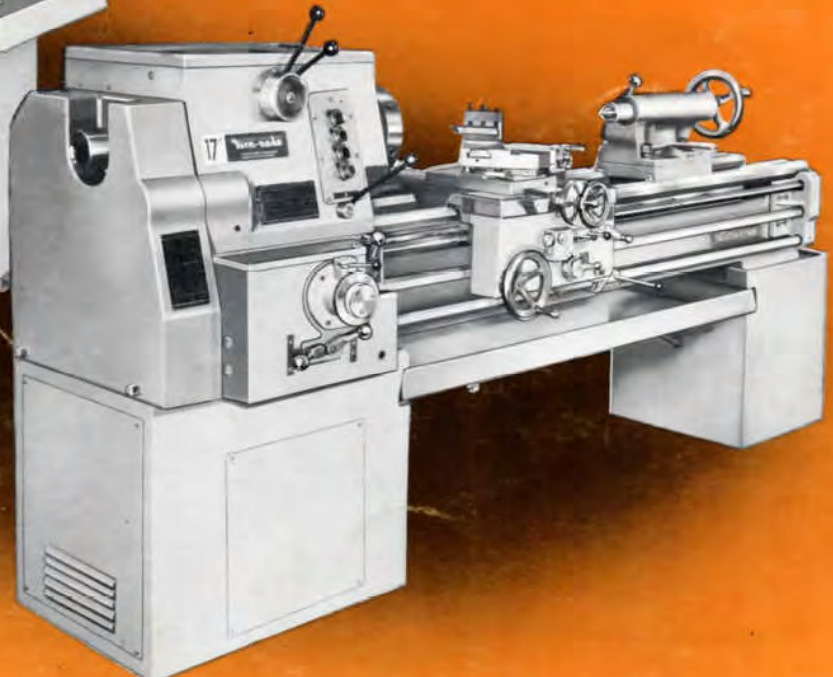




SOUTH BEND

machine tools

USED AROUND THE WORLD



BUILDERS OF PRECISION MACHINE TOOLS SINCE 1906



Welcome to SOUTH BEND LATHE

Since its early days as a pioneer in the metal working industry, South Bend Lathe has expanded its participation in the machine tool field. Today, after 60 years experience, the South Bend® product line has grown to include milling machines, drill presses, shapers, hydraulic presses, mechanical punch presses and a wider selection of lathes. Markets for these products are as wide and varied as the industry itself. Industry has these tools on the production line or in the maintenance shop. Vocational schools, research laboratories and the Armed Forces are markets. Every Polaris submarine carries a South Bend® lathe. Competing strongly in all world markets, each year a large percent of the company's machine tool production is exported right into the teeth of foreign competition. The reason is dependability. Some company tools are still operating after 60 years of service.

PRICES


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

WARRANTY

South Bend Lathe 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 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 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 will not be responsible for transportation charges or consequential damages.

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

TRADE MARKS

The trade marks SOUTH BEND, , Hydrolair, Power Petuator and Turn-nado are owned by South Bend Lathe and are registered in the United States Patent Office and in principal foreign countries. In order to obtain the very best in precision machine tools and other products illustrated in this catalog, ask for them by name.

SOUTH BEND LATHE

Cable Address: "Twins" South Bend, South Bend, Indiana, U.S.A. 46623

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ONE OF THE **Amsted**
INDUSTRIES

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

SOUTH BEND LATHE CATALOG 6601

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QUALITY CONTROLLED

- RAW MATERIALS
- FINISHED PARTS
- ASSEMBLY
- COMPLETE PRODUCT

FACTORY TEST CARD		DATE	ACTUAL	TESTED BY
BED BED LEVEL TRANSVERSE DIRECTION BED LEVEL LONGITUDINAL DIRECTION TAILSTOCK WAY ALIGNMENT HEADSTOCK SPINDLE SPINDLE CENTER RUNOUT SPINDLE NOSE RUNOUT CAM ACTION OF SPINDLE SPINDLE TAPER RUNOUT HEADSTOCK ALIGNMENT VERTICAL HEADSTOCK ALIGNMENT HORIZONTAL HEAD-TAIL ALIGNMENT TAILSTOCK SPINDLE ALIGNMENT HORIZONTAL TAILSTOCK SPINDLE ALIGNMENT VERTICAL TAILSTOCK TAPER ALIGNMENT HORIZONTAL		ASA B5 16 - 1952 Machine lathes 12" to 18" incl. WHEN USING PRECISION LEVEL ALL READINGS TO BE WITHIN .0005 IN 12 INCHES .0005 IN 12 INCHES WHEN USING PRECISION LEVEL ALONG BED MAX. READING TO BE WITHIN .0005 IN 12 INCHES .0005 IN 12 INCHES MAX. READING ALONG LENGTH OF BED .00050 IN 48 INCHES .00075 IN 48 INCHES TOTAL INDICATOR READING 0 TO .0004 0 TO .0003 TOTAL INDICATOR READING 0 TO .0003 0 TO .0004 TOTAL INDICATOR READING WITH INDICATOR ON REAR SIDE OF TEST PLATE 0 TO .0003 0 TO .0005 TOTAL INDICATOR READING OF 12 IN. TEST BAR AT END 0 TO .0006 0 TO .0008 NEAR SPINDLE NOSE 0 TO .0003 0 TO .0004 HIGH AT END OF 12 IN. TEST BAR 0 TO .0003 0 TO .0010 AT END OF 12 IN. TEST BAR 0 TO .0003 0 TO .0005 FORWARD AT END OF SPINDLE WHEN FULLY EXTENDED 0 TO .0005 0 TO .0005 HIGH AT END OF SPINDLE WHEN FULLY EXTENDED 0 TO .0005 0 TO .0008 END OF 12 IN. TEST BAR 0 TO .0005 0 TO .0008		
SIZE OF LATHE TEST TAILSTOCK TAPER ALIGNMENT-VERTICAL VERTICAL ALIGNMENT OF HEAD AND TAIL CENTERS LEAD SCREW LEAD SCREW ALIGNMENT LEAD SCREW CAM ACTION SADDLE CROSS SLIDE ALIGNMENT CAM LOCK SPINDLE FACE PLATE RUNOUT CHUCK - RUNOUT LATHE MUST TURN ROUND WITH WORK MOUNTED IN CHUCK LATHE MUST TURN CYLINDRICAL ON A 12 IN. LENGTH OF WORK PIECE MOUNTED ON CENTERS		SERIAL NO. ASA B5 16 - 1952 Machine lathes 12" to 18" incl. HIGH AT END OF 12 IN. TEST BAR 0 TO .0005 0 TO .0008 HIGH AT TAILSTOCK 0 TO .002 0 TO .003 PARALLEL WITH WAYS 0 TO .004 HORIZONTAL 0 TO .004 HORIZONTAL 0 TO .004 VERTICAL 0 TO .004 VERTICAL ALIGNMENT OF HALF NUT 0 TO .004 HORIZONTAL 0 TO .006 HORIZONTAL 0 TO .004 VERTICAL 0 TO .006 VERTICAL FORWARD 0 TO .0003 0 TO .0004 REVERSE 0 TO .0003 0 TO .0004 TO FACE HOLLOW OR CONCAVE ONLY ON 12 IN. DIAMETER 0 TO .0005 0 TO .0010 ON DIAMETER .004 .004 .0 TO .0005 0 TO .0010 ON FACE AT NOMINAL DIAMETER 0 TO .0010 0 TO .0015 FACE AND PERIPHERY .003 FACE OF STEPS .003 BAR TEST 3 INCHES FROM END OF 12 IN. BAR DIAMETER SAME AS HOLE .003 .003 .004 .0008 .0015 .0004 .0008		

SOUTH BEND INDIANA, U.S.A.

CONTINUED ON REVERSE SIDE

The highest standards of precision and accuracy are maintained in the manufacturer of South Bend Machine Tools.

Every machine must pass many accuracy tests. Our inspectors use fine precision measuring instruments, gauges, test bars, master templates, etc. to assure a final product of superior quality.

These tests are recorded on a test card similar to the one illustrated above and then kept on file at the factory.



Your confidence in our products is well founded. They are scientifically designed, engineered and manufactured by skilled craftsmen using the most modern machines and manufacturing techniques. These unseen values contribute much to the fine performance of our products.

This Optical Comparator is one of the many precision instruments used in our Quality Control Department to assure careful inspection of a variety of machine tool parts.



An experienced machinist can see at a glance that only the finest craftsmanship enters into the construction of South Bend Machine Tools, and after using South Bend Tools prefers them for their simplicity of operation.

SOUTH BEND LATHE

thread and feed ranges

9" and 10-K

threads per inch and carriage feeds per spindle revolution

4 .0853	4-1/2 .0758	5 .0683	5-1/2 .0621	5-3/4 .0594	6 .0569	6-1/2 .0525	7 .0488		
8 .0427	9 .0379	10 .0341	11 .0310	11-1/2 .0297	12 .0284	13 .0263	14 .0244		
16 .0213	18 .0190	20 .0171	22 .0155	23 .0148	24 .0142	26 .0131	28 .0122		
32 .0107	36 .0095	40 .0085	44 .0078	46 .0074	48 .0071	52 .0066	56 .0061		
64 .0053	72 .0047	80 .0043	88 .0039	92 .0037	96 .0036	104 .0033	112 .0030		
128 .0027	144 .0024	160 .0021	176 .0019	184 .0019	192 .0018	208 .0016	224 .0015		

10"

threads per inch and carriage feeds per spindle revolution

4 .0836	4-1/2 .0743	5 .0669	5-1/2 .0608	5-3/4 .0582	6 .0557	6-1/2 .0515	6-3/4 .0495	7 .0478	7-1/2 .0446
8 .0418	9 .0372	10 .0334	11 .0304	11-1/2 .0291	12 .0278	13 .0257	13-1/2 .0248	14 .0239	15 .0223
16 .0209	18 .0186	20 .0167	22 .0152	23 .0145	24 .0139	26 .0129	27 .0124	28 .0119	30 .0112
32 .0104	36 .0093	40 .0084	44 .0076	46 .0073	48 .0070	52 .0064	54 .0062	56 .0060	60 .0056
64 .0052	72 .0046	80 .0042	88 .0038	92 .0036	96 .0035	104 .0032	108 .0031	112 .0030	120 .0028
128 .0026	144 .0023	160 .0021	176 .0019	184 .0018	192 .0017	208 .0016	216 .0016	224 .0015	240 .0014
256 .0013	288 .0012	320 .0011	352 .0010	368 .0009	384 .0009	416 .0008	432 .0008	448 .0008	480 .0007

13", 14 1/2", 16" and 16-24"

threads per inch and carriage feeds per spindle revolution

4 .0841	4-1/2 .0748	5 .0673	5-1/2 .0612	5-3/4 .0585	6 .0561	6-1/2 .0518	7 .0481		
8 .0421	9 .0374	10 .0337	11 .0306	11-1/2 .0293	12 .0280	13 .0259	14 .0240		
16 .0210	18 .0187	20 .0168	22 .0153	23 .0146	24 .0140	26 .0129	28 .0120		
32 .0105	36 .0093	40 .0084	44 .0076	46 .0073	48 .0070	52 .0065	56 .0060		
64 .0053	72 .0047	80 .0042	88 .0038	92 .0037	96 .0035	104 .0032	112 .0030		
128 .0026	144 .0023	160 .0021	176 .0019	184 .0018	192 .0017	208 .0016	224 .0015		

17"

threads per inch and carriage feeds per spindle revolution

1-3/8 .1242	1-7/16 .1188	1-1/2 .1138	1-5/8 .1051	1-11/16 .1012	1-3/4 .0976	1-7/8 .0911	2 .0854	2-1/4 .0759	2-1/2 .0683
2-3/4 .0621	2-7/8 .0594	3 .0569	3-1/4 .0525	3-3/8 .0506	3-1/2 .0488	3-3/4 .0455	4 .0427	4-1/2 .0379	5 .0341
5-1/2 .0310	5-3/4 .0297	6 .0285	6-1/2 .0263	6-3/4 .0253	7 .0244	7-1/2 .0228	8 .0213	9 .0190	10 .0171
11 .0155	11-1/2 .0148	12 .0142	13 .0131	13-1/2 .0126	14 .0122	15 .0114	16 .0107	18 .0095	20 .0085
22 .0078	23 .0074	24 .0071	26 .0066	27 .0063	28 .0061	30 .0057	32 .0053	36 .0047	40 .0043
44 .0039	46 .0037	48 .0036	52 .0033	54 .0032	56 .0030	60 .0028	64 .0027	72 .0024	80 .0021

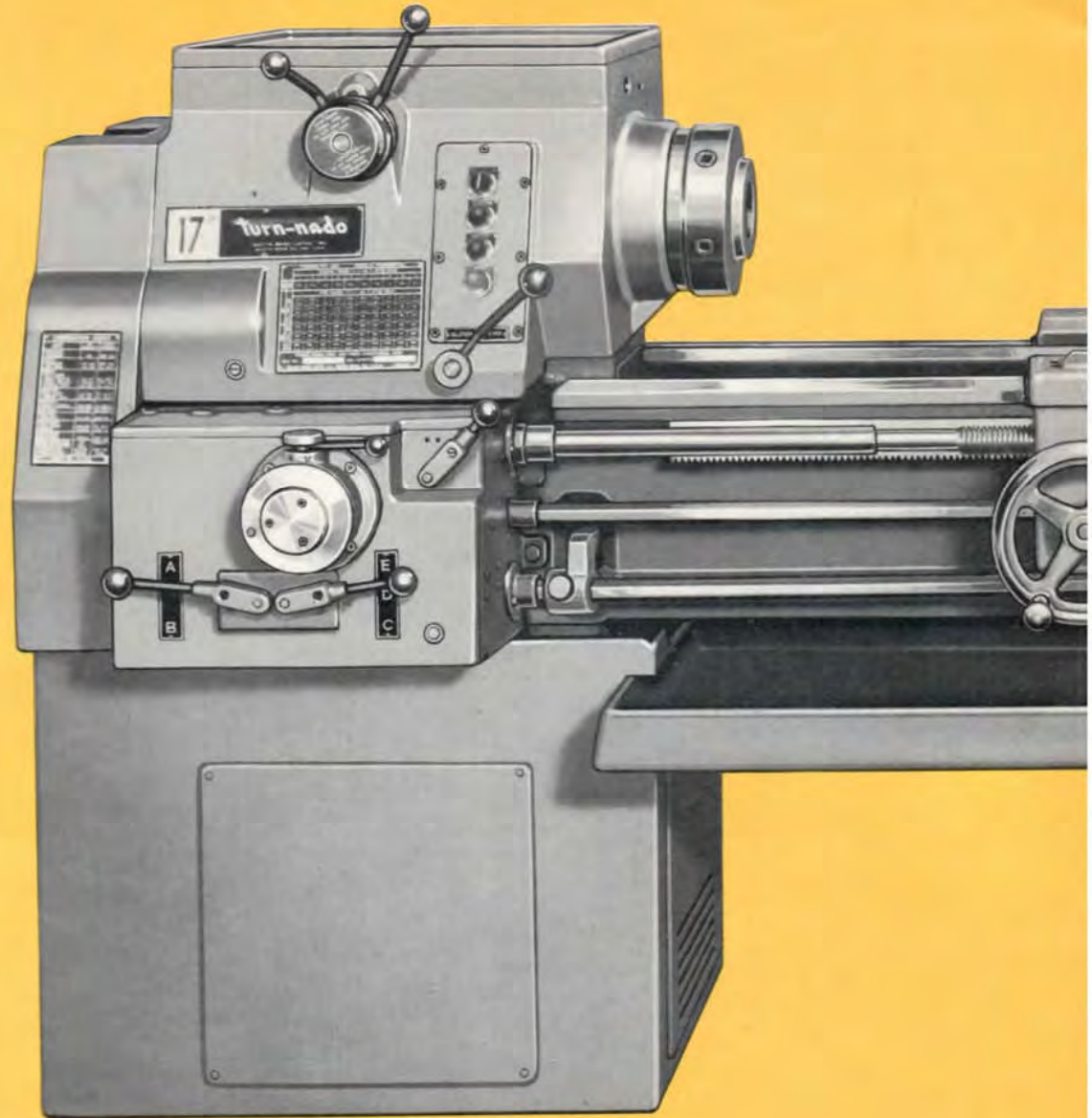
Consult Your South Bend Lathe DISTRIBUTOR

He's well qualified to make recommendations.

Your South Bend Lathe distributor knows shop practice and he knows turning tool equipment. His experience in the metal turning

field will enable him to offer sound advice on solving your machining problems.

He will be glad to help you select the right lathe to suit your particular production problem. Why not phone or write him now — There is a South Bend Lathe distributor near you — He's closer than you think!



In just three years, the popularity of South Bend's 17" Geared Head Lathe has spread throughout the metal-working industry.

By leaps and bounds our customers are discovering that with minimum investment this new lathe means faster machining from rough to finish — great capacity for work (a full 2 $\frac{1}{16}$ " hole through spindle) — almost effortless operation — offering less chance for operator fatigue and resulting errors.

See for yourself the beauty of this fine Precision machine. The large illustration above tells better than words the fine workmanship, the careful attention to detail that makes this "The Lathe Man's Lathe"! He

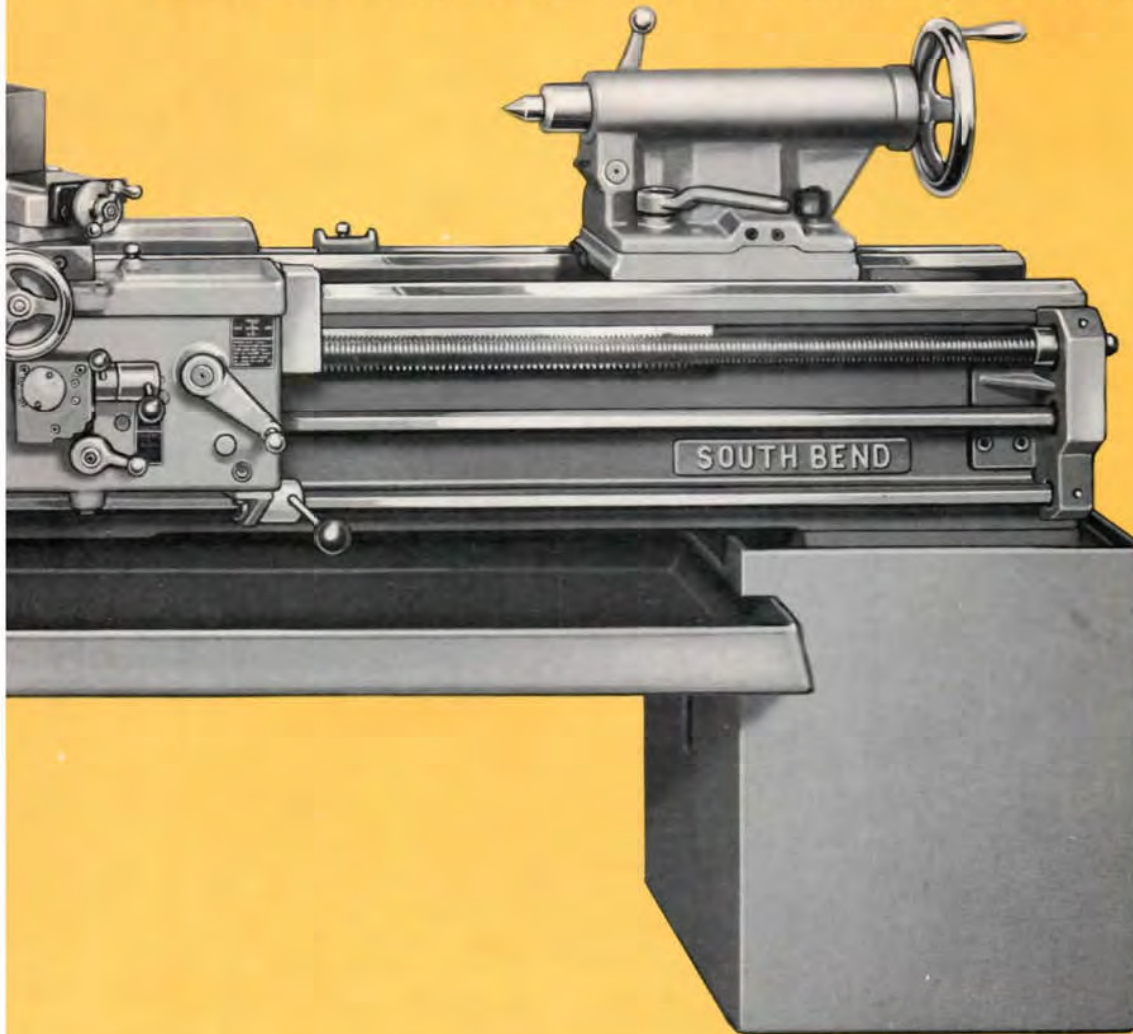
immediately feels at home when he steps up to this beauty.

Built to fit into any size shop . . . this 17" Geared Head Lathe will always pull her weight with stacks of blue chips to prove it.

From head to tail this lathe offers more value for your dollar — with an 8" D-1 Cam Lock spindle nose standard equipment. Hardened and ground bed ways and cross-feed screws standard equipment. Built in leveling screws for headstock and tailstock — sliding chip pan with chip slide an integral part of bed. In every way designed to lower your costs, lessen down time and produce a greater profit for you.

compare the 17⁹⁹ **turn-nado**

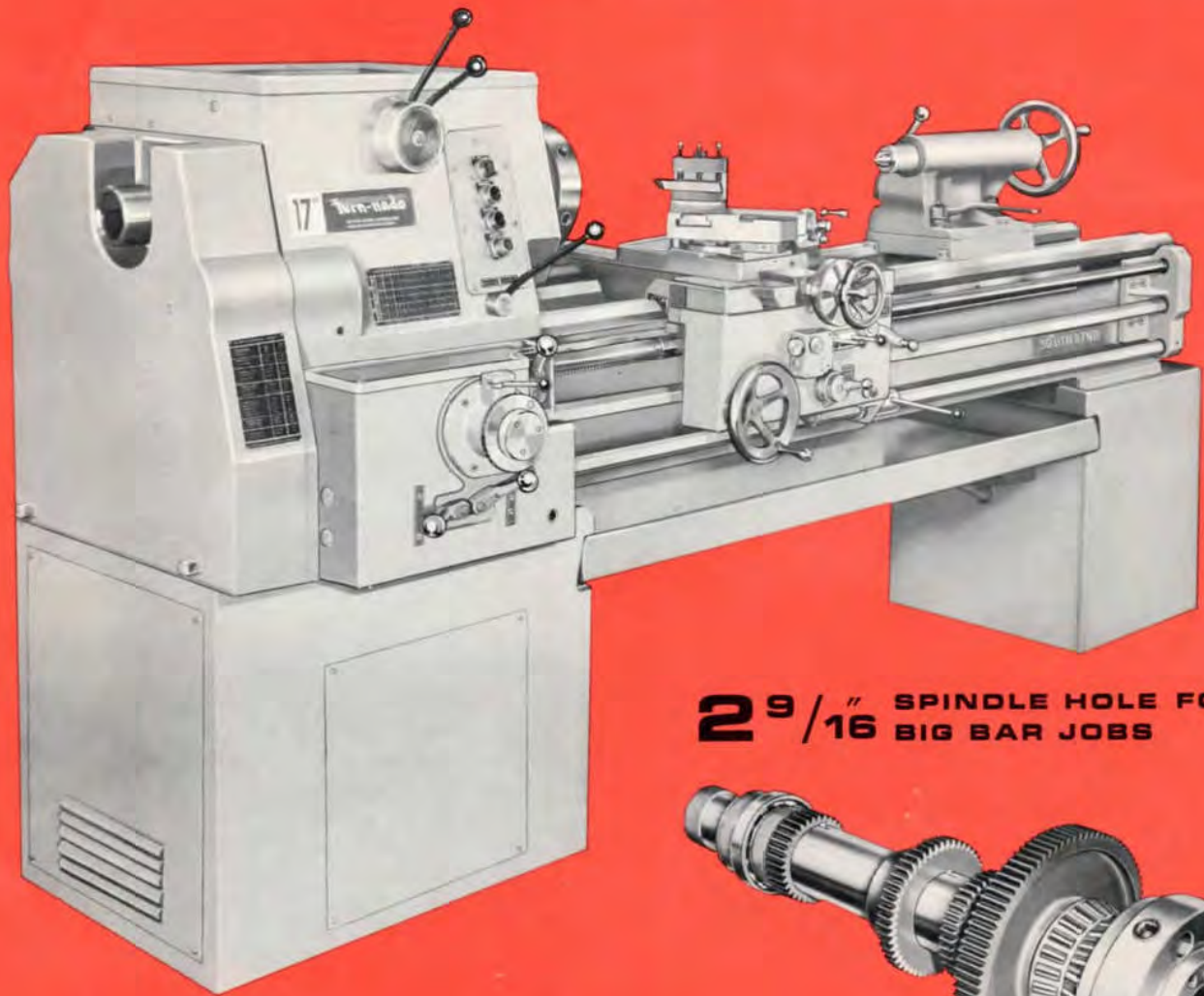
GEARED HEAD LATHE built by **SOUTH BEND**



Compare the 17" South Bend . . . and you'll buy South Bend

	South Bend	Lathe A	Lathe B
Headstock Bearing Area on Bed	21-3/4	21-1/8	20-9/16
Front Spindle Bearing	2 rollers	1 roller	1 roller
Hole through Spindle	2-9/16	1-49/64	1-3/4
Number of changes for Feeds	60	48	48
Number of Power Cross Feeds	60	48	48

17" SOUTH BEND *Turn-nado*[®] GEARED HEAD LATHE



**2⁹/₁₆" SPINDLE HOLE FOR
BIG BAR JOBS**



FOR HIGH PRECISION LOW-COST MACHINING ON EVERY JOB

You get something extra when you buy South Bend.

Take a lathe with 60 power feeds and 70 changes for threading • combine this tremendous range of speeds and feeds with a full 2⁹/₁₆" hole through spindle • build extra beef into the bed and headstock and tailstock to practically eliminate twist and deflection under heavy loads • place all controls in such a convenient position that operator "reach" is practically eliminated • add 60 years of lathe building experience and you will see why the South Bend 17" Turn-nado Geared Head Lathe is the most Productive — the most Accurate — the Biggest Lathe Value on the market today.

This 17" lathe is new in basic design, new in every component. Engineered to give every shop, large or small, the lathe features they need for competitive machining.

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

UNIQUE FEATURES

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

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

A "One Shot" oiling system for apron and saddle simplifies proper lubrication of saddle V-ways cross-slide, cross-feed nut and the cross-feed and longitudinal feed selector assembly.

SPECIFICATIONS / SOUTH BEND 17" GEARED HEAD LATHE

CAPACITY

Swing over bed and saddle wings.....	17½"
Swing over cross slide.....	10½"
Swing over cross slide without chip guard.....	11½"
Swing over compound rest.....	4¾"

HEADSTOCK

Length on bed.....	21¾"
Front spindle bearing.....	6¾" O.D. Tapered Roller (2)
Intermediate spindle bearing.....	Bronze
Rear spindle bearing.....	Ball
Radial load capacity of front bearing at 100 rpm.....	24,600 lb.
Thrust load capacity of front bearing at 100 rpm.....	11,500 lb.
Spindle nose.....	8" D-1 Cam-lock
Size of center (Morse taper).....	No. 5
Distance from spindle center to floor.....	44"
Hole through spindle.....	2¾"

SPINDLE SPEEDS

1800-rpm motor (single speed).....	(9) 60 — 1580 rpm
900-rpm motor (single speed).....	(9) 30 — 790 rpm
1800 — 900-rpm motor (two speeds).....	(18) 30 — 1580 rpm*
Recommended motor size.....	5 hp
Optional motor.....	7½ hp
Recommended two-speed motor.....	7½ — 3¾ hp

BED

Width.....	13"
Depth.....	12½"
Length.....	6'6", 8'6", 10'6", 12'6"
Distance between centers.....	30", 54", 78", 102"
*Special Spindle Speed Unit is available to allow 15 r.p.m.	

GEARBOX — THREADS & FEEDS

Number of thread selections.....	70
Range of threads (20T stud gear).....	2¼ — 160 t.p.i.
Range of threads (40T stud gear).....	1¾ — 2½ t.p.i.
Range of longitudinal feeds (60).....	0.0021 — 0.1242"
Range of cross-feeds (60).....	0.0011 — 0.0678"
Lead screw.....	1¾" — 4"

SADDLE

Length on bed.....	20¼"
Saddle bearing on ways in square inches.....	62
Bridge width.....	7"
Cross-feed travel (without taper attachment).....	12¼"
Cross-feed travel (with taper attachments).....	14"
Compound rest travel.....	3½"
Round tool post opening.....	1¾" x 2"

TAILSTOCK

Length on bed.....	11½"
Spindle diameter.....	2½"
Spindle travel.....	6"
Size of centers (Morse taper).....	No. 4
Set over in either direction from center.....	½"

TAPER ATTACHMENT

Maximum taper per foot.....	4"
Maximum turning length at one setting.....	16"

CL1785GJ. Special 15 r.p.m. spindle speeds in lieu of standard, factory installed... \$62.50

Note: When this unit is factory installed, spindle speeds in above specifications are cut in half.

CL1786GJ. Special 15 r.p.m. spindle speed unit for customer installation... \$129.00

Note: When installed by customer he can obtain 15 r.p.m. and its speed ranges plus standard speed ranges by changing from one unit to the other. The 15 r.p.m. unit can be used with all motors except 7½ h.p. — 900 r.p.m. single speed.

STANDARD EQUIPMENT

8" D-1 Cam-Lock Spindle, Hardened and Ground Bedways, Hardened and Ground Cross Feed and Compound Rest Screws, Chip Pan, Small Face Plate, Thread Dial Indicator, Open Side Tool Post, Thread Cutting Stop, Spindle Sleeve, No. 4 MT 60° Center, No. 5 MT 60° Center and necessary Wrenches.

APRON MOUNTED CLUTCH AND BRAKE CONTROL (Factory Installed)

CL172C. Apron Clutch and Brake Control for 17" lathe with 6' bed... \$75.00

CL172E. Apron Clutch and Brake Control for 17" lathe with 8' bed... \$75.00

CL172G. Apron Clutch and Brake Control for 17" lathe with 10' bed... \$75.00

Above apron clutch and brake control is standard equipment on 17" lathe with 12' bed.

RECOMMENDED MOTORS AND CONTROLS

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

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

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

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

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

Catalog Number	Bed Length	Between Centers	Grated Weight	Price F.O.B. Factory
CL170C	6'6"	30"	3865 lbs.	\$4750
CL170E	8'6"	54"	4300 lbs.	4900
CL170G	10'6"	78"	4800 lbs.	5400
CL170H	12'6"	102"	6200 lbs.	5800

EXTRAS FOR 17" LATHES

Catalog Number	Description	See Page	Price
CL1545GJ	Taper Attachment.....	46	\$387.00
CL3510GJ	10" 3-Jaw Universal Chuck w/2 piece Jaws.....	54	304.00
CL4212GJ	12" 4-Jaw Independent Chuck.....	54	265.00
CL2400GJ	Steady Rest.....	39	58.00
CL2395GJ	Follower Rest.....	39	36.75

For additional accessories see pages 33 thru 65.

"turn a profit with these SOUTH BEND built-in features"

1. Gearbox Oil Level Window
2. C-D-E Thread-Feed Selector Lever
3. A-B Thread-Feed Selector Lever
4. Cone Gear Thread-Feed Selector Lever
5. Feed Rod — Lead Screw Selector Lever
6. Headstock Oil Level Window
7. Spindle Speed Selector Outer Lever
8. Spindle Speed Selector Inner Lever
9. Motor Controls
10. Clutch-Brake Lever
11. Headstock Oil Flow Sight Window
12. Headstock Spindle
13. Cross-Feed Screw
14. Tool Post
15. Compound Rest Feed Screw
16. Compound Rest Clamp Nut
17. Carriage Lock Screw
18. Tailstock Spindle
19. Tailstock Spindle Binding Lever
20. Tailstock Clamp Nuts
21. Tailstock Handwheel
22. Tailstock Set over Screws
23. Thread Cutting Dial

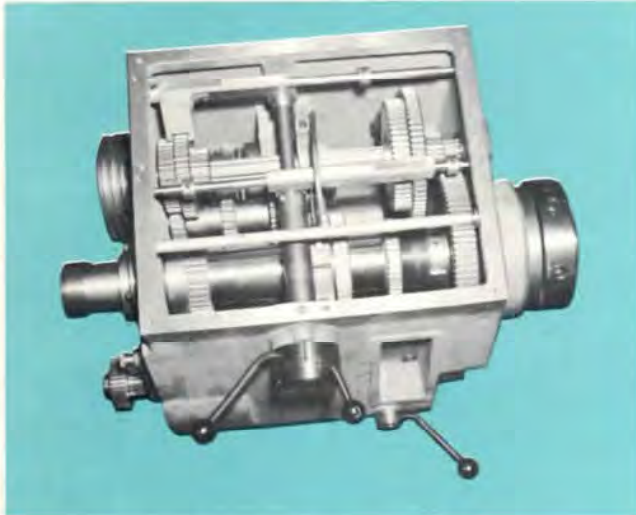
24. Apron Clutch and Brake Assembly
25. Lead Screw Nut Lever
26. Apron Oil Level Window
27. One Shot Lubrication Pump

28. Feed Clutch Lever
29. Feed Direction Lever
30. Carriage Feed Handwheel

Center leg is standard on 12' bed models. See following page for construction features.

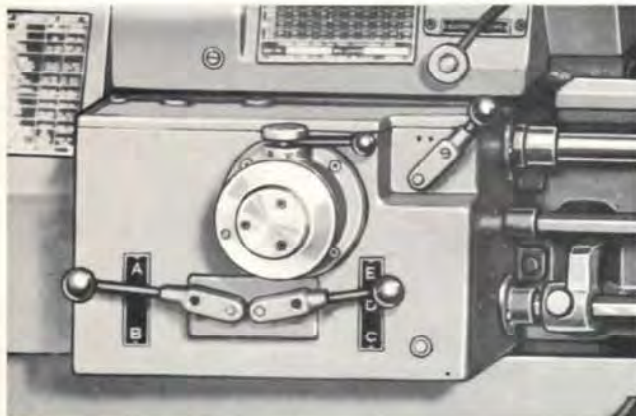
SOUTH BEND quality inside and out

No matter what the operation, turning, threading, drilling, boring, this South Bend 17" Turn-nado lathe will do the job — Fast, Accurate ... with minimum original investment. Large shop — small shop — this lathe has the features you need to "turn a profit" in today's competitive machining market. Throughout its entire design you'll find improvements that pay off in lower machining costs.



MASSIVE HEADSTOCK

All geared headstock has all controls grouped for convenient operation. Operator moves two shifting levers to obtain any of the 9 or 18 available spindle speeds. Full gear drive transmits maximum horsepower through the entire range of feeds. Pressure oiling system showers oil on every moving part. To insure accuracy and stability, spindle is supported by four bearings. One lever operates the friction disc clutch and the spindle brake.



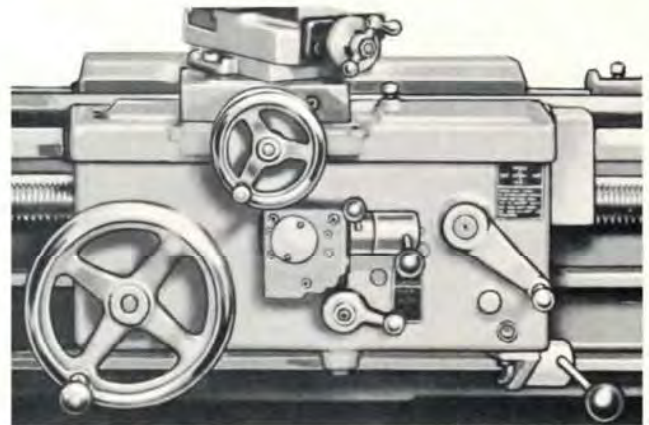
GEAR BOX

Totally enclosed gear box provides a selection of 70 screw threads, 60 changes for power longitudinal and power cross feeds. Self contained, constant flow oiling system keeps all moving parts bathed in oil. Thread selection from 1 $\frac{1}{2}$ to 160 per inch. Power can be shifted to feed rod for regular turning or to the lead screw for thread cutting. Safety feature eliminates possibility of engaging both feed rod and lead screw at the same time.



BED CONSTRUCTION

Three large V-ways and one flat way on the bed assures permanent precision alignment of the headstock, tailstock and carriage. Ways are hardened and ground for long life. Bed is heavily constructed to maintain accuracy and the design of the bracing is such that a slide is created so chips and coolant slide out the back of the bed into the chip pan.



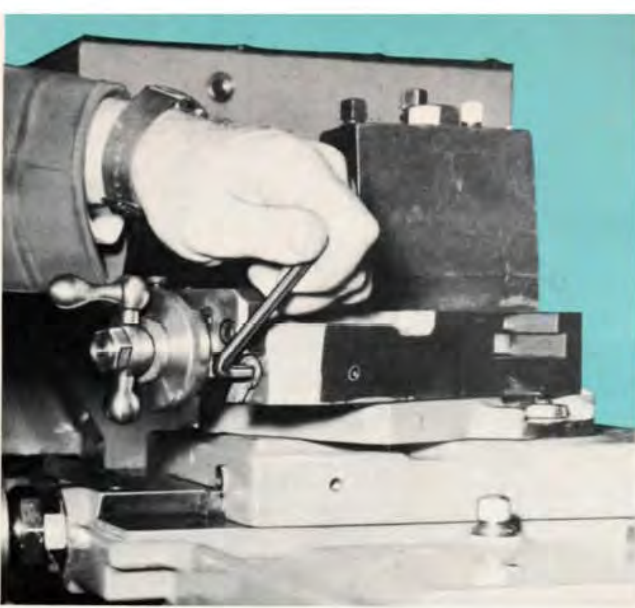
APRON AND CARRIAGE

62 inches of bearing surface align the carriage positively on the bed ways. Satin, chrome finish, direct reading micrometer dials are provided. Cross-feed and compound screws are hardened and ground. Compound rest and cross slide have adjustable tapered gibs. One piece double walled apron, steel gears are self lubricated from the apron oil reservoir.



TAILSTOCK

Tailstock spindle is 2 $\frac{1}{2}$ " diameter with 6" travel, has nonfreeze feature to prevent tie up when fully retracted. Barrel clamp exerts upward pressure to maintain perfect alignment. Spindle clamp locks securely in only a short arc of travel. Center mark for setting tool height, tang slot and center ejector built in. Tailstock can be set over as much as $\frac{1}{2}$ " for taper turning. The set over is easily adjusted by means of the two socket-head screws on the front of the tailstock.



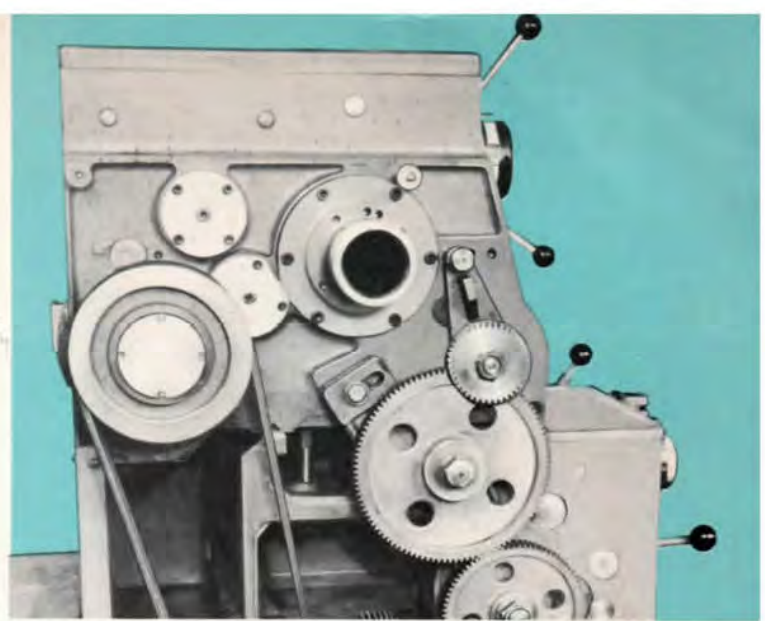
COMPOUND REST

Although carefully adjusted at the factory before shipment, after continued use the compound rest base and top are subject to some wear. Adjustment can easily be made by loosening lock screw and, while turning feed screw back and forth, turning gib adjusting screw inward until play is taken up. (Not so tight as to restrict free movement.) Tighten set screw. Repeat for compound rest base. Such "Planned Ahead" adjustments keep your lathe like new for years of service.



MULTIPLE-DISC CLUTCH

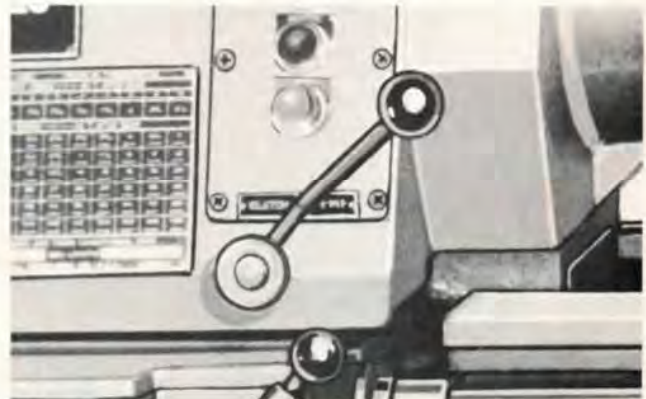
Combination multiple-disc clutch and brake unit is highly efficient and brake requires no adjustment. Clutch can be adjusted from time to time to compensate for disc wear. One lever controls both the clutch and the brake. Thus before brake can be applied, clutch is disengaged.



LEAD SCREW DRIVE

Inside the headstock gearing cover a pivoted lever with spring loaded plunger provides normal forward rotation of lead screw — disengagement of lead screw or direction reverse of lead screw.

A special gear is supplied to provide the very coarse threading ranges which are possible on this 17" lathe. The gear is stored in position shown and can be easily installed in place of regular gear.



BRAKE-CLUTCH CONTROL

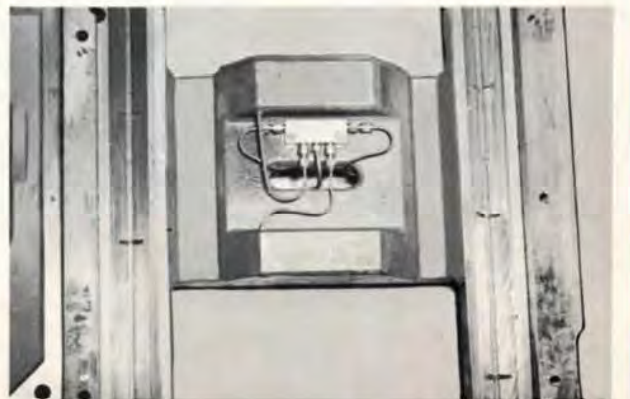
Conveniently located on the headstock, the clutch and brake control lever is designed for efficient action.

Clutch snaps into full engaged position and remains in till disengaged. The spindle brake also locks into braking position and holds till spindle stops and lever is released.

ONE SHOT LUBRICATION

This new One Shot Oiling System is standard equipment and operates from the apron reservoir which must be kept full of oil. Two cubic centimeters of oil is pumped every time finger plunger is activated. The system is designed with metering units so that right amount of oil is delivered to each point of lubrication which includes:

1. Feed Control Housing.
2. Bed Ways.
3. Cross Slide Dovetail.
4. Cross Feed Screw.



Quality Features

THAT ASSURE PRECISION

For over 60 years South Bend has led the way in the manufacture of Precision Lathes. This has been possible only through a devoted program of testing, checking and refining every operation in the manufacturing process.

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

SMOOTH POWER

Much time, thought and care have gone into the design of the headstock spindle and bearings. The bearings in which the spindle revolves are unusually large and are precision bored and burnished. The bearing surfaces on the spindle are hardened and ground then superfinished. The extreme smoothness of the superfinished bearing surface practically eliminates wear, reduces friction and permits higher spindle speeds with utmost precision.

DEPENDABLE PERFORMANCE

The one piece double wall apron supplied on 10"-1 $\frac{1}{8}$ " collet and larger lathes provides substantial support for both ends of the gear shafts. Gears in the apron are made of steel and have reservoir and wick oiling system. These fine features help deliver dependable performance.

The unusually long bearing surfaces of the saddle are hand-scraped to conform to the outer V-ways of the lathe bed and the cross slide dovetail is hand-scraped square with the V-ways of the saddle.

In so many ways South Bend lathes are perfection. No wonder they are preferred over all competitors in their size and price range.

CONVENIENCE

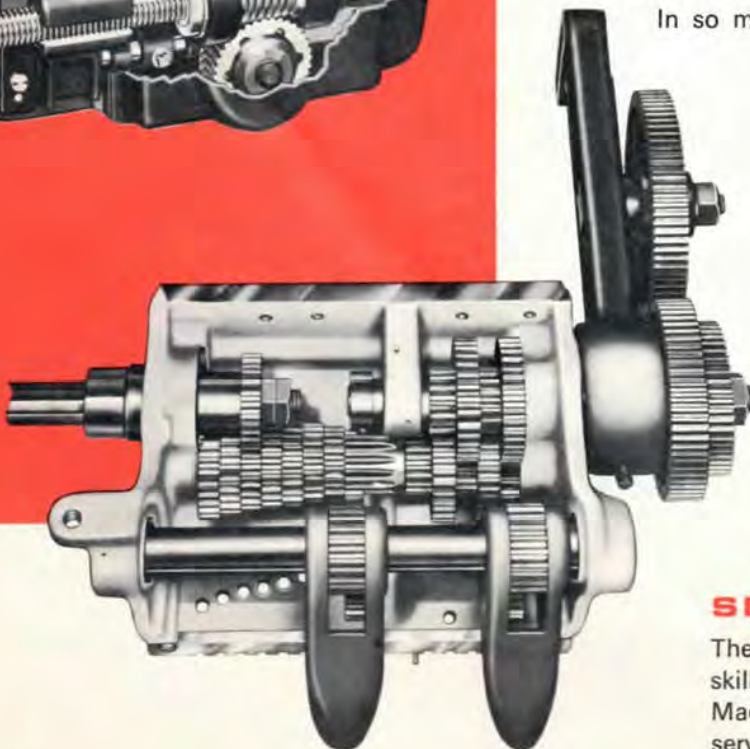
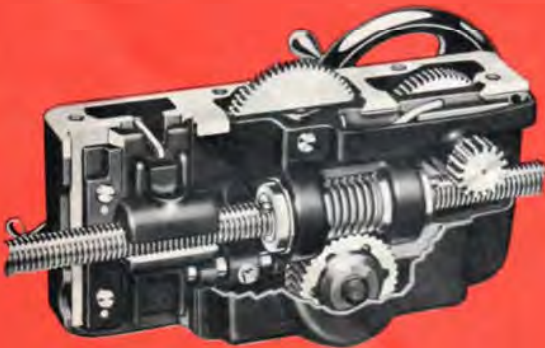
Years of research and testing have proved South Bend equipment to be especially easy to set-up and operate. All controls are convenient to the operator and this pays off with more production for your shop. For example, actual use on tough jobs in our own plant has helped us develop the operation and machine control to the point of almost fool-proof design.

LOW COST

You win three ways with South Bend Machine Tools, Low first cost, Low operational costs, Almost no maintenance costs.

SERVICE

The best materials available and the highly specialized skills of our workmen are used in building South Bend Machine Tools. That's why they give almost endless service if given proper care.



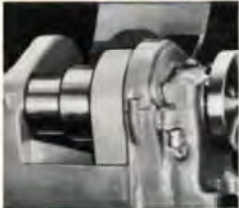
ONLY SOUTH BEND OFFERS — all these **OPTIONAL FEATURES**

Quantity production of a standardized design makes it possible for us to manufacture a lathe of unquestionable quality at a comparatively low cost.



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.

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 43.



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

HARDENED TAILSTOCK TAPER
Tailstock spindle with hardened and precision ground taper furnished in lieu of regular at small extra cost. See page 50.



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 33.

HANDLEVER TAILSTOCK
Supplied in lieu of regular tailstock at extra cost. Also available as an extra. Speeds drilling and reaming operations. See page 42.



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.

FINE FEED HANDWHEEL
With this fine feed handwheel planetary gear reduction assures smooth, steady movement of carriage as handwheel is turned. See page 50.



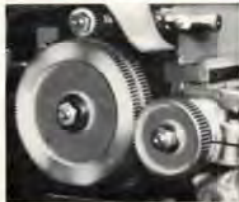
CAM LOCK SPINDLE
4" Type D1 Cam Lock Spindle supplied to order in lieu of regular threaded spindle at extra cost. Chucks, face plates and other accessories available. See page 33.

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.



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 page 33.

DOUBLE TOOL CROSS SLIDE
This cross-feed may be power operated through friction clutch in apron or manually by cross-feed handwheel. Ideal where multiple tool set up is necessary. See page 41.



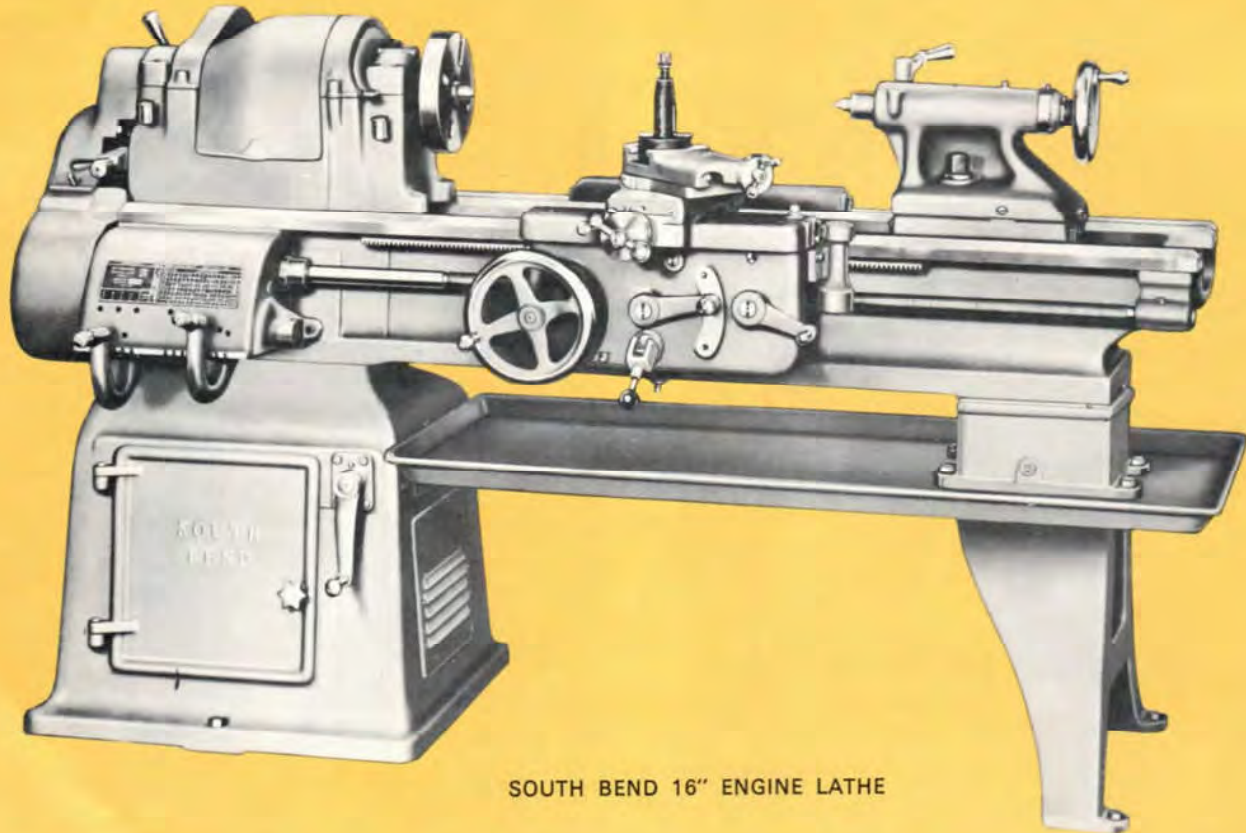
METRIC EQUIPMENT
Metric lead screw, metric quick change box and metric graduations supplied in lieu of English at no extra cost. Metric transposing gears at extra cost. See pages 64 and 65.

