in the cross slide base are provided for adjusting the position of the tool blocks. Should be ordered with the lathe.

Catalog Number	Size Lathe	Swing over Cross Slide	Cross-Feed	Size Bit	Shipping Weight	Price
CL2027T	13"	6 $\frac{1}{8}$ "	ENGLISH	$\frac{7}{16}$ " sq.	60 lbs.	\$171.00
CL2027H	16"	6 $\frac{1}{8}$ "		$\frac{7}{16}$ " sq.	95 lbs.	185.00
CL2027TME	13"	6 $\frac{1}{8}$ "	METRIC	$\frac{7}{16}$ " sq.	60 lbs.	171.00
CL2027HME	16"	6 $\frac{1}{8}$ "		$\frac{7}{16}$ " sq.	95 lbs.	185.00

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

Catalog Number	Size of Lathe	Size Square	Takes Tools	Shipping Weight	Price
CL3375N	9"	3"	$\frac{3}{8}$ " x $\frac{3}{8}$ "	13 lbs.	\$44.75
CL3375K	10-K	3"	$\frac{3}{8}$ " x $\frac{3}{8}$ "	14 lbs.	49.50
CL3375R	10"	3"	$\frac{3}{8}$ " x $\frac{3}{8}$ "	15 lbs.	53.00
CL3375T	13"	3"	$\frac{3}{8}$ " x $\frac{3}{8}$ "	24 lbs.	59.00
CL3375F	14 $\frac{1}{2}$ "	4"	$\frac{5}{8}$ " x $\frac{5}{8}$ "	36 lbs.	85.00
CL3375H	16" and 16-24"	4"	$\frac{5}{8}$ " x $\frac{5}{8}$ "	40 lbs.	92.00



TURRET LATHE CONVERSION UNITS

For All 9" and 10-K South Bend Lathes

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

HANDLEVER BED TURRET

The 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 head indexes automatically when the feed lever is pushed to the extreme right. Each face of the turret has an independently adjustable feed stop screw which accurately regulates the length of the cut.

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

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

COMBINATION DOUBLE TOOL SLIDE

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

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

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

TURRET LATHE CONVERSION UNITS

Prices for Turret Lathe Conversion Units listed below are for handlever bed turret and combination handlever and screw feed double tool cross slide in lieu of compound rest, tailstock, centers, spindle sleeve, tool post and small face plate. Prices also include making chip pan oil tight on Self-Contained and Underneath Motor Drive Lathes, installing coolant dams and drains in lathe bed, leveling leg in lieu of regular leg for tailstock end of lathe, fitting cross slide and turret to lathe, and boring turret head. These prices apply only when Turret Lathe Conversion Units are specified when lathe is ordered. See pages 36 and 37 if turret equipment is wanted for lathes now in service.

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

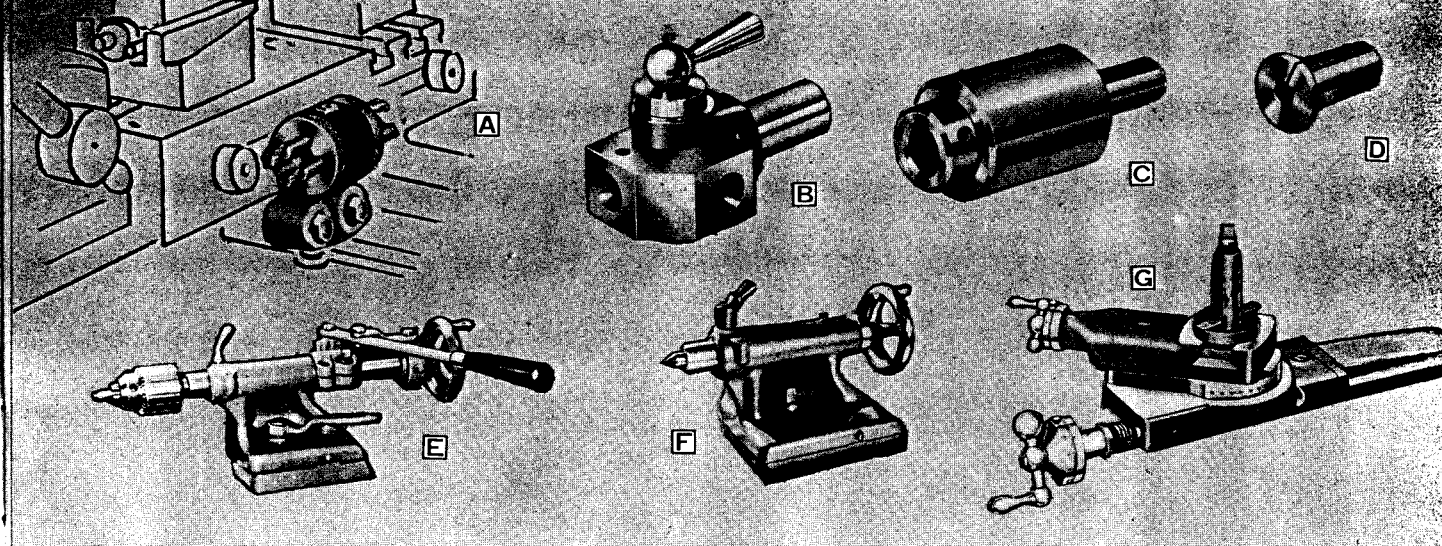
Catalog Number	Size Lathe	Type of Drive	Price
CL3815N	9"	Horizontal Motor Drive, V-belt or flat belt	\$317
CL3816N	9"	Self-Contained Drive, V-belt or flat belt	317
CL3817N	9"	Underneath Motor Drive, V-belt or flat	306
CL3815K	10-K	Horizontal Motor Drive, V-belt or flat belt	319
CL3816K	10-K	Self-Contained Drive, V-belt or flat Belt	319
CL3817K	10-K	Underneath Motor Drive, V-belt or flat	308

SPECIAL PAINT COLORS AND STYLES

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

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

Size and Type of Machine	2-H, 16-24", 16", 14 1/2" & 13" Lathes, Milling Machine		10" Bench & Floor, 9" & 10-K UMD and Self-Cont. Drive Floor Lathes, 3 & 4 Spindle Drill Presses		9" & 10-K HMD Bench Lathes, Shaper, Pedestal Grinder, 1 & 2 Spindle Drill Presses	
	Cat. No.	Price	Cat. No.	Price	Cat. No.	Price
Colors						
One Special Solid Color	CE2860	\$41.00	CE2861	\$28.00	CE2862	\$14.25
Multicolor 1st Color	CE2863	41.00	CE2864	28.50	CE2865	14.25
Multicolor, each extra color	CE2866	29.50	CE2867	23.75	CE2868	9.25



A FOUR POSITION CROSS SLIDE STOP. This stop fits onto the saddle and is used with the double tool cross slide in place of the regular cross slide stop. See page 37. It has four adjustable stops for locating positions of the cutting tools for each of four successive operations.

Cat. No.	Size Lathe	Ship. Wt.	Price
CL2154NR	9", 10-K and 10"	2 lbs.	\$14.75
CL2154T	13"	3 lbs.	15.00
CL2154H	16" and No. 2-H	3 lbs.	18.00

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

Cat. No.	Shank Size		Hole Size		Ship. Wt. Pounds	Price
	Dia.	Length	Dia.	Length		
CE2666	5/8"	1 1/2"	5/8"	3/4"	4	\$31.50
CE2667	3/4"	1 1/2"	5/8"	3/4"	6	32.50
CE2668	1"	1 1/2"	5/8"	3/4"	8	34.00
CE2669	1 1/2"	2 3/8"	1"	1 1/8"	10	46.00

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

Catalog Number	Shank Size		Hole Size		Ship. Wt. Pounds	Price
	Dia.	Length	Dia.	Length		
CE3666	5/8"	1 1/2"	5/8"	1 3/8"	3	\$ 9.05
CE3667	3/4"	1 1/2"	5/8"	1 3/8"	3	9.05
CE3668	1"	1 1/2"	5/8"	1 3/8"	3	9.05
CE3683	1 1/2"	2 13/16"	1 1/8"	2 3/8"	9	12.60

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

Bore	5/8" Outside Diameter			1 1/8" Outside Diameter		
	Cat. No.	Ship. Wt.	Price	Cat. No.	Ship. Wt.	Price
1/8"	CE3669	8 ozs.	\$1.90	.....	.....	.....
3/16"	CE3670	8 ozs.	1.90	.....	.....	.....
1/4"	CE3671	8 ozs.	1.90	CE3706	12 ozs.	\$3.00
5/16"	CE3672	8 ozs.	1.90	CE3707	12 ozs.	3.00
3/8"	CE3673	8 ozs.	1.90	CE3708	12 ozs.	3.00
7/16"	CE3674	8 ozs.	1.90	CE3709	12 ozs.	3.00
1/2"	CE3675	8 ozs.	1.90	CE3710	12 ozs.	3.00
5/8"	.....	.....	.....	CE3711	12 ozs.	3.00
3/4"	.....	.....	.....	CE3712	12 ozs.	3.00
7/8"	.....	.....	.....	CE3713	12 ozs.	3.00
1 1/16"	.....	.....	.....	CE3714	12 ozs.	3.00
1 1/4"	.....	.....	.....	CE3715	12 ozs.	3.00
1 3/8"	.....	.....	.....	CE3716	12 ozs.	3.00
1 1/2"	.....	.....	.....	.....	.....	.....

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

Size Lathe	Lgth. of Feed Inches	Ship. Weight Lbs.	In Lieu of Regular Tailstock		In Addition to Regular Tailstock	
			Cat. No.	Price	Cat. No.	Price
9"	2 1/2"	25	CL519N	\$65.50	CL1197N	\$ 87.50
10-K	2 1/2"	25	CL519K	72.50	CL1197K	98.00
10"	2 1/2"	33	CL519R	77.50	CL1197R	104.00

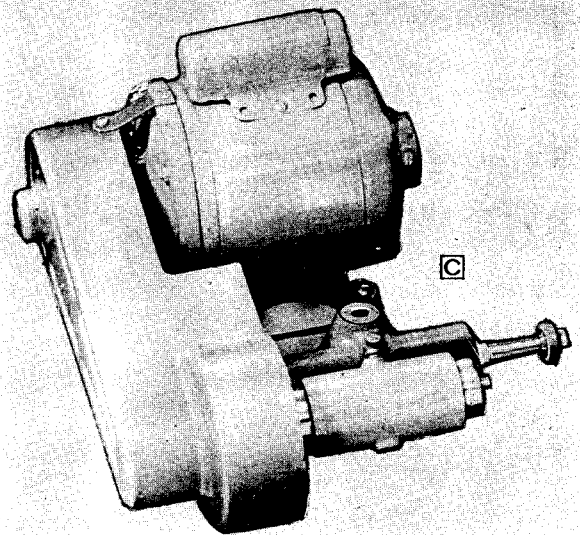
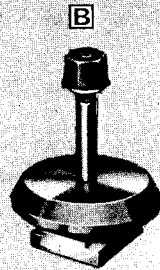
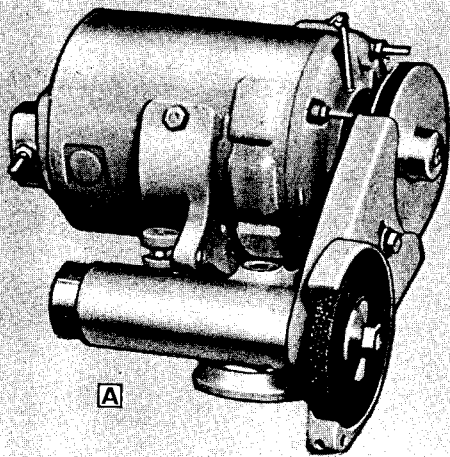
F REGULAR TAILSTOCK. Prices of South Bend Turret Lathes do not include tailstock. Standard set-over type tailstock can be supplied to order. Tailstock mounts on the lathe bed, in place of the turret, for machining work between centers. Spindle is graduated and is fitted with a 60° hardened center. Tailstock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

Catalog No.	Size Lathe	Size Center	Shipping Weight	Price
CL2036N	9"	No. 2 M.T.	22 lbs.	\$ 47.50
CL2036K	10-K	No. 2 M.T.	22 lbs.	65.50
CL2036R	10"	No. 2 M.T.	42 lbs.	83.00
CL2036T	13"	No. 3 M.T.	90 lbs.	149.50
CL2036P	No. 2-H	No. 3 M.T.	133 lbs.	187.00

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

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

Cat. No.	Size Lathe	Ship. Wt.	Price
CL2200N	9"	13 lbs.	\$ 42.00
CL2200K	10-K	14 lbs.	43.00
CL2200R	10"	15 lbs.	68.75
CL2200T	13"	30 lbs.	107.00
CL2200P	2-H	50 lbs.	136.50



GRINDING ATTACHMENTS for Precision Toolroom Grinding

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

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

Catalog Number	Motor Specifications			Shipping Weight	Price
	Phase	Cycle	Volts		
CE301B	1	60	115	43 lbs.	\$70.00
CE301BA	1	60	150	43 lbs.	75.00
CE301D	1	60	230	43 lbs.	75.00
CE301A	1	50	115	43 lbs.	72.00
CE301C	1	50	230	43 lbs.	77.00
CE301Y	1	40	115	43 lbs.	75.00
CE301Z	1	40	230	43 lbs.	78.00
CE301K	1	25	230	43 lbs.	78.00
CE303D	3	60	208-220	43 lbs.	82.00*
CE303F	3	60	440	43 lbs.	82.00*
CE303C	3	50	208-220	43 lbs.	82.00*
CE303E	3	50	440	43 lbs.	82.00*

*These prices do not include switch.

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

Catalog Number	Size Lathe	Shipping Weight	Price
CE307NK	9" & 10-K	1 lb.	\$2.20
CE307R	10"	1 lb.	2.75
CE307T	13"	3 lbs.	3.25
CE307F	14 $\frac{1}{2}$ "	3 lbs.	3.85
CE307H	16" & 16-24"	4 lbs.	3.85

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

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

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

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

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

SPECIFICATIONS

Grinding wheel speed 30,000 r.p.m.
 Maximum depth of ground hole with 1-inch wheel $3\frac{3}{8}$ inches
 Maximum wheel diameter recommended 1-inch

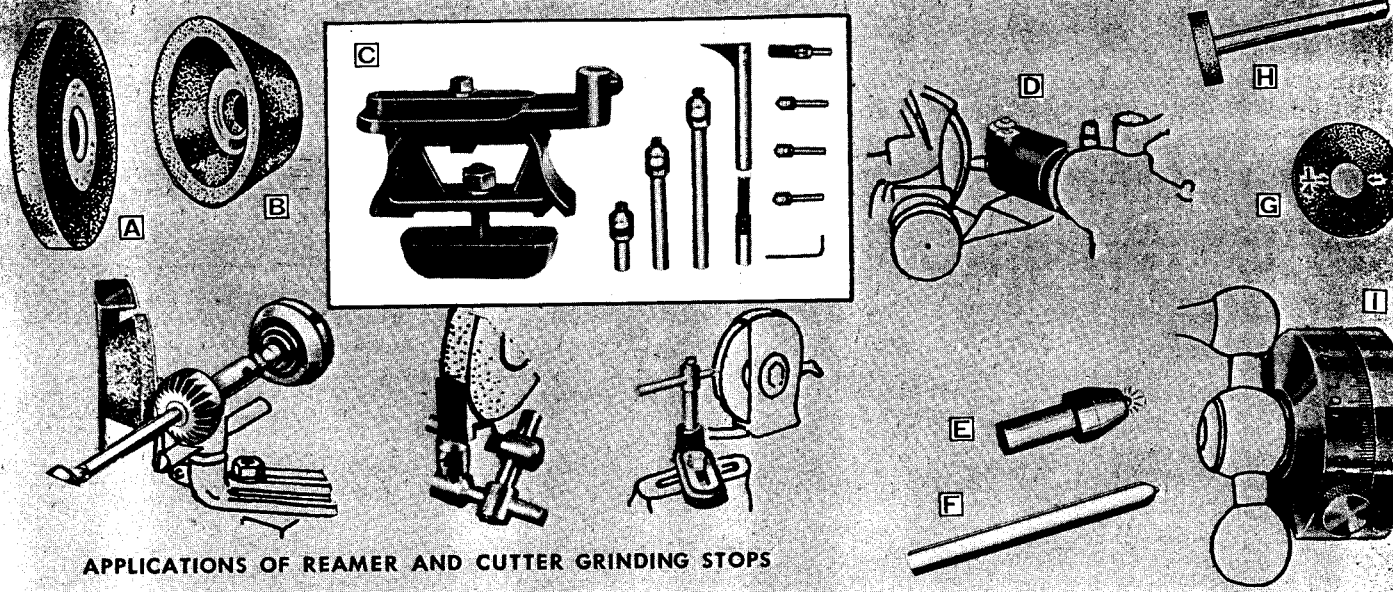
Accessories supplied:

Four $\frac{1}{4}$ " wheel arbors: lengths $2\frac{3}{8}$ ", $2\frac{1}{8}$ ", $3\frac{3}{8}$ ", and $4\frac{3}{8}$ ".
 Four grinding wheels: $\frac{1}{4}$ " bore; $\frac{1}{4}$ " face; $\frac{3}{8}$ ", $\frac{3}{4}$ ", $\frac{7}{8}$ ", and 1" diameters.
 One chuck for mounted wheels $\frac{1}{8}$ " capacity
 Eight-foot extension cord, plug, and switch.

CE601B. Internal Grinding Attachment with 1 ph., 60 cy., 115 v., A.C. motor and accessories listed above, but without clamp bolt equipment. Price f.o.b. factory \$183.00

CE603D. Same as above but with 3 ph., 60 cy., 220 v., A.C. motor less switch. Price f.o.b. factory \$174.00

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



APPLICATIONS OF REAMER AND CUTTER GRINDING STOPS

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

Cat. No.	Type of Work	Class of Work	Price
CE2759	General Work	Rough or Finish	\$2.65
CE2758	Cutting Tools	Rough or Finish	2.65
CE2774	Automobile Valves	Rough or Finish	2.65
CE2757	Cast Iron	Finish Grinding	3.10
CE2769	Soft Steel	Finish Grinding	2.65

B CUP GRINDING WHEEL, 3 1/4" outside diameter, 1 1/4" face, 1/2" hole for use with External Grinding Attachment. Used for sharpening reamers, milling cutters, etc.

CE3236. Cup Grinding Wheel. Ship. wt. 2 lbs. \$4.00

C REAMER AND CUTTER GRINDING STOPS.

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

Cat. No.	Size Lathe	Ship. Wt.	Price
CE1512N	9"	7 lbs.	\$14.50
CE1512K	10-K	8 lbs.	15.00
CE1512R	10"	9 lbs.	16.00
CE1512T	13"	14 lbs.	20.00
CE1512F	14 1/2"	20 lbs.	22.00
CE1512H	16"	24 lbs.	23.00
CE1512V	16"-24"	30 lbs.	34.00

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

Cat. No.	Size Lathe	Ship. Wt.	Price
CE91NK	9" & 10-K	3 lbs.	\$8.95
CE91R	10"	3 lbs.	8.95
CE91T	13"	4 lbs.	10.65
CE91F	14 1/2"	4 lbs.	10.65
CE91H	16" & 16-24"	5 lbs.	12.00

E DIAMOND DRESSER. Mounts in tailstock type holding fixture "D" above for truing grinding wheels. For satisfactory operation the grinding wheel should be trued frequently with a diamond dresser. Price does not include holding fixture.

CE406. Diamond Dresser. Ship wt. 1/2 lb. \$8.25

F DIAMOND DRESSER. This dresser is designed for mounting in Reamer and Cutter Grinding Stop Fixture listed under "C" above. Price does not include fixture.

CE18. Diamond Dresser. Ship. wt. 1 lb. \$8.25

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

Catalog Number	Shipping Weight	Diameter	Face	Price
CE2925	4 ozs.	3/8"	1/4"	\$.60
CE2926	4 ozs.	3/4"	1/4"	.60
CE2927	4 ozs.	7/8"	1/4"	.60
CE2928	4 ozs.	1"	1/4"	.60

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

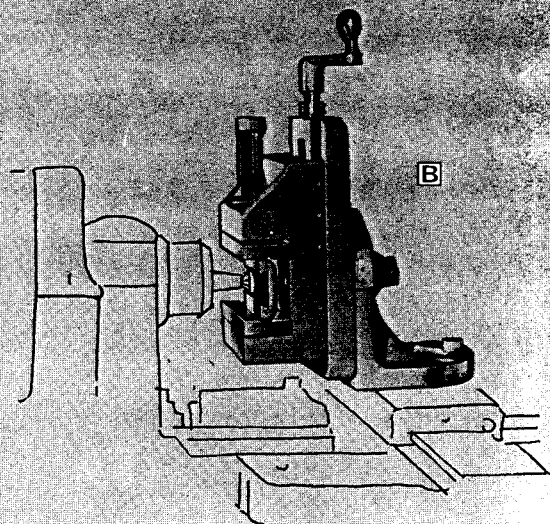
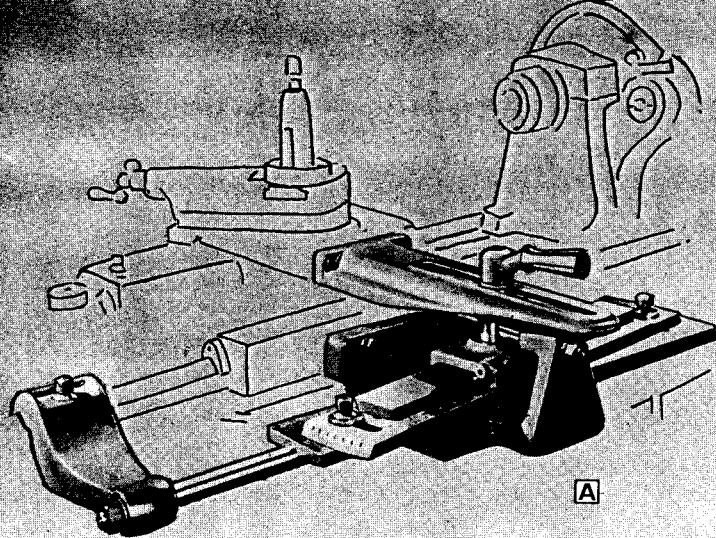
Catalog Number	Shank	Diameter	Face	Price
CE3035	1/8"	1/4"	1/8"	\$.65
CE3036	1/8"	1/2"	1/8"	.65
CE3037	1/8"	3/4"	1/8"	.70
CE3038	1/8"	1"	1/8"	.75
CE3039	1/8"	3/32"	1/4"	.65
CE3040	1/8"	1/8"	1/4"	.65
CE3041	1/8"	3/16"	1/4"	.65
CE3042	1/8"	1/4"	1/4"	.65
CE3043	1/8"	3/16"	1/4"	.65
CE3044	1/8"	3/8"	1/4"	.65
CE3045	1/8"	1/2"	1/4"	.65
CE3046	1/8"	3/8"	1/4"	.70
CE3047	1/8"	3/4"	1/4"	.70
CE3048	1/8"	7/8"	1/4"	.75
CE3049	1/8"	1"	1/4"	.75

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

LARGE DIAMETER easy reading graduated collars with regular graduations are regular equipment on 10" and larger lathes and can be supplied in lieu of regular collars at extra cost on cross-feed and compound rest screws for 9" and 10-K Lathes as listed below.

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

Size Lathe	Large Dia. Reg. Grad.		Direct Reading	
	Cat. No.	Price	Cat. No.	Price
9" & 10-K	CL2117NK	\$7.85	CL2520NK	\$9.45
10"	.....	.....	CL2520R	3.85
13", 14 1/2", 16", 16-24"	.....	.....	CL2520TH	4.70
No. 2-H	.....	.....	CL2520P	4.95



TWO PRACTICAL ATTACHMENTS That Increase Lathe Versatility

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

The telescopic taper attachment is supplied on 10"-1 1/8" 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 10-K lathes. This taper attachment has plain cross-feed screw and straight gibs. The cross-feed screw and nut must be disconnected before the taper attachment can be engaged for taper turning and boring.

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

The taper attachment must be fitted to the lathe at factory.

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

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

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

Cat. No.	Size of Lathe	Vert. Feed Ins.	Cross Feed Ins.	Vise Holds Ins.	Jaw Depth Ins.	Jaw Width Ins.	Ship. Wt. Lbs.	Price
CL2680NK	9-10-K	3	5 7/8	1 1/2	1 3/4	3	13	\$ 53.50
CL2680R	10"	3	5 7/8	1 3/4	1 3/4	3 1/2	25	66.50
CL2680T	13"	4 1/4	8 1/8	2 7/8	1 1/16	4 7/8	40	82.50
CL2680F	14 1/2"	6	10	4	2	5 3/4	50	96.50
CL2680H	16"	6	10 1/2	4	2	5 3/4	65	112.00
CL2680HK	16-24"	6	10 1/2	4	2	5 3/4	65	112.00

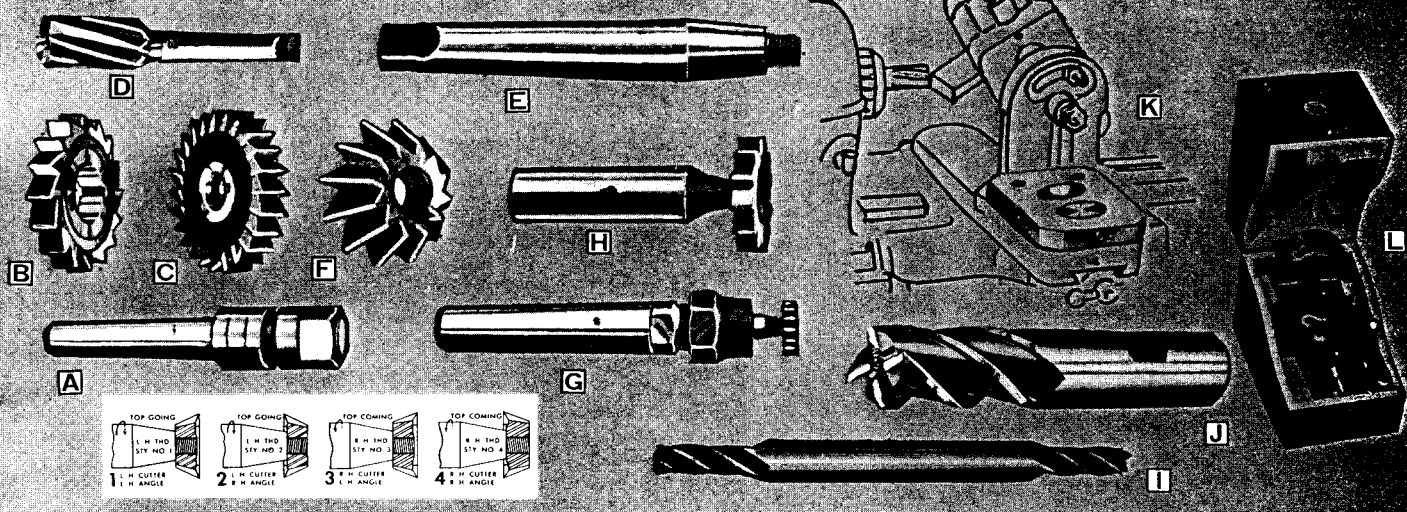
TAPER ATTACHMENT WITH ENGLISH GRADUATIONS

Cat. No.	Size of Lathe	Swing Over Cross Slide	Maximum Taper			Approx. Ship. Wt.	Price
			At One Setting	Per Foot	In Degrees		
CL428NK	9"	5"	7"	3 1/2"	16 1/2	35 lbs.	\$ 93.00
CL428NK	10-K	5 7/8"	7"	3 1/2"	16 1/2	35 lbs.	93.00
CL1545R	10"	5 3/4"	8 1/2"	3 1/2"	16 1/2	40 lbs.	194.00
CL1545T	13"	8"	9 1/4"	3 1/2"	16 1/2	65 lbs.	233.00
CL1545F	14 1/2"	8 1/4"	9 1/4"	3 1/2"	16 1/2	80 lbs.	251.00
CL1545H	16"	9 3/8"	11 1/2"	3 1/2"	16 1/2	100 lbs.	281.00
CL1545H	16-24"	18 3/4"	11 1/2"	3 1/2"	16 1/2	100 lbs.	281.00

METRIC TAPER ATTACHMENT with metric graduations can be supplied for any size or type of South Bend Lathe. Write for information.

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

Catalog Number	Size Lathe	Catalog Number	Size Lathe
CL2680NKME	9" & 10-K	CL2680FMME	14 1/2"
CL2680RME	10"	CL2680HME	16" & 16-24"
CL2680TME	13"		



A PLAIN MILLING ARBOR for milling cutters with 1-inch hole. Has No. 3 Morse taper shank, nut and spacing collars. CE109. Plain Arbor. Ship. wt. 3 lbs. **\$10.15**

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

Cat. No.	Face Width	O.D.	Price	Cat. No.	Face Width	O.D.	Price
CE3920	3/16"	2 1/2"	\$4.15	CE3924	7/16"	2 1/2"	\$6.50
CE3921	1/4"	2 1/2"	5.45	CE3925	1/2"	2 1/2"	6.80
CE3922	3/8"	2 1/2"	5.70	CE3926	5/8"	2 1/2"	7.45
CE3923	3/8"	2 1/2"	6.10	CE3927	3/4"	2 1/2"	8.00

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

Cat. No.	Face Width	O.D.	Price	Cat. No.	Face Width	O.D.	Price
CE3930	1/4"	3"	\$ 8.65	CE3934	1/2"	3"	\$10.65
CE3931	3/8"	3"	9.15	CE3935	3/4"	4"	17.75
CE3932	3/8"	3"	9.60	CE3936	3/8"	4"	19.25
CE3933	7/16"	3"	10.10				

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

Cat. No.	Dia. Mill	Morse Taper	Price	Cat. No.	Dia. Mill	Morse Taper	Price
CE3893	1/2"	No. 2	\$6.07	CE3808	3/4"	No. 3	\$ 8.91
CE3894	3/4"	No. 2	6.23	CE3809	7/8"	No. 3	8.91
CE3895	3/4"	No. 2	6.23	CE3810	1"	No. 3	9.27
CE3896	7/8"	No. 2	7.24	CE3811	1 1/8"	No. 3	11.08
CE3897	1"	No. 2	8.38	CE3812	1 1/4"	No. 3	12.64

E THREADED ARBORS for angular milling cutters "F" with threaded holes. Have No. 3 Morse taper shank. Ship. wt. approx. 2 lbs.
CE829. For angular cutters with right-hand thread. **\$4.95**
CE830. For angular cutters with left-hand thread. **\$4.95**

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

Cat. No.	Style	Description	Price
CE66751	1	L.H. thread, L.H. angle	\$9.37
CE66752	2	L.H. thread, R.H. angle	9.37
CE66753	3	R.H. thread, L.H. angle	9.37
CE66754	4	R.H. thread, R.H. angle	9.37

G COLLET CHUCK for holding Woodruff Cutters with 1/2" diameter shank. Has No. 3 Morse taper shank. Ship. 2 lb. CE101. Collet Chuck for Woodruff cutters. **\$9.90**

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

Cat. No.	Cutter Dia.	Cutter Face	Price	Cat. No.	Cutter Dia.	Cutter Face	Price
CE3940	1/2"	1/16"	\$3.55	CE3948	1"	1/4"	\$4.80
CE3941	1/2"	1/8"	3.55	CE3949	1"	3/8"	5.05
CE3942	3/8"	1/8"	3.55	CE3950	1 1/8"	3/8"	5.30
CE3943	3/4"	1/8"	3.90	CE3951	1 1/8"	1/4"	5.30
CE3944	3/4"	3/16"	3.90	CE3952	1 1/8"	3/8"	5.55
CE3945	7/8"	3/16"	4.30	CE3953	1 1/4"	3/8"	5.80
CE3946	7/8"	1/4"	4.30	CE3954	1 1/4"	1/4"	5.80
CE3947	1"	3/16"	4.80	CE3955	1 1/4"	3/8"	6.20

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

Cat. No.	Dia. of Mill	Dia. of Shank	Length of Flutes	No. of Flutes	Whole Length	Price
MIL7031	3/32"	3/16"	3/8"	4	2 1/4"	\$2.32
MIL7032	1/8"	3/16"	3/8"	4	2 1/4"	2.32
MIL7033	3/32"	3/16"	7/16"	4	2 1/4"	2.32
MIL7034	3/16"	3/16"	1/2"	4	2 1/4"	2.32

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

Cat. No.	Dia. of Mill	Dia. of Shank	Length of Flutes	No. of Flutes	Whole Length	Price
MIL7023	1/8"	3/16"	3/8"	4	2 3/16"	\$1.80
MIL7024	1/4"	3/16"	3/8"	4	2 7/16"	1.80
MIL7025	3/8"	3/16"	3/8"	4	2 1/2"	1.80
MIL7026	1/2"	1/2"	1 1/4"	4	3 1/4"	2.62
MIL7027	5/8"	5/8"	1 5/8"	4	3 3/4"	3.68
MIL7028	3/4"	5/8"	1 3/8"	4	3 3/4"	4.13
MIL7029	7/8"	7/8"	1 3/8"	4	4 1/8"	5.18
MIL7030	1"	1"	2"	4	4 1/2"	6.15

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

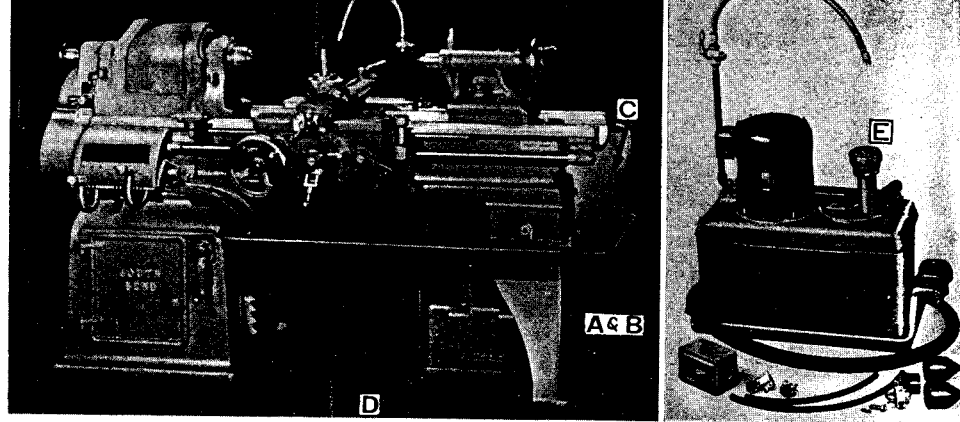
CL2408NK. Offset Base for milling attachment. Fits 9" and 10-K lathes only. Ship. wt. 5 lbs. Price **\$4.10**

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

CL2224. Hinged Wooden Chest for No. CL2680NK Milling and Keyway Cutting Attachment. Shipping wt. 4 lbs. Price **\$8.50**

COOLANT EQUIPMENT

OIL PANS SPLASH PANS CHIP PANS



Oil Pans, Splash Pans, and Chip Pans for South Bend Lathes are made of heavy gauge sheet steel with welded corners and roll rim. Pans should be specified at the time the lathe is ordered so that they can be properly fitted at the factory. See page 30 for collet splash guard.

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

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

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

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

COOLANT PUMP AND RESERVOIR FITTED TO 10"-1 1/4" COLLET OR LARGER FLOOR LEG LATHES, NO. 2-H, 13" OR 10" FLOOR LEG TURRET LATHES

Cat. No.	Current	Phase	Cycle	Voltage	Price
CL503C	A.C.	3	50	208-220	\$191.00
CL503D	A.C.	3	60	208-220	191.00
CL503E	A.C.	3	50	440	191.00
CL503F	A.C.	3	60	440	191.00
CL503G	A.C.	3	50	550	191.00
CL503H	A.C.	3	60	550	191.00
CL502C	A.C.	2	50	208-220	191.00
CL502D	A.C.	2	60	208-220	191.00
CL501A	A.C.	1	50	115	173.00
CL501B	A.C.	1	60	115	171.00
CL501C	A.C.	1	50	230	175.00
CL501D	A.C.	1	60	230	173.00

PANS FOR FLOOR LEG SOUTH BEND LATHES

Size Lathe	A Chip Pans		B Oil Pans		C Splash Pans	
	Cat. No.	Price	Cat. No.	Price	Cat. No.	Price
9" and 10-K U.M.D.					CL2057Z	\$19.75
10" x 3'	CL1987Y	\$ 41.00	CL2020Y	\$ 89.50	CL2059Z	24.00
10" x 3 1/2'	CL1987Z	42.50	CL2020Z	92.50	CL2059Z	24.00
10" Turret					CL2059Z	24.00
10" x 4'	CL1987A	44.00	CL2020A	93.50	CL2059R	29.50
10" x 4 1/2'	CL1987R	45.00	CL2020R	95.00	CL2059R	29.50
13" x 4'	CL1989A	55.50	CL2022A	109.00	CL2060A	32.50
13" x 5'	CL1989B	58.50	CL2022B	112.00	CL2060B	35.50
13" x 6'	CL1989C	61.00	CL2022C	115.00	CL2060C	37.00
13" x 7'	CL1989D	64.00	CL2022D	121.00	CL2060D	38.50
14 1/2" x 5'	CL1990B	58.50	CL2023B	119.50	CL2062B	35.50
14 1/2" x 6'	CL1990C	65.00	CL2023C	126.50	CL2062C	41.00
14 1/2" x 7'	CL1990D	72.50	CL2023D	132.50	CL2062D	41.00
14 1/2" x 8'	CL1990E	79.50	CL2023E	139.00	CL2062H	50.00
16" x 6'	CL1991C	67.00	CL2024C	128.00	CL2062C	41.00
16" x 7'	CL1991D	75.00	CL2024D	136.50	CL2062D	41.00
16" x 8'	CL1991E	83.50	CL2024E	145.00	CL2062H	50.00
16" x 10'	CL1991G	101.00	CL2024G	162.00	CL2062H	50.00
16" x 12'	CL1991H	128.00	CL2024H	188.00	CL2062H	50.00
16" x 14'	CL1991K	167.00	CL2024K	227.00	CL2062H	50.00
16-24" x 6'	CL1991C	67.00	CL2064C	147.50	CL2062C	41.00
16-24" x 7'	CL1991D	75.00	CL2064D	156.00	CL2062D	41.00
16-24" x 8'	CL1991E	83.50	CL2064E	164.50	CL2062H	50.00
16-24" x 10'	CL1991G	101.00	CL2064G	181.50	CL2062H	50.00
16-24" x 12'	CL1991H	128.00	CL2064H	207.50	CL2062H	50.00
16-24" x 14'	CL1991K	167.00	CL2064K	247.00	CL2062H	50.00
2-H x 6'					CL2062C	41.00
2-H x 7'					CL2062D	41.00

COOLANT PUMP AND RESERVOIR FITTED TO 9", OR 10-K U.M.D. LATHES, OR 10" BENCH LATHES ON STEEL BENCH

Cat. No.	Current	Phase	Cycle	Voltage	Price
CL513C	A.C.	3	50	208-220	\$191.00
CL513D	A.C.	3	60	208-220	191.00
CL513E	A.C.	3	50	440	191.00
CL513F	A.C.	3	60	440	191.00
CL513G	A.C.	3	50	550	191.00
CL513H	A.C.	3	60	550	191.00
CL512C	A.C.	2	50	208-220	191.00
CL512D	A.C.	2	60	208-220	191.00
CL511A	A.C.	1	50	115	173.00
CL511B	A.C.	1	60	115	171.00
CL511C	A.C.	1	50	230	175.00
CL511D	A.C.	1	60	230	173.00

When ordered for 9" or 10-K 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 turret lathes.

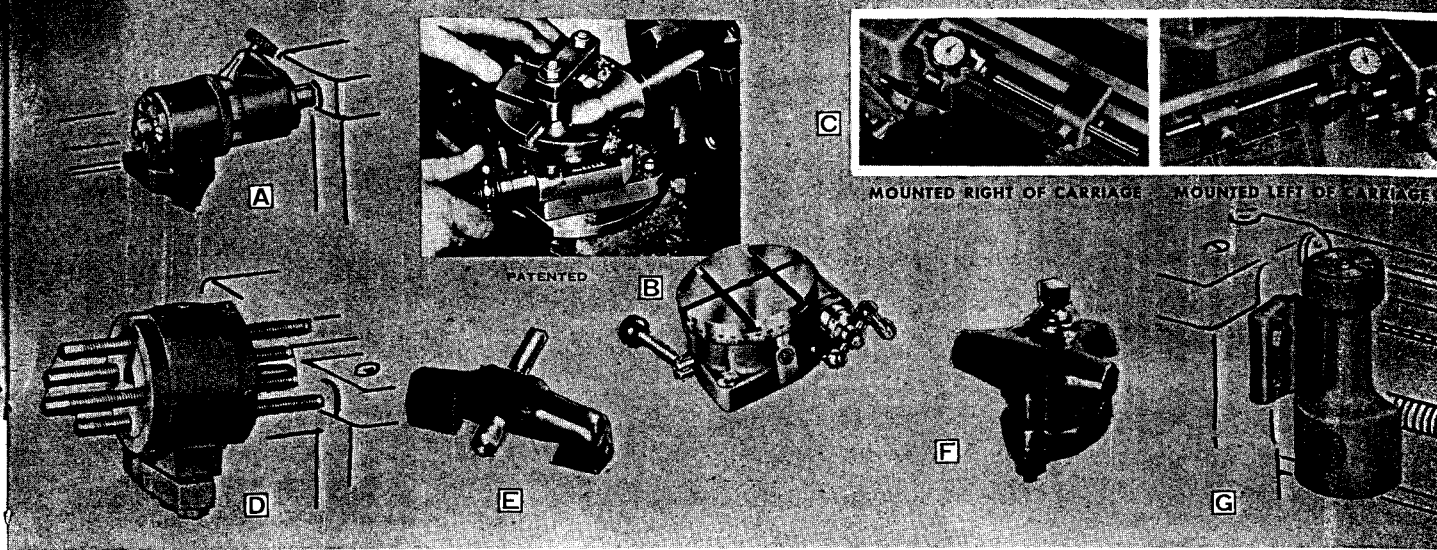
CL2195NK—Making chip pan oil tight on 9" or 10-K Lathe. Price f.o.b. factory \$35.50
 CL2195R—Making chip pan oil tight on 10" Lathe. Price \$35.50

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

Cat. No.	Current	Phase	Cycle	Voltage	Price
CE2003C	A.C.	3	50	208-220	\$166.50
CE2003D	A.C.	3	60	208-220	166.50
CE2003E	A.C.	3	50	440	166.50
CE2003F	A.C.	3	60	440	166.50
CE2003G	A.C.	3	50	550	166.50
CE2003H	A.C.	3	60	550	166.50
CE2002C	A.C.	2	50	208-220	166.50
CE2002D	A.C.	2	60	208-220	166.50
CE2001A	A.C.	1	50	115	150.25
CE2001B	A.C.	1	60	115	147.50
CE2001C	A.C.	1	50	230	152.00
CE2001D	A.C.	1	60	230	150.00

PANS FOR SOUTH BEND BENCH LATHES

Size Lathe	A Chip Pans		B Splash Pans	
	Cat. No.	Price	Cat. No.	Price
9" and 10-K x 3'	CL1297Y	\$32.50	CL2056Y	\$17.00
9" and 10-K x 3 1/2'	CL1297Z	35.75	CL2057Z	19.75
9" and 10-K x 4'	CL1297A	38.50	CL2057Z	19.75
9" and 10-K x 4 1/2'	CL1297R	39.75	CL2057R	19.75
10" x 3'	CL1377Y	36.00	CL2057Z	19.75
10" x 3 1/2'	CL1377Z	38.00	CL2057Z	19.75
10" Turret			CL2057Z	19.75
10" x 4'	CL1377A	41.00	CL2057R	19.75
10" x 4 1/2'	CL1377R	42.50	CL2057R	19.75



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

Size Lathe	Ship. Wt.	English Graduations		Metric Graduations	
		Cat. No.	Price	Cat. No.	Price
9" & 10-K 10" 13"	2 lbs.	CL968NK	\$22.95	CL968NKME	\$22.95
	4 lbs.	CL968R	23.95	CL968RME	23.95
	4 lbs.	CL968T	27.00	CL968TME	27.00
14½", 16", 16-24", & 2-H	7 lbs.	CL968FH	28.00	CL968FHME	28.00

B INDEXING TABLE. Can be mounted on compound rest base of lathe for machining spherical surfaces and concave or convex radial surfaces. Also for mounting small work on the milling machine, drill press, or shaper. Used for accurately spacing bolt holes, indexing clutch teeth, machining square, hexagonal or octagonal shapes, milling circular grooves or T-slots for clamping work. Edge of table is graduated 360°. Table is turned by worm gearing having graduated collar and ball crank. Thumb screw on front of ball crank locks graduated collar in any position. Each graduation indicates table movement of 3 minutes. One complete revolution of the ball crank turns the table 5 degrees. Clamping device is provided for locking table in any position. Top of table is precision ground. Base has two bolt holes for clamping to machine table. Price includes eight clamping bolts with nuts and washers.

CE9144. Indexing Table. Ship. wt. 14 lbs. Price..... **\$58.80**

C DIAL INDICATOR CARRIAGE STOP. Repetitive facing, shouldering or grooving operations can be performed with speed and precision on lathes equipped with a dial indicator type carriage stop. Position of carriage is clearly shown on face of dial which has a total movement of .250". Indicator support bar has ½" adjustment in bracket.

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

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

CL2795RT. Dial Indicator Carriage Stop for 10" or 13" Lathe. Shipping wt. 10 lbs. Price..... **\$41.00**

CL2795FH. Dial Indicator Carriage Stop for 14½", 16", 16-24" or 2-H Lathe. Ship. wt. 12 lbs. Price..... **\$44.50**

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

Catalog Number	Size Lathe	Shipping Weight	Price
CL2185NK	9" & 10-K	6 lbs.	\$25.00
CL2185R	10"	6 lbs.	26.00
CL2185T	13"	6 lbs.	27.00
CL2185FH	14½", 16", 16-24", & 2-H	10 lbs.	30.00

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

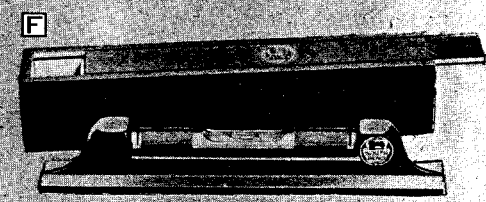
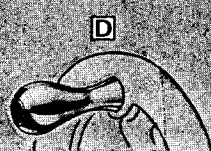
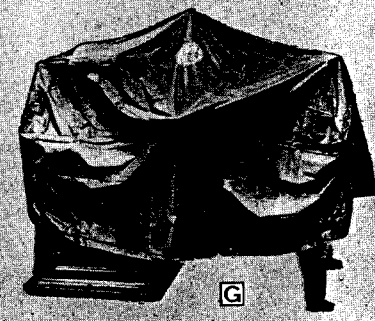
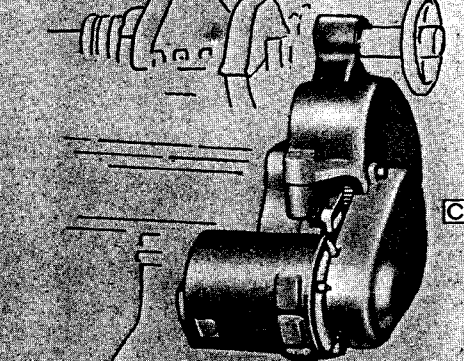
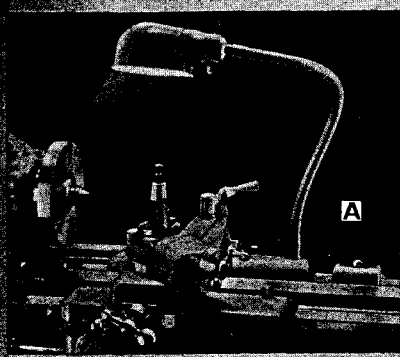
Catalog Number	Size Lathe	Shipping Weight	Price
CL2250NK	9" & 10-K	½ lb.	\$3.40
CL2250R	10"	½ lb.	3.95
CL2250T	13"	1 lb.	4.75
CL2250F	14½"	1 lb.	5.50
CL2250H	16" & 16-24"	2 lbs.	6.25

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

Catalog Number	Size Lathe	Shipping Weight	Price
CL758NK	9" & 10-K	2 lbs.	\$4.50
CL758R	10"	4 lbs.	5.00
CL758T	13"	4 lbs.	6.00
CL758FH	14½", 16", 16-24", & 2-H	7 lbs.	7.50

G THREAD INDICATOR. Eliminates reversing the lathe spindle when cutting threads. Dial is numbered and graduated to show when to close half-nuts on lead screw to catch the thread on each successive cut, after returning carriage to the starting point. For English pitches only. See page 59 for metric thread indicator dial.

Catalog Number	Size Lathe	Shipping Weight	Price
CL810NK	9" & 10-K	2 lbs.	\$10.95
CL810R	10"	3 lbs.	17.50
CL810TH	13", 14½", 16", 16-24", 2-H	5 lbs.	21.00



A WORK LIGHT. For clear vision without eyestrain, equip all your lathes (and other machine tools) with this South Bend Work Light. It has a clamp for attaching to the lathe bed, or may be permanently installed by drilling and tapping the saddle for the threaded end of the flexible support as shown in illustration. When attached to the lathe carriage in this way it travels with the cutting tool. When ordered with the lathe, the saddle will be drilled and tapped for the work light at no extra charge.

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

B KOOL-SHIELD. Nylon guard snaps over work light reflector and is held in position by a small spring. Permits safe use of 100 w. lamp in work light.

CE2816. Kool-Shield. Ship. wt. 1/2 lb. **\$1.20**

C INDEPENDENT POWER FEED. This attachment is especially desirable for manufacturing dental amalgam, diamond turning and diamond boring operations, and other work requiring extremely smooth, fine feeds, or high spindle speeds. Equipment includes a special high-speed drive which provides spindle speeds ranging from 55 to 2400 r.p.m., and a separate motor with gearing for driving the power carriage feeds independent of the lathe spindle speeds. The rate of feed is determined by the speed of the lathe spindle. For example, when the spindle revolves at 2400 r.p.m., the power longitudinal feeds range from .00015" to .018" per revolution of the spindle, approximately. The independent power feed may be disconnected and the regular power carriage feeds used for coarser feeds or for cutting screw threads. This attachment should be ordered with the lathe and fitted at the factory.

Independent Power Feed Attachment for 10-Inch Lathe

Catalog Number	Motor Specifications				Price
	Current	Phase	Cycle	Voltage	
CL333DR	A.C.	3	60	220	\$175.00
CL333FR	A.C.	3	60	440	185.00
CL331BR	A.C.	1	60	115	145.00
CL331DP	A.C.	1	60	220	157.00

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

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

CL2605NK. Swiveling Machine Handles for apron handwheel, cross-feed knob, and tailstock handwheel in lieu of regular machine handles on 9" or 10-K Lathes. Price **\$2.15**

HOW TO GET PROMPT DELIVERY

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

E LATHE MANDRELS. For machining work mounted between lathe centers. Made of steel and properly carburized, hardened and ground for maximum durability. Large center holes provide substantial bearings on centers. Mandrels taper .0006" per foot and are slightly undersize at small end for easy starting in standard holes. Flat for lathe dog is milled on each end. Nominal size of each mandrel is stamped on large end.

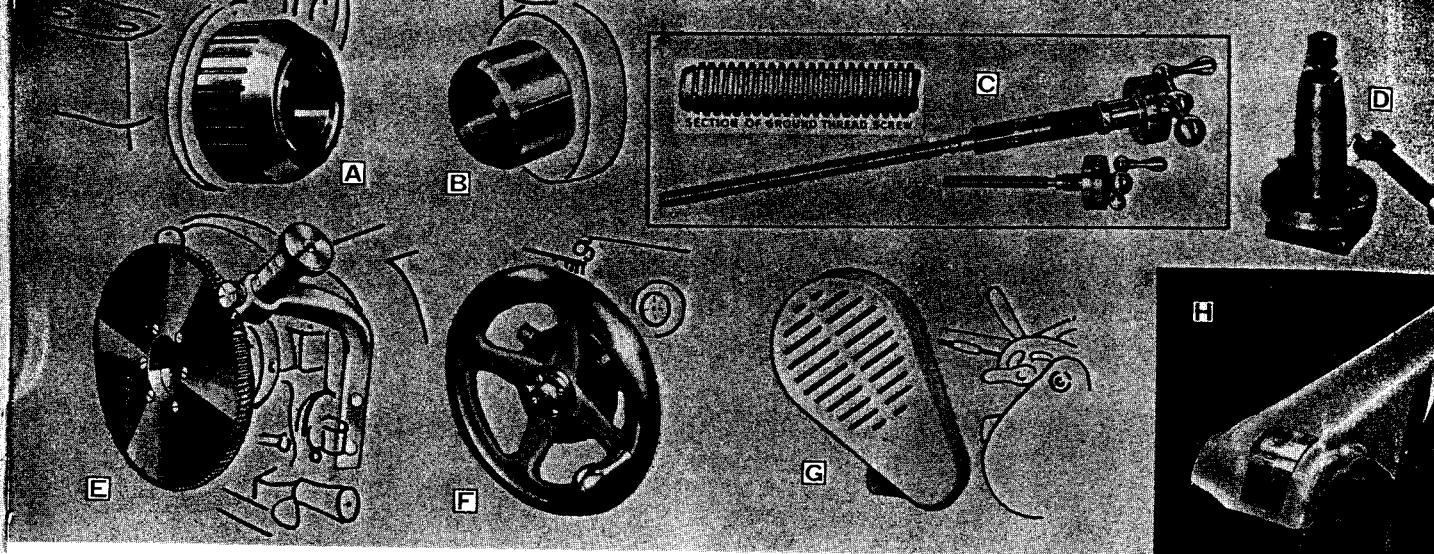
Catalog Number	Diameter Inches	Total Length, In.	Ship. Wt. Pounds	Price
CE3620	1/4	3 3/4	1	\$2.75
CE3621	3/8	4	1	3.00
CE3622	1/2	4 1/4	1	3.30
CE3623	5/8	4 1/2	1	3.60
CE3624	3/4	5	1	3.80
CE3625	7/8	5 1/4	1	3.85
CE3626	1	5 1/2	1	3.95
CE3627	1 1/8	5 3/4	2	4.15
CE3628	1 1/4	6	2	4.30
CE3629	1 3/8	6 1/4	2	4.45
CE3630	1 1/2	6 1/2	2	4.65
CE3631	1 5/8	6 3/4	3	4.80
CE3632	1 3/4	7	3	4.95

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

CE2218. Precision Level. Packed in wooden case. Shipping weight 5 lbs. Price f.o.b. factory **\$13.50**

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

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



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

Catalog Number	Thread Size	Size Lathe	Ship. Weight	Price
CL3515NK	1½"–8	9" & 10-K	2 lbs.	\$3.45
CL3515R	1¾"–8	10"-1¼" Collet	2 lbs.	4.15
CL3515LT	2¼"–8	10"-1¼" Collet & 13"	3 lbs.	4.50
CL3515FH	2¾"–6	14½", 16", 16-24" & 2-H	4 lbs.	6.75

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

Size Lathe	In Lieu of Regular Tailstock Spindle		As an Extra		
	Cat. No.	Price	Cat. No.	Ship. Wt.	Price
10"	CL3870R	\$5.75	CL3875R	2 lbs.	\$15.00
13"	CL3870T	6.20	CL3875T	4 lbs.	17.50
14½"	CL3870F	7.35	CL3875F	5 lbs.	20.20
16" & 16-24"	CL3870H	8.20	CL3875H	7 lbs.	23.00

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

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

Regular Cross-Feed			Taper Attachment Cross-Feed		
Cat. No.	Size Lathe	Price	Cat. No.	Size Lathe	Price
CL2032L	10"	\$14.00	CL2198L	10"	\$15.90
CL2032T	13"	24.00	CL2198T	13"	26.75
CL2032F	14½"	26.00	CL2198F	14½"	29.20
CL2032H	16" & 16-24"	26.75	CL2198H	16" & 16-24"	29.90

CL2222T. Hardened and ground thread cross-feed screw in lieu of regular screw for 13" lathe screw feed double tool cross slide. \$18.65
 CL2222H. Hardened and ground thread cross-feed screw in lieu of regular screw for 16" lathe or 2-H turret lathe screw feed double tool cross slide. \$20.75

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

Catalog Number	Size Lathe	Dimensions in Inches			Ship. Wt.	Price
		Dia.	Opening	Block		
CE2450NK	9" & 10-K	5¾"	1½" x ¾"	¼" x 1¼" x 1¾"	2 lbs.	\$6.50
CE2450R	10"	3½"	1½" x 1"	¼" x 1¾" x 1½"	2 lbs.	9.50
CE2450T	13"	1¾"	1½" x 1¼"	¾" x 1¾" x 1¾"	3 lbs.	12.00
CE2450F	14½"	1½"	2½" x 1¾"	½" x 2" x 2¾"	4 lbs.	15.50
CE2450H	16"	1½"	2½" x 1¾"	½" x 2¼" x 2½"	5 lbs.	16.50

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

CL2505L. Indexing Attachment for 10"-1¼" Collet Lathe. Shipping weight 30 lbs. Price f.o.b. factory \$89.00

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

Size Lathe	In Lieu of Regular Handwheel		Extra, in Addition to Regular Handwheel		
	Cat. No.	Price	Cat. No.	Ship. Wt.	Price
13" or 14½" 16", 16-24" or 2-H	CL3305TF	\$38.00	CL3307TF	12 lbs.	\$48.50
	CL3305H	39.25	CL3307H	15 lbs.	50.00

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

CL2885. Motor Belt Guard for 9" Horizontal Motor Drive with ¼ h.p. or ½ h.p. NEMA No. 56 frame motor. Ship. wt. 26 lbs. Price \$13.15

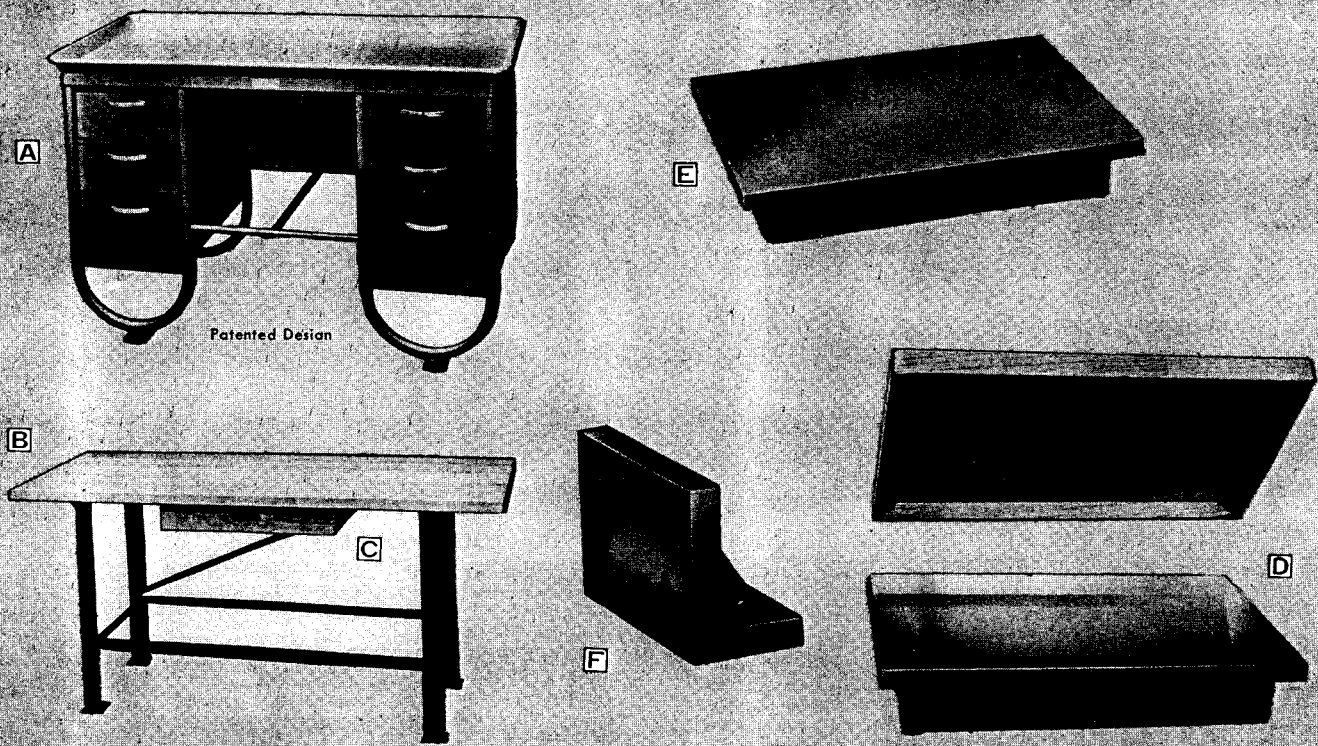
CL2886. Motor Belt Guard for 9" Horizontal Motor Drive with ½ h.p. NEMA No. 66 frame motor. Ship. wt. 27 lbs. Price \$15.50

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

CL2882NK. Belt Guard for 9" & 10-K HMD lathes. With instructions for installing. Price \$19.50

CL2883N. Belt Guard for 9" HMD lathe when ordered with lathe. With instructions for installing. Price \$15.75

CL2883K. Belt Guard for 10-K HMD lathe when ordered with lathe. With instructions for installing. Price \$15.75



A TUBULAR STEEL BENCH. Designed especially for 9" and 10-K South Bend 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 5/8" 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 10½" wide, 15" long, 5½" 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, 51½" long, for 9" and 10-K Horizontal Motor Driven Bench Lathes with 3' or 3½' bed lengths. Shipping weight 336 lbs. **\$192.50**

B ANGLE STEEL BENCH. Heavy angle steel construction, 29¾" or 34" high, with hardwood top 26" x 60" x 1¾" thick. For 9" and 10-K Horizontal Motor Driven Bench Lathes, any bed length. This also makes an ideal work bench for general shop use. Bench top is edge glued and has oil finish. Price does not include drawer, which is listed separately below.

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

CE1780. Steel Bench 29¾" high with wood top (less drawer). Shipping weight, 84 lbs. Price f.o.b. factory **\$44.25**

CE1849. Same as above but 34" high **\$46.25**

C DRAWER FOR BENCH. CE1780D. Drawer for angle steel bench, 20½" wide, 14" long, 3¾" deep. Shipping weight 9 lbs. Price f.o.b. factory **\$8.60**

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

Top surface is precision ground and is well supported by heavy ribs on back. Wooden cover is supplied to protect ground surface. Edges are machined and under side of edges is finished all around. Size 12" x 17" x 3" with top ¾" thick. Approximate net weight 64 pounds.

CE2215. Surface Plate. Shipping weight 75 lbs. Price **\$42.50**

E BENCH PLATE. This is a substantial economically priced bench plate intended for work that does not require the true flat surface of the precision ground surface plate described above. Size 12" x 17" x 3" with top ¾" thick. Top surface has commercial ground finish. Edges are unfinished.

CE2219. Bench Plate. Shipping weight 75 lbs. Price **\$27.00**

F ANGLE PLATE. This is a heavy cast iron angle plate suitable for clamping work on the face plate or compound rest base of the lathe. Also for setting up work on the shaper, drill press, milling machine, etc. Size 4½" x 3" x 2". Has six bolt holes.

CE9640. Angle Plate. Shipping weight 4 lbs. Price **\$9.50**



A FLAT LEATHER BELTS. Cord reinforced flat leather belts are recommended for South Bend Lathes because they have minimum stretch due to variations in temperature and humidity. Belts are skived on both ends and cement for joining skived ends is included with each belt. Shipping weight each approximately 1/2 lb.

Type of Drive	Cat. No.	Price	Type of Drive	Cat. No.	Price
9" H.M.D.	CE3190N	\$8.25	13" U.M.D. 3-Step	CE3194T	\$18.50
10-K H.M.D.	CE3191K	8.00	14 1/2" U.M.D. 4-Step	CE3193F	17.50
9" U.M.D.	CE3192N	8.75	14 1/2" U.M.D. 3-Step	CE3194F	21.75
10-K U.M.D.	CE3192K	8.75	16" U.M.D. 4-Step	CE3193H	20.25
10" U.M.D. Bench	CE3192R	10.45	16" U.M.D. 3-Step	CE3194H	28.00
10" U.M.D. Floor	CE3193R	11.00	16-24" U.M.D. 4-Step	CE3193V	23.75
13" U.M.D. 4-Step	CE3193T	14.75	16-24" U.M.D. 3-Step 2-H	CE3194V	30.00
				CE3194H	28.00

CE2323N. Oak tan single ply flat leather belt without cord reinforcing for 9" Horizontal Motor Drive only. Has square ends and lace for joining. Price f.o.b. factory.....\$2.00

B BELT SPLICING CEMENT. Cement for gluing endless leather belts with lapped joint. Comes in 1 oz. glass bottles. CE1886. Price.....\$0.75

C BELT SPLICING CLAMPS. For gluing skived ends of cone pulley belts or other flat leather belts. Made of heavy steel plate with guide for aligning edges of belt ends.

Catalog Number	Maximum Size of Belt			Ship. Wt.	Price f.o.b. Factory
	Width	Thickness	Skive Length		
CE1898	1 3/4"	1/2"	6 3/4"	4 lbs.	\$3.40
CE1899	3"	1/2"	6 3/4"	5 lbs.	4.45

D LUBRICATING OIL. Nothing is more important to the satisfactory operation and life of fine machinery than correct lubrication. The lubricating oils listed below have been thoroughly tested in our research laboratory and are highly recommended. It is essential that the correct type of oil be used for the lathe spindle, lathe apron and shaper oil reservoirs and general lubrication. A supply of each kind of oil should be kept on hand and used as needed. The Saybolt viscosity of the various oils is indicated in seconds at 100°F.

Cat. No.	Viscosity	Quantity	Ship. Wt.	Price
Oil for General Lubrication of Lathes and Other Machinery				
CE1603	240-500	1 quart	3 lbs.	\$0.95
CE1906	240-500	12 quarts	31 lbs.	9.95
CE2019	240-500	Gal. can	11 lbs.	3.20
Oil for Spindle Bearings of South Bend Lathes				
CE1600	100	1 quart	3 lbs.	\$0.95
CE1905	100	12 quarts	31 lbs.	9.95
CE2017	100	Gal. can	11 lbs.	3.20
Oil for Lathe Apron Oil Reservoir and Shaper Oil Reservoir				
CE1602	150-240	1 quart	3 lbs.	\$0.95
CE1904	150-240	12 quarts	31 lbs.	9.95
CE2018	150-240	Gal. can	11 lbs.	3.20

BED WAY LUBRICANT. A specially refined lubricant of superior quality for bed ways and other flat bearing surfaces. CE1671. Ship. wt. 3 lbs. Twelve ounce can. Price.....\$0.60

E PUMP OIL CAN. Suitable for lubricating all types of machinery. Has large non-clogging pump tube, no leathers to crimp or dry out. Lower half of body is in one-piece with no seam to open up or wear through. Cone tipped spout seats in oil hole, forces oil into bearings and prevents it from spilling. Hook on tip is provided for opening spring cap oil cups. Holds 7/8 pint and has 6" spout with twin-tipped vent. CE3575. Pump Oil Can. Shipping weight 1 pound. Price.....\$2.20

F GRAY FINISH ENAMEL. For refinishing and touching up South Bend Lathes, Drill Presses, Shapers, and other machine tools. Made in two types, light gray high gloss for current models and light gray semi-gloss to match older models of lathes. Cannot be shipped by parcel post.

Catalog Number		Size Can	Number of Cans	Ship. Wt.	Price f.o.b. Factory
Light Gray High Gloss	Light Gray Semi-Gloss				
CE3421	CE2640	Pint	1	2 lbs.	\$1.40
CE3422	CE2641	Quart	1	4 lbs.	2.10
CE3423	CE2642	Gallon	1	12 lbs.	7.55

G HOW TO RUN A LATHE. This is a complete reference book and manual on the care and operation of the backgeared 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. Printed in English, Spanish, and Portuguese languages.

Now in its 54th edition, this book has been improved and perfected by suggestions, criticisms, and ideas that have been submitted by hundreds of practical shop men. The latest shop practices and methods used in modern industry are accurately described. Contains 128 pages, 5 1/8" x 7 7/8" and more than 360 illustrations.

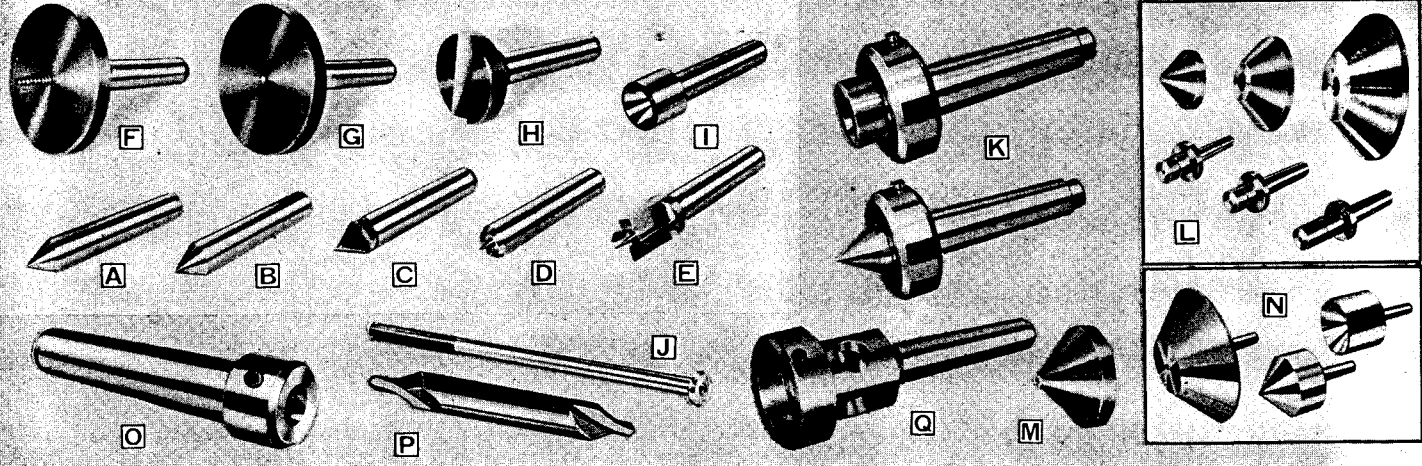
PARTIAL LIST OF CONTENTS

History of the Lathe	Machining Work Between Centers
Erecting and Leveling the Lathe	Chuck Work
Operation of Lathe Controls	Taper Turning and Boring
Lathe Tools and Their Application	Drilling, Reaming, and Tapping
How to Take Accurate Measurements	Cutting Screw Threads
	Special Classes of Work

Catalog Number	Description	Price Postpaid
CE3450	"How to Run a Lathe", English.....	\$0.50
CE3452	"How to Run a Lathe", Spanish.....	.50
CE3454	"How to Run a Lathe", Portuguese.....	.50

H 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.