EXTRA TOOL POST
An extra tool post on your lathe can often be a real time saver. Where long production runs are required this accessory is a must. See page 50.



16" SOUTH BEND *Precision* LATHES

ENGINE
TOOLROOM
MODELS



SOUTH BEND 16" ENGINE LATHE

FOR EFFICIENT PRODUCTION WITH PRECISION ON A MODEST BUDGET

When your product must have the finest finish — must be held dimensionally to close tolerances, yet allotted capital expenditure for equipment to do the job is limited, you naturally turn to South Bend for Precision Lathes.

- Low first cost — just look at the price.
- Low operational cost and practically no maintenance.
- For trouble-free, big lathe performance, for a lathe that is tough and ready, easy to set-up, quiet and free of vibration. Here's the one — South Bend's big 16" Lathe.

Proven design and expert workmanship give these 16" lathes extreme accuracy — and South Bend 16" lathes are regular "eager beavers" ... they handle more routine jobs, tool-up easier for special jobs with off-the-shelf attachments.

With smooth, vibration-free power, so essential for precision turning, these 16" lathes have the capacity to handle close

tolerance tooling and die operations, precision maintenance work and short run production where extremely fine finish is required in a single operation.

ENGINE LATHES

Standard equipment included in the price of each 16" engine lathe consists of necessary belting and motor pulley, thread indicator dial, thread cutting stop, small face plate, round tool post assembly, 60° centers and spindle sleeve, chip pan, wrenches, installation plan and manual. Electrical equipment is not included.

TOOLROOM LATHES

Standard equipment included in the price of each 16" toolroom lathe consists of necessary belting and motor pulley, thread indicator dial, thread cutting stop, micrometer carriage stop, small face plate, large face plate, telescopic taper attachment, round tool post assembly, 60° centers and spindle sleeve, chip pan, handwheel type draw in collet attachment, collet rack (without collets), precision lead screw, wrenches, installation plan and manual. Electrical equipment is not included.

SPECIFICATIONS / SOUTH BEND 16" LATHES

CAPACITY

Swing over bed and saddle wings.....	16 1/4"
Swing over cross slide, engine lathe.....	9 3/4"
Swing over cross slide, toolroom lathe.....	9 3/4"
Swing over cross slide without chip guard, engine lathe only.....	11 1/4"
Between centers (various bed lengths).....	33", 45", 57", 81", 105", 129"

HEADSTOCK

Capacity through spindle, nose type collet chuck or lathe chuck.....	1 1/4"
Maximum collet capacity, handwheel or handlever type.....	1 1/4"
Threaded spindle nose, diameter and threads per inch.....	2 3/4" - 6
Cam lock spindle nose, size.....	4" type D1
Long taper key drive spindle nose, size.....	L00

Center, Morse taper.....	No. 3
Width, each step of 4-step cone pulley.....	2 1/4"
Width, each step of 3-step cone pulley.....	3"

SPINDLE SPEEDS (approximate, not exact)

With 4-Step Cone Pulley		Direct Drive	Back-Geared
1-speed motor, r.p.m.....	980,610,390,240	125, 80,50,30	
2-speed motor			
High speeds—r.p.m.....	980,610,390,240	125, 80,50,30	
Low speeds—r.p.m.....	490,305,195,120	62, 40,25,15	
With 3-Step Cone Pulley			
1-speed motor, r.p.m.....	945,550,300	118,70,32	
2-speed motor			
High speeds—r.p.m.....	945,550,300	118,70,32	
Low speeds—r.p.m.....	475,278,150	60,33,20	
Higher spindle speed available at extra cost — up to.....		1200 r.p.m.	

THREADS AND FEEDS

Number of changes for threads and feeds.....	48
Range of threads cut.....	4 to 224
Range of longitudinal feeds.....	.0015" to .0841"
Range of cross-feeds.....	.0006" to .0315"
Lead screw, 29° Acme thread, diameter and threads.....	1 1/4" - 6

COMPOUND REST

Cross slide travel, engine lathe model.....	10 1/2"
Cross slide travel, toolroom lathe model.....	10 1/4"
Angular hand feed, compound rest top slide.....	3 3/4"
Tool post opening for tool holder shank.....	3/8" x 1 3/8"

TAILSTOCK

Center, Morse taper.....	No. 3
Spindle travel.....	5 3/4"
Set-over of top for taper turning.....	1"

EXTRAS FOR 16" LATHES

Catalog Number	Description	See Page	Price
CE3077	Set of 4-R-5-B Steel Collets for Round Work	36	\$ 98.00
CL4210MH	10" 4-Jaw Independent Chuck	54	141.00
CL2395H	Telescoping Jaw Follower Rest	39	21.45
CL2400H	Telescoping Jaw Steady Rest	39	36.75

For additional accessories see pages 33 thru 65.

RECOMMENDED MOTORS and CONTROLS

MOTORS						CONTROLS		
Cat. No.	H.P.	Speed	Phase	Cycle	Volts	Price	Cat. No.	Prices
CE2592P	3	1	3	60	208	\$123.00	EQ965	\$ 40.00
CE2592D	3	1	3	60	220	123.00	EQ965	40.00
CE2592F	3	1	3	60	440	123.00	ES841DTO	107.00
CE2593H	3	1	3	60	550	123.00	ES841ETO	111.00
CE2594P*	3-1 1/2	2	3	60	208	246.00	ES843CO	178.00
CE2594D*	3-1 1/2	2	3	60	220	225.00	ES843CO	178.00
CE2596F*	3-1 1/2	2	3	60	440	225.00	ES843DTO	186.00
CE2598H*	3-1 1/2	2	3	60	550	246.00	ES843ETO	190.00

NOTE: All 3 phase controls 440-550 volt, include overload protection, low voltage release and step-down transformer. For listing of optional motors and controls see pages 66 thru 69.
*Double Winding Motors.

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	\$ 2770		
		CL155D	7	45	96	2950	2380	2847		
		CL155E	8	57	105	3150	2460	2924		
		CL155G	10*	81	123	3550	2800	3134		
		CL155H	12*	105	141	3900	2975	3414		
		CL155K	14*	129	167	4380	3200	3806		
	FOUR-STEP CONE PULLEY	CL117C	6	33	89	2700	2300	2770		
		CL117D	7	45	96	2950	2380	2847		
		CL117E	8	57	105	3150	2460	2924		
		CL117G	10*	81	123	3550	2800	3134		
		CL117H	12*	105	141	3900	2975	3414		
		CL117K	14*	129	167	4380	3200	3806		
		TOOLROOM LATHES	THREE-STEP CONE PULLEY	CL8155C	6	33	100	2925	2525	3362
				CL8155D	7	45	106	3175	2605	3439
CL8155E	8			57	117	3375	2685	3516		
FOUR-STEP CONE PULLEY	CL8117C		6	33	100	2925	2525	3362		
	CL8117D		7	45	106	3175	2605	3439		
	CL8117E		8	57	117	3375	2685	3516		

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

Electrical equipment is not included in price.

SIX TO SIXTEEN SPINDLE SPEEDS

Headstocks for 16" swing South Bend Lathes are made in two types: 4-step cone pulley and wide belt 3-step cone pulley. The 4-step cone pulley headstock provides either eight or sixteen spindle speeds depending on whether a single-speed or a two-speed motor is used. With the wide belt 3-step cone pulley you have either six or twelve spindle speeds.

QUICK CHANGE FROM HIGH TO LOW-SPEEDS

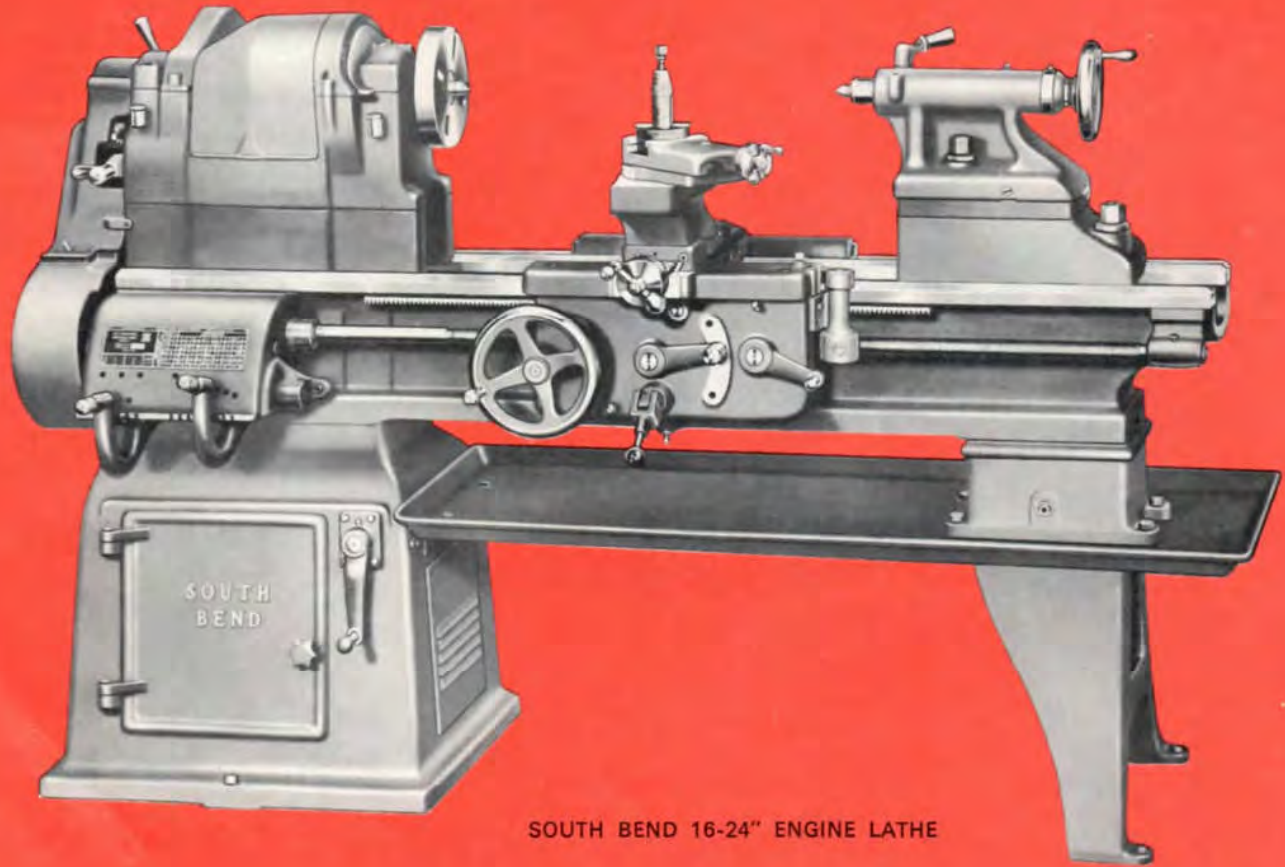
When a two-speed motor is used, it provides sixteen speeds with the 4-step cone pulley or twelve speeds with the 3-step cone pulley headstock. This not only increases the speed range but with push button control it provides instantaneous changes between corresponding high speeds and low speeds. This feature saves time on multiple operations requiring frequent speed changes such as drilling and tapping, boring and reaming, or turning and facing. The low spindle speeds are approximately one-half the corresponding high speeds.

Sleeve Boring Operation on South Bend 16" Toolroom Lathe.



16-24" SOUTH BEND

Precision
LARGE SWING LATHE



SOUTH BEND 16-24" ENGINE LATHE

Large jobs are a sure thing with a full 25" swing and up to 126" between centers. This big capacity is ideal for medium weight, large swing work requiring extreme accuracy and fine finish.

The beauty of it is — in addition to your large, big swing jobs, this lathe is so easy to set up and so convenient to handle, it's ideal for all your smaller work too. Industrial shops all across the country are finding this to be the work-horse of the maintenance shop.



SIX TO SIXTEEN SPINDLE SPEEDS

Headstocks for 16-24" South Bend Lathes are made in two types: 4-step cone pulley and wide belt 3-step cone pulley. The 4-step cone pulley headstock provides either eight or sixteen spindle speeds depending on whether a single-speed or a two-speed motor is used. With the wide belt 3-step cone pulley you have either six or twelve spindle speeds.

QUICK CHANGE FROM HIGH TO LOW SPEEDS

When a two-speed motor is used it doubles the number of spindle speeds, providing sixteen speeds with the 4-step cone pulley or twelve speeds with the 3-step cone pulley headstock. This not only increases the speed range but, with push button control, it provides instantaneous changes between corresponding high speeds and low speeds. This feature saves time on multiple operations requiring frequent speed changes such as drilling and tapping, boring and reaming, or turning and facing. The low spindle speeds are approximately one-half the corresponding high speeds.

PRACTICAL ATTACHMENTS AND ACCESSORIES INCREASE THE USEFULNESS OF YOUR LATHE. See pages 33 thru 65.

SPECIFICATIONS / 16-24" LATHES

CAPACITY

Swing over bed and saddle weight	25 1/4"
Swing over cross slide, engine lathe	18 3/4"
Swing over cross slide without chip guard, engine lathe only	19 1/4"
Between centers (various bed lengths)	30", 42", 54", 78", 102", 126"

HEADSTOCK

Same as for 16" Lathes

SPINDLE SPEEDS (approximate, not exact) Direct Drive Back-Geared

With 4-Step Cone Pulley		
1-speed motor, r.p.m.	470,280,175,105	60,35,22,15
2-speed motor, High speeds — r.p.m.	900,550,340,203	116,70,45,30
Low speeds — r.p.m.	455,274,170,104	60,34,24,15
With 3-Step Cone Pulley		
1-speed motor, r.p.m.	405,235,130	50,30,14
2-speed motor, High speeds — r.p.m.	790,460,250	100,60,27
Low speeds — r.p.m.	400,230,125	50,29,15

THREADS AND FEEDS

Same as for 16" Lathes

COMPOUND REST

Same as for 16" Lathes

TAILSTOCK

Same as for 16" Lathes

STANDARD EQUIPMENT

Included in the price of each 16-24" engine lathe is necessary belting and motor pulley, thread indicator dial, thread cutting stop, small face plate, round tool post assembly, 60° centers and spindle sleeve, chip pan, wrenches, installation plan and manual. Electrical equipment is not included.

RECOMMENDED MOTORS and CONTROLS

MOTORS						CONTROLS		
Cat. No.	H.P.	Speed	Phase	Cycle	Volts	Price	Cat. No.	Price
CE2592P	3	1	3	60	208	\$123.00	EQ965	\$ 40.00
CE2592D	3	1	3	60	220	123.00	EQ965	40.00
CE2592F	3	1	3	60	440	123.00	ERC841D TO	111.00
CE2593H	3	1	3	60	550	123.00	ERC841E TO	115.00
CE2594P*	3-1 1/2	2	3	60	208	246.00	ERC843CO	176.00
CE2594D*	3-1 1/2	2	3	60	220	225.00	ERC843CO	176.00
CE2596F*	3-1 1/2	2	3	60	440	225.00	ERC843D TO	186.00
CE2598H*	3-1 1/2	2	3	60	550	246.00	ERC843E TO	190.00

NOTE: All 3 phase controls 440-550 volt, include overload protection, low voltage release and step-down transformer. For listing of optional motors and controls see pages 66 thru 69.

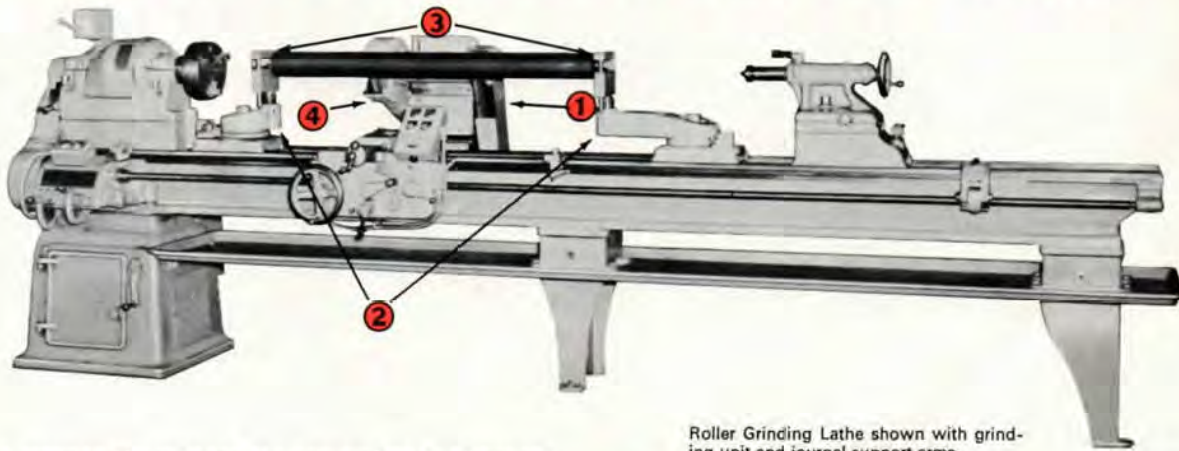
* Double Winding Motors.

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	\$3316
	CL176D	CL198D	7	42	104	3200	2560	3393
	CL176E	CL198E	8	54	114	3300	2640	3470
	CL176G	CL198G	10*	78	134	3800	2980	3680
	CL176H	CL198H	12*	102	153	4100	3155	3960
	CL176K	CL198K	14*	126	182	4500	3350	4352
FOR TWO-SPEED MOTOR	CL195C	CL179C	6	30	98	3175	2555	3316
	CL195D	CL179D	7	42	104	3275	2635	3393
	CL195E	CL179E	8	54	114	3375	2715	3470
	CL195G	CL179G	10*	78	134	3875	3055	3680
	CL195H	CL179H	12*	102	153	4175	3230	3960
	CL195K	CL179K	14*	126	182	4575	3425	4352

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

Electrical equipment is not included in price.

SOUTH BEND ROLLER GRINDING LATHE



Roller Grinding Lathe shown with grinding unit and journal support arms.

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

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

The regular compound rest unit comes with the machine, and therefore, it can be used as a regular lathe or roll grinder. With the compound and grinder unit both in position, a work piece of 7 1/2" O.D. may be mounted. With only the grinder mounted, a 14" O.D. roll will clear.

The tailstock has been modified for quick acting set-over operation.

Limit switches are mounted on both sides of the apron and on the tailstock. Stops can be set for automatic motor shut off at the end of work piece and for safety. Any single limit switch shuts off all motors.

① Grinding Unit consisting of special 16/24" cross slide, grinder spindle, wheel guard, balancing type wheel holder, grinding wheels (2), pulleys, belt, belt guard, 5-H.P. motor and mounting base, gib, and compound mounting hole cover plate.

CL724. Entire unit drop shipped f.o.b. Chicago for customer installation and fitting..... \$2598.00

Grinding Unit mounted on special 16/24" cross slide in lieu of standard, including grinder spindle, wheel guard, balancing type wheel holder, grinding wheels (2), pulleys, belt, belt guard, 5-H.P. motor mounted on pivoted base, gib, and compound mounting hole cover plate. The tailstock is modified for grinder clearance and has a fast acting set-over device.

CL725. Entire unit fitted and mounted on lathe at factory..... \$2550.00

② CL726. Set of one left hand and one right hand journal support arms on pivoting mounting pads, with universal drive unit, driving bushing, and cam lock mounting plate..... \$1619.00

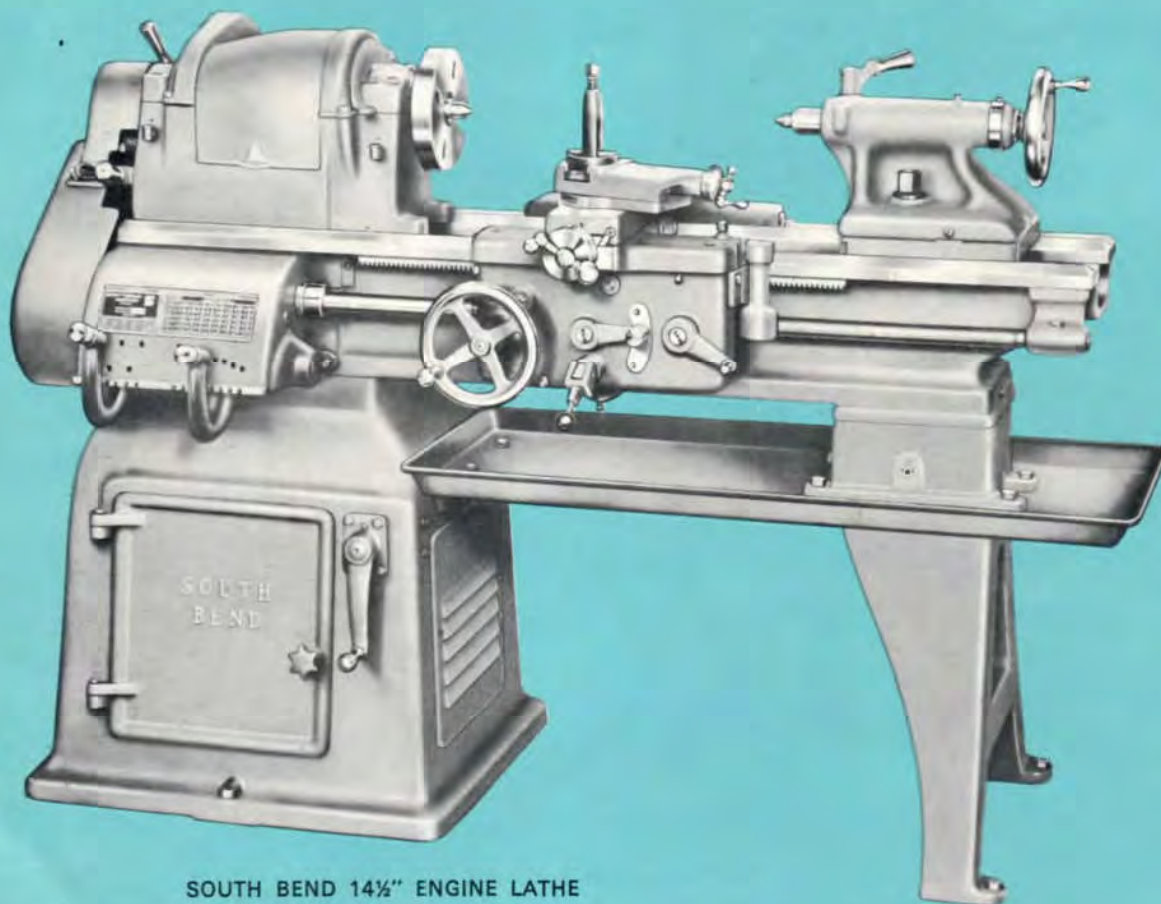
③ CL727. Set of one left hand and one right hand ball bearing journal supports with ball bearing hold down clamps..... \$368.00

④ CL728. Extra balancing type wheel holder with spacers for double wheel mounting, balanced and includes two wheels..... \$258.00

NOTE: Control unit for lathe and grinder is extra.

Prices f.o.b. South Bend, Indiana

14 1/2" SOUTH BEND ENGINE TOOLROOM MODELS *Precision* LATHES



SOUTH BEND 14 1/2" ENGINE LATHE

PRECISION ACCURACY FOR THE MOST EXACTING TOOL AND INSTRUMENT WORK

Performance counts and you'll be counting dollars saved after installing a 14 1/2" South Bend Lathe in your shop.

Ample swing for most every job . . . Precision built, yet rugged. The rugged construction of South Bend Lathes is best demonstrated by the fact that the great majority of all lathes ever made by South Bend are still giving satisfactory service after years of use.

Sound design, expert workmanship and quality materials give South Bend Lathes extreme accuracy for precision tool and gauge work — smooth power and speed for efficient production. They are first choice among expert toolmakers and experienced production men everywhere.

We are sure you too will agree with hundreds of satisfied users that they represent the maximum lathe value per dollar of cost.

A complete line of practical attachments and accessories simplifies tooling for many operations that might otherwise re-

quire special fixtures or machinery. Should any of the attachments be needed they can be selected from our attachment and accessory section of this catalog. See pages 33 thru 65.

ENGINE LATHES

Standard equipment included in the price of each 14 1/2" engine lathe consists of necessary belting and motor pulley, thread indicator dial, thread cutting stop, small face plate, round tool post assembly, 60° centers and spindle sleeve, chip pan, wrenches, installation plan and manual. Electrical equipment is not included.

TOOLROOM LATHES

Standard equipment included in the price of each 14 1/2" toolroom lathe consists of necessary belting and motor pulley, thread indicator dial, thread cutting stop, micrometer carriage stop, small face plate, large face plate, telescoping taper attachment, round tool post assembly, 60° centers and spindle sleeve, chip pan, handwheel type draw-in collet attachment, collet rack (without collets), precision lead screw, wrenches, installation plan and manual. Electrical equipment is not included.

SPECIFICATIONS / SOUTH BEND 14 1/2" LATHES

CAPACITY

Swing over bed and saddle wings	14 1/2"
Swing over cross slide, engine lathe	8 3/4"
Swing over cross slide, toolroom lathe	8 15/16"
Swing over cross slide without chip guard, engine lathe only	10 1/4"
Between centers (various bed lengths)	24", 36", 48", 60"

HEADSTOCK

Capacity through spindle, nose type collet chuck or lathe chuck	1 3/4"
Maximum collet capacity, handwheel or handlever type	1 1/4"
Threaded spindle nose, diameter and threads per inch	2 3/8"-6
Cam lock spindle nose, size	4" type D1
Long taper key drive spindle nose, size	L00

Center, Morse taper	No. 3
Width, each step of 4-step cone pulley	2 1/4"
Width, each step of 3-step cone pulley	2 3/4"

SPINDLE SPEEDS (approximate, not exact)

With 4-Step Cone Pulley	Direct Drive	Back-Geared
1-speed motor, r.p.m.	875,545,350,215	130,80,50,30
2-speed motor		
High speeds—r.p.m.	875,545,350,215	130,80,50,30
Low speeds—r.p.m.	437,272,175,107	65,40,25,15
With 3-Step Cone Pulley		
1-speed motor, r.p.m.	875,428,215	130,61,30
2-speed motor		
High speeds—r.p.m.	875,428,215	130,61,30
Low speeds—r.p.m.	437,214,107	65,30,15
Higher spindle speeds available at extra cost, up to		1200 r.p.m.

THREADS AND FEEDS

Number of changes for threads and feeds	48
Range of threads cut	4 to 224
Range of longitudinal feeds	.0015" to .0841"
Range of cross-feeds	.0006" to .0315"
Lead screw, 29° Acme thread, diameter and threads	1 1/2"-6

COMPOUND REST

Cross slide travel, engine lathe model	10"
Cross slide travel, toolroom lathe model	9 1/2"
Angular hand feed, compound rest top slide	3 1/4"
Tool post opening for tool holder shank	1/2" x 1 1/2"

TAILSTOCK

Center, Morse taper	No. 3
Spindle travel	5 1/4"
Set-over of top for taper turning	1 1/4"

EXTRAS FOR 14 1/2" LATHES

Catalog Number	Description	See Page	Price
CE3077	Set of 16 \leftarrow \leftarrow \leftarrow \leftarrow Steel Collets for Round Work	36	\$ 98.00
CL4209MH	9" 4-Jaw Independent Chuck	54	125.00
CL2395F	Telescoping Jaw Follower Rest	39	20.75
CL2400F	Telescoping Jaw Steady Rest	39	34.65

For additional accessories see pages 33 thru 65.

RECOMMENDED MOTORS and CONTROLS

Cat. No.	H.P.	MOTORS			CONTROLS			
		Speed	Phase	Cycle	Volts	Price	Cat. No.	Price
CE2543P	2	1	3	60	208	\$111.00	EQ790	\$ 12.00
CE2543D	2	1	3	60	220	111.00	EQ790	12.00
CE2543F	2	1	3	60	440	111.00	ES841D TO	107.00
CE2552H	2	1	3	60	550	111.00	ES841E TO	111.00
CE2584P*	3-1 1/2	2	3	60	208	246.00	ES843C O	176.00
CE2584D*	3-1 1/2	2	3	60	220	225.00	ES843C O	176.00
CE2596F*	3-1 1/2	2	3	60	440	225.00	ES843D TO	186.00
CE2598H*	3-1 1/2	2	3	60	550	246.00	ES843E TO	190.00

NOTE: All 3 phase controls 440-550 volt, include overload protection, low voltage release and step-down transformer. For listing of optional motors and controls see pages 66 thru 69.
*Double Winding Motors.

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	\$2355
		CL129C	6	36	89	2600	2070	2429
		CL129D	7	48	96	2750	2145	2503
		CL129E	8	60	105	2900	2225	2577
	FOUR-STEP CONE PULLEY	CL185B	5	24	82	2500	1995	2355
		CL185C	6	36	89	2600	2070	2429
		CL185D	7	48	96	2750	2145	2503
		CL185E	8	60	105	2900	2225	2577
TOOLROOM LATHES	THREE-STEP CONE PULLEY	CL8129B	5	24	92	2685	2180	2903
		CL8129C	6	36	100	2785	2255	2977
		CL8129D	7	48	106	2935	2330	3051
		CL8129E	8	60	117	3085	2405	3125
	FOUR-STEP CONE PULLEY	CL8185B	5	24	92	2685	2180	2903
		CL8185C	6	36	100	2785	2255	2977
		CL8185D	7	48	106	2935	2330	3051
		CL8185E	8	60	117	3085	2405	3125

Electrical equipment is not included in price of lathe.

SIX TO SIXTEEN SPINDLE SPEEDS

Headstocks for 14 1/2" swing South Bend Lathes are made in two types: 4-step cone pulley and wide belt 3-step cone pulley. The 4-step cone pulley headstock provides either eight or sixteen spindle speeds depending on whether a single-speed or a two-speed motor is used. With the wide belt 3-step cone pulley you have either six or twelve spindle speeds.

QUICK CHANGE FROM HIGH TO LOW-SPEEDS

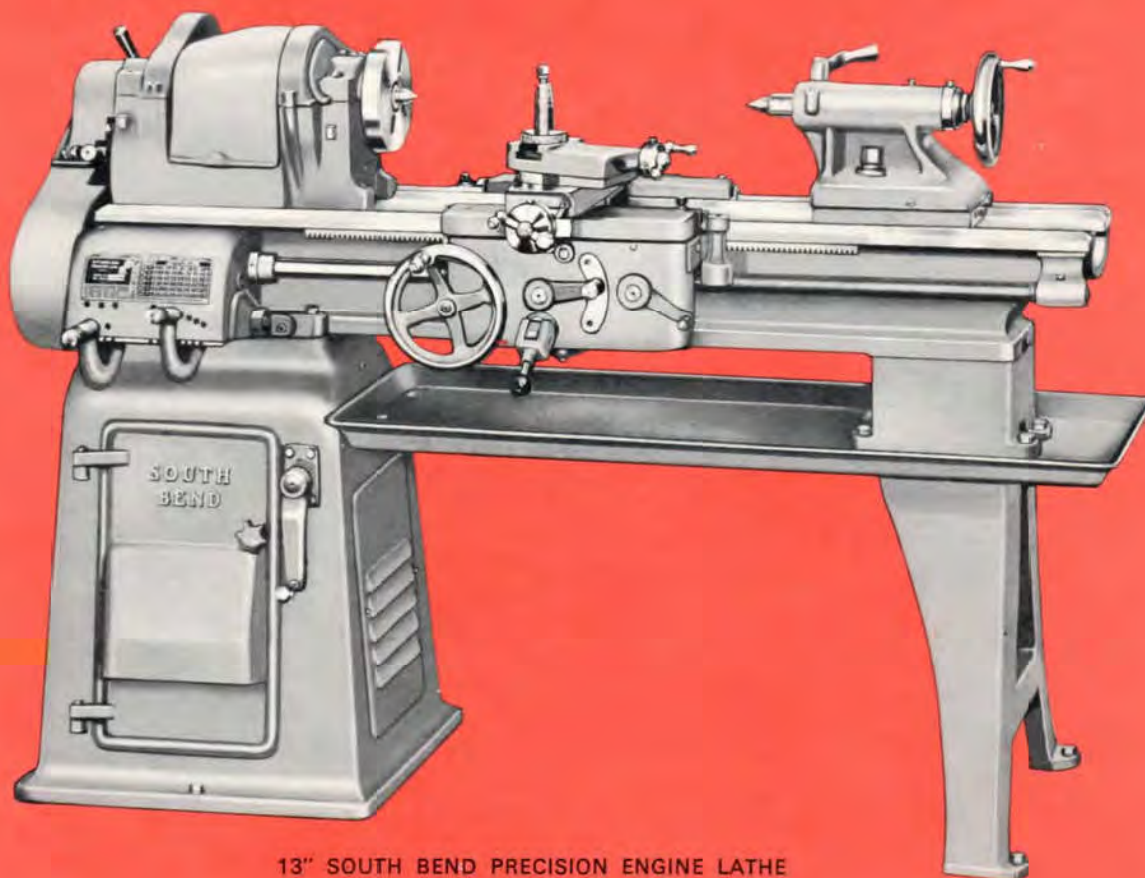
When a two-speed motor is used it doubles the number of spindle speeds, providing sixteen speeds with the 4-step cone pulley or twelve speeds with the 3-step cone pulley headstock. This not only increases the speed range but, with push button control, it provides instantaneous changes between corresponding high speeds and low speeds. This feature saves time on multiple operations requiring frequent speed changes such as drilling and tapping, boring and reaming, or turning and facing. The low spindle speeds are approximately one-half the corresponding high speeds.

Internal Boring of Mold Section mounted on fixture plate.



13" SOUTH BEND *Precision* LATHES

ENGINE
TOOLROOM
MODELS



13" SOUTH BEND PRECISION ENGINE LATHE

PRECISION BUILT THROUGHOUT FOR PLUS PERFORMANCE

Known 'round the world for their stability, honest down-to-earth value, extreme accuracy and ease of operation the South Bend Lathe has proved itself worthy of the name "The Precision Lathe". South Bend 13" Lathes are exceedingly easy to operate, all controls are fast and positive in action ... distinctively shaped knobs are readily recognized by touch ... the large feed dials are easy to read ... therefore machine handling is no problem and production time on your job is kept to a bare minimum.

Heavy enough to do the job, light enough to be quick and responsive to the operator — South Bend 13" Precision Lathes mean economy ... in first cost ... power consumption ... by giving years of trouble-free service.

South Bend Lathes are designed and built to retain their precision. Each lathe is thoroughly inspected and tested before it is approved for shipment.

Careful design and conscientious workmanship are combined in South Bend Lathes to give your shop a machine tool

you can depend on. You will find it to your advantage to specify South Bend Lathes for your next installation.

Especially popular for small and medium size jobs requiring speed and accuracy.

ENGINE LATHES

Standard equipment included in the price of each 13" engine lathe consists of necessary belting and motor pulley, thread indicator dial, thread cutting stop, small face plate, round tool post assembly, 60° centers and spindle sleeve, chip pan, wrenches installation plan and manual. Electrical equipment is not included.

TOOLROOM LATHES

Standard equipment included in the price of each 13" toolroom lathe consists of necessary belting and motor pulley, thread indicator dial, thread cutting stop, micrometer carriage stop, small face plate, large face plate, telescopic taper attachment, round tool post assembly, 60° centers and spindle sleeve, chip pan, handwheel type draw in collet attachment, collet rack (without collets), precision lead screw, wrenches, installation plan and manual. Electrical equipment is not included.

SPECIFICATIONS / SOUTH BEND 13" LATHES

CAPACITY

Swing over bed and saddle wings	13 1/2"
Swing over cross slide, engine lathe	7 3/4"
Swing over cross slide, toolroom lathe	8"
Swing over cross slide without chip guard, engine lathe only	8 3/4"
Between centers (various bed lengths)	16", 28", 40", 52"

HEADSTOCK

Capacity through spindle, nose type collet chuck or lathe chuck	1 3/8"
Maximum collet capacity, handwheel or handlever type	1 1/4"
Threaded spindle nose, diameter and threads per inch	2 1/4"-8
Cam lock spindle nose, size	4" type D1
Long taper key drive spindle nose, size	L00
Center, Morse taper	No. 3

Width, each step of 4-step cone pulley	1 3/4"
Width, each step of 3-step cone pulley	2 3/4"

SPINDLE SPEEDS (approximate, not exact)

With 4-Step Cone Pulley		Direct Drive	Back-Geared
1-speed motor, r.p.m.	940,628,418,270		135,90,60,40
2-speed motor			
High speeds—r.p.m.	940,628,418,270		135,90,60,40
Low speeds—r.p.m.	470,314,209,135		67,45,30,20
With 3-Step Cone Pulley			
1-speed motor, r.p.m.	940,497,270		135,71,40
2-speed motor			
High speeds—r.p.m.	940,497,270		135,71,40
Low speeds—r.p.m.	470,248,135		67,35,20
Higher spindle speeds available at extra cost, up to			1600 r.p.m.

THREADS AND FEEDS

Number of changes for threads and feeds	48
Range of threads cut	4 to 224
Range of longitudinal feeds	.0015" to .0841"
Range of cross-feeds	.0006" to .0315"
Lead screw, 29° Acme thread, diameter and threads	1"-6

COMPOUND REST

Cross slide travel, engine lathe model	8 3/4"
Cross slide travel, toolroom lathe model	8 1/2"
Angular hand feed, compound rest top slide	3 1/2"
Tool post opening for tool holder shank	1/2" x 1 1/4"

TAILSTOCK

Center, Morse taper	No. 3
Spindle travel	4 1/4"
Set-over of top for taper turning	1 3/4"

EXTRAS FOR 13" LATHES

Catalog Number	Description	See Page	Price
CE3077	Set of 16 A-S-B-C Steel Collets for Round Work	35	\$ 98.00
CL4207LQ	7 1/2" 4-Jaw Independent Chuck	54	111.00
CL2395T	Telescoping Jaw Follower Rest	39	17.50
CL2400T	Telescoping Jaw Steady Rest	39	28.90

For additional accessories see pages 33 thru 65.

RECOMMENDED MOTORS and CONTROLS

MOTORS							CONTROLS	
Cat. No.	H.P.	Speed	Phase	Cycle	Volts	Price	Cat. No.	Price
CE2545P	1 1/2	1	3	60	208	\$ 95.00	EQ790	\$ 12.00
CE2545D	1 1/2	1	3	60	220	95.00	EQ790	12.00
CE2545F	1 1/2	1	3	60	440	95.00	ES841DYO	107.00
CE2547H	1 1/2	1	3	60	550	95.00	ES841ETO	111.00
CE3373*	2-1	2	3	60	208	202.00	ES843CO	176.00
CE2130*	2-1	2	3	60	220	202.00	ES843CO	176.00
CE2131*	2-1	2	3	60	440	202.00	ES843DYO	186.00
CE3372*	2-1	2	3	60	550	202.00	ES843ETO	190.00

NOTE: All 3 phase controls 440-550 volt, include overload protection, low voltage release and step-down transformer. For listing of optional motors and controls see pages 66 thru 69. *Double Winding Motors.

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	\$1964
		CL175B	5	28	73	1940	1510	2031
		CL175C	6	40	77	2045	1560	2098
		CL175D	7	52	82	2150	1615	2165
	FOUR-STEP CONE PULLEY	CL145A	4	16	63	1835	1460	1964
		CL145B	5	28	73	1940	1510	2031
		CL145C	6	40	77	2045	1560	2098
CL145D	7	52	82	2150	1615	2165		
TOOLROOM LATHES	THREE-STEP CONE PULLEY	CL8175B	5	28	84	1995	1665	2532
		CL8175C	6	40	89	2150	1715	2599
		CL8175D	7	52	96	2305	1770	2666
	FOUR-STEP CONE PULLEY	CL8145B	5	28	84	1995	1665	2532
		CL8145C	6	40	89	2150	1715	2599
		CL8145D	6	40	89	2150	1715	2599
		CL8145D	7	52	96	2305	1770	2666

Electrical equipment is not included in price of lathe.

SIX TO SIXTEEN SPINDLE SPEEDS

Headstocks for 13" swing South Bend Lathes are made in two types: 4-step cone pulley and wide belt 3-step cone pulley. The 4-step cone pulley headstock provides either eight or sixteen spindle speeds depending on whether a single-speed or a two-speed motor is used. With the wide belt 3-step cone pulley you have either six or twelve spindle speeds.

QUICK CHANGE FROM HIGH TO LOW SPEEDS

When a two-speed motor is used it doubles the number of spindle speeds, providing sixteen speeds with the 4-step cone pulley or twelve speeds with the 3-step cone pulley headstock. This not only increases the speed range but with push button control it provides instantaneous changes between corresponding high speeds and low speeds. This feature saves time on multiple operations requiring frequent speed changes such as drilling and tapping, boring and reaming, or turning and facing. The low spindle speeds are approximately one-half the corresponding high speeds.

PRACTICAL ATTACHMENTS AND ACCESSORIES INCREASE THE USEFULNESS OF YOUR LATHE. See Pages 33 thru 65.

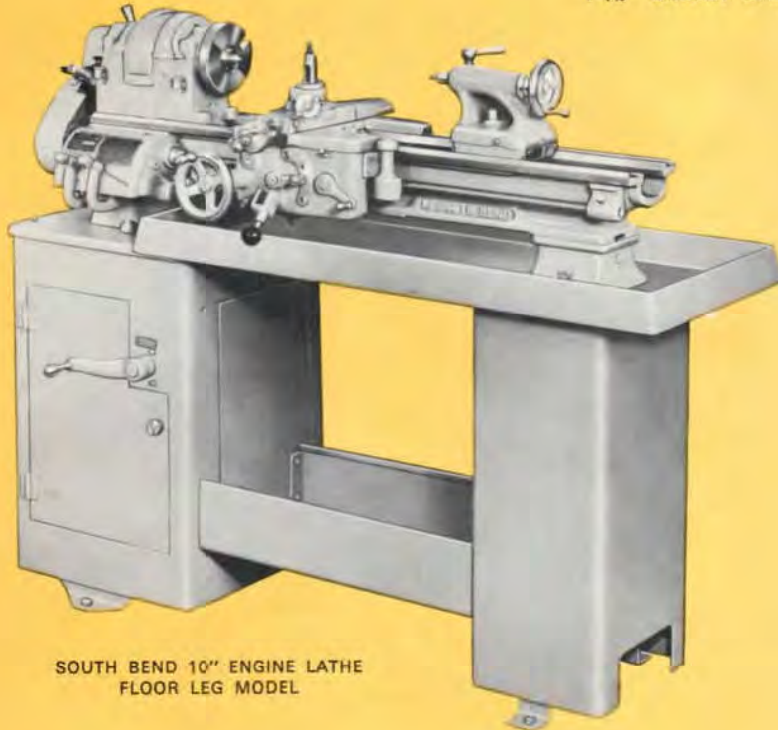


13" Toolroom Underneath Belt Motor Driven Floor Lathe with Operator.

10" SOUTH BEND Precision LATHES

FLOOR METAL CABINET MODELS

1-1/8" COLLET CAPACITY



SOUTH BEND 10" ENGINE LATHE
FLOOR LEG MODEL



SOUTH BEND 10" TOOL ROOM LATHE
METAL CABINET MODEL

The Metal Cabinet Model of South Bend 10" Lathes is illustrated above. The heavy, welded steel cabinet houses motor and driving mechanism in the left hand side beneath the headstock. The right side contains two shelves for convenient storage of tools, etc. A built-in chip pan forms the top of the metal cabinet.

Modern in design, the South Bend 10" Precision Toolroom Lathes are built with care, they're fast and accurate. With high spindle speeds for efficient machining with carbide or diamond tipped tools and plenty of power for heavy roughing cuts. They are capable of finish turning and boring with such precision that subsequent grinding, honing and lapping operations can often be eliminated. They are unsurpassed for cutting screw threads to the exacting tolerances required for precision thread gauges, taps, dies, instruments, etc. 1 1/8" maximum collet capacity and available with floor or metal cabinet mounting. Satin finish micrometer dials make fine adjustments easier and give less chance for operator error. Swiveling machine handles fit the hands reducing operator fatigue.

Through the years, no lathe has been as popular as South Bend 10" lathes. Always reliable, exceptionally accurate and set-up is simple, operation is even simpler. This is especially valuable where short run production is required or for toolroom and maintenance operations.

10"-1 1/8" 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 1/4" maximum collet capacity. Write for information.

ENGINE LATHES

Standard equipment included in the price of each 10" engine lathe consists of necessary belting and motor pulley, thread indicator dial, thread cutting stop, small face plate, round tool post assembly, 60° centers and spindle sleeve, chip pan, wrenches, installation plan and manual. Electrical equipment is not included.

TOOLROOM LATHES

Standard equipment included in the price of each 10" toolroom lathe consists of necessary belting and motor pulley, thread indicator dial, thread cutting stop, micrometer carriage stop, small face plate, large face plate, telescopic taper attachment, round tool post assembly, 60° centers and spindle sleeve, chip pan, handwheel type draw-in collet attachment, collet rack (without collets), precision lead screw, wrenches, installation plan and manual. Electrical equipment is not included.

METAL CABINET OR FLOOR MOUNTING

Either Metal Cabinet or Floor Mounting can be supplied for 10" lathes. The floor leg model has two pedestal legs joined at the top by a chip-pan. A tool tray joins the bottom of the legs. The left pedestal, under the headstock, houses motor and driving mechanism. (See illustration at the left above.)

The Metal Cabinet model is described under the illustration, on the right, above.

SPECIFICATIONS / SOUTH BEND 10" LATHES

CAPACITY

Swing over bed and saddle wings.....	10 1/2"
Swing over cross slide, engine lathe.....	5 1/2"
Swing over cross slide, toolroom lathe.....	5 1/4"
Swing over cross slide without chip guard, engine lathe only.....	6 3/4"
Between centers (various bed lengths).....	20", 27", 34"

HEADSTOCK

Capacity through spindle, nose type collet chuck or lathe chuck.....	1 3/8"
Maximum collet capacity, handwheel or handlever type.....	1 1/4"
Threaded spindle nose, diameter and threads per inch.....	2 1/4" - 8
Cam lock spindle nose, size.....	4" type D1
Long taper key drive spindle nose, size.....	.100

Center, Morse taper.....	No. 2
Width, each step of cone pulley.....	1 1/4"

SPINDLE SPEEDS (approximate, not exact)

1-speed motor		Direct Drive	Back-Geared
High speeds—r.p.m.....	1400, 898, 585	250, 160, 105	
Low speeds—r.p.m.....	740, 470, 304	130, 85, 55	
2-speed motor			
High speeds—r.p.m.....	1400, 898, 585	250, 160, 105	
	740, 470, 304	130, 85, 55	
Low speeds—r.p.m.....	700, 449, 292	125, 80, 52	
	370, 235, 152	65, 42, 27	

Higher spindle speeds available at extra cost, up to 1800 r.p.m.

THREADS AND FEEDS

Number of changes for threads and feeds.....	70
--	----

Range of threads cut.....	4 to 480
Range of longitudinal feeds.....	.0007" to .0836"
Range of cross-feeds.....	.0003" to .0303"
Lead screw, 29° Acme thread, diameter and threads.....	3/4" - 8

COMPOUND REST

Cross slide travel, engine lathe model.....	6 1/4"
Cross slide travel, toolroom lathe model.....	5 1/2"
Angular hand feed, compound rest top slide.....	2"
Tool post opening for tool holder shank.....	3/8" x 1 1/4"

TAILSTOCK

Center, Morse taper.....	No. 2
Spindle travel.....	2 1/4"
Set-over of top for taper turning.....	1 1/4"

EXTRAS FOR 10" LATHES

Catalog Number	Description	See Page	Price
CE3077	Set of 16 R-5-B Steel Collets for Round Work.....	35	\$98.00
CL4206LQ	6" 4-Jaw Independent Chuck.....	54	90.00
CL2395R	Telescoping Jaw Follower Rest.....	39	14.70
CL2400R	Telescoping Jaw Steady Rest.....	39	23.00

For additional accessories see pages 33 thru 65.

RECOMMENDED MOTORS and CONTROLS

MOTORS							CONTROLS		
Cat. No.	H.P.	Speeds	Phase	Cycle	Volts	Price	Catalog Number		Price
							Floor Model	Met. Cab. Model	
CE2625P	1	1	3	60	208	\$ 81.00	EQ790	EB790	\$ 12.00
CE2625D	1	1	3	60	220	81.00	EQ790	EB790	12.00
CE2625F	1	1	3	60	440	81.00	ES841DTO	EB841DTO	107.00
CE2627H	1	1	3	60	550	81.00	ES841ETO	EB841ETO	111.00
CE3384*	1-1/2	2	3	60	208	182.00	ES843CO	ES843CO	176.00
CE3385*	1-1/2	2	3	60	220	182.00	ES843CO	ES843CO	176.00
CE3388*	1-1/2	2	3	60	440	182.00	ES843DTO	ES843DTO	186.00

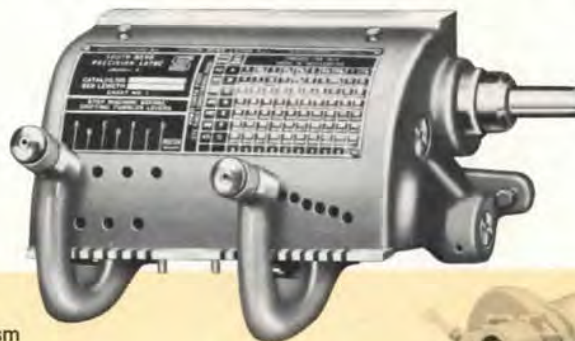
NOTE: All 3 phase controls 440-550 volt, include overload protection, low voltage release and step-down transformer. For listing of optional motors and controls see pages 66 thru 69.
*Double Winding Motors.