CE700. Machinery's Handbook. Price f.o.b. factory.....\$9.00



LATHE CENTERS AND DRILL PADS

Description	No. 2 Morse Taper Shank			No. 3 Morse Taper Shank		
	Cat. No.	Ship. Wt.	Price	Cat. No.	Ship. Wt.	Price
A—60° Center	CE2401	1 lb.	\$3.15	CE2402	2 lbs.	\$4.15
B—60° Carbide Center	CE1889	1 lb.	6.30	CE1890	2 lbs.	11.20
C—Half Center	CE2424	1 lb.	3.15	CE2425	2 lbs.	4.15
D—Cup Center	CE2422	1 lb.	2.85	CE2423	2 lbs.	3.85
E—Spur Center	CE2416	2 lbs.	4.15	CE2417	5 lbs.	4.55
F—Screw Center	CE2413	3 lbs.	4.15	CE2414	4 lbs.	4.55
G—Drill Pad	CE2396	3 lbs.	3.50	CE2397	4 lbs.	3.85
H—Crotch Center	CE2398	2 lbs.	3.50	CE2399	3 lbs.	4.55
I—60° Hollow Center	CE1896	2 lbs.	3.50	CE1897	2 lbs.	4.45

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

Catalog Number	Size Lathe	Outside Dia.	Total Length	Ship. Weight	Price
CE1475NK	9" & 10-K	3/4"	16"	4 lbs.	\$1.65
CE1475R	10"-1 1/4" Collet	1"	17 3/16"	5 lbs.	2.10
CE1475L	10"-1 1/4" Collet	1 3/8"	17 3/16"	7 lbs.	2.45
CE1475QH	13", 14 1/2", 16", 16-24", & 2-H	1 3/8"	28 1/16"	7 lbs.	3.85

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

Catalog Number	Style of Center	Morse Taper	Shipping Weight	Price
CE3900	60° Point	No. 2	3 lbs.	\$18.20
CE3901	60° Point	No. 3	5 lbs.	21.55
CE3903	60° Hollow	No. 2	3 lbs.	18.20
CE3904	60° Hollow	No. 3	5 lbs.	21.55

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

PIPE CENTERS

Cat. No.	Takes Pipe	Requires Shank	Shipping Weight	Price
CE2160	1/2" to 3"	CE2172	4 lbs.	\$ 6.30
CE2161	3" to 5"	CE2174	6 lbs.	8.55
CE2162	5" to 8"	CE2173	17 lbs.	12.85

PIPE CENTER SHANKS

Cat. No.	Shank Taper	Takes Centers	Shipping Weight	Price
CE2172	No. 2	CE2160 & CE2161	2 lbs.	\$ 5.40
CE2174	No. 3	CE2160 & CE2161	3 lbs.	6.25
CE2173	No. 3	CE2162	4 lbs.	10.50

M HARDENED PIPE CENTER. Takes pipe 1/2" to 3". Same as CE2160, but made of heat-treated and hardened steel. CE2163. Shipping weight 4 lbs. \$7.35

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

Catalog Number	Style of Center	Capacity	Morse Taper	Shipping Weight	Price
CE2445	90° Point	7/32" to 3/8"	No. 2	9 lbs.	\$41.00
CE2446	90° Point	7/32" to 3/8"	No. 3	9 lbs.	43.00
CE2449	90° Point	3/8" to 8/16"	No. 3	20 lbs.	59.50
CE2447	90° Hollow	7/16" to 3/16"	No. 2	8 lbs.	41.00
CE2448	90° Hollow	7/16" to 3/16"	No. 3	8 lbs.	43.00

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

Catalog Number	Taper Shank	Diameter Will Hold	Shipping Weight	Price
CE2338	No. 2	1/8"	1 lb.	\$3.50
CE3029	No. 2	3/16"	1 lb.	3.55
CE2340	No. 2	1/4"	1 lb.	3.50
CE2339	No. 2	1/4"	1 lb.	3.50
CE3030	No. 2	1/4"	1 lb.	3.55
CE2341	No. 2	.302"	1 lb.	3.50
CE3031	No. 2	3/16"	1 lb.	3.55
CE2342	No. 2	3/16"	1 lb.	3.50
CE2346	No. 3	1/8"	2 lbs.	4.45
CE3032	No. 3	3/16"	2 lbs.	4.50
CE2343	No. 3	1/4"	2 lbs.	4.45
CE2347	No. 3	1/4"	2 lbs.	4.45
CE3033	No. 3	1/4"	2 lbs.	4.50
CE2344	No. 3	.302"	2 lbs.	4.45
CE3034	No. 3	3/16"	2 lbs.	4.50
CE2345	No. 3	3/16"	2 lbs.	4.45

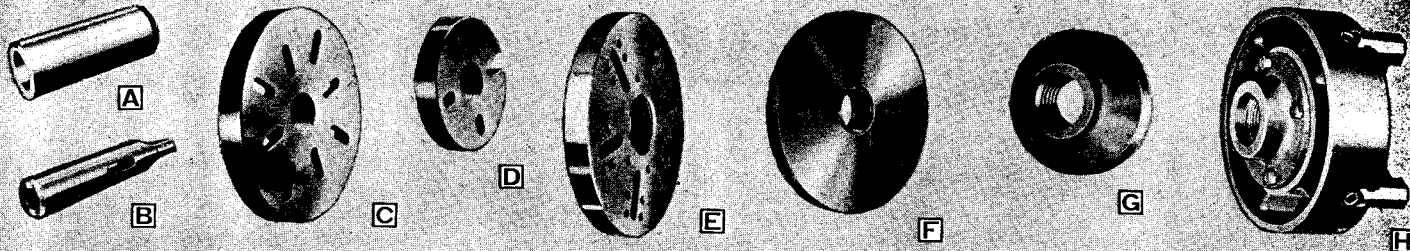
P COMBINATION CENTER DRILL AND COUNTERSINKS. For drilling center hole and countersinking 60° angle for lathe center. Made of high speed tool steel.

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

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

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

Catalog Number	Takes Dies	Taper Shank	Shipping Weight	Price
CE1829	1" diameter	No. 2	2 lbs.	\$5.55
CE1834	1" diameter	No. 3	3 lbs.	6.30
CE1838	1 1/2" diameter	No. 2	2 lbs.	5.55
CE1839	1 1/2" diameter	No. 3	3 lbs.	6.30



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

Catalog Number	Size Lathe	Taper Inside	Ship. Weight	Price
CL205NK	9" and 10-K	No. 2	1 lb.	\$2.75
CL205R	10"-1 1/16" Collet	No. 2	2 lbs.	3.60
CL205RT	10"-1 1/16" Collet	No. 3	2 lbs.	4.10
CL205L	10"-1 1/16" Collet, 13", 14 1/2", 16", 16-24", and 2-H	No. 2	2 lbs.	3.85
CL205H	10"-1 1/16" Collet, 13", 14 1/2", 16", 16-24", and 2-H	No. 3	2 lbs.	5.20

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

Catalog No.	Morse Taper		Shipping Weight	Price
	Outside	Inside		
CE2525	2	1	8 ozs.	\$1.15
CE2526	3	1	12 ozs.	1.51
CE2527	3	2	12 ozs.	1.51

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

Catalog Number	Size Lathe	Out-side Dia.	Thread	No. of Slots	Ship-ping Weight	Price
CL2180NK	9" and 10-K	7 3/8"	1 1/2"—8	6	8 lbs.	\$10.75
CL2180R	10"-1 1/16" Collet	8 3/8"	1 7/8"—8	6	10 lbs.	13.25
CL2180L	10"-1 1/16" Collet	8 3/8"	2 1/4"—8	6	10 lbs.	18.50
CL2180Q	13"	10 3/4"	2 1/4"—8	8	19 lbs.	19.75
CL2180MH	14 1/2", 16", 16-24", & 2-H	13 1/4"	2 3/8"—6	8	38 lbs.	27.00
CL2180V*	16-24"	22 3/4"	2 3/8"—6	12	96 1/2 lbs.	59.50

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

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

Catalog Number	Size Lathe	Out-side Dia.	Thread	No. of Slots	Ship-ping Weight	Price
CL2175NK	9" and 10-K	5 1/8"	1 1/2"—8	1	4 lbs.	\$ 7.75
CL2175R	10"-1 1/16" Collet	5 3/8"	1 7/8"—8	1	5 lbs.	11.00
CL2175L	10"-1 1/16" Collet	5 3/8"	2 1/4"—8	1	5 lbs.	13.50
CL2175Q	13"	6 3/8"	2 1/4"—8	4	4 lbs.	13.50
CL2175MH	14 1/2", 16", 16-24" & No. 2-H	8 1/8"	2 3/8"—6	4	13 lbs.	19.75

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

Catalog Number	Size Lathe	Out-side Dia.	Spindle Thread	Ship-ping Weight	Price
CL1483NK	9" & 10-K	8 1/2"	1 1/2"—8	13 lbs.	\$13.50
CL1483R	10"-1 1/16" Collet	8 1/2"	1 7/8"—8	13 lbs.	18.75
CL1483LQ	10"-1 1/16" Collet & 13"	8 1/2"	2 1/4"—8	13 lbs.	21.00

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

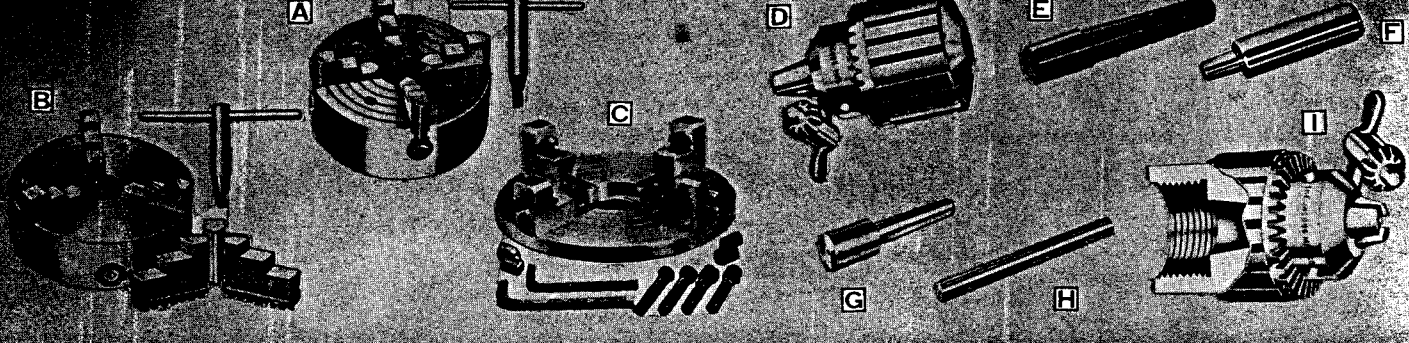
Catalog Number	Size Lathe	Out-side Dia.	Spindle Thread	Ship-ping Weight	Price
CL46NK	9" & 10-K	7 1/2"	1 1/2"—8	9 lbs.	\$ 4.95
CL46R	10"-1 1/16" Collet	9"	1 7/8"—8	14 lbs.	10.00
CL46L	10"-1 1/16" Collet	9"	2 1/4"—8	14 lbs.	11.00
CL46Q	13"	10 1/4"	2 1/4"—8	22 lbs.	12.50
CL46MH	14 1/2", 16", 16-24" & No. 2-H	11 3/4"	2 3/8"—6	29 lbs.	14.00

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

Catalog Number	Size Lathe	Spindle Nose Th'd	O.D. of Plate	Shipping Weight	Price		
CE2703NK	9" and 10-K	1 1/2"—8	3 1/2"	3 lbs.	\$ 3.85		
CE2704NK			5"	4 lbs.	4.15		
CE2709NK			7 1/2"	10 lbs.	4.65		
CE2703RT	10"-1 1/16" Col.	1 7/8"—8	3 1/2"	4 lbs.	8.60		
CE2704RT			5"	6 lbs.	9.05		
CE2705RT			5 1/2"	8 lbs.	9.20		
CE2707RT			6 1/4"	9 lbs.	9.45		
CE2708RT			7 1/2"	12 lbs.	9.85		
CE2709RT			9"	16 lbs.	10.30		
CE2710RT			10 1/4"	20 lbs.	10.70		
CE2703LQ			10"-1 1/16" Col. & 13"	2 1/4"—8	3 1/2"	4 lbs.	10.20
CE2704LQ					5"	5 lbs.	10.65
CE2705LQ					5 1/2"	6 lbs.	10.80
CE2707LQ	6 1/4"	7 lbs.			11.05		
CE2708LQ	7 1/2"	11 lbs.			11.45		
CE2709LQ	9"	13 lbs.			11.90		
CE2710LQ	10 1/4"	18 lbs.			12.30		
CE2704MH	14 1/2", 16", 16-24", & 2-H	2 3/8"—6	5"	8 lbs.	12.10		
CE2705MH			5 1/2"	8 lbs.	12.25		
CE2706MH			6"	9 lbs.	12.40		
CE2707MH			6 1/4"	9 lbs.	12.50		
CE2708MH			7 1/2"	13 lbs.	12.90		
CE2710MH			10 1/4"	20 lbs.	13.65		
CE2711MH			11 3/4"	24 lbs.	14.20		

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

Catalog Number	Size Lathes	Price
CE2935NK	9" & 10-K	\$ 7.35
CE2935RT	10"-1 1/16" Collet	14.70
CE2935LQ	10"-1 1/16" Collet & 13"-1 1/16" Collet	15.75
CE2935MH	14 1/2", 16", 16-24", & 2-H	17.50



A FOUR-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 Thread	Size of Lathe	Ship. Wt.	Price
CL4006NK	6"	1 1/2"-8	9" and 10-K	14 lbs.	\$ 46.00
CL4206NK	6"	1 1/2"-8	9" and 10-K	26 lbs.	83.00
CL4006R	6"	1 1/2"-8	10"-1 1/4" Collet	14 lbs.	49.00
CL4206R	6"	1 1/8"-8	10"-1 1/4" Collet	28 lbs.	84.00
CL4207R	7 1/2"	1 1/8"-8	10"-1 1/4" Collet	40 lbs.	102.00
CL4006L	6"	2 1/4"-8	10"-1 1/4" Collet	14 lbs.	50.00
CL4206LQ	6"	2 1/4"-8	10"-1 1/4" Collet	28 lbs.	85.00
CL4207LQ	7 1/2"	2 1/4"-8	10"-1 1/4" Collet	40 lbs.	103.00
CL4206LQ	6"	2 1/4"-8	13"	28 lbs.	85.00
CL4207LQ	7 1/2"	2 1/4"-8	13"	40 lbs.	103.00
CL4209Q	9"	2 1/4"-8	13"	51 lbs.	117.00
CL4207MH	7 1/2"	2 3/8"-6	14 1/2"	42 lbs.	104.00
CL4209MH	9"	2 3/8"-6	14 1/2"	52 lbs.	118.00
CL4210MH	10"	2 3/8"-6	14 1/2"	62 lbs.	128.00
CL4207MH	7 1/2"	2 3/8"-6	16", 16-24", & 2-H	42 lbs.	104.00
CL4209MH	9"	2 3/8"-6	16", 16-24", & 2-H	52 lbs.	118.00
CL4210MH	10"	2 3/8"-6	16", 16-24", & 2-H	62 lbs.	128.00
CL4212H	12"	2 3/4"-6	16", 16-24", & 2-H	84 lbs.	168.00

B THREE-JAW UNIVERSAL LATHE CHUCKS. Universal

Chucks are supplied with two sets of jaws, one set for chucking externally and the other for chucking internally. 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 Thread	Size of Lathe	Ship. Wt.	Price
CL3005NK	5"	1 1/2"-8	9" and 10-K	14 lbs.	\$ 68.00
CL3505NK	5"	1 1/2"-8	9" and 10-K	16 lbs.	117.00
CL3506NK	6"	1 1/2"-8	9" and 10-K	25 lbs.	124.00
CL3005R	5"	1 1/8"-8	10"-1 1/4" Collet	14 lbs.	70.00
CL3505R	5"	1 1/8"-8	10"-1 1/4" Collet	18 lbs.	118.00
CL3506R	6"	1 1/8"-8	10"-1 1/4" Collet	33 lbs.	126.00
CL3005L	5"	2 1/4"-8	10"-1 1/4" Collet	14 lbs.	71.00
CL3505LQ	5"	2 1/4"-8	10"-1 1/4" Collet	18 lbs.	119.00
CL3506LQ	6"	2 1/4"-8	10"-1 1/4" Collet	33 lbs.	128.00
CL3505LQ	5"	2 1/4"-8	13"	18 lbs.	119.00
CL3506LQ	6"	2 1/4"-8	13"	33 lbs.	128.00
CL3507Q	7 1/2"	2 1/4"-8	13"	49 lbs.	145.00
CL3505MH	5"	2 3/8"-6	14 1/2"	19 lbs.	121.00
CL3506MH	6"	2 3/8"-6	14 1/2"	29 lbs.	129.00
CL3507MH	7 1/2"	2 3/8"-6	14 1/2"	50 lbs.	146.00
CL3509MH	9"	2 3/8"-6	14 1/2"	62 lbs.	193.00
CL3505MH	5"	2 3/8"-6	16", 16-24", & 2-H	19 lbs.	121.00
CL3506MH	6"	2 3/8"-6	16", 16-24", & 2-H	29 lbs.	129.00
CL3507MH	7 1/2"	2 3/8"-6	16", 16-24", & 2-H	50 lbs.	146.00
CL3509MH	9"	2 3/8"-6	16", 16-24", & 2-H	62 lbs.	193.00

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

Catalog Number	Size of Lathe	Spindle Thread	Ship. Weight	Price
CL2155NK	9" and 10-K	1 1/2"-8	14 lbs.	\$19.50
CL2155R	10"-1 1/4" Collet	1 1/8"-8	16 lbs.	21.00
CL2155L	10"-1 1/4" Collet	2 1/4"-8	16 lbs.	22.00

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

Cat. No.	Make of Chuck	Capacity of Chuck	Net Wt. Lbs.	Ship. Wt. Lbs.	Price
CE1200	Jacobs	0 to 3/8 in.	1 1/4	1 1/2	\$ 7.85
CE1201	Jacobs	0 to 1/2 in.	1 3/4	2 3/8	9.70
CE1202	Jacobs	3/8 to 3/4 in.	3 1/2	3 1/2	14.50
CE1206	Jacobs	3/8 to 1 in.	6 3/4	7 1/2	31.50

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

For Drill Chuck	No. 2 Morse Taper			No. 3 Morse Taper		
	Cat. No.	Ship. Wt.	Price	Cat. No.	Ship. Wt.	Price
CE1200	CE2300	3/8 lb.	\$1.25	CE2301	3/4 lb.	\$1.85
CE1201	CE2302	1/2 lb.	1.25	CE2303	3/8 lb.	1.85
CE1202	CE2304	1/2 lb.	1.25	CE2305	3/4 lb.	1.85
CE1206	CE2306	1 1/8 lbs.	1.25	CE2307	1 1/2 lbs.	1.85

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

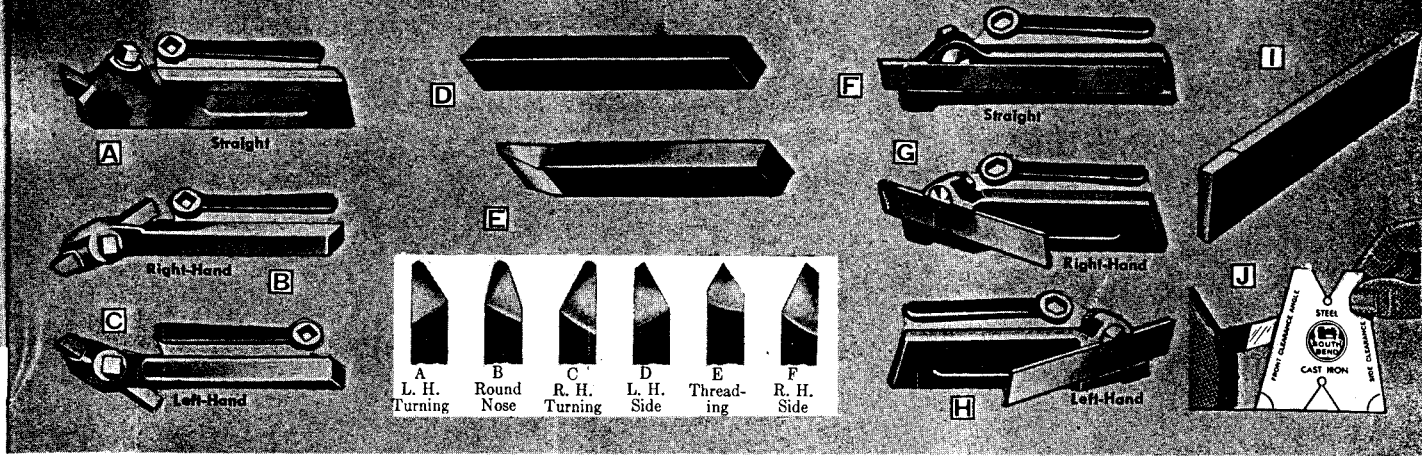
Cat. No.	For Turret Hole	For Drill Chuck	Price	Cat. No.	For Turret Hole	For Drill Chuck	Price
CE2362	3/8"	CE1201	1.25	CE2901	1"	CE1201	2.10
CE2364	3/8"	CE1202	1.25	CE2902	1"	CE1202	2.10
CE2366	3/8"	CE1206	1.25	CE2903	1"	CE1206	2.10
CE2361	3/4"	CE1200	1.25	CE2377	1 1/2"	CE1200	2.75
CE2363	3/4"	CE1201	1.25	CE2378	1 1/2"	CE1201	2.75
CE2365	3/4"	CE1202	1.25	CE2379	1 1/2"	CE1202	2.75
CE2367	3/4"	CE1206	1.25	CE2380	1 1/2"	CE1206	2.75

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

Cat. No.	Shank	Ship. Wt.	Price
CE1500	No. 2 Morse Taper	1 lb.	\$1.25
CE1501	No. 3 Morse Taper	2 lbs.	1.85
CE2325	3/8" Diameter Straight	1 lb.	1.70
CE2326	3/4" Diameter Straight	1 lb.	1.75

I HOLLOW BODY SPINDLE NOSE CHUCK. Has 1 1/2"-8 thread to fit spindle nose of 9" and 10-K lathes only. Has hollow body for holding automobile engine valves for refacing. Also used for holding small rods, bars, and tubes for machining. 3/8" chuck can be used in tailstock of lathe when fitted with taper arbor, No. CE2304 or CE2305, listed under "E" above. Price includes pinion key.

Cat. No.	Capacity	Ship. Wt.	Price
CE907	1/4" to 3/8"	3 3/4 lbs.	\$20.00
CE925	3/8" to 3/4"	4 1/4 lbs.	23.75



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

Cat. No.	Size Lathe	Size Shank	Size Cutter	Ship. Wt.	Price
A Straight Shank Turning Tool Holder					
CE847S	9", 10-K, & 10"	3/8" x 1 1/4"	1/4" x 1/4"	1 lb.	\$2.91
CE846S	9", 10-K, & 10"	3/8" x 1 1/4"	1/4" x 1/4"	2 lbs.	6.69
CE852S	13"	1/2" x 1 1/8"	3/8" x 3/8"	3 lbs.	7.66
CE853S	14 1/2", 16" & 16-24"	3/8" x 1 3/8"	3/8" x 3/8"	3 lbs.	9.38

Cat. No.	Size Lathe	Size Shank	Size Cutter	Ship. Wt.	Price
B Right-Hand Turning Tool Holders					
CE847R	9", 10-K, & 10"	3/8" x 1 1/4"	1/4" x 1/4"	1 lb.	\$2.91
CE846R	9", 10-K, & 10"	3/8" x 1 1/4"	1/4" x 1/4"	2 lbs.	6.69
CE852R	13"	1/2" x 1 1/8"	3/8" x 3/8"	3 lbs.	7.66
CE853R	14 1/2", 16" & 16-24"	3/8" x 1 3/8"	3/8" x 3/8"	3 lbs.	9.38

Cat. No.	Size Lathe	Size Shank	Size Cutter	Ship. Wt.	Price
C Left-Hand Turning Tool Holders					
CE847L	9", 10-K, & 10"	3/8" x 1 1/4"	1/4" x 1/4"	1 lb.	\$2.91
CE846L	9", 10-K, & 10"	3/8" x 1 1/4"	1/4" x 1/4"	2 lbs.	6.69
CE852L	13"	1/2" x 1 1/8"	3/8" x 3/8"	3 lbs.	7.66
CE853L	14 1/2", 16" & 16-24"	3/8" x 1 3/8"	3/8" x 3/8"	3 lbs.	9.38

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

UNGROUND HIGH SPEED STEEL CUTTER BITS

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

UNGROUND HIGH SPEED STEEL CUTTER BITS IN LOTS

Size Square Inch	Length Cutter Inches	Lot of 6 Bits			Lot of 24 Bits		
		Cat. No.	Ship. Wt.	Price	Cat. No.	Ship. Wt.	Price
3/16	1	.....	.....	.....	CE2370	1 lb.	\$ 3.25
3/16	1 1/2	.....	.....	.....	CE2371	1 lb.	3.90
1/4	2	CE1629	10 ozs.	\$ 1.35	CE2372	2 lbs.	5.25
3/8	2 1/2	CE1632	10 1/2 ozs.	2.80	CE2373	3 lbs.	10.65
3/8	3	CE1633	11 ozs.	3.90	CE2374	4 lbs.	15.10
7/16	3 1/2	CE2501	2 lbs.	5.70	CE2375	6 lbs.	22.35
1/2	4	CE2502	3 lbs.	7.80	CE2393	13 lbs.	30.15
5/8	4 3/8	CE2503	4 lbs.	11.40	CE2376	15 lbs.	44.70

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

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

Size Square Inch	Length Cutter Inches	Single Bit			Set of 6 Bits		
		Cat. No.	Ship. Wt.	Price	Cat. No.	Ship. Wt.	Price
1/4	2	CE1305	4 ozs.	\$0.45	CE1779	10 ozs.	\$2.40
3/16	2 1/2	CE1313	5 ozs.	0.62	CE1777	10 1/2 ozs.	3.40
3/8	3	CE1316	5 ozs.	0.88	CE1778	11 ozs.	4.90

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

Cat. No.	Size Lathe	Size Shank	Size Cutter	Ship. Wt.	Price
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Cat. No.	Size Lathe	Size Shank	Size Cutter	Ship. Wt.	Price
F Straight Shank Cutting-off Tool Holders					
CE833S	9", 10-K, & 10"	3/8" x 1 1/4"	3/32" x .595"	1 lb.	\$3.45
CE736S	9", 10-K, & 10"	3/8" x 1 1/4"	3/32" x .475"	2 lbs.	6.69
CE883S	13"	1/2" x 1 1/8"	1/8" x .735"	3 lbs.	8.40
CE884S	14 1/2", 16" & 16-24"	3/8" x 1 3/8"	1/8" x .870"	3 lbs.	10.54

Cat. No.	Size Lathe	Size Shank	Size Cutter	Ship. Wt.	Price
G Right-Hand Cutting-off Tool Holders					
CE833R	9", 10-K, & 10"	3/8" x 1 1/4"	3/32" x .595"	1 lb.	\$3.45
CE736R	9", 10-K, & 10"	3/8" x 1 1/4"	3/32" x .475"	2 lbs.	6.69
CE883R	13"	1/2" x 1 1/8"	1/8" x .735"	3 lbs.	8.40
CE884R	14 1/2", 16" & 16-24"	3/8" x 1 3/8"	1/8" x .870"	3 lbs.	10.54

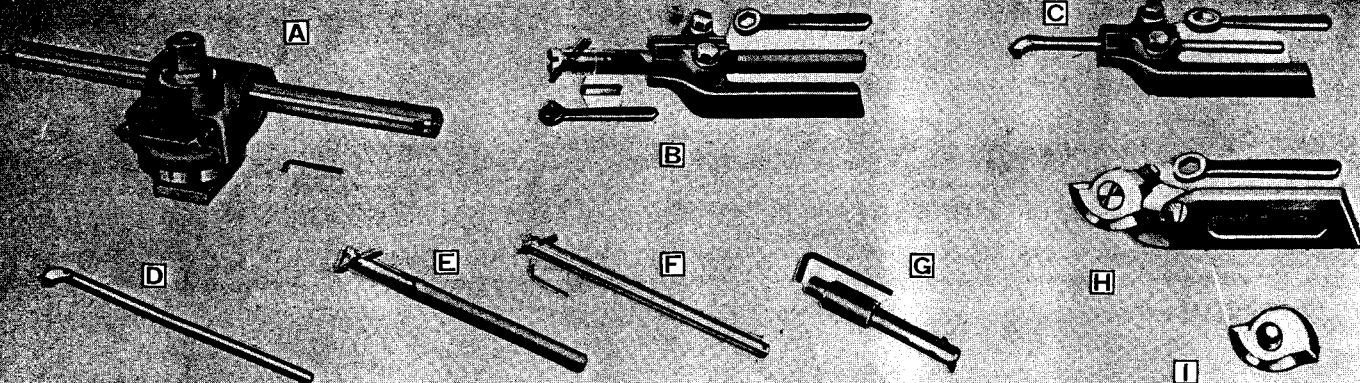
Cat. No.	Size Lathe	Size Shank	Size Cutter	Ship. Wt.	Price
H Left-Hand Cutting-off Tool Holders					
CE736L	9", 10-K, & 10"	3/8" x 1 1/4"	3/32" x .475"	2 lbs.	\$6.69
CE883L	13"	1/2" x 1 1/8"	1/8" x .735"	3 lbs.	8.40
CE884L	14 1/2", 16" & 16-24"	3/8" x 1 3/8"	1/8" x .870"	3 lbs.	10.54

I BLADES FOR CUTTING-OFF TOOL HOLDERS. Made from high-speed steel, heat-treated, hardened, ground on the edges, ready to use in above tool holders or 10 in 1 Tool Holder listed on page 55.

Cat. No.	Size of Blade	Ship. Wt.	Price
CE876	3/32" x .595" x 5"	5 ozs.	\$1.65
CE1192	3/32" x .475" x 4 1/2"	5 ozs.	1.37
CE878	1/8" x .735" x 5"	6 ozs.	1.82
CE879	1/8" x .870" x 6"	8 ozs.	2.38

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

CE2169. Shipping weight 1/2 lb. Price f.o.b. factory. \$0.60



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

Size Lathe	9" & 10-K	10"	13"	14½"	16" & 16-24"
Max. Bar Cap.	¾"	¾"	1¼"	1½"	1½"
Size Boring Bar	¾" x 12"	¾" x 12"	1" x 16"	1½" x 18"	1½" x 18"
Size Cutter Bit	¼" x ¼"	¼" x ¼"	¾" x ¾"	¾" x ¾"	¾" x ¾"
Holder Only					
Cat. No.	CE3677NK	CE3677R	CE3677T	CE3677F	CE3677H
Ship. Wt. Lbs.	3	3	5	7	7
Price	\$9.55	\$11.20	\$13.40	\$15.00	\$16.65
Holder and Bar					
Cat. No.	CE469NK	CE469R	CE469T	CE469F	CE469H
Ship. Wt. Lbs.	8	8	14	15	18
Price	\$16.00	\$17.75	\$25.00	\$29.75	\$31.50

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

Cat. No.	Size of Lathe	Size of Shank, Inches	Size Bar Inches	Size of Cutter, Inch	Ship. Wt. Lbs.	Price
CE423	9", 10-K, & 10"	¾ x ¾	½ x 7½	¾ x ¾	2	\$11.52
CE431	13"	½ x 1½	¾ x 11	¼ x ¼	5	13.67
CE432	14½", 16", 16-24"	¾ x 1¾	1½ x 13¼	¾ x ¾	8	18.00

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

Cat. No.	Size of Lathe	Size of Shank, Inches	Size Bar, Inches	Ship. Wt. Lbs.	Price
CE3175	9", 10-K, & 10"	¾ x ¾	¼ x 5	2	\$7.00
CE3176	13"	½ x 1½	¾ x 7	4	8.03
CE3177	14½", 16", 16-24"	¾ x 1¾	¾ x 8	6	9.10

D SOLID BORING BARS.

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

Cat. No.	Bar Inches	Ship. Wt.	Price
CE3856	1/8 x 4	3 ozs.	\$0.80
CE3857	3/16 x 4½	4 ozs.	1.06
CE3858	¼ x 5	5 ozs.	1.35
CE3859	5/16 x 6	5 ozs.	1.56
CE3860	¾ x 7	8 ozs.	2.10
CE3861	¾ x 8	1 lb.	2.91

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

Cat. No.	Size of Bar	Size of Cutter Bit	Ship. Wt.	Price
CE2419	½" x 7½"	¾" x ¾"	1 lb.	\$ 7.05
CE2420	¾" x 11"	¼" x ¼"	2 lbs.	8.82
CE2421	1½" x 13¼"	¾" x ¾"	4 lbs.	12.70

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

Cat. No.	Bar Size	Cutter Bit	Ship. Wt.	Price
CE2943	¾" x 12"	¼" x ¼"	3 lbs.	\$ 6.60
CE2944	1" x, 16"	¾" x ¾"	5 lbs.	11.50
CE2945	1½" x 18"	¾" x ¾"	7 lbs.	14.70

G PRECISION BORING BAR FOR CHUCK. Designed especially for boring holes in turret head with extreme precision, this boring bar can be used for any similar operation in which the work is mounted on the lathe carriage or turret and the boring bar is held in the lathe chuck. Cutter bit has a very fine adjustment of .010" obtained by revolving the eccentric bushing. Minimum diameter of bore is 5/8". Maximum depth of bore is 2½".

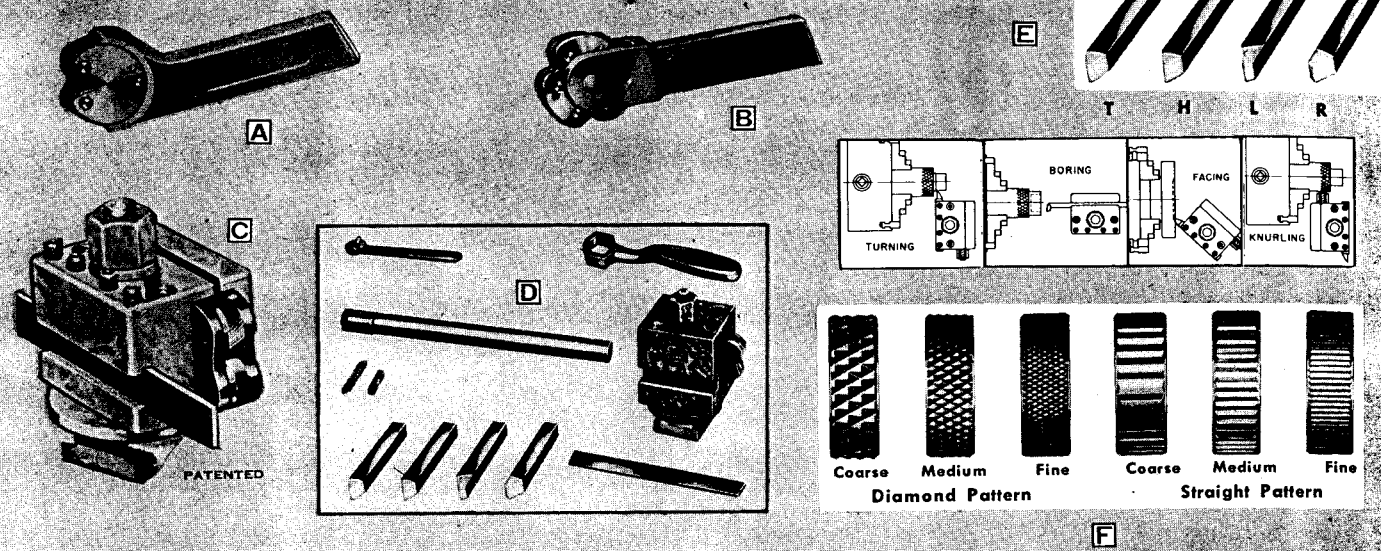
CE3420. Precision Boring Bar for Chuck. Shipping weight 1 lb. Price f.o.b. factory \$2.75

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

Cat. No.	Size of Lathe	Size of Shank	Ship. Wt.	Price
CE845	9" 10-K, & 10"	¾" x ¾"	2 lbs.	\$ 5.79
CE648	9", 10-K, & 10"	¾" x ¾"	2 lbs.	9.76
CE867	13"	½" x 1½"	3 lbs.	11.77
CE868	14½", 16", & 16-24"	¾" x 1¾"	4 lbs.	15.05

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

Catalog Number		Fits Thread Tools	Shipping Weight	Price
60° Angle	55° Angle			
CE3480	CE3483	CE845 & CE648	3 ozs.	\$3.78
CE3481	CE3484		4 ozs.	7.35
CE3482	CE3485		5 ozs.	9.79



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

Cat. No.	Size Lathe	Shank Size	Ship Wt.	Price
CE820	9", 10-K, & 10"	3/8" x 3/4"	2 lbs.	\$ 6.89
CE665	9", 10-K, & 10"	3/8" x 3/4"	2 lbs.	13.25
CE893	13"	1/2" x 1 1/4"	2 lbs.	15.84
CE894	14 1/2", 16", & 16-24"	5/8" x 1 3/8"	3 lbs.	18.75

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

Cat. No.	Size Lathe	Shank Size	Ship Wt.	Price
CE3615	9", 10-K, & 10"	3/8" x 3/4"	2 lbs.	\$18.79
CE3616	13"	1/2" x 1 1/4"	2 lbs.	21.15
CE3617	14 1/2", 16", & 16-24"	5/8" x 1 3/8"	3 lbs.	24.63

C 10 IN 1 TOOL HOLDER. The 10 in 1 Tool Holder replaces the conventional tool post and various tool holders ordinarily used for general lathe work. It provides rigid support for turning, boring, threading, and cut-off tool bits. In addition, it is equipped with self-aligning knurling head having No. CE3151 medium diamond knurls. Screw adjustments for tool height are easily made, and they stay put. No readjustment is required when replacing tools. This tool block can be adapted to fit other makes of lathes. See pages 53, 54, and 56 for cutter bits, boring bars, and cut-off blades.

Catalog Number	Size Lathe Inches	Holds Cutter Bits Inch	Holds Boring Bars Inches	Holds Cut-off Blades Inch	Ship. Wt. Lbs.	Price
CE1413NK	9 & 10-K	3/8 x 3/8	3/8 to 3/4	3/32 x .595	5	\$14.70
CE1413R	10	3/8 x 3/8	3/8 to 3/4	3/32 x .595	5	15.85
CE1413T	13	1/2 x 1/2	1/2 to 1 1/4	1/8 x .735	7	18.85
CE1413F	14 1/2	5/8 x 5/8	1/2 to 1 1/4	1/8 x .870	10	21.85
CE1413H	16 & 16-24	5/8 x 5/8	1/2 to 1 1/4	1/8 x .870	10	22.70

D 10 IN 1 TOOL HOLDER KIT. You can save money by purchasing this 10 in 1 Tool Holder Kit complete with boring bar, cut-off blade, and set of four ground high speed steel cutter bits. Price includes tool holder, knurling head, bolt, clamp, and all other equipment regularly supplied with the 10 in 1 tool holder. For specifications of tool holder see item "C". For description and illustrations of cutter bits, boring bars, and cut-off blades, see item "E" below and pages 53 and 54.

Catalog No. of Kit	Size of Lathe	Items Included in Kit			Ship. Weight	Price
		Cutter Bits	Boring Bar	Cut-off Blade		
CE2930NK	9" & 10-K	CE2776	CE2419	CE876	7 lbs.	\$25.75
CE2930R	10"	CE2776	CE2419	CE876	7 lbs.	26.75
CE2930T	13"	CE2777	CE2420	CE878	12 lbs.	35.25
CE2930F	14 1/2"	CE2778	CE2421	CE879	18 lbs.	47.50
CE2930H	16" & 16-24"	CE2778	CE2421	CE879	18 lbs.	48.75

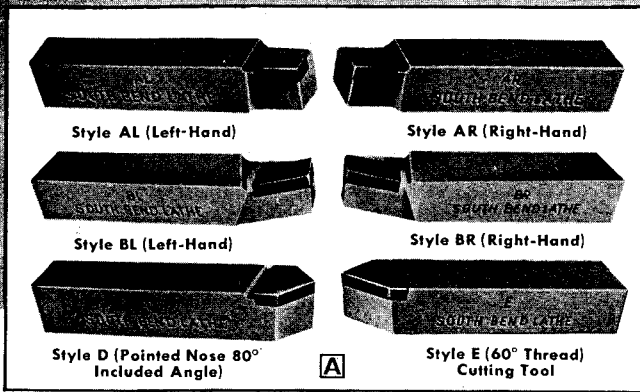
E GROUND CUTTER BITS FOR 10 IN 1 TOOL HOLDER. High speed steel cutter bits ground for use in 10 in 1 tool holder listed above. Made in four shapes: T for turning, H for threading, R for facing on right side of work, and L for facing on left side of work. When ordering single bits be sure to specify shape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

Size Square Inch	Length Cutter Inches	Single Bit			Set of 4 Bits		
		Cat. No.	Ship. Wt.	Price	Cat. No.	Ship. Wt.	Price
3/8	3	CE2267	5 ozs.	\$0.88	CE2776	1 lb.	\$ 3.30
1/2	4	CE2268	8 ozs.	1.82	CE2777	2 lbs.	7.00
5/8	4 3/8	CE2269	1 lb.	3.40	CE2778	3 lbs.	12.95

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

Cat. No.	Pattern	Size	Fits Knurling Tools	Ship. Wt.	Price
CE3150†	Fine Diamond...	5/8" x 3/8"	CE820 & CE665	4 ozs.	\$2.36
CE3151†	Med. Diamond...	5/8" x 3/8"	CE820 & CE665	4 ozs.	2.36
CE3152†	Coarse Diamond...	5/8" x 3/8"	CE820 & CE665	4 ozs.	2.36
CE3153†	Fine Straight...	5/8" x 3/8"	CE820 & CE665	4 ozs.	2.36
CE3154†	Med. Straight...	5/8" x 3/8"	CE820 & CE665	4 ozs.	2.36
CE3155†	Coarse Straight...	5/8" x 3/8"	CE820 & CE665	4 ozs.	2.36
CE3156	Fine Diamond...	3/4" x 3/8"	CE893 & CE894	5 ozs.	2.74
CE3157	Med. Diamond...	3/4" x 3/8"	CE893 & CE894	5 ozs.	2.74
CE3158	Coarse Diamond...	3/4" x 3/8"	CE893 & CE894	5 ozs.	2.74
CE3159	Fine Straight...	3/4" x 3/8"	CE893 & CE894	5 ozs.	2.74
CE3160	Med. Straight...	3/4" x 3/8"	CE893 & CE894	5 ozs.	2.74
CE3161	Coarse Straight...	3/4" x 3/8"	CE893 & CE894	5 ozs.	2.74

†Fits all sizes of 10 in 1 Tool Holders.



A CARBIDE TIPPED CUTTER BITS. These Carbide Tipped Cutter Bits are intended for use in the 10 in 1 Tool Holder (page 55), Double Tool Cross Slide, and Square Turret Tool Block (page 37). They are not recommended for use in the Forged Tool Holders (page 53).

Carbide tipped cutting tools are used for manufacturing operations where long tool life and maximum cutting speeds are desirable. They are highly efficient for machining alloy steel, alloy cast iron, bronze, aluminum and abrasive non-metallic materials such as fibre, rubber, and plastics. Two grades of tools are supplied, one for machining steel and the other for machining cast iron and all other materials.

A special grinding wheel (preferably diamond impregnated) is required for grinding carbide as it cannot be satisfactorily ground on the ordinary grinding wheel. Because of its extreme hardness, the carbide tip is very brittle and must be carefully handled to avoid accidental damage. The cutting edge must be well supported and should have just enough clearance to permit it to cut freely.

Style AL Left-Hand Cutter Bits

Shank Size	Ship. Weight	Machining Steel		Other Materials	
		Cat. No.	Price	Cat. No.	Price
3/8" x 3/8" x 2 1/2"	5 ozs.	CE3320	\$1.39	CE3325	\$1.32
7/16" x 7/16" x 3"	7 ozs.	CE3321	1.65	CE3326	1.57
1/2" x 1/2" x 3 1/2"	12 ozs.	CE3322	1.91	CE3327	1.83
5/8" x 5/8" x 4"	1 lb.	CE3323	2.35	CE3328	2.24

Style AR Right-Hand Cutter Bits

Shank Size	Ship. Weight	Machining Steel		Other Materials	
		Cat. No.	Price	Cat. No.	Price
3/8" x 3/8" x 2 1/2"	5 ozs.	CE3330	\$1.39	CE3335	\$1.32
7/16" x 7/16" x 3"	7 ozs.	CE3331	1.65	CE3336	1.57
1/2" x 1/2" x 3 1/2"	12 ozs.	CE3332	1.91	CE3337	1.83
5/8" x 5/8" x 4"	1 lb.	CE3333	2.35	CE3338	2.24

Style BL Left-Hand Cutter Bits

Shank Size	Ship. Weight	Machining Steel		Other Materials	
		Cat. No.	Price	Cat. No.	Price
3/8" x 3/8" x 2 1/2"	5 ozs.	CE3590	\$1.39	CE3595	\$1.32
7/16" x 7/16" x 3"	7 ozs.	CE3591	1.65	CE3596	1.57
1/2" x 1/2" x 3 1/2"	12 ozs.	CE3592	1.91	CE3597	1.83
5/8" x 5/8" x 4"	1 lb.	CE3593	2.35	CE3598	2.24

Style BR Right-Hand Cutter Bits

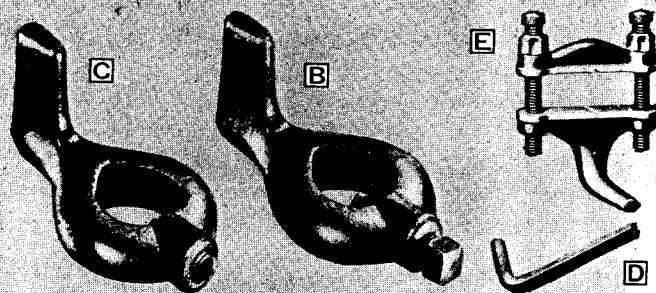
Shank Size	Ship. Weight	Machining Steel		Other Materials	
		Cat. No.	Price	Cat. No.	Price
3/8" x 3/8" x 2 1/2"	5 ozs.	CE3550	\$1.39	CE3555	\$1.32
7/16" x 7/16" x 3"	7 ozs.	CE3551	1.65	CE3556	1.57
1/2" x 1/2" x 3 1/2"	12 ozs.	CE3552	1.91	CE3557	1.83
5/8" x 5/8" x 4"	1 lb.	CE3553	2.35	CE3558	2.24

Style D 80-deg. Included Angle Cutter Bits

Shank Size	Ship. Weight	Machining Steel		Other Materials	
		Cat. No.	Price	Cat. No.	Price
3/8" x 3/8" x 2 1/2"	5 ozs.	CE3340	\$1.58	CE3345	\$1.51
7/16" x 7/16" x 3"	7 ozs.	CE3341	1.88	CE3346	1.79
1/2" x 1/2" x 3 1/2"	12 ozs.	CE3342	1.97	CE3347	1.87
5/8" x 5/8" x 4"	1 lb.	CE3343	2.52	CE3348	2.40

Style E 60-deg. Thread Tool Cutter Bits

Shank Size	Ship. Weight	Machining Steel		Other Materials	
		Cat. No.	Price	Cat. No.	Price
3/8" x 3/8" x 2 1/2"	5 ozs.	CE3390	\$1.53	CE3394	\$1.45
7/16" x 7/16" x 3"	7 ozs.	CE3391	1.74	CE3395	1.65
1/2" x 1/2" x 3 1/2"	12 ozs.	CE3392	1.85	CE3396	1.76
5/8" x 5/8" x 4"	1 lb.	CE3393	2.42	CE3397	2.31



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

Catalog Number	Cap. In.	Ship. Wt.	Price	Catalog Number	Cap. In.	Ship. Wt.	Price
Standard Lathe Dogs for 13" and Larger Lathes							
CE3843	1/2	1 lb.	\$1.25	CE3849	2	4 lbs.	\$2.55
CE3844	3/4	1 lb.	1.40	CE3850	2 1/2	5 lbs.	2.85
CE3845	1	2 lbs.	1.50	CE3851	3	6 lbs.	3.25
CE3846	1 1/4	2 lbs.	1.75	CE3852	3 1/2	7 lbs.	4.45
CE3847	1 1/2	3 lbs.	2.10	CE3853	4	9 lbs.	5.95
CE3848	1 3/4	3 lbs.	2.30				

Standard Lathe Dogs for 9" and 10" Lathes

CE3837	3/8	1 lb.	\$1.05	CE3840	1	2 lbs.	\$1.45
CE3838	1/2	1 lb.	1.10	CE3841	1 1/4	3 lbs.	1.60
CE3839	3/4	2 lbs.	1.35	CE3842	1 1/2	3 lbs.	2.05

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

Catalog Number	Cap. In.	Ship. Wt.	Price	Catalog Number	Cap. In.	Ship. Wt.	Price
Safety Lathe Dogs for 13" and Larger Lathes							
CE3826	1/2	1 lb.	\$1.25	CE3832	2	4 lbs.	\$2.55
CE3827	3/4	1 lb.	1.40	CE3833	2 1/2	5 lbs.	2.85
CE3828	1	2 lbs.	1.50	CE3834	3	6 lbs.	3.25
CE3829	1 1/4	2 lbs.	1.75	CE3835	3 1/2	7 lbs.	4.45
CE3830	1 1/2	3 lbs.	2.10	CE3836	4	9 lbs.	5.95
CE3831	1 3/4	3 lbs.	2.30				

Safety Lathe Dogs for 9" and 10" Lathes

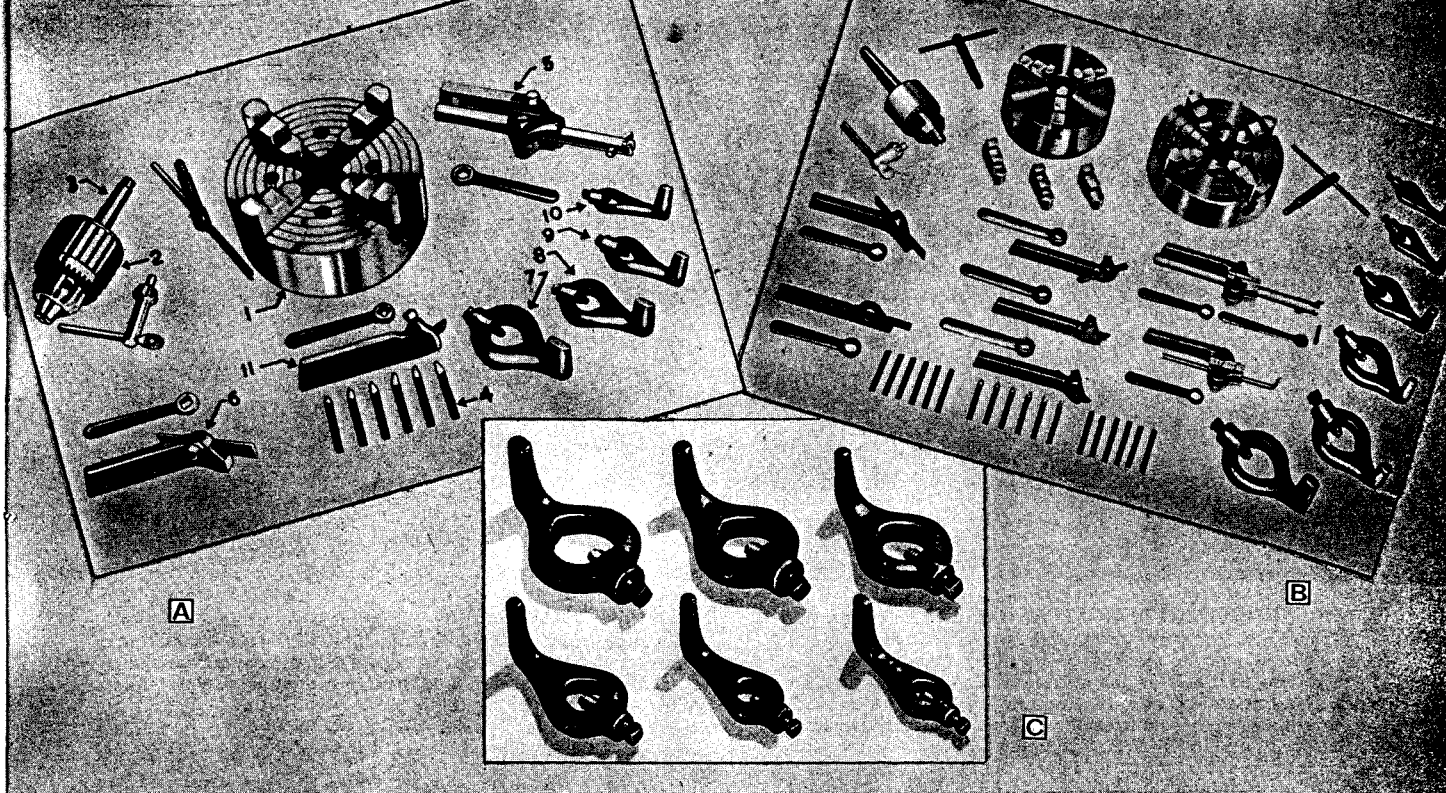
CE3820	3/8	1 lb.	\$1.05	CE3823	1	2 lbs.	\$1.45
CE3821	1/2	1 lb.	1.10	CE3824	1 1/4	3 lbs.	1.60
CE3822	3/4	2 lbs.	1.35	CE3825	1 1/2	3 lbs.	2.05

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

Cat. No.	FITS LATHE DOGS	Ship. Wt.	Price
CE2385	CE3820, CE3821, CE3826	3 oz.	\$0.07
CE2386	CE3822, CE3827	4 oz.	0.08
CE2387	CE3823, CE3828	4 oz.	0.11
CE2388	CE3824, CE3825, CE3829	4 oz.	0.12
CE2389	CE3830, CE3831, CE3832	4 oz.	0.16
CE2390	CE3833, CE3834, CE3835, CE3836	6 ozs.	0.26

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

Catalog Number	Capacity		Size Lathe Used With	Shipping Weight	Price
	Maximum Opening	Distance Between Screws			
CE160	1 3/8"	1 3/4"	9" & larger	1 lb.	\$ 5.84
CE161	1 7/8"	2 1/4"	13" & larger	2 lbs.	7.77
CE162	2 1/2"	2 3/4"	13" & larger	3 lbs.	9.74
CE163	3 1/4"	3 1/2"	14 1/2" & larger	4 lbs.	13.60



SAVE TIME AND MONEY BY ORDERING COMPLETE CHUCK AND TOOL ASSORTMENTS

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

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

EQUIPMENT INCLUDED IN 11-TOOL ASSORTMENTS

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

COMPLETE 11-TOOL ASSORTMENTS AS LISTED ABOVE

Catalog Number	Size Lathe	Shipping Weight	Price
CL2890NK	9" & 10-K	28 lbs.	\$ 78.00
CL2890R	10"-1¼" Collet	35 lbs.	125.00
CL2890L	10"-1¼" Collet	35 lbs.	128.00
CL2890Q	13"-1¼" Collet	70 lbs.	156.00
CL2890M	14½"-1¼" Collet	87 lbs.	182.00
CL2890H	16" & 16-24"	110 lbs.	208.00

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

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

CL2960NK. Eleven Tool Assortment with Universal Chuck for 9-inch and 10-K Lathes. Ship. wt. 20 lbs. Price \$99.00

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

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

Item	Cat. No.	Description
1	CL4006NK	6" Four-Jaw Independent Lathe Chuck, fitted.
2	CL3005NK	5" Three-Jaw Universal Lathe Chuck, fitted.
3	CE1201	Jacob's Three-Jaw Drill Chuck, ½" capacity.
4	CE2302	Taper Shank Arbor (No. 2 M.T.), fitted to Drill Chuck.
5	CE8475	Straight Shank Turning Tool Holder.
6	CE847R	Right-Hand Turning Tool Holder.
7	CE847L	Left-Hand Turning Tool Holder.
8	CE833R	Right-Hand Cutting-off Tool Holder.
9	CE833S	Straight Shank Cutting-off Tool Holder.
10	CE1779	Set (6) Ground Cutter Bits for Turning Tools.
11-12	CE1629	Two Sets (6) Unground Cutter Bits for Turning Tools.
13	CE3175	Style "D" Boring Tool Holder.
14	CE423	Style "B" Boring Tool Holder.
15	CE3837	¾" Standard Malleable Lathe Dog.
16	CE3838	½" Standard Malleable Lathe Dog.
17	CE3839	¾" Standard Malleable Lathe Dog.
18	CE3840	1" Standard Malleable Lathe Dog.
19	CE3841	1¼" Standard Malleable Lathe Dog.
20	CE3842	1½" Standard Malleable Lathe Dog.

CL2970NK. Twenty Tool Assortment as listed above for 9" or 10-K Lathes. Shipping weight 52 lbs. \$169.00

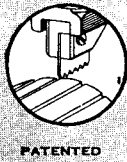
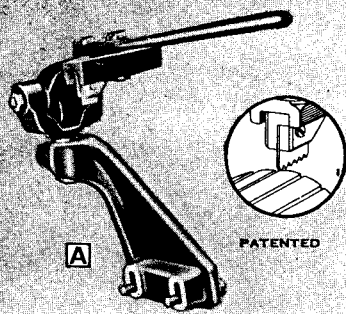
C SETS OF LATHE DOGS. A complete set of dogs for each lathe will save time and contribute to efficient operation. Having the correct size of lathe dog at hand for any job will more than compensate for the cost of a full set. Two or more dogs of each size will often save time on production work, as this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

Cat. No. CE2102. Set of 11 Standard Lathe Dogs, ½" to 4" capacity for 13" and larger lathes. Ship. wt. 36 lbs. \$29.00

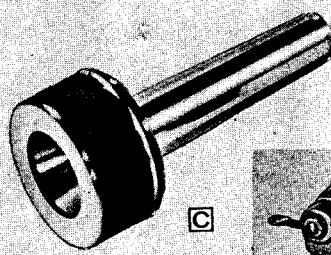
Cat. No. CE2103. Set of 11 Safety Lathe Dogs, ½" to 4" capacity for 13" and larger lathes. Ship wt. 36 lbs. \$29.00

Cat. No. CE2105. Set of 6 Standard Lathe Dogs, ¾" to 1½" capacity for 9" and 10" lathes. Ship. wt. 6 lbs. \$8.50

Cat. No. CE2107. Set of 6 Safety Lathe Dogs, ¾" to 1½" capacity for 9" and 10" lathes. Ship. wt. 6 lbs. Price \$8.50



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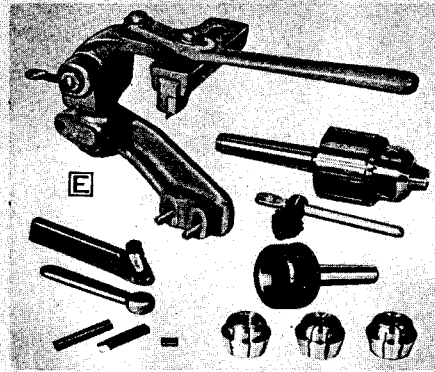


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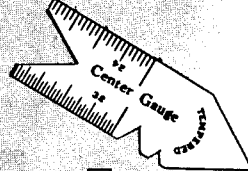


D

B

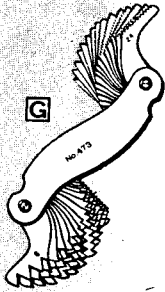


E



F

G



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

Catalog No.	Size Lathe	Ship. Weight	Price
CL675N	9"	7 lbs.	\$27.00
CL675KR	10-K & 10"	10 lbs.	27.00
CL675T	13"	12 lbs.	28.00
CL675F	14½"	15 lbs.	29.50
CL675H	16"	17 lbs.	31.50

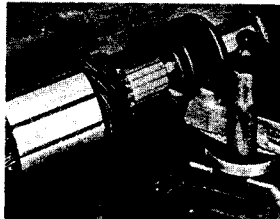
CE2028. Extra cutter .015" thick. Ship. wt. ½ lb. Price \$0.25

CE2029. Extra cutter .020" thick. Ship. wt. ½ lb. Price 0.35

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

Size of Bit	Single Bit			Lot of Six Bits		
	Cat. No.	Ship. Wt.	Price	Cat. No.	Ship. Wt.	Price
¼" sq.	CE1363	4 ozs.	\$0.52	CE1744	10 ozs.	\$2.50
⅜" sq.	CE1365	5 ozs.	0.62	CE1746	10½ ozs.	3.40
½" sq.	CE1366	5 ozs.	0.88	CE1747	11 ozs.	5.00

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



Description	Cat. No.	Shank	Shipping Weight	Price
Adjustable Collet Bushing Chuck only.....	CE1615NR	No. 2	2 lbs.	\$ 9.30
	CE1615TH	No. 3	2 lbs.	10.00
Adjustable Collet Bushing Chuck with set of 3 collets, ⅜", ½", and .637" capacity for popular armatures.	CE1608NR	No. 2	3 lbs.	13.40
	CE1608TH	No. 3	4 lbs.	14.15

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

CE1659. Extra Collets for round work, any capacity ⅛" to 1" round by 16ths, also .637", ship. wt. each 1 lb. Price each... \$1.45

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

Catalog No.	Size Lathe	Shipping Weight	Price
CL2330N	9"	20 lbs.	\$59.00
CL2330K	10-K	22 lbs.	59.00
CL2330R	10"	22 lbs.	59.00
CL2330T	13"	26 lbs.	65.00
CL2330F	14½"	28 lbs.	68.00
CL2330H	16"	30 lbs.	70.00

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

CE650. Center Gauge. Shipping weight 2 ozs..... \$0.95

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

CE2188. Ace screw pitch gauge with 14 blades for 10, 11, 12, 13, 14, 16, 18, 20, 24, 27, 28, 32, 36, and 40 threads per inch. Shipping weight 4 ozs. Price f.o.b. factory..... \$0.80

CE2171. Starrett screw pitch gauge with 30 blades for 6, 7, 8, 9, 10, 11, 1½, 12, 13, 14, 15, 16, 18, 20, 22, 24, 26, 27, 28, 30, 32, 34, 36, 38, 40, 42, 48, 50, 56, and 60 threads per inch. Shipping weight 5 ozs. Price f.o.b. factory..... \$5.00

MANUFACTURED BY SOUTH BEND LATHE WORKS SOUTH BEND, IND.

PITCHES IN mm—PASOS EN mm		PAS EN mm		POSITION	STUD ANGLE															
7.500	7.000	6.500	6.000	5.000	4.500	4.000	3.500	3.000	2.750	2.500	2.250	2.000	1.875	1.750	1.625	1.500	1.375	1.250	1.125	1.000
				D	50															
				C	20															
				B	15															
				A	10															

9-Inch—235 SOUTH BEND LATHE MODEL MO

CATALOG NO. BED LENGTH

Positions Posiciones

FEEDS IN mm—AVANCES EN mm		POSITION							
0.512	0.478	0.444	0.410	0.375	0.341	0.307	0.273	C	20
0.256	0.239	0.222	0.205	0.188	0.171	0.154	0.137	B	15
0.128	0.119	0.111	0.102	0.094	0.085	0.077	0.068	A	10

TRANSPOSING GEAR CHART METRIC SCREW THREADS ENGLISH PITCH LEAD SCREW

IN. PITCH	STUD GEAR	DRIVE GEARS	SCREW GEAR
4.0	40	FIG. 1	20
4.5	45	FIG. 1	20
5.0	50	FIG. 1	20
5.5	55	FIG. 1	20
6.0	60	FIG. 1	20
6.5	65	FIG. 1	20
7.0	70	FIG. 1	20
7.5	75	FIG. 1	20
8.0	80	FIG. 1	20
8.5	85	FIG. 1	20
9.0	90	FIG. 1	20
9.5	95	FIG. 1	20
10.0	100	FIG. 1	20
10.5	105	FIG. 1	20
11.0	110	FIG. 1	20
11.5	115	FIG. 1	20
12.0	120	FIG. 1	20
12.5	125	FIG. 1	20
13.0	130	FIG. 1	20
13.5	135	FIG. 1	20
14.0	140	FIG. 1	20
14.5	145	FIG. 1	20
15.0	150	FIG. 1	20
15.5	155	FIG. 1	20
16.0	160	FIG. 1	20
16.5	165	FIG. 1	20
17.0	170	FIG. 1	20
17.5	175	FIG. 1	20
18.0	180	FIG. 1	20
18.5	185	FIG. 1	20
19.0	190	FIG. 1	20
19.5	195	FIG. 1	20
20.0	200	FIG. 1	20
20.5	205	FIG. 1	20
21.0	210	FIG. 1	20
21.5	215	FIG. 1	20
22.0	220	FIG. 1	20
22.5	225	FIG. 1	20
23.0	230	FIG. 1	20
23.5	235	FIG. 1	20
24.0	240	FIG. 1	20
24.5	245	FIG. 1	20
25.0	250	FIG. 1	20
25.5	255	FIG. 1	20
26.0	260	FIG. 1	20
26.5	265	FIG. 1	20
27.0	270	FIG. 1	20
27.5	275	FIG. 1	20
28.0	280	FIG. 1	20
28.5	285	FIG. 1	20
29.0	290	FIG. 1	20
29.5	295	FIG. 1	20
30.0	300	FIG. 1	20
30.5	305	FIG. 1	20
31.0	310	FIG. 1	20
31.5	315	FIG. 1	20
32.0	320	FIG. 1	20
32.5	325	FIG. 1	20
33.0	330	FIG. 1	20
33.5	335	FIG. 1	20
34.0	340	FIG. 1	20
34.5	345	FIG. 1	20
35.0	350	FIG. 1	20
35.5	355	FIG. 1	20
36.0	360	FIG. 1	20
36.5	365	FIG. 1	20
37.0	370	FIG. 1	20
37.5	375	FIG. 1	20
38.0	380	FIG. 1	20
38.5	385	FIG. 1	20
39.0	390	FIG. 1	20
39.5	395	FIG. 1	20
40.0	400	FIG. 1	20
40.5	405	FIG. 1	20
41.0	410	FIG. 1	20
41.5	415	FIG. 1	20
42.0	420	FIG. 1	20
42.5	425	FIG. 1	20
43.0	430	FIG. 1	20
43.5	435	FIG. 1	20
44.0	440	FIG. 1	20
44.5	445	FIG. 1	20
45.0	450	FIG. 1	20
45.5	455	FIG. 1	20
46.0	460	FIG. 1	20
46.5	465	FIG. 1	20
47.0	470	FIG. 1	20
47.5	475	FIG. 1	20
48.0	480	FIG. 1	20
48.5	485	FIG. 1	20
49.0	490	FIG. 1	20
49.5	495	FIG. 1	20
50.0	500	FIG. 1	20
50.5	505	FIG. 1	20
51.0	510	FIG. 1	20
51.5	515	FIG. 1	20
52.0	520	FIG. 1	20
52.5	525	FIG. 1	20
53.0	530	FIG. 1	20
53.5	535	FIG. 1	20
54.0	540	FIG. 1	20
54.5	545	FIG. 1	20
55.0	550	FIG. 1	20
55.5	555	FIG. 1	20
56.0	560	FIG. 1	20
56.5	565	FIG. 1	20
57.0	570	FIG. 1	20
57.5	575	FIG. 1	20
58.0	580	FIG. 1	20
58.5	585	FIG. 1	20
59.0	590	FIG. 1	20
59.5	595	FIG. 1	20
60.0	600	FIG. 1	20
60.5	605	FIG. 1	20
61.0	610	FIG. 1	20
61.5	615	FIG. 1	20
62.0	620	FIG. 1	20
62.5	625	FIG. 1	20
63.0	630	FIG. 1	20
63.5	635	FIG. 1	20
64.0	640	FIG. 1	20
64.5	645	FIG. 1	20
65.0	650	FIG. 1	20
65.5	655	FIG. 1	20
66.0	660	FIG. 1	20
66.5	665	FIG. 1	20
67.0	670	FIG. 1	20
67.5	675	FIG. 1	20
68.0	680	FIG. 1	20
68.5	685	FIG. 1	20
69.0	690	FIG. 1	20
69.5	695	FIG. 1	20
70.0	700	FIG. 1	20
70.5	705	FIG. 1	20
71.0	710	FIG. 1	20
71.5	715	FIG. 1	20
72.0	720	FIG. 1	20
72.5	725	FIG. 1	20
73.0	730	FIG. 1	20
73.5	735	FIG. 1	20
74.0	740	FIG. 1	20
74.5	745	FIG. 1	20
75.0	750	FIG. 1	20
75.5	755	FIG. 1	20
76.0	760	FIG. 1	20
76.5	765	FIG. 1	20
77.0	770	FIG. 1	20
77.5	775	FIG. 1	20
78.0	780	FIG. 1	20
78.5	785	FIG. 1	20
79.0	790	FIG. 1	20
79.5	795	FIG. 1	20
80.0	800	FIG. 1	20

TRANSPOSING GEAR CHART ENGLISH SCREW THREADS METRIC PITCH LEAD SCREW

ENGLISH PITCH	STUD GEAR	DRIVE GEARS	SCREW GEAR
4	40	FIG. 1	20
5	50	FIG. 1	20
6	60	FIG. 1	20
7	70	FIG. 1	20
8	80	FIG. 1	20
9	90	FIG. 1	20
10	100	FIG. 1	20
11	110	FIG. 1	20
12	120	FIG. 1	20
13	130	FIG. 1	20
14	140	FIG. 1	20
15	150	FIG. 1	20
16	160	FIG. 1	20
17	170	FIG. 1	20
18	180	FIG. 1	20
19	190	FIG. 1	20
20	200	FIG. 1	20
21	210	FIG. 1	20
22	220	FIG. 1	20
23	230	FIG. 1	20
24	240	FIG. 1	20
25	250	FIG. 1	20
26	260	FIG. 1	20
27	270	FIG. 1	20
28	280	FIG. 1	20
29	290	FIG. 1	20
30	300	FIG. 1	20
31	310	FIG. 1	20
32	320	FIG. 1	20
33	330	FIG. 1	20
34	340	FIG. 1	20
35	350	FIG. 1	20
36	360	FIG. 1	20
37	370	FIG. 1	20
38	380	FIG. 1	20
39	390	FIG. 1	20
40	400	FIG. 1	20
41	410	FIG. 1	20
42	420	FIG. 1	20
43	430	FIG. 1	20
44	440	FIG. 1	20
45	450	FIG. 1	20
46	460	FIG. 1	20
47	470	FIG. 1	20
48	480	FIG. 1	20
49	490	FIG. 1	20
50	500	FIG. 1	20
51	510	FIG. 1	20
52	520	FIG. 1	20
53	530	FIG. 1	20
54	540	FIG. 1	20
55	550	FIG. 1	20
56	560	FIG. 1	20
57	570	FIG. 1	20
58	580	FIG. 1	20
59	590	FIG. 1	20
60	600	FIG. 1	20
61	610	FIG. 1	20
62	620	FIG. 1	20
63	630	FIG. 1	20
64	640	FIG. 1	20
65	650	FIG. 1	20
66	660	FIG. 1	20
67	670	FIG. 1	20
68	680	FIG. 1	20
69	690	FIG. 1	20
70	700	FIG. 1	20
71	710	FIG. 1	20
72	720	FIG. 1	20
73	730	FIG. 1	20
74	740	FIG. 1	20
75	750	FIG. 1	20
76	760	FIG. 1	20
77	770	FIG. 1	20
78	780	FIG. 1	20
79	790	FIG. 1	20
80	800	FIG. 1	20

METRIC SYSTEM EQUIPMENT

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

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

METRIC TRANSPOSING GEARS ORDERED WITH LATHE

Size of Lathe	With English Graduations		With Metric Graduations	
	Cat. No.	Price	Cat. No.	Price
9" Model A	CL1955NK	\$14.75	CL1941NK	\$14.75
9" Model B	CL2248N	17.50	CL2247N	17.50
9" Model C	CL2261N	17.50	CL2263N	17.50
10-K Model A	CL1955NK	14.75	CL1941NK	14.75
10-K Model B	CL2248K	18.50	CL2247K	18.50
10-K Model C	CL2261K	18.50	CL2263K	18.50
10" Quick Change	CL1955R	55.75	CL1941R	55.75
13" Quick Change	CL1955T	62.00	CL1941T	62.00
14½" Quick Change	CL1955F	72.50	CL1941F	72.50
16", 16-24", & 2-H Q.C.	CL1955H	72.50	CL1941H	72.50

METRIC TRANSPOSING GEARS ORDERED SEPARATE FROM LATHE

Size of Lathe	Ship. Wt.	Cat. No.	Price
9" Model A	8 lbs.	CL1957NK	\$14.75
9" Model B	21 lbs.	CL1962N	23.75
9" Model C	21 lbs.	CL1961N	23.75
10-K Model A	8 lbs.	CL1957NK	14.75
10-K Model B	21 lbs.	CL1962K	25.25
10-K Model C	21 lbs.	CL1961K	25.25
10" Quick Change	51 lbs.	CL1957R	67.25
13" Quick Change	73 lbs.	CL1957T	73.50
14½" Quick Change	121 lbs.	CL1957F	89.25
16", 16-24", & 2-H Q.C.	65 lbs.	CL1957H	89.25

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

CL2265NK. Metric Thread Dial for 9" and 10-K South Bend Lathes with metric lead screw. Ship. wt. 3 lbs. Price\$18.50

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

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

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

ENGLISH TRANSPOSING GEARS ORDERED WITH LATHE

Size of Lathe	With English Graduations		With Metric Graduations	
	Cat. No.	Price	Cat. No.	Price
9" Model A	CL2288NK	\$14.75	CL2284NK	\$14.75
9" Model B	CL2253N	17.50	CL2255N	18.00

MOTORS FOR SOUTH BEND LATHES

MOTORS listed are instant reversing type to permit reversing lathe spindle for thread cutting, tapping, and similar operations. Single phase motors are capacitor type. Prices of motors for current characteristics not listed will be quoted on request. Regular control equipment for each motor is listed in Tables 2, 3, and 4, page 61. Alternate controls for motors are listed on page 62.