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	CL187Z	3 1/2	20	55	1200	880	\$1535
		CL187A	4	27	61	1220	950	1570
		CL187R	4 1/2	34	67	1240	980	1605
	METAL CABINET	CL187ZB	3 1/2	20	56	1250	960	1607
		CL187AB	4	27	68	1300	980	1652
		CL187RB	4 1/2	34	68	1350	1000	1685
TOOLROOM LATHES	FLOOR	CL8187Z	3 1/2	20	54	1310	990	1952
		CL8187A	4	27	54	1330	1030	1985
	METAL CABINET	CL8187ZB	3 1/2	20	56	1360	1010	2019
		CL8187AB	4	27	86	1410	1060	2064

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

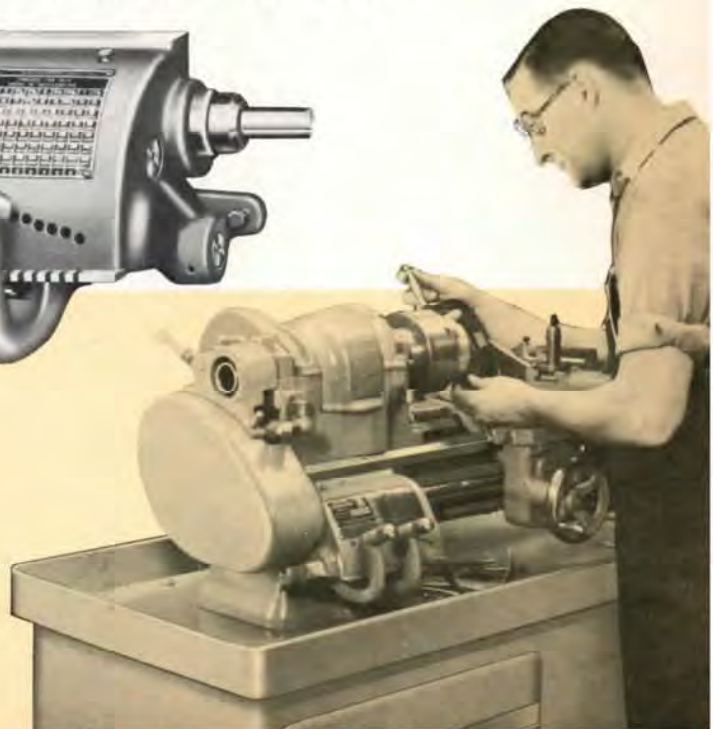
IMPROVED WIDE RANGE QUICK CHANGE GEAR BOX

70 SCREW THREADS—
70 CROSS-FEEDS—
70 LONGITUDINAL FEEDS

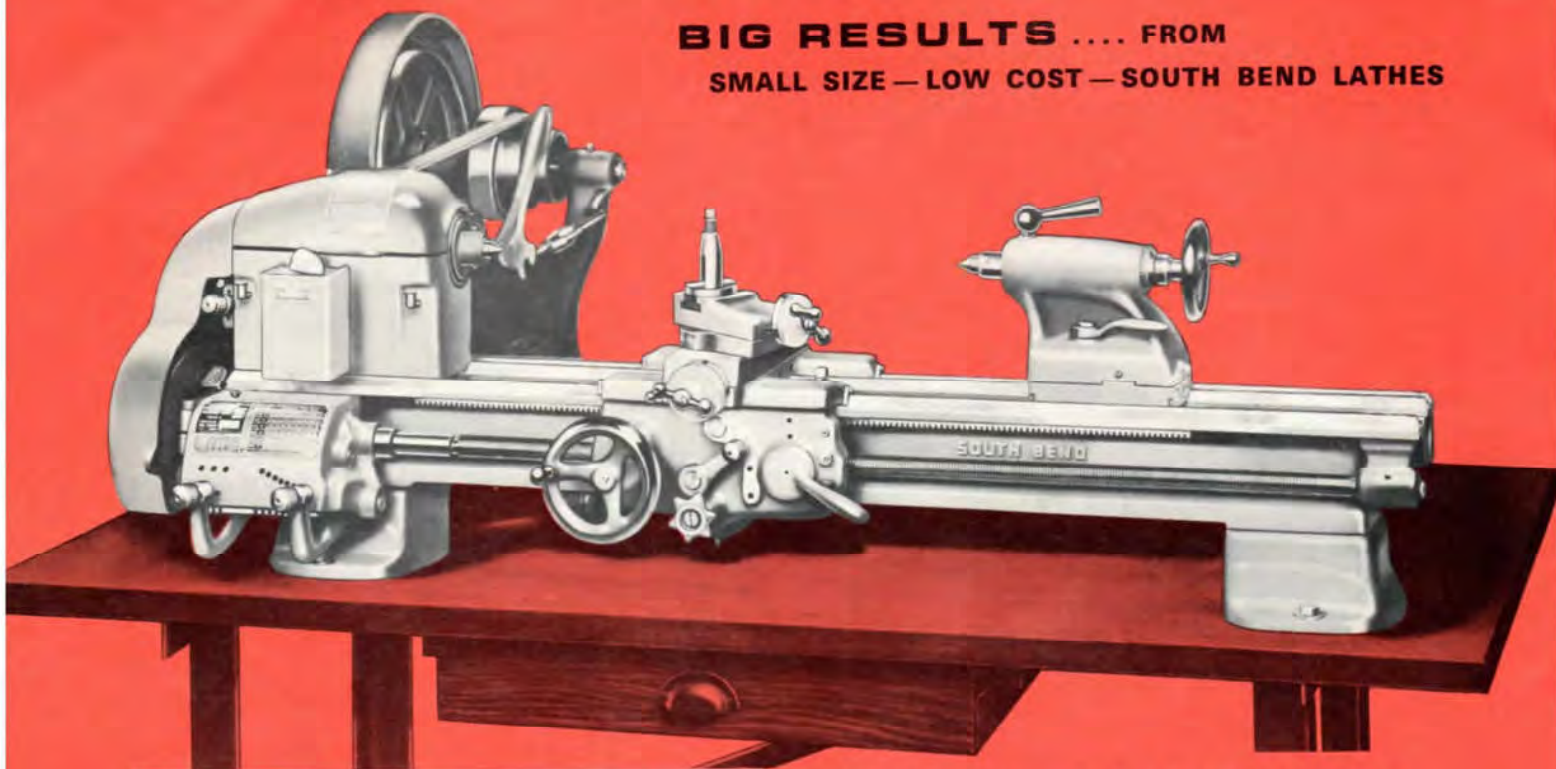


With the improved full quick change mechanism supplied on South Bend 10" Lathes you have at your finger tips 70 pitches of screw threads, 70 changes for power longitudinal feeds, and 70 power cross-feeds. Thread cutting range from 4 to 480 per inch. Included are all standard pitches 4 to 80 as listed in the National Bureau of Standards Handbook H28, "Screw Thread Standards". You can also cut many important pitches such as 1 1/2 and 27 pipe thread, 4, 6, and 7 1/2 fire hose coupling thread, 30 instrument thread and fine pitches up to 480 per inch used in watch and instrument work.

For a complete listing of all 70 feeds and threads, see page 3.



**BIG RESULTS . . . FROM
SMALL SIZE — LOW COST — SOUTH BEND LATHES**



MODEL A SOUTH BEND 10-K Precision BENCH LATHE



MODEL B SOUTH BEND 10-K Precision BENCH LATHE



MODEL C SOUTH BEND 10-K Precision BENCH LATHE



SOUTH BEND 10-K TOOLROOM BENCH LATHE

Bench and electrical equipment are not included in price of 10-K lathes.

10-K SOUTH BEND *Precision* **BENCH LATHES**

The 10-K is a very fine precision lathe for small work in the tool-room, manufacturing plant or maintenance department. It has the same precision and many of the features usually found only on larger and more expensive lathes. These include precision finished V-ways on the lathe bed, heat-treated and superfinished spindle, replaceable bronze sleeve bearings for spindle with oil reservoir and capillary oiling system, oilite bushings in countershaft bearings, large satin chrome micrometer dials on cross feed screw and compound screw, built-in leveling leg, and graduated tail-stock 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.

Standard equipment included in lathe price consists of: horizontal motor drive unit (patented); motor pulley with $\frac{1}{2}$ " hole; necessary belting; worm drive friction clutch power feed apron (except Model C); graduated compound rest; small face plate; heat-treated steel tool post; two 60° hardened tool steel centers; spindle sleeve; wrenches; installation plan; and book "How to Run a Lathe".

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.

MODEL B 10-K Bench Lathes are the same as Model A Lathes, except that in place 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.

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.

TOOLROOM 10-K Bench Lathes are the same as Model A Lathes, and have the same standard equipment. In addition, the following toolroom attachments are supplied: precision lead screw (in lieu of regular); 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.

SPECIFICATIONS / SOUTH BEND 10-K LATHES

CAPACITY OF LATHE

Swing over bed, maximum	10"
Swing over saddle wings	9 1/4"
Swing over cross slide, (models A, B, C)	6 1/4"
Swing over cross slide, (toolroom lathe)	5 1/2"

TAILSTOCK

Size of center, Morse taper	No. 2
Spindle travel	2 1/2"
Each graduation on tailstock spindle	1/10"
Tailstock top set-over for taper turning	3/4"

COMPOUND REST

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

TOOL POST

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

SPINDLE SPEEDS (approximate, not exact)

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

HEADSTOCK

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

Small face plate diameter	5 1/4"
Front spindle bearing diameter	1 1/4"

THREAD CUTTING RANGE

Toolroom and Model A — 48 pitches, R.H. and L.H.	4 to 224 per inch
Models B and C — 45 pitches, R.H. and 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 feeds	.0015" to .0853"
Model B — 26 feeds	.0021" to .0155"
Model C — 14 feeds	.0021" to .0156"

POWER CROSS-FEEDS

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

EXTRAS FOR 10-K LATHES

Catalog Number	Description	See Page	Price
CE3068	Set of 10 ←R-S-B← Steel Collets for Round Work	36	\$53.50
CL4006NK	6" Four Jaw Independent Chuck	54	61.00
CL2396K	Telescoping Jaw Follower Rest	39	13.65
CL2400K	Telescoping Jaw Steady Rest	39	21.90

For additional accessories see pages 33 thru 65.

RECOMMENDED MOTORS and CONTROLS

MOTORS							CONTROLS	
Cat. No.	H.P.	Speed	Phase	Cycle	Volts	Price	Cat. No.	Price
CE3228	1/2	1	1	60	115	\$53.50	EHB790	\$ 12.00
CE3229	1/2	1	1	60	230	53.50	EHB790	12.00
CE3227P	1/2	1	3	60	208	39.00	EHB790	12.00
CE3227D	1/2	1	3	60	220	39.00	EHB790	12.00
CE3227F	1/2	1	3	60	440	39.00	EHB961DTO	86.00
CE4927H	1/2	1	3	60	550	44.50	EHB961ETO	90.00

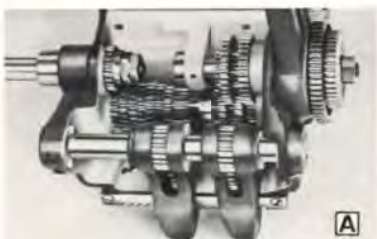
NOTE: All 3 phase controls 440-550 volt, include overload protection, low voltage release and step-down transformer. (Starter and transformer Not Mounted on 9" and 10-K HMD lathes.) For listing of optional motors and controls see pages 66 thru 69.

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
MODEL A	3 1/2	22	22	615	505	CL770Z	\$650	CL670Z	\$635
	4	28	25	640	520	CL770A	680	CL670A	665
	4 1/2	34	29	670	535	CL770R	715	CL670R	700
MODEL B	3 1/2	22	22	600	490	CL767Z	560	CL667Z	545
	4	28	25	625	505	CL767A	590	CL667A	575
	4 1/2	34	29	655	520	CL767R	625	CL667R	610
MODEL C	3 1/2	22	22	590	480	CL753Z	465	CL653Z	450
	4	28	25	615	495	CL753A	495	CL653A	480
	4 1/2	34	29	645	510	CL753R	530	CL653R	515
TOOLROOM	3 1/2	22	26	665	535	CL8770Z	900	CL8670Z	885
	4	28	29	690	550	CL8770A	930	CL8670A	915

- 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

TWO TYPES OF DRIVES 12 or 16 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.



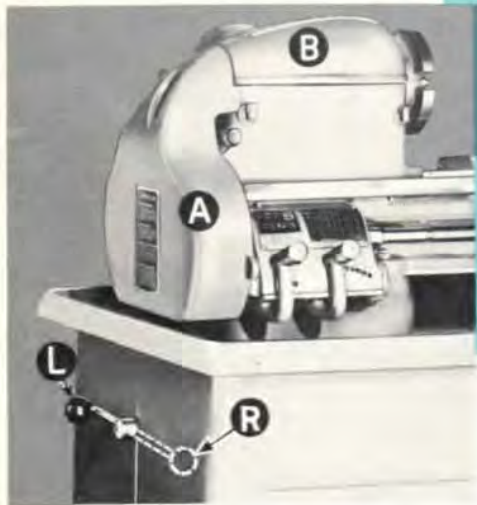
SOUTH BEND

10-K

Precision

METAL CABINET LATHES

**WITH
UNDERNEATH
MOTOR DRIVE**



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.



VARIABLE SPEED DRIVE AND CONTROL
New infinitely variable speed drive is now available on 10-K Underneath Motor Drive Lathes with Metal Cabinet.



SOUTH BEND 10-K MODEL A UNDERNEATH MOTOR DRIVE LATHE with METAL CABINET

These lathes are the same as corresponding models of 10-K Bench Lathes except for the underneath motor drive, spindle speeds and the necessary alterations in the headstock. Lathe is supplied with headstock and drive shaft cone pulleys. Fully enclosed in the metal cabinet under the headstock, the motor and driving mechanism are protected from dust, dirt and chips. Cabinet is available with three drawers, 10 1/2" x 5 1/2" x 14" as shown in illustration, or without drawers*. A built-in chip pan forms the top of the metal cabinet. Standard 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 66 thru 69.

VARIABLE SPEED DRIVE

This new variable speed drive is available only on South Bend 10-K underneath motor drive lathes.

Although sold as an extra, it must be ordered with the lathe and installed at the factory.

The installation of this drive changes the spindle speed ranges to 325 to 1800 r.p.m. in direct drive and 65 to 360 r.p.m. in back gear drive. (Spindle speeds approximate.)

**RECOMMENDED MOTORS and CONTROLS
FOR 10-K UMD LATHES EQUIPPED WITH VARIABLE SPEED DRIVE**

MOTORS							CONTROLS	
Cat. No.	H.P.	Speed	Phase	Cycle	Volts	Price	Cat. No.	Price
CE2804	3/4	1	1	60	115	\$64.00	EB790	\$ 12.00
CE2805	3/4	1	1	60	230	64.00	EB790	12.00
CE2801P	3/4	1	3	60	208	49.00	EB790	12.00
CE2801D	3/4	1	3	60	220	49.00	EB790	12.00
CE2801F	3/4	1	3	60	440	49.00	EB841DTO	107.00
CE2803H	3/4	1	3	60	550	49.00	EB841ETO	111.00

NOTE: All 3 phase controls 440-550 volt, include overload protection, low voltage release and step-down transformer. For listing of optional, motors and controls see pages 66 thru 69.

Cat. No. CL222. Variable Speed Drive (Factory installed) \$75.00

SPECIFICATIONS / SOUTH BEND 10-K LATHES

CAPACITY OF LATHE

Swing over bed, maximum	10"
Swing over saddle wings	9 1/4"
Swing over cross slide, (models A, B, C)	6 1/4"
Swing over cross slide, (toolroom lathe)	5 1/2"

TAILSTOCK

Size of center, Morse taper	No. 2
Spindle travel	2 1/4"
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 1/4"
Cross slide travel (toolroom lathe)	5 1/8"
Angular hand feed of compound rest top slide	2 1/4"

TOOL POST

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

SPINDLE SPEEDS (approximate, not exact)

	Direct Drive	Back-Geared
High, r.p.m.	1365, 780, 460	265, 155, 90
Low, r.p.m.	715, 410, 240	135, 78, 50

HEADSTOCK

Hole through spindle	27/32"
Maximum collet capacity	3/8"
Spindle nose diameter and threads per inch	1 1/2"-8
Size of center, Morse taper	No. 2
Width of cone pulley step for flat belt	1"
Small face plate diameter	5 1/4"

Front spindle bearing diameter 1 1/4"

THREAD CUTTING RANGE

Toolroom and Model A — 48 pitches	
R.H. and L.H.	4 to 224 per inch
Models B and C — 45 pitches,	
R.H. and 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 feeds	.0015" to .0853"
Model B — 26 feeds	.0021" to .0155"
Model C — 14 feeds	.0021" to .0156"

POWER CROSS-FEEDS

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

RECOMMENDED MOTORS and CONTROLS

EXTRAS FOR 10-K LATHES

Catalog Number	Description	See Page	Price
CL4306K	Handwheel Collet Attachment*	34	\$27.00
CE2107	Set of 6 Safety Lathe Dogs	59	10.50
CE2815	Work Light	49	14.95
CE820	Knurling Tool	57	8.05

*Standard equipment on 10-K Toolroom Lathes.

MOTORS							CONTROLS	
Cat. No.	H.P.	Speed	Phase	Cycle	Volts	Price	Cat. No.	Price
CE3228	1/2	1	1	60	115	\$53.50	EB790	\$ 12.00
CE3229	1/2	1	1	60	230	53.50	EB790	12.00
CE3227P	1/2	1	3	60	208	39.00	EB790	12.00
CE3227D	1/2	1	3	60	220	39.00	EB790	12.00
CE3227F	1/2	1	3	60	440	39.00	EB841DTO	107.00
CE4927H	1/2	1	3	60	550	44.50	EB841ETO	111.00

For additional accessories see pages 33 thru 65.

Model	Bed Length Feet	Between Centers Inches	Cubic Feet Boxed	Boxed Weight Pounds	Crated Weight Pounds	With 12-Speed Flat Belt Underneath Motor Drive	
						Cat. No.	Price
MODEL A	3 1/2	22	56	910	720	CL370ZD	\$ 960
	4	28	68	960	750	CL370AD	995
	4 1/2	34	68	970	760	CL370RD	1035
MODEL B	3 1/2	22	56	895	705	CL367ZD	870
	4	28	68	945	730	CL367AD	905
	4 1/2	34	68	955	740	CL367RD	945
MODEL C	3 1/2	22	56	895	695	CL353ZD	775
	4	28	68	940	720	CL353AD	810
	4 1/2	34	68	950	730	CL353RD	850
TOOLROOM	3 1/2	22	56	940	750	CL8370ZD	1210
	4	28	68	1000	780	CL8370AD	1245

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

10-K SOUTH BEND GAP BED BENCH LATHES

The 10-K Gap Bed Bench Lathe is made with 4 1/2' bed in Model A only. They have a 1" gap measured from the face plate when bed insert is in place. When 4" insert is removed, the 5" gap allows 14 1/4" swing capacity. These Gap Bed Lathes have a new design saddle and cross slide which allows the cutting tool to move fully up to the work in the gap area. This new design gives much greater support to the tool. Ideal for larger work requiring boring and facing operation. The 10-K Gap Bed Lathe can be supplied with either flat belt or V-belt cone pulleys for the headstock. South Bend 10-K lathes have always delivered more than was expected of them ... But now, an even greater selection of work can be handled on these Gap Bed Lathes. They have the same equipment as corresponding models of 10-K bench lathes described on the preceding pages. All other specifications are the same except for shipping weights. See pages 22 and 24.

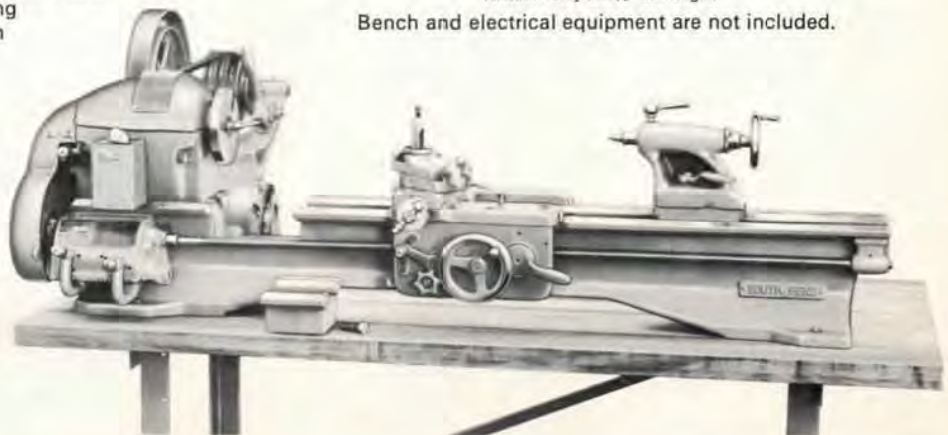
10-K HORIZONTAL MOTOR DRIVE GAP BED LATHES

Bed Length*	4 1/2'
Between Centers	34"
Cubic Feet Boxed	.29
Box Weight, pounds	.700
Crated Weight, pounds	.565

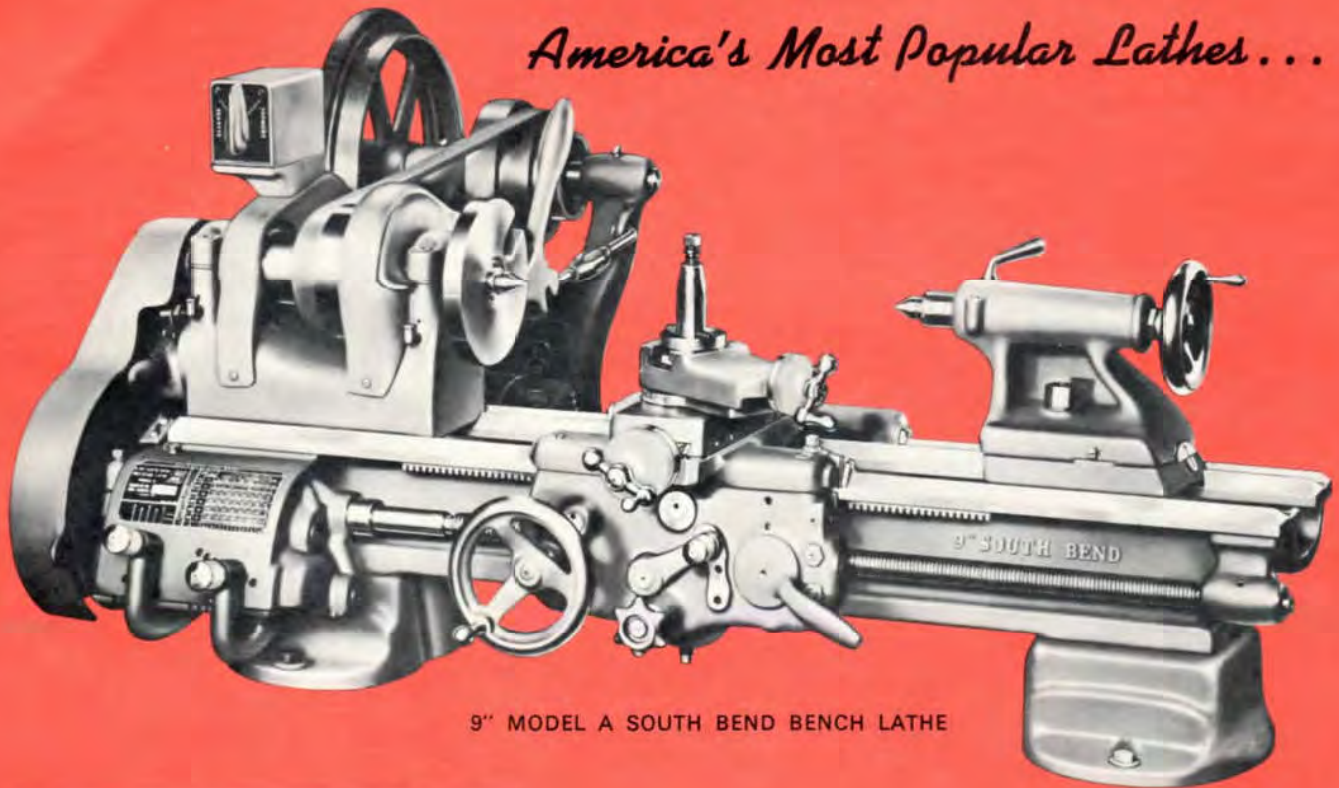
With 16-Speed V-Belt Drive		With 12-Speed Flat Belt Drive	
Cat. No.	Price	Cat. No.	Price
CL770RG	\$764	CL670RG	\$749

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

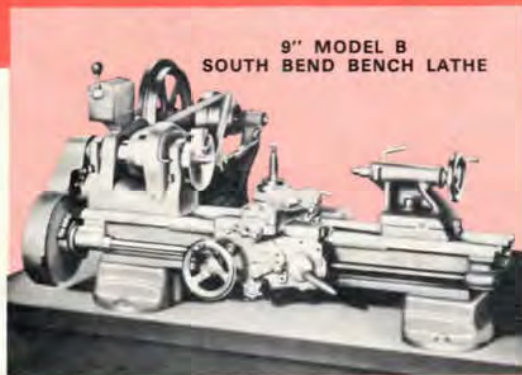
Bench and electrical equipment are not included.



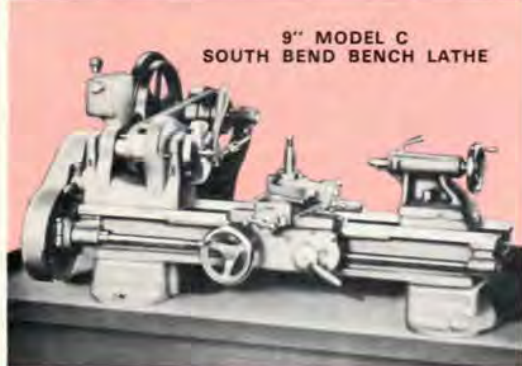
America's Most Popular Lathes...



9" MODEL A SOUTH BEND BENCH LATHE



9" MODEL B
SOUTH BEND BENCH LATHE



9" MODEL C
SOUTH BEND BENCH LATHE



9" TOOLROOM
SOUTH BEND BENCH LATHE

9" SOUTH BEND *Precision* BENCH LATHES

These 9" Bench Lathes are precision tools capable of machining work to the exacting tolerances demanded in modern industry. Features include precision finished V-ways on lathe bed, heat-treated and super-finished spindle, precision bored integral bearings for spindle with oil reservoir and capillary oiling system, graduated tailstock spindle, large satin chrome micrometer dials, oilite bushings in countershaft bearings and built-in leveling leg.

FOUR MODELS

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

Standard equipment included in price consists of: horizontal motor drive unit (patented); motor pulley with $\frac{3}{8}$ " hole; necessary belting; worm drive friction clutch power feed apron (except Model C); 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".

MODEL A 9" Bench Lathes have quick change box and patented worm drive apron with friction clutch.

MODEL B 9" Bench Lathes are the same as Model A Lathes, except that in place of the quick change box a set of independent change gears is supplied.

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.

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 (in lieu of regular); hand-wheel 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 9" lathes.

SPECIFICATIONS / SOUTH BEND 9" LATHES

CAPACITY OF LATHE

Swing over bed and saddle wings	9 1/4"
Swing over saddle cross slide, (models A, B, C)	5 1/2"
Swing over saddle cross slide, (toolroom lathe)	5"

TAILSTOCK

Size of center, Morse taper	No. 2
Spindle travel	2 1/8"
Each graduation on tailstock spindle	1/16"
Tailstock top set-over for taper turning	3/8"

COMPOUND REST

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

TOOL POST

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

SPINDLE SPEEDS (approximate, not exact)

With flat belt	Direct Drive	Back-Geared
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	3/4"
Maximum collet capacity	1/2"
Spindle nose diameter and threads per inch	1 1/2" - 8
Size of center, Morse taper	No. 2
Width of cone pulley step for belt	1"
Small face plate diameter	5 1/2"
Front spindle bearing diameter	1 1/4"

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	1/4" dia.—8 threads.

POWER LONGITUDINAL FEEDS

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

POWER CROSS-FEEDS

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

EXTRAS FOR 9" LATHES

Catalog Number	Description	See Page	Price
CE3065	Set of 8 \leftarrow R-S-B \rightarrow Steel Collets for Round Work	35	\$41.50
CL4006NK	6" Four Jaw Independent Chuck	54	\$1.00
CL2395N	Telescoping Jaw Follower Rest	39	\$3.55
CL2400N	Telescoping Jaw Steady Rest	39	\$21.75

For additional accessories see pages 33 thru 65.

RECOMMENDED MOTORS and CONTROLS

MOTORS						CONTROLS		
Cat. No.	H.P.	Speed	Phase	Cycle	Volts	Price	Cat. No.	Price
CE3228	1/2	1	1	60	115	\$53.50	EQ789	\$ 8.50
CE3229	1/2	1	1	60	230	\$3.50	EQ789	8.50
CE3227P	1/2	1	3	60	208	\$9.00	EQ790	12.00
CE3227D	1/2	1	3	60	220	\$9.00	EQ790	12.00
CE3227F	1/2	1	3	60	440	\$9.00	EQ861DTO	\$6.00
CE4927H	1/2	1	3	60	550	\$4.50	EQ861ETO	\$9.00

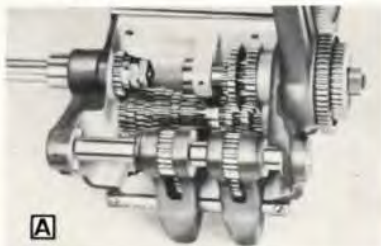
NOTE: All 3 phase controls 440-550 volt, include overload protection, low voltage release and step-down transformer. (Starter and transformer Not Mounted on 9" and 10-K HMD lathes.) For listing of optional motors and controls see pages 66 thru 69.

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
MODEL A	3 1/2	22	20	515	404	CL744Z	\$555	CL644Z	\$540
	4	28	21	530	420	CL744A	585	CL644A	570
	4 1/2	34	24	545	435	CL744R	620	CL644R	605
MODEL B	3 1/2	22	20	500	390	CL777Z	465	CL677Z	450
	4	28	21	515	405	CL777A	495	CL677A	480
	4 1/2	34	24	530	420	CL777R	530	CL677R	515
MODEL C	3 1/2	22	20	490	380	CL715Z	370	CL615Z	355
	4	28	21	505	395	CL715A	400	CL615A	385
	4 1/2	34	24	520	410	CL715R	435	CL615R	420
TOOLROOM	3 1/2	22	21	565	455	CL8744Z	805	CL8644Z	790
	4	28	23	580	470	CL8744A	835	CL8644A	820

- 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

TWO TYPES OF DRIVES 12 or 16 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.



SOUTH BEND

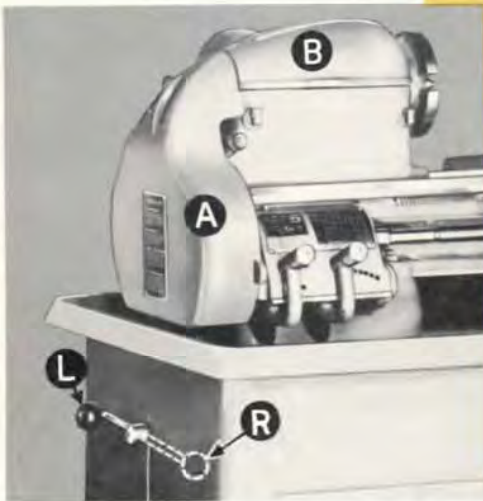
9"

Precision
**METAL
CABINET LATHE**

with
**UNDERNEATH
MOTOR DRIVE**



**SOUTH BEND 9" MODEL A UNDERNEATH MOTOR DRIVE
LATHE WITH METAL CABINET.**



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.

Convenient and efficient in operation, this excellently designed model is our finest 9-inch swing lathe. Neat and attractive in appearance, it has the same precision and many of the features and refinements usually available only on larger and more costly lathes. Its speed and ease of handling save time on all work within its capacity. It is one of our most popular lathes for precision toolroom and manufacturing operations.

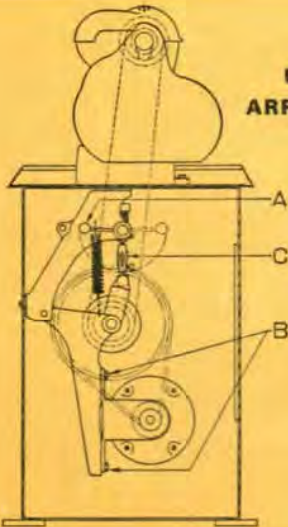
The metal column base on which the lathe is mounted is constructed throughout of heavy gauge welded steel. It is available with three drawers as shown in the large illustration, or without the drawers. Each drawer is 10 $\frac{1}{2}$ " x 5 $\frac{1}{2}$ " x 14" inside and is fitted with lock and key. A built-in chip pan forms the top of the metal cabinet.

The motor drive unit, enclosed in the cabinet underneath the lathe headstock, provides twelve spindle speeds ranging from 50 to 1365 r.p.m., approximately. The cone pulley belt tension may be released and the hinged cone pulley cover on the headstock raised for shifting the belt. Any desired belt tension can be obtained by adjusting a turnbuckle located inside the cabinet.

Standard equipment included in price of engine lathe consists of: cabinet with chip pan; underneath belt motor drive unit, (patented); motor pulley with $\frac{3}{8}$ " hole; V-belt; flat leather belt; power feed apron (patented); graduated compound rest; small face plate; tool post; two 60-degree heat-treated tool steel centers; spindle sleeve; wrenches; quick change gear box; installation plan; and book "How to Run a Lathe." Electrical equipment is not included in price of lathe.

Standard equipment included in price of Toolroom lathe consists of: precision lead screw (in lieu of regular) handwheel type draw-in collet attachment (without collets); collet rack; plain taper attachment; thread dial indicator; thread cutting stop; large face plate; and micrometer carriage stop.

**UNDERNEATH MOTOR DRIVE
ARRANGEMENT FOR 9" LATHES**



A. Quick acting belt tension release permit changing spindle speeds quickly, usually in five to ten seconds.

B. Adjusting bolts for lightening tension on V-belts. V-belts transfer power from the motor to the lower cone pulley.

C. Turnbuckle tension adjustment for flat belt.

SPECIFICATIONS / SOUTH BEND 9" LATHES

CAPACITY OF LATHE

Swing over bed and saddle wings	9 1/4"
Swing over saddle cross slide (models A, B, C)	5 1/2"
Swing over saddle cross slide, (toolroom lathe)	5"

TAILSTOCK

Size of center, Morse taper	No. 2
Spindle travel	2 1/4"
Each graduation on tailstock spindle	1/4"
Tailstock top set-over for taper turning	3/4"

COMPOUND REST

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

TOOL POST

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

SPINDLE SPEEDS (approximate, not exact)

With flat belt	Direct Drive	Back-Geared
High, r.p.m.	1365,780,460	265,155,90
Low r.p.m.	715,410,240	135, 78,50

HEADSTOCK

Hole through spindle	3/4"
Maximum collet capacity	1/2"
Spindle nose diameter and threads per inch	1 1/2"-8
Size of center, Morse taper	No. 2
Width of cone pulley step for belt	1"
Small face plate diameter	5 1/4"
Front spindle bearing diameter	1 3/4"

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 thrsd.

POWER LONGITUDINAL FEEDS

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

POWER CROSS-FEEDS

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

EXTRAS FOR 9" LATHES

Catalog Number	Description	See Page	Price
CL4306N	Handwheel Collet Attachment*	34	\$23.65
CE2107	Set of 6 Safety Lathe Dogs	59	10.60
CE2815	Work Light	49	14.85
CE820	Knurling Tool	57	8.05

*Standard equipment on 9" Toolroom Lathes.
For additional accessories see pages 33 thru 65.

RECOMMENDED MOTORS and CONTROLS

MOTORS						CONTROLS		
Cat. No.	H.P.	Speeds	Phase	Cycle	Volt	Price	Cat. No.	Price
CE3228	1/2	1	1	60	115	\$53.50	EB790	\$ 12.00
CE3229	1/2	1	1	60	230	53.50	EB790	12.00
CE3227P	1/2	1	3	60	208	39.00	EB790	12.00
CE3227D	1/2	1	3	60	220	39.00	EB790	12.00
CE3227F	1/2	1	3	60	440	39.00	EB841D TO	107.00
CE4927H	1/2	1	3	60	550	44.50	EB841E TO	111.00

NOTE: All 3 phase controls 440-550 volt, include overload protection, low voltage release and step-down transformer.
For listing of optional motors and controls see pages 66 thru 69.

Model	Bed Length Feet	Between Centers Inches	Cubic Feet Boxed	Boxed Weight Pounds	Crated Weight Pounds	With 12-Speed Flat Belt Underneath Motor Drive	
						Cat. No.	Price
MODEL A	3 1/2	22	56	900	710	CL344ZD	\$ 865
	4	28	68	930	720	CL344AD	900
	4 1/2	34	68	950	730	CL344RD	940
MODEL B	3 1/2	22	56	885	695	CL377ZD	775
	4	28	68	915	705	CL377AD	810
	4 1/2	34	68	935	715	CL377RD	850
MODEL C	3 1/2	22	56	880	685	CL315ZD	680
	4	28	68	910	690	CL315AD	715
	4 1/2	34	68	930	695	CL315RD	755
TOOLROOM	3 1/2	22	56	930	740	CL8344ZD	1115
	4	28	68	960	760	CL8344AD	1150

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

9" SOUTH BEND GAP BED Precision BENCH LATHES

The 9" Gap Bed Bench Lathe is made with 4 1/2' bed in Model A only. They 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 1/4" swing capacity. These Gap Bed Lathes have a new design saddle and cross slide which allows the cutting tool to move fully up to the work in the gap area. This new design gives much greater support to the tool. Ideal for larger work requiring boring and facing operation. The 9" Gap Bed Lathe can be supplied with either flat belt or V-belt cone pulleys for the headstock. These lathes have the same standard equipment as corresponding models of 9" Bench lathes described on the preceding pages. All other specifications are the same except for shipping weights. See page 27.

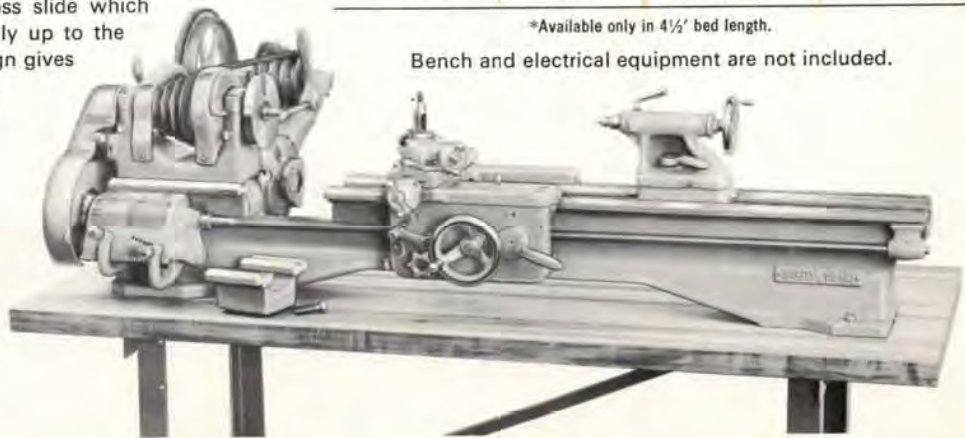
9" HORIZONTAL MOTOR DRIVE GAP BED LATHES

Bed Length*	4 1/2'
Between Centers	34"
Cubic Feet Boxed	29
Boxed Weight, pounds	575
Crated Weight, pounds	465

With 16-Speed V-Belt Drive		With 12-Speed Flat Belt Drive	
Cat. No.	Price	Cat. No.	Price
CL744RG	\$669	CL644RG	\$654

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

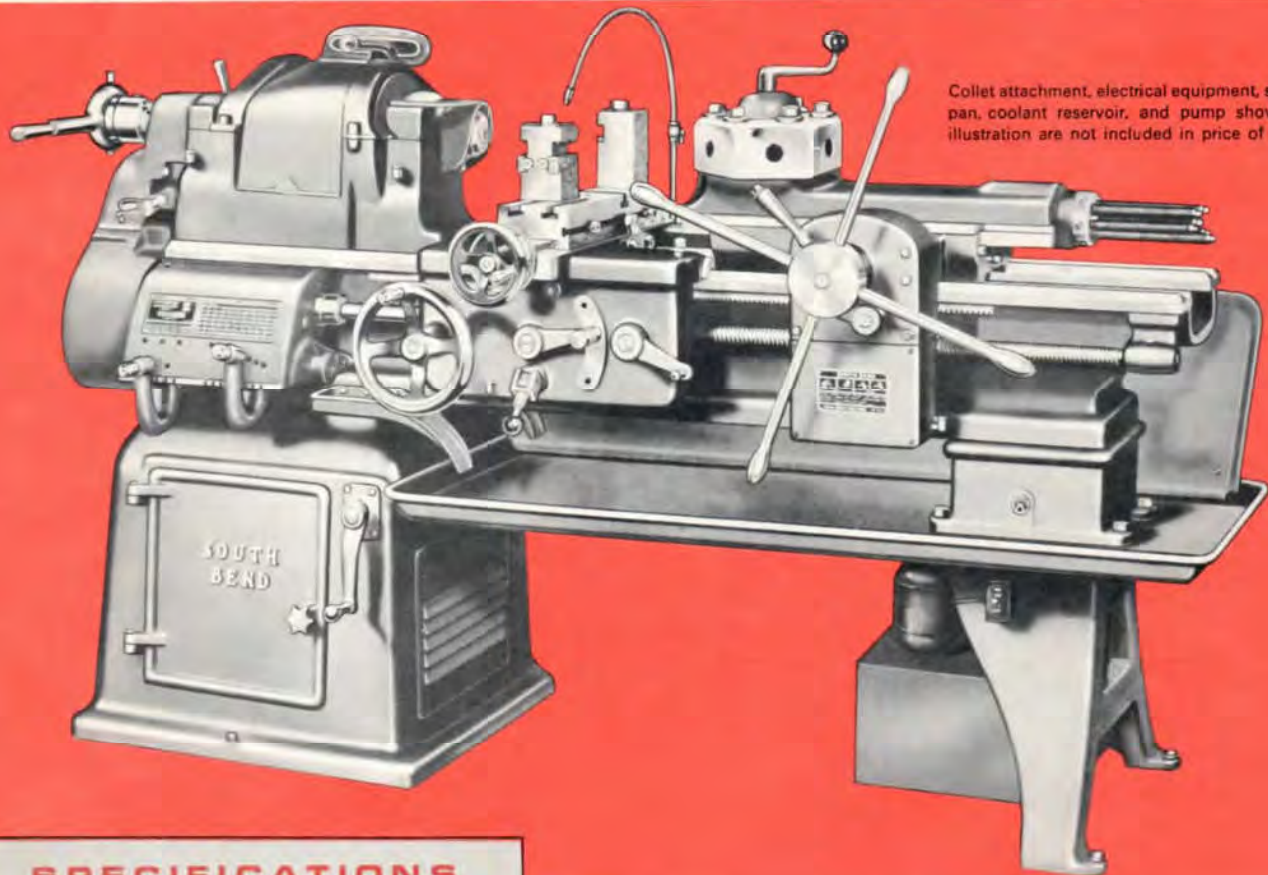
Bench and electrical equipment are not included.



16" SOUTH BEND

Precision

TURRET LATHES



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

SPECIFICATIONS

CAPACITY

Swing over bed and saddle wings 16 1/4"
Swing over double tool cross slide 8 3/4"

HEADSTOCK

Capacity through spindle, nose type collet chuck or lathe chuck 1 3/4"
Maximum handle lever collet capacity 1 1/16"
Spindle nose diameter and threads 2 3/4"-6 Center, Morse taper 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 945,550,300
r.p.m. of spindle, back-gear drive 118, 70, 32
Low spindle speeds (Not available with 1-speed motor)
r.p.m. of spindle, direct belt drive 475,278,150
r.p.m. of spindle, back-gear drive 60, 33, 20

TURRET

Diameter of holes in turret faces 1 1/2"
Center of turret hole to top of turret slide 2 1/2"
Effective feed of turret slide 8 3/4"
Distance between opposite flats 9 3/4"
Maximum distance between spindle nose and turret face at beginning of indexing movement 5 ft. bed 28 1/4"

UNIVERSAL CARRIAGE

Thread cutting range 4 to 224 per inch
Power longitudinal feeds0015" to .0841"
Maximum longitudinal travel 5 ft. bed 22 1/2"
Power cross-feeds0005" to .0315"
Cross travel of cross slide 9 3/4"
Tool block openings for cutter bits 3/4" x 3/4"

Standard equipment included in lathe price 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.

Built with the same stamina as 16" South Bend Lathes.

The turret indexing mechanism with power feed and hand feed is ruggedly constructed and superbly designed. Indexing automatically within —.0005" at a distance of 4" from the turret face.

The generously proportioned indexing pin is hardened, ground and super-finished and operates in replaceable heat-treated steel bushings.

Front and back tool blocks are supplied on the cross slide. A 4-way turret tool block is available to order. See page 41. Large satin chrome micrometer graduated collar on the cross slide handwheel permits adjusting the cutting tools with extreme accuracy. (Note: On turret lathes equipped with taper attachment, Double Tool Slide cannot be used.)

Write for more complete information.

RECOMMENDED MOTORS and CONTROLS

MOTORS							CONTROLS	
Cat. No.	H.P.	Speed	Phase	Cycle	Volts	Price	Cat. No.	Price
CE2592P	3	1	3	60	208	\$123.00	EQ965	\$ 40.00
CE2592D	3	1	3	60	220	123.00	EQ965	40.00
CE2592F	3	1	3	60	440	123.00	EQ951DTO	107.00
CE2593H	3	1	3	60	550	123.00	EQ951ETO	111.00
CE2594P	3-1 1/2*	2	3	60	208	246.00	EQ963CO	193.00
CE2594D	3-1 1/2*	2	3	60	220	225.00	EQ963GO	193.00
CE2596F	3-1 1/2*	2	3	60	440	225.00	EQ963DT1	269.00
CE2598H	3-1 1/2*	2	3	60	550	246.00	EQ963ET1	273.00

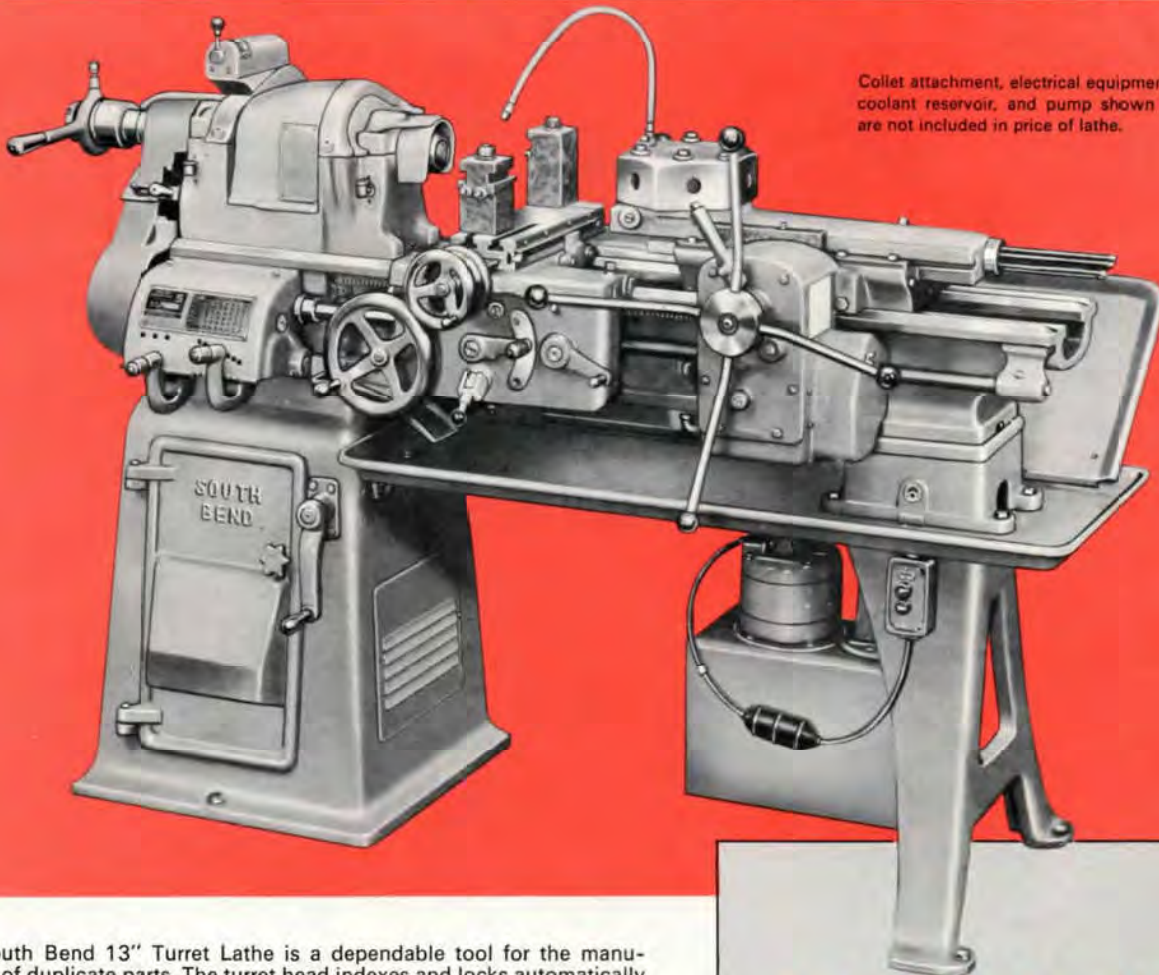
NOTE: All 3 phase controls, 440-550 volt include overload protection, low voltage release and step-down transformer. For listing of optional motors and controls see pages 66 thru 69. *Double Winding Motors.

Catalog Number	Bed Length Feet	Cubic Feet Boxed	Boxed Weight Pounds	Crated Weight Pounds	Price F.O.B. Factory
CL2CT	6	115	3175	2810	\$4194
CL2DT	7	130	3300	2900	4271

For accessories see pages 33 thru 65.

13"

SOUTH BEND *Precision* TURRET LATHES



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

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.

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

Standard equipment included in lathe price consist of: Universal Carriage, double tool slide, front and rear tool blocks, power feed turret, quick change box, oil pan, coolant return troughs, wrenches and installation plan.

NOTE: The recommended motors and controls are the same as corresponding models of 13" lathes described on page 19.

Catalog Number	Bed Length Feet	Cubic Feet Boxed	Boxed Weight Pounds	Crated Weight Pounds	Price F.O.B. Factory
CL1BT	5	88	1875	1570	\$2974
CL1CT	6	103	1950	1620	3038
CL1DT	7	117	2025	1670	3102

For accessories see pages 33 thru 65.

SPECIFICATIONS

CAPACITY
 Swing over bed and saddle wings 13 1/2"
 Swing over double tool cross slide 8 3/4"

HEADSTOCK
 Capacity through spindle, nose type collet chuck or lathe chuck 1 3/4"
 Maximum handleover collet capacity 1 1/4"
 Spindle nose diameter and threads 2 1/4"-8
 Center, Morse taper No. 3

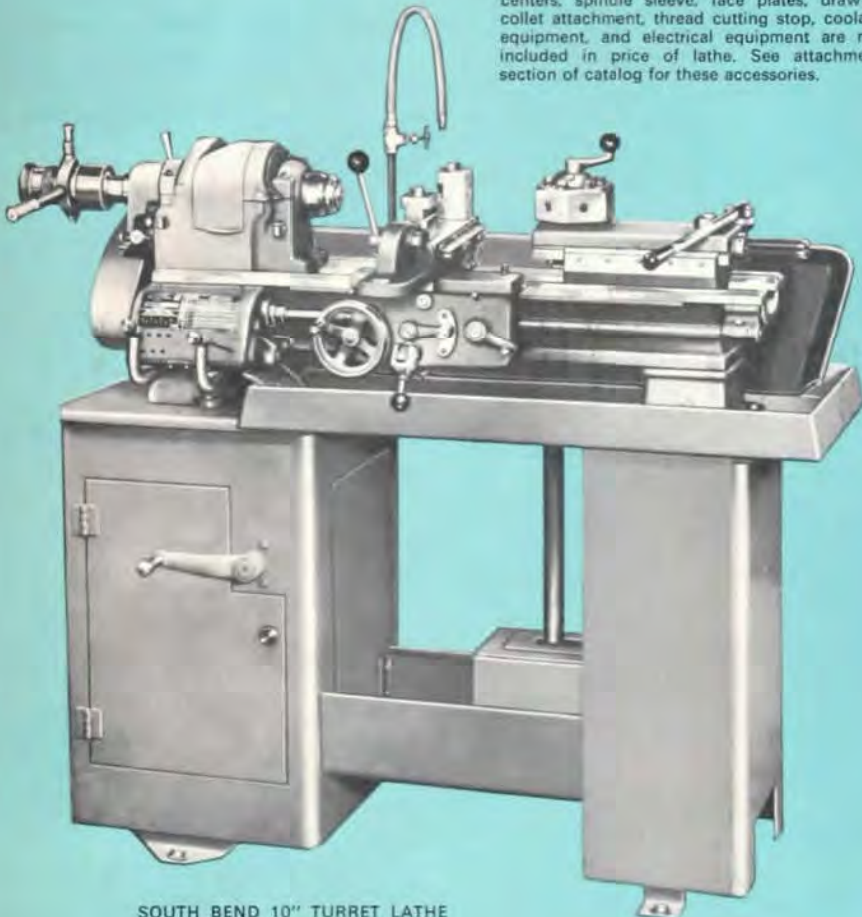
SPINDLE SPEEDS (Standard spindle speeds with two-speed motor, approximate, not exact)
High spindle speeds
 r.p.m. of spindle, direct belt drive 940, 487, 270
 r.p.m. of spindle, back-gear drive 135, 71, 40
Low spindle speeds (Not available with 1-speed motor)
 r.p.m. of spindle, direct belt drive 470, 248, 135
 r.p.m. of spindle, back-gear drive 67, 35, 20

TURRET
 Diameter of holes in turret faces 1"
 Center of turret hole to top of turret slide 1 7/8"
 Effective feed of turret slide 6 1/2"
 Distance between opposite flats 8"
 Maximum distance between spindle nose and turret face at beginning of indexing movement 5 ft. bed 35 1/2"

UNIVERSAL CARRIAGE
 Thread cutting range 4 to 224 per inch
 Power longitudinal feeds0015" to .0841"
 Maximum longitudinal travel 6 ft. bed 3 1/4"
 Power cross-feeds0006" to .0315"
 Cross travel of cross slide 9 3/4"
 Tool block opening for cutter bits 7/16" x 3/16"

10" SOUTH BEND *Precision* TURRET LATHES

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



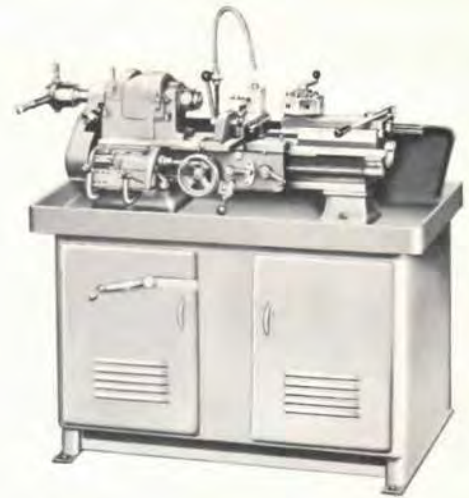
SOUTH BEND 10" TURRET LATHE
WELDED STEEL FLOOR LEG MODEL

South Bend 10" Turret Lathes are made with 3½" bed length and with either metal cabinet or floor mounting, as illustrated. They are precision tools capable of fast, efficient production and are easily adaptable to a wide variety of work. 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. The large satin chrome micrometer graduated collar on the cross slide handwheel permits adjusting the cutting tools with extreme accuracy. (Note: On turret lathes equipped with taper attachment, Double Tool Slide cannot be used.)