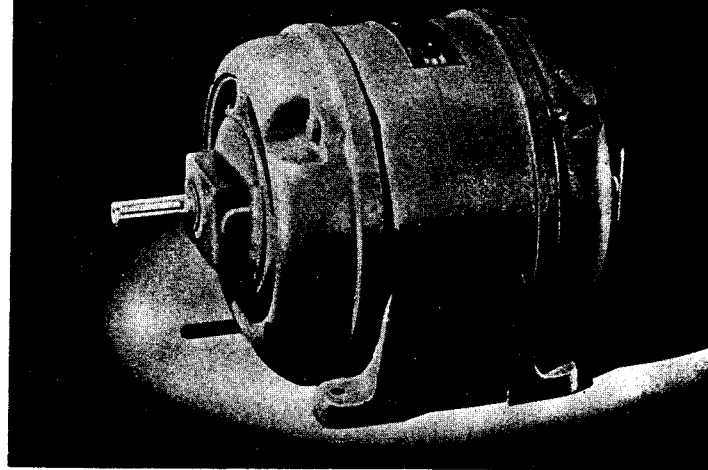


Table 1—MOTORS FOR SOUTH BEND LATHES

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

Catalog Number	Size of Lathe	Type of Current	Phase	Cycle	Voltage	h.p.	Speeds	Price f.o.b. Fact.
CE3383††	13-inch	A.C.	3	60	208	1½-¾	Two	\$192.00
CE3380††		A.C.	3	60	220	1½-¾		192.00
CE3381††		A.C.	3	60	440	1½-¾		192.00
CE2604S††		A.C.	3	50	380	1½-¾		192.00
CE2801P	10-inch	A.C.	3	60	208	¾	One-Speed	47.00
CE2801C		A.C.	3	50	220	¾		47.00
CE2801D		A.C.	3	60	220	¾		47.00
CE2801E		A.C.	3	50	440	¾		47.00
CE2801F		A.C.	3	60	440	¾		47.00
CE2803G		A.C.	3	50	550	¾		47.00
CE2803H		A.C.	3	60	550	¾		47.00
CE2804		A.C.	1	60	115	¾		55.50
CE2805		A.C.	1	60	230	¾		55.50
CE2806A		A.C.	1	50	115	¾		66.00
CE2806B	A.C.	1	50	230	¾	66.00		
CE3384††	10-inch	A.C.	3	60	208	½-1	Two	182.00
CE3385††		A.C.	3	60	220	½-1		182.00
CE3386††		A.C.	3	60	440	½-1		182.00
CE2606S††		A.C.	3	50	380	½-1		182.00
CE3227P	10-K and 9-inch	A.C.	3	60	208	½	One-Speed	37.50
CE3228*		A.C.	1	60	115	½		43.00
CE3240*		A.C.	1	50	115	½		49.50
CE3229		A.C.	1	60	230	½		43.00
CE3230		A.C.	1	50	230	½		49.50
CE3227C		A.C.	3	50	220	½		37.50
CE3227D		A.C.	3	60	220	½		37.50
CE3227E		A.C.	3	50	440	½		37.50
CE3227F		A.C.	3	60	440	½		37.50
CE4927G		A.C.	3	50	550	½		43.00
CE4927H	A.C.	3	60	550	½	43.00		
CE3250P	9-inch	A.C.	3	60	208	¼	One-Speed	26.00
CE3250C		A.C.	3	50	220	¼		26.00
CE3250D		A.C.	3	60	220	¼		26.00
CE3252*		A.C.	1	60	115	¼		33.50
CE3253		A.C.	1	60	230	¼		33.50
CE3242*		A.C.	1	50	115	¼		30.50
CE3243	A.C.	1	50	230	¼	33.00		

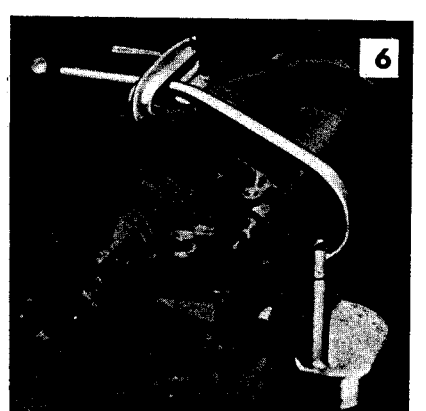
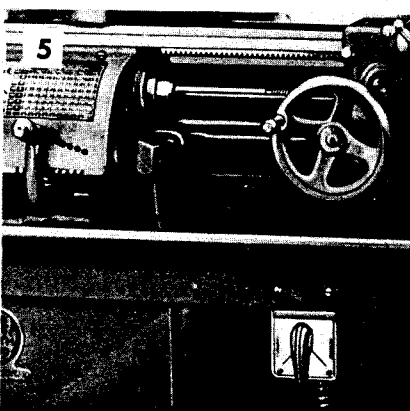
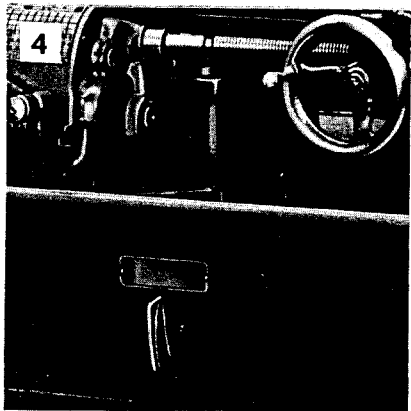
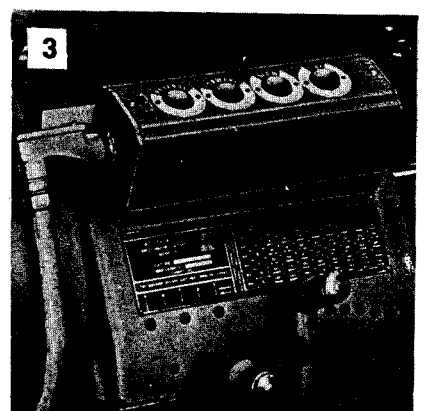
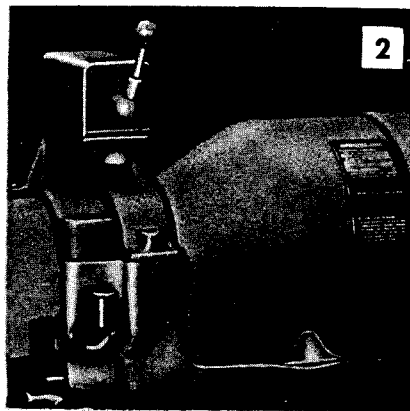
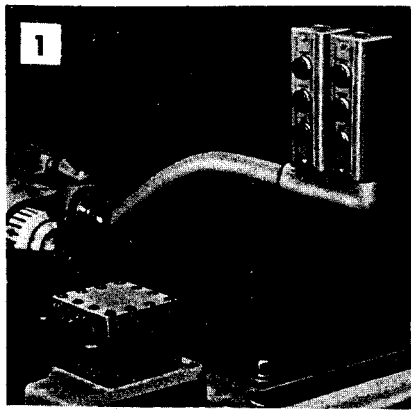
*Equipped with 6-ft. extension cord and plug when ordered with lathe. †Single winding motor. ††Double winding motor.

BRAKE TYPE MOTORS

Brake type motors can be supplied to order. Write for information, stating size and type of lathe.

NEMA MAXIMUM FRAME SIZES

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



ALTERNATE CONTROLS FOR MOTORS AND OPTIONAL MOUNTINGS FOR MOTORS

In addition to regular controls and control mountings listed on page 61, optional controls and mountings can be supplied as listed below. Illustrations above show method of mounting a representative control in each group, but do not illustrate all controls. Prices for alternate controls and mountings can be obtained from your South Bend Lathe distributor.

Fig. 1. Switch Arm Mounted Controls for 10", 13", 14½", and 16" Lathes.

- ES765. 2-speed Drum Control, Furnas. ††
- ES766. 2-speed Drum Control, Allen-Bradley (10" only). ††
- ES768. 2-speed Drum Control, Furnas (16" only). †
- ES790. 1-speed Drum Control.
- ES841. 1-speed Pushbutton Linestarter Control.
- ES843. 2-speed Pushbutton Linestarter Control. ††
- ES961. 1-speed Drum Control with Linestarter.
- ES962. 2-speed Allen-Bradley Drum Control with Linestarter, 60 Cycle. ††
- ES963. 2-speed Furnas Drum Control with Linestarter. ††
- ES964. 2-speed Allen-Bradley Drum Control with Linestarter, 50 Cycle (14½" and 16" only). †
- ES965. 1-speed Drum Control (14½" and 16" only).
- ES966. 1-speed Drum Control (14½" and 16" only).
- ES985. Start-Stop Pushbutton and Drum Control with Non-Reversing Linestarter. ††

Fig. 2. Quill Gear Guard Mounted Controls for 9", 10", 13", 14½", 16", and 16-24" Lathes.

- EQ765. 2-speed Drum Control, Furnas (10" and larger only). ††
- EQ766. 2-speed Drum Control, Allen-Bradley (10" and 13" only). ††
- EQ768. 2-speed Drum Control, Furnas (16" and 16-24" only). †
- EQ789. 1-speed Drum Control, Furnas (9" Horizontal Motor Drive only).
- EQ790. 1-speed Drum Control, Cutler-Hammer.
- EQ961. 1-speed Drum Control, Furnas, with Linestarter.
- EQ963. 2-speed Drum Control, Furnas, with Linestarter (10" and larger only). ††
- EQ964. 2-speed Allen-Bradley Drum Control with Linestarter, 50 cycle (14½", 16", and 16-24" only). †

- EQ965. 1-speed Drum Control, Cutler-Hammer (14½", 16", and 16-24" only).

- EQ966. 1-speed Drum Control, Cutler-Hammer (14½", 16", and 16-24" only).

Fig. 3. Gear Box Mounted Controls for 14½", 16", and 16-24" Lathes. These controls can also be used on 13" swing lathes, but will prevent using carriage stop on left of carriage close to headstock.

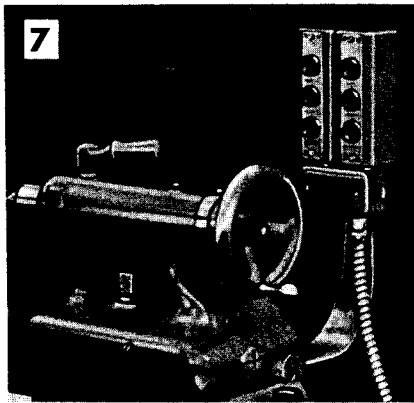
- EG765. 2-speed Drum Control, Furnas. ††
- EG790. 1-speed Drum Control.
- EG841. 1-speed Pushbutton Linestarter Control.
- EG842. 2-speed Pushbutton Linestarter Control. † (14½", 16", 16-24" only).
- EG961. 1-speed Drum Control with Linestarter.
- EG962. 2-speed Allen-Bradley Drum Control with Linestarter. ††
- EG963. 2-speed Furnas Drum Control with Linestarter. ††
- EG964. 2-speed Allen-Bradley Drum Control with Linestarter. †
- EG965. 1-speed Drum Control, Cutler-Hammer.
- EG966. 1-speed Drum Control, Cutler-Hammer.

Figs. 4 and 5. Bench Leg or Bench Leg Well Mounted Controls for 9" UMD, 10-K UMD, and 10" Lathes.

- EB765. 2-speed Drum Control, Furnas (10" only). ††
- EB766. 2-speed Drum Control, Allen-Bradley (10" only). ††
- EB790. 1-speed Drum Control.
- EB841. 1-speed Pushbutton Linestarter Control.
- EB842. 2-speed Pushbutton Linestarter Control (10" only). ††
- EB961. 1-speed Drum Control with Linestarter.
- EB962. 2-speed Allen-Bradley Drum Control with Linestarter (10" only) 60 Cycle. ††
- EB963. 2-speed Furnas Drum Control with Linestarter (10" only). ††
- EB985. Start-Stop Pushbutton and Drum Control with Non-Reversing Linestarter.

Fig. 6. Turret Type Mounted Controls for 16" and 2-H Lathes.

- ET961. 1-speed Drum Control with Linestarter.



- Fig. 7. Tailstock Raising Block Mounted Controls for 16-24" Lathes Only.**
- ETR765. 2-speed Drum Control, Furnas. ††
 - ETR768. 2-speed Drum Control, Furnas. †
 - ETR790. 1-speed Drum Control.
 - ETR841. 1-speed Pushbutton Linestarter Control.
 - ETR843. 2-speed Pushbutton Linestarter Control. ††
 - ETR961. 1-speed Drum Control with Linestarter.
 - ETR965. 1-speed Drum Control, Size 1.
 - ETR963. 2-speed Furnas Drum Control with Linestarter. ††
 - ETR966. 1-speed Drum Control, Size 2.
 - ETR985. Start-Stop Pushbutton and Drum Control with Non-Reversing Linestarter.

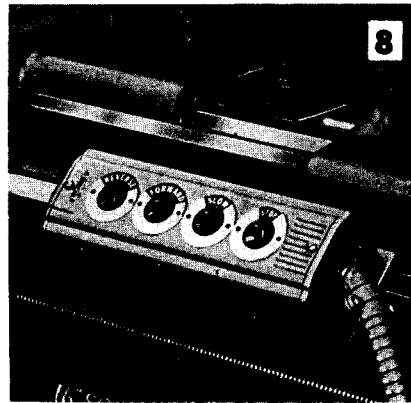


Fig. 8. Remote Control Mounted on Movable Bed Bracket for Lathes with 10' or Longer Beds. (Controls marked (*) can be used as a second control also.)

- ERC765. 2-speed Furnas Drum Control. ††
- ERC768. 2-speed Drum Control, Furnas. †
- ERC790. 1-speed Drum Control.
- *ERC841. 1-speed Pushbutton Linestarter Control.
- *ERC842. 2-speed Pushbutton Linestarter Control. †
- *ERC843. 2-speed Pushbutton Linestarter Control. ††
- ERC961. 1-speed Drum Control with Linestarter.
- ERC963. 2-speed Furnas Drum Control with Linestarter. ††
- ERC965. 1-speed Drum Control, Size 1.
- ERC966. 1-speed Drum Control, Size 2.

Fig. 9. Drive Unit Mounted Controls for 10-K Lathes only.

- ED790. 1-speed Drum Control.
 - ED841. 1-speed Pushbutton Linestarter Control. (Linestarter not fitted).
 - ED961. 1-speed Drum Control with Linestarter. (Linestarter not fitted).
- † For single winding motor. †† For double winding motor.

J. I. C. ELECTRICAL EQUIPMENT

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

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

Cat. No.	H.P.	Phase	Cycle	Volts	Price
CE6150	¾	3	60	220/440	\$52.50
CE6151	1	3	60	220/440	104.00
CE6152	1½	3	60	220/440	119.00
CE6153	2	3	60	220/440	146.00

NON-FUSIBLE CONTROL EQUIPMENT

Consisting of one combination magnetic reversing line-starter, size 1, with fused dual voltage transformer for low voltage control, overload protection and non-fusible disconnect, all in NEMA type 12 enclosure. Also one pushbutton station, forward, reverse, stop, in oil tight enclosure for surface mounting.

CE6154. Non-fusible Electrical Control Equipment to J. I. C. standards. Price.....\$216.00

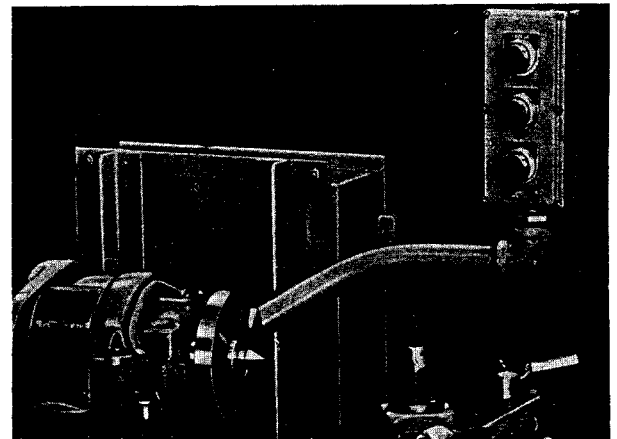
FUSIBLE CONTROL EQUIPMENT

Consisting of one combination magnetic reversing line-starter, size 1, with fused dual voltage transformer for low voltage control, with overload protection and with fusible disconnect, all in NEMA type 12 enclosure. Also one pushbutton station, forward, reverse, stop, in oil tight enclosure for surface mounting.

CE6155. Fusible Electrical Control Equipment to J. I. C. standards. Price.....\$231.00

CIRCUIT BREAKER CONTROL EQUIPMENT

Consisting of one combination magnetic reversing line-starter, size 1, with fused dual voltage transformer for low voltage control, overload protection and circuit breaker, all in NEMA type 12 enclosure. Also one pushbutton station, forward, reverse, stop, in oil tight enclosure for surface mounting.



CE6156. Circuit Breaker Electrical Control Equipment to J. I. C. standards. Price.....\$254.00

FITTING AND CONNECTING EQUIPMENT

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

- CE6157. Mounting J. I. C. Electrical Equipment on 10" Underneath Motor Drive Bench Lathe. Price.....\$58.00
- CE6158. Mounting J. I. C. Electrical Equipment on 10" Underneath Motor Drive Floor Lathe. Price.....\$56.00
- CE6159. Mounting J. I. C. Electrical Equipment on 13" Underneath Motor Drive Lathe. Price.....\$56.00
- CE6160. Mounting J. I. C. Electrical Equipment on 14½" or 16" Underneath Motor Drive Lathe. Price.....\$57.00
- CE6161. Mounting J. I. C. Electrical Equipment on 16-24" Underneath Motor Drive Lathe. Price.....\$58.00

SOUTH BEND VERTICAL SPINDLE

Precision

MILLING MACHINE

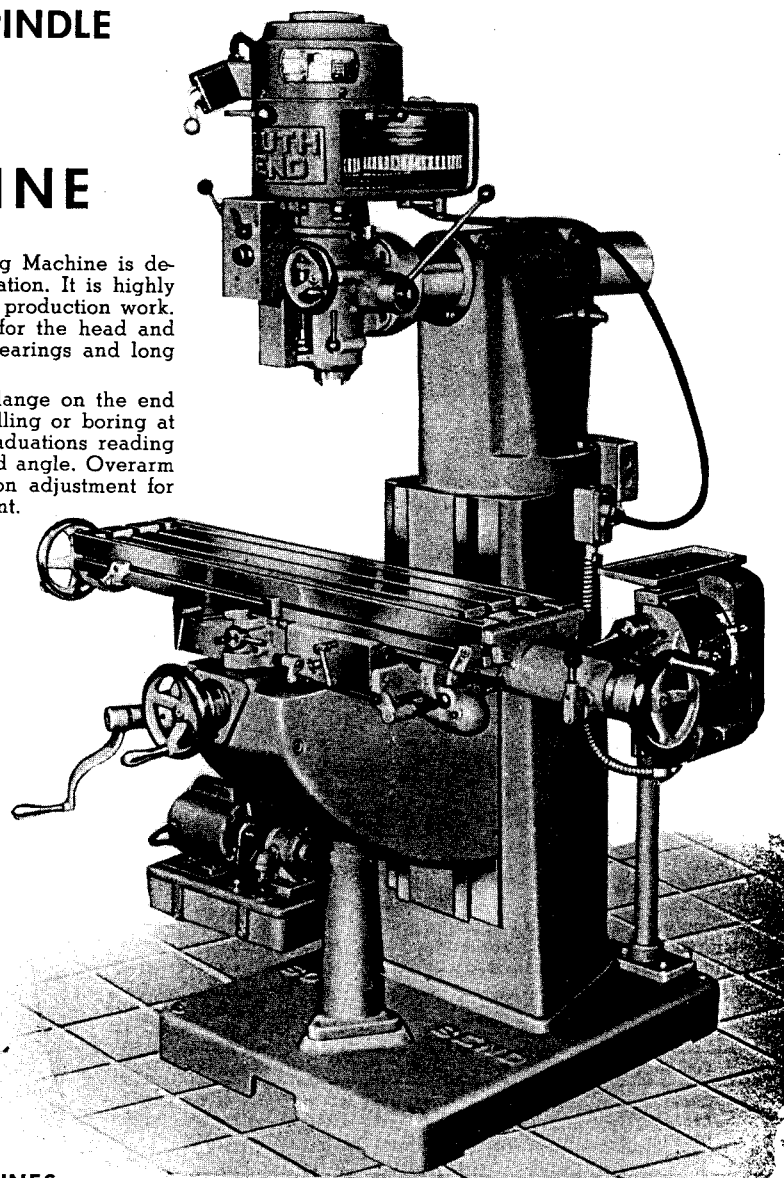
The South Bend Vertical Spindle Precision Milling Machine is designed for maximum convenience and ease of operation. It is highly efficient for a wide variety of exacting toolroom and production work. Heavily constructed column provides rigid support for the head and table assemblies. Massive knee has wide dovetail bearings and long tapered gibs for both column and table.

The universal type head is mounted on a large flange on the end of the overarm and swivels full 360° for milling, drilling or boring at any angle. Worm gearing and precision vernier graduations reading in minutes permit quick and easy adjustment for head angle. Overarm has large key with tapered gib and rack and pinion adjustment for positioning head without disturbing angular adjustment.

Flange mounted motor designed for operating in any position is mounted on milling machine head. Motor housing swivels around spindle for maximum flexibility in setting up work. A compound V-belt and timing belt "Lo-Loss" drive transmits power to the spindle with extreme smoothness. Aluminum pulleys are accurately machined and balanced. Convenient belt tension release permits changing speeds quickly and easily. Reversing switch controls direction of spindle rotation, permitting right- or left-hand milling. Convenient mechanical brake permits stopping spindle quickly. Spindle lock is provided for easy changing of cutting tools.

Spindle is made of hardened and ground alloy steel and runs in Timken tapered precision roller bearings. The ten-spline spindle has lever for rapid movement and handwheel for slow feed. A dependable micrometer depth stop is graduated in thousandths and positive quill lock is provided.

Table has dual controls for operating from either end. Movement of table is controlled by two Acme thread feed screws, each equipped with large easy-reading satin finish chrome plated micrometer collars with black graduations. Adjustable stops are provided for regulating the length of table feed. Three T-slots for clamping work or fixtures extend full length of table.



PRICES OF SOUTH BEND MILLING MACHINES

Equipment included in prices of milling machines listed below consists of three phase, 60 cycle, 220/440 v. A.C. motor; reversing switch; master collet holder; wrenches; and four collets having 3/8", 1/2", 5/8" and 3/4" capacities respectively. See pages 66 and 67 for cutter arbors, vises and other accessories.

Catalog Number	Table Length	Motor		Price
		R.P.M.	H.P.	
MIL3212	32"	1200	3/4	\$1829.00
MIL3218	32"	1800	1	1829.00
MIL4212	42"	1200	3/4	1911.00
MIL4218	42"	1800	1	1911.00

SINGLE PHASE MOTORS AND CONTROLS

Prices below show the additional cost for single phase motors and controls in lieu of three phase motors and controls of corresponding horsepower and speed, provided single phase equipment is specified when milling machine is ordered. Prices for current characteristics not shown quoted on request.

Cat. No.	H.P.	Ph.	Cycles	Volts	R.P.M.	Price
MIL2804	3/4	1	60	115	1200	\$52.00
MIL2805	3/4	1	60	230	1200	52.00
MIL2628B	1	1	60	115	1800	45.00
MIL2628D	1	1	60	230	1800	45.00

MECHANICAL POWER TABLE FEED

The South Bend Vertical Spindle Milling Machine can be supplied with power longitudinal feed at extra cost, provided this feature is specified at time machine is ordered. The power feed mechanism has independent motor drive and lever operated quick change mechanism which provide a range of 30 longitudinal feeds 1/4" to 15" per minute. Table feeds in either direction and directional control lever has quick release and neutral position. Automatic feed stops are adjustable for any desired length of cut within the normal feed range. Mechanical overload clutch is provided.

MIL3262. 32" Power Feed Table in lieu of regular.....\$350
 MIL4262. 42" Power Feed Table in lieu of regular.....\$350

HYDRAULIC POWER QUILL FEED

Hydraulic power quill feed attachment can be supplied at extra cost when specified at time Milling Machine is ordered. A single control lever permits feeding the spindle in either direction, up or down, and also has neutral or off position. Rate of feed is infinitely variable 0 to 25" per minute. Rapid traverse lever permits positioning quill quickly. Maximum length of feed is 4" and length of travel can be accurately controlled by positive depth stop. The hydraulic feed quill also has the regular manual feed lever and manual fine feed handwheel. We recommend purchase of MIL7052 Cabinet to enclose pump and reservoir. See page 65.

MIL7049. Power feed spindle in lieu of regular.....\$250

COMPARE THESE FEATURES

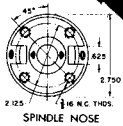
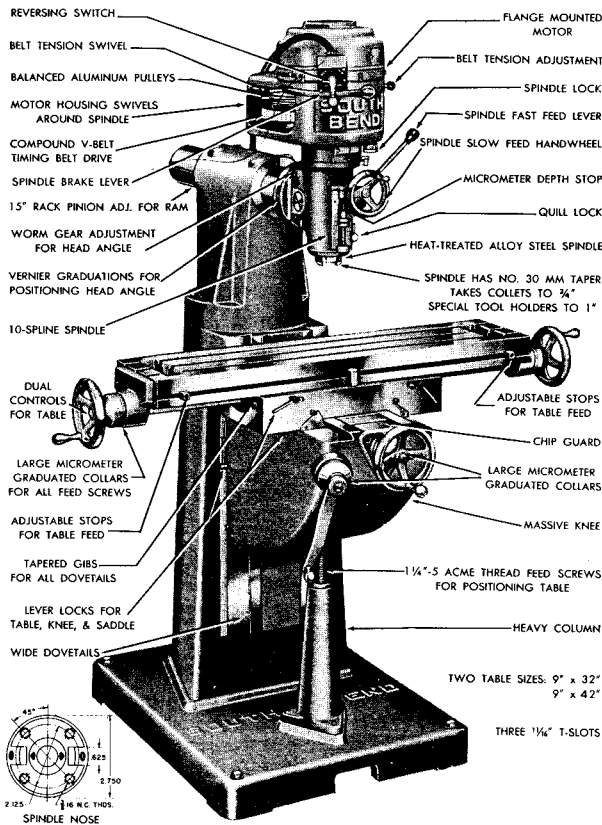
- Overarm has large key with tapered gib and rack and pinion adjustment for positioning head in or out without disturbing angular alignment of head.
- "Lo-Loss" combination timing belt and V-belt drive to spindle transmits full h.p. efficiently at all speeds. Convenient belt tension release is provided for quick and easy speed changes.
- Quill is ground and accurately fitted to semi-steel head casting. Quill bearing in head is bored and honed to a perfect precision fit with quill. Quill has lever operated fast feed and hand-wheel operated slow feed as standard equipment. (Hydraulic power feed is available at extra cost.) Turnstile lever for rapid hand feed disengages when worm and worm gear fine feed is used.
- Spindle has dependable micrometer depth stop graduated in thousandths, and positive quill lock. Independent spindle lock is also provided.
- Spindle is made of hardened and ground alloy steel, has 1 1/4" ten-spline drive, takes No. 30 MM taper quick change individual holders.
- Spindle face has four 3/8"-16 bolt holes for mounting face milling cutters, etc.
- Large diameter easy reading micrometer collars for positioning table have nonglare satin finish surface with black graduations.
- Lever locks for table, knee and saddle are conveniently located on front of machine. Chip guard between dovetails protects cross-feed screw from damage.
- Adjustable stops in T-slot are provided for regulating length of table travel.
- Manual longitudinal and cross-feeds to table are standard equipment. Power longitudinal feeds available at extra cost.

SPINDLE BRAKE

Spindle Brake is now standard equipment for South Bend Milling Machines. This feature can be added to older models if desired. Specify serial number of machine when ordering.
MIL7051. Spindle Brake for Milling Machines built before January 16, 1958. Shipping weight 6 lbs. Price f.o.b. factory \$15.50

METRIC GRADUATIONS

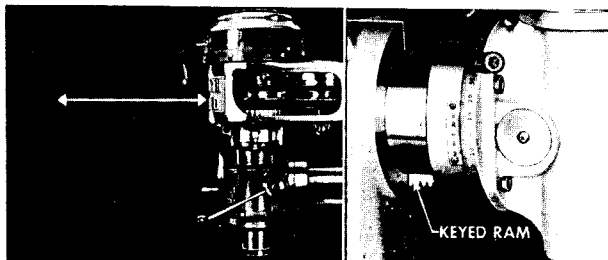
South Bend Milling Machines can be supplied with metric quill stop screw and depth scale, metric feed screws and metric graduated collars in lieu of English at no extra cost when metric equipment is specified at time machine is ordered.