NOTE: Recommended motors and controls are the same as corresponding models of 10" lathes described on page 21.

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.

Catalog Number	Type of Mounting	Cubic Feet Boxed	Boxed Weight Pounds	Crated Weight Pounds	Price F.O.B. Factory
CL1006Z	Floor	59	1350	1050	\$1988
CL1005Z	Metal Cabinet	56	1250	950	2043



SOUTH BEND 10"
METAL CABINET TURRET LATHE

Either metal cabinet or floor mounting can be supplied. Metal Cabinet lathes are mounted on a substantial welded steel cabinet with built-in chip pan. Motor and driving mechanism are fully enclosed in cabinet beneath lathe headstock. Floor lathes have a large cabinet leg under lathe headstock in which motor and driving mechanism are enclosed. See page 20.

Standard equipment included in the price of turret lathe consists of: universal carriage with combination handlever and screw feed double tool slide having front and rear square tool blocks; (no cross-feed screw assembly supplied with 10" Turret Lathe) handlever bed turret; quick change box; oil pan; coolant return troughs; wrenches, and installation plan.

SPECIFICATIONS

CAPACITY

Swing over bed and saddle ways 10½"
Swing over double tool cross slide 3⅞"

HEADSTOCK

Capacity through spindle, nose type collet chuck or lathe chuck 1⅝"
Maximum handlever collet capacity 1⅞"
Spindle nose diameter and threads 2¼"-8
Center, Morse taper No. 2

SPINDLE SPEEDS

with two-speed motor, approximate, not exact)

High spindle speeds

r.p.m. of spindle, direct belt drive 1400, 898, 585
740, 470, 304
r.p.m. of spindle, back-gear drive 250, 160, 105
130, 85, 55

Low spindle speeds (Not available with 1-speed motor)

r.p.m. of spindle, direct belt drive 700, 449, 292
370, 235, 152
r.p.m. of spindle, back-gear drive 125, 80, 52
65, 42, 27

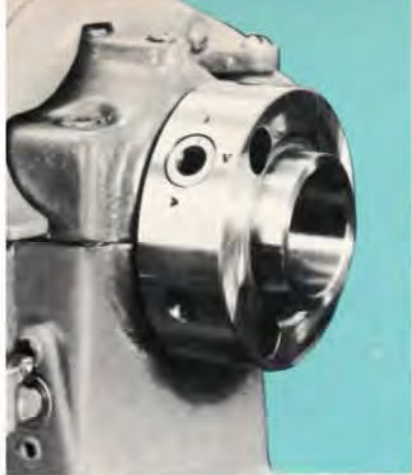
TURRET

Diameter of holes in turret faces ⅜"
Center of turret hole to top of turret slide 1½"
Effective lead of turret slide 4"
Distance between opposite flats 4⅝"
Maximum distance between spindle nose and turret face at beginning of indexing movement 3½ ft. bed 19⅝"

UNIVERSAL CARRIAGE

Thread cutting range 4 to 480 per inch
Power longitudinal feeds0007" to .0836"
Maximum longitudinal travel 3½" bed 16"
Power cross-feeds0003" to .0303"
Cross travel of cross slide 3⅝"
Tool block openings for cutter bits ⅞" x ⅞"

*Can be supplied to order with ⅜" holes in turret head. No extra charge.



CAM LOCK AND LONG TAPER KEY DRIVE SPINDLES

All South Bend Lathes, 10-1 1/4" Collet and larger, can be supplied with 4" Type D1 Cam Lock Spindles or Size L00 Type L Long Taper Key Drive Spindles in lieu of the regular threaded spindles at extra cost. Price includes small face plate which is supplied with the lathe. (Does not apply to Turret Lathes.) On tool room lathes price also includes Large Face Plate and Hand-wheel Collet Attachment fitted for Cam Lock or Long Taper Key Drive Spindle Nose. Spindle nose dimensions conform with ASA standards, but spindle bore and inside taper are larger to accommodate South Bend Collet equipment, spindle sleeves and centers. See pages 34 thru 38 for descriptions of chucks, collet equipment and other accessories for these lathes.



Left — Type D1 Cam Lock Spindle Nose.

Right — Type L00 Long Taper Key Drive Spindle Nose.

Size of Lathe	Size L00 Long Taper Key Drive Spindle Nose in Lieu of Regular Threaded Spindle Nose		4" Cam Lock Spindle Nose in Lieu of Regular Threaded Spindle Nose	
	Cat. No.	Price	Cat. No.	Price
10" (Engine and	CA8050L	\$26.25	CB8050L	\$34.75
13" Turret	CA8050T	37.00	CB8050T	37.00
14 1/2" Lathes)	CA8050F	45.25	CB8050F	45.25
16" — 16-24"	CA8050H	52.00	CB8050H	52.00

Size of Lathe	Size L00 Long Taper Key Drive Spindle Nose in Lieu of Regular Threaded Spindle Nose		4" Cam Lock Spindle Nose in Lieu of Regular Threaded Spindle Nose	
	Cat. No.	Price	Cat. No.	Price
10" Toolroom	CA8051L	\$43.50	CB8051L	\$52.00
13" Toolroom	CA8051T	55.50	CB8051T	55.50
14 1/2" Toolroom	CA8051F	67.50	CB8051F	67.50
16" Toolroom	CA8051H	74.50	CB8051H	74.50

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 1/2' bed	4' bed	4 1/2' bed	5' bed	6' bed	7' bed	8' bed	10' bed	12' bed	14' bed
10"	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 can be supplied with hardened and ground bed ways in lieu of regular bed ways at extra cost as listed in tabulation below. Heat-treating produces a hardness of all bed ways throughout the wearing area of the bed. After a period of seasoning, the bed ways are finished by precision grinding on equipment especially designed and built for the purpose.

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



Catalog Number	Size	Bed Length Feet	Price
CL4954Z	9" & 10-K	3 1/2	\$113
CL4954A	9" & 10-K	4	118
CL4954R	9" & 10-K	4 1/2	123
CL4955Z	10"	3 1/2	179
CL4955A	10"	4	184
CL4955R	10"	4 1/2	191
CL4956A	13"	4	211
CL4956B	13"	5	224
CL4956C	13"	6	238
CL4956D	13"	7	252

Catalog Number	Size	Bed Length Feet	Price
CL4957B	14 1/2"	5	\$240
CL4957C	14 1/2"	6	256
CL4957D	14 1/2"	7	270
CL4957E	14 1/2"	8	284
CL4958C	16"—16-24"	6	269
CL4958D	16"—16-24"	7	286
CL4958E	16"—16-24"	8	304
CL4958G	16"—16-24"	10	338
CL4958H	16"—16-24"	12	371
CL4958K	16"—16-24"	14	448

A complete line of ATTACHMENTS &

Often a careful selection of equipment will save much loss of time and the expense of making special tools or fixtures. It is recommended that certain attachments

and accessories be ordered with the lathe so that any fitting that may be required can be done at the factory.



HANDWHEEL COLLET ATTACHMENT

A A great time saver in mounting small work in the lathe, especially when extremely accurate centering is required. Bar and tube stock can be fed through the hollow drawbar which operates the collet. When handwheel is tightened, collet automatically grips and centers work. Equipment includes steel drawbar with handwheel, spindle nose cap, spanner wrench, and heat-treated steel closing sleeve if required. Collets are not included. See pages 35, 36 and 37.

FOR THREADED SPINDLE

Catalog Number	Size of Lathe	Collet Used	Max. Collet Cap.	Shipping Weight	Price
CL4306N	9"	No. 3	1/2"	5 lbs.	\$23.85
CL4306K	10-K	No. 6K	3/4"	5 lbs.	27.00
CL4306R	10"-1 1/4" Collet	No. 2	1 1/4"	8 lbs.	62.50
CL4306L	10"-1 1/4" Collet	No. 5	1 1/4"	10 lbs.	66.00
CL4306Q	13"	No. 5	1 1/4"	14 lbs.	72.00
CL4306M	14 1/2"	No. 5	1 1/4"	14 lbs.	77.00
CL4306H	16"-16-24"	No. 5	1 1/4"	15 lbs.	80.50

FOR 4" TYPE D1 CAM LOCK SPINDLE

CB4306L	10"-1 1/4" Collet	No. 5	1 1/4"	10 lbs.	\$73.50
CB4306T	13"	No. 5	1 1/4"	14 lbs.	78.50
CB4306F	14 1/2"	No. 5	1 1/4"	14 lbs.	84.50
CB4306H	16"-16-24"	No. 5	1 1/4"	15 lbs.	88.00

FOR TYPE L00 LONG TAPER KEY DRIVE SPINDLE

CA4306L	10"-1 1/4" Collet	No. 5	1 1/4"	10 lbs.	\$73.50
CA4306T	13"	No. 5	1 1/4"	14 lbs.	79.50
CA4306F	14 1/2"	No. 5	1 1/4"	14 lbs.	84.50
CA4306H	16"-16-24"	No. 5	1 1/4"	15 lbs.	88.00

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 35, 36 and 37.

FOR THREADED SPINDLE

Catalog Number	Size of Lathe	Collet Used	Max. Collet Cap.	Shipping Weight	Price
CL5206N	9"	No. 3	1/2"	10 lbs.	\$ 94.00
CL5206K	10-K	No. 6K	3/4"	10 lbs.	111.00
CL5206R	10"-1 1/4" Collet	No. 2	1 1/4"	19 lbs.	133.00
CL5206L	10"-1 1/4" Collet	No. 5	1 1/4"	20 lbs.	149.00
CL5206Q	13"	No. 5	1 1/4"	25 lbs.	165.00
CL5206M	14 1/2"	No. 5	1 1/4"	31 lbs.	180.00
CL5206H	16"-16-24"	No. 5	1 1/4"	32 lbs.	198.00

FOR 4" TYPE D1 CAM LOCK SPINDLE

CB5206L	10"-1 1/4" Collet	No. 5	1 1/4"	20 lbs.	\$156.00
CB5206T	13"	No. 5	1 1/4"	25 lbs.	172.00
CB5206F	14 1/2"	No. 5	1 1/4"	31 lbs.	187.00
CB5206H	16"-16-24"	No. 5	1 1/4"	32 lbs.	203.00

FOR TYPE L00 LONG TAPER KEY DRIVE SPINDLE

CA5206L	10"-1 1/4" Collet	No. 5	1 1/4"	20 lbs.	\$156.00
CA5206T	13"	No. 5	1 1/4"	25 lbs.	172.00
CA5206F	14 1/2"	No. 5	1 1/4"	31 lbs.	187.00
CA5206H	16"-16-24"	No. 5	1 1/4"	32 lbs.	203.00



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.

FOR THREADED SPINDLE

Cat. No.	Size and Type of Lathe	Ship. Wt.	Price
CL5223NK	9" & 10-K Underneath M. D.	2 lbs.	\$3.60
CL5200N	9" Horizontal M. D.	2 lbs.	3.75
CL5223NK	10-K H. M. D.	2 lbs.	3.60
CL5223R	10" Underneath M. D.	2 lbs.	4.30
CL5223T	13" Underneath M. D.	2 lbs.	4.60
CL5223F	14 1/2" Underneath M. D.	3 lbs.	5.60
CL5223H	16"-16-24"	3 lbs.	6.95

FOR 4" TYPE D1 CAM LOCK SPINDLE

Cat. No.	Size and Type of Lathe	Ship. Wt.	Price
CB5223L	10"-1 1/4" Collet	2 lbs.	\$6.40
CB5223T	13"	2 lbs.	6.45
CB5223F	14 1/2"	3 lbs.	6.65
CB5223H	16"-16-24"	3 lbs.	8.50

FOR TYPE L00 LONG TAPER KEY DRIVE SPINDLE

CA5223L	10"-1 1/4" Collet	2 lbs.	\$6.10
CA5223T	13"	2 lbs.	6.25
CA5223F	14 1/2"	3 lbs.	6.65
CA5223H	16"-16-24"	3 lbs.	8.50

ACCESSORIES for South Bend Lathes

SOUTH BEND

Precision

COLLETS

SOUTH BEND COLLETS ARE CAM GROUND

All Steel Collets Manufactured by South Bend are Cam Ground.

Cam grinding provides many important advantages.

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



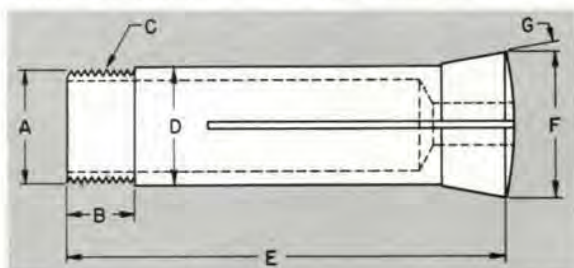
ROUND GROUND COLLETS

In closing, force is exerted on edges of collet segment.



CAM GROUND COLLETS

Closing force is always at the center of the taper.



COLLET SPECIFICATIONS

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

Collet No.	3	6K	2	4	5
Sizes of Lathes Used on	9"	10-K	10" & 13" 1/16" Col.	14 1/2" 3/4" Col.	All 1 1/4" Col. Cap. S. B. Lathes
A, Thread Diameter	.642"	.767"	.857"	.942"	1.242"
B, Thread Length	3/4"	2 1/2"	1 3/8"	1 3/8"	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 3/4"	3"	3 3/32"
F, Head Diameter	.852"	1.160"	1.095"	1.150"	1.452"
G, Angle of Head	12°	15°	15°	10°	10°



South Bend **←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.

NOTE: You do not need a separate set of collets for each size lathe when you use South Bend collets. Our number 5 collet fits 10", 13", 14 1/2" and 16" South Bend Lathes and the 10", 13" and 16" turret lathes. This not only saves a substantial capital investment, but is a real convenience that any shop man can appreciate.

SOUTH BEND STEEL COLLETS

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

State capacity of each collet wanted

CE3050	3	9"	1/16" to 1/2" in 64ths.	6 ozs.	\$5.30
CE3051	6K	10-K	1/16" to 3/8" in 64ths.	8 ozs.	5.45
CE3052	2	10" & 13"-1/16" Col.	1/16" to 1/16" in 64ths.	8 ozs.	5.55
CE3053	4	14 1/2"-3/4" Col.	1/16" to 3/4" in 64ths.	8 ozs.	5.95
CE3054	5	10", 13", 14 1/2", 16", 16-24" 1/16" Col.	1/16" to 1/16" in 64ths.	1 lb.	6.30

COLLETS WITH DECIMAL HOLE SIZES FOR ROUND WORK

State capacity of each collet wanted (Not Returnable)

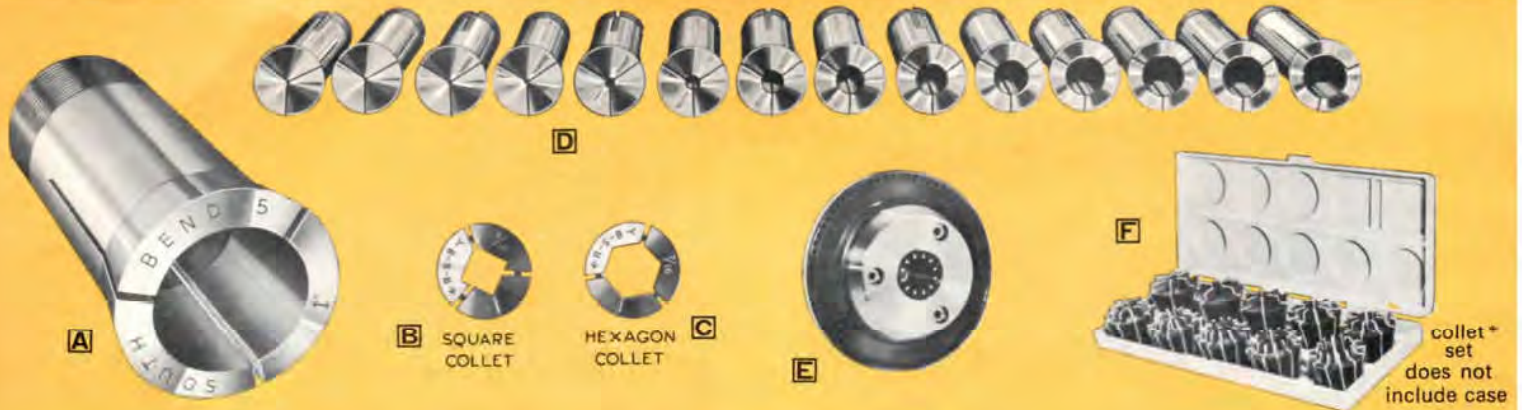
CE3055	3	9"	.0625" to .500"	6 ozs.	\$6.80
CE3056	6K	10-K	.0625" to .625"	8 ozs.	6.95
CE3057	2	10" & 13"-1/16" Col.	.0625" to .6875"	8 ozs.	7.05
CE3058	4	14 1/2"-3/4" Col.	.0625" to .750"	8 ozs.	7.45
CE3059	5	10", 13", 14 1/2", 16", 16-24" 1/16" Col.	.0625" to 1.063"	1 lb.	7.80

COLLETS WITH METRIC HOLE SIZES FOR ROUND WORK

State capacity of each collet wanted (Not Returnable)

CE3060	3	9"	1.5 mm to 12.5 mm*	6 ozs.	\$6.80
CE3061	6K	10-K	1.5 mm to 15.5 mm*	8 ozs.	6.95
CE3062	2	10" & 13"-1/16" Col.	1.5 mm to 17.0 mm*	8 ozs.	7.05
CE3064	5	10", 13", 14 1/2", 16", 16-24" 1/16" Col.	1.5 mm to 27.0 mm*	1 lb.	7.80

*In increments of 0.5 mm



SOUTH BEND BRASS COLLETS WITH STANDARD HOLE SIZES FOR ROUND WORK

SIZES TO FIT MOST LATHES
AT PRICES YOU CAN'T
AFFORD TO OVERLOOK

LOW COST BRASS COLLETS

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

Catalog Number	Collet No.	Sizes of Lathes Used on	Collet Capacities for Round Work	Ship. Wt.	Price Each Collet
COLLETS WITH STANDARD HOLE SIZES FOR ROUND WORK State capacity of each collet wanted.					
CE2825	3	9"	1/8" to 1/2" in 16ths.	6 ozs.	\$2.35
CE2826	6K	10-K	1/8" to 3/8" in 16ths.	8 ozs.	2.70
CE2827	2	10" & 13"—1 1/4" Col.	1/8" to 1 1/4" in 16ths.	8 ozs.	3.00
CE2829	4	14 1/2"—3/4" Col.	1/8" to 3/4" in 16ths.	8 ozs.	3.15
CE2828	5	10", 13", 14 1/2", 16"—16-24", 1 1/4" Col.	1/8" to 1 1/4" in 16ths.	1 lb.	3.75

COLLETS FOR SQUARE AND HEXAGONAL WORK

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

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

Collet No.	Steel Collets for Square Work				
	Ship. Wt.	Cat. No.	Max. Cap.	Price	
				1/8" & 3/16"	1/4" to Max.
3	6 ozs.	CE3080	3/16"	\$12.75	\$ 9.75
6K	8 ozs.	CE3081	7/16"	19.15	14.65
2	8 ozs.	CE3082	7/8"	13.50	10.50
5	1 lb.	CE3084	1 1/4"	13.25	10.25

Collet No.	Steel Collets for Hexagon Work				
	Ship. Wt.	Cat. No.	Max. Cap.	Price	
				1/8" & 3/16"	1/4" to Max.
3	6 ozs.	CE3085	7/16"	\$12.75	\$ 9.75
6K	8 ozs.	CE3086	1 1/2"	19.15	14.65
2	8 ozs.	CE3087	3/4"	13.50	10.50
5	1 lb.	CE3088	1 1/2"	13.25	10.25

FOR ECONOMY AND CONVENIENCE BUY COLLETS IN COMPLETE SETS

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

Collet No.	Collets in Set	Ship. Wt. Lbs.	Sizes of Collets	Brass Collets		←R-S-B-C Collets	
				Catalog No.	Price	Catalog No.	Price
				3	8 7 14	3 3 6	1/8" to 1/2" in 16ths. 3/32" to 1 1/2" in odd 32nds. 3/64" to 1 1/4" in odd 64ths.	CE2235	$18.15	CE3065 CE3066 CE3067	$ 41.50 36.50 72.00
6K	10 9 18	7 7 12	1/8" to 3/8" in 16ths. 3/32" to 1 1/2" in odd 32nds. 3/64" to 1 1/4" in odd 64ths.	CE2485	28.25	CE3068 CE3069 CE3070	53.50 48.25 95.50
2	11 10	6 6	1/8" to 1 1/4" in 16ths. 3/32" to 1 1/2" in odd 32nds.	CE2238	32.00	CE3071 CE3072	59.00 54.00
4	12 11	7 7	1/8" to 3/4" in 16ths. 3/32" to 1 1/2" in odd 32nds.	CE2244	36.75	CE3074 CE3075	69.00 63.50
5	16 15 30	11 11 20	1/8" to 1" in 16ths. 3/32" to 1 1/2" in odd 32nds. 3/64" to 1 1/4" in odd 64ths.	CE2241	58.00	CE3077 CE3078 CE3079	98.00 91.50 181.00



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-C** Collets in sixteenths, in sizes from 1/8" 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 36.

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.	\$ 64.00
CL5417K	10K	10	3/8"	10 lbs.	79.00
CL5417R	10"-1 1/4" Collet	11	1 1/4"	24 lbs.	119.00
CL5417L	10"-1 1/4" Collet	16	1"	28 lbs.	161.00
CL5417Q	13"	16	1"	33 lbs.	166.00
CL5417M	14 1/2"	16	1"	35 lbs.	171.00
CL5417H	16"-16-24", 1 1/4" Collet	16	1"	35 lbs.	174.00

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-C** Collets in sixteenths, in sizes from 1/8" 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 36. 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.	\$134.00
CL5418K	10K	10	3/8"	15 lbs.	163.00
CL5418R	10"-1 1/4" Collet	11	1 1/4"	29 lbs.	190.00
CL5418L	10"-1 1/4" Collet	16	1"	35 lbs.	242.00
CL5418Q	13"	16	1"	44 lbs.	258.00
CL5418M	14 1/2"	16	1"	51 lbs.	273.00
CL5418H	16"-16-24", 1 1/4" Collet	16	1"	52 lbs.	288.00

SPINDLE NOSE COLLET CHUCK FOR 17" GEARED HEAD LATHE



C SJOGREN HANDWHEEL SPINDLE NOSE COLLET CHUCKS. For direct mounting on 8" D-1 Cam Lock Spindle of 17" geared head lathe.

SJOGREN SPINDLE NOSE COLLET CHUCKS

Cat. No.	Capacity	Mfg. Model Number	Uses Collet	Shipping Weight	Price
CE917GJ	1/8"-1 3/8"	2	2J	30	\$162.00
CE918GJ	1/8"-1 1/2"	3	3J	35	186.00
CE919GJ	1/8"-2 1/4"	22	22J	40	227.00

COLLETS FOR SJOGREN COLLET CHUCKS

Cat. No.	Fit Collet Chuck No.	Mfg. Model Number	Price
CE3017	CE917GJ	2J	\$ 9.75
CE3018	CE918GJ	3J	13.75
CE3019	CE919GJ	22J	22.50

Sjogren chucks and collets are a special purchase item and prices are subject to fluctuation by supplier.

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



COLLET RACKS FOR SOUTH BEND LATHES

Catalog Number	Size of Lathe	Rack Holds	Ship. Wt.	Price
CE1770N	9"	19 Collets	9 lbs.	\$20.75
CE1770K	10-K	17 Collets	10 lbs.	22.35
CE1770R	10"-1 1/4" Collet	17 Collets	10 lbs.	24.95
CE1770L	10"-1 1/4" Collet	17 Collets	10 lbs.	28.25
CE1770Q	13"	17 Collets	12 lbs.	28.25
CE1770M	14 1/2"	17 Collets	14 lbs.	28.25
CE1770H	16"-16-24"	17 Collets	15 lbs.	28.25

SAVE ON TOOLING COST AND TIME BY USING SOUTH BEND ATTACHMENTS AND ACCESSORIES.

STEP CHUCK EQUIPMENT

FOR SOUTH BEND LATHES

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

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

A CLOSERS FOR STEP CHUCKS

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.

FOR THREADED SPINDLES

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.	\$ 6.95 10.80
CL6309R CL6311R	10"-1 1/4" Collet	3" and 4" 5" and 6"	4 lbs. 5 lbs.	8.10 12.00
CL6309LQ CL6311LQ	10" and 13" 1 1/4" Collet	3" and 4" 5" and 6"	4 lbs. 6 lbs.	10.25 13.85
CL6309MH CL6311MH	14 1/2", 16", 16-24" 16" Turret Lathe	3" and 4" 5" and 6"	5 lbs. 7 lbs.	11.45 16.00

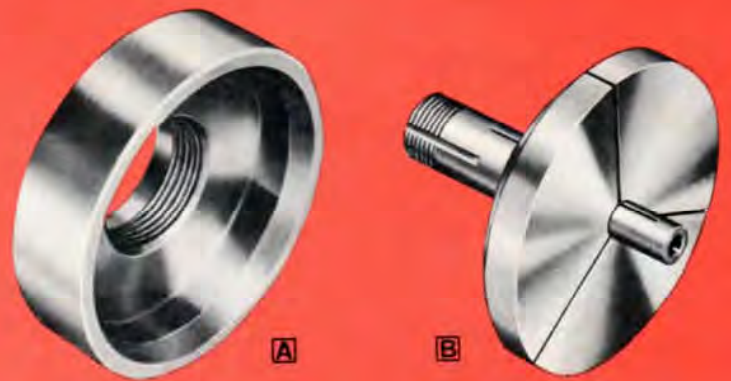
FOR 4" TYPE D1 CAM LOCK SPINDLE

CB6309LH	10" to 16-24"	3" and 4"	3 lbs.	\$15.90
CB6311LH	9" to 16-24"	5" and 6"	5 lbs.	21.10

FOR TYPE L00 LONG TAPER KEY DRIVE SPINDLE

CA6309LH	10" to 16-24"	3" and 4"	3 lbs.	\$18.80
CA6311LH	10" to 16-24"	5" and 6"	5 lbs.	24.95

Step chucks are used with either the Handwheel type or the Handlever draw-in chuck attachment for holding discs, gear blanks and similar round work. Step chuck equipment can speed up production on this larger size work.



B STEP CHUCK BLANKS

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

Step chuck blanks are made in various sizes having 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	Maximum Capacity	Shipping Weight	Price
CE5916*	9"	2"	2"	2 lbs.	\$10.00
CE5917		3"	3"	3 lbs.	13.65
CE5918		4"	4"	5 lbs.	16.80
CE5919		5"	5"	8 lbs.	20.45
CE5920		6"	6"	12 lbs.	23.45
CE5936*	10-K	2"	2"	3 lbs.	10.60
CE5937		3"	3"	4 lbs.	15.00
CE5938		4"	4"	6 lbs.	17.25
CE5939		5"	5"	8 lbs.	20.65
CE5940		6"	6"	12 lbs.	23.45
CE5921*	10"-1 1/4" Collet	2"	2"	4 lbs.	10.85
CE5922		3"	3"	4 lbs.	15.00
CE5923		4"	4"	5 lbs.	17.25
CE5924		5"	5"	9 lbs.	20.65
CE5925		6"	6"	13 lbs.	23.45
CE5926*	10", 13", 14 1/2", 16", 16-24" 1 1/4" Collet	2"	2"	4 lbs.	11.45
CE5927		3"	3"	4 lbs.	15.65
CE5928		4"	4"	5 lbs.	18.60
CE5929		5"	5"	9 lbs.	21.85
CE5930		6"	6"	13 lbs.	23.45

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

SPECIAL PAINT COLORS

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.

CE5510GJ. One special color paint for 17" Lathe. \$30.00

CE5515. One special color paint for 100-Ton Hydrolair Press and 16", 16-24" Lathes with 12' or 14' Beds. \$20.00

CE5522. One special color paint for 30-Ton and 50-Ton Hydrolair Presses, all Drill Presses, Milling Machines, Shapers, 9", 10K, 10", 13", 14 1/2", 16" and 16-24" Lathes with 6', 7', 8', 9' and 10' beds. \$10.00

CE5534. For each additional color on any of the above. . . \$7.50



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.	\$21.75
CL2400K	10-K	3 in.	$\frac{3}{16}$ in.	11 lbs.	21.90
CL2400R	10 inch	3 in.	$\frac{3}{16}$ in.	13 lbs.	23.00
CL2400T	13 inch	3 $\frac{3}{4}$ in.	$\frac{3}{16}$ in.	21 lbs.	28.90
CL2400F	14 $\frac{1}{2}$ inch	4 $\frac{1}{4}$ in.	$\frac{3}{16}$ in.	28 lbs.	34.65
CL2400H	16 inch	4 $\frac{3}{4}$ in.	$\frac{3}{16}$ in.	30 lbs.	36.75
CL2400V	16-24 inch	4 $\frac{3}{4}$ in.	$\frac{3}{16}$ in.	47 lbs.	46.75
CL2400GJ	17 inch	6 in.	$\frac{3}{16}$ in.	50 lbs.	58.00

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.	\$13.55
CL2395K	10-K	2 in.	$\frac{3}{16}$ in.	7 lbs.	13.65
CL2395R	10 inch	2 $\frac{1}{2}$ in.	$\frac{3}{16}$ in.	9 lbs.	14.70
CL2395T	13 inch	3 $\frac{1}{4}$ in.	$\frac{3}{16}$ in.	11 lbs.	17.50
CL2395F	14 $\frac{1}{2}$ inch	4 $\frac{1}{4}$ in.	$\frac{3}{16}$ in.	15 lbs.	20.75
CL2395H	16 inch	4 $\frac{1}{4}$ in.	$\frac{3}{16}$ in.	17 lbs.	21.45
CL2395V	16-24 inch	4 $\frac{1}{4}$ in.	$\frac{3}{16}$ in.	21 lbs.	28.00
CL2395GJ	17 inch	4 $\frac{1}{4}$ in.	$\frac{1}{8}$ in.	35 lbs.	36.75

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

Catalog Number	Size Lathe	Maximum Capacity	Minimum Capacity	Shipping Weight	Price
CL1177N	9 inch	3 in.	$\frac{1}{4}$ in.	10 lbs.	\$11.90
	10-K	3 in.	$\frac{1}{4}$ in.	10 lbs.	Not Made
CL1177R	10 inch	3 in.	$\frac{1}{4}$ in.	11 lbs.	17.50
CL1177T	13 inch	3 $\frac{3}{4}$ in.	$\frac{1}{4}$ in.	19 lbs.	21.80
CL1177F	14 $\frac{1}{2}$ inch	4 $\frac{1}{4}$ in.	$\frac{3}{8}$ in.	27 lbs.	26.50
CL1177H	16 inch	4 $\frac{3}{4}$ in.	$\frac{3}{8}$ in.	29 lbs.	29.75
CL1177V	16-24 inch	4 $\frac{3}{4}$ in.	$\frac{3}{8}$ in.	47 lbs.	40.50

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.	\$ 7.75
	10-K	2 in.	$\frac{3}{16}$ in.	4 lbs.	Not Made
CL1353R	10 inch	2 $\frac{1}{2}$ in.	$\frac{3}{16}$ in.	6 lbs.	11.90
CL1353T	13 inch	3 $\frac{1}{4}$ in.	$\frac{3}{16}$ in.	9 lbs.	13.25
CL2353F	14 $\frac{1}{2}$ inch	4 $\frac{1}{4}$ in.	$\frac{3}{16}$ in.	12 lbs.	15.70
CL1353H	16 inch	4 $\frac{1}{4}$ in.	$\frac{3}{16}$ in.	13 lbs.	17.15
CL1353V	16-24 inch	4 $\frac{1}{4}$ in.	$\frac{3}{16}$ in.	18 lbs.	24.55

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 inch	4 $\frac{1}{4}$ " to 10 $\frac{3}{4}$ "	65 lbs.	\$67.50
CL2266V	16-24 inch	4 $\frac{1}{4}$ " to 10 $\frac{3}{4}$ "	85 lbs.	78.00
Regular Style Extra Large Steady Rest				
CL2258H	16 inch	5" to 11"	75 lbs.	\$50.50
CL2258V	16-24 inch	5" to 11"	95 lbs.	62.50

HAND AND POWER FEED BED TURRETS

SAVES TIME ON REPETITIVE OPERATIONS

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

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

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

Effective feed of turret slide 8 $\frac{1}{2}$ ". Center of turret hole to top of turret slide 2 $\frac{1}{2}$ ". Takes standard turret tools with 1 $\frac{1}{2}$ " diameter shank. Distance between opposite turret flats is 9 $\frac{1}{2}$ ". 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. Shipping weight 505 lbs. Price \$821.00

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

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

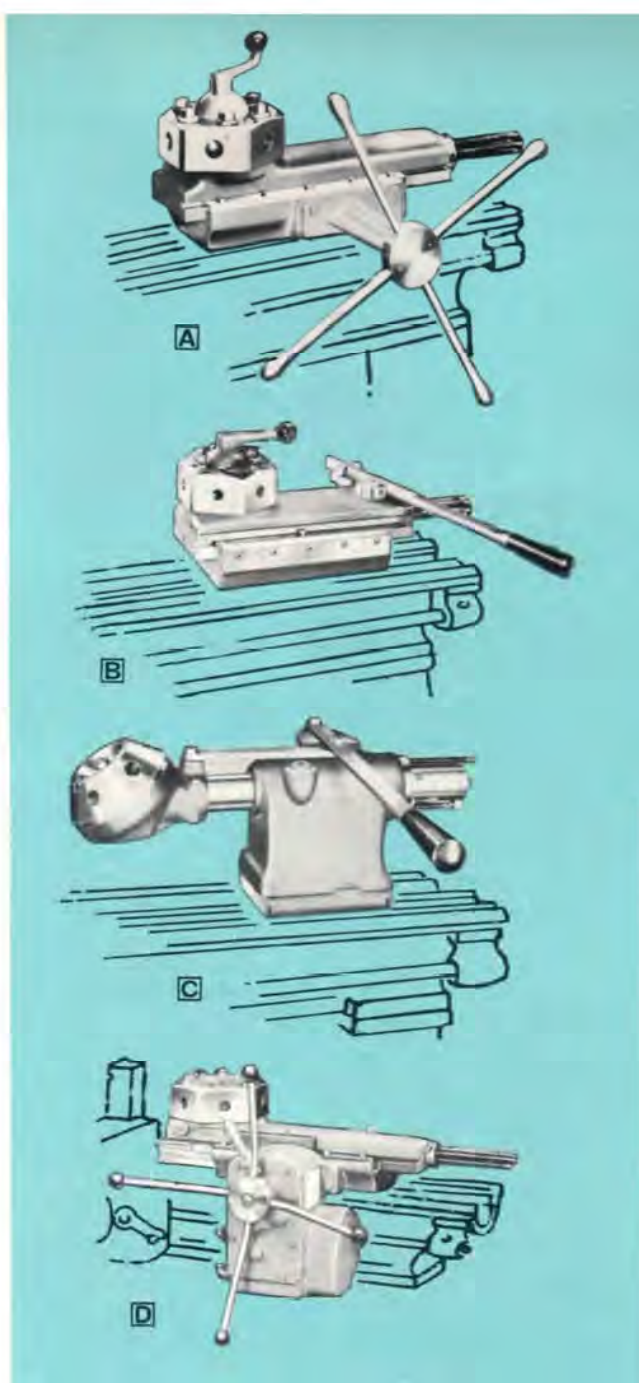
The effective feed of the turret slide is 4". Center of turret hole to top of turret slide 1 $\frac{1}{2}$ ". Takes standard turret tools with $\frac{5}{8}$ " diameter shank*. Distance between opposite flats on turret head is 4 $\frac{1}{2}$ ". When turret is ordered separate from lathe, the purchaser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

Catalog Number	Size Lathe	Shipping Weight	Price
CL1611N	9"	76 lbs.	\$322.00
CL1611K	10-K	76 lbs.	330.00
CL1611R	10"	83 lbs.	353.00
CL1611T	13"	130 lbs.	386.00

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

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

Catalog Number	Size Lathe	Shipping Weight	Price
CL2045N	9"	50 lbs.	\$156.00
CL2045K	10-K	50 lbs.	161.00
CL2045R	10"	60 lbs.	177.00
CL2045T	13"	90 lbs.	207.00



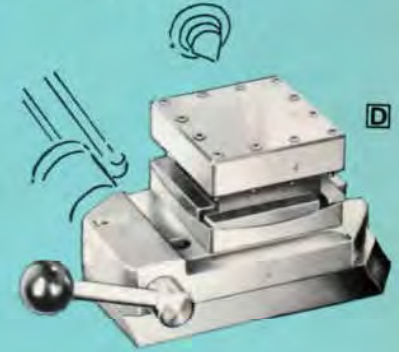
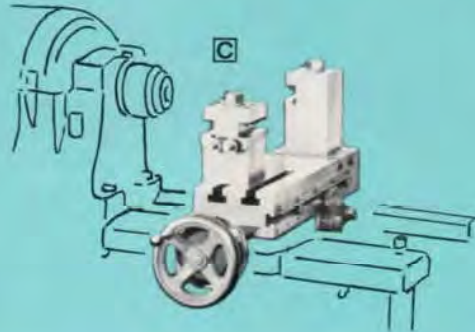
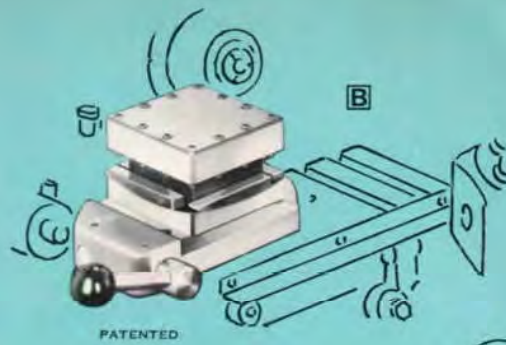
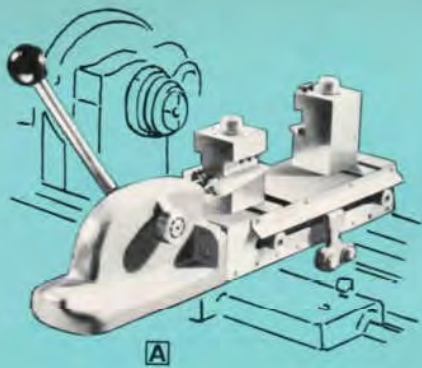
D HAND AND POWER FEED BED TURRETS for 13" Lathe. Power feed turret is illustrated, hand feed turret is similar but does not have power feeds for the turret slide. Effective feed of turret slide is 6 $\frac{1}{2}$ ". Turret head revolves on a precision ball bearing and has six 1" diameter holes for tools.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

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 \$607.00

CL2620T. Power Feed Turnstile Bed Turret for 13" South Bend Lathe. Approx. ship. wt. 414 lbs. Price \$840.00



SQUARE TURRETS - DOUBLE TOOL SLIDES

Speed Production for Greater Profits

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

This cross slide has front and back square tool blocks in which $\frac{7}{16}$ " square cutter bits can be mounted. T-slots in the cross slide base permit adjusting the positions of the tool blocks. The front tool block takes two cutter bits, and the back tool block takes one cutter bit. Tapered wedges and thumb screws provide adjustment for the height of cutter bits.

Cat. No.	Size Lathe	Swing over Cross Slide	Cross Feed	Ship. Wt.	Price
CL2030N	9"	3 $\frac{3}{8}$ "	ENGLISH	36 lbs.	\$108.00
CL2030K	10-K	3 $\frac{3}{8}$ "		37 lbs.	115.00
CL2030R	10"	3 $\frac{3}{8}$ "		45 lbs.	127.00
CL2030NME	9"	3 $\frac{3}{8}$ "	METRIC	36 lbs.	108.00
CL2030KME	10-K	3 $\frac{3}{8}$ "		37 lbs.	115.00
CL2030RME	10"	3 $\frac{3}{8}$ "		45 lbs.	127.00

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	Shipping Weight	Price
CL3376NR	9" and 10"	3"	$\frac{1}{2}$ " x $\frac{3}{8}$ "	10 lbs.	\$47.00
CL3376K	10-K	3"	$\frac{5}{8}$ " x $\frac{3}{8}$ "	11 lbs.	48.25
CL3376T	13"	3"	$\frac{3}{8}$ " x $\frac{3}{8}$ "	20 lbs.	64.00
CL3376H	16"	4"	$\frac{1}{2}$ " x $\frac{3}{8}$ "	28 lbs.	94.00

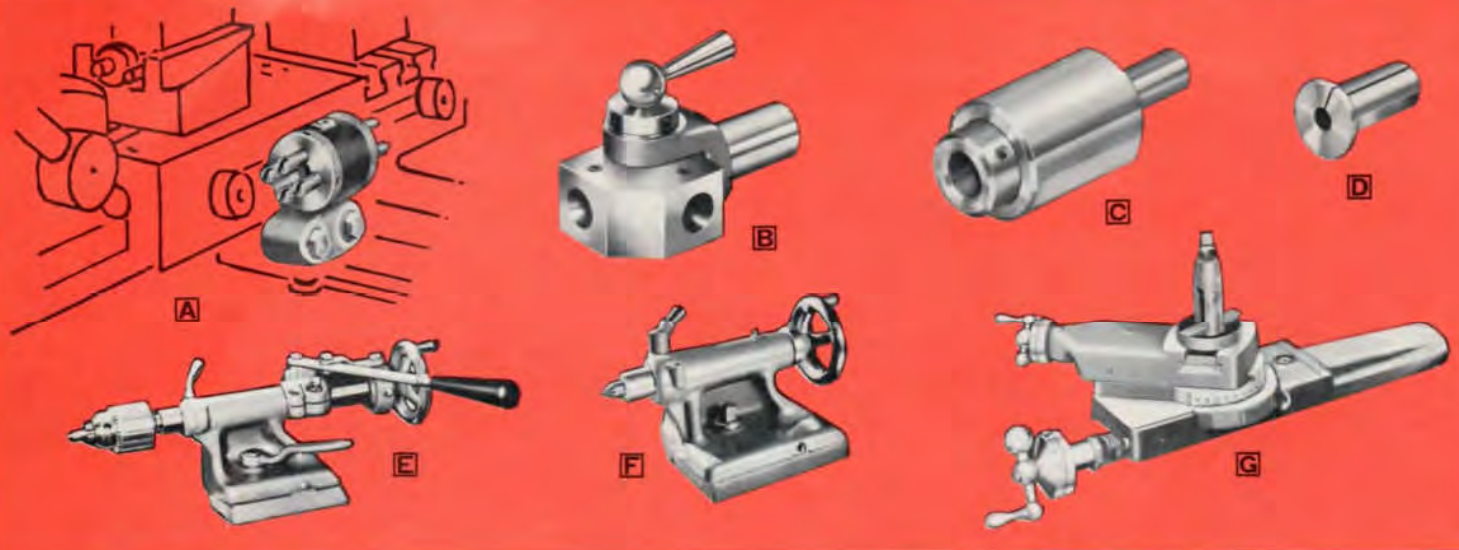
C SCREW FEED DOUBLE TOOL SLIDE for 13" and 16" Lathes. This cross slide fits on the saddle dovetail in place of the compound rest assembly. The cross-feed may be operated by power through the friction clutch in the apron, as well as by the cross-feed handwheel. A large diameter micrometer graduated collar 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 48 for four-position stop. The front tool block takes two square cutter bits and the back tool block takes one square cutter bit. Tapered wedges are provided for adjusting the height of the cutter bits. T-slots in the cross slide base are provided for adjusting the position of the tool blocks. Should be ordered with the lathe. Cannot be used on lathe with taper attachment.

Catalog Number	Size Lathe	Swing over Cross Slide	Cross-Feed	Size Bit	Shipping Weight	Price
CL2027T	13"	6 $\frac{1}{2}$ "	ENGLISH	$\frac{7}{16}$ " sq.	60 lbs.	\$188.00
CL2027H	16"	6 $\frac{1}{2}$ "		$\frac{1}{2}$ " sq.	95 lbs.	204.00
CL2027TME	13"	6 $\frac{1}{2}$ "	METRIC	$\frac{7}{16}$ " sq.	60 lbs.	188.00
CL2027HME	16"	6 $\frac{1}{2}$ "		$\frac{1}{2}$ " sq.	95 lbs.	204.00

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.	\$ 53.00
CL3375K	10-K	3"	$\frac{3}{8}$ " x $\frac{3}{8}$ "	14 lbs.	58.50
CL3375R	10"	3"	$\frac{3}{8}$ " x $\frac{3}{8}$ "	15 lbs.	58.50
CL3375T	13"	3"	$\frac{3}{8}$ " x $\frac{3}{8}$ "	24 lbs.	65.00
CL3375F	14 $\frac{1}{2}$ "	4"	$\frac{3}{8}$ " x $\frac{3}{8}$ "	36 lbs.	94.00
CL3375H	16"-16-24"	4"	$\frac{3}{8}$ " x $\frac{3}{8}$ "	40 lbs.	101.00
CL3375GJ	17"	4"	$\frac{3}{8}$ " x $\frac{3}{8}$ "	43 lbs.	104.00



HANDLE MORE JOBS WITH THESE ATTACHMENTS

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 41. 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.	\$16.45
CL2154T	13"	3 lbs.	16.60
CL2154H	16"	3 lbs.	20.00

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.

Catalog Number	Shank Size		Hole Size		Ship. Wt. Pounds	Price
	Dia.	Length	Dia.	Length		
CE2666	3/8"	1 1/2"	3/8"	3/4"	4	\$34.75
CE2667	3/8"	1 1/2"	3/8"	3/4"	6	36.00
CE2668	1"	1 1/2"	3/8"	3/4"	8	37.50
CE2669	1 1/2"	2 3/8"	1"	1 1/2"	10	50.50

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

Catalog Number	Shank Size		Hole Size		Ship. Wt. Pounds	Price
	Dia.	Length	Dia.	Length		
CE3666	3/8"	1 1/2"	3/8"	1 3/4"	3	\$10.05
CE3667	3/8"	1 1/2"	3/8"	1 3/4"	3	10.05
CE3668	1"	1 1/2"	3/8"	1 3/4"	3	10.05
CE3683	1 1/2"	2 3/8"	1 1/8"	2 3/4"	9	13.90

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

Bore	3/8" Outside Diameter			1 1/8" Outside Diameter		
	Cat. No.	Ship. Wt.	Price	Cat. No.	Ship. Wt.	Price
3/8"	CE3669	8 ozs.	\$2.25			
3/8"	CE3670	8 ozs.	2.25			
1/2"	CE3671	8 ozs.	2.25	CE3706	12 ozs.	\$3.40
3/8"	CE3672	8 ozs.	2.25	CE3707	12 ozs.	3.40
3/8"	CE3673	8 ozs.	2.25	CE3708	12 ozs.	3.40
3/8"	CE3674	8 ozs.	2.25	CE3709	12 ozs.	3.40
1/2"	CE3675	8 ozs.	2.25	CE3710	12 ozs.	3.40
3/8"				CE3711	12 ozs.	3.40
3/8"				CE3712	12 ozs.	3.40
1 1/8"				CE3713	12 ozs.	3.40
3/8"				CE3714	12 ozs.	3.40
1 1/8"				CE3715	12 ozs.	3.40
3/8"				CE3716	12 ozs.	3.40

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 hand-wheel. 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	Length of Feed Inches	Shipping Weight Lbs.	In Lieu of Regular Tailstock		In Addition to Regular Tailstock	
			Cat. No.	Price	Cat. No.	Price
9"	2 3/4"	25	CL519N	\$72.25	CL1197N	\$ 96.50
10-K	2 3/4"	25	CL519K	80.00	CL1197K	108.00
10"	2 3/4"	33	CL519R	85.50	CL1197R	115.00

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.	\$ 52.50
CL2036K	10-K	No. 2 M.T.	22 lbs.	72.00
CL2036R	10"	No. 2 M.T.	42 lbs.	91.50
CL2036T	13"	No. 3 M.T.	90 lbs.	164.00
CL2036P	16"	No. 3 M.T.	133 lbs.	206.00

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.

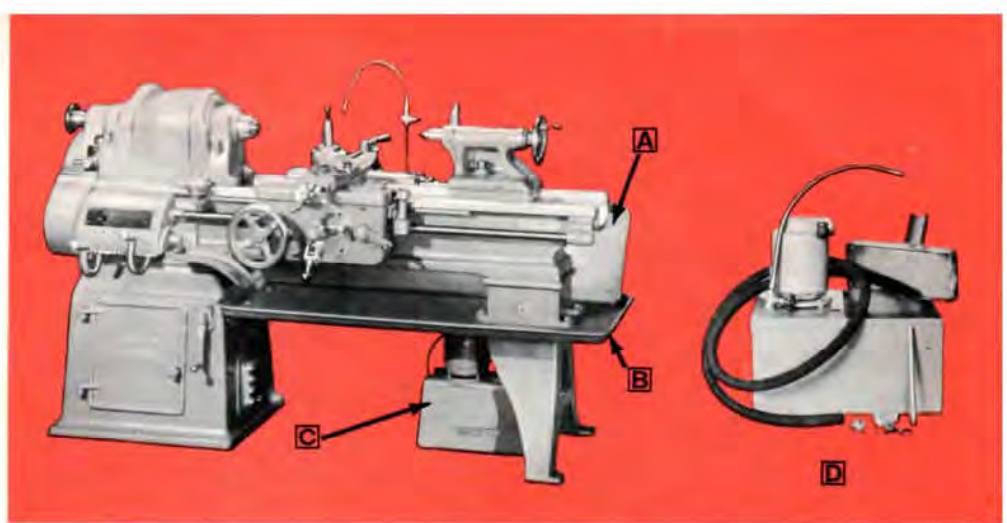
Price includes compound rest top, swivel, and base assembly complete with tool post. Cross-feed screw assembly is supplied for 10"-1 1/8" Collet Lathes and larger but is not supplied for the 9" and 10-K lathes*. Cannot be used with double tool slide. When this unit is required, it should be ordered with the lathe and fitted at the factory.