SPECIFICATIONS

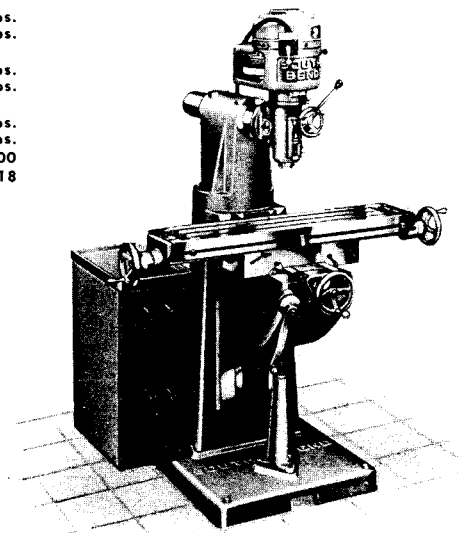
Table width	9"
Table lengths	32"-42"
Table travel, longitudinal	20"-30"
Table travel, cross	9 1/2"
Table travel, vertical	18"
Table feed screws, Acme thread	1 1/4"-5
Table to spindle, maximum	20"
Spindle to column, maximum	20"
Ram travel by rack and pinion	15"
Ram diameter	4 1/2"
Head rotates	360°
Quill diameter	3 1/4"
Quill travel	4"
Collet capacity, maximum	3/4"
Spindle taper	#30 MM

Spindle speeds	8
r.p.m. with 1 h.p., 1800 r.p.m. motor	135, 220, 350, 560, 900, 1450, 2330, 3750
r.p.m. with 3/4 h.p., 1200 r.p.m. motor	90, 150, 230, 375, 600, 965, 1550, 2500
Net weight, Approx.	
With 32" Table	1635 lbs.
With 42" Table	1700 lbs.
Shipping weight crated, approx.	
With 32" Table	1950 lbs.
With 42" Table	2000 lbs.
Shipping weight boxed, approx.	
With 32" Table	2430 lbs.
With 42" Table	2625 lbs.
Cubic feet boxed, 32" Table	100
Cubic feet boxed, 42" Table	118



KEYED RAM SAVES TIME

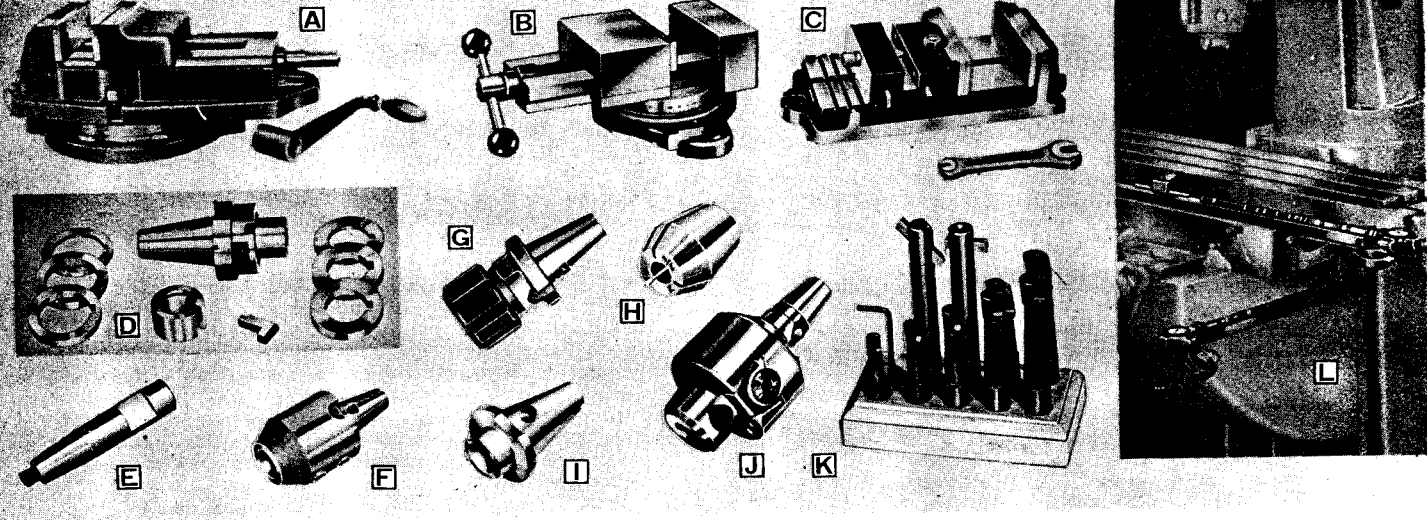
This feature saves you the time and annoyance of resetting the head angle every time the ram is moved transversely. A large key fitted with adjustable tapered gib holds the ram and head assembly in angular alignment, even when ram lock is released for transverse movement of head. The head swivels on a large flange on the end of the ram. Vernier graduations and worm adjustment make angular settings precise and easy.



CABINET FOR MILLING MACHINE

This steel cabinet has two compartments, one for holding the hydraulic pump and reservoir for operating power spindle feed and the other for coolant pump and reservoir. See page 44 for Universal Coolant Pump.

MIL7052. Cabinet for Milling Machine Price \$39.50



ACCESSORIES FOR SOUTH BEND MILLING MACHINES

A 6" SWIVEL VISE has flanges for clamping to machine table and may be used with or without the 360° swivel base. Base has two 1/8" T-slot bolts for swivel, two 5/8" T-slot bolts and two 1/8" keys to fit machine table slots. Ground steel jaw plates are removable. Vise jaws are 6" wide, 2" deep and open 6". Shipping weight 95 lbs.

MIL7014. 6" Swivel Milling Machine Vise. Price f.o.b. factory. \$101.75

MIL7036. Crank Handle for above vise, extra. Price f.o.b. factory. \$7.80

B 4" SWIVEL VISE has base with slotted flanges for bolting to machine table. Swivel is graduated 180° to permit setting vise at any angle with slots in machine table. Jaws are replaceable and are made of hardened steel. Jaws are 4" wide, 1" deep and maximum jaw opening is 4". Shipping wt. 18 lbs.

CE9100. Swivel Machine Vise. Price f.o.b. factory. \$28.35

C QUICK-ACTING VISE. This is a sturdy accurately machined vise for general all around work. Has quick-acting adjustment for self-aligning jaw. Vise screw is wrench operated. Vise jaws are replaceable hardened steel and are 5 1/2" wide, 2 1/8" deep and open 6 1/2". Shipping weight 40 pounds.

MIL7013. 5 1/2" Quick-acting Milling Machine Vise. Price. \$76.50

D MILLING CUTTER ARBOR. This arbor is designed to hold standard side milling cutters and dovetail cutters from 3" to 6" diameter with 1/8" to 3/4" face and having either a 1" or 1 1/4" diameter arbor hole. (See page 43 for milling cutters.) Cutter is securely held by a split expansion taper bushing and flush tightening screw. Cutters are driven by a key which fits standard size key slots. Spacing collars are provided to accommodate various face widths. Shipping weight 3 pounds.

MIL7035. Side Milling Cutter Arbor. Price f.o.b. factory. \$39.50

E THREADED ARBORS FOR ANGULAR CUTTERS. These arbors have 3/4" diameter straight shank to fit into 3/4" quick change tool holder or 3/4" collet held in master collet holder. (See page 43 for milling cutters.) Shipping weight 1 pound.

MIL7037. Arbor with 3/8"—24 right-hand thread for holding angular cutters CE66753 and CE66754. Price f.o.b. factory. \$4.95

MIL7038. Arbor with 3/8"—24 left-hand thread for holding angular cutters CE66751 and CE66752. Price f.o.b. factory. \$4.95

F QUICK CHANGE TOOL HOLDERS fit into No. 30 MM taper to hold single or double end straight shank end mills, drills, boring bars or other straight shank tools. (See page 43 for milling cutters.) Shipping weight 4 pounds each.

Cat. No.	Capacity	Price	Cat. No.	Capacity	Price
MIL7016	3/8"	\$14.60	MIL7020	3/4"	\$15.65
MIL7017	3/8"	12.80	MIL7021	7/8"	19.30
MIL7018	1/2"	12.25	MIL7022	1"	19.45
MIL7019	3/8"	11.70			

G MASTER COLLET HOLDER. One master collet holder is supplied as part of the regular equipment with each milling machine. Additional master collet holders are supplied as extras. Shipping weight 3 lbs.

MIL7000. Master Collet Holder and Wrench. Price f.o.b. factory \$43.00

H EXTRA COLLETS. These collets fit into master collet holder (standard equipment) to take straight shank milling cutters, boring tools, etc. Shipping weight 1 pound each.

Cat. No.	Capacity	Price	Cat. No.	Capacity	Price
MIL7001	1/16"	\$10.80	MIL7007	7/16"	\$3.60
MIL7002	1/8"	10.80	MIL7008	1/2"	3.60
MIL7003	3/16"	3.95	MIL7009	9/16"	3.60
MIL7004	1/4"	3.95	MIL7010	5/8"	3.60
MIL7005	5/16"	3.95	MIL7011	1 1/16"	3.60
MIL7006	3/8"	3.60	MIL7012	3/4"	3.60

I MORSE TAPER SLEEVE. This sleeve has the No. 30 MM taper on the outside to fit into the milling machine spindle and has a No. 2 Morse taper inside to receive taper shank drills, reamers, boring bars, end mills and other taper shank tools. Shipping weight 1 pound.

MIL7039. No. 2 Morse Taper Sleeve for Milling Machine. Price. \$7.50

J OFFSET BORING HEAD. This boring head has No. 30 MM taper shank to fit directly into taper of milling machine spindle. Body is 2 3/4" diameter and maximum bar offset is 5/8". Offsetting screw has dial with graduations reading in thousandths and each complete revolution of screw moves tool .050". Bar or tool capacity is 5/8". Price includes T wrench. Shipping weight approx. 4 1/4 lbs.

MIL7043. Offset Boring Head. Price f.o.b. factory. \$85.00

K BORING TOOL SET for use with Offset Boring Head described above. Consists of nine boring bars and boring tools for 3/8" and larger holes. Made of hardened high speed steel with 5/8" diameter shanks. Price includes wrench and wood base. Shipping weight 3 1/2 lbs.

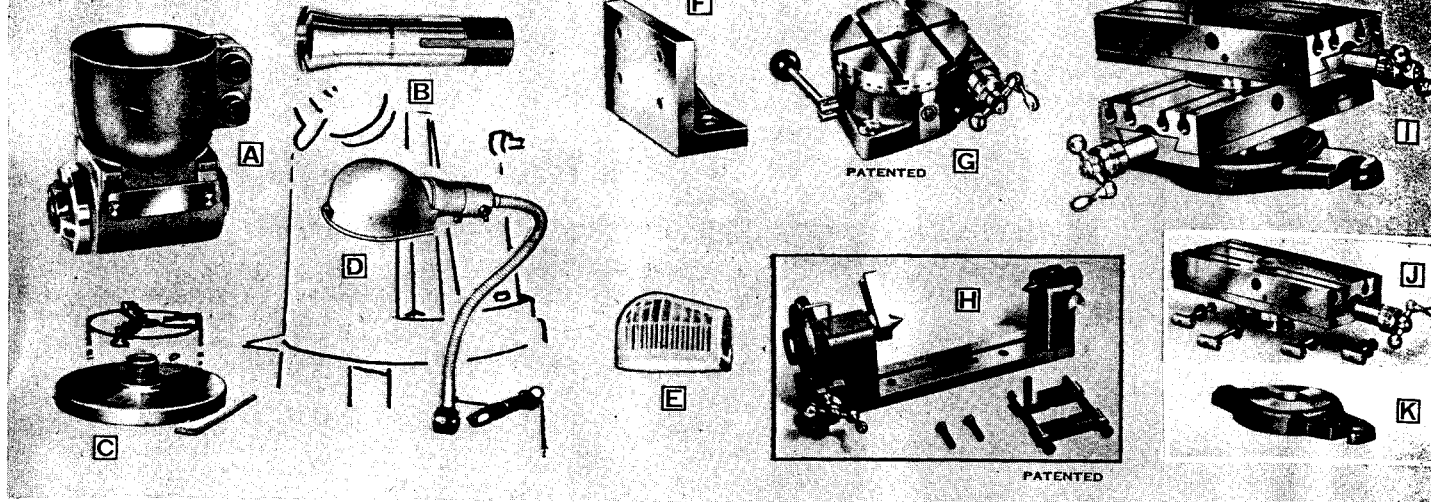
MIL7044. Boring Tool Set, Price f.o.b. factory. \$28.00

L MEASURING TRAYS AND RODS. Measuring trays are attached to table and knee of milling machine and used with 5/8" diameter end measuring rods and micrometers (listed below) for positioning table with extreme precision. Especially useful for jig boring operations. Dial indicators supplied with measuring trays have 100 graduations reading in thousandths of an inch. Indicator housing is so constructed that indicator is protected against accidental damage. Shipping weight approximately 35 pounds.

MIL7040. Measuring Trays and Indicators for 32" Table. \$129.50

MIL7041. Measuring Trays and Indicators for 42" Table. \$136.50

MIL7042. Set of Precision End Measuring Rods consisting of two 4" to 5" inside micrometers, one 10" solid rod, and two each solid rods 1", 2", 3", and 6" long. Packed in wooden case. Shipping wt. 5 lbs. Price. \$217.50



ACCESSORIES FOR SOUTH BEND MILLING MACHINES

A 90° MILLING HEAD. This attachment greatly increases the versatility of the milling machine. It clamps onto quill of milling machine and may be set at any angle. The 90° spindle has #30 MM taper and takes same holders, arbors, sleeves or other tools that are normally used in regular spindle. Also supplied are draw-in collet attachment for the spindle and one 1/2" capacity No. 3 collet. Spindle is driven from the milling machine spindle through bevel gears and operates at same speed as milling machine spindle. Shipping weight 20 lbs. MIL7050. 90° Milling Head. Price f.o.b. factory.....\$77.50

B EXTRA COLLETS FOR 90° MILLING HEAD. Regular South Bend No 3 **←R-S-B←** steel collets. Any capacity 1/8" to 1/2" round in increments of 1/16". (See page 32 for square and hexagon collets.) Shipping weight each 6 ozs. CE3050. Steel Collet. Price each f.o.b. factory.....\$4.80

C CHUCK ADAPTER STUD for mounting chuck on table of milling machine, drill press, shaper or other machine for holding work. Consists of accurately machined base plate with threaded stud on which lathe chuck may be screwed. When ordering be sure thread on stud conforms with thread in back of chuck to be used. Price includes bar for screwing stud into base plate but does not include clamps or bolts.

Catalog Number	Diameter of Plate	Thread Diameter	Threads per Inch	Shipping Weight	Price
CE3445	6 1/4"	1 1/2"	8	7 lbs.	\$5.50
CE3446	6 1/4"	1 3/4"	8	10 lbs.	6.95
CE3447	7 1/2"	2 1/4"	8	13 lbs.	8.85
CE3448	11 3/4"	2 3/8"	6	14 lbs.	16.75

D WORK LIGHT. For clear vision without eyestrain, equip your milling machines (and other machine tools) with this South Bend Work Light. May be permanently installed by drilling and tapping one hole in the milling machine column. When ordered with milling machine, the column will be drilled and tapped for the work light at no extra charge. Shipping weight 5 pounds.

MIL7047. Work Light for milling machine. Price f.o.b. factory...\$14.20

E KOOL-SHIELD. Nylon guard snaps over work light reflector and is held in position by a small spring. Permits safe use of 100 w lamp in work light. Shipping weight 1/2 pound. CE2816. Kool-Shield. Price f.o.b. factory.....\$1.20

F ANGLE PLATE. This is a heavy cast iron angle plate suitable for clamping work on the milling machine, shaper, drill press, face plate of lathe, etc. Size 4 1/2" x 3" x 2". Has six bolt holes. Shipping weight 4 pounds.

CE9640. Angle Plate. Price f.o.b. factory.....\$9.50

G ROTARY INDEXING TABLE. You will find this rotary indexing table a great convenience for mounting small work on the milling machine, drill press, or shaper. Used for accurately spacing holes, indexing clutch teeth, machining squares, hexagonal or octagonal shapes, milling circular grooves or T-slots, etc. Table is 4 1/2" in diameter and has three T-slots for clamping work. Edge of table is graduated 360°. Table is turned by worm gearing having graduated collar and ball crank. Thumb screw on front of ball crank locks graduated collar in any position. Each graduation indicates a table movement of 3 minutes. One complete revolution of the ball crank turns the table 5 degrees. Clamping device is provided for locking table in any position. Top of table is precision ground. Base has two bolt holes for clamping to machine table. Price includes eight clamping bolts with nuts and washers. Shipping weight 14 lbs.

CE9144. Indexing table. Price f.o.b. factory.....\$58.80

H INDEXING CENTERS. This is an indispensable device for milling splines or flutes in shafts, laying out work, accurate cross drilling, gear cutting, milling or shaping hexagons, squares, etc. Base has bolt holes for clamping on table of milling machine, drill press or shaper. Takes work between centers up to 5" in diameter, 6" long. Revolving center has large dial graduated 360°. Center is turned by worm gearing having graduated collar and ball crank. Each graduation indicates a center movement of 3 minutes. One complete revolution of the ball crank turns the center 5°. Worm gear can be disengaged for quick positioning of indexing center. Clamping device is provided for locking center in any position. Base has two bolt holes for clamping to machine table. Price includes two clamping bolts. Shipping weight 12 lbs.

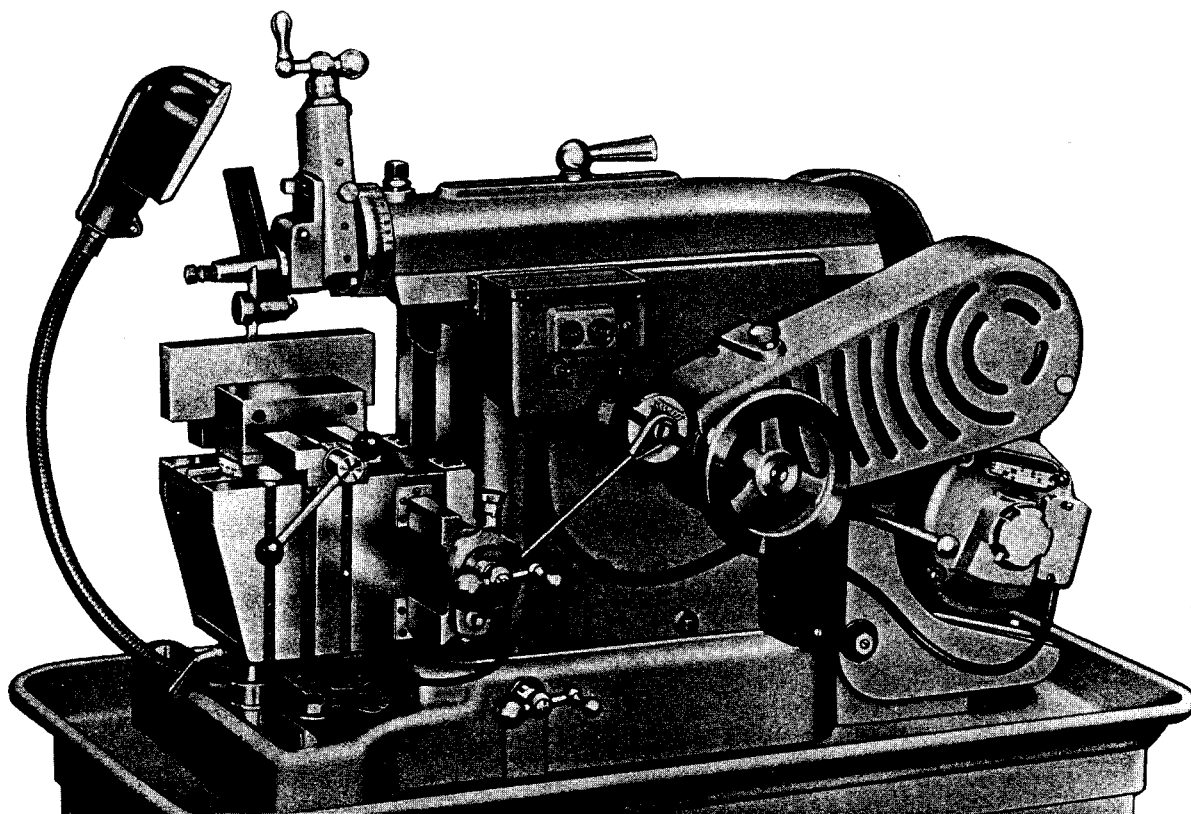
CE9635. Indexing Centers. Price f.o.b. factory.....\$73.25

I UNIVERSAL TABLE. For angular milling operations. Both upper and lower slides have graduated swivels and may be turned through full 360°. Slides can be used without graduated swivels to reduce height if desired. They can be positioned at any angle with each other and may be turned individually or together. Each slide has feed screw with micrometer collar reading in thousandths of an inch. Dovetails are equipped with full length gibs for take-up. The precision ground work surface is 4" x 8 7/8" and maximum travel is 4" for either slide. Table has four slots for clamping work. Clamp bolts fit snugly into round slots in such a way that there is little danger of breaking out or otherwise damaging the slots. Supplied with base for use on milling machines, drill press, etc.

CE9156. Universal Table complete with base for South Bend milling machine or other machine tools, two slides, two graduated swivels, and eight clamp bolts with nuts. Ship. wt. 43 lbs. Price.....\$106.00

CE9157. Single Table with one graduated swivel and four clamp bolts with nuts. Ship. wt. 19 lbs. Factory price.....\$50.50

CE9159. Base only for adapting single table to South Bend milling machine or other machine tool. Ship. wt. 8 lbs. Price.....\$4.60



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

7" SOUTH BEND *Precision* BENCH SHAPER

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

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

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

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

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

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

Motor required is $\frac{1}{3}$ or $\frac{1}{2}$ h.p., 1725 r.p.m., and is mounted on a cradle at the back of the shaper. Power is transmitted by V-belts. A quick acting belt tension release is provided for easy shifting of the belt to change speeds. All V-belts and pulleys are enclosed in substantial metal guards. If shaper is ordered without motor, specify voltage, phase, and cycle of motor to be used so that correct wiring can be supplied.

CS100. South Bend 7" Precision Bench Shaper with vise, drive unit for $\frac{1}{3}$ h.p. motor, motor pulley, V-belts, guards, work light, and built-in pushbutton type across-the-line manual starter for motor, but without motor, steel stand, or tool holder. (See pages 70 and 71). Shipping weight crated 330 lbs. Boxed weight 400 lbs., cubic feet boxed 12.* Price f.o.b. factory **\$602.00**

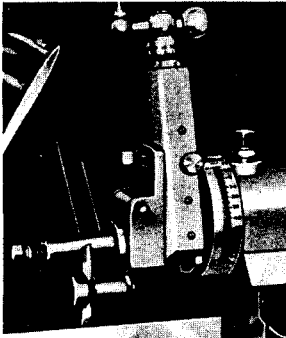
CS100M. South Bend 7" Shaper, same as above but with metric graduations. Price f.o.b. factory **\$602.00**

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

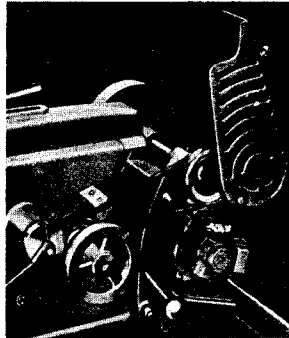
Features

THAT MAKE SOUTH BEND A BETTER SHAPER VALUE

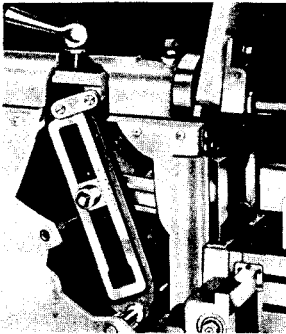
- Extreme precision for the most exacting tolerances.
- Convenient controls for maximum ease of operation.
- Built-in work light to prevent eye strain.
- Ample bearing surfaces assure rigidity and durability.
- Force feed lubrication to ram dovetail, bull gear, and crank pin slide.
- Powerful built-in V-belt motor drive.
- Smooth, quiet operation at all speeds.
- Quick acting belt tension release for changing speeds.
- Sliding support shoe for outer end of table.
- Convenient length of stroke adjustment graduated 0 to 7".
- Reversible power cross-feeds .002" to .012" per stroke.
- Graduated eccentric indicating power feed in thousandths.
- Swivel vise graduated in degrees mounts on top or side of table. Locks at any angle.
- Swivel tool head graduated in degrees, locks at any angle.
- Tool slide has swivel clapper box and heat-treated steel tool post and tool post screw.
- Cross-feed screw for table has micrometer graduated collar.
- Tool slide feed screw has micrometer graduated collar.



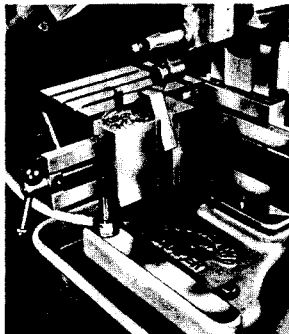
Tool head locks in any position.
Clapper box also adjustable



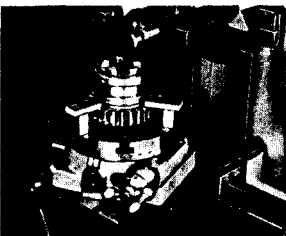
Quick-acting belt tension release.
All belts guarded.



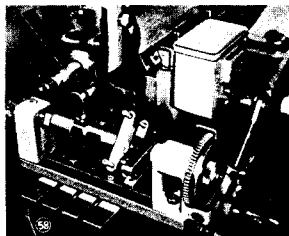
Rocker arm graduated for accurate
stroke adjustment.



Bearing surface on base for adjust-
able table support



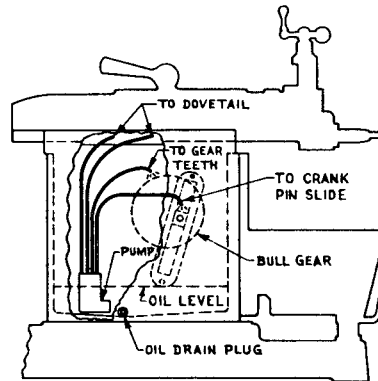
Machining clutch teeth with rotary
indexing table.



Machining flat surfaces on shaft
with indexing head

SPECIFICATIONS

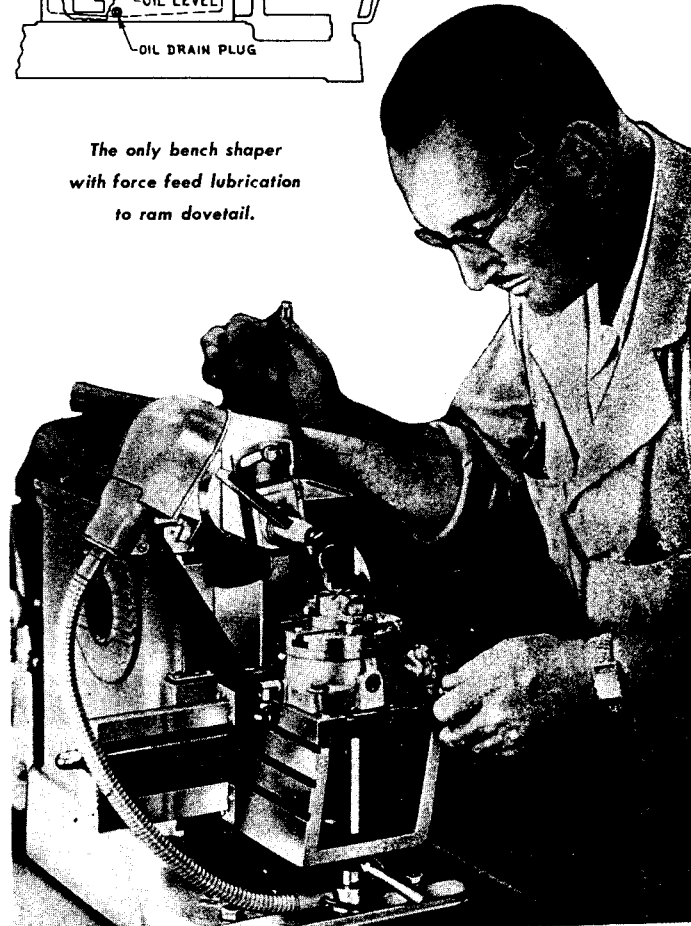
Length of ram stroke	..... 0 to 7"
Strokes per minute, approximate	..... 42-75-120-195
Cutting speeds	..... 3 to 114 feet per minute
Vertical feed of tool	..... 3"
Tool post takes tool	..... 3/8" x 1 3/16"
Tool head swivels	..... 360°
Width of vise jaws	..... 4"
Depth of vise jaws	..... 1"
Maximum opening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

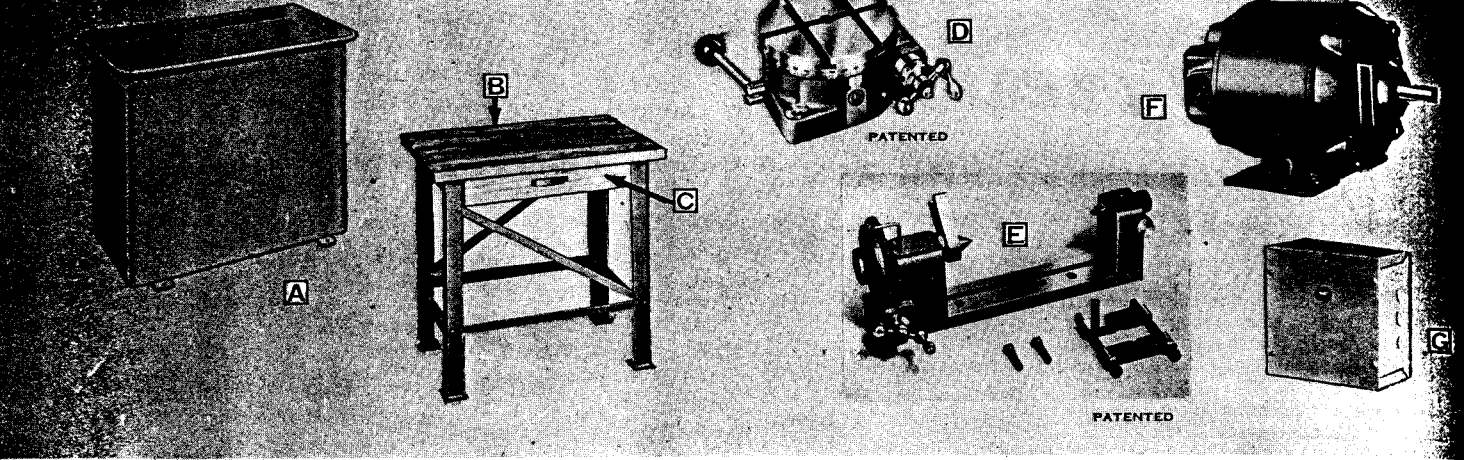


FORCE FEED LUBRICATION

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

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





ACCESSORIES FOR SOUTH BEND 7" BENCH SHAPERS

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

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

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

CE9141. Wood Top Machine Stand (less drawer). Price f.o.b. factory..... **\$25.95**

C DRAWER FOR MACHINE STAND. Handy for keeping small tools, wrenches, etc. Finished to match stand CE9141. Drawer is 20½" wide, 14" long, 3⅝" deep. Price includes metal pull and wood slides. Shipping weight 9 pounds.

CE1780D. Drawer for use with Machine Stand. Price f.o.b. factory..... **\$8.60**

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

CE9144. Indexing Table. Ship. wt. 14 lbs. Price f.o.b. factory **\$58.80**

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

CE9635. Indexing Centers. Ship. wt. 12 lbs. Price f.o.b. factory. **\$73.25**

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

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

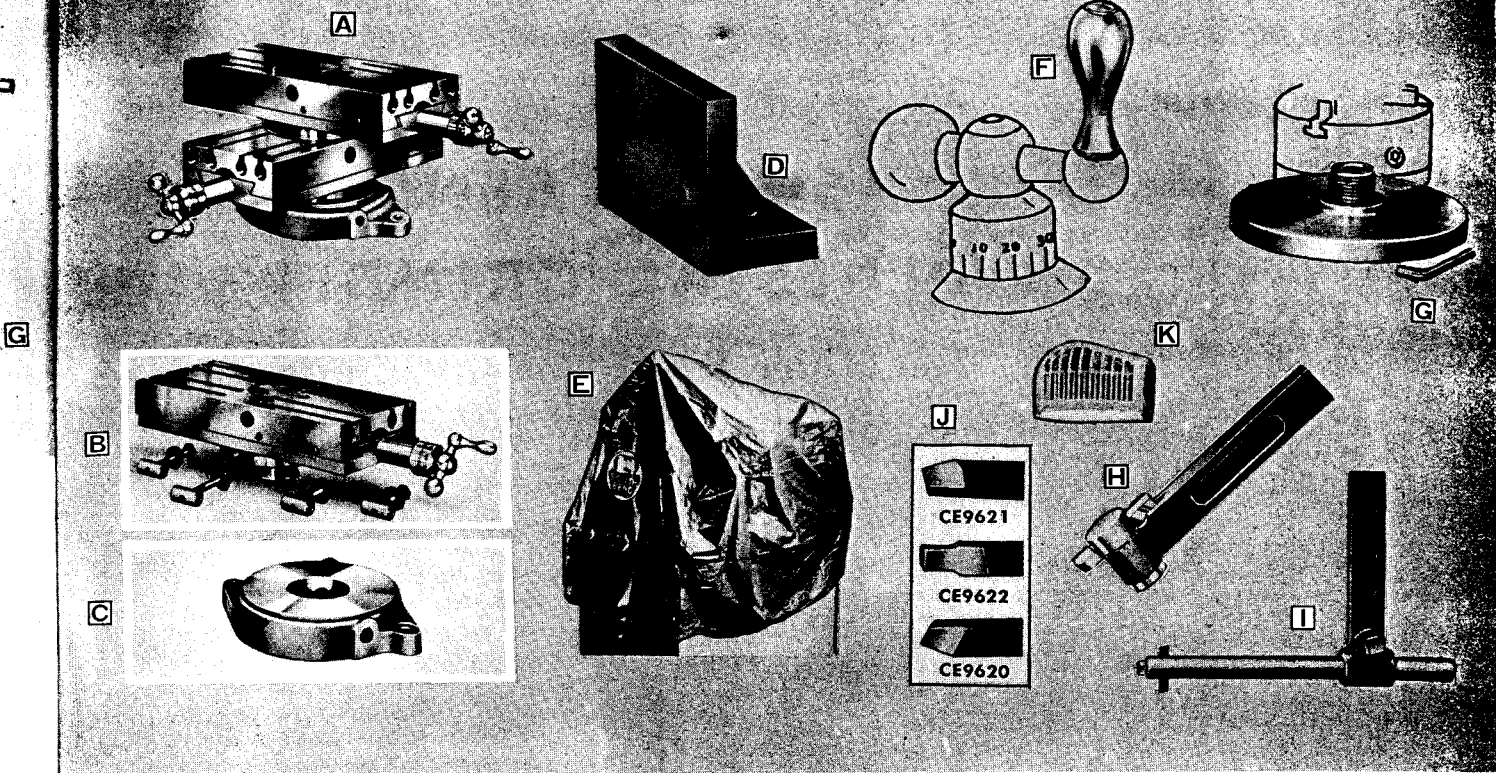
Cat. No.	H.P.	Current	Volts	Phase	Cycle	Price
CS4910B	½	A.C.	115	1	60	\$ 37.00
CS4910D	½	A.C.	230	1	60	37.00
CS4911A	½	A.C.	115	1	50	40.50
CS4911C	½	A.C.	230	1	50	40.50
CS4912D	½	A.C.	208-220	3	60	43.50
CS4912C	½	A.C.	208-220	3	50	43.50
CS4913S	½	A.C.	380	3	50	43.50
CS4913F	½	A.C.	440	3	60	43.50
CS4913E	½	A.C.	440	3	50	43.50
CS4920B	½	A.C.	115	1	60	43.50
CS4920D	½	A.C.	230	1	60	43.50
CS4921A	½	A.C.	115	1	50	47.00
CS4921C	½	A.C.	230	1	50	60.50
CS4916R	½	A.C.	125	1	50	72.00
CS4915Q	½	A.C.	250	1	50	72.00
CS4922Y	½	A.C.	115	1	40	100.00
CS4922Z	½	A.C.	230	1	40	100.00
CS4914D	½	A.C.	208-220	2	60	47.00
CS4914C	½	A.C.	208-220	2	50	47.00
CS4914F	½	A.C.	440	2	60	47.00
CS4914E	½	A.C.	440	2	50	47.00
CS4924D	½	A.C.	208-220	3	60	47.00
CS4924C	½	A.C.	208-220	3	50	47.00
CS4924S	½	A.C.	380	3	50	47.00
CS4924F	½	A.C.	440	3	60	47.00
CS4924E	½	A.C.	440	3	50	47.00

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

CE9609E. Remote Control for three phase or two phase three wire 208-220/440 v., 50 cy. A.C. motors. Ship. wt. 14 lbs. Price f.o.b. factory..... **\$82.00**

CE9609F. Remote controls for three phase or two phase three wire 208-220/440 v., 60 cy., A.C. motors. Ship. wt. 14 lbs. Price f.o.b. factory..... **\$82.00**

CE9609S. Remote Control for three phase 380 v. A.C. motors. Shipping weight 14 lbs. Price f.o.b. factory..... **\$86.00**



ACCESSORIES FOR SOUTH BEND 7" BENCH SHAPERS

A UNIVERSAL TABLE. Both upper and lower slides have graduated swivels and may be turned through full 360°. 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 8⁷/₈" and maximum travel is 4" for either slide. Table has four slots for clamping work. Clamp bolts fit snugly into round slots in such a way that there is little danger of breaking out or otherwise damaging the slots. Slides and bases may be purchased separately if desired.

CE9150. Universal Table "A" complete with base for South Bend 7" Shaper, two slides, two graduated swivels, and eight clamp bolts with nuts. Shipping weight 37 lbs. Price f.o.b. factory \$107.00

CE9157. Single Table "B" with one graduated swivel and four clamp bolts with nuts. Shipping weight 19 lbs. Price f.o.b. factory \$50.50

CE9158. Base only "C" for adapting single table to South Bend 7" Shaper. Shipping weight 3 lbs. Price f.o.b. factory \$4.15

D ANGLE PLATE. This is a heavy cast iron angle plate suitable for clamping work on the shaper, drill press, milling machine, face plate of lathe, etc. Size 4¹/₂" x 3" x 2". Has six bolt holes.

CE9640. Shipping weight 4 lbs. Price f.o.b. factory \$9.50

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

CE2694. Waterproof Service Cover for Shaper. Price \$2.85

F SWIVELING MACHINE HANDLES. Swiveling machine handles for the shaper can be supplied in lieu of the solid machine handles, provided they are specified when the shaper is ordered.

CS9636. Swiveling Machine Handles for tool head feed screw, table cross-feed screw, and table vertical feed screw, in lieu of solid machine handles. Price f.o.b. factory when ordered with shaper \$2.55

G CHUCK ADAPTER STUD for mounting chuck on table of shaper, drill press, milling machine or other machine for holding work. Consists of accurately machined base plate with threaded stud on which lathe chuck may be screwed. When ordering be sure thread on stud conforms with thread in back of chuck to be used. Price includes bar for screwing stud into base plate but does not include clamps or bolts.

Catalog Number	Diameter of Plate	Thread Diameter	Threads per Inch	Shipping Weight	Price
CE3445	6 ¹ / ₄ "	1 ¹ / ₂ "	8	7 lbs.	\$ 5.50
CE3446	6 ¹ / ₄ "	1 ⁷ / ₈ "	8	10 lbs.	6.95
CE3447	7 ¹ / ₂ "	2 ¹ / ₄ "	8	13 lbs.	8.85
CE3448	11 ³ / ₄ "	2 ³ / ₈ "	6	14 lbs.	16.75

H SHAPER TOOL HOLDER. An extremely rigid forged steel tool holder for 1/4" square cutter bits. Adjustable to work at all angles. Head can be swivled and locked at eight different positions for machining many odd shapes and for cutting various angles without shifting the work. Shipping wt. 1 lb.

CS9630. Adjustable Shaper Tool Holder. Price f.o.b. factory . . . \$9.39

I EXTENSION SHAPER TOOL. A rigid forged steel tool holder for internal work. Adapted for die work, internal keyways or for any work on the shaper in which extra clearance is needed. Size of bar is 1/2" x 7¹/₂". Takes cutter bit 3/8" x 3/8". Shipping weight 2 lbs.

CS9631. Extension Shaper Tool. Price f.o.b. factory \$9.39

J GROUND CUTTER BITS FOR SHAPER. High speed steel cutter bits, 1/4" square, ground to shape, ready for use in shaper tool holder CS9630. Shipping weight 4 ozs. each.

CE9620. Right-Cut Shaper Tool Bit. Price f.o.b. factory \$.68

CE9621. Left-Cutter Shaper Tool Bit. Price f.o.b. factory \$.68

CE9622. Slot-Cutting Shaper Tool Bit. Price f.o.b. factory \$.68

CE9623. Set of Three Tool Bits (one each of above). Price \$1.95

K KOOL-SHIELD. Nylon guard snaps over shaper work light reflector and is held in position by a small spring. Permits safe use of 100 w. lamp in work light.

CE2816. Kool-Shield. Ship. wt. 1/2 lb. Price f.o.b. factory \$1.20

SOUTH BEND PEDESTAL GRINDER

For Better-Faster-Easier Grinding



SPECIFICATIONS

WHEEL SIZE

For $\frac{3}{4}$ h.p. motor, 10" dia., 1" face,
 $\frac{3}{4}$ " hole.

For $\frac{1}{2}$ " h.p. motor, 8" dia., 1" face,
 $\frac{3}{4}$ " hole.

SPINDLE

Sealed ball bearings. Approximate
speed 2450 r.p.m.

MOTOR

Standard 2875 r.p.m., 50 cycle or
3450 r.p.m. 60 cycle and D.C., $\frac{1}{2}$
h.p. or $\frac{3}{4}$ h.p.

OVER-ALL DIMENSIONS

10" Grinder, 49 $\frac{1}{2}$ " high, 20 $\frac{3}{4}$ "
wide, 22 $\frac{3}{4}$ " deep.

8" Grinder, 49 $\frac{1}{2}$ " high, 20 $\frac{3}{4}$ " wide,
20 $\frac{1}{2}$ " deep.

SHIPPING WEIGHT

10" Grinder 377 lbs. crated for rail
shipment, 437 lbs. boxed for ex-
port. 8" Grinder 360 lbs. crated for
rail shipment, 420 lbs. boxed for
export.

EXPORT SPACE

24 cubic feet boxed.

A great deal of careful research has gone into the design of the South Bend Pedestal Tool Grinder. To provide ample work clearance the grinding wheels are widely separated and the motor is mounted in the pedestal instead of between the wheels. Additional clearance for the work is obtained by mounting the grinding wheel spindle toward the front of the pedestal. This construction also provides extra toe room for the operator. The U-shaped tool rests are adjustable to any angle and are also adjustable for wheel wear. The large water pot for cooling work is conveniently located and is removable for cleaning.

Large safety glass eye shields are hinged and are easily adjusted to three positions. Two light bulbs enclosed in the frame of each shield throw ample light directly onto the work. Close-fitting adjustable spark guards built into the heavy wheel guards provide added protection. Wheel guards have removable end plates and large dust outlets for connecting with dust collector or exhaust ducts.

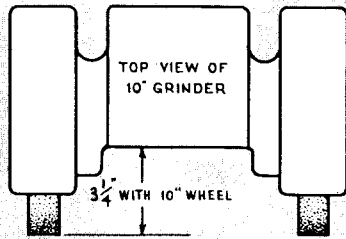
A pushbutton motor control is conveniently mounted at waist level on the front of the grinder frame. The motor is fully

enclosed in the pedestal. A V-belt drives the grinding wheel spindle which revolves on sealed ball bearings. This construction practically eliminates vibration, removes the weight of the grinding wheels from the motor bearings and protects the motor from the abrasive dust of the grinding wheels.

The grinder is made with either 8" grinding wheels or with 10" wheels. A $\frac{1}{2}$ h.p. motor is required with 8" wheels and a $\frac{3}{4}$ h.p. motor with 10" wheels. Any NEMA standard 3450 or 2875 r.p.m. motor may be used. Equipment includes one coarse and one fine wheel for general work; tool rests; wheel guards; eye shields with wiring, sockets, and 110 v. lamps; V-belt and pulleys; and built-in pushbutton type across-the-line manual starter for motor. Price of grinder does not include motor. See page 73 for motors. If grinder is ordered without motor specify voltage, phase and cycle of motor to be used so correct wiring can be supplied.

CE2725. Pedestal Grinder with 8" wheels and equipment as listed above, but without motor. \$282.00

CE2726. Pedestal Grinder with 10" wheels and equipment as listed above, but without motor. \$284.00

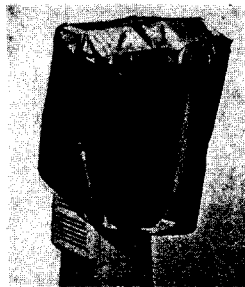


Knuckle Room to Spare

Expert tool grinders will especially appreciate one outstanding feature of this grinder. There is no bulky motor between the grinding wheels. The wide open space around each grinding wheel permits the operator to do his work better and faster because arm movements are never cramped. To give plenty of room for both work and hands, the motor is mounted inside the pedestal instead of between the wheels. Spaced 12" apart the peripheries of the 10" wheels extend 3 1/4" beyond the spindle housing between them.

SERVICE COVERS FOR PEDESTAL GRINDERS

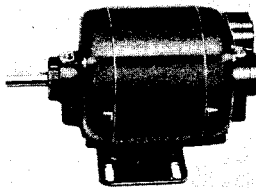
This waterproof oil resistant service cover will protect your grinder from dust and dirt at night or whenever the grinder is not being used. Attractive maroon color, 12" wide, 28" long, 28" high.



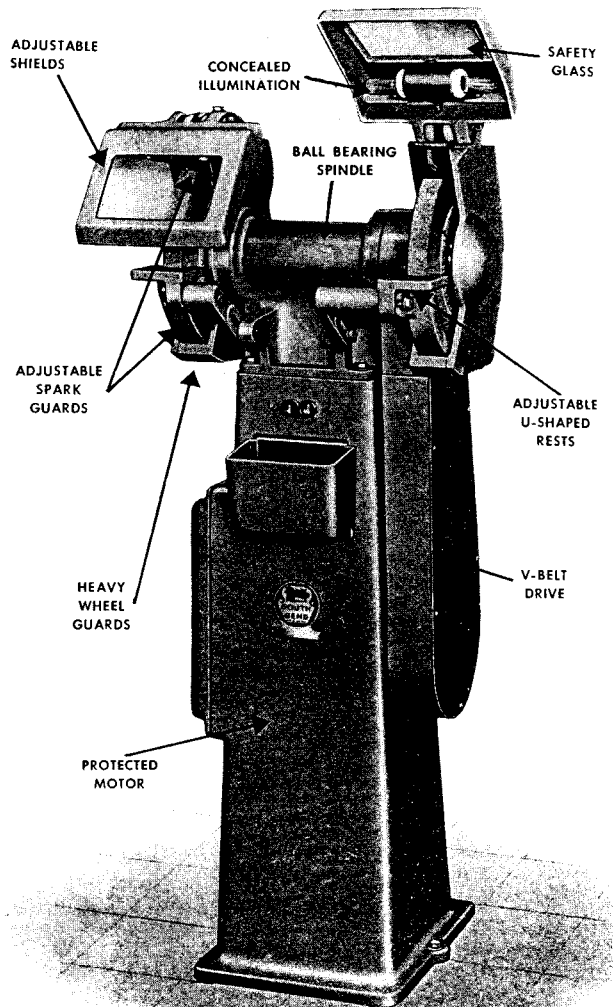
CE2693. Waterproof Service Cover for Pedestal Grinder. Shipping weight 2 lbs. Price \$2.05

MOTORS FOR PEDESTAL GRINDERS

South Bend Pedestal Grinders require NEMA standard frame 3450 r.p.m. or 2875 r.p.m. motors as listed below. A 1/2 h.p. motor is required for the grinder with 8" wheels, and a 3/4 h.p. motor is required with 10" wheels. Approximate shipping weight of 1/2 h.p. motor is 40 lbs., 3/4 h.p. motor 50 lbs. Write for information on motors for currents not listed.

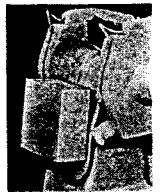


1/2 h.p. Motors for 8" grinder		3/4 h.p. Motors for 10" grinder		Current Characteristics			
Cat. No.	Price	Cat. No.	Price	Current	Volts	Phase	Cycle
CE3431A	\$31.00	CE3441A	\$40.50	A.C.	115	1	50
CE3431R	34.00	CE3441R	58.00	A.C.	125	1	50
CE3461B	27.00	CE3471B	37.00	A.C.	115	1	60
CE3431C	31.00	CE3441C	40.50	A.C.	230	1	50
CE3461D	27.00	CE3471D	37.00	A.C.	230	1	60
CE3431Q	34.00	CE3441Q	58.00	A.C.	250	1	50
CE3463P	27.00	CE3443P	37.00	A.C.	208	3	60
CE3463C	27.00	CE3443C	37.00	A.C.	208-220	3	50
CE3463D	27.00	CE3443D	37.00	A.C.	220	3	60
CE3433S	29.50	CE3443S	37.00	A.C.	380	3	50
CE3433E	29.50	CE3443E	37.00	A.C.	440	3	50
CE3433F	29.50	CE3443F	37.00	A.C.	440	3	60
CE3462D	27.00	CE3442D	37.00	A.C.	208-220	2	60
CE3462C	27.00	CE3442C	37.00	A.C.	208-220	2	50
CE3432F	29.50	CE3442F	37.00	A.C.	440	2	60
CE3432E	29.50	CE3442E	37.00	A.C.	440	2	50



OPTIONAL CONTROLS FOR PEDESTAL GRINDERS

Prices of South Bend Pedestal Grinders include a pushbutton type across-the-line manual starting switch for the motor. Remote control equipment is optional for two and three phase motors. This equipment includes step-down transformers and relays which reduce the current to the operating switch to 110 volts, and provide overload protection and low voltage release. Shipping weight 23 lbs.



Cat. No.	Volts	Phase	Cycle	Price
CE2636	208-220	2-3 3-wire	50	\$82.00
	440			
CE2637	208-220	2-3 3-wire	60	82.00
	440			
CE2638	380	3	50	86.00
CE2664	208-220	2 4-wire	50	82.00
	440			
CE2665	208-220 440	2 4-wire	60	82.00

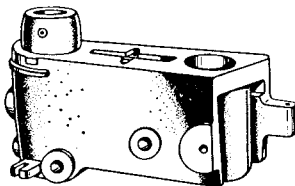
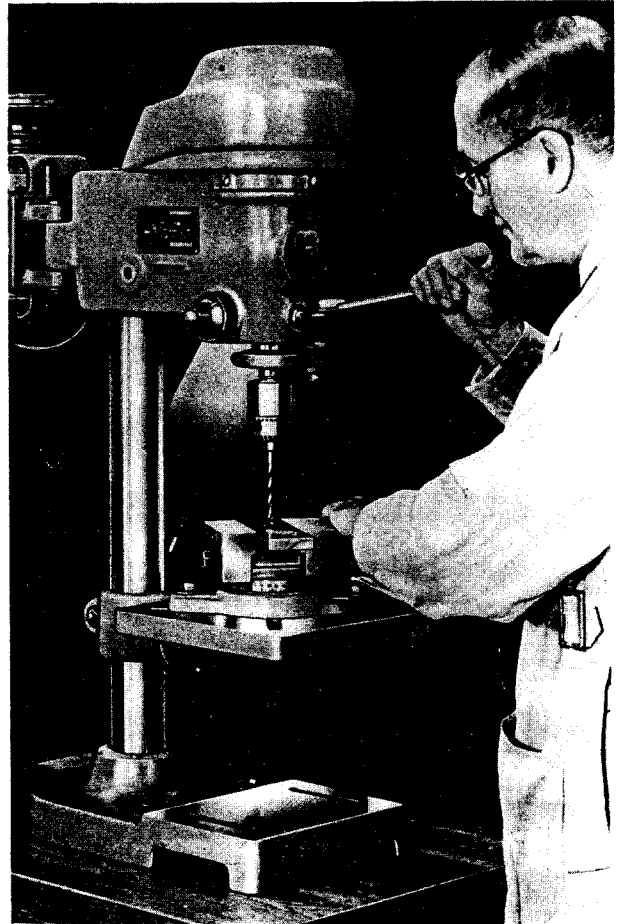
14-INCH SOUTH BEND *Precision* MODEL DRILL PRESS

Designed by the same engineering staff and produced with the same excellent manufacturing facilities employed in the production of South Bend Precision Lathes, this drill press is a superior tool unsurpassed for accuracy, ease of operation, versatility, and dependable performance. It is ruggedly constructed, and will maintain its precision accuracy indefinitely under severe industrial service.

A built-in light with independent switch provides shadowless illumination on the work area, eliminating the necessity of installing a separate lighting fixture. A quick-acting belt tension release lever simplifies speed changes and returns the vertical mounted motor to its original position after each change, thus maintaining the same belt tension for each of the four cone pulley steps.

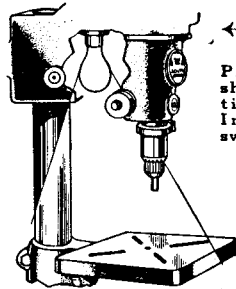
SPECIFICATIONS

Maximum drill size in iron or steel.....	1/2"
Drills to center of.....	1 1/4" circle
Net weight, bench type, less motor.....	130 lbs.
Net weight, floor type, less motor.....	165 lbs.
Chuck capacity.....	0 to 1/2"
Spindle Speeds:	
With 1725 r.p.m. motor, four, approx.	720 to 4325 r.p.m.
With 1140 r.p.m. motor, four, approx.	480 to 2885 r.p.m.
With 1725 r.p.m. motor and multi-speed attachment, (see page 77) twelve, approx.	380 to 8010 r.p.m.
With 1140 r.p.m. motor and multi-speed attachment, (see page 77) twelve, approx.	255 to 5340 r.p.m.
Spindle travel, maximum.....	4"
Spindle run out, maximum.....	.001"
Spindle, square with table within.....	.002" in 5"
Chuck to base, maximum, bench type.....	16"
Chuck to base, maximum, floor type.....	45 1/4"
Chuck to table, maximum, bench type.....	11 3/8"
Chuck to table, maximum, floor type.....	40 3/4"
Base, work surface, bench type.....	7" x 10"
Base, work surface, floor type.....	8" x 12"
Table, work surface.....	10" x 10"
Table tilt.....	Any angle
Column diameter.....	2.730"
Motor, size recommended.....	1/3 or 1/2 h.p.



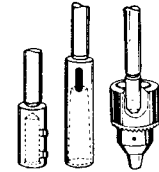
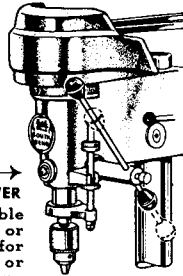
ONE-PIECE HEAD CASTING

Insures accurate alignment. Heavy, rigid construction. Internal clutch locks the head to column. Column bearing is NOT split.



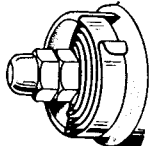
BUILT-IN LIGHT
Provides shielded, shadowless illumination on work area. Independent on-off switch is built-in.

ADJUSTABLE FEED LEVER
Feed lever is adjustable and can be centered or extended as desired for increased leverage or for greater convenience.



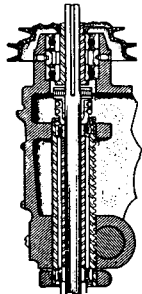
INTERCHANGEABLE SPINDLES

Spindles available to take No. 2 Morse taper shank tools, and for 1/2" straight shank tools, router bits, shaper cutters.



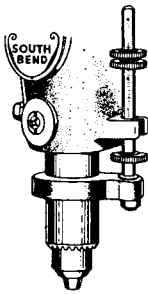
ADJUSTABLE QUILL RETURN SPRING

Retracts quill instantly upon release of feed lever. Tension of spring adjustable.



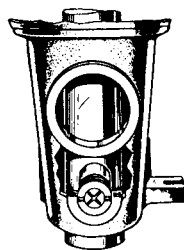
FOUR PRECISION BALL BEARINGS

Two on spindle, two on drive sleeve. Prelubricated and sealed precision type, no oiling required.



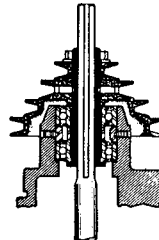
DEPTH GAUGE

Controls feed depth, length of return stroke, or locks spindle in any position. 16th gradations.



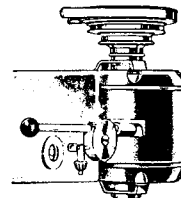
QUILL BEARING ADJUSTMENT

Shoe-type take-up provides feather-touch tension and secure locking. Quill bearing is NOT split.



FREE-FLOATING SPINDLE

Design prevents misalignment, side thrust and whip. Precision splines in spindle and sleeve.



BELT TENSION RELEASE

Flip of lever removes tension from belt for easy speed changes. Proper belt tension maintained.

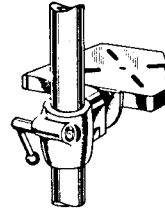
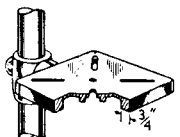


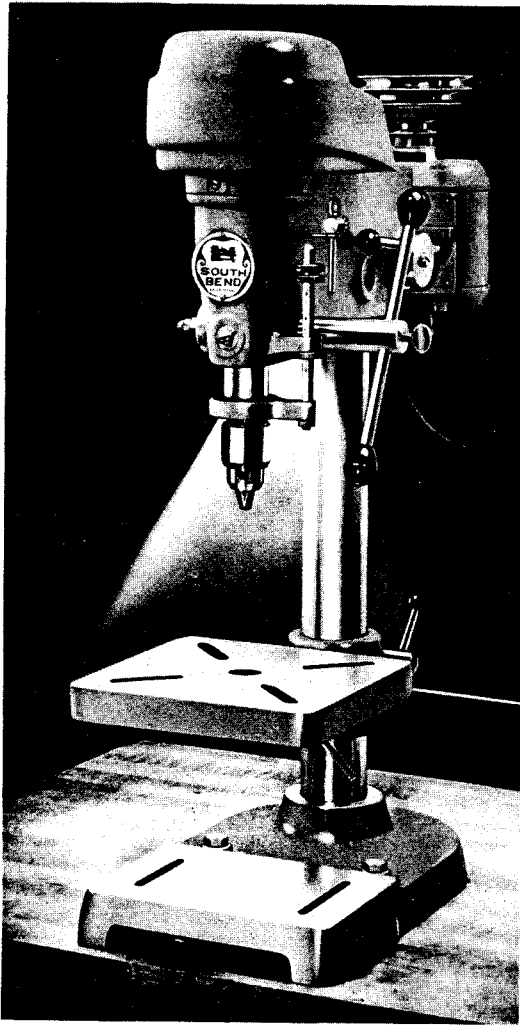
TABLE LOCK

Internal clutch securely locks table to column. Eliminates misalignment. Column bearing is NOT split.



PRECISION TABLE HAS WIDE CLAMPING RIB

Table has accurately ground work surface. Heavy rib 3/4" wide strengthens table and provides flat surface underneath for clamping work securely to table.



Precision MODEL 14-INCH BENCH DRILL PRESS

Perfectly proportioned for mounting on any substantial work bench, table, or machine stand, this is one of our most popular drill presses. Base has bolt holes for securing to bench, and precision ground work surface with two slots for clamping. Maximum distance between base and chuck is 16" and between table and chuck is 11 $\frac{3}{8}$ ". See preceding page for other specifications and features.

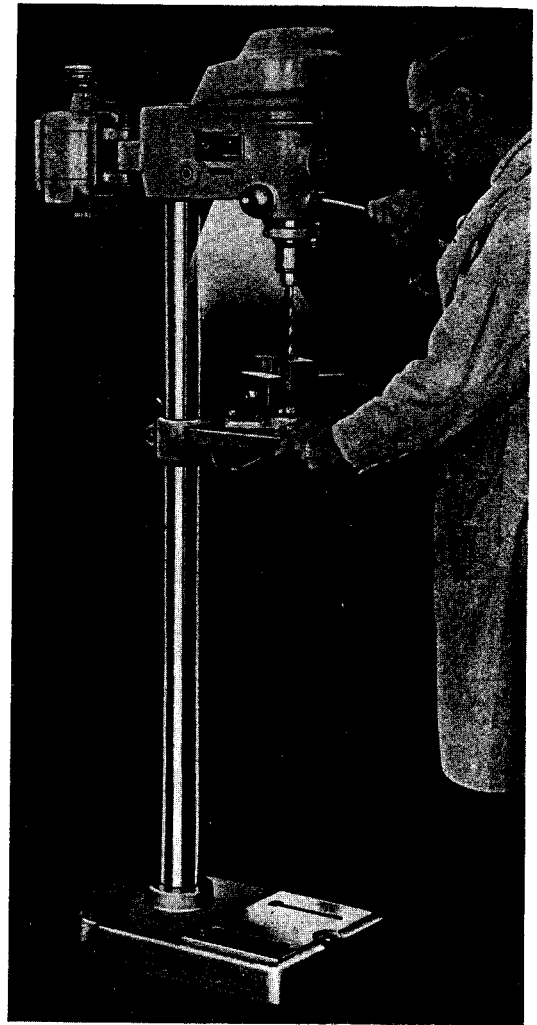
The free-floating spindle design prevents misalignment, side thrust, and whip. Two precision ball bearings carry the drive sleeve and two additional ball bearings carry the spindle, which is spline driven. All ball bearings, being prelubricated and sealed, require no oiling. Quill bearing adjustment provides feather touch tension and secure locking.

Regular equipment supplied with each Precision Model Bench Drill Press includes motor base, balanced motor pulley, balanced spindle pulley, V-belt, built-in work light, wiring in drill press head, spindle equipment as indicated in table, switch for work light, and switch for single phase motor when specified, but does not include motor. See page 78 for drill press motors.

PRECISION MODEL BENCH DRILL PRESSES

Catalog Number	Spindle Equipment	Cubic Feet Boxed	Boxed Weight Pounds	Crated Weight Pounds	Price
CD400B	1/2" Jacobs Key Chuck	9	255	190	\$133
CD414B	No. 2 Morse Taper Socket	9	255	190	128

Note: If ordered less motor, specify voltage, phase, and cycle of motor to be used.



Precision MODEL 14-INCH FLOOR DRILL PRESS

Except for the tall column and large base for floor mounting, this is the same as the bench drill press shown at the left. Base is heavily constructed and of ample size to provide substantial support. Precision ground work surface on base has two slots for clamp bolts. Maximum distance between base and chuck is 45 $\frac{1}{4}$ " and between table and chuck is 40 $\frac{3}{4}$ ". For other specifications and features see preceding page.

The full tilt type table, with 10" x 10" precision ground top surface, has slots for clamping fixtures or work. An improved type of internal clutch binder is provided for locking the table quickly in any position on the column. The edge of the table has a heavy flange with a 3/4" flat underneath for clamping.

Regular equipment supplied with each Precision Model Floor Drill Press includes motor base, balanced motor pulley, balanced spindle pulley, V-belt, built-in work light, wiring in drill press head, spindle equipment as indicated in table, switch for work light, and switch for single phase motor when specified, but does not include motor. See page 78 for drill press motors.

PRECISION MODEL FLOOR DRILL PRESSES

Catalog Number	Spindle Equipment	Cubic Feet Boxed	Boxed Weight Pounds	Crated Weight Pounds	Price
CD400F	1/2" Jacobs Key Chuck	19	365	235	\$154
CD414F	No. 2 Morse Taper Socket	19	365	235	149

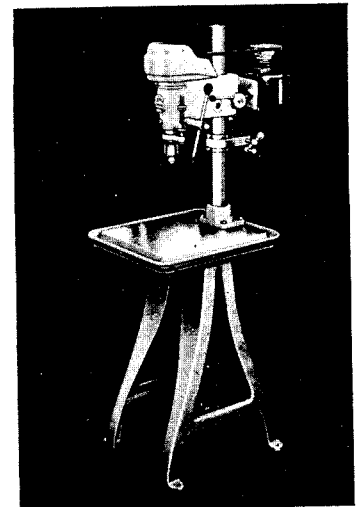
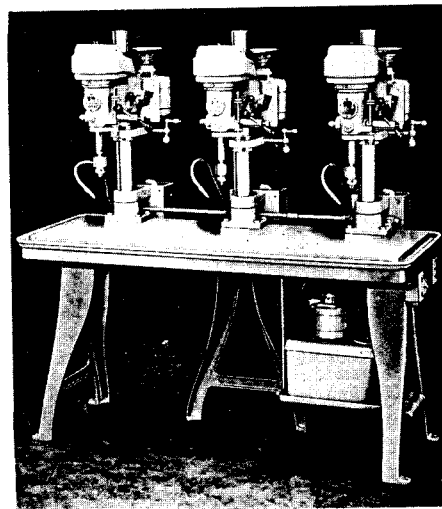
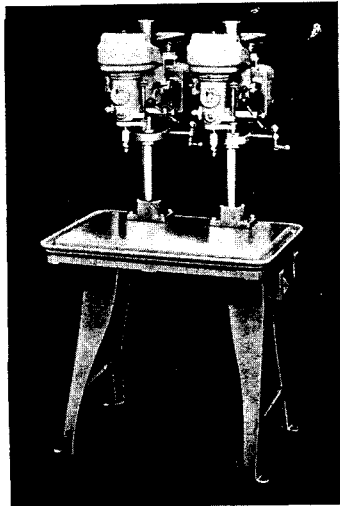
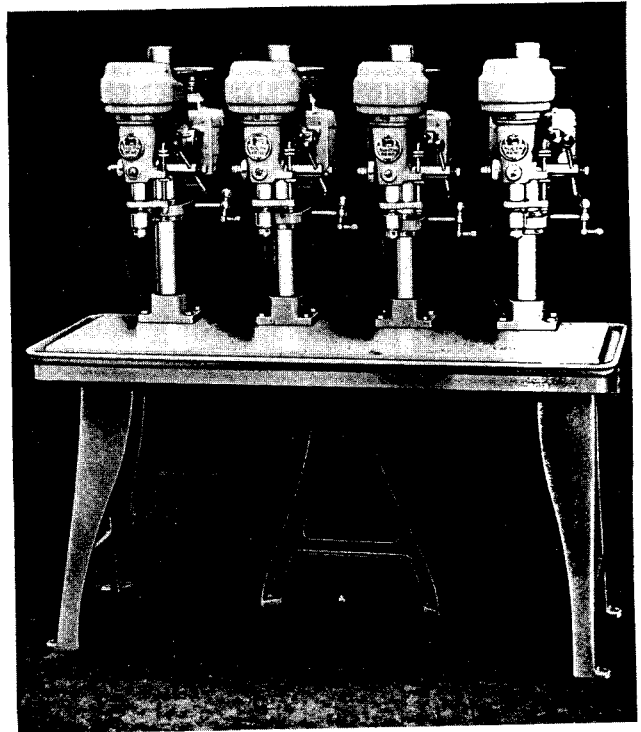
Precision MODEL SINGLE AND MULTIPLE SPINDLE DRILL PRESSES FOR PRODUCTION OPERATIONS

Much time can be saved on production drill press work by using one of these multiple spindle models so that two or more operations can be performed in rapid sequence. Each spindle can be adjusted independently to the correct position and speed for most convenient and efficient operation.

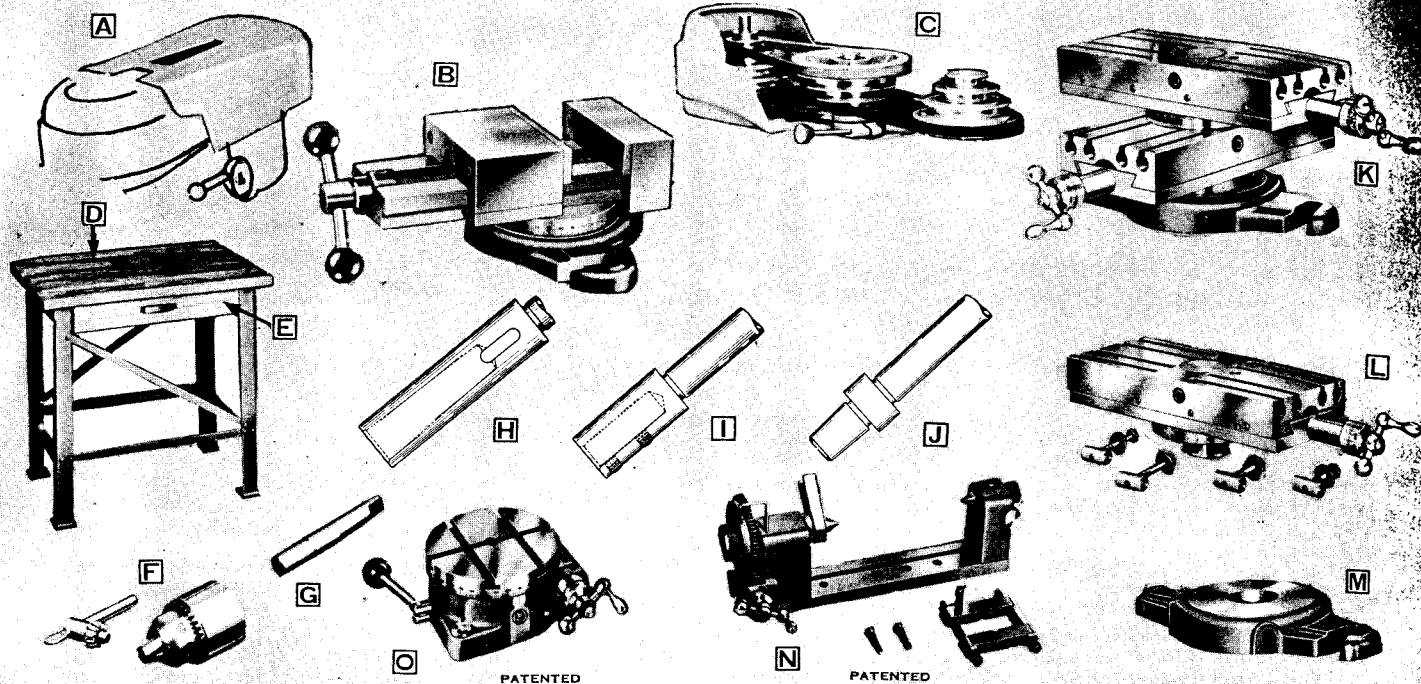
These drill presses consist of our standard 14" Precision Model drill press heads mounted on heavy, accurately machined work tables having large coolant return grooves. Either bench mounting (not illustrated) or heavy cast legs for floor installation as illustrated, can be supplied. The open leg construction facilitates cleaning and permits the operator to sit comfortably if desired.

The drill press spindles can be supplied with either 1/2" Jacobs key type chucks or with taper sockets to receive tools with No. 2 Morse taper shanks. Coolant pump and reservoir, multi-speed attachment, and other attachments and accessories can be supplied and are illustrated and described on pages 77 to 79 inclusive.

Regular equipment supplied with each drill press head includes: head positioning mechanism, spindle equipment as indicated in table below, motor base, motor pulley, V-belt, built-in work light, wiring and toggle switches. Motors and remote control equipment are not included. (See page 78.) If drill press is ordered without motors, specify voltage, phase and cycle of motors to be used so correct wiring can be supplied in drill press head.



With 1/2" Jacobs Chucks		With No. 2 M. T. Sockets		Number of Spindles	Table Work Surface	Between Column Centers	Over-all Size			Cubic Feet Boxed	Boxed Weight Pounds	Crated Weight Pounds
Cat. No.	Price	Cat. No.	Price				Width	Depth	Height			
Floor Model Drill Presses for Production Operations												
CD451F	\$264	CD491F	\$258	1	13 7/8" x 15 3/4"	...	20"	33"	68 1/4"	22	475	375
CD452F	507	CD492F	496	2	14" x 28 3/4"	13"	33 1/8"	33"	69 1/4"	34	725	628
CD453F	786	CD493F	770	3	14" x 55"	19"	59 1/2"	33"	70 1/4"	57	1185	1065
CD454F	904	CD494F	883	4	14" x 55"	13"	59 1/2"	33"	70 1/4"	57	1320	1200
Bench Model Drill Presses for Production Operations												
CD451B	\$198	CD491B	\$193	1	13 7/8" x 15 3/4"	...	20"	33"	37 7/8"	22	393	293
CD452B	442	CD492B	432	2	14" x 28 3/4"	13"	33 1/8"	33"	38 7/8"	34	645	546
CD453B	654	CD493B	637	3	14" x 55"	19"	59 1/2"	33"	38 1/4"	57	1065	902
CD454B	807	CD494B	785	4	14" x 55"	13"	59 1/2"	33"	38 1/4"	57	1200	1035



ACCESSORIES FOR SOUTH BEND DRILL PRESSES

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

CD9136. Belt Guard for use with Precision Model Drill Press. Shipping weight 16 lbs. Price \$14.70

B SWIVEL MACHINE VISE for holding work on drill press table, milling machine, shaper, etc. Swivel is graduated 180° to permit setting vise at any angle with slots in table. Hardened and replaceable jaws are 4" wide and 1" deep. Maximum jaw opening is 4".