Cat. No.	Size Lathe	Ship. Wt.	Price
CL2200N	9"	13 lbs.	\$ 46.25*
CL2200K	10-K	14 lbs.	47.50*
CL2200R	10"	15 lbs.	76.00
CL2200T	13"	30 lbs.	118.00
CL2200P	16"	50 lbs.	150.00

COOLANT EQUIPMENT

'OIL TIGHT'
CHIP PANS

SPLASH PANS



Splash 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 34 for collet splash guard.

A SPLASH PANS are an essential addition to the oil tight chip 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 chip pans as shown in illustration above.

PANS FOR FLOOR LEG SOUTH BEND LATHES

Size Lathe	Splash Pans		Size Lathe	Splash Pans	
	Cat. No.	Price		Cat. No.	Price
9" and 10-K U.M.D.	CL2057Z	\$21.75	16" x 6'	CL2062C	\$ 45.25
10" x 3 1/2"	CL2059Z	25.25	16" x 7'	CL2062D	45.25
10" x 3 1/2" **	CL3059Z	26.50	16" x 8'	CL2062H	55.00
10" Turret*	CL2059Z	25.25	16" x 10'	CL2062H	55.00
10" Turret**	CL3059Z	26.50	16" x 12'	CL2062H	55.00
10" x 4"	CL2059A	31.00	16" x 14'	CL2062H	55.00
10" x 4" **	CL3059A	32.50	16-24" x 6'	CL2062C	45.25
10" x 4 1/2"	CL2059R	31.00	16-24" x 7'	CL2062D	45.25
10" x 4 1/2" **	CL3059R	32.50	16-24" x 8'	CL2062H	55.00
13" x 4"	CL2060A	36.00	16-24" x 10'	CL2062H	55.00
13" x 5"	CL2060B	39.25	16-24" x 12'	CL2062H	55.00
13" x 6"	CL2060C	40.75	16-24" x 14'	CL2062H	55.00
13" x 7"	CL2060D	42.75	17" x 6'	CL1762GJ	56.50
14 1/2" x 5"	CL2062B	39.25	17" x 8'	CL1763GJ	73.50
14 1/2" x 6"	CL2062C	45.25	17" x 10'	CL1764GJ	97.00
14 1/2" x 7"	CL2062D	45.25	17" x 12'	CL1765GJ	114.00
14 1/2" x 8"	CL2062H	55.00			

*Cast Iron Legs. **Welded Steel Legs.

PANS FOR SOUTH BEND BENCH & MET. CAB. LATHES

Size Lathe	A Chip Pans		B Splash Pans	
	Cat. No.	Price	Cat. No.	Price
9" and 10-K x 3 1/2"	CL1297Z	\$39.50	CL2057Z	\$21.75
9" and 10-K x 4"	CL1297A	42.50	CL2057Z	21.75
9" and 10-K x 4 1/2"	CL1297R	43.75	CL2057R	23.10
10" x 3 1/2" Metal Cabinet Lathes			CL3057Z	21.80
10" x 4" or 4 1/2" Metal Cabinet Lathes			CL3057R	23.10

B PREPARING LATHE FOR USE WITH COOLANT.

For those who desire to use coolant with their lathes, it is necessary to make chip pans oil tight and install dams and blocks in the headstock. The following catalog numbers and prices apply to preparing lathe for use of coolant.

(This does not apply to turret lathes which are prepared for use of coolant as standard.)

PREPARING LATHE FOR USE WITH COOLANT

Cat. No.	For Lathe	Price
CL2195NK	9" or 10-K UMD	\$39.25
CL2195R	10" Metal Cabinet	39.25
CL4010	10" or 12 1/4" Floor	54.50
CL4013	13" Floor	60.00
CL4014	14 1/2" Floor	66.00
CL4016	16" Floor	67.00
CL4024	16-24" Floor	88.50

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

COOLANT PUMP AND RESERVOIR FITTED TO 10"-1 1/2" COLLET CAPACITY THROUGH 17" FLOOR LEG LATHES.

Cat. No.	Current	Phase	Cycle	Voltage	Price
CL503C	A.C.	3	50	208-220	\$211.00
CL503D	A.C.	3	60	208-220	211.00
CL503E	A.C.	3	50	440	211.00
CL503F	A.C.	3	60	440	211.00
CL503G	A.C.	3	50	550	211.00
CL503H	A.C.	3	60	550	211.00
CL502C	A.C.	2	50	208-220	211.00
CL502D	A.C.	2	60	208-220	211.00
CL501A	A.C.	1	50	115	191.00
CL501B	A.C.	1	60	115	189.00
CL501C	A.C.	1	50	230	193.00
CL501D	A.C.	1	60	230	191.00

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

Cat. No.	Current	Phase	Cycle	Voltage	Price
CL513C	A.C.	3	50	208-220	\$211.00
CL513D	A.C.	3	60	208-220	211.00
CL513E	A.C.	3	50	440	211.00
CL513F	A.C.	3	60	440	211.00
CL513G	A.C.	3	50	550	211.00
CL513H	A.C.	3	60	550	211.00
CL512C	A.C.	2	50	208-220	211.00
CL512D	A.C.	2	60	208-220	211.00
CL511A	A.C.	1	50	115	191.00
CL511B	A.C.	1	60	115	189.00
CL511C	A.C.	1	50	230	193.00
CL511D	A.C.	1	60	230	191.00

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

D UNIVERSAL COOLANT PUMP EQUIPMENT

for application to lathes, drill presses, or other machine tools. Equipment consists of: coolant pump, tubing, reservoir, motor, switch, and wire for connecting motor and switch, **but does not include equipment for fitting to South Bend Lathes.** Shipping weight 110 lbs.

Cat. No.	Current	Phase	Cycle	Voltage	Price
CE2003C	A.C.	3	50	208-220	\$183.00
CE2003D	A.C.	3	60	208-220	183.00
CE2003E	A.C.	3	50	440	183.00
CE2003F	A.C.	3	60	440	183.00
CE2003G	A.C.	3	50	550	183.00
CE2003H	A.C.	3	60	550	183.00
CE2002C	A.C.	2	50	208-220	183.00
CE2002D	A.C.	2	60	208-220	183.00
CE2001A	A.C.	1	50	115	166.00
CE2001B	A.C.	1	60	115	163.00
CE2001C	A.C.	1	50	230	167.00
CE2001D	A.C.	1	60	230	165.00



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.	\$85.50
CE301D	1	60	230	43 lbs.	\$9.50
CE301A	1	50	115	43 lbs.	\$8.50
CE301C	1	50	230	43 lbs.	\$7.00
CE303D	3	60	208-220	43 lbs.	\$4.50*
CE303F	3	60	440	43 lbs.	\$9.00*
CE303C	3	50	208-220	43 lbs.	\$4.50*
CE303E	3	50	440	43 lbs.	\$9.00*

*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.	\$2.60
CE307R	10"	1 lb.	3.15
CE307T	13"	3 lbs.	3.70
CE307F	14 $\frac{1}{2}$ "	3 lbs.	4.35
CE307H	16" - 16-24"	4 lbs.	4.35
CE307GJ	17"	5 lbs.	4.55

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 $\frac{3}{8}$ 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".

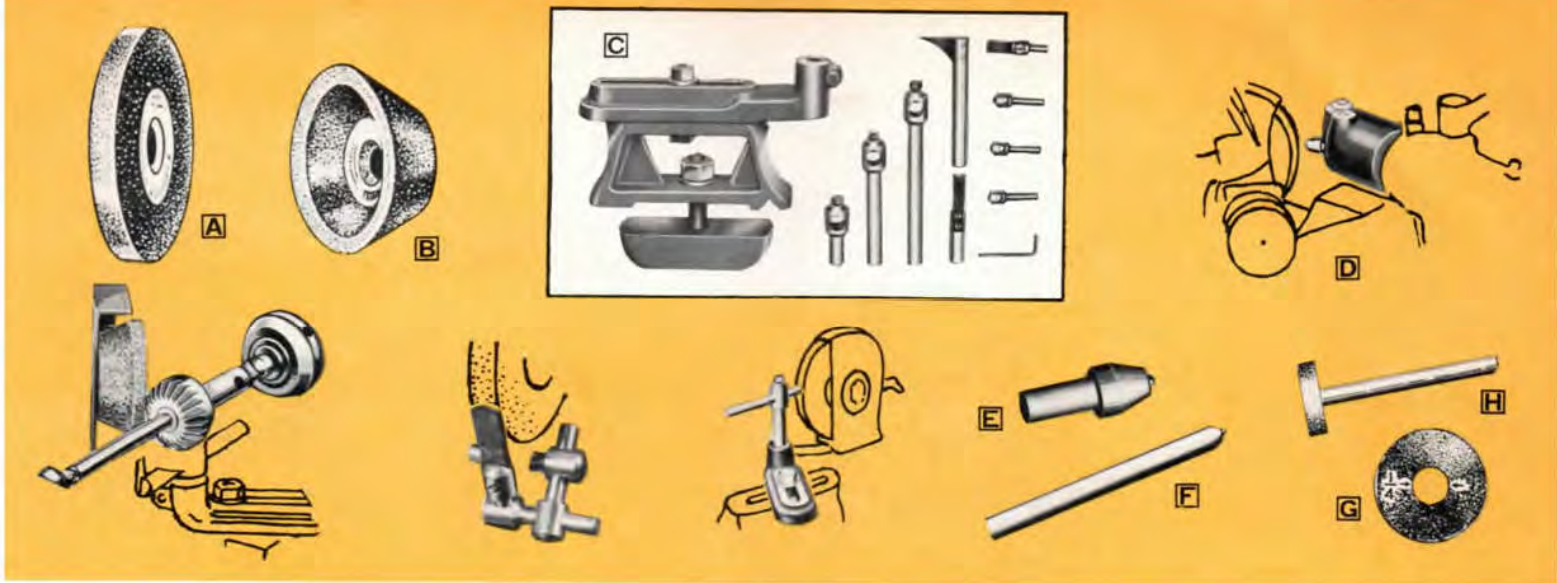
SPECIFICATIONS

Grinding wheel speed 30,000 r.p.m.
 Maximum depth of ground hole with 1-inch wheel $3\frac{1}{4}$ inches
 Maximum wheel diameter recommended 1-inch
 Accessories supplied:
 Four $\frac{1}{4}$ " wheel arbors: lengths 2 $\frac{3}{4}$ ", 2 $\frac{1}{2}$ ", 3 $\frac{1}{4}$ ", and 4 $\frac{1}{4}$ ".
 Two grinding wheels: $\frac{1}{4}$ " bore; $\frac{1}{4}$ " face; $\frac{1}{2}$ " and $\frac{3}{4}$ " diameters.
 One chuck for mounted wheels $\frac{1}{4}$ " capacity
 Eight-foot extension cord, plug, and switch. (115 volt motor only)

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 **\$204.00**

CE603D. Same as above but with 3 ph., 60 cy., 220 v., A.C. motor less switch. Price f.o.b. factory **\$206.00**

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



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

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

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

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

Cat. No.	Size Lathe	Ship. Wt.	Price
CE1512N	9"	7 lbs.	\$20.40
CE1512K	10-K	8 lbs.	21.10
CE1512R	10"	9 lbs.	21.90
CE1512T	13"	14 lbs.	27.00
CE1512F	14 1/2"	20 lbs.	30.50
CE1512H	16"	24 lbs.	31.50
CE1512V	16-24"	30 lbs.	41.00

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

Cat. No.	Size Lathe	Ship. Wt.	Price
CE91NK	9" & 10-K	3 lbs.	\$ 9.90
CE91R	10"	3 lbs.	9.90
CE91T	13"	4 lbs.	11.80
CE91F	14 1/2"	4 lbs.	11.80
CE91H	16" & 16-24"	5 lbs.	13.25
CE91GJ	17"	5 lbs.	28.00

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. \$8.65

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

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

Catalog Number	Shipping Weight	Diameter	Face	Price
CE2925	4 ozs.	3/8"	1/4"	5.70
CE2926	4 ozs.	3/4"	1/4"	.70

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"	5.75
CE3036	1/8"	1/2"	1/8"	.75
CE3037	1/8"	3/4"	1/8"	.80
CE3039	1/8"	3/8"	1/4"	.75
CE3040	1/8"	1/2"	1/4"	.75
CE3041	1/8"	3/4"	1/4"	.75
CE3042	1/8"	1/4"	1/4"	.75
CE3043	1/8"	3/4"	1/4"	.75
CE3044	1/8"	3/8"	1/4"	.75
CE3045	1/8"	1/2"	1/4"	.75
CE3046	1/8"	3/8"	1/4"	.80
CE3047	1/8"	3/4"	1/4"	.75

HOW TO ORDER ATTACHMENTS

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

When ordering attachments, chucks, or tools for South Bend Lathes, always state the swing of the lathe and also give the serial number of the lathe, which is stamped on top of the lathe bed at the tailstock end between the front V-way and the flat way.



A



B



C

TWO PRACTICAL ATTACHMENTS THAT INCREASE LATHE VERSATILITY

A TAPER ATTACHMENT. Taper turning and boring are 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 tapers are machined. The cross-feed screw may be used to adjust the lathe tool for the required diameter. When the binding lever is tightened, the cross slide base is rigidly locked to the taper attachment swivel slide, and the thrust is removed from the cross-feed screw.

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

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

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

TAPER ATTACHMENT WITH ENGLISH GRADUATIONS

Catalog Number	Size of Lathe	Swing Over Cross Slide	Maximum Taper			Approx. Shipping Weight	Price
			At One Setting	Per Foot	in Degrees		
CL428NK	9"	5"	7"	3 1/2"	16 1/2	35 lbs.	\$105.00
CL428NK	10-K	5 1/4"	7"	3 1/2"	16 1/2	35 lbs.	105.00
CL1545R	10"	5 3/4"	8 1/2"	3 1/2"	16 1/2	40 lbs.	214.00
CL1545T	13"	8"	9 1/4"	3 1/2"	16 1/2	65 lbs.	257.00
CL1545F	14 1/2"	8 3/4"	9 1/2"	3 1/2"	16 1/2	80 lbs.	277.00
CL1545H	16"	9 3/4"	11 1/2"	3 1/2"	16 1/2	100 lbs.	\$10.00
CL1545H	16-24"	18 3/4"	11 1/2"	3 1/2"	16 1/2	100 lbs.	\$10.00

B TAPER ATTACHMENT FOR 17" LATHE. Attachment is permanently mounted on the lathe carriage and is always ready to use. It does not interfere with any lathe operation.

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

CL1545GJ. Taper Attachment for 17" Geared Head Lathe. Shipping weight approx. 100 lbs. f.o.b. factory. \$387.00

METRIC TAPER ATTACHMENT with metric graduations can be supplied for any size or type of South Bend Lathe. See Page 65.

C 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.

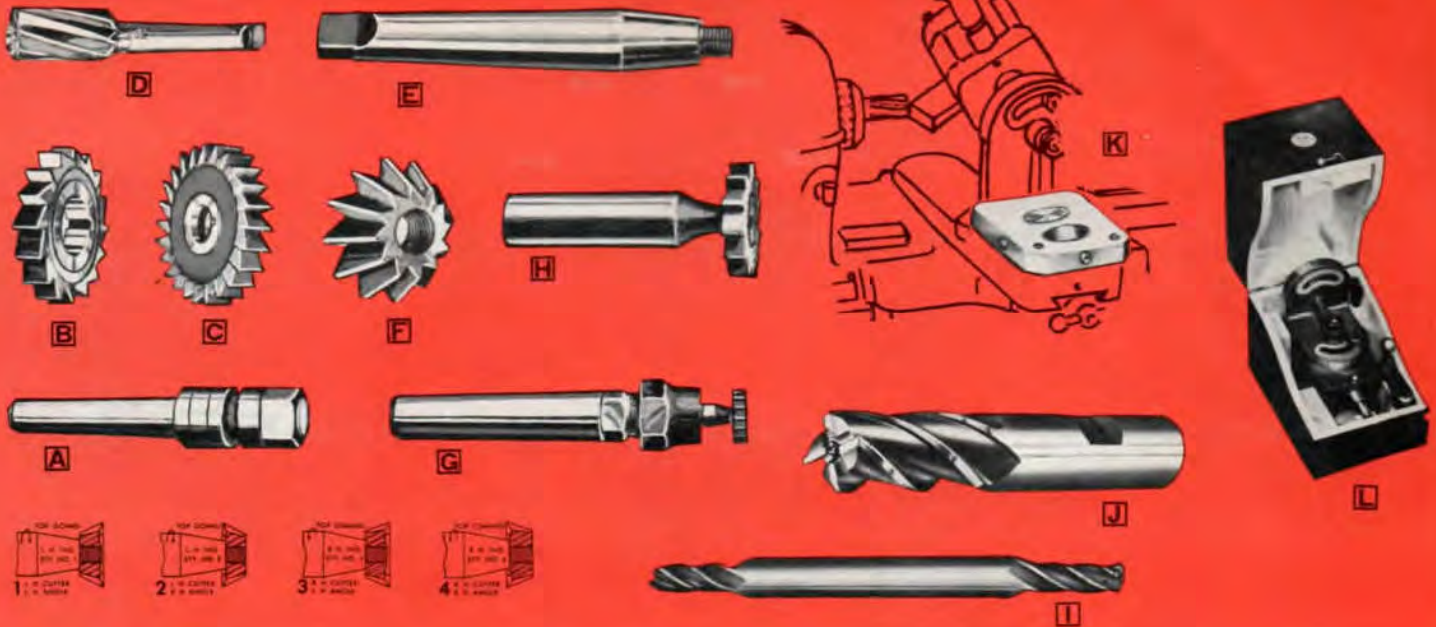
Catalog Number	Size of Lathe	Vert. Feed Ins.	Cross Feed Ins.	Vise Holds Ins.	Jaw Depth Ins.	Jaw Width Ins.	Ship. Wt. Lbs.	Price
CL2580NK	9-10-K	3	5 1/2"	1 1/2"	1 3/4"	3	13	\$ 59.00
CL2580R	10"	3	5 1/2"	1 3/4"	1 3/4"	3 1/2"	25	78.50
CL2580T	13"	4 1/4"	8 1/2"	2 1/2"	1 1/4"	4 1/2"	40	91.00
CL2580F	14 1/2"	6	10	4	2	5 1/4"	50	106.00
CL2580H	16"	6	10 1/2"	4	2	5 3/4"	65	123.00
CL2580H	16-24"	6	10 1/2"	4	2	5 3/4"	65	123.00

METRIC MILLING ATTACHMENT. The milling and keyway cutting attachment 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
CL2580NKME	9" & 10-K	CL2580FME	14 1/2"
CL2580RME	10"		
CL2580TME	13"	CL2580HME	16"-16-24"

METRIC LATHES

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 screws having micrometer collars with metric graduations. The tailstock spindles and taper attachment are graduated in both the 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.



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. \$11.20**

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

Catalog Number	Face Width	O.D.	Price	Catalog Number	Face Width	O.D.	Price
CE3920	3/4"	2 1/2"	\$5.50	CE3924	7/8"	2 1/2"	\$ 8.60
CE3921	1/4"	2 1/2"	7.25	CE3925	1/2"	2 1/2"	9.35
CE3922	3/8"	2 1/2"	7.45	CE3926	3/8"	2 1/2"	10.20
CE3923	3/8"	2 1/2"	8.00	CE3927	3/8"	2 1/2"	11.00

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

Catalog Number	Face Width	O.D.	Price	Catalog Number	Face Width	O.D.	Price
CE3930	1/4"	3"	\$11.90	CE3934	1/2"	-3"	\$14.70
CE3931	3/8"	3"	12.50	CE3935	3/8"	4"	24.40
CE3932	3/8"	3"	13.20	CE3936	3/8"	4"	26.40
CE3933	7/8"	3"	13.90				

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

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

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

CE829. For angular cutters with right-hand thread. \$5.45
CE830. For angular cutters with left-hand thread. \$5.45

F ANGULAR MILLING CUTTERS. High speed steel milling cutters with threaded hole, 60° included angle, 1 1/4" O.D., 3/8" face. Ship. wt. approx. 8 ozs. each.

Catalog Number	Style	Description	Price
CE667S1	1	L.H. thread, L.H. angle	\$11.75
CE667S2	2	L.H. thread, R.H. angle	11.75
CE667S3	3	R.H. thread, L.H. angle	12.05
CE667S4	4	R.H. thread, R.H. angle	12.05

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

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

Catalog Number	Cutter Dia.	Cutter Face	Price	Catalog Number	Cutter Dia.	Cutter Face	Price
CE3940	1/2"	1/8"	\$4.70	CE3948	1"	1/4"	\$7.35
CE3941	1/2"	3/8"	4.70	CE3949	1"	3/8"	7.70
CE3942	3/8"	1/8"	4.30	CE3950	1 1/8"	3/8"	8.00
CE3943	3/8"	3/8"	5.40	CE3951	1 1/8"	1/4"	8.00
CE3944	3/8"	3/8"	5.90	CE3952	1 1/8"	3/8"	8.35
CE3945	3/8"	3/8"	6.55	CE3953	1 1/4"	3/8"	8.05
CE3946	3/8"	1/4"	6.55	CE3954	1 1/4"	1/4"	8.25
CE3947	1"	3/8"	6.70	CE3955	1 1/4"	3/8"	9.40

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.

Catalog No.	Dia. of Mill	Dia. of Shank	Length of Flutes	No. of Flutes	Whole Length	Price
MIL7031	3/32"	3/16"	3/16"	4	2 1/4"	\$2.45
MIL7032	1/8"	3/16"	3/8"	4	2 1/4"	2.45
MIL7033	3/32"	3/16"	7/16"	4	2 1/4"	2.45
MIL7034	3/16"	3/16"	1/2"	4	2 1/4"	2.45

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.

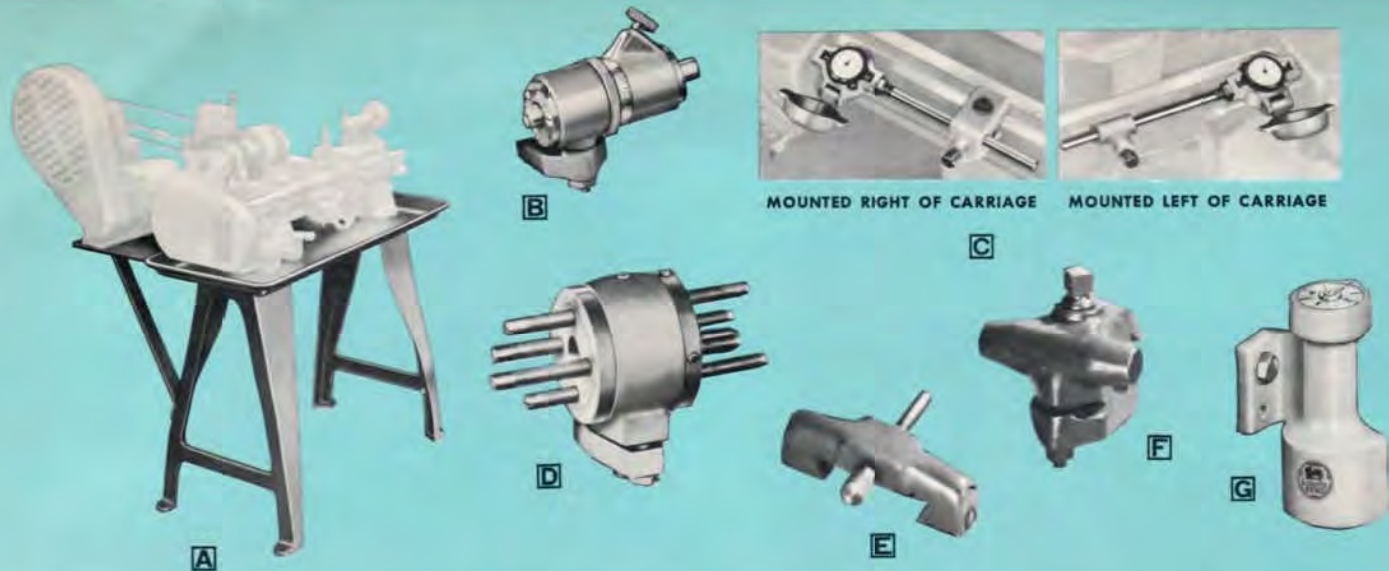
Catalog No.	Dia. of Mill	Dia. of Shank	Length of Flutes	No. of Flutes	Whole Length	Price
MIL7023	1/8"	3/8"	3/8"	4	2 3/4"	\$1.85
MIL7024	1/4"	3/8"	3/8"	4	2 3/4"	1.85
MIL7025	3/8"	3/8"	3/8"	4	2 1/2"	1.85
MIL7026	1/2"	1/2"	1 1/4"	4	3 1/4"	2.60
MIL7027	3/8"	3/8"	1 1/8"	4	3 3/4"	4.25
MIL7028	3/4"	3/8"	1 3/8"	4	3 3/4"	4.70
MIL7029	3/8"	3/8"	1 1/8"	4	4 1/2"	6.10
MIL7030	1"	1"	2"	4	4 1/2"	7.40

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

CL2408NK. Offset Base for milling attachment. Fits 9" and 10-K lathes only. Ship. wt. 5 lbs. Price. \$9.30

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

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



A 9" & 10-K SELF-CONTAINED ASSEMBLY KIT. Easily converts your 9" or 10-K Horizontal Motor Drive bench lathe into a self-contained floor leg model. Kit consists of two floor leg units, chip pan, mounting shelf for drive unit and necessary hardware. Available in three bed lengths as listed below.

If ordered for use with lathe previously shipped, include the lathe serial number with your order. Serial number is stamped between front ways at the tailstock end of the lathe.

Legs stand 29 $\frac{1}{2}$ " high. With drive unit mounted, self-contained lathe will be approximately 40 inches wide.

CL470Z. Self-Contained Assembly Kit for 9" or 10-K HMD lathe with 3 $\frac{1}{2}$ ' bed. Shipping weight 185 lbs. **\$115**

CL470A. Self-Contained Assembly Kit for 9" or 10-K HMD lathe with 4' bed. Shipping weight 190 lbs. **\$120**

CL470R. Self-Contained Assembly Kit for 9" or 10-K HMD lathe with 4 $\frac{1}{2}$ ' bed. Shipping weight 195 lbs. **\$125**

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

Size Lathe	Ship. Wt.	English Graduations		Metric Graduations	
		Cat. No.	Price	Cat. No.	Price
9" & 10-K	2 lbs.	CL968NK	\$25.25	CL968NKME	\$25.25
10"	4 lbs.	CL968R	26.50	CL968RME	26.50
13"	4 lbs.	CL968T	28.75	CL968TME	28.75
14 $\frac{1}{2}$ ", 16"-16-24", 17"	7 lbs.	CL968FH	30.75	CL968FHME	30.75

C DIAL INDICATOR CARRIAGE STOP. Repetitive facing, shouldering or grooving operations can be performed with speed and precision on lathes equipped with a dial indicator type carriage stop. Position of carriage is clearly shown on face of dial which has a total movement of .250". Indicator support bar has 5 $\frac{1}{2}$ " 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 **\$45.25**

CL2795FH. Dial Indicator Carriage Stop for 14 $\frac{1}{2}$ ", 16", 16-24" or 16" Turret Lathe. Ship. wt. 12 lbs. Price **\$49.00**



MOUNTED RIGHT OF CARRIAGE



MOUNTED LEFT OF CARRIAGE

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.	\$27.75
CL2185R	10"	6 lbs.	28.75
CL2185T	13"	6 lbs.	29.75
CL2185FH	14 $\frac{1}{2}$ ", 16"-16-24"	10 lbs.	33.25
CL2185GJ	17"	10 lbs.	41.50

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

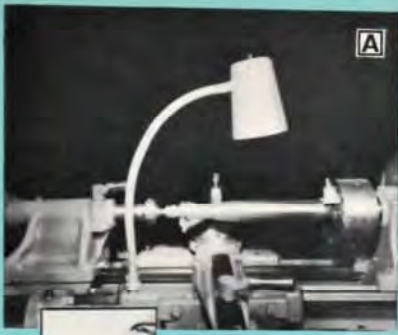
Catalog Number	Size Lathe	Shipping Weight	Price
CL2250NK	9" & 10-K	$\frac{1}{2}$ lb.	\$3.85
CL2250R	10"	$\frac{1}{2}$ lb.	4.65
CL2250T	13"	1 lb.	5.25
CL2250F	14 $\frac{1}{2}$ "	1 lb.	6.10
CL2250H	16"-16-24"	2 lbs.	6.90

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.	\$5.05
CL758R	10"	4 lbs.	5.50
CL758T	13"	4 lbs.	6.60
CL758FH	14 $\frac{1}{2}$ ", 16"-16-24"	7 lbs.	8.30

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 64 for metric thread indicator dial.

Catalog Number	Size Lathe	Shipping Weight	Price
CL810NK	9" & 10-K	2 lbs.	\$12.10
CL810R	10"	3 lbs.	19.35
CL810TH	13", 14 $\frac{1}{2}$ ", 16"-16-24"	5 lbs.	23.15
CL810GJ	17"	5 lbs.	31.00



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

CE2815. Work Light for Lathe, including snap bolt for attaching to lathe bed. Shipping weight 5 lbs. Price..... **\$14.95**

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

CL2350. Lever operated Friction Spindle Brake with Micro-Switch assembled to the lathe at factory. Price..... **\$18.65**

CL2351. Lever operated Friction Spindle Brake with Micro-Switch. With instructions for installing. (Not installed)... **\$23.90**

CL2352. Lever operated Friction Spindle Brake (LESS Micro-Switch) assembled to the lathe at the factory. Price..... **\$13.15**

CL2353. Lever operated Friction Spindle Brake (LESS Micro-Switch). With instructions for installing. (Not installed)... **\$17.60**

C SWIVELING MACHINE HANDLES. Standard equipment on 10"-1 1/4" 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..... **\$2.55**

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

Catalog Number	Diameter Inches	Total Length, In.	Ship. Wt. Pounds	Price
CE3620	1/4	3 3/4	1	\$3.50
CE3621	3/8	4	1	4.45
CE3622	1/2	4 1/4	1	4.45
CE3623	5/8	4 1/2	1	4.55
CE3624	3/4	5	1	4.55
CE3625	7/8	5 1/4	1	4.75
CE3626	1	5 1/2	1	4.85
CE3627	1 1/8	5 3/4	2	5.50
CE3628	1 1/4	6	2	5.50
CE3629	1 3/8	6 1/4	2	6.30
CE3630	1 1/2	6 1/2	2	6.30
CE3631	1 3/4	6 3/4	3	6.30
CE3632	1 7/8	7	3	6.55

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

CE2218. Precision Level. Packed in wooden case. Shipping weight 5 lbs. Price f.o.b. factory..... **\$18.00**

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

Catalog Number	Sizes, Inches			Suggested for	Ship. Weight	Price
	Width	Length	Height			
CE2695	32	48	17	9" & 10" Lathe, 3 1/2' Bed	2 lbs.	\$3.05
CE2696	32	60	17	9" & 10" Lathe, 4' & 4 1/2' Bed	3 lbs.	4.00
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", 6' & 7' Bed	3 lbs.	7.80
CE2693	12	28	28	Drill Press	2 lbs.	2.60
CE2694	21	37	24	Shaper	2 lbs.	2.85

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.



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.	\$3.90
CL3515R	1½"–8	10"–1¼" Collet	2 lbs.	4.65
CL3515LT	2¼"–8	10"–1¼" Collet & 13"	3 lbs.	5.00
CL3515FH	2¾"–6	14½", 16"–16-24"	4 lbs.	7.50

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

Size Lathe	In Lieu of Regular Tailstock Spindle		As an Extra		
	Cat. No.	Price	Cat. No.	Ship. Wt.	Price
10"	CL3870R	\$6.35	CL3875R	2 lbs.	\$16.55
13"	CL3870T	8.85	CL3875T	4 lbs.	19.30
14½"	CL3870F	8.10	CL3875F	5 lbs.	22.30
16"–16-24"	CL3870H	9.05	CL3875H	7 lbs.	25.25

C HARDENED AND GROUND THREAD SCREWS.

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

Metric Hardened and Ground Thread Cross-feed Screws and Compound Rest Screws can be supplied in lieu of regular screws on 10" and larger South Bend Lathes. See Page 65.

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"	\$15.45	CL2198L	10"	\$18.75
CL2032T	13"	26.50	CL2198T	13"	29.50
CL2032F	14½"	28.75	CL2198F	14½"	32.25
CL2032H	16"–16-24"	29.50	CL2198H	16"–16-24"	33.00

CL2222T. Hardened and ground thread cross-feed screw in lieu of regular screw for 13" lathe screw feed double tool cross slide.....\$20.60

CL2222H. Hardened and ground thread cross-feed screw in lieu of regular screw for 16" lathe screw feed double tool cross slide.....\$22.90

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	55/64	13/32 x 3/8	¼ x 1¼ x 1¾	2 lbs.	\$ 7.20
CE2450R	10"	31/32	15/32 x 1	¼ x 1¾ x 1½"	2 lbs.	10.50
CE2450T	13"	13/16	19/32 x 1¼	¾ x 1¾ x 1¾	3 lbs.	13.25
CE2450F	14½"	111/32	21/32 x 1¾	½ x 2 x 2¾	4 lbs.	17.15
CE2450H	16"	1½	23/32 x 1¾	½ x 2¼ x 2½	5 lbs.	18.25
CE2450GJ	17"	1¾	15/16 x 2	½ x 2½ x 2¾	6 lbs.	20.35

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

CL2505L. Indexing Attachment for 10"–1¼" collet Lathe. Shipping weight 30 lbs. Price f.o.b. factory.....\$97.50

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"	CL3305TF	\$42.00	CL3307TF	12 lbs.	\$53.50
16"–16-24"	CL3305H	50.00	CL3307H	15 lbs.	55.00

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

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.....\$14.50

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.....\$21.55

CL2883N. Belt Guard for 9" HMD lathe when ordered with lathe. With instructions for installing. Price.....\$17.40

CL2883K. Belt Guard for 10-K HMD lathe when ordered with lathe. With instructions for installing. Price.....\$17.40



STURDY WORK BENCHES FOR 9" and 10-K LATHES

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

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

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

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

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

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

CE1780. Steel Bench 29 3/16" high with wood top (less drawer). Shipping weight, 124 lbs. Price f.o.b. factory **\$48.75**

CE1849. Same as above but 34 3/16" high **\$51.00**

C DRAWER FOR BENCH. CE1780D. Drawer for angle steel bench, 20 1/2" wide, 14" long, 3 3/8" deep. Shipping weight 9 lbs. Price f.o.b. factory **\$9.05**

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

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

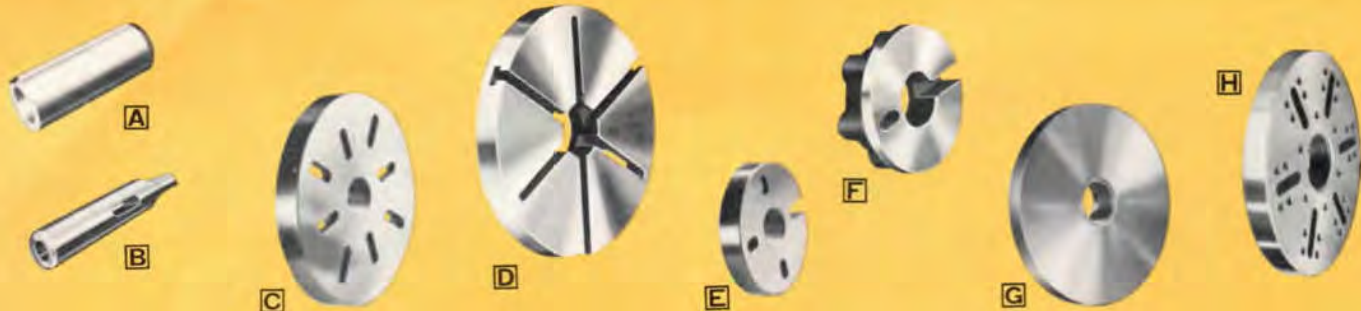
CE2215. Surface Plate. Shipping weight 75 lbs. Price . . . **\$47.00**

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

CE2219. Bench Plate. Shipping weight 75 lbs. Price . . . **\$29.75**

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

CE9640. Angle Plate. Shipping weight 4 lbs. Price . . . **\$10.50**



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

Catalog Number	Size Lathe	Taper Inside	Ship. Weight	Price
CL205NK	9" and 10-K	No. 2	1 lb.	\$3.15
CL205R	10"-1 1/4" Collet	No. 2	2 lbs.	4.05
CL205RT	10"-1 1/4" Collet	No. 3	2 lbs.	4.55
CL205L	10"-1 1/4" Collet, 13", 14 1/2", 16"-16-24"	No. 2	2 lbs.	4.30
CL205H	10"-1 1/4" Collet, 13", 14 1/2", 16"-16-24"	No. 3	2 lbs.	5.70

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.	\$1.55
CE2526	3	1	12 ozs.	2.20
CE2527	3	2	12 ozs.	2.20

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.

FOR THREADED SPINDLES:

Catalog No.	Size Lathe	Outside Dia.	Thread	No. of Slots	Shipping Weight	Price
CL2180NK	9" and 10-K	7 1/2"	1 1/2"-8	6	8 lbs.	\$11.90
CL2180R	10"-1 1/4" Collet	8 3/4"	1 1/2"-8	8	10 lbs.	14.55
CL2180L	10"-1 1/4" Collet	8 3/4"	2 1/4"-8	8	10 lbs.	20.45
CL2180Q	13"	10 1/4"	2 1/4"-8	8	19 lbs.	21.80
CL2180MH	14 1/2", 16"-16-24"	13 1/4"	2 3/4"-6	8	38 lbs.	29.75
CL2180V*	16-24"	22 3/4"	2 3/4"-6	12	96 1/2 lbs.	87.50

FOR 4" TYPE D1 CAM LOCK SPINDLES:

Catalog No.	Size Lathe	Outside Dia.	Thread	No. of Slots	Shipping Weight	Price
CB2180L	10"-1 1/4" Collet	8 3/4"	Cam Lock Spindle	8	10 lbs.	\$30.50
CB2180T	13"	10 1/4"	Cam Lock Spindle	8	19 lbs.	33.25
CB2180FH	14 1/2", 16"-16-24"	13 1/4"	Cam Lock Spindle	8	38 lbs.	45.00
CB2180V*	16-24"	22 3/4"	Cam Lock Spindle	12	96 1/2 lbs.	99.50

FOR TYPE L00 LONG TAPER SPINDLES:

Catalog No.	Size Lathe	Outside Dia.	Thread	No. of Slots	Shipping Weight	Price
CA2180L	10"-1 1/4" Collet	8 3/4"	Taper Spindle	8	10 lbs.	\$30.50
CA2180T	13"	10 1/4"	Taper Spindle	8	19 lbs.	33.25
CA2180FH	14 1/2", 16"-16-24"	13 1/4"	Taper Spindle	8	38 lbs.	45.00
CA2180V*	16-24"	22 3/4"	Taper Spindle	12	96 1/2 lbs.	99.50

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

D LARGE FACE PLATE FOR 17" LATHE. Heavily constructed and accurately machined and ground for 8" D1 Cam Lock Spindle. Has 3 T-slots for clamping work or fixtures plus regular drive slots for lathe dogs. Plate is 15" in diameter and 3" thick. Cam lock studs furnished for mounting on Cam Lock Spindle.

CL2180GJ. Large face Plate. Shipping weight 70 lbs. Price f.o.b. factory \$84.00

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

FOR THREADED SPINDLES:

Catalog No.	Size Lathe	Outside Dia.	Thread	No. of Slots	Shipping Weight	Price
CL2175NK	9" and 10-K	5 1/2"	1 1/2"-8	1	4 lbs.	\$ 8.60
CL2175R	10"-1 1/4" Collet	5 5/8"	1 1/2"-8	1	5 lbs.	12.15
CL2175L	10"-1 1/4" Collet	5 5/8"	2 1/4"-8	1	5 lbs.	14.95
CL2175Q	13"	6 3/8"	2 1/4"-8	4	4 lbs.	14.95
CL2175MH	14 1/2", 16"-16-24"	8 1/4"	2 3/4"-6	4	13 lbs.	21.80

FOR 4" TYPE D1 CAM LOCK SPINDLES:

Catalog No.	Size Lathe	Outside Dia.	Thread	No. of Slots	Shipping Weight	Price
CB2175LT	10"-1 1/4" Collet & 13"	5 1/2"	Cam Lock Spindle	1	5 lbs.	\$22.35
CB2175FH	14 1/2", 16"-16-24"	8 1/4"	Cam Lock Spindle	1	13 lbs.	33.25

FOR TYPE L00 LONG TAPER SPINDLES:

Catalog No.	Size Lathe	Outside Dia.	Thread	No. of Slots	Shipping Weight	Price
CA2175L	10"-1 1/4" Collet	5 1/2"	Tapered Spindle	1	5 lbs.	\$22.35
CA2175T	13"	5 3/4"	Tapered Spindle	1	5 lbs.	22.35
CA2175FH	14 1/2", 16"-16-24"	8 1/4"	Tapered Spindle	1	13 lbs.	33.25

F SMALL FACE PLATE FOR 17" LATHE. For 8" D1 Cam Lock Spindle, solid construction, accurately machined and ground. Has slots for driving lathe dog. 8 3/8" in diameter and 3" thick. Cam Lock Studs furnished for mounting on Cam Lock Spindle.

CL2175GJ. Small Face Plate. Shipping weight 35 lbs. Price f.o.b. factory \$50.50

G FIXTURE PLATES. Mount special fixtures, jigs, holding devices, and tools on the spindle nose of the lathe. 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.

FOR THREADED SPINDLES:

Catalog No.	Size Lathe	Outside Dia.	Spindle Thread	Shipping Weight	Price
CL46NK	9" & 10-K	7 1/2"	1 1/2"-8	9 lbs.	\$ 8.20
CL46R	10"-1 1/4" Collet	9"	1 1/2"-8	14 lbs.	11.05
CL46L	10"-1 1/4" Collet	9"	2 1/4"-8	14 lbs.	12.15
CL46Q	13"	10 1/4"	2 1/4"-8	22 lbs.	13.85
CL46MH	14 1/2", 16"-16-24"	11 3/4"	2 3/4"-6	29 lbs.	15.45

FOR 4" TYPE D1 CAM LOCK SPINDLES:

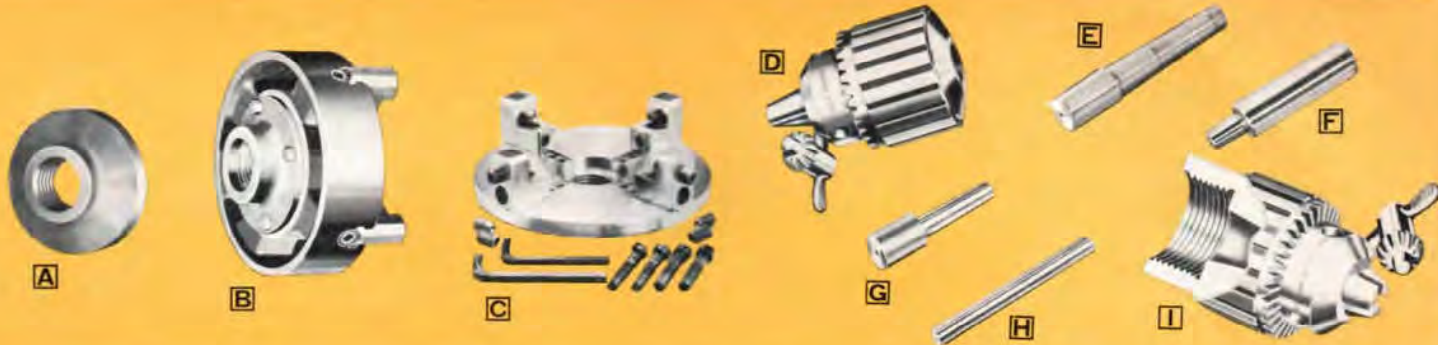
Catalog No.	Size Lathe	Outside Dia.	Spindle Thread	Shipping Weight	Price
CB46L	10"-1 1/4" Collet	9"	Cam Lock Spindle	14 lbs.	\$21.15
CB46T	13"	10 1/4"	Cam Lock Spindle	22 lbs.	22.90
CB46FH	14 1/2", 16"-16-24"	11 3/4"	Cam Lock Spindle	29 lbs.	24.70

FOR TYPE L00 LONG TAPER SPINDLES:

Catalog No.	Size Lathe	Outside Dia.	Spindle Thread	Shipping Weight	Price
CA46L	10"-1 1/4" Collet	9"	Taper Spindle	14 lbs.	\$21.15
CA46T	13"	10 1/4"	Taper Spindle	22 lbs.	22.90
CA46FH	14 1/2", 16"-16-24"	11 3/4"	Taper Spindle	29 lbs.	24.70

H 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 core 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 3/8" thick.

Catalog No.	Size Lathe	Outside Dia.	Spindle Thread	Shipping Weight	Price
CL1483NK	9" & 10-K	8 1/2"	1 1/2"-8	13 lbs.	\$14.95
CL1483R	10"-1 1/4" Collet	8 1/2"	1 1/2"-8	13 lbs.	20.70
CL1483LQ	10"-1 1/4" Collet & 13"	8 1/2"	2 1/4"-8	13 lbs.	23.15



A CHUCK PLATES. Semi-machined Chuck Plates for those who wish to fit their own chucks to South Bend Lathes. Heavily constructed cast-iron plates, 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.

FOR THREADED SPINDLES: (Accurately Threaded)

Catalog Number	Size Lathe	Spindle Nose Th'd.	O.D. of Plate	Shipping Weight	Price
CE2703NK CE2704NK CE2709NK	9" and 10-K	1 1/2"-8	3 1/2"	3 lbs.	5 4.30
5"			4 lbs.	4.65	
7 1/2"			10 lbs.	6.00	
CE2703RT CE2704RT CE2705RT CE2707RT CE2708RT CE2709RT CE2710RT	10"-1 1/4" Collet	1 3/4"-8	3 1/2"	4 lbs.	8.50
5"			6 lbs.	10.00	
5 1/2"			8 lbs.	10.20	
6 1/4"			9 lbs.	10.40	
7 1/2"			12 lbs.	10.90	
9"			16 lbs.	11.35	
10 1/4"			20 lbs.	11.85	
CE2703LQ CE2704LQ CE2705LQ CE2707LQ CE2708LQ CE2709LQ CE2710LQ	10"-1 1/4" Collet & 13"	2 1/4"-8	3 1/2"	4 lbs.	11.25
5"			5 lbs.	11.80	
5 1/2"			6 lbs.	11.95	
6 1/4"			7 lbs.	12.20	
7 1/2"			11 lbs.	12.60	
9"			13 lbs.	13.15	
10 1/4"			18 lbs.	13.55	
CE2704MH CE2705MH CE2706MH CE2707MH CE2708MH CE2710MH CE2711MH	14 1/2", 16"-16-24"	2 3/4"-6	5"	8 lbs.	13.35
5 1/2"			8 lbs.	13.50	
6"			9 lbs.	13.65	
6 1/4"			9 lbs.	13.85	
7 1/2"			13 lbs.	14.25	
10 1/4"			20 lbs.	15.75	
11 1/4"			24 lbs.	15.75	

FOR 4" TYPE D1 CAM LOCK SPINDLES:

Catalog Number	Size Lathe	Spindle Type	O.D. of Plate	Shipping Weight	Price
CB2704RH	10"-1 1/4", 13"	Cam Lock	5"	8 lbs.	521.10
CB2707RH	14 1/2", 16"-16-24"	Lock Spindle	6 1/4"	9 lbs.	22.35
CB2709RH		Spindle	9"	16 lbs.	24.30

FOR TYPE L00 LONG TAPER SPINDLES:

Catalog Number	Size Lathe	Spindle Type	O.D. of Plate	Shipping Weight	Price
CA2704RH	10"-1 1/4", 13"	Taper Spindle	5"	8 lbs.	521.10
CA2707RH	14 1/2", 16"-16-24"		6 1/4"	9 lbs.	22.35
CA2709RH			9"	16 lbs.	23.55

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

Catalog Number	Size Lathe	Spindle Type	Price
CE2935NK	9" & 10-K	Threaded	5 8.10
CE2935RT	10"-1 1/4" Collet	Threaded	16.25
CE2935LQ	10"-1 1/4" Collet & 13"-1 1/4" Collet	Threaded	17.40
CE2935MH	14 1/2", 16"-16-24"	Threaded	19.35
CB2935	10" thru 16-24"	4" D1 Cam Lock	33.00
CA2935	10" thru 16-24"	L00 Long Taper	33.00

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

Cat. No.	Size of Lathe	Thread	Weight	Price
CL2155NK	9" and 10-K	1 1/2"-8	14 lbs.	521.55
CL2155R	10"-1 1/4" Collet	1 3/4"-8	16 lbs.	23.20
CL2155L	10"-1 1/4" Collet	2 1/4"-8	16 lbs.	24.30

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.

Catalog Number	Make of Chuck	Capacity of Chuck	Net Wt. Lbs.	Ship. Wt. Lbs.	Price
CE1200	Jacobs	0 to 3/8 in.	1 1/2	1 1/2	5 9.80
CE1201	Jacobs	0 to 1/2 in.	1 3/4	2 3/4	12.20
CE1202	Jacobs	3/4 to 7/8 in.	3 1/2	3 1/2	18.30
CE1206	Jacobs	3/8 to 1 in.	6 1/2	7 1/2	39.25

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

For Drill Chuck	No. 2 Morse Taper			No. 3 Morse Taper		
	Cat. No.	Ship. Wt.	Price	Cat. No.	Ship. Wt.	Price
CE1200	CE2300	3/8 lb.	\$1.60	CE2301	3/4 lb.	\$2.25
CE1201	CE2302	1/2 lb.	1.60	CE2303	5/8 lb.	2.25
CE1202	CE2304	1/2 lb.	1.75	CE2305	3/4 lb.	2.25
CE1206	CE2306	1 1/4 lbs.	2.25	CE2307	1 1/2 lbs.	2.50

CE1217GJ. TAPER ARBOR FOR 17" LATHE. Fits headstock and tailstock spindle. Has tang to be used with CE1206 Drill Chuck listed above. Shipping weight 2 pounds. . . . \$8.95

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

Cat. No.	For Turret Hole	For Drill Chuck	Price	Cat. No.	For Turret Hole	For Drill Chuck	Price
CE2360	3/8"	CE1200	\$2.50	CE2900	1"	CE1200	\$2.75
CE2362	3/8"	CE1201	2.50	CE2901	1"	CE1201	2.75
CE2364	3/8"	CE1202	2.50	CE2902	1"	CE1202	2.75
CE2366	3/8"	CE1206	2.50	CE2903	1"	CE1206	2.75
CE2361	3/4"	CE1200	2.75	CE2377	1 1/2"	CE1200	3.15
CE2363	3/4"	CE1201	2.75	CE2378	1 1/2"	CE1201	3.15
CE2365	3/4"	CE1202	2.75	CE2379	1 1/2"	CE1202	3.15
CE2367	3/4"	CE1206	2.75	CE2380	1 1/2"	CE1206	3.15

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.	52.05
CE1501	No. 3 Morse Taper	2 lbs.	2.45
CE2325	3/8" Diameter Straight	1 lb.	2.05
CE2326	3/4" Diameter Straight	1 lb.	2.10

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	3/8" to 3/4"	3 3/4 lbs.	\$24.50
CE925	3/8" to 3/4"	4 1/4 lbs.	29.00



MEDIUM DUTY 3 AND 4 JAW CHUCKS

Recommended Types for SOUTH BEND LATHES

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

FOR THREADED SPINDLES:

Number	Size	Thread	Size of Lathe	Weight	Price
CL3005NK	5"	1½"-8	9" and 10-K	14 lbs.	\$ 82.00
CL3505NK	5"	1½"-8	9" and 10-K	16 lbs.	123.00
CL3506NK	6"	1½"-8	9" and 10-K	25 lbs.	133.00
CL3005R	5"	1¾"-8	10"-1¼" Collet	14 lbs.	84.00
CL3505R	5"	1¾"-8	10"-1¼" Collet	18 lbs.	124.00
CL3506R	5"	1¾"-8	10"-1¼" Collet	33 lbs.	135.00
CL3005L	5"	2¼"-8	10"-1¼" Collet	14 lbs.	86.00
CL3505LQ	5"	2¼"-8	10"-1¼" Collet	18 lbs.	125.00
CL3506LQ	6"	2¼"-8	10"-1¼" Collet	33 lbs.	137.00
CL3505LQ	5"	2¼"-8	13"	18 lbs.	125.00
CL3506LQ	6"	2¼"-8	13"	33 lbs.	137.00
CL3507Q	7½"	2¼"-8	13"	49 lbs.	160.00
CL3505MH	5"	2¾"-6	14½"	19 lbs.	127.00
CL3506MH	6"	2¾"-6	14½"	29 lbs.	138.00
CL3507MH	7½"	2¾"-6	14½"	50 lbs.	161.00
CL3509MH	9"	2¾"-6	14½"	62 lbs.	199.00
CL3505MH	5"	2¾"-6	16"-16-24"	19 lbs.	127.00
CL3506MH	6"	2¾"-6	16"-16-24"	29 lbs.	138.00
CL3507MH	7½"	2¾"-6	16"-16-24"	50 lbs.	161.00
CL3509MH	9"	2¾"-6	16"-16-24"	62 lbs.	199.00

FOR 4" TYPE D1 CAM LOCK SPINDLES:

CB3005	5"	1 Pinion	10" & 13"	14 lbs.	\$ 88.00
CB3505	5"	3 Pinion	10" & 13"	18 lbs.	130.00
CB3506	6"	Cam Lock Spindle	10", 13", 14½", 16"-16-24"	33 lbs.	142.00
CB3507	7½"	Cam Lock Spindle	13", 14½", 16"-16-24"	50 lbs.	164.00
CB3509	9"	Cam Lock Spindle	14½", 16"-16-24"	62 lbs.	208.00

FOR TYPE L00 LONG TAPER SPINDLES:

CA3005	5"	1 Pinion	10" & 13"	14 lbs.	\$ 88.00
CA3505	5"	3 Pinion	10" & 13"	18 lbs.	130.00
CA3506	6"	Long Taper Spindle	10", 13", 14½", 16"-16-24"	33 lbs.	142.00
CA3507	7½"	Long Taper Spindle	13", 14½", 16"-16-24"	50 lbs.	164.00
CA3509	9"	Long Taper Spindle	14½", 16"-16-24"	62 lbs.	208.00

B LATHE CHUCKS WITH THREE 2-PIECE JAWS (Reversible Tops.) These three jaw chucks have two piece reversible top jaws. Chuck body ground, jaws hardened. Jaws move simultaneously automatically centering work. Price includes wrench.