CE9100. Swivel Drill Press Vise. Ship. wt. 18 lbs. Price \$28.35

C MULTI-SPEED ATTACHMENT. The Multi-Speed Attachment for the South Bend 14" Precision Model Drill Press provides twelve spindle speeds 380 to 8010 r.p.m. with 1725 r.p.m. motor or 255 to 5340 r.p.m. with 1140 r.p.m. motor. The attachment consists of an eccentric spindle, which is mounted in the drill press column to support a 4-step auxiliary cone pulley with two V-belts.

Price includes eccentric spindle, 4-step cone pulley and two V-belts. Shipping weight 8 pounds.

CD9135A. For 1/3 h.p. or 1/2 h.p. NEMA No. 56 frame motor. Price f.o.b. factory \$17.75

CD9135B. For 1/2 h.p. NEMA No. 66 frame motor. Price \$17.75

Note: This attachment cannot be used with Head Positioning Attachment.

D WOOD TOP MACHINE STAND. This is a heavily constructed angle steel stand 29 3/8" high for mounting the drill press, bench shaper, or for other small machines. The glued wood top is 20" x 32" and is 1 3/4" thick. Steel parts are finished in gray enamel. Shipping weight 52 pounds.

CE9141. Wood Top Machine Stand (less drawer). Price \$25.95

E DRAWER FOR MACHINE STAND. Handy for keeping small tools, wrenches, etc. Finished to match stand CE9141. Drawer is 20 1/8" wide, 14" long, 3 3/4" deep. Price includes metal pull and wood slides. Shipping weight 9 pounds.

CE1780D. Drawer for use with Machine Stand. Price \$8.60

F CHUCK AND ARBOR FOR DRILL PRESS. This drill chuck and arbor are recommended for use with drill presses having spindles with No. 2 Morse taper.

CE1201. Jacobs 3-jaw smooth body drill chuck, 0 to 1/2" capacity with pinion key. Shipping weight 2 3/8 pounds. Price \$9.70

CE9110. No. 2 Morse taper shank arbor with tang, for fitting chuck No. CE1201 to drill press spindle No. CD 9125. Shipping weight 3/4 pound. Price f.o.b. factory \$1.35

H EXTRA SPINDLES FOR DRILL PRESSES. Extra spindles I are interchangeable with regular drill press spindles supplied with either the Single or Multiple Spindle Precision Model Drill Presses.

CD9125. Spindle "H" with No. 2 Morse taper hole for holding taper shank tools. Drift included. Ship. wt. 3 pounds. Price \$7.50

CD9128. Spindle with No. 3 Morse taper hole for holding taper shank tools. Drift included. Shipping weight 5 pounds. Price \$11.50

CD9126. Utility spindle "I" with 1/2" x 1 5/8" deep straight hole for holding routing tools, etc. Shipping weight 3 pounds. Price \$5.45

CD9127. Spindle "J" with short taper for 1/2" Drill Chuck No. CE1201. (Jacobs No. 34.) Shipping weight 2 pounds. Price \$4.60

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

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

CE9156. Universal Table "K" complete with base, two slides, two graduated swivels, and eight clamp bolts with nuts. Shipping weight 43 pounds. Price f.o.b. factory \$106.00

CE9157. Single Table "L" with one graduated swivel and four clamp bolts with nuts. Shipping weight 19 pounds. Price \$50.50

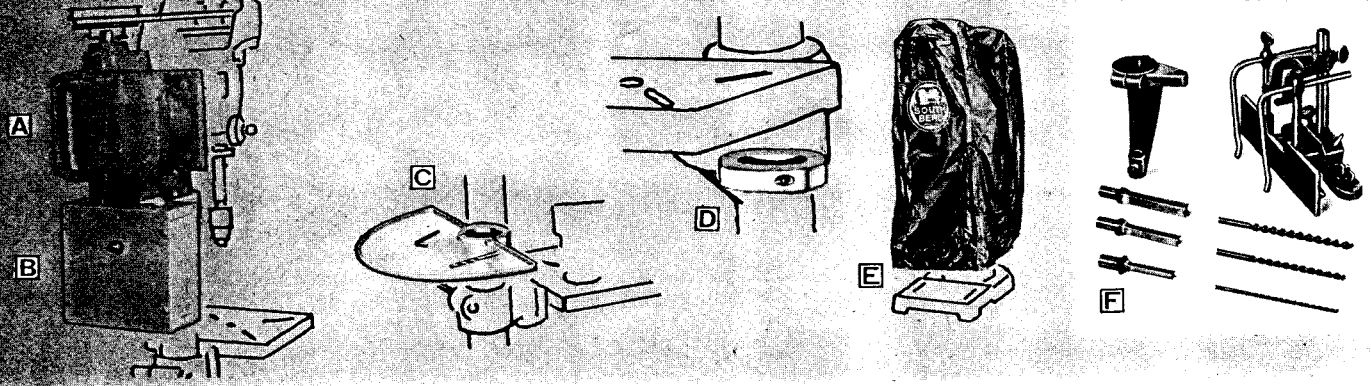
CE9159. Base only "M" for adapting single table to South Bend Drill Press. Shipping weight 8 pounds. Price f.o.b. factory \$4.60

N INDEXING CENTERS for accurate indexing, cross drilling, cutting flutes, etc. Takes work up to 5" in diameter and 6" long. Worm gear dial is graduated in degrees and each graduation on ball crank collar indicates 3 minutes.

CE9635. Indexing Centers. Ship. wt. 12 lbs. Price f.o.b. factory . . . \$73.25

O INDEXING TABLE for accurately spacing holes, etc. Table is 4 1/2" in diameter and has three T-slots for clamping work. Edge of table is graduated 360°. Each graduation on ball crank collar indicates table movement of 3 minutes.

CE9144. Indexing Table. Ship. wt. 14 lbs. Price f.o.b. factory . . . \$58.80



A MOTORS FOR DRILL PRESSES. Motors listed below are recommended for use with South Bend 14" Drill Presses. Standard spindle speeds with 1725 r.p.m. motors are approximately 720 to 4325 r.p.m. and with 1140 r.p.m. motors 480 to 2885 r.p.m. These are all vertical mounting ball-bearing motors. All single phase motors are capacitor type. Prices of 230 v. single phase motors include 230 v. lamp in lieu of 115 v. lamp regularly supplied.

Motors operating on two or three phase A.C. require either remote control or across-the-line manual starter equipment described below the motor table.

Wiring and switches for single phase motors are supplied with Precision Model Drill Presses, and need not be ordered as extras. Information on motors for current characteristics not listed will be supplied on request.

Cat. No.	R.P.M.	H.P.	Current	Volts	Phase	Cycle	Price
CE4910B	1725	1/2	A.C.	115	1	60	\$33.00
CE4910D	1725	1/2	A.C.	230	1	60	33.00
CE4911A	1425	1/2	A.C.	115	1	50	37.00
CE4911C	1425	1/2	A.C.	230	1	50	37.00
CE4912D	1725	1/2	A.C.	208-220	3	60	36.00
CE4912C	1425	1/2	A.C.	208-220	3	50	36.00
CE4913S	1425	1/2	A.C.	380	3	50	36.00
CE4913F	1725	1/2	A.C.	440	3	60	36.00
CE4913E	1425	1/2	A.C.	440	3	50	36.00
CE4920B	1725	1/2	A.C.	115	1	60	40.00
CE4920D	1725	1/2	A.C.	230	1	60	40.00
CE4921A	1425	1/2	A.C.	115	1	50	43.50
CE4921C	1425	1/2	A.C.	230	1	50	43.50
CE4916R	1425	1/2	A.C.	125	1	50	55.00
CE4915Q	1425	1/2	A.C.	250	1	50	55.00
CE4922Y	1200	1/2	A.C.	115	1	40	83.00
CE4922Z	1200	1/2	A.C.	230	1	40	83.00
CE4914D	1725	1/2	A.C.	208-220	2	60	39.50
CE4914C	1425	1/2	A.C.	208-220	2	50	39.50
CE4914F	1725	1/2	A.C.	440	2	60	39.50
CE4914E	1425	1/2	A.C.	440	2	50	39.50
CE4924D	1725	1/2	A.C.	208-220	3	60	39.50
CE4924C	1425	1/2	A.C.	208-220	3	50	39.50
CE4924S	1425	1/2	A.C.	380	3	50	39.50
CE4924F	1725	1/2	A.C.	440	3	60	39.50
CE4924E	1425	1/2	A.C.	440	3	50	39.50
CE4932B	1140	1/2	A.C.	115	1	60	49.00
CE4932D	1140	1/2	A.C.	230	1	60	49.00
CE4933D	1140	1/2	A.C.	208-220	3	60	49.00
CE4933F	1140	1/2	A.C.	440	3	60	49.00
CE4934B	1140	1/2	A.C.	115	1	60	70.00
CE4934D	1140	1/2	A.C.	230	1	60	70.00
CE4935D	1140	1/2	A.C.	208-220	3	60	63.50
CE4935F	1140	1/2	A.C.	440	3	60	63.50

B CONTROLS FOR TWO AND THREE PHASE MOTORS.

All two and three phase motors for drill presses require either remote control or across-the-line manual starter equipment. Remote control equipment includes step-down transformers and relays which reduce current to operating switch to 110 volts, and provide overload protection and low voltage release.

CE4901. Across-the-line Manual Starter for three phase or two phase three wire 208-220/440 v., 50/60 cycle A.C. motors. Shipping weight 5 pounds. Price f.o.b. factory **\$14.00**

CE4909E Remote Control for three phase or two phase three wire 208-220/440 v., 50 cycle A.C. motors. Shipping weight 23 pounds. Price f.o.b. factory **\$82.00**

CE4909F. Remote Control for two phase or three phase 208-220/440 v., 60 cy. A.C. motors. Ship. wt. 23 pounds. Price **\$82.00**

CE4909S. Remote Control for three phase 380 v., 50 cycle A.C. motors. Ship. wt. 23 lbs. Price f.o.b. factory **\$86.00**

C TOOL TRAY FOR DRILL PRESS. This is a convenient metal tool tray which may be clamped on the drill press column either above or below the table. Especially desirable for floor type drill presses.

CD9175. Tool Tray. Ship. wt. 5 lbs. Price f.o.b. factory **\$4.75**

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

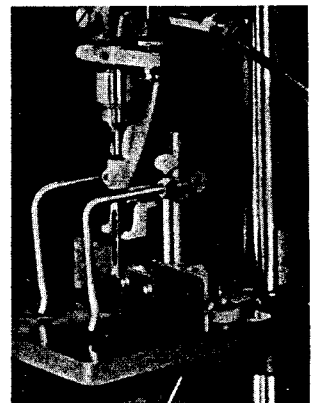
CE9140. Table Support Ring. Shipping weight 1 1/2 pounds. Price f.o.b. factory **\$1.75**

E WATERPROOF SERVICE COVER. Use this durable waterproof oil resistant plastic service cover to protect your drill press overnight or whenever it is not in use. Effectively prevents dirt from accumulating. Attractive maroon color with South Bend emblem printed in metallic ink. Size 12" wide, 28" long, 28" high, large enough for any South Bend single spindle drill press. Folds compactly to small package for easy storing when not in use. Use two or more on multiple spindle drill presses.

CE2693. Waterproof Service Cover for Drill Press. Shipping weight 2 pounds. Price f.o.b. factory **\$2.05**

F MORTISING ATTACHMENT. This Mortising Attachment converts any South Bend 14" Drill Press equipped with a 1/2" drill chuck into an efficient mortising machine. The improved fence assembly adjusts quickly and accurately for different thickness stock.

The base clamps to the table and the fence adjusts on two steel posts. This design aids in eliminating alignment errors in the work. Two guide arms mount directly on fence and are separately adjustable. A forked work hold down also adjusts on a vertical steel post mounted on the base. This fence assembly has many uses for guiding work other than mortising. It may be purchased separately.

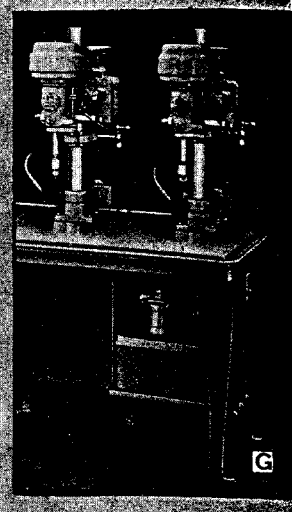
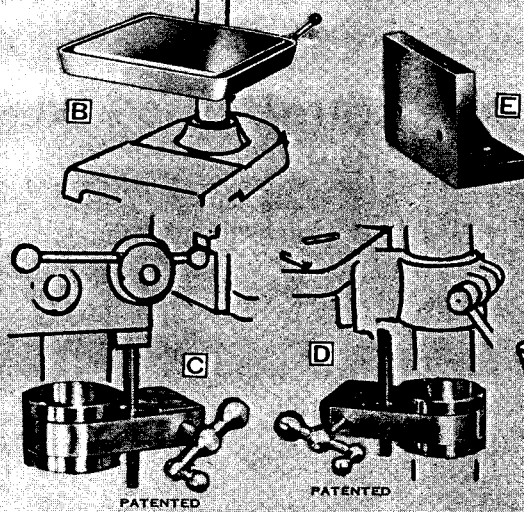
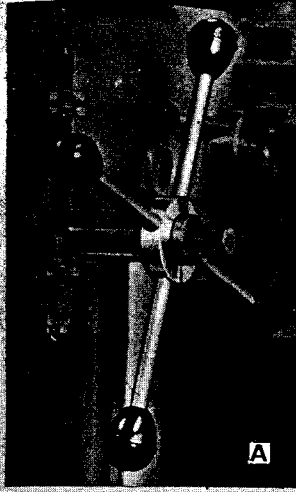


The mortising chisel holder clamps on the drill press quill taking the place of the depth stop clamp.

Specifications

Capacity under work hold down, maximum.....	5 1/16"
Capacity guide rods to fence, maximum.....	4 7/16"
Distance fence adjusts without moving base on table.....	1"
Working depth of chisels:	
1/4".....	2 1/16"
3/8".....	2 3/4"
1/2".....	3 3/16"

Cat. No.	Description	Ship. Wt.	Price
CE9151	Mortising Attachment Fence Assembly	10 lbs.	\$12.55
CD9152	Mortising Chisel Holder	3 lbs.	4.60
CE9153	1/4" Mortising Chisel and Bit	1/2 lb.	9.20
CE9154	3/8" Mortising Chisel and Bit	3/4 lb.	9.20
CE9155	1/2" Mortising Chisel and Bit	1 lb.	10.55



A TURNSTILE FEED LEVER ATTACHMENT. This attachment adds two spokes to the regular feed lever to provide a four spoke turnstile feed for the drill press spindle. It consists of two levers of equal length mounted in a collar which slips over the quill feed shaft. The regular feed lever passes through the collar and locks it in position. The use of this attachment does not interfere with the adjustable feature of the regular feed lever, which can be set in central position or extended for additional leverage or convenience as desired. Made with knobs to match Precision Model Drill Press.

CD9170. Turnstile Feed Lever Attachment. Shipping weight 3 pounds. Price f.o.b. factory..... **\$3.35**

B TABLE WITH COOLANT TROUGH is heavily constructed with large flat underneath edge for clamping. Precision ground work surface is 10½" square. Coolant trough has drain hole with ¼" pipe thread.

CD9165. Table with Coolant Trough in lieu of regular table at time drill press is purchased. Price f.o.b. factory..... **\$10.75**

CD9166. Table with Coolant Trough in addition to regular table or separate from drill press. Shipping weight 40 pounds. Price f.o.b. factory..... **\$18.95**

C HEAD POSITIONING ATTACHMENT. The Head Positioning Attachment provides a quick and convenient means for adjusting the position of the drill press head on the column. The attachment can be used at any point on the column, and provides four inches of vertical adjustment at one setting. Enclosed worm gearing operated by a steel ball crank assures smooth, easy operation. The head positioning attachment swivels around the column with the head to any desired angle. Designed for use with South Bend 14" Drill Presses which have columns 2.730" in diameter. The head positioning attachment and the multi-speed attachment cannot be used at the same time.

CE9131. Head Positioning Attachment. Shipping weight 10 pounds. Price f.o.b. factory..... **\$18.90**

D TABLE POSITIONING ATTACHMENT. This Table Positioning Attachment raises or lowers the drill press table. 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 when the table is in normal horizontal position. The adjustment is reduced to 3½" when the table is set at 45°, which is the maximum angle for the table when the positioning adjustment is used. Swivels around column with table. Designed for use with South Bend Drill Presses which have column of 2.730" in diameter.

CE9130. Table Positioning Attachment. Shipping weight 10 pounds. Price f.o.b. factory..... **\$18.90**

E ANGLE PLATE. This is a heavy cast iron angle plate suitable for clamping work on the drill press, shaper, milling machine, face plate of lathe, etc. Size 4½" x 3" x 2". Has six bolt holes.

CE9640. Shipping weight 4 pounds. Price f.o.b. factory..... **\$9.50**

F CHUCK ADAPTER STUD for mounting chuck on table of drill press, milling machine, shaper or other machine for holding work. Consists of accurately machined base plate with threaded stud on which lathe chuck may be screwed. When ordering be sure thread on stud conforms with thread in back of chuck to be used. Price includes bar for screwing stud into base plate but does not include chuck, clamps or bolts.

Catalog Number	Diameter of Plate	Thread Diameter	Threads per Inch	Shipping Weight	Factory Price
CE3445	6¼"	1½"	8	7 lbs.	\$5.50
CE3446	6¼"	1¾"	8	10 lbs.	6.95
CE3447	7½"	2¼"	8	13 lbs.	8.85
CE3448	11¾"	2¾"	6	14 lbs.	16.75

COOLANT PUMP EQUIPMENT FOR PRODUCTION TYPE DRILL PRESSES

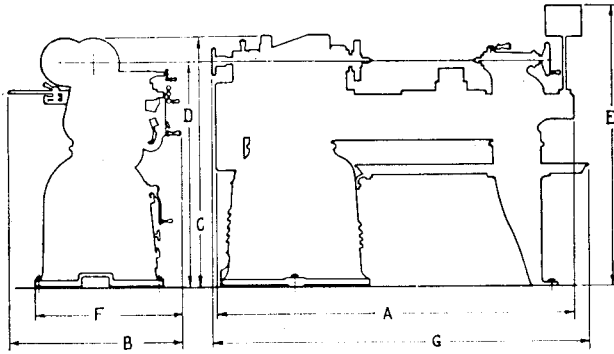
G COOLANT PUMP EQUIPMENT for production type drill presses listed on page 76. Includes a self-priming coolant pump driven by a ¼ h.p. motor, toggle switch, coolant reservoir, necessary piping, and individual nozzle with shut off

valve for each spindle of the drill press. Price includes fitting coolant equipment to drill press at factory. Shipping weight approximately 154 pounds. See page 44 item "E" for universal coolant pump suitable for use with any type of drill press.

CURRENT				One Spindle Drill Press		Two Spindle Drill Press		Three Spindle Drill Press		Four Spindle Drill Press	
Type	Phase	Cycle	Volts	Cat. No.	Price	Cat. No.	Price	Cat. No.	Price	Cat. No.	Price
A.C.	3	50	220	CD9103C	\$205.00	CD9203C	\$211.00	CD9303C	\$218.50	CD9403C	\$224.50
A.C.	3	60	220	CD9103D	205.00	CD9203D	211.00	CD9303D	218.50	CD9403D	224.50
A.C.	3	50	440	CD9103E	209.00	CD9203E	215.25	CD9303E	222.50	CD9403E	229.00
A.C.	3	60	440	CD9103F	209.00	CD9203F	215.25	CD9303F	222.50	CD9403F	229.00
A.C.	3	50	550	CD9103G	209.00	CD9203G	215.25	CD9303G	222.50	CD9403G	229.00
A.C.	3	60	550	CD9103H	209.00	CD9203H	215.25	CD9303H	222.50	CD9403H	229.00
A.C.	2	50	220	CD9102C	205.00	CD9202C	211.00	CD9302C	218.50	CD9402C	224.50
A.C.	2	60	220	CD9102D	205.00	CD9202D	211.00	CD9302D	218.50	CD9402D	224.50
A.C.	1	50	115	CD9101A	189.25	CD9201A	195.50	CD9301A	203.00	CD9401A	209.00
A.C.	1	60	115	CD9101B	185.00	CD9201B	192.50	CD9301B	198.50	CD9401B	206.00
A.C.	1	50	230	CD9101C	192.50	CD9201C	198.50	CD9301C	206.00	CD9401C	212.00
A.C.	1	60	230	CD9101D	188.25	CD9201D	194.50	CD9301D	201.75	CD9401D	208.00

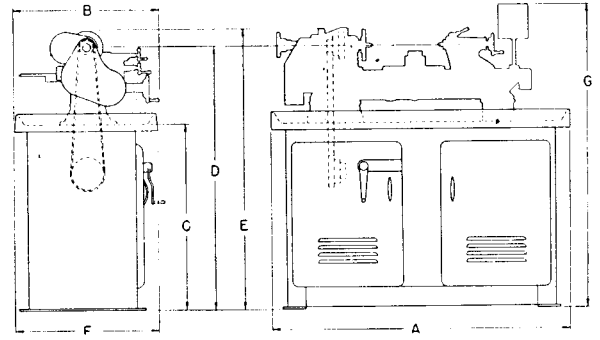
FLOOR SPACE REQUIRED FOR SOUTH BEND MACHINE TOOLS

DIMENSIONS A TO G GIVEN IN TABLES BELOW ARE IN INCHES



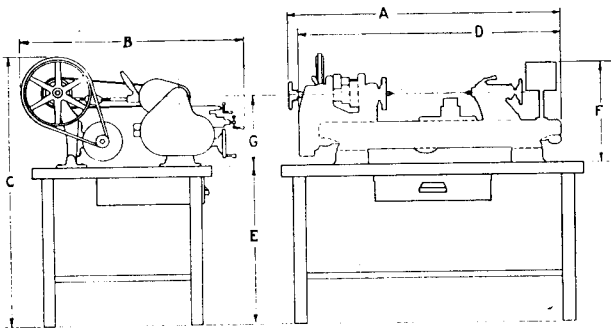
UNDERNEATH MOTOR DRIVEN FLOOR LATHES

Size Lathe	Bed Length	A	B	C	D	E	F	G
10"	3'	44	27 ³ / ₄	44 ²³ / ₃₂	41 ¹³ / ₃₂	50 ² / ₃₂	24	46
13"	5'	65 ³ / ₁₆	34 ¹ / ₄	45 ¹ / ₂	41 ¹ / ₂	52 ¹¹ / ₃₂	26 ³ / ₁₆	70
14 ¹ / ₂ "	6'	78 ¹ / ₂	36 ³ / ₄	46 ¹ / ₂	41 ¹ / ₁₆	50 ¹ / ₁₆	27 ¹ / ₂	84
16"	8'	102 ¹ / ₂	41 ³ / ₈	46 ³ / ₄	42 ¹ / ₃₂	54 ¹ / ₃₂	28 ³ / ₈	106 ⁷ / ₈
16-24"	10'	126 ¹ / ₂	51 ¹ / ₂	46 ²³ / ₃₂	46 ²³ / ₃₂	54 ²³ / ₃₂	28 ³ / ₈	



UNDERNEATH MOTOR DRIVEN BENCH LATHES

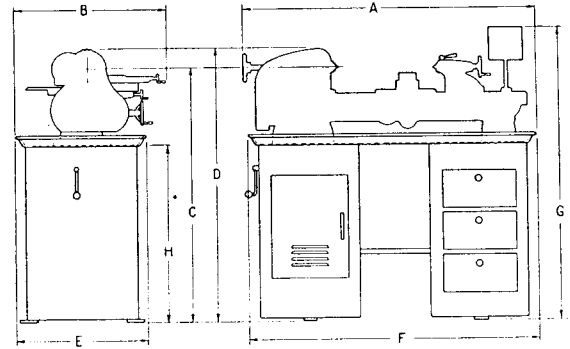
Size Lathe	Bed Length	A	B	C	D	E	F	G
10"	3'	51 ³ / ₄	25 ²¹ / ₃₂	32	45 ²³ / ₃₂	49 ³ / ₃₂	25	54 ¹ / ₃₂
10"	3 ¹ / ₂ '	51 ³ / ₄	25 ²¹ / ₃₂	32	45 ²³ / ₃₂	49 ³ / ₃₂	25	54 ¹ / ₃₂
10"	4'	65 ³ / ₄	25 ²¹ / ₃₂	32	45 ²³ / ₃₂	49 ³ / ₃₂	25	54 ¹ / ₃₂
10"	4 ¹ / ₂ '	65 ³ / ₄	25 ²¹ / ₃₂	32	45 ²³ / ₃₂	49 ³ / ₃₂	25	54 ¹ / ₃₂



HORIZONTAL MOTOR DRIVEN BENCH LATHES

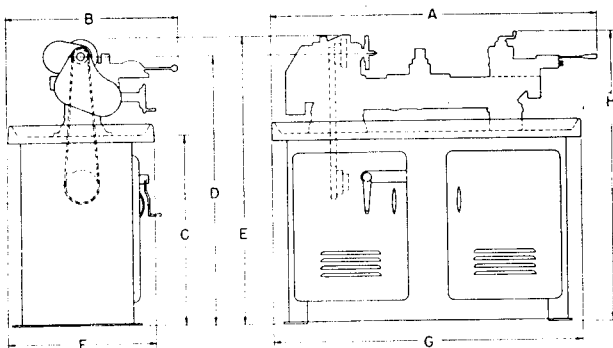
Size Lathe	Bed Length	A	B	C	D	E	F	G
9"	3'	41 ¹ / ₂	37	49 ¹ / ₁₆	39 ³ / ₈	29 ³ / ₁₆ *	19 ¹ / ₂	12 ¹¹ / ₃₂
10-K	3'	41 ¹ / ₂	38 ¹ / ₂	51 ¹ / ₁₆	39 ³ / ₈	29 ³ / ₁₆ *	19 ³ / ₈	12 ⁴ / ₁₆

* Benches also made 34" high.



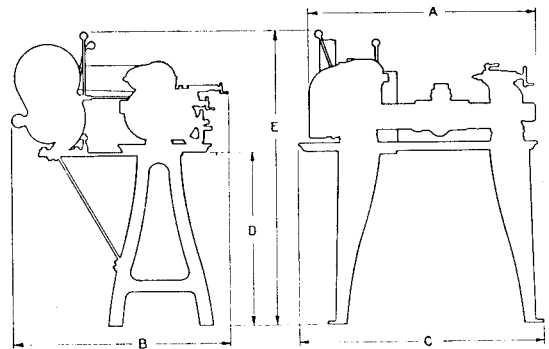
UNDERNEATH MOTOR DRIVEN METAL COLUMN BASE LATHES

Size Lathe	Bed Length	A	B	C	D	E	F	G	H
9"	3 ¹ / ₂ '	49 ³ / ₃₂	25 ¹ / ₄	41 ²³ / ₃₂	44 ²³ / ₃₂	21 ¹ / ₂	48 ¹ / ₄	48 ¹ / ₁₆	29 ³ / ₈
10-K	3 ¹ / ₂ '	49 ³ / ₃₂	25 ¹ / ₄	42 ¹ / ₈	45 ³ / ₁₆	21 ¹ / ₂	48 ¹ / ₄	49 ³ / ₁₆	29 ³ / ₈



10" BENCH TURRET LATHE

Size Lathe	Bed Length	A	B	C	D	E	F	G	H
10"	3 ¹ / ₂ '	61 ¹ / ₂	30 ¹ / ₃₂	32	45 ²³ / ₃₂	49 ³ / ₃₂	25	51 ³ / ₄	49 ³ / ₈

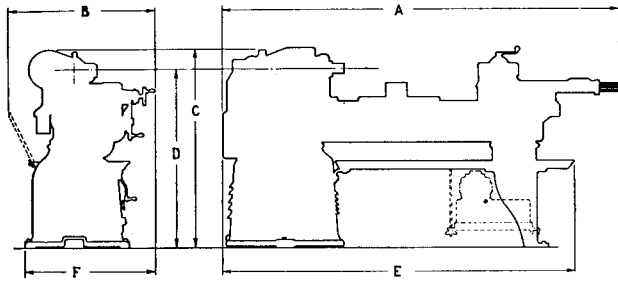


SELF-CONTAINED DRIVE FLOOR LATHES

Size Lathe	Bed Length	A	B	C	D	E
9"	3'	39 ³ / ₈	40	41 ⁷ / ₈	29 ²³ / ₃₂	50 ¹ / ₂
10-K	3'	39 ³ / ₈	39 ³ / ₄	41 ⁷ / ₈	29 ²³ / ₃₂	51 ³ / ₄

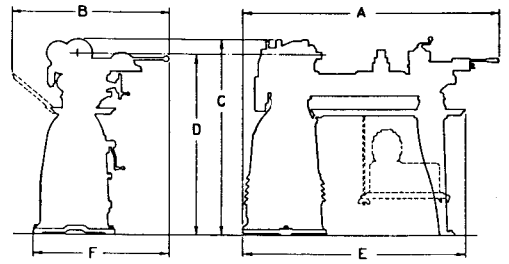
FLOOR SPACE REQUIRED FOR SOUTH BEND MACHINE TOOLS

DIMENSIONS A TO H IN TABLES BELOW ARE IN INCHES



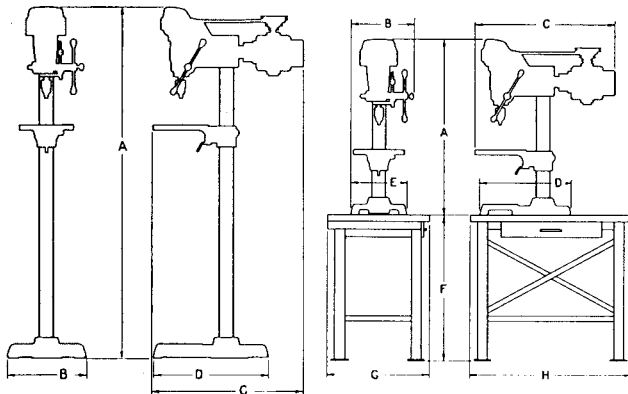
13" AND NO. 2-H TURRET LATHES

Size Lathe	Bed Length	A	B	C	D	E	F
13"	5'	72 1/4	39 1/4	45 3/4	41 1/2	68 1/2	30 3/4
2-H	6'	93 1/2	37	46 3/4	42 1/2	81 1/2	28 3/4



10" TURRET LATHE

Size Lathe	Bed Length	A	B	C	D	E	F
10"	3 1/2'	62 1/4	35 1/4	44 23/32	41 13/32	51	29 1/4

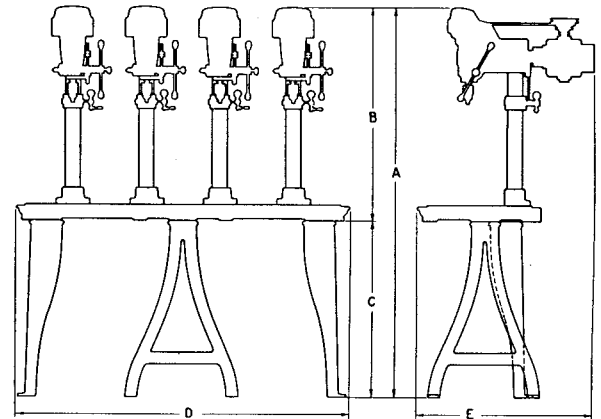


FLOOR TYPE DRILL PRESSES

A	B	C		D
		1/3 h.p.	1/2 h.p.	
65 1/4"	15	27 3/4	29	21

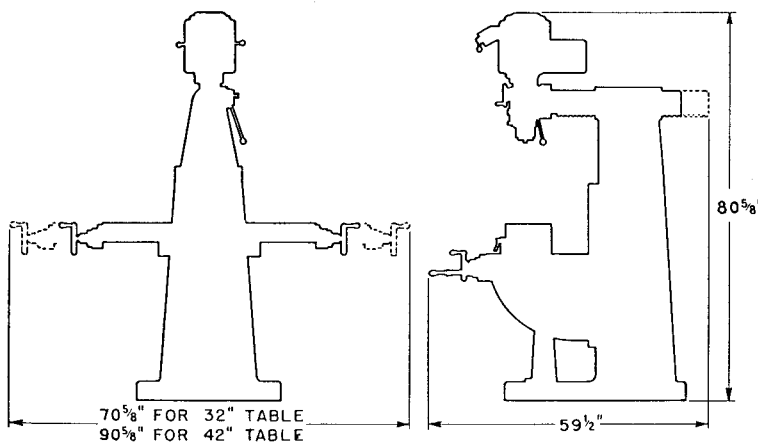
14" BENCH DRILL PRESSES

A—35 1/4"	D—17 3/4"
B—12 1/4"	E—10 3/4"
C—1/3 h.p. motor—27 3/4"	F—29 3/8"
C—1/2 h.p. motor—29"	G—20"
	H—32"



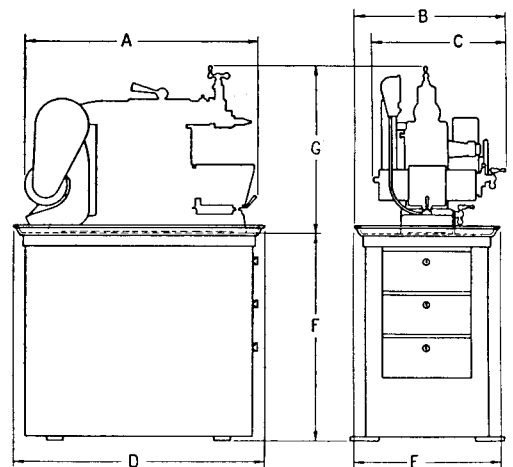
DRILL PRESSES FOR PRODUCTION OPERATIONS

Spindles	A	B	C	D	E	
					1/3 h.p.	1/2 h.p.
1	68 13/16	37 7/16	31 3/8	19 13/16	31 21/32	32 29/32
2	69 13/16	38 7/16	31 3/8	32 13/16	31 21/32	32 29/32
3	70 1/16	38 11/16	31 3/8	58 13/16	31 21/32	32 29/32
4	70 1/16	38 11/16	31 3/8	58 13/16	31 21/32	32 29/32



MILLING MACHINE

Good light on the work prevents scrap—equip each lathe with South Bend work light. See page 46.



7" SHAPER AND STAND

A		B	C	D	E	F	G
1/3 h.p.	1/2 h.p.						
31 3/4	35 1/4	20 1/2	19	36	19	28 3/8	26