FOR THREADED SPINDLES:

CLR3506NK	6"	1½"-8	9" and 10-K	33 lbs.	\$133.00
CLR3506R	6"	1¾"-8	10"-1¼" Collet	33 lbs.	135.00
CLR3506LQ	6"	2¼"-8	10"-1¼" Collet	33 lbs.	137.00
CLR3506MH	6"	2¾"-6	14½" thru 16-24"	33 lbs.	138.00
CLR3507Q	7½"	2¼"-8	13"	50 lbs.	160.00
CLR3507MH	7½"	2¾"-6	14½" thru 16-24"	50 lbs.	161.00
CLR3509MH	9"	2¾"-6	14½" thru 16-24"	62 lbs.	199.00

FOR 4" TYPE D1 CAM LOCK SPINDLES:

CBR3506	6"	Cam Lock	10"-1¼" Collet	33 lbs.	\$142.00
CBR3507	7½"	Cam Lock	13" & 14½"	50 lbs.	164.00
CBR3509	9"	Cam Lock	16"-16-24"	62 lbs.	208.00

FOR TYPE L00 LONG TAPER SPINDLES:

CAR3506	6"	Long Taper Spindle	10"-1¼" Collet	33 lbs.	\$142.00
CAR3507	7½"	Long Taper Spindle	13" & 14½"	50 lbs.	164.00
CAR3509	9"	Long Taper Spindle	16"-16-24"	62 lbs.	208.00

FOR 8" D1 CAM LOCK SPINDLES:

CL3510GJ	10"	Cam Lock Spindle	17"	65 lbs.	\$304.00
CL3512GJ	12"	Cam Lock Spindle	17"	89 lbs.	371.00

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

FOR THREADED SPINDLES:

Cat. No.	Size	Thread	Size of Lathe	Weight	Price
CL4006NK	6"	1½"-8	9" and 10-K	14 lbs.	\$ 61.00
CL4206NK	6"	1½"-8	9" and 10-K	26 lbs.	88.00
CL4006R	6"	1¾"-8	10"-1¼" Collet	14 lbs.	55.00
CL4206R	6"	1¾"-8	10"-1¼" Collet	28 lbs.	89.00
CL4207R	7½"	1¾"-8	10"-1¼" Collet	40 lbs.	110.00
CL4006L	6"	2¼"-8	10"-1¼" Collet	14 lbs.	56.00
CL4206LQ	6"	2¼"-8	10"-1¼" Collet	28 lbs.	90.00
CL4207LQ	7½"	2¼"-8	10"-1¼" Collet	40 lbs.	111.00
CL4206LQ	6"	2¼"-8	13"	28 lbs.	90.00
CL4207LQ	7½"	2¼"-8	13"	40 lbs.	111.00
CL4209Q	9"	2¼"-8	13"	51 lbs.	124.00
CL4207MH	7½"	2¾"-6	14½"	42 lbs.	112.00
CL4209MH	9"	2¾"-6	14½"	52 lbs.	125.00
CL4210MH	10"	2¾"-6	14½"	62 lbs.	141.00
CL4207MH	7½"	2¾"-6	16"-16-24"	42 lbs.	112.00
CL4209MH	9"	2¾"-6	16"-16-24"	52 lbs.	125.00
CL4210MH	9"	2¾"-6	16"-16-24"	62 lbs.	141.00
CL4212H	12"	2¾"-6	16"-16-24"	84 lbs.	199.00

FOR 4" TYPE D1 CAM LOCK SPINDLES:

CB4006	6"	Cam Lock	10"-1¼" Collet	14 lbs.	\$ 61.00
CB4206	6"	Cam Lock	10" & 13"	26 lbs.	97.00
CB4207	7½"	Cam Lock Spindle	10", 13", 14½", 16"-16-24"	42 lbs.	114.00
CB4209	9"	Cam Lock Spindle	13", 14½", 16"-16-24"	52 lbs.	130.00
CB4210	10"	Cam Lock Spindle	14½", 16"-16-24"	62 lbs.	148.00
CB4212	12"	Cam Lock Spindle	16"-16-24"	84 lbs.	205.00

FOR TYPE L00 LONG TAPER SPINDLES:

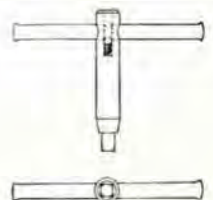
CA4006	6"	Long Taper Spindle	10"-1¼" Collet	14 lbs.	\$ 61.00
CA4206	6"	Long Taper Spindle	10" & 13"	26 lbs.	97.00
CA4207	7½"	Long Taper Spindle	10", 13", 14½", 16"-16-24"	42 lbs.	114.00
CA4209	9"	Long Taper Spindle	13", 14½", 16"-16-24"	52 lbs.	130.00
CA4210	10"	Long Taper Spindle	14½", 16"-16-24"	62 lbs.	148.00
CA4212	12"	Long Taper Spindle	16"-16-24"	84 lbs.	205.00

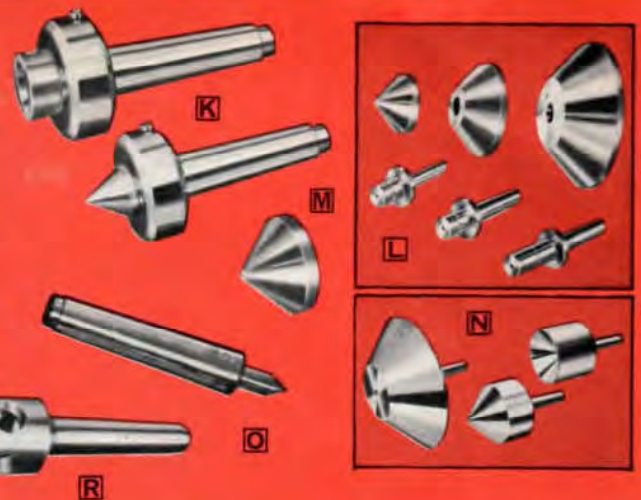
FOR 8" TYPE D1 CAM LOCK SPINDLES:

CL4210GJ	10"	Cam Lock Spindle	17"	65 lbs.	\$225.00
CL4212GJ	12"	Cam Lock Spindle	17"	89 lbs.	265.00

CHUCK WRENCHES

Catalog Number	Size Square	Shipping Weight	Factory Price
CE2748	.277"	2 lbs.	\$2.50
CE2742	.297"	1 lb.	3.15
CE2743	.375"	2 lbs.	2.50
CE2749	.400"	2 lbs.	2.50
CE2744	.420"	2 lbs.	4.20
CE2746	.570"	2 lbs.	3.15





LATHE CENTERS AND DRILL PADS

Description	No. 2 Morse Taper Shank			No. 3 Morse Taper Shank		
	Catalog Number	Ship. Wt.	Price	Catalog Number	Ship. Wt.	Price
A — 60° Center	CE2401	1 lb.	\$3.60	CE2402	2 lbs.	\$ 4.65
B — 60° Carbide Center	CE1889	1 lb.	6.95	CE1890	2 lbs.	12.35
C — Half Center	CE2424	1 lb.	3.60	CE2425	2 lbs.	4.65
D — Cup Center	CE2422	1 lb.	3.30	CE2423	2 lbs.	4.35
E — Spur Center	CE2416	2 lbs.	4.65	CE2417	5 lbs.	5.05
F — Screw Center	CE2413	3 lbs.	4.75	CE2414	4 lbs.	5.55
G — Drill Pad	CE2396	3 lbs.	3.95	CE2397	4 lbs.	4.35
H — Crotch Center	CE2398	2 lbs.	3.95	CE2399	3 lbs.	5.05
I — 60° Hollow Center	CE1896	2 lbs.	5.75	CE1897	2 lbs.	6.75

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 Diameter	Total Length	Shipping Weight	Price
CE1475NK	9" & 10-K	¾"	16"	4 lbs.	\$2.30
CE1475R	10"-11¼" Collet	1"	17¾"	5 lbs.	3.45
CE1475L	10"-11¼" Collet	1¾"	17¾"	7 lbs.	3.65
CE1475QH	13", 14½", 16", 16-24"	1¾"	28¼"	7 lbs.	4.65

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.	\$20.05
CE3901	60° Point	No. 3	5 lbs.	24.05
CE3903	60° Hollow	No. 2	3 lbs.	20.05
CE3904	60° Hollow	No. 3	5 lbs.	24.05

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

Catalog Number	Takes Pipe	Requires Shank	Shipping Weight	Price
CE2160	½" to 3"	CE2172	4 lbs.	\$ 6.95
CE2161	3" to 5"	CE2174	6 lbs.	9.45
CE2162	5" to 8"	CE2173	17 lbs.	14.20

PIPE CENTER SHANKS

Catalog Number	Shank Taper	Takes Centers	Shipping Weight	Price
CE2172	No. 2	CE2160 & CE2161	2 lbs.	\$ 5.95
CE2174	No. 3	CE2160 & CE2161	3 lbs.	6.90
CE2173	No. 3	CE2162	4 lbs.	11.65

M HARDENED PIPE CENTER. Takes pipe ½" to 3". Same as CE2160, but made of heat-treated and hardened steel. **CE2163.** Shipping weight 4 lbs. \$8.10

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	¾" to 3½"	No. 2	9 lbs.	\$52.00
CE2446	90° Point	¾" to 3½"	No. 3	9 lbs.	53.00
CE2449	90° Point	3½" to 8¾"	No. 3	20 lbs.	69.00
CE2447	90° Hollow	¾" to 3½"	No. 2	8 lbs.	63.00
CE2448	90° Hollow	¾" to 3½"	No. 3	8 lbs.	63.00

O SPRING LOADED PRECISION LIVE CENTER. 60° spindle maintains constant tailstock thrust. A fine live center for high speed, precision operations.

Catalog Number	Morse Taper	End Thrust Spring Limit	Over-All Taper Length	Radial Load Cap. Pounds	Price
CE3905	2	120	3"	1400	\$32.00
CE3906	3	290	3¾"	1850	40.00
CE3907	4	420	5"	2500	48.00

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

Cat. No.	Taper Shank	Diameter Will Hold	Ship. Wt.	Price	Cat. No.	Taper Shank	Diameter Will Hold	Ship. Wt.	Price
CE2338	No. 2	¼"	1 lb.	\$3.95	CE2346	No. 3	¼"	2 lbs.	\$4.95
CE3029	No. 2	¾"	1 lb.	4.00	CE3032	No. 3	¾"	2 lbs.	5.00
CE2340	No. 2	1¼"	1 lb.	3.95	CE2343	No. 3	1¼"	2 lbs.	4.95
CE2339	No. 2	1¾"	1 lb.	3.95	CE2347	No. 3	1¾"	2 lbs.	4.95
CE3030	No. 2	½"	1 lb.	4.00	CE3033	No. 3	½"	2 lbs.	5.00
CE2341	No. 2	.302"	1 lb.	3.95	CE2344	No. 3	.302"	2 lbs.	4.95
CE3031	No. 2	¾"	1 lb.	4.00	CE3034	No. 3	¾"	2 lbs.	5.00
CE2342	No. 2	1¼"	1 lb.	3.95	CE2345	No. 3	1¼"	2 lbs.	4.95

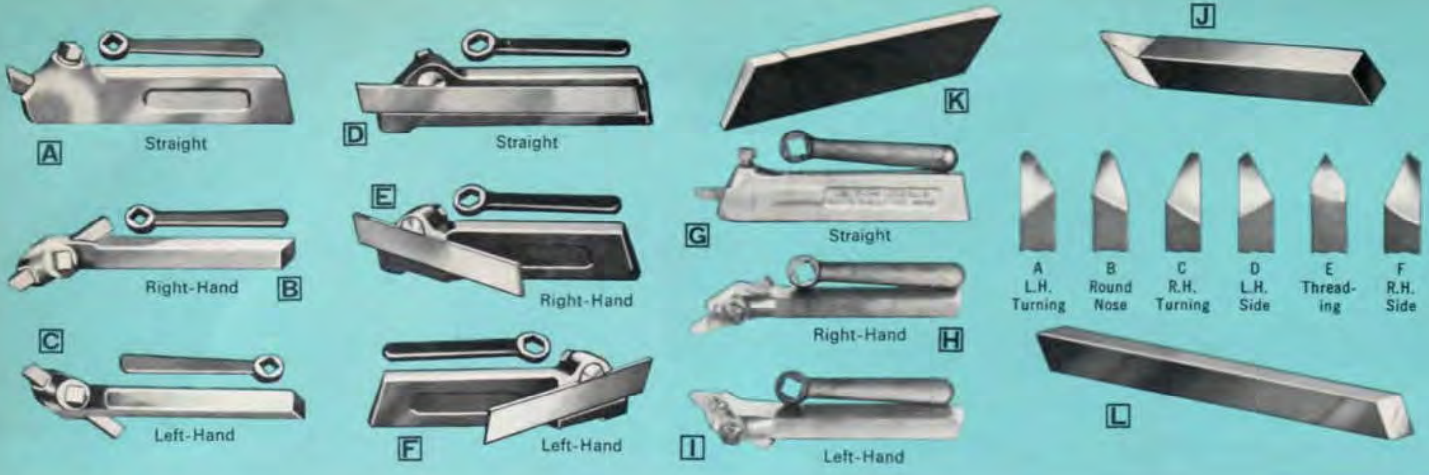
Q COMBINATION CENTER DRILL AND COUNTER-SINKS. For drilling center hole and countersinking 60° angle for lathe center. Made of high speed tool steel.

Dia. of Drill	Dia. of Body	Single Drill			Lots of Twelve		
		Cat. No.	Ship. Wt.	Price	Catalog No.	Ship. Wt.	Price
¾"	¾"	CE2087	4 ozs.	\$.98	CE2555	8 ozs.	\$11.75
¾"	¾"	CE3021	4 ozs.	.98	CE3025	8 ozs.	11.75
¾"	¾"	CE3022	4 ozs.	.98	CE3026	8 ozs.	11.75
½"	¾"	CE3023	4 ozs.	.98	CE3027	1 lb.	11.75
¾"	¾"	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

R DIE HOLDER. For holding standard 1" or 1½" diameter button dies in tailstock spindle of lathe for cutting screw threads on work held in lathe chuck. Die holder has ½" hole, 3" deep for stock clearance. Made of a single piece of steel.

Catalog Number	Takes Dies	Taper Shank	Shipping Weight	Price
CE1829	1" diameter	No. 2	2 lbs.	\$6.55
CE1834	1" diameter	No. 3	3 lbs.	7.55
CE1838	1½" diameter	No. 2	2 lbs.	6.55
CE1839	1½" diameter	No. 3	3 lbs.	7.55



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.

Catalog Number	Size Lathe	Size Shank	Size Cutter	Ship. Wt.	Price
A Straight Shank Turning Tool Holders					
CE847S	9", 10-K & 10"	3/8" x 1 3/16"	1/4" x 1/4"	1 lb.	\$ 3.40
CE846S	9", 10-K & 10"	3/8" x 1 3/16"	1/4" x 1/4"	2 lbs.	7.75
CE852S	13"	1/2" x 1 1/8"	3/8" x 3/8"	3 lbs.	8.90
CE853S	14 1/2", 16"-16-24"	3/8" x 1 1/8"	3/8" x 3/8"	3 lbs.	10.85

Catalog Number	Size Lathe	Size Shank	Size Cutter	Ship. Wt.	Price
B Right-Hand Turning Tool Holders					
CE847R	9", 10-K & 10"	3/8" x 1 3/16"	1/4" x 1/4"	1 lb.	\$ 3.40
CE846R	9", 10-K & 10"	3/8" x 1 3/16"	1/4" x 1/4"	2 lbs.	7.75
CE852R	13"	1/2" x 1 1/8"	3/8" x 3/8"	3 lbs.	8.90
CE853R	14 1/2", 16"-16-24"	3/8" x 1 1/8"	3/8" x 3/8"	3 lbs.	10.85

Catalog Number	Size Lathe	Size Shank	Size Cutter	Ship. Wt.	Price
C Left-Hand Turning Tool Holders					
CE847L	9", 10-K & 10"	3/8" x 1 3/16"	1/4" x 1/4"	1 lb.	\$ 3.40
CE846L	9", 10-K & 10"	3/8" x 1 3/16"	1/4" x 1/4"	2 lbs.	7.75
CE852L	13"	1/2" x 1 1/8"	3/8" x 3/8"	3 lbs.	8.90
CE853L	14 1/2", 16"-16-24"	3/8" x 1 1/8"	3/8" x 3/8"	3 lbs.	10.85

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

Catalog Number	Size Lathe	Size Shank	Size Cutter	Ship. Weight	Price
D Straight Shank Cutting-off Tool Holders					
CE833S	9", 10-K & 10"	3/8" x 1 3/16"	3/32" x .595"	1 lb.	\$ 4.00
CE736S	9", 10-K & 10"	3/8" x 1 3/16"	3/16" x .475"	2 lbs.	7.75
CE883S	13"	1/2" x 1 1/8"	1/8" x .735"	3 lbs.	9.75
CE884S	14 1/2", 16"-16-24"	3/8" x 1 1/8"	1/8" x .870"	3 lbs.	12.20

Catalog Number	Size Lathe	Size Shank	Size Cutter	Ship. Weight	Price
E Right-Hand Cutting-off Tool Holders					
CE833R	9", 10-K & 10"	3/8" x 1 3/16"	3/32" x .595"	1 lb.	\$ 4.00
CE736R	9", 10-K & 10"	3/8" x 1 3/16"	3/16" x .475"	2 lbs.	7.75
CE883R	13"	1/2" x 1 1/8"	1/8" x .735"	3 lbs.	9.75
CE884R	14 1/2", 16"-16-24"	3/8" x 1 1/8"	1/8" x .870"	3 lbs.	12.20

Catalog Number	Size Lathe	Size Shank	Size Cutter	Ship. Weight	Price
F Left-Hand Cutting-off Tool Holders					
CE736L	9", 10-K & 10"	3/8" x 1 3/16"	3/16" x .475"	2 lbs.	\$ 7.75
CE883L	13"	1/2" x 1 1/8"	1/8" x .735"	3 lbs.	9.75
CE884L	14 1/2", 16"-16-24"	3/8" x 1 1/8"	1/8" x .870"	3 lbs.	12.20

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

- G CE817S.** Straight Carbide Turning Tool Holder. For 3/8" cutter bits. Shipping weight 3 lbs. Price \$12.25
- H CE817R.** Right Hand Carbide Turning Tool Holder. For 3/8" cutter bits. Shipping weight 3 lbs. Price \$12.25
- I CL817L.** Left Hand Carbide Turning Tool Holder. For 3/8" cutter bits. Shipping weight 3 lbs. Price \$12.25

J 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.	\$.60	CE1779	10 ozs.	\$3.30
3/16	2 1/2	CE1313	5 ozs.	.85	CE1777	10 1/2 ozs.	4.85
3/8	3	CE1316	5 ozs.	1.70	CE1778	11 ozs.	8.90

K 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 57.

Cat. No.	Size of Blade	Ship. Wt.	Price
CE876	3/32" x .595" x 5"	5 ozs.	\$2.20
CE1192	3/32" x .475" x 4 1/2"	5 ozs.	2.05
CE878	1/8" x .735" x 5"	6 ozs.	2.65
CE879	1/8" x .870" x 6"	8 ozs.	3.25

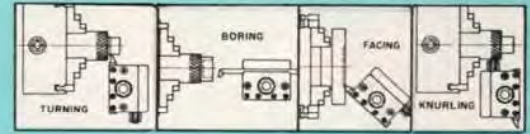
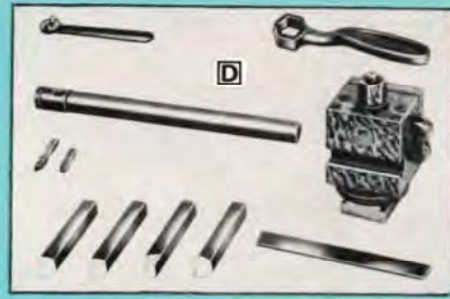
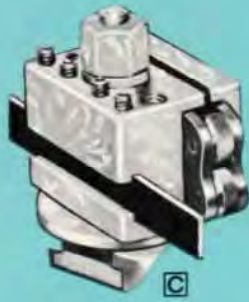
L UNGROUND CUTTER BITS. These cutter bits are made of good quality high-speed steel. They are heat-treated and hardened and are ready for use when sharpened. Specify catalog number and size when ordering cutter bits.

UNGROUND HIGH SPEED STEEL CUTTER BITS

Catalog Number	Size Square	Length Cutter	Shipping Weight	Factory Price
CE3531	3/16"	1"	3 ozs.	\$.15
CE3532	3/16"	1 1/2"	3 ozs.	.18
CE3533	1/4"	2"	4 ozs.	.28
CE3534	3/16"	2 1/2"	5 ozs.	.50
CE3535	3/8"	3"	5 ozs.	.73
CE3536	7/16"	3 1/2"	7 ozs.	1.04
CE3537	1/2"	4"	12 ozs.	1.40
CE3538	3/4"	4 1/2"	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	CE2270	1 lb.	\$ 3.25	CE2370	1 lb.	3.90
3/16	1 1/2	CE2371	1 lb.	3.90	CE2372	2 lbs.	5.25
1/4	2	CE1629	10 ozs.	\$ 1.40	CE2373	2 lbs.	5.25
3/16	2 1/2	CE1632	10 1/2 ozs.	2.80	CE2374	3 lbs.	10.65
3/8	3	CE1633	11 ozs.	3.90	CE2375	4 lbs.	15.45
3/8	3 1/2	CE2501	2 lbs.	5.70	CE2393	6 lbs.	22.35
1/2	4	CE2502	3 lbs.	7.80	CE2393	13 lbs.	31.75
3/4	4 1/2	CE2503	4 lbs.	11.40	CE2376	15 lbs.	44.70



A MOST POPULAR ITEM – SOUTH BEND 10 IN 1 TOOL HOLDER

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 course, 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 3/8"	2 lbs.	\$ 8.05
CE665	9", 10-K, & 10"	3/4" x 3/4"	2 lbs.	15.40
CE893	13"	1/2" x 1 1/8"	2 lbs.	18.45
CE894	14 1/2", 16"—16"-24", & 17"	3/8" x 1 1/8"	3 lbs.	21.85

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 3/8"	2 lbs.	\$21.90
CE3616	13"	1/2" x 1 1/8"	2 lbs.	24.65
CE3617	14 1/2", 16"—16"-24", & 17"	3/8" x 1 1/8"	3 lbs.	28.75

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 56 and 58 for cutter bits, boring bars, and cut-off blades.

Cut off blade shown in illustration is not included.

Catalog Number	Size Lathe Inches	Holds Cutter Bits Inch	Holds Boring Bars Inches	Holds Cut-off Blades Inch	Ship. Wt. Lbs.	Price
CE1413NK	9 & 10-K	3/8 x 3/8	3/8 to 3/4	3/32 x .595	5	\$22.05
CE1413R	10	3/8 x 3/8	3/8 to 3/4	3/32 x .595	5	22.05
CE1413T	13	1/2 x 1/2	1/2 to 1 1/4	1/4 x .735	7	29.25
CE1413F	14 1/2	3/8 x 3/8	1/2 to 1 1/4	1/4 x .870	10	33.00
CE1413H	16"—16"-24"	3/8 x 3/8	1/2 to 1 1/4	1/4 x .870	10	33.25

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 illustration of cutter bits, boring bars, and cut-off blades, see item "E" below and pages 56 and 58.

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.	\$36.00
CE2930R	10"	CE2776	CE2419	CE876	7 lbs.	36.00
CE2930T	13"	CE2777	CE2420	CE878	12 lbs.	50.50
CE2930F	14 1/2"	CE2778	CE2421	CE879	18 lbs.	67.50
CE2930H	16"—16"-24"	CE2778	CE2421	CE879	18 lbs.	68.50

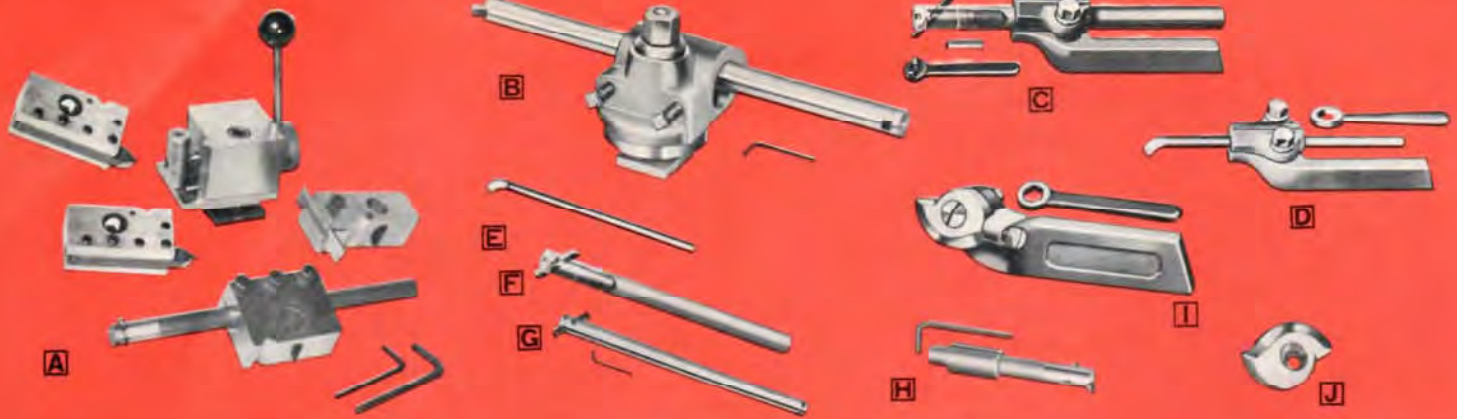
E GROUND CUTTER BITS FOR 10 IN 1 TOOL HOLDER. High speed steel cutter bits ground for use in 10 in 1 tool holder listed above. Made in four shapes: T for turning, H for threading, R for facing on right side of work, and L for facing on left side of work. When ordering single bits be sure to specify shape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

Size Square Inch	Length Cutter Inches	Single Bit			Set of 4 Bits		
		Cat. No.	Ship. Wt.	Price	Cat. No.	Ship. Wt.	Price
3/8	3	CE2267	5 ozs.	\$1.70	CE2776	1 lb.	\$ 6.60
1/2	4	CE2268	8 ozs.	2.65	CE2777	2 lbs.	9.60
3/4	4 3/4	CE2269	1 lb.	4.80	CE2778	3 lbs.	18.15

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.

Catalog Number	Pattern	Size	Fits Knurling Tools	Ship. Wt.	Price
CE3150†	Fine Diamond	3/8" x 3/8"	CE820 & CE665	4 ozs.	\$3.15
CE3151†	Med. Diamond	3/8" x 3/8"	CE820 & CE665	4 ozs.	3.15
CE3152†	Coarse Diamond	3/8" x 3/8"	CE820 & CE665	4 ozs.	3.15
CE3153†	Fine Straight	3/8" x 3/8"	CE820 & CE665	4 ozs.	3.15
CE3154†	Med. Straight	3/8" x 3/8"	CE820 & CE665	4 ozs.	3.15
CE3155†	Coarse Straight	3/8" x 3/8"	CE820 & CE665	4 ozs.	3.15
CE3156	Fine Diamond	3/4" x 3/8"	CE893 & CE894	5 ozs.	3.65
CE3157	Med. Diamond	3/4" x 3/8"	CE893 & CE894	5 ozs.	3.65
CE3158	Coarse Diamond	3/4" x 3/8"	CE893 & CE894	5 ozs.	3.65
CE3159	Fine Straight	3/4" x 3/8"	CE893 & CE894	5 ozs.	3.65
CE3160	Med. Straight	3/4" x 3/8"	CE893 & CE894	5 ozs.	3.65
CE3161	Coarse Straight	3/4" x 3/8"	CE893 & CE894	5 ozs.	3.65

†Fits all sizes of 10 in 1 Tool Holders.



A QUICK CHANGE TOOL POST. This new Quick Change Tool Post fits on the compound of South Bend 9", 10-K and 10"-1 1/4" collet lathes. All working surfaces are precision ground.

Regular shop test has shown over 80% reduction to production time compared with regular tool post and tool holders.

Comes complete with four tool holders. (2) Turning and Facing Tool Holders. (1) Cut-off or Parting Tool Holder (1) Boring Bar holder and Boring Bar. One unground cutter bit for each tool also included.

Locking requires less than 90° movement of handle for tool change. Tools lock into pre-set position. Individual tool holders have built in height adjustment.

CE1414NK. Quick Change Tool Post with four tool holders for 9" and 10-K lathes. Shipping weight 7 lbs. **\$74.95**

CE1414R. Quick Change Tool Post with four tool holders for 10" lathes. Shipping weight 7 lbs. **\$74.95**

B HEAVY DUTY BORING AND TURNING TOOL. This is a very rigid combination tool for boring, turning, and facing operations. Holder takes bars from 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"	14 1/2"	16" & 16-24"
Max. Bar Cap.	3/4"	3/4"	1 1/4"	1 1/2"	1 1/2"
Size Boring Bar	3/4" x 12"	3/4" x 12"	1" x 16"	1 1/4" x 18"	1 1/4" x 18"
Size Cutter Bit	1/4" x 1/4"	1/4" x 1/4"	3/8" x 3/8"	3/8" x 3/8"	3/8" x 3/8"
Holder Only Cat. No.	CE3677NK	CE3677R	CE3677T	CE3677F	CE3677H
Ship. Wt. Lbs.	3	3	5	7	7
Price	\$13.10	\$13.90	\$14.75	\$16.55	\$18.40
Holder and Bar Cat. No.	CE469NK	CE469R	CE469T	CE469F	CE469H
Ship. Wt. Lbs.	8	8	14	15	18
Price	\$20.15	\$20.95	\$27.50	\$32.75	\$34.75

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

Cat. No.	Size of Lathe	Size of Shank, Inches	Size Bar, Inches	Size of Cutter, Inch	Ship. Wt. Lbs.	Price
CE423	9", 10-K, & 10"	5/16 x 3/4	1/2 x 7 3/8	3/16 x 3/16	2	\$13.35
CE431	13"	1/2 x 1 1/4	3/4 x 11	1/4 x 1/4	5	15.85
CE432	14 1/2", 16", 16-24"	3/8 x 1 3/8	1 3/8 x 13 1/4	3/8 x 3/8	8	20.85

D 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"	3/16 x 3/4	1/4 x 5	2	\$ 8.10
CE3176	13"	1/2 x 1 1/4	3/8 x 7	4	9.35
CE3177	14 1/2", 16", 16-24"	3/8 x 1 3/8	7/8 x 8	6	10.80

E 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.	\$.95
CE3857	3/16 x 4 1/2	4 ozs.	1.25
CE3858	1/4 x 5	5 ozs.	1.60
CE3859	3/8 x 6	5 ozs.	1.80
CE3860	3/8 x 7	8 ozs.	2.40
CE3861	7/8 x 8	1 lb.	3.40

F SLEEVE BORING BARS.

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

Cat. No.	Size of Bar	Size of Cutter Bit	Ship. Wt.	Price
CE2419	1/2" x 7 3/4"	3/16" x 3/16"	1 lb.	\$ 8.20
CE2420	3/4" x 11"	1/4" x 1/4"	2 lbs.	10.30
CE2421	1 1/8" x 13 1/4"	3/8" x 3/8"	4 lbs.	14.80

G PLAIN BORING BARS.

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

Cat. No.	Bar Size	Cutter Bit	Ship. Wt.	Price
CE2943	3/4" x 12"	1/4" x 1/4"	3 lbs.	\$ 7.30
CE2944	1" x 16"	3/8" x 3/8"	5 lbs.	12.70
CE2945	1 1/8" x 18"	3/8" x 3/8"	7 lbs.	16.20

H 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.

CE3420. Precision Boring Bar for Chuck. Shipping weight 1 lb. Price f.o.b. factory. **\$3.15**

I THREADING TOOLS.

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

Cat. No.	Size of Lathe	Size of Shank	Ship. Wt.	Price
CE845	9", 10-K & 10"	3/8" x 3/4"	2 lbs.	\$ 6.75
CE848	9", 10-K & 10"	3/8" x 3/8"	2 lbs.	11.35
CE867	13"	1/2" x 1 1/8"	3 lbs.	13.70
CE868	14 1/2" & 16"	3/4" x 1 3/8"	4 lbs.	17.55

J EXTRA CUTTERS FOR THREADING TOOLS.

Formed cutters properly heat-treated and ground, ready for use with Threading Tools described above. Made of high speed steel.

Catalog Number		Fits Thread Tools	Shipping Weight	Price
60° Angle	55° Angle			
CE3480	CE3483	CE845 & CE648	3 ozs.	\$ 4.20
CE3481	CE3484	CE867	4 ozs.	8.15
CE3482	CE3485	CE868	5 ozs.	10.85



GET MORE WORK OUT OF YOUR MACHINES BY SELECTING ONLY SOUTH BEND ATTACHMENTS AND ACCESSORIES

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

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

CE2168. Cutter Bit Grinding Block. Ship. wt. 3 lbs. \$10.45

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

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

CE2196. One thread cleaner. Ship. wt. $\frac{1}{2}$ lb. \$.40

CE2197. Lot of three Thread Cleaners. Ship. wt. 2 lbs. . . . \$1.05

C 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 17" Lathes							
CE3843GJ	$\frac{1}{2}$	1 lb.	\$3.33	CE3847GJ	$1\frac{1}{2}$	3 lbs.	\$6.08
CE3844GJ	$\frac{3}{4}$	1 lb.	3.64				

Standard Lathe Dogs for 13" and Larger Lathes							
CE3843	$\frac{1}{2}$	1 lb.	\$1.60	CE3849	2	4 lbs.	\$3.50
CE3844	$\frac{3}{4}$	1 lb.	1.75	CE3850	$2\frac{1}{2}$	5 lbs.	4.20
CE3845	1	2 lbs.	1.85	CE3851	3	6 lbs.	4.55
CE3846	$1\frac{1}{4}$	2 lbs.	2.25	CE3852	$3\frac{1}{2}$	7 lbs.	5.40
CE3847	$1\frac{1}{2}$	3 lbs.	2.65	CE3853	4	9 lbs.	7.00
CE3848	$1\frac{3}{4}$	3 lbs.	3.00				

Standard Lathe Dogs for 9" and 10" Lathes							
CE3837	$\frac{3}{8}$	1 lb.	\$1.40	CE3840	1	2 lbs.	\$1.80
CE3838	$\frac{1}{2}$	1 lb.	1.45	CE3841	$1\frac{1}{4}$	3 lbs.	1.95
CE3839	$\frac{3}{4}$	2 lbs.	1.70	CE3842	$1\frac{1}{2}$	3 lbs.	2.40

D 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	$\frac{1}{2}$	1 lb.	\$1.60	CE3832	2	4 lbs.	\$3.50
CE3827	$\frac{3}{4}$	1 lb.	1.75	CE3833	$2\frac{1}{2}$	5 lbs.	4.20
CE3828	1	2 lbs.	1.85	CE3834	3	6 lbs.	4.55
CE3829	$1\frac{1}{4}$	2 lbs.	2.25	CE3835	$3\frac{1}{2}$	7 lbs.	5.40
CE3830	$1\frac{1}{2}$	3 lbs.	2.65	CE3836	4	9 lbs.	7.00
CE3831	$1\frac{3}{4}$	3 lbs.	3.00				

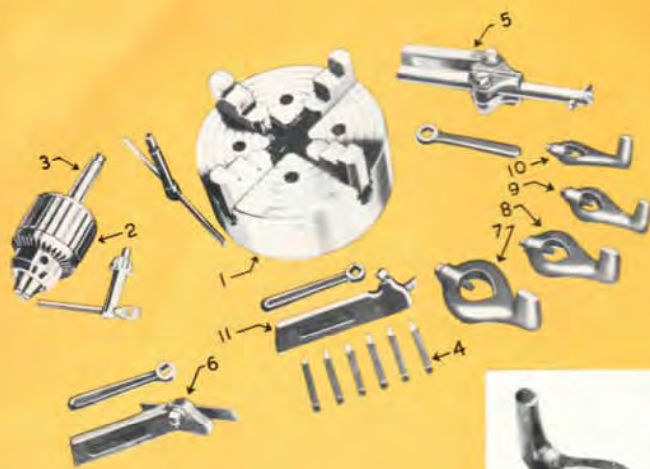
Safety Lathe Dogs for 9" and 10" Lathes							
CE3820	$\frac{3}{8}$	1 lb.	\$1.40	CE3823	1	2 lbs.	\$1.80
CE3821	$\frac{1}{2}$	1 lb.	1.45	CE3824	$1\frac{1}{4}$	3 lbs.	1.95
CE3822	$\frac{3}{4}$	2 lbs.	1.70	CE3825	$1\frac{1}{2}$	3 lbs.	2.40

E 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 ozs.	\$.07
CE2386	CE3822, CE3827	4 ozs.	.08
CE2387	CE3823, CE3828	4 ozs.	.12
CE2388	CE3824, CE3825, CE3829	4 ozs.	.13
CE2389	CE3830, CE3831, CE3832	4 ozs.	.17
CE2390	CE3833, CE3834, CE3835, CE3836	6 ozs.	.27

F 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	$1\frac{3}{8}$ "	$1\frac{1}{4}$ "	9" & larger	1 lb.	\$ 8.75
CE161	$1\frac{1}{2}$ "	$2\frac{1}{4}$ "	13" & larger	2 lbs.	9.00
CE162	$2\frac{1}{2}$ "	$2\frac{3}{4}$ "	13" & larger	3 lbs.	11.30
CE163	$3\frac{1}{4}$ "	$3\frac{1}{2}$ "	$14\frac{1}{2}$ " & larger	4 lbs.	15.75



A



B



C

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; 7 1/2 in. on 13" Lathe; 9 in. on 14 1/2" Lathe; 10" on 16" and 16-24" Lathes.
2	Jacobs 3-Jaw Drill Chuck Sizes: 1/2 in. on 9" and 10" Lathes; 3/4 in. on 13" and 14 1/2" 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: 3/8", 1/2", 1" and 1 1/2".
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.	5 86.00
CL2890R	10"-1 1/4" Collet	35 lbs.	135.00
CL2890L	10"-1 1/4" Collet	35 lbs.	136.00
CL2890Q	13"-1 1/4" Collet	70 lbs.	176.00
CL2890M	14 1/2"-1 1/4" Collet	87 lbs.	199.00
CL2890H	16" & 16-24"	110 lbs.	235.00

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 \$116.00

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	CL4005NK	6" Four-Jaw Independent Lathe Chuck, fitted.
2	CL3005NK	5" Three-Jaw Universal Lathe Chuck, fitted.
3		Jacobs 3-Jaw Drill Chuck 1/2" capacity.
4		Taper Shank Arbor (No. 2 M.T.), fitted to Drill Chuck.
5	CE847S	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	3/8" Standard Malleable Lathe Dog.
16	CE3838	1/2" Standard Malleable Lathe Dog.
17	CE3839	3/4" Standard Malleable Lathe Dog.
18	CE3840	1" Standard Malleable Lathe Dog.
19	CE3841	1 1/4" Standard Malleable Lathe Dog.
20	CE3842	1 1/2" Standard Malleable Lathe Dog.

CL2970NK. Twenty Tool Assortment as listed above for 9" or 10-K Lathes. Shipping weight 52 lbs. \$195.00

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, 1/2" to 4" capacity for 13" and larger lathes. Ship. wt. 36 lbs. \$33.50

Cat. No. CE2103. Set of 11 Safety Lathe Dogs, 1/2" to 4" capacity for 13" and larger lathes. Ship. wt. 36 lbs. \$33.50

Cat. No. CE2105. Set of 6 Standard Lathe Dogs, 3/8" to 1 1/2" capacity for 9" and 10" lathes. Ship. wt. 6 lbs. \$10.50

Cat. No. CE2107. Set of 6 Safety Lathe Dogs, 3/8" to 1 1/2" capacity for 9" and 10" lathes. Ship. wt. 6 lbs. Price \$10.50



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.	\$29.75
CL675KR	10-K & 10"	10 lbs.	29.75
CL675T	13"	12 lbs.	30.75
CL675F	14½"	15 lbs.	32.50
CL675H	16"	17 lbs.	34.75

CE2028. Extra cutter .015" thick. Ship. wt. ½ lb. Price . . . \$.75
CE2029. Extra cutter .020" thick. Ship. wt. ½ lb. Price . . . \$.75

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		
	Catalog Number	Shipping Weight	Price	Catalog Number	Shipping Weight	Price
¼" sq.	CE1363	4 ozs.	\$.60	CE1744	10 ozs.	\$3.30
⅜" sq.	CE1365	5 ozs.	.85	CE1746	10½ ozs.	4.85
½" sq.	CE1366	5 ozs.	1.70	CE1747	11 ozs.	9.90

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	Catalog Number	Shank	Shipping Weight	Price
Adjusting Collet Bushing Chuck only	CE1615NR	No. 2 M.T.	2 lbs.	\$10.25
	CE1615TH	No. 3 M.T.	2 lbs.	11.05
Adjustable Collet Bushing Chuck with set of 3 collets, ¼", ⅜", and .637" capacity for popular armatures	CE1608NR	No. 2 M.T.	3 lbs.	15.35
	CE1608TH	No. 3 M.T.	4 lbs.	16.95

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 ¼" to 1" round in increments of ⅛".

CE1659. Extra Collets for round work, any capacity ¼" to 1" round by 16ths, also .637", ship wt. ea. 1 lb. Price ea. . . . \$1.80

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 Number	Size Lathe	Shipping Weight	Price
CL2330N	9"	20 lbs.	\$65.50
CL2330K	10-K	22 lbs.	65.50
CL2330R	10"	22 lbs.	65.50
CL2330T	13"	26 lbs.	73.00
CL2330F	14½"	28 lbs.	76.50
CL2330H	16"	30 lbs.	79.00

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

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

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

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

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



A



B



E



F



H



C

D



G



BELTS and LUBRICATION

A FLAT BELTS. A strong flexible belt recommended for use with South Bend Lathes. Able to withstand continual flexing without significant stretch and loss of efficiency. These belts are skived on both ends and cementing kit for joining skived ends is included with each belt. Shipping weight each approx. ½ lb.

Type of Drive	Cat. No.	Price	Type of Drive	Cat. No.	Price	
9" HMD	CE3750N	\$ 9.25	13"	3-Step	CE3753T	\$21.50
10-K HMD	CE3750K	8.75	14½"	4-Step	CE3752F	17.50
9" UMD	CE3752N	9.75	14½"	3-Step	CE3753F	27.00
10-K UMD	CE3752K	9.75	16"	4-Step	CE3752H	23.25
10-K Variable	CE3751K	18.45	16"	3-Step	CE3753H	28.25
10" Met. Cab.	CE3753R	11.95	16-24"	4-Step	CE3752V	24.90
10" Floor	CE3752R	12.35	16-24"	3-Step	CE3753V	30.75
12¾" Met. Cab.	CE3754	12.15	16" Turret		CE3753H	28.25
12¾" Floor	CE3755	12.75				
13" 4-Step	CE3752T	16.90				

B CEMENTING KIT. For cold splicing skived ends of flat belts.

CE1789. Necessary splicing cement and brush for belts listed above. Price f.o.b. factory **\$3.20**

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 **\$2.95**

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	1¾"	½"	6¾"	4 lbs.	\$3.85
CE1899	3"	½"	6¾"	5 lbs.	4.95

D 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 MARLA OPEN GEAR SPRAY LUBRICANT. This oil is an extreme pressure adhesive lubricant recommended for gearing not running in oil and is effective in reducing gear noise. It is available in 12 oz. pressure cans with a spray dispenser on top which makes it easy to apply.

CE1605. Shipping wt. 3 lbs. Twelve oz. can. Price **\$2.15**

LEATHER V-BELTS FOR CONE PULLEYS

Lathe cone pulley V-belts can be replaced without disassembling the lathe headstock or drive unit by using these cord reinforced leather V-belts. Belts are skived for gluing and belt splicing cement is included.



Cat. No.	Size Lathe	Drive	Ship. Wt.	Price
CE5L81L	9"	U.M.D.	1 lb.	\$7.65
CE5L82L	10-K	U.M.D.	1 lb.	7.75
CE5L54L	9"	H.M.D.	1 lb.	7.05
CE5L51L	10-K	H.M.D.	1 lb.	6.75

F 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 ¾ pint and has 6" spout with twin-tipped vent.

CE3575. Pump Oil Can. Shipping wt. 1 pound. Price **\$2.20**

G 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

H 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
General Lubricating Oil (See Oil Chart for Individual Machine)				
CE1603	240-500	1 quart	3 lbs.	\$.95
CE1906	240-500	12 quarts	31 lbs.	10.15
CE2019	240-500	Gal. can	11 lbs.	3.25
Oil for Spindle Bearings of South Bend Lathes (For other components see Oil Chart for Individual Machines)				
CE1600	100	1 quart	3 lbs.	\$.95
CE1905	100	12 quarts	31 lbs.	10.15
CE2017	100	Gal. can	11 lbs.	3.25
Oil for Lathes and Shapers (See Oil Chart for Individual Machine)				
CE1602	150-240	1 quart	3 lbs.	\$.95
CE1904	150-240	12 quarts	31 lbs.	10.15
CE2018	150-240	Gal. can	11 lbs.	3.25

HYDRAULIC OIL for use in Power Quill Feed on Vertical Milling Machine. This Hydraulic Oil is also used in the headstock of the 17" Geared Head Lathe.

CE7053. 1 qt. can Hydraulic Oil. **\$1.30**

CE7054 1 gal. can Hydraulic Oil. **4.10**

TWO PRACTICAL ATTACHMENTS

FOR SOUTH BEND LATHES THE TRUE-TRACE TRACING ATTACHMENT FOR SOUTH BEND LATHES

True-Trace attachments give you more parts per hour, at less cost per part. Therefore, more Profit Returns from your lathe with set up time of just a few minutes. For your template use a master part or an inexpensive flat template.

SELF CONTAINED UNIT — Uses its own set of dovetail ways and cylinder. Template rail and bracket power unit with all lines and fittings furnished.

NO MACHINE CONVERSION REQUIRED — Can be moved from machine to machine quickly, easily — after initial installation. Tracer requires but a few minutes to install or remove from lathe.

PROVEN HYDRAULIC OPERATION — Trouble free hydraulic servo-valve and cylinder has proved itself in thousands of installations — completely reliable — year after year.

ELIMINATES OPERATOR ERROR — Only one dimension to measure then other dimensions stay true, part after part. Only low cost single point tools are used. Shape and contour are controlled by template and Tracer.

SPECIFICATIONS

Attachment Series	Mark "O-A"	Mark II-A
Cylinder Bore.....	1.75 in.	3.0 in.
Cylinder Stroke.....	3.0 in.	4.0 in.
Tracer Stylus Pressure.....	6-9 oz.	6-9 oz.
Tracer Stylus Bore.....	0.375 in.	0.375 in.
Lathe Swing.....	10-13 in.	14½, 16, 16-24, & 17 in.
Valve Slide Adjustment:		
Parallel to Cross Slide		
(In-and-out).....	3¾ in.	3 in.
Parallel to Bed		
(Longitudinal).....	½ in.	1 in.
Length of Template Rail.....	14 in.	48 in.
Hydraulic Power Unit		
Horsepower.....	½	½
Voltage.....	115 /230V	115 /230V
Amps.....	80/40	5.8 /2.9
Phase.....	single	single
Cycle.....	60	60
Pump Capacity.....	1.5 gpm	1.5 gpm
Normal Operating Pressure..	160 psi	160 psi
Maximum Output Pressure..	275 psi	275 psi
Reservoir Capacity.....	15 gal.	15 gal.
Shipping Weight (Complete Attachment).....	185 lbs.	275 lbs.

F.O.B. El Monte, Calif.

NOTE: A 220/440 V., 3 PH, 60 CPS heavy duty power unit may be supplied at additional cost.

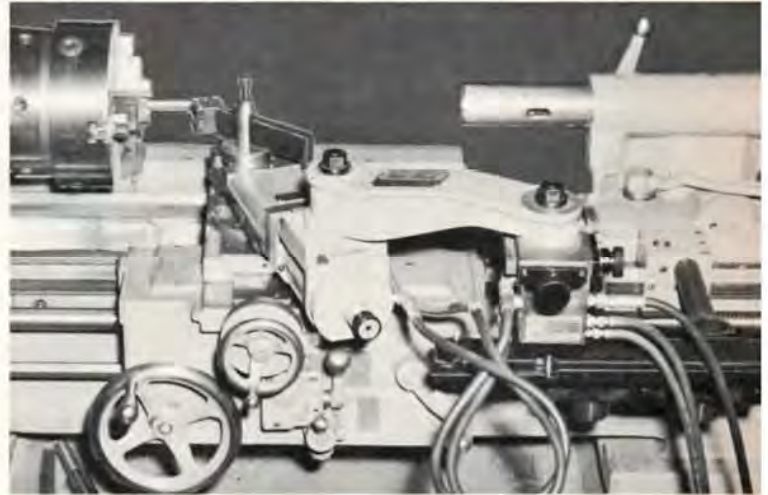
Prices on these units are the same whether purchased from a South Bend dealer or directly from True-Trace factory.

BASIC ATTACHMENT — Unit is furnished complete except for fitting to specific lathe. Customer does own fitting to lathe, following instructions furnished by True-Trace factory.

CUSTOM FITTED ATTACHMENT — Unit is furnished complete from True-Trace, fitted to specific lathe. Customer only has to install to machine. Write to your nearest South Bend Lathe distributor for complete information.



Photos below show typical installation on 17" South Bend Lathes.



INDEPENDENT POWER FEEDS for 10" & 13" LATHES

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



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

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

Catalog Number	Motor Specification				
	Cur.	Ph.	Cy.	Volt.	Price
CL333DR	A.C.	3	60	220	\$193.00
CL333FR	A.C.	3	60	440	203.00
CL331BR	A.C.	1	60	115	159.00
CL331DR	A.C.	1	60	230	167.00

Catalog Number	Motor Specifications				
	Cur.	Ph.	Cy.	Volt.	Price
CL331BT	A.C.	1	60	115	\$164.00
CL331DT	A.C.	1	60	230	172.00
CL333DT	A.C.	3	60	220	198.00
CL333FT	A.C.	3	60	440	208.00

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

TRANSPOSING GEAR CHART
METRIC SCREW THREADS
ENGLISH PITCH LEAD SCREW

MM PITCH	STUD GEAR	WHEEL GEAR	SCREW GEAR
4.00	48	FIG. 1	30
4.50	48	FIG. 1	30
5.00	36	FIG. 1	30
4.50	36	FIG. 1	30
4.00	24	FIG. 1	30
3.50	24	FIG. 1	30
3.00	24	FIG. 1	30
2.50	32	FIG. 1	40
2.00	32	FIG. 1	40
1.75	48	FIG. 2	80
1.50	48	FIG. 2	80
1.40	96	FIG. 2	100
1.30	48	FIG. 2	100
1.25	48	FIG. 2	100
1.20	48	FIG. 2	100
1.10	96	FIG. 2	100
1.00	96	FIG. 2	100
0.90	36	FIG. 2	110
0.80	36	FIG. 2	110
0.70	24	FIG. 2	110
0.60	24	FIG. 2	110
0.50	18	FIG. 2	110
0.45	18	FIG. 2	110
0.40	18	FIG. 2	110
0.30	96	FIG. 3	100
0.25	96	FIG. 3	100
0.20	32	FIG. 3	100
0.15	32	FIG. 3	100
0.10	32	FIG. 3	100
0.075	32	FIG. 3	100
0.050	32	FIG. 3	100

MANUFACTURED BY SOUTH BEND LATHE SOUTH BEND, IND.,

9-Inch—235 SOUTH BEND LATHE MO

CATALOG NO. BED LENGTH

Positions Posiciones

PITCHES IN mm—PASOS EN mm—PAS EN mm			POSITION POSITION	STUD ANGLE ANGLE					
7.500	7.000	6.500	6.000	5.500	5.000	4.500	4.000	D	50
3.750	3.500	3.250	3.000	2.750	2.500	2.250	2.000	C	—
1.875	1.750	1.625	1.500	1.375	1.250	1.125	1.000	B	—
FEEDS IN mm—AVANCES EN mm									
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	—
0.128	0.119	0.111	0.102	0.094	0.085	0.077	0.068	A	—

TRANSPOSING GEAR CHART
ENGLISH SCREW THREADS
METRIC PITCH LEAD SCREW

MM PITCH	STUD GEAR	WHEEL GEAR	SCREW GEAR
4	48	FIG. 1	30
5	48	FIG. 1	30
6	36	FIG. 1	30
7	36	FIG. 1	30
8	24	FIG. 1	30
9	24	FIG. 1	30
10	24	FIG. 1	30
11	24	FIG. 1	30
12	24	FIG. 1	30
13	32	FIG. 1	40
14	32	FIG. 1	40
15	32	FIG. 1	40
16	32	FIG. 1	40
17	32	FIG. 1	40
18	32	FIG. 1	40
19	32	FIG. 1	40
20	32	FIG. 1	40
22	48	FIG. 2	80
24	48	FIG. 2	80
26	48	FIG. 2	80
28	48	FIG. 2	80
30	48	FIG. 2	80
32	48	FIG. 2	80
34	96	FIG. 2	100
36	48	FIG. 2	100
38	48	FIG. 2	100
40	48	FIG. 2	100
42	48	FIG. 2	100
44	48	FIG. 2	100
46	48	FIG. 2	100
48	48	FIG. 2	100
50	48	FIG. 2	100
52	48	FIG. 2	100
54	48	FIG. 2	100
56	48	FIG. 2	100
58	48	FIG. 2	100
60	48	FIG. 2	100
62	48	FIG. 2	100
64	48	FIG. 2	100
66	48	FIG. 2	100
68	48	FIG. 2	100
70	48	FIG. 2	100
72	48	FIG. 2	100
74	48	FIG. 2	100
76	48	FIG. 2	100
78	48	FIG. 2	100
80	48	FIG. 2	100
82	48	FIG. 2	100
84	48	FIG. 2	100
86	48	FIG. 2	100
88	48	FIG. 2	100
90	48	FIG. 2	100
92	48	FIG. 2	100
94	48	FIG. 2	100
96	48	FIG. 2	100
98	48	FIG. 2	100
100	48	FIG. 2	100

METRIC SYSTEM EQUIPMENT

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

When "English" lathes are ordered with metric transposing gears, the graduations on the tailstock spindle, the cross-feed screw, and the compound rest screw can be supplied to read in either the English or metric system and the compound rest screw and cross-feed screw have English or metric pitch threads depending on graduations selected. 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	\$16.30	CL1941NK	\$16.30
9" Model B	CL2248N	19.45	CL2247N	19.45
9" Model C	CL2261N	19.45	CL2263N	19.45
10-K Model A	CL1955NK	16.30	CL1941NK	16.30
10-K Model B	CL2248K	20.50	CL2247K	20.50
10-K Model C	CL2261K	20.50	CL2263K	20.50
10"	CL1955R	61.50	CL1941R	61.50
13"	CL1955T	68.50	CL1941T	68.50
14½"	CL1955F	80.00	CL1941F	80.00
16"—16"-24"	CL1955H	80.00	CL1941H	80.00
17"	CL1955GJ	158.00		

METRIC TRANSPOSING GEARS ORDERED SEPARATE FROM LATHE

Size of Lathe	Ship. Wt.	Cat. No.	Price
9" Model A	8 lbs.	CL1957NK	\$16.30
9" Model B	21 lbs.	CL1962N	26.25
9" Model C	21 lbs.	CL1961N	26.25
10-K Model A	8 lbs.	CL1957NK	16.00
10-K Model B	21 lbs.	CL1962K	27.75
10-K Model C	21 lbs.	CL1961K	27.75
10"	51 lbs.	CL1957R	74.00
13"	73 lbs.	CL1957T	81.00
14½"	121 lbs.	CL1957F	98.50
16"—16-24"	65 lbs.	CL1957H	98.50

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..... **\$20.45**
- CL2265R.** Metric Thread Dial for 10" South Bend Lathes with metric lead screw. Same as CL2265NK but includes adapter to fit 10" lathes. Ship. wt. 3 lbs..... **\$31.75**
- CL2265TH.** Metric Dial for 13", 14½" and 16" South Bend Lathes with metric lead screw. Ship. wt. 5 lbs..... **\$44.00**

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

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

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

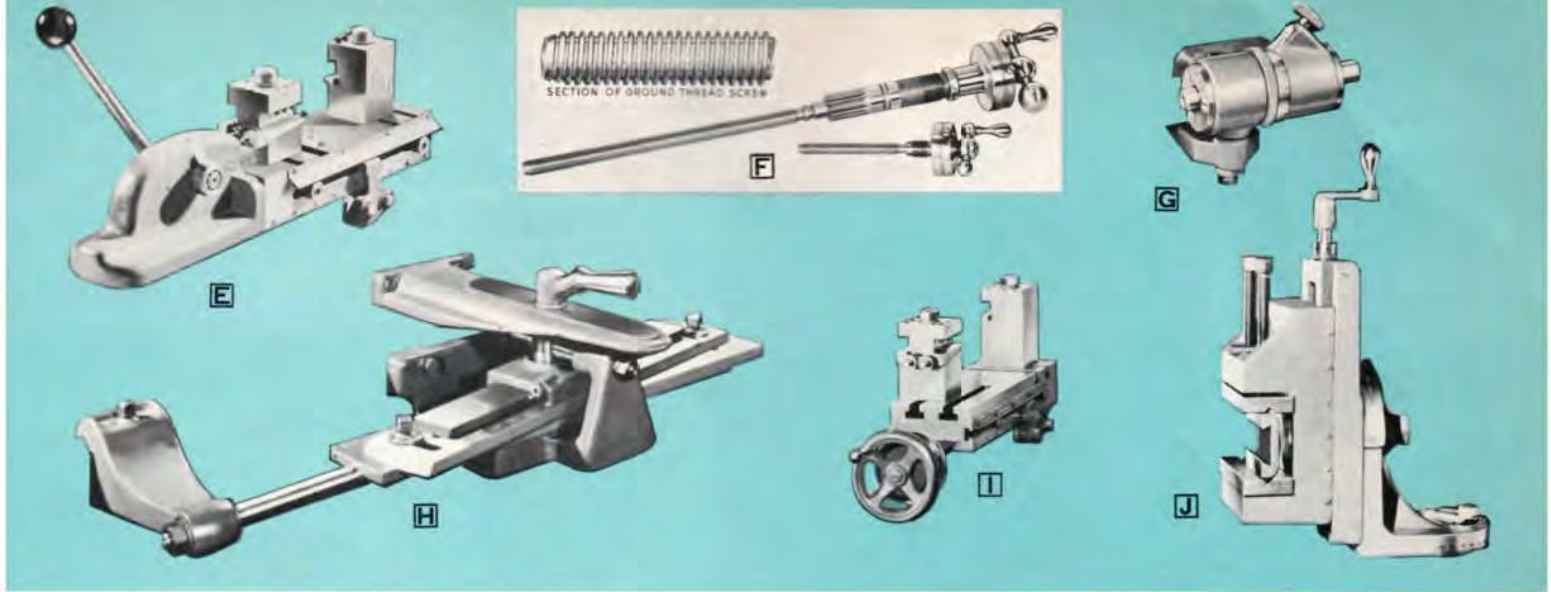
ENGLISH TRANSPOSING GEARS ORDERED WITH LATHE

Size of Lathe	With English Graduations		With Metric Graduations	
	Cat. No.	Price	Cat. No.	Price
9" Model A	CL2288NK	\$18.00	CL2284NK	\$16.30
9" Model B	CL2253N	19.45	CL2255N	19.95
9" Model C	CL2254N	19.45	CL2256N	19.95
10-K Model A	CL2288NK	18.00	CL2284NK	16.30
10-K Model B	CL2253K	21.00	CL2255K	21.00
10-K Model C	CL2254K	21.00	CL2256K	21.00
10"	CL2288R	55.50	CL2284R	55.50
13"	CL2288T	61.50	CL2284T	61.50
14½"	CL2288F	71.50	CL2284F	71.50
16"—16"-24"	CL2288H	76.50	CL2284H	76.50

ENGLISH TRANSPOSING GEARS ORDERED SEPARATE FROM LATHE

Size of Lathe	Ship. Wt.	Cat. No.	Price
9" Model A	8 lbs.	CL2289NK	\$ 16.60
9" Model B	21 lbs.	CL1283N	26.25
9" Model C	21 lbs.	CL1284N	26.25
10-K Model A	8 lbs.	CL2289NK	16.60
10-K Model B	21 lbs.	CL1283N	27.75
10-K Model C	21 lbs.	CL1284K	27.75
10"	51 lbs.	CL2289R	75.50
13"	73 lbs.	CL2289T	83.00
14½"	121 lbs.	CL2289F	92.50
16"—16-24"	65 lbs.	CL2289H	107.00

You can get almost any South Bend product quickly, from stock carried by our distributors in all principal cities. To avoid delay, select the equipment you need and order immediately.



E COMBINATION DOUBLE TOOL SLIDE for 9", 10-K and 10" Lathes. This combination Hand Lever and Screw Feed Double Tool Cross Slide mounts on saddle cross slide dovetail in place of compound rest assembly.

Front tool block takes two square cutter bits, back tool block takes one cutter bit. See **A** page 41 for detailed description.

Cat. No.	Size Lathe	Swing over Cross Slide	Cross Feed	Ship. Wt.	Price*
CL2030NME	9"	3 3/4"		36 lbs.	\$108.00
CL2030KME	10-K	3 3/4"	METRIC	37 lbs.	115.00
CL2030RME	10"	3 3/4"		45 lbs.	127.00

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

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

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

Regular Cross-Feed			Taper Attachment Cross-Feed		
Cat. No.	Size Lathe	Price	Cat. No.	Size Lathe	Price
CL2032LME	10"	515.45	CL2198LME	10"	518.75
CL2032TME	13"	26.50	CL2198TME	13"	29.50
CL2032FME	14 1/2"	28.75	CL2198FME	14 1/2"	32.25
CL2032HME	16"-16"-24"	29.50	CL2198HME	16"-16"-24"	33.00

CL2222TME. Metric hardened and ground thread cross-feed screw in lieu of regular metric screw for 13" lathe screw feed double tool cross slide..... **\$20.60**

CL2222HME. Metric hardened and ground thread cross-feed screw in lieu of regular metric screw for 16" lathe or 16" turret lathe screw feed double tool cross slide..... **\$22.90**

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

Size Lathe	Shipping Weight	Metric Graduations	
		Catalog No.	Price
9" & 10-K	2 lbs.	CL968NKME	\$25.25
10"	4 lbs.	CL968RME	26.50
13"	4 lbs.	CL968TME	29.75
14 1/2", 16"-16"-24"	7 lbs.	CL968FHME	30.75

H METRIC TAPER ATTACHMENT with metric graduations can be supplied for any size or type of South Bend Lathe. Plain taper attachment is supplied for 9" and 10-K Lathes, a telescopic taper attachment on 10" and larger. See page 46 for detailed specifications.

TAPER ATTACHMENT WITH METRIC GRADUATIONS

Catalog Number	Size of Lathe	Swing M.M.	Swing Over Cross Slide	Maximum Taper		Approx. Ship. Weight	Price
				At One Sitting	In Degrees		
CL428NKME	9"	234	127 mm	177 mm	16 1/2	35 lbs.	\$105.00
CL428KME	10-K	254	149 mm	177 mm	16 1/2	35 lbs.	105.00
CL1545RME	10"	257	146 mm	215 mm	16 1/2	40 lbs.	214.00
CL1545TME	13"	333	203 mm	234 mm	16 1/2	65 lbs.	257.00
CL1545FME	14 1/2"	371	227 mm	234 mm	16 1/2	80 lbs.	277.00
CL1545HME	16"	412	244 mm	292 mm	16 1/2	100 lbs.	310.00
CL1545HME	16-24"	638	476 mm	292 mm	16 1/2	100 lbs.	310.00

I SCREW FEED DOUBLE TOOL SLIDE for 13" and 16" Lathes. Fits on saddle dovetail in place of compound rest assembly. May be operated manually or by power through friction clutch in apron. See **C** page 41 for detailed description.

Catalog Number	Size Lathe	Swing over Cross Slide	Cross Feed	Size Bit	Shipping Weight	Factory Price
CL2027TME	13"	6 3/4"	METRIC	7/16" sq.	60 lbs.	\$188.00
CL2027HME	16"	6 3/4"		3/4" sq.	95 lbs.	204.00

J 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. See page 46 for detailed specifications.

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

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

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

DRUM SWITCH CONTROLS



789



790



965



765

PUSH BUTTON CONTROLS



841



843



Quill Gear Mounted



Leg Well Mounted



Headstock Mounted



Switch Arm Mounted



Movable Bed Bracket Mounted

CONTROLS FOR MOTORS

The following prefixes are to be used to specify the location of the operating control. Page 67 should be referred to so that proper selection can be made for the particular size lathe in question. 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 found on pages 68 and 69.

- EQ.** Quill gear guard mounted control for 9", 10", 13", 14½", 16" and 16-24" lathes.
- EB.** Metal cabinet leg or metal cabinet leg well control for 9" UMD, 10-K UMD and 10" metal cabinet lathes.
- EBH.** Bed mounted control, mounts on bracket fastened to bed at headstock end of 10-K gap and HMD lathes.
- ES.** Switch arm mounted controls for 10", 13", 14½" and 16" lathes.
- ERC.** Remote control mounted on moveable bed bracket for lathes with 10' or longer beds.

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

DRUM CONTROLS — SEE ILLUSTRATIONS

NO.	DRUM SWITCH DESCRIPTION	MAX. H.P. RATING				
		SINGLE PHASE		POLY-PHASE		
		115 V.	230 V.	110 V.	220 V.	440 V. or 550 V.
789	1 speed drum control — 1 forward, 1 reverse, 1 stop (single phase only) for 9" HMD and 10-K Gap Lathes only	1	2			
790	1 speed drum control — 1 forward, 1 reverse, 1 stop	1	1½	1½	2	2
965	1 speed drum control — 1 forward, 1 reverse, 1 stop	1½	3	3	5	7½
765	2 speed drum control — 2 forward, 2 reverse, 1 stop				3	3

DRUM SWITCH — LINESTARTER CONTROLS (Overload Protection — Low Voltage Release)

- 961** — 1 speed drum control, for use with one magnetic reversing linestarter.
- 963** — 2 speed drum control, for use with two magnetic reversing linestarters. (Use with 2 speed, 2 winding motors)

PUSH BUTTON — LINESTARTER CONTROLS (Overload Protection — Low Voltage Release)

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

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

When using the new listing for lathe motor controls the following suffixes shall follow the previously listed base numbers. These suffixes are to indicate the voltage of the control.

A — 115 Volts	1 Phase AC
B — 230 Volts	1 Phase AC
C — 208 or 220 Volts	3 Phase AC
D — 440 Volts	3 Phase AC
E — 550 Volts	3 Phase AC
H — 380 Volts	3 Phase AC

LATHE MOTOR CONTROLS

When ordering controls that operate 440 volts or over and are used in conjunction with linestarters, it is recommended that a step down transformer be used to reduce the voltage to 115 volts at the operating control. When a step down transformer is desired, place the letter T after voltage suffix letter of the control.

The following suffixes are to indicate the size of linestarter to be used in each control. This suffix is to be listed after the base number.

MAGNETIC LINESTARTERS

SIZE	DESCRIPTION	MAX. H.P. RATING			
		SINGLE PHASE		POLYPHASE	
		115V.	230V.	220V.	440/550V.
0	Magnetic non-reversing linestarter	1	2	3	3
0	Magnetic reversing linestarter	2	3	3	3
1*	Magnetic non-reversing linestarter	2	3		
1*	Magnetic reversing linestarter	1½ (1)	3 (2)	7½ (3)	7½ (3)
2*	Magnetic reversing linestarter	— (2)	— (5)	15 (10)	15 (10)

All magnetic starters are NEMA rated.
() Horsepower rating, shown in brackets, when linestarter is used for constant plugging or jogging.

MOTORS FOR SOUTH BEND LATHES



The following motors and controls are recommended when using 50 cycle current. All 3 phase controls 380-440-550 volt include overload protection, low voltage release and step down transformer.

Optional controls are listed on pages 68 and 69.

MOTORS								CONTROLS	
Size of Lathe	Cat. No.	H.P.	Speed	Phase	Cycle	Voltage	Price	Cat. No.	Price
9 INCH HORIZONTAL MOTOR DRIVE	CE3240	1/2	1	1	50	115	\$ 57.50	EQ789	\$ 8.50
	CE3230	1/2	1	3	50	230	57.50	EQ789	8.50
	CE3227S	1/2	1	3	50	380	39.00	EQ961HTO	86.00*
	CE3227E	1/2	1	3	50	440	39.00	EQ961DTO	86.00*
	CE4927G	1/2	1	3	50	550	44.50	EQ961ETO	90.00*
9 INCH UNDERNEATH MOTOR DRIVE	CE3240	1/2	1	1	50	115	57.50	EB790	12.00
	CE3230	1/2	1	1	50	230	57.50	EB790	12.00
	CE3227S	1/2	1	3	50	380	39.00	EB841HTO	107.00
	CE3227E	1/2	1	3	50	440	39.00	EB841DTO	107.00
	CE4927G	1/2	1	3	50	550	44.50	EB841ETO	111.00
10-K HORIZONTAL MOTOR DRIVE	CE3240	1/2	1	1	50	115	57.50	EBH790	12.00
	CE3230	1/2	1	1	50	230	57.50	EBH790	12.00
	CE3227S	1/2	1	3	50	380	39.00	EBH961HTO	86.00*
	CE3227E	1/2	1	3	50	440	39.00	EBH961DTO	86.00*
	CE4927G	1/2	1	3	50	550	44.50	EBH961ETO	90.00*
10-K UNDERNEATH MOTOR DRIVE	CE3240	1/2	1	1	50	115	57.50	EB790	12.00
	CE3230	1/2	1	1	50	230	57.50	EB790	12.00
	CE3227S	1/2	1	3	50	380	39.00	EB841HTO	107.00
	CE3227E	1/2	1	3	50	440	39.00	EB841DTO	107.00
	CE4927G	1/2	1	3	50	550	44.50	EB841ETO	111.00
10 INCH	CE2625C	1	1	3	50	220	81.00	EQ790	12.00
	CE2625E	1	1	3	50	440	81.00	ES841DTO	107.00
	CE2627G	1	1	3	50	550	81.00	ES841ETO	111.00
	CE2625S	1	1	3	50	380	81.00	ES841HTO	107.00
	CE2606S	1/2-1	2	3	50	380	182.00	ES843HTO	186.00
13 INCH	CE2545C	1 1/2	1	3	50	220	95.00	EQ790	12.00
	CE2545E	1 1/2	1	3	50	440	95.00	ES841DTO	107.00
	CE2547G	1 1/2	1	3	50	550	95.00	ES841ETO	111.00
	CE2545S	1 1/2	1	3	50	380	95.00	ES841HTO	107.00
	CE2603S	2-1	2	3	50	380	202.00	ES843HTO	186.00
	CE2147	2-1	2	3	50	220	223.00	ES843CO	176.00
	CE2148	2-1	2	3	50	440	223.00	ES843DTO	186.00
14 1/2 INCH	CE2543C	2	1	3	50	220	111.00	EQ790	12.00
	CE2543E	2	1	3	50	440	111.00	ES841DTO	107.00
	CE2552G	2	1	3	50	550	111.00	ES841ETO	111.00
	CE2543S	2	1	3	50	380	111.00	ES841HTO	107.00
	CE2595C	3-1 1/2	2	3	50	220	246.00	ES843CO	176.00
	CE2597E	3-1 1/2	2	3	50	440	246.00	ES843DTO	186.00
	CE2599G	3-1 1/2	2	3	50	550	246.00	ES843ETO	190.00
	CE2602S	3-1 1/2	2	3	50	380	246.00	ES843HTO	186.00
16 INCH	CE2592C	3	1	3	50	220	123.00	EQ965	40.00
	CE2592E	3	1	3	50	440	123.00	ES841DTO	107.00
	CE2593G	3	1	3	50	550	123.00	ES841ETO	111.00
	CE2592S	3	1	3	50	380	123.00	ES841HTO	107.00
	CE2595C	3-1 1/2	2	3	50	220	246.00	ES843CO	176.00
	CE2597E	3-1 1/2	2	3	50	440	246.00	ES843DTO	186.00
	CE2599G	3-1 1/2	2	3	50	550	246.00	ES843ETO	190.00
	CE2602S	3-1 1/2	2	3	50	380	246.00	ES843HTO	186.00
16-24 INCH	CE2592C	3	1	3	50	220	123.00	EQ965	40.00
	CE2592E	3	1	3	50	440	123.00	ERC841DTO	111.00
	CE2593G	3	1	3	50	550	123.00	ERC841ETO	115.00
	CE2592S	3	1	3	50	380	123.00	ERC841HTO	111.00
	CE2595C	3-1 1/2	2	3	50	220	246.00	ERC843CO	195.00
	CE2597E	3-1 1/2	2	3	50	440	246.00	ERC843DTO	205.00
	CE2599G	3-1 1/2	2	3	50	550	246.00	ERC843ETO	209.00
	CE2602S	3-1 1/2	2	3	50	380	246.00	ERC843HTO	205.00
16 INCH TURRET	CE2592C	3	1	3	50	220	123.00	EQ965	40.00
	CE2592E	3	1	3	50	440	123.00	EQ961DTO	107.00
	CE2593G	3	1	3	50	550	123.00	EQ961ETO	111.00
	CE2592S	3	1	3	50	380	123.00	EQ961HTO	107.00
	CE2595C	3-1 1/2	2	3	50	220	246.00	EQ963CO	193.00
	CE2597E	3-1 1/2	2	3	50	440	246.00	EQ963DT1	269.00
	CE2599G	3-1 1/2	2	3	50	550	246.00	EQ963ET1	273.00
	CE2602S	3-1 1/2	2	3	50	380	246.00	EQ963HT1	269.00

NOTE: All 2-speed motors listed on this page are double winding. *Linestarter not mounted.

OPTIONAL CONTROLS

In the forward pages of this catalog with the lathes, we have listed the motors and controls we recommend.

However, for those desiring different motor or control characteristics, the following are available and can be used on the lathes indicated.

MOTORS								CONTROLS	
Size of Lathe	Cat. No.	H.P.	Speed	Phase	Cycle	Voltage	Price	Cat. No.	Price
9 INCH HORIZONTAL MOTOR DRIVE	CE3227P	½	1	3	60	208	\$ 39.00	EQ961 CO	\$ 76.00 *
	CE3227C	½	1	3	50	220	39.00	EQ961 CO	76.00 *
	CE3227D	½	1	3	60	220	39.00	EQ961 CO	76.00 *
	CE3227S	½	1	3	50	380	39.00	EQ790	12.00
	CE3227E	½	1	3	50	440	39.00	EQ790	12.00
	CE3227F	½	1	3	60	440	39.00	EQ790	12.00
	CE4927G	½	1	3	50	550	44.50	EQ790	12.00
CE4927H	½	1	3	60	550	44.50	EQ790	12.00	
9 INCH UNDERNEATH MOTOR DRIVE	CE3227P	½	1	3	60	208	39.00	EB841 CO	97.00
	CE3227C	½	1	3	50	220	39.00	EB841 CO	97.00
	CE3227D	½	1	3	60	220	39.00	EB841 CO	97.00
	CE3227S	½	1	3	50	380	39.00	EB790	12.00
	CE3227E	½	1	3	50	440	39.00	EB790	12.00
	CE3227F	½	1	3	60	440	39.00	EB790	12.00
	CE4927G	½	1	3	50	550	44.50	EB790	12.00
CE4927H	½	1	3	60	550	44.50	EB790	12.00	
10-K HORIZONTAL MOTOR DRIVE	CE3227P	½	1	3	60	208	39.00	EBH961 CO	76.00 *
	CE3227C	½	1	3	50	220	39.00	EBH961 CO	76.00 *
	CE3227D	½	1	3	60	220	39.00	EBH961 CO	76.00 *
	CE3227S	½	1	3	50	380	39.00	EBH790	12.00
	CE3227E	½	1	3	50	440	39.00	EBH790	12.00
	CE3227F	½	1	3	60	440	39.00	EBH790	12.00
	CE4927G	½	1	3	50	550	44.50	EBH790	12.00
CE4927H	½	1	3	60	550	44.50	EBH790	12.00	
10-K UNDERNEATH MOTOR DRIVE	CE3227P	½	1	3	60	208	39.00	EB841 CO	97.00
	CE3227C	½	1	3	50	220	39.00	EB841 CO	97.00
	CE3227D	½	1	3	60	220	39.00	EB841 CO	97.00
	CE3227S	½	1	3	50	380	39.00	EB790	12.00
	CE3227E	½	1	3	50	440	39.00	EB790	12.00
	CE3227F	½	1	3	60	440	39.00	EB790	12.00
	CE4927G	½	1	3	50	550	44.50	EB790	12.00
CE4927H	½	1	3	60	550	44.50	EB790	12.00	
10 INCH	CE2625P	1	1	3	60	208	81.00	ES841 CO	97.00
	CE2625C	1	1	3	50	220	81.00	ES841 CO	97.00
	CE2625D	1	1	3	60	220	81.00	ES841 CO	97.00
	CE2625E	1	1	3	50	440	81.00	EQ790	12.00
	CE2625F	1	1	3	60	440	81.00	EQ790	12.00
	CE2627G	1	1	3	50	550	81.00	EQ790	12.00
	CE2627H	1	1	3	60	550	81.00	EQ790	12.00
	CE2625S	1	1	3	50	380	81.00	EQ790	12.00
	CE3384	1-½	2	3	60	208	182.00	EQ765	51.00
	CE3385	1-½	2	3	60	220	182.00	EQ765	51.00
	CE3386	1-½	2	3	60	440	182.00	EQ765	51.00
	CE2606S	1-½	2	3	50	380	182.00	EQ765	51.00
	13 INCH	CE2545P	1½	1	3	60	208	95.00	ES841 CO	97.00
CE2545C		1½	1	3	50	220	95.00	ES841 CO	97.00
CE2545D		1½	1	3	60	220	95.00	ES841 CO	97.00
CE2545E		1½	1	3	50	440	95.00	EQ790	12.00
CE2545F		1½	1	3	60	440	95.00	EQ790	12.00
CE2547G		1½	1	3	50	550	95.00	EQ790	12.00
CE2547H		1½	1	3	60	550	95.00	EQ790	12.00
CE2545S		1½	1	3	50	380	95.00	EQ790	12.00
CE3373		2-1	2	3	60	208	202.00	EQ765	51.00
CE2130		2-1	2	3	60	220	202.00	EQ765	51.00
CE2131		2-1	2	3	60	440	202.00	EQ765	51.00
CE3372		2-1	2	3	60	550	202.00	EQ765	51.00
CE2603S		2-1	2	3	50	380	202.00	EQ765	51.00
CE2147		2-1	2	3	50	220	223.00	EQ765	51.00
CE2148		2-1	2	3	50	440	223.00	EQ765	51.00
14½ INCH	CE2543P	2	1	3	60	208	111.00	ES841 CO	97.00
	CE2543C	2	1	3	50	220	111.00	ES841 CO	97.00
	CE2543D	2	1	3	60	220	111.00	ES841 CO	97.00
	CE2543E	2	1	3	50	440	111.00	EQ790	12.00
	CE2543F	2	1	3	60	440	111.00	EQ790	12.00
	CE2552G	2	1	3	50	550	111.00	EQ790	12.00
	CE2552H	2	1	3	60	550	111.00	EQ790	12.00
	CE2543S	2	1	3	50	380	111.00	EQ790	12.00
	CE2594P	3-1½	2	3	60	208	246.00	EQ765	51.00
	CE2595C	3-1½	2	3	50	220	246.00	EQ765	51.00
	CE2594D	3-1½	2	3	60	220	225.00	EQ765	51.00
	CE2597E	3-1½	2	3	50	440	246.00	EQ765	51.00
	CE2596F	3-1½	2	3	60	440	225.00	EQ765	51.00
CE2599G	3-1½	2	3	50	550	246.00	EQ765	51.00	
CE2598H	3-1½	2	3	60	550	246.00	EQ765	51.00	
CE2602S	3-1½	2	3	50	380	246.00	EQ765	51.00	
16 INCH	CE2592P	3	1	3	60	208	123.00	ES841 CO	97.00
	CE2592C	3	1	3	50	220	123.00	ES841 CO	97.00
	CE2592D	3	1	3	60	220	123.00	ES841 CO	97.00
	CE2592E	3	1	3	50	440	123.00	EQ965	40.00
	CE2592F	3	1	3	60	440	123.00	EQ965	40.00
	CE2593G	3	1	3	50	550	123.00	EQ965	40.00
	CE2593H	3	1	3	60	550	123.00	EQ965	40.00
	CE2592S	3	1	3	50	380	123.00	EQ965	40.00
	CE2594P	3-1½	2	3	60	208	246.00	EQ765	51.00
	CE2595C	3-1½	2	3	50	220	246.00	EQ765	51.00
	CE2594D	3-1½	2	3	60	220	225.00	EQ765	51.00
	CE2597E	3-1½	2	3	50	440	246.00	EQ765	51.00
	CE2596F	3-1½	2	3	60	440	225.00	EQ765	51.00
	CE2599G	3-1½	2	3	50	550	246.00	EQ765	51.00
	CE2598H	3-1½	2	3	60	550	246.00	EQ765	51.00
CE2602S	3-1½	2	3	50	380	246.00	EQ765	51.00	

NOTE: We recommend step-down transformer for 380-440-550 as shown with lathe description on previous pages.

NOTE: All two speed motors double winding.

*Linestarters not mounted.

OPTIONAL CONTROLS (CONTINUED)

MOTORS								CONTROLS	
Size of Lathe	Cat. No.	H.P.	Speed	Phase	Cycle	Voltage	Price	Cat. No.	Price
16-24 INCH	CE2592P	3	1	3	60	208	123.00	ERC841CO	101.00
	CE2592C	3	1	3	50	220	123.00	ERC841CO	101.00
	CE2592D	3	1	3	60	220	123.00	ERC841CO	101.00
	CE2592E	3	1	3	50	440	123.00	EQ965	40.00
	CE2592F	3	1	3	60	440	123.00	EQ965	40.00
	CE2593G	3	1	3	50	550	123.00	EQ965	40.00
	CE2593H	3	1	3	60	550	123.00	EQ965	40.00
	CE2592S	3	1	3	50	380	123.00	EQ965	40.00
	CE2594P	3-1½	2	3	60	208	246.00	EQ765	51.00
	CE2595C	3-1½	2	3	50	220	246.00	EQ765	51.00
	CE2594D	3-1½	2	3	60	220	225.00	EQ765	51.00
	CE2597E	3-1½	2	3	50	440	246.00	EQ765	51.00
	CE2596F	3-1½	2	3	60	440	225.00	EQ765	51.00
	CE2599G	3-1½	2	3	50	550	246.00	EQ765	51.00
	CE2598H	3-1½	2	3	60	550	246.00	EQ765	51.00
	CE2602S	3-1½	2	3	50	380	246.00	EQ765	51.00
16 INCH TURRET	CE2592P	3	1	3	60	208	123.00	EQ961CO	97.00
	CE2592C	3	1	3	50	220	123.00	EQ961CO	97.00
	CE2592D	3	1	3	60	220	123.00	EQ961CO	97.00
	CE2592E	3	1	3	50	440	123.00	EQ965	40.00
	CE2592F	3	1	3	60	440	123.00	EQ965	40.00
	CE2593G	3	1	3	50	550	123.00	EQ965	40.00
	CE2593H	3	1	3	60	550	123.00	EQ965	40.00
	CE2592S	3	1	3	50	380	123.00	EQ965	40.00
	CE2594P	3-1½	2	3	60	208	246.00	EQ765	51.00
	CE2595C	3-1½	2	3	50	220	246.00	EQ765	51.00
	CE2594D	3-1½	2	3	60	220	225.00	EQ765	51.00
	CE2597E	3-1½	2	3	50	440	246.00	EQ765	51.00
	CE2596F	3-1½	2	3	60	440	225.00	EQ765	51.00
	CE2599G	3-1½	2	3	50	550	246.00	EQ765	51.00
	CE2598H	3-1½	2	3	60	550	246.00	EQ765	51.00
	CE2602S	3-1½	2	3	50	380	246.00	EQ765	51.00

NOTE: All 2-speed motors listed on this page are double winding.

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 MOTORS TO MEET J.I.C. STANDARDS

Cat. No.	H.P.	Phase	Cycle	Volts	Price
CE6150	¾	3	60	220/440	\$ 54.50
CE6151	1	3	60	220/440	104.00
CE6152	1½	3	60	220/440	119.00
CE6153	2	3	60	220/440	146.00
CE6172	3	3	60	220/440	198.00
CE6173	5	3	60	220/440	238.00
CE6174	7½	3	60	220/440	302.00
CE6175	7½-3¾	3	60	220	390.00
CE6176	7½-3¾	3	60	440	390.00

NON-FUSIBLE CONTROL EQUIPMENT

Consisting of one combination magnetic reversing linestarter, 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. For use on 3 ph., 60 cycle, 220/440 A.C. equipment. Price..... \$254.00

Consisting of one combination magnetic reversing linestarter, size 1, with fused dual voltage transformer for low voltage control, with overload protection and with non-fusible disconnect, all in NEMA type 12 enclosure. Also includes pushbutton station in oil tight enclosure in headstock.

CE6180. Non-fusible Control Equipment to J.I.C. standards. For use on single speed 3 ph., 60 cycle, 220/440 A.C. equipment. Price..... \$254.00

Consisting of one combination magnetic reversing linestarter, size 1, and one reversible controller size 1, two speed, reversible on both speeds, with fused dual voltage transformer for low voltage control, with overload protection and with non-fusible disconnect, all in NEMA type 12 enclosure. Also includes pushbutton station in oil tight enclosure in headstock.

CE6183. Non-fusible Control Equipment to J.I.C. standards. For use on two speed 3 ph., 60 cycle, 220/440 A.C. equipment. Price..... \$647.00

FUSIBLE CONTROL EQUIPMENT

Consisting of one combination magnetic reversing linestarter, 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. standard. For use on 3 ph., 60 cycle, 220/440 A.C. equipment. Price..... \$259.00

Consisting of one combination magnetic reversing linestarter, 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 includes pushbutton station in oil tight enclosure in headstock.

CE6181. Fusible Electrical Control Equipment to J.I.C. standards. For use with single speed 3 ph., 60 cycle, 220/440 A.C. equipment. Price..... \$259.00

Consisting of one combination magnetic reversing linestarter, size 1, and one reversible controller size 1, two-speed, reversible on both speeds, with fused dual voltage transformer for low voltage control with overload protection and with fusible disconnect, all in NEMA type 12 enclosure. Also includes pushbutton station in oil tight enclosure in headstock.

CE6184. Fusible Electrical Control Equipment to J.I.C. standards. For use with 2 speed, 7½-3¾ h.p. motor. Price..... \$663.00

CIRCUIT BREAKER CONTROL EQUIPMENT

Consisting of one combination magnetic reversing linestarter, 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. For use on 3 ph., 60 cycle, 220/440 A.C. equipment. Price..... \$286.00

Consisting of one combination magnetic reversing linestarter, size 1, with fused dual voltage transformer for low voltage control, overload protection and circuit breaker, all in NEMA type 12 enclosure. Also includes pushbutton station in oil tight enclosure in headstock.

CE6182. Circuit Breaker Electrical Control Equipment to J.I.C. standard. For use with single speed, 3 ph., 60 cycle, 220/440 A.C. equipment. Price \$286.00

Consisting of one combination magnetic reversing linestarter, size 1, and one reversible controller size 1, two speed, reversible on both speeds, with fused dual voltage transformer for low voltage control, overload protection and circuit breaker, all in NEMA type 12 enclosure. Also including pushbutton station in oil tight enclosure in headstock.

CE6185. Circuit Breaker Electrical Control Equipment to J.I.C. standards. For use with 2 speed, 7½-3¾ h.p. motor. Price..... \$694.00

FITTING AND CONNECTING EQUIPMENT

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

CE6157. Mounting J.I.C. Electrical Equipment on 10" Underneath Motor Drive Met. Cab. Lathe. Price..... \$94.50

CE6158. Mounting J.I.C. Electrical Equipment on 10" Underneath Motor Drive Floor Lathe. Price..... \$109.00

CE6159. Mounting J.I.C. Electrical Equipment on 13" Underneath Motor Drive Lathe. Price..... \$109.00

CE6160. Mounting J.I.C. Electrical Equipment on 14½" or 16" Underneath Motor Drive Lathe. Price..... \$110.00

CE6161. Mounting J.I.C. Electrical Equipment on 16-24" Underneath Motor Drive Lathe. Price..... \$110.00

CE6186. Mounting J.I.C. Electrical Equipment on 17" Lathe. Price... \$110.00

SOUTH BEND VERTICAL MILLING MACHINE

The South Bend Vertical Spindle Precision Milling Machine is designed for maximum convenience and ease of operation with massive knee having wide dovetail bearings and long tapered gibs for both column and table.

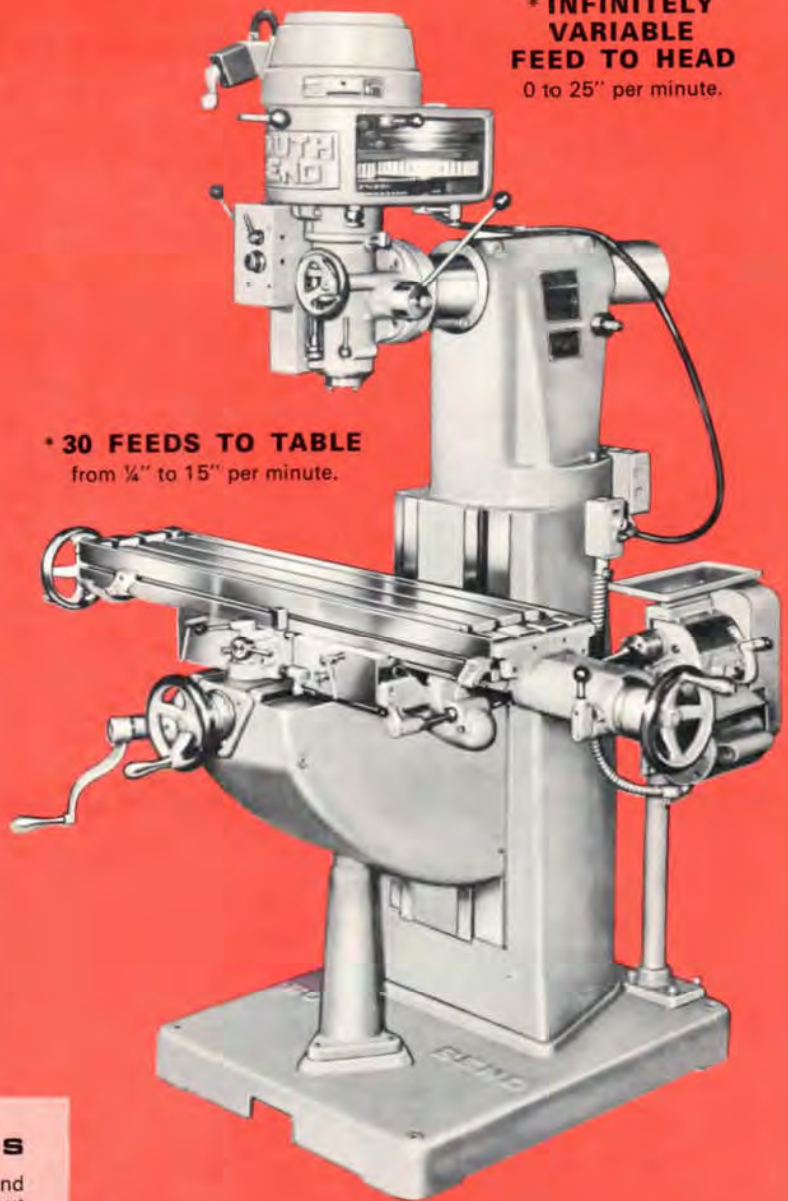
The universal type head is mounted on a large flange on the end of the overarm and swivels full 360° for milling, drilling or boring at any angle. Convenient belt tension release permits changing speeds quickly and easily. Reversing switch controls direction of spindle rotation, permitting right- or left-hand milling. Convenient mechanical brake permits stopping spindle quickly. Spindle lock is provided for easy changing of cutting tools. A dependable micrometer depth stop is graduated in thousandths and positive quill lock is provided.

Table has dual controls for operating from either end. Adjustable stops are provided for regulating the length of table feed. Three T-slots for clamping work or fixtures extend full length of table.

See operating features and job application on pages 72 and 73.

* INFINITELY
VARIABLE
FEED TO HEAD
0 to 25" per minute.

* 30 FEEDS TO TABLE
from 1/4" to 15" per minute.

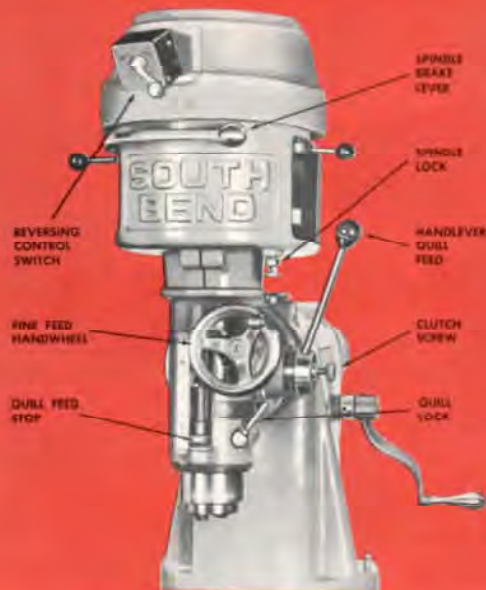


COMPARE THESE FEATURES

- 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-slots are provided for regulating length of table travel.
- Manual longitudinal and cross-feeds to table are standard equipment. Power longitudinal feeds available at extra cost.

SPECIFICATIONS

Table width	9"
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	3/4"
Quill travel	4"
Coflet 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



The principal controls for the Milling Machine head are illustrated above. The controls are conveniently located and so easy to operate that you will become familiar with them in just a few minutes.



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 setting precise and easy.

METRIC GRADUATIONS

at no extra cost, metric quill stop screw and depth scale, metric feed screws and metric graduated collars can be supplied in lieu of English if ordered with Mill.



South Bend Vertical Mill is also available without power feeds as illustrated above. Cabinet is extra. Easy to set-up, truly accurate and built to give you long years of service.

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 $\frac{3}{8}$ ", $\frac{1}{2}$ ", $\frac{5}{8}$ " and $\frac{3}{4}$ " capacities respectively. See inside pages for cutter arbors, vises and other accessories.

Catalog Number	Table Length	Motor		Price
		R.P.M.	H.P.	
MIL3212	32"	1200	$\frac{3}{4}$	\$1679.00
MIL3218	32"	1800	1	1679.00
MIL4212	42"	1200	$\frac{3}{4}$	1761.00
MIL4218	42"	1800	1	1761.00

ALTERNATE MOTORS AND CONTROL

Prices below show the additional cost for single phase and special three phase motors and controls in lieu of regular three phase motors and controls of corresponding horsepower and speed, when specified at time milling machine is ordered.

Cat. No.	H.P.	Phase	Cycles	Volts	R.P.M.	Price
MIL2804	$\frac{3}{4}$	1	60	115	1200	\$52.00
MIL2805	$\frac{3}{4}$	1	60	230	1200	52.00
MIL2628B	1	1	60	115	1800	45.00
MIL2628D	1	1	60	230	1800	45.00
MIL2712D	1	3	60	220	1200	41.00
MIL2712F	1	3	60	440	1200	41.00

MECHANICAL POWER TABLE FEED

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

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

HYDRAULIC POWER QUILL FEED

Hydraulic power quill feed attachment can be supplied at extra cost when specified at time Milling Machine is ordered. A single control lever permits feeding the spindle in either direction, up or down, and also has neutral or off position. Rate of feed is infinitely variable 0 to 25" per minute. Rapid traverse lever permits positioning quill quickly. Maximum length of feed is 4" and length of travel can be accurately controlled by positive depth stop. The hydraulic feed quill also has the regular manual feed lever and manual fine feed handwheel. When ordering, specify phase, cycle and voltage of motor required.

MIL7049. Power feed spindle in lieu of regular . . . \$262

CABINET FOR MILLING MACHINE

This steel cabinet has two compartments, one for holding the hydraulic pump and reservoir for operating power spindle feed and the other for coolant pump and reservoir.

MIL7052. Cabinet for Milling Machine. Price . . . \$43.50

COOLANT EQUIPMENT FOR MILL WITH MOTOR LISTINGS

Coolant Pump Equipment for Milling Machine include coolant pump, tubing, reservoir, $\frac{1}{4}$ h.p. motor, and switch. If coolant pump equipment is purchased with the milling machine, piping will be assembled in place and necessary electrical connections made.

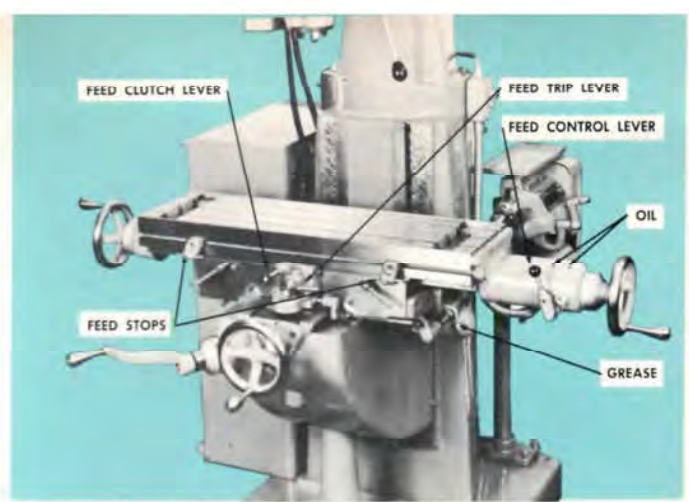
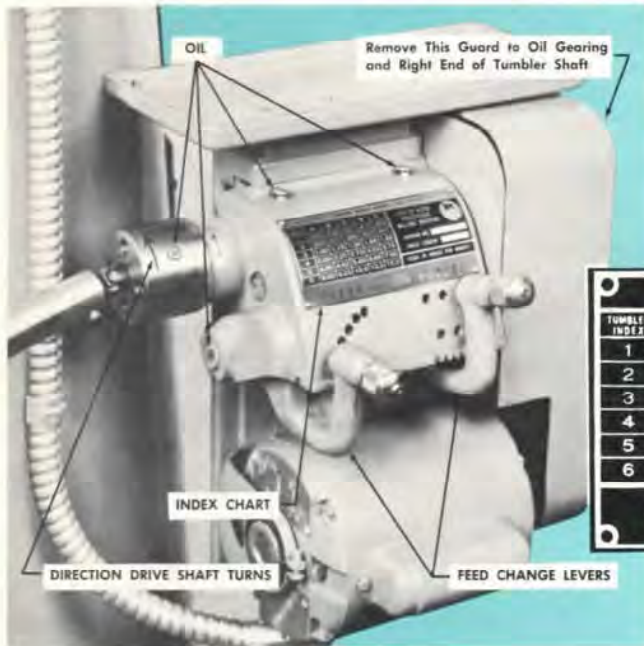
Catalog Number	Motor				Price
	Current	Phase	Cycle	Voltage	
MIL7061A	A.C.	1	50	115	\$191.00
MIL7061B	A.C.	1	60	115	189.00
MIL7061C	A.C.	1	50	230	193.00
MIL7061D	A.C.	1	60	230	191.00
MIL7063C	A.C.	3	50	208/220	211.00
MIL7063D	A.C.	3	60	208/220	211.00
MIL7063E	A.C.	3	50	440	211.00
MIL7063F	A.C.	3	60	440	211.00
MIL7063G	A.C.	3	50	550	211.00
MIL7063H	A.C.	3	60	550	211.00
MIL7063S	A.C.	3	50	380	211.00

FOR ATTACHMENTS AND ACCESSORIES SEE
 Pages 74 and 75

OPERATING FEATURES

THAT MAKE SOUTH BEND VERTICAL MILLING MACHINE YOUR BEST BUY

With so many desirable features, this South Bend Vertical Milling Machine with Power Feed to Table and Head will prove conclusively how you can save time and money on every milling machine operation in your shop. Just look at some of these features.



CONTROLS

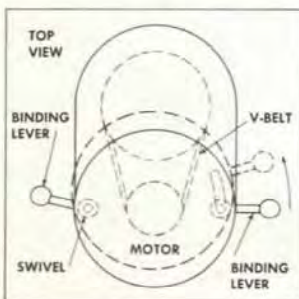
Controls used to operate the power table feeds. The direction of feed is determined by the feed control lever. Push lever to left to feed table to left, and to right to feed table to right. To engage power table feed push feed clutch lever to left. To disengage the feed push feed lever down. The automatic feed trip stops on side of table, may be set to stop the power table feed at any point. When automatic stop is tripped, the table must be backed away from the trip plunger manually before the feed clutch lever can be engaged again. This is a safety feature which prevents jamming the power feed mechanism.

MANUFACTURED BY SOUTH BEND LATHE						SOUTH BEND, IND., U.S.A.	
TUMBLER INDEX	A	B	C	D	E	SOUTH BEND PRECISION MILLING MACHINE	
1	.250	.288	.341	.417	.468	CATALOG NO. _____	
2	.500	.577	.682	.833	.937	TABLE LENGTH _____	
3	1.00	1.15	1.36	1.66	1.88	FEEDS IN INCHES PER MINUTE	
4	2.00	2.31	2.73	3.33	3.75	1 2 3 4 5	
5	4.00	4.62	5.45	6.66	7.50	6 7 8 9 10 11 12 13 14 15	
6	8.00	9.23	10.9	13.3	15.0	TUMBLER POSITIONS	

Index plate attached to gear box shows the arrangements of gear box levers for each of the 30 table feeds. (From 1/4" to 15" per minute.)

GEAR BOX DRIVE

The mechanical power feed to table consists of an independent motor drive and gear box with telescoping drive shaft. A mechanical table feed safety device prevents damage to table and gear box in case of overload.



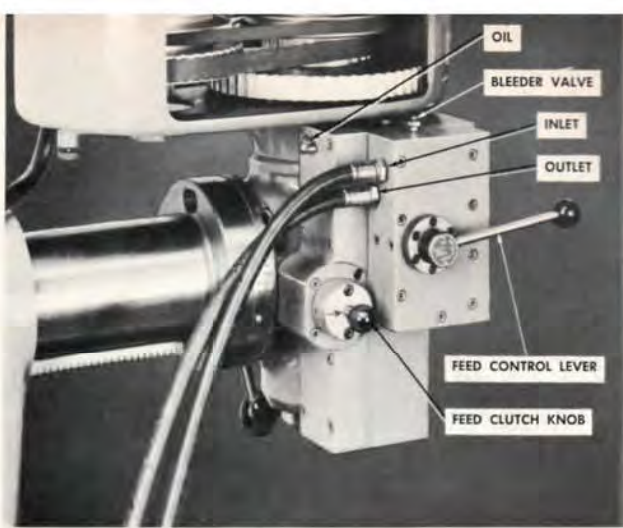
TIMING BELT

A combination V-Belt and timing belt "Lo Loss" drive transmits power to spindle with extreme smoothness. Convenient timing belt lever allows changing spindle speeds quickly. For slow spindle speeds lever is locked into position "A". For higher speeds the lever is in position "B". When pushed to position "C" the belt can be shifted to change spindle speeds.



FEED SCREWS

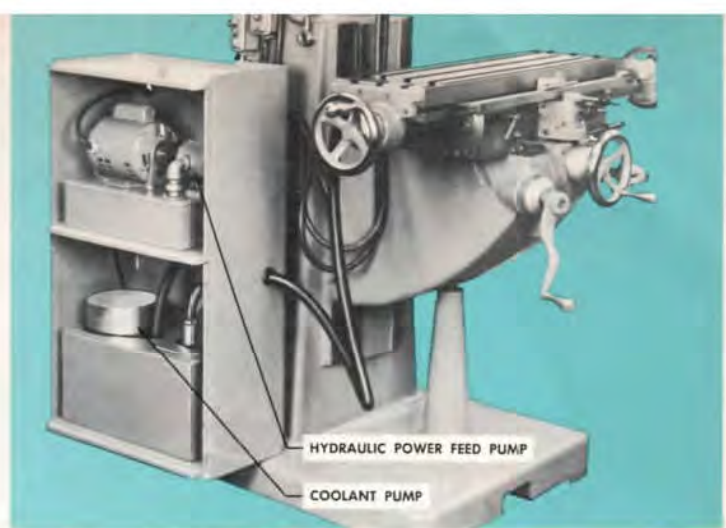
Longitudinal feed, cross-feed and vertical feed screws have graduated collars reading in thousandths of an inch. A small lock screw on each graduated collar permits loosening the collar and adjusting the graduations to zero at any time.



POWER QUILL FEED

The power quill feed is connected to the hydraulic pump and reservoir with two high pressure tubes. An automatic by-pass relief valve permits quill feed to stop automatically when maximum travel is reached. A positive depth stop is used to regulate length of quill feed. Quill feed control lever has three positions "Up", "Off", and "Down".

A fine feed control knob provides infinitely variable feeds ranging from 0 to 25" per minute. Power to quill feed is disengaged by power feed clutch.



HYDRAULIC POWER FEED

Hydraulic power feed consists of hydraulic power pump assembly. Motor for hydraulic pump is wired to the starting switch which is mounted on left side of milling machine column. Pump reservoir holds 4½ quarts of light hydraulic oil and is maintained at a level between two marks on gauge rod attached to oil filter hole cover. The steel cabinet illustrated above is an accessory item. The side panel is removed to show one way to mount hydraulic power quill feed pump and coolant pump. Coolant pump is extra.

DOVE TAIL GIB ADJUSTMENT

Adjustable tapered gibs are used for all three dovetails on milling machine. Gibs should be adjusted so they are snug, but not so tight that they bind and prevent the dovetail slides from operating freely.

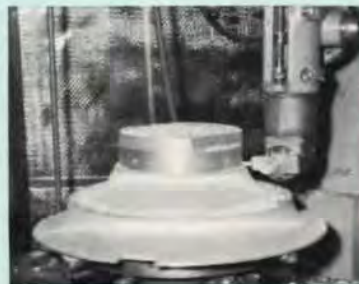
The longitudinal feed dovetail has two gibs, one in each end of the saddle at the front of the table. These are independently adjusted by turning the gib adjusting screws located beneath table at each end of saddle.



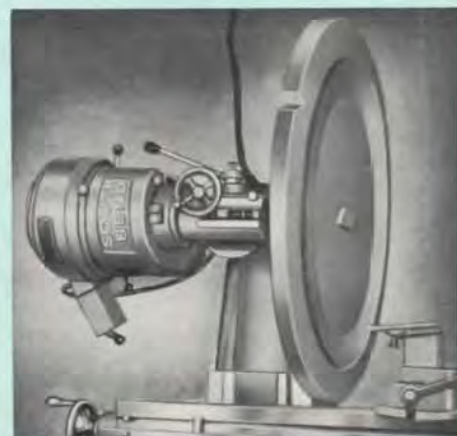
DO JOBS LIKE THESE and countless others



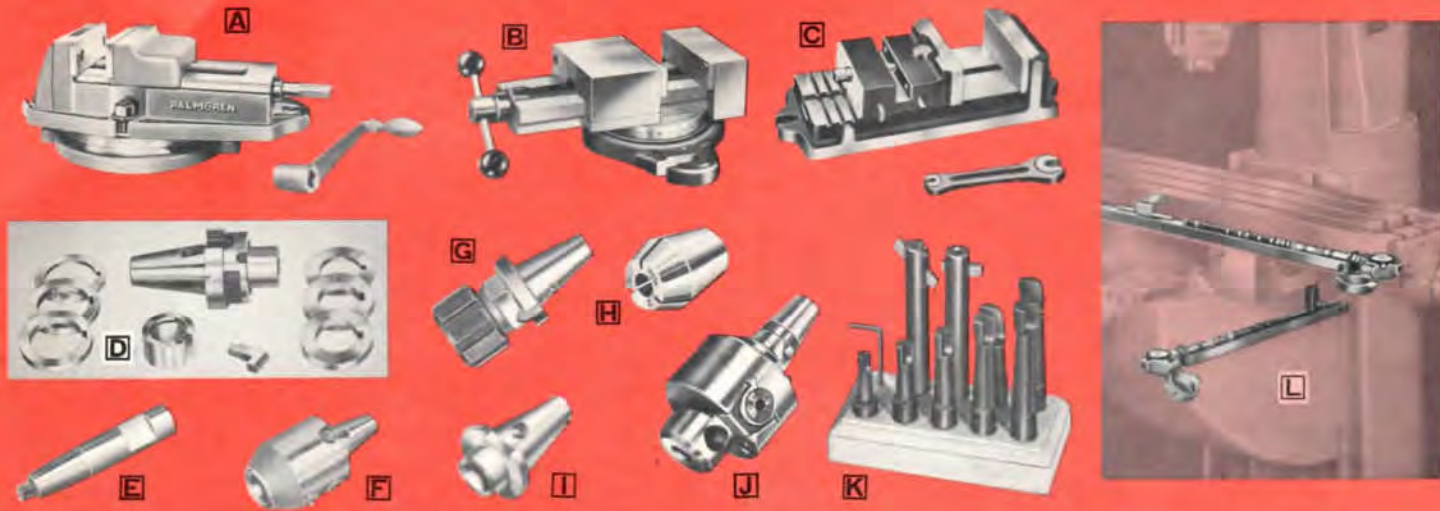
Smooth, accurate table control is a big help in tool positioning and center finding. Here aluminum pattern is set up for machining.



Using 90° Milling Head, with proper length radii of tool and tool holder, concave precision were milled with extreme precision in this aluminum pattern casting.



Above is an example of how one shop solved a large diameter turning problem. By rotating the milling machine head 90° it was possible to turn and face a 42" diameter pattern with cutting tool mounted in a vise on the table.



THESE ACCESSORIES EXPAND THE PRODUCTIVE

A SWIVEL VISE, with 360° swivel base, has flanges for clamping to machine table. Base has two 1/4" T-slot bolts for swivel and two 1/4" keys to fit machine table slots. Ground steel jaw plates are removable. Vice jaws are 4" wide, 1 1/2" deep and open 4". Wrench for vise is included in price. Shipping weight 51 lbs.

MIL7450. 4" Swivel Milling Machine Vise. Price f.o.b. factory \$99.95

MIL7014. 6" Swivel Vise with Base. Same features as above. Jaws are 6" wide, 2" deep and open 6". Wrench included. Shipping weight 105 lbs. Price f.o.b. factory \$139.95

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 weight 18 lbs.

CE9100. Swivel Machine Vise. Price f.o.b. factory \$31.25

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 1/4" deep and open 6 1/2". Shipping weight 40 pounds.

MIL7013. 5 1/2" Quick-acting Milling Machine Vise. Price \$80.00

D MILLING CUTTER ARBOR. This arbor is designed to hold standard side milling cutters and dovetail cutters from 3" to 6" diameter with 1/2" to 3/4" face and having either a 1" or 1 1/2" diameter arbor hole.

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 \$58.50

NOTE: We are in a position to supply 30 MM Shell End Mill Arbors to fit South Bend Mills. We must know shank diameter to fit cutter hole. Arbors on special order only. Not subject to return. Price on request.

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

MIL7037. Arbor with 3/4"—24 right-hand thread for holding angular cutters CE667S3 and CE667S4. Price f.o.b. factory \$5.20

MIL7038. Arbor with 3/4"—24 left-hand thread for holding angular cutters CE667S1 and CE667S2. Price f.o.b. factory \$5.20

F QUICK CHANGE TOOL HOLDERS fit into No. 30 MM taper to hold single end straight shank end mills, drills, boring bars or other straight shank tools. No. MIL7016 will also hold double end mills. Shipping weight 4 lbs. each.

Cat. No.	Capacity	Price	Cat. No.	Capacity	Price
MIL7016	3/4"	\$24.00	MIL7020	3/4"	\$27.00
MIL7017	3/8"	23.30	MIL7021	1/2"	31.25
MIL7018	1/2"	19.40	MIL7022	1"	37.25
MIL7019	5/8"	19.40			

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 \$47.30

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	1/4"	\$12.85	MIL7007	7/16"	\$3.90
MIL7002	3/8"	12.85	MIL7008	1/2"	3.90
MIL7003	3/4"	4.45	MIL7009	9/16"	3.90
MIL7004	1"	4.45	MIL7010	5/8"	3.90
MIL7005	5/8"	4.45	MIL7011	11/16"	3.90
MIL7006	3/8"	3.90	MIL7012	3/4"	3.90

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 \$7.90

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 1/2" 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 1/2 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 3/8" diameter shanks. Price includes wrench and wood base. Shipping weight 3 1/2 lbs.

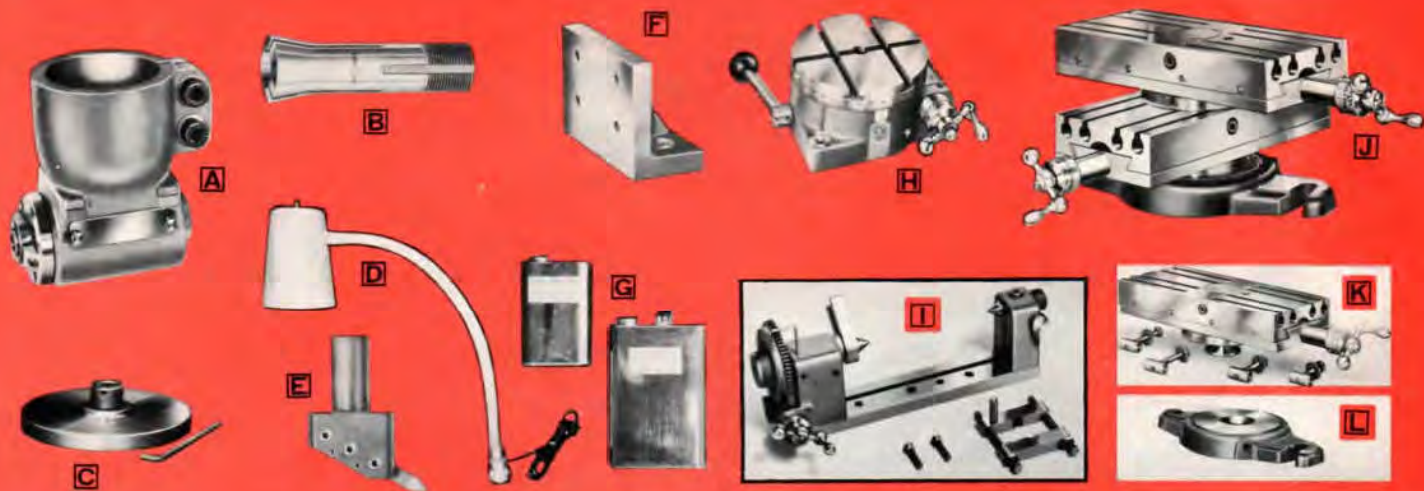
MIL7044. Boring Tool Set. Price f.o.b. factory \$29.00

L MEASURING TRAYS AND RODS. Measuring trays are attached to table and knee of milling machine and used with 3/8" 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 \$136.00

MIL7041. Measuring Trays and Indicators for 42" Table \$143.00

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 weight 5 lbs. Price \$217.50



CAPACITY OF YOUR SOUTH BEND MILLING MACHINE

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 No. 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 attachments for the spindle and one ½" 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..... \$85.50

B EXTRA COLLETS FOR 90° MILLING HEAD. Regular South Bend No. 3 **←R-S-B←** steel collets. Any capacity ⅛" to ½" round in increments of ¼". (See page 36 for square and hexagon collets.) Shipping weight each 6 ozs.

CE3050. Steel Collet. Price each f.o.b. factory..... \$5.30

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	5¼"	1½"	8	7 lbs.	\$ 8.15
CE3446	5¼"	1¾"	8	10 lbs.	9.50
CE3447	7½"	2¼"	8	13 lbs.	11.20
CE3448	11¾"	2¾"	6	14 lbs.	20.30

D WORK LIGHT. For clear vision without eyestrain, equip your milling machines (and other machine tools) with this South Bend Work Light. May be permanently installed by drilling and tapping one hole in the milling machine column. When ordered with milling machine, the column will be drilled and tapped for the work light at no extra charge. Shipping weight 5 pounds. Bulb is not included.

MIL7047. Work Light for milling machine. Price f.o.b. factory..... \$14.90

E FLY CUTTER for use with Vertical Milling Machine. Has ⅝" shank and takes ⅜" cutter bit. (Cutter bit not included.)

MIL7058. Fly Cutter. Price f.o.b. factory..... \$8.75

F ANGLE PLATE. This is a heavy cast iron angle plate suitable for clamping work on the milling machine, shaper, drill press, face plate of lathe, etc. Size 4½" x 3" x 2". Has six bolt holes. Shipping weight 4 pounds.

CE9640. Angle Plate. Price f.o.b. factory..... \$10.50

G HYDRAULIC OIL. For use in Power Feed Quill on Vertical Milling Machine.

CE7053. 1 qt. can Hydraulic Oil..... \$1.30

CE7054. 1 gal. can Hydraulic Oil..... 4.10

H ROTARY INDEXING TABLE. You will find this rotary indexing table a great convenience for mounting small work on the milling machine, drill press, or shaper. Used for accurately spacing holes, indexing clutch teeth, machining squares, hexagonal or octagonal shapes, milling circular grooves or T-slots, etc. Table is 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. Shipping weight 14 lbs.

CE9144. Indexing table. Price f.o.b. factory..... \$65.00

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

CE9635. Indexing Centers. Price f.o.b. factory..... \$80.50

J UNIVERSAL TABLE. For angular milling operations. Both upper and lower slides have graduated swivels and may be turned through full 360°. Slides can be used without graduated swivels to reduce height if desired. They can be positioned at any angle with each other and may be turned individually or together. Each slide has feed screw with micrometer collar reading in thousandths of an inch. Dovetails are equipped with full length gibs for take-up. The precision ground work surface is 4" x 8½" 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. Shipping weight 43 lbs. Price..... \$137.00

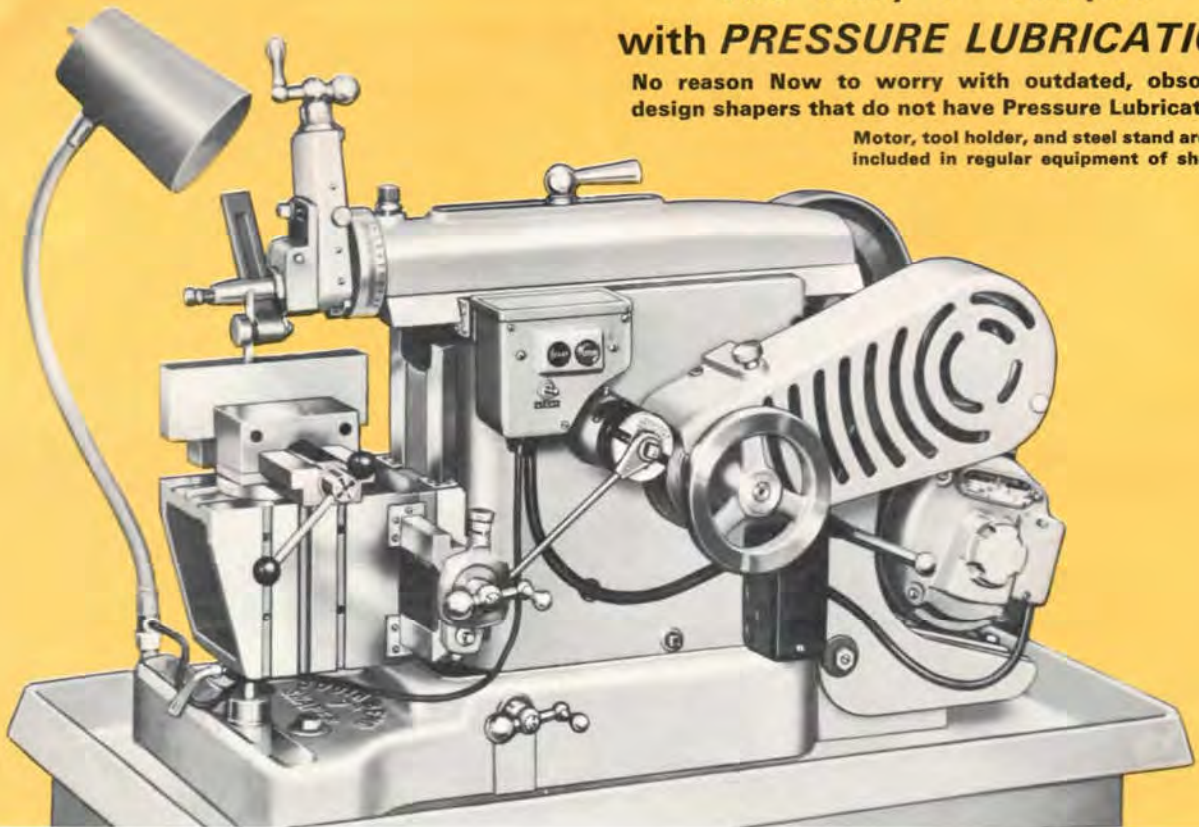
CE9157. Single Table with one graduated swivel and four clamp bolts with nuts. Ship. wt. 19 lbs. Factory price..... \$66.50

CE9159. Base only for adapting single table to South Bend milling machine or other machine tool. Ship. wt. 8 lbs. Price..... \$5.10

the only 7" shaper
with **PRESSURE LUBRICATION**

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

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 3½" 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 ⅓ or ½ 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 ⅓ 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 78 and 79). Shipping weight crated 330 lbs. Boxed weight 400 lbs., cubic feet boxed 12.* Price f.o.b. factory **\$632.00**

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

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

Features

THAT MAKE SOUTH BEND THE BEST SHAPER VALUE

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



Tool head locks in any position. Rugged clapper box also adjustable.



Guards on all belts and pulleys. Quick-acting belt tension release.



Rocker arm graduated for accurate stroke adjustment.



Bearing surface on base for adjustable table support.



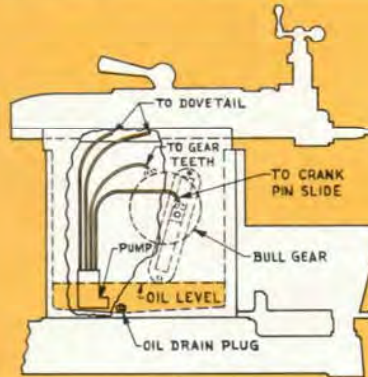
Machining clutch teeth with rotary indexing table.



Machining flat surfaces on shaft with indexing head.

SPECIFICATIONS

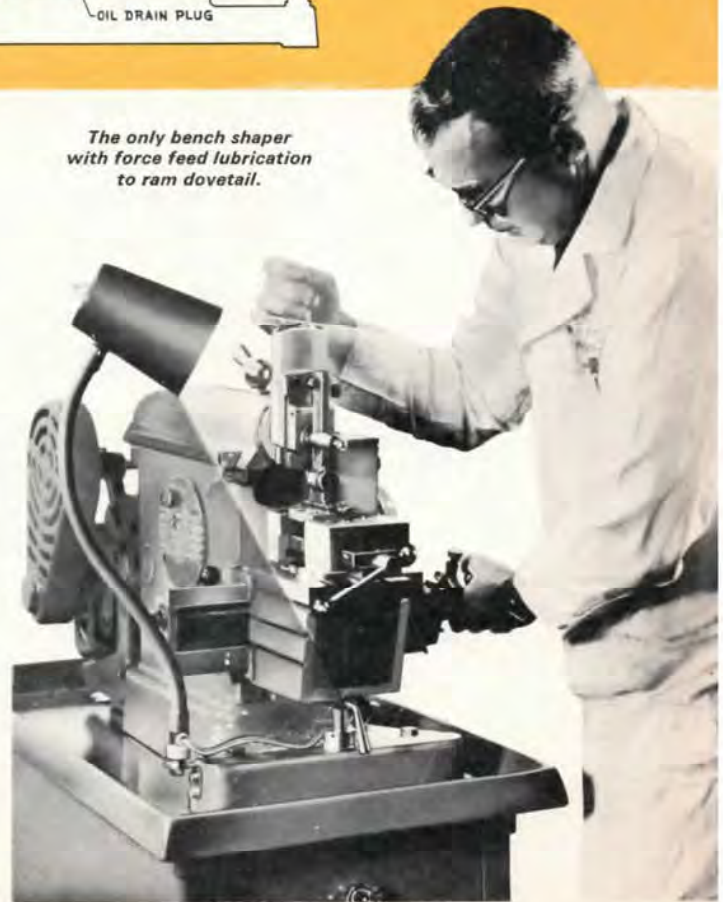
Length of ram stroke.....	0 to 7"
Strokes per minute, approximate.....	42-75-120-195
Cutting speeds.....	3 to 114 feet per minute
Vertical feed of tool.....	.3"
Tool post takes tool.....	3/8" x 1 1/16"
Tool head swivels.....	360°
Width of vise jaws.....	.4"
Depth of vise jaws.....	.1"
Maximum opening of vise jaws.....	.4"
Length of table top.....	6 5/16"
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.....	5/16"
Holes in table for clamp bolts.....	3/32"
Size motor recommended.....	1/2 or 3/4 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 SHAPER

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. Shipped knocked down.

CE9141. Wood Top Machine Stand (less drawer). Shipping weight 52 pounds. Price f.o.b. factory . . . \$28.50

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

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

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

CE9144. Indexing Table. Shipping weight 14 lbs. Price f.o.b. factory . . . \$65.00

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. Shipping weight 12 lbs. Price f.o.b. factory . . . \$80.50

F MOTORS AND CONTROLS 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: ½ h.p. motors 40 lbs., ¼ h.p. motors 50 lbs.

Cat. No.	H.P.	Current	Volts	Phase	Cycle	Price
CS4910B	½	A.C.	115	1	60	\$38.50
CS4910D	½	A.C.	230	1	60	38.50
CS4911A	½	A.C.	115	1	50	42.00
CS4911C	½	A.C.	230	1	50	42.00
CS4912D	½	A.C.	208-220	3	60	41.50
CS4912C	½	A.C.	208-220	3	50	41.50
CS4913S	½	A.C.	380	3	50	41.50
CS4913F	½	A.C.	440	3	60	44.50
CS4913E	½	A.C.	440	3	50	44.50
CS4920B	½	A.C.	115	1	60	45.00
CS4920D	½	A.C.	230	1	60	45.00
CS4921A	½	A.C.	115	1	50	49.00
CS4921C	½	A.C.	230	1	50	49.00
CS4924D	½	A.C.	208-220	3	60	48.50
CS4924C	½	A.C.	208-220	3	50	48.50
CS4924S	½	A.C.	380	3	50	48.50
CS4924F	½	A.C.	440	3	60	48.50
CS4924E	½	A.C.	440	3	50	48.50

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

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

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

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



ACCESSORIES FOR SOUTH BEND 7" BENCH SHAPER

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 8 1/2" 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. Ship. wt. 37 lbs. Price f.o.b. factory . . . \$138.00

CE9157. Single Table "B" with one graduated swivel and four clamp bolts with nuts. Shipping weight 19 lbs. Price f.o.b. factory . . . \$66.50

CE9158. Base only "C" for adapting single table to South Bend 7" Shaper. Ship. wt. 3 lbs. Price f.o.b. factory . . . \$5.85

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

CE9640. Shipping weight 4 lbs. Price f.o.b. factory . . . \$10.50

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

THESE ACCESSORIES MAKE THE SOUTH BEND 7" BENCH SHAPER EVEN MORE VERSATILE FOR HIGH PRODUCTION WORK.

F 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 1/8"	8	7 lbs.	\$ 8.15
CE3446	6 1/4"	1 1/8"	8	10 lbs.	9.50
CE3447	7 1/2"	2 1/4"	8	13 lbs.	11.20
CE3448	11 1/4"	2 3/8"	6	14 lbs.	20.30

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

CS9630. Adjustable Shaper Tool Holder. Price f.o.b. factory . . . \$10.90

H EXTENSION SHAPER TOOL. A rigid forged steel tool holder for internal work. Adapted for die work, internal keyways or for any work on the shaper in which extra clearance is needed. Size of bar is 1/2" x 7 1/2". Takes cutter bit 3/16" x 3/16". Shipping weight 2 lbs.

CS9631. Extension Shaper Tool. Price f.o.b. factory . . . \$10.90

I 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 . . . \$.75

CE9621. Left-Cut Shaper Tool Bit. Price f.o.b. factory . . . \$.75

CE9622. Slot-Cutting Shaper Tool Bit. Price f.o.b. factory . . . \$.90

CE9623. Set of Three Tool Bits (one ea. of above). Price . . . \$2.10

You can get almost any South Bend product quickly, from stock carried by our distributors in all principal cities.

SOUTH BEND

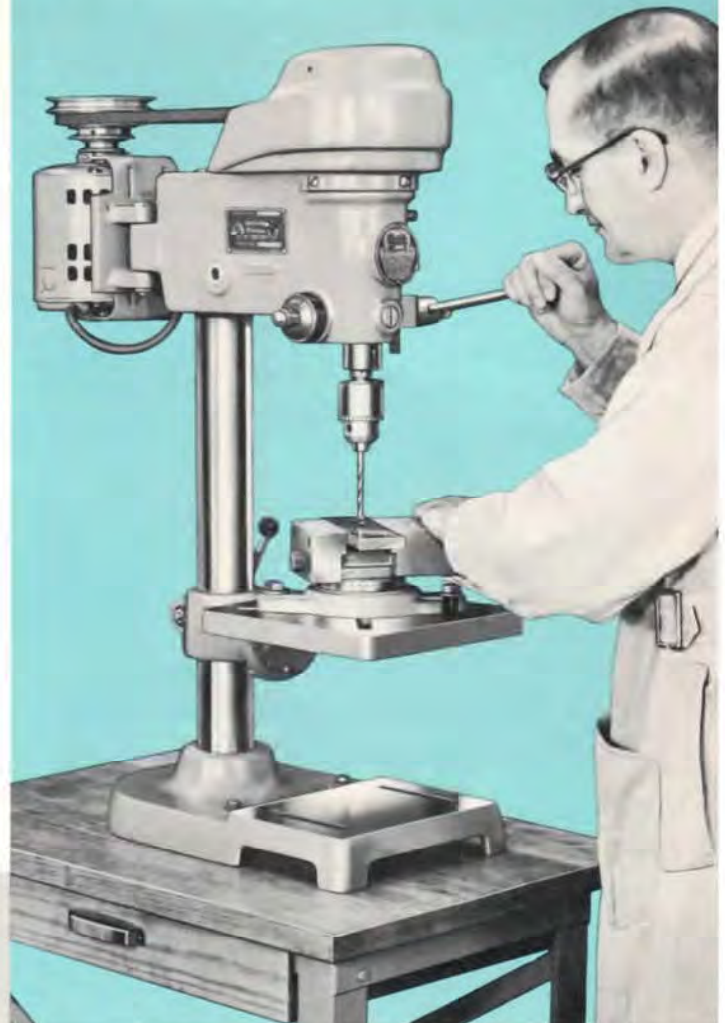
Precision BENCH MODEL

14"

DRILL PRESS

South Bend's 14" Drill Press is the only drill press in its size and price range with a Patented Design Rack Type Depth Gage completely integrated with the quill. Designed to eliminate spindle deflection. Depth stop is direct reading, in thousandths of an inch. Not just an ordinary drill press — but a Precision Engineered Machine Tool for extremely accurate work.

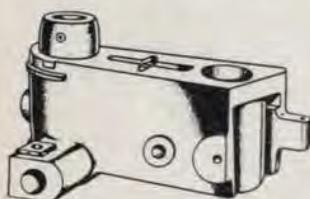
A built-in light with independent switch provides shadowless illumination on the work area, eliminating the necessity of installing a separate lighting fixture. A quick-acting belt tension release lever simplifies speed changes and returns the vertical mounted motor to its original position after each change, thus maintaining the same belt tension for each of the four cone pulley steps.



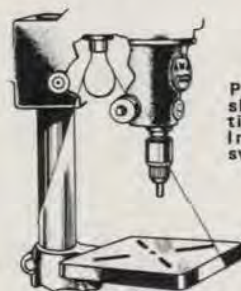
LOOK AT THESE

FEATURES

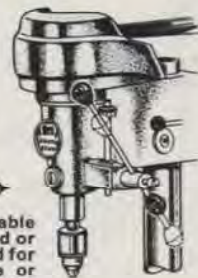
PULLEYS BALANCED FOR SMOOTH OPERATION



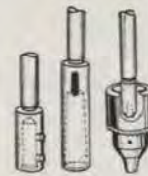
ONE-PIECE HEAD CASTING
Insures accurate alignment. Heavy, rigid construction. Internal clutch locks the head to column. Column bearing is NOT split.



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.



INTER-CHANGEABLE SPINDLES
Spindles available to take No. 2 Morse taper shank tools, and for 1/2" straight shank tools, router bits, shaper cutters.



ADJUSTABLE QUILL RETURN SPRING
Retracts quill instantly. Feather touch sensitivity of the quill by adjustment of tension spring.



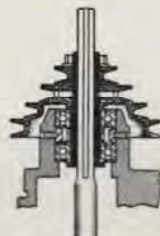
FOUR PRECISION BALL BEARINGS
Two on spindle, two on drive sleeve. Prelubricated and sealed precision type, no oiling required.



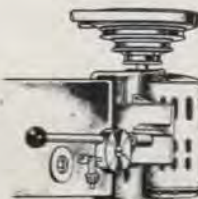
RACK TYPE DEPTH GAUGE
Works as an integral part of quill. Eliminates spindle deflection. Graduated in thousandths.



QUILL SHOE ADJUSTMENT
Shoe-type take-up provides feather-touch tension and secure locking. Quill bearing is NOT split.



FREE-FLOATING SPINDLE
Design prevents misalignment, side thrust and whip. Precision splines in spindle and sleeve.



BELT TENSION RELEASE
Flip of lever removes tension from belt for easy speed changes. Proper belt tension maintained.



TABLE LOCK
Internal clutch securely locks table to column. Eliminates misalignment. Column bearing is NOT split.



PRECISION TABLE HAS WIDE CLAMPING RIB
Table has accurately ground work surface. Heavy rib 3/4" wide strengthens table and provides flat surface underneath for clamping work securely to table.

SPECIFICATIONS

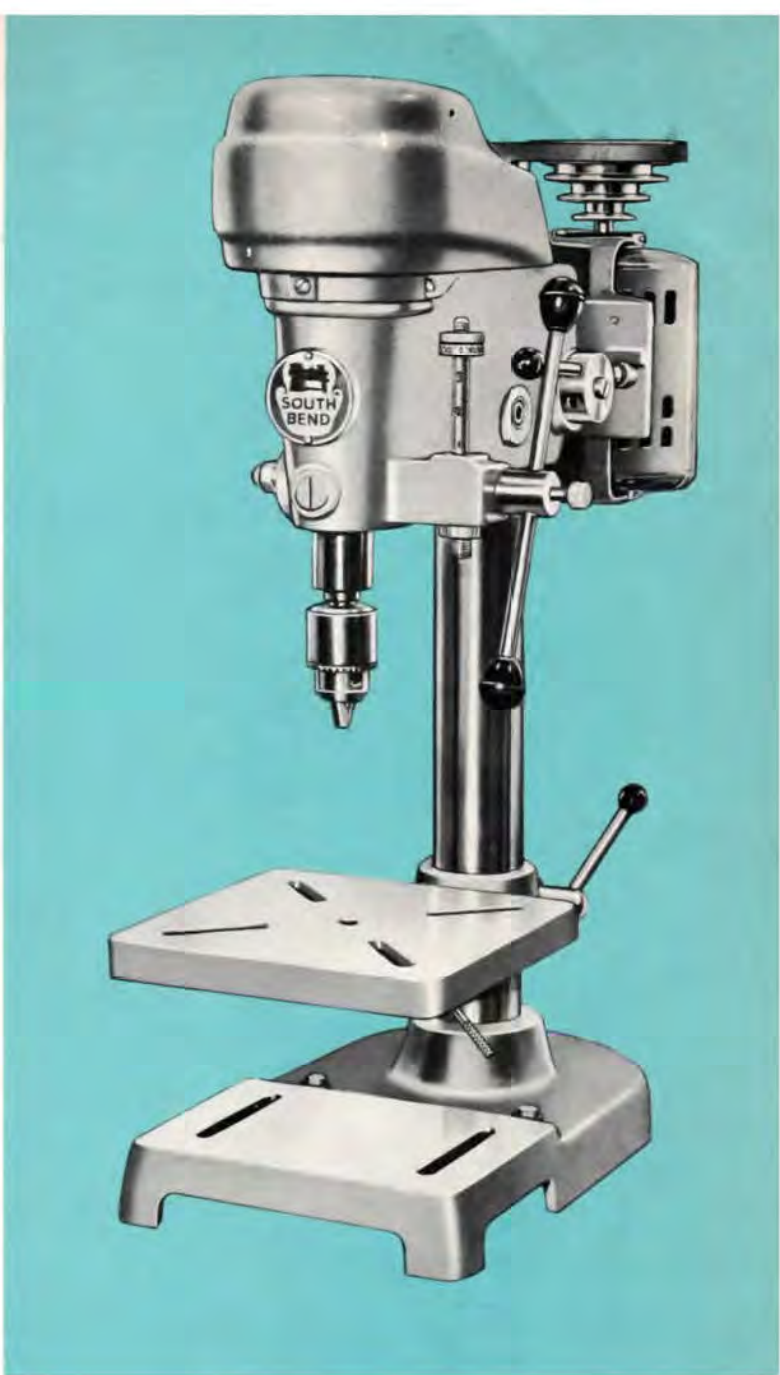
- Maximum drill size in iron or steel..... $\frac{1}{2}$ "
- Drills to center of..... $1\frac{1}{4}$ " circle
- Net weight, bench type, less motor.....130 lbs.
- Chuck capacity.....0 to $\frac{1}{2}$ "
- Spindle Speeds:
- With 1725 r.p.m. motor, four, approx.....720 to 4325 r.p.m.
- With 1140 r.p.m. motor, four, approx.....480 to 2885 r.p.m.
- With 1725 r.p.m. motor and multi-speed attachment, (see pages 85 and 87) twelve, approx.....380 to 8010 r.p.m.
- With 1140 r.p.m. motor and multi-speed attachment, (see pages 85 and 87) 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 table, maximum, bench type..... $11\frac{1}{8}$ "
- Base, work surface, bench type.....7" x 10"
- Table, work surface.....10" x 10"
- Table tilt.....Any angle
- Column diameter.....2.730"
- Motor, size recommended..... $\frac{1}{2}$ or $\frac{1}{2}$ h.p.

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 two slots for clamping. Maximum distance between base and chuck is 16" and between table and chuck is $11\frac{1}{8}$ ".



Precision drilling operation with use of a universal table for handling and clamping of work. See page 85.

Drilling an angle plate clamped in a drill press vise. A practical method of holding small work rigidly for drilling or reaming operations. See page 85.



The free-floating spindle design prevents misalignment, side thrust, and whip. Two precision ball bearings carry the drive sleeve and two additional ball bearings carry the spindle, which is spline driven. All ball bearings pre-lubricated and sealed, require no oiling. Rack type depth gage integrated with the quill, eliminates spindle and small drill deflection.

Standard 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 87 for drill press motors.

PRECISION MODEL BENCH DRILL PRESSES

Catalog Number	Spindle Equipment	Cubic Feet Boxed	Boxed Weight Pounds	Crated Weight Pounds	Price
CD400B	$\frac{1}{2}$ " Jacobs Key Chuck.....	9	255	190	\$147
CD414B	No. 2 Morse Taper Socket...	9	255	190	140

NOTE: If ordered less motor, specify voltage, phase, and cycle of motor to be used.

SOUTH BEND

Precision FLOOR MODEL

14"

DRILL PRESS

Except for the tall column and large base for floor mounting, this is the same as the bench drill press shown on the preceding pages. The base is heavily constructed and of ample size to provide substantial support. Maximum distance between base and chuck is 45½" and between table and chuck is 40¾".

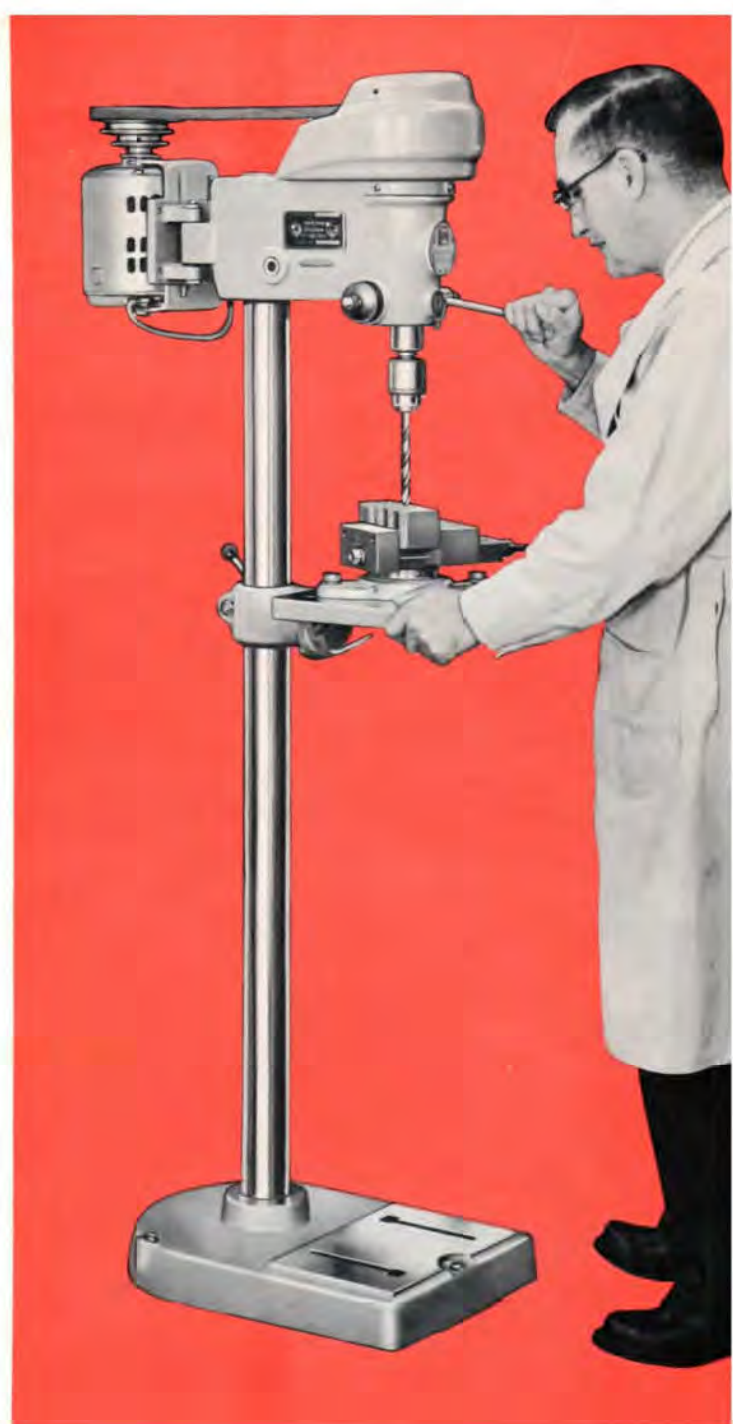
The free-floating spindle design prevents misalignment, side thrust, and whip. Two precision ball bearings carry the drive sleeve and two additional ball bearings carry the spindle, which is spline driven.

SPECIFICATIONS

- Maximum drill size in iron or steel.....½"
- Drills to center of.....14¾" circle
- Net weight, floor type, less motor.....165 lbs.
- Chuck capacity.....0 to ½"
- 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 pages 85 and 87) twelve, approx.....380 to 8010 r.p.m.
- With 1140 r.p.m. motor and multi-speed attachment, (see pages 85 and 87) 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, floor type.....45¾"
- Chuck to table, maximum, floor type.....40¾"
- 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.....½ or ½ h.p.



For handling and clamping of work for precision drilling. The rotary feed table features an accurately machined table surface for clamping slots. See page 85.



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 ¾" flat underneath for clamping.

Standard 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 87 for drill press motors.

PRECISION MODEL FLOOR DRILL PRESSES

Catalog Number	Spindle Equipment	Cubic Feet Boxed	Boxed Weight Pounds	Crated Weight Pounds	Price
CD400F	½" Jacobs Key Chuck	19	365	235	\$168
CD414F	No. 2 Morse Taper Socket	19	365	235	161

NOTE: If ordered less motor, specify voltage, phase, and cycle of motor to be used.

Precision MODEL SINGLE AND MULTIPLE SPINDLE DRILL PRESSES FOR PRODUCTION OPERATIONS

Much time can be saved on production drill press work by using one of these multiple spindle models so that two or more operations can be performed in rapid sequence. Each spindle can be adjusted independently to the correct position and speed for most convenient and efficient operation.

These drill presses consist of our standard 14" Precision Model drill press heads mounted on heavy, accurately machined work tables having large coolant return grooves. Either bench mounting (not illustrated) or heavy welded steel floor legs for floor installation as illustrated, can be supplied.

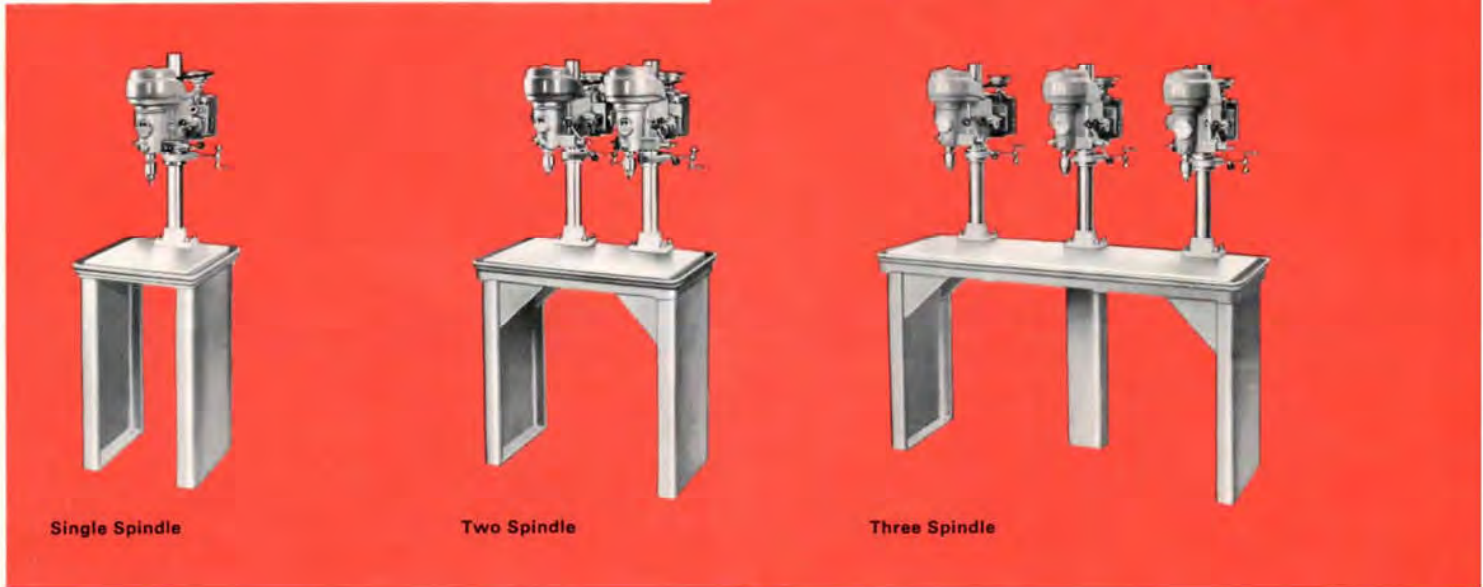
Drill press heads have the New Patented Design Rack Type Depth Gage, completely eliminating spindle and small drill deflection due to depth gage pressure.

The drill press spindles can be supplied with either 1/2" Jacobs key type chucks or with taper sockets to receive tools with No. 2 Morse taper shanks. Coolant pump and reservoir, multi-speed attachment, and other attachments and accessories can be supplied and are illustrated and described on pages 85 to 87 inclusive.

Standard 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 87) 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.



Four Spindle Production Drill Press



Single Spindle

Two Spindle

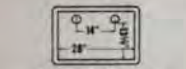
Three Spindle

SINGLE AND MULTIPLE SPINDLE DRILL PRESSES

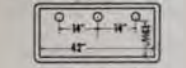
With 1/2" Jacobs Chucks Cat. No.	Price	With No. 2 M.T. Sockets Cat. No.	Price	Number of Spindles	Table Work Surface	Between Column Centers	Over-all Size			Cubic Feet Boxed	Boxed Weight Pounds	Crated Weight Pounds
							Width	Depth	Height			
FLOOR MODEL DRILL PRESSES FOR PRODUCTION OPERATIONS												
CD451F	\$290	CD491F	\$284	1	13 7/8" x 15 3/4"	...	20"	33"	68 1/4"	22	475	375
CD452F	558	CD492F	547	2	14" x 28 3/4"	13"	33 1/4"	33"	69 13/16"	34	725	628
CD453F	866	CD493F	849	3	14" x 55"	19"	59 1/2"	33"	70 1/4"	57	1185	1065
CD454F	996	CD494F	973	4	14" x 55"	13"	59 1/2"	33"	70 1/4"	57	1320	1200
BENCH MODEL DRILL PRESSES FOR PRODUCTION OPERATIONS												
CD451B	\$228	CD491B	\$222	1	13 7/8" x 15 3/4"	...	20"	33"	37 1/4"	22	393	293
CD452B	487	CD492B	476	2	14" x 28 3/4"	13"	33 1/4"	33"	38 7/16"	34	645	546
CD453B	721	CD493B	702	3	14" x 55"	19"	59 1/2"	33"	38 11/16"	57	1065	902
CD454B	889	CD494B	865	4	14" x 55"	13"	59 1/2"	33"	38 11/16"	57	1200	1035

SOUTH BEND 14" DRILL PRESS

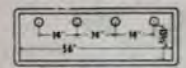
MULTIPLE SPINDLE — SECTIONAL TABLE MODELS



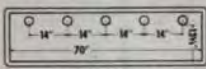
2 SPINDLE SECTIONAL TABLE



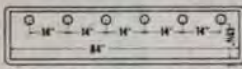
3 SPINDLE SECTIONAL TABLE



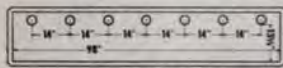
4 SPINDLE SECTIONAL TABLE



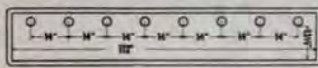
5 SPINDLE SECTIONAL TABLE



6 SPINDLE SECTIONAL TABLE



7 SPINDLE SECTIONAL TABLE



8 SPINDLE SECTIONAL TABLE

Carefully designed and engineered to provide a Precision Drill Press with maximum strength and minimum weight. Table castings have rigid ribbed construction and legs are reinforced welded steel, equipped with adjustable table leveling mechanism. From single unit to multiple spindle by adding necessary components. No limit to number of stations that can be assembled.

TABLE shows equipment recommended for various set-ups.

* No. of SPINDLES	Table Section CD552	Table Ends CD555	End Legs CD554	Inner Leg CD553	Head and Column Assembly — 1/2" Jacobs Chuck or #2 M.T. Socket
1 SPINDLE	1	2	2	—	1
2 SPINDLE	2	2	2	—	2
3 SPINDLE	3	2	2	1	3
4 SPINDLE	4	2	2	2	4
5 SPINDLE	5	2	2	3	5
6 SPINDLE	6	2	2	4	6
7 SPINDLE	7	2	2	5	7
8 SPINDLE	8	2	2	6	8

*Sectional Production Drill Presses are shipped knocked down, ready for assembly. (Requires approx. 1 hour per head for assembly.)

Components can be added as needed to make up any length production drill press.

Note: If heavy duty work is continually being done on the Drill Press, additional inner legs may be added.



*Coolant equipment extra. See page 86.

MAKE UP YOUR OWN PRODUCTION DRILL PRESS EQUIPMENT WITH THESE LOW COST COMPONENTS



HEAD AND COLUMN ASSEMBLIES

Regular equipment with each head assembly includes a Precision Model Drill Press Head, with motor base, motor pulley, V-belt, built-in work light, wiring, toggle switches (switches not included when three phase motor is used) motor not included. (See page 87 for control equipment for 2 and 3 phase motors). Column assembly includes column and column support assembled plus cap screws for attaching to table. If ordered without motor, specify voltage, phase and cycle of motor to be used so correct wiring can be supplied in drill press head.

CD556. Precision Head Assembly with 1/2" Jacobs Key Chuck. Price f.o.b. \$120.00

CD557. Precision Head Assembly with No. 2 M.T. Socket. Price f.o.b. \$115.00

CD558. Column Assembly. Price f.o.b. \$23.95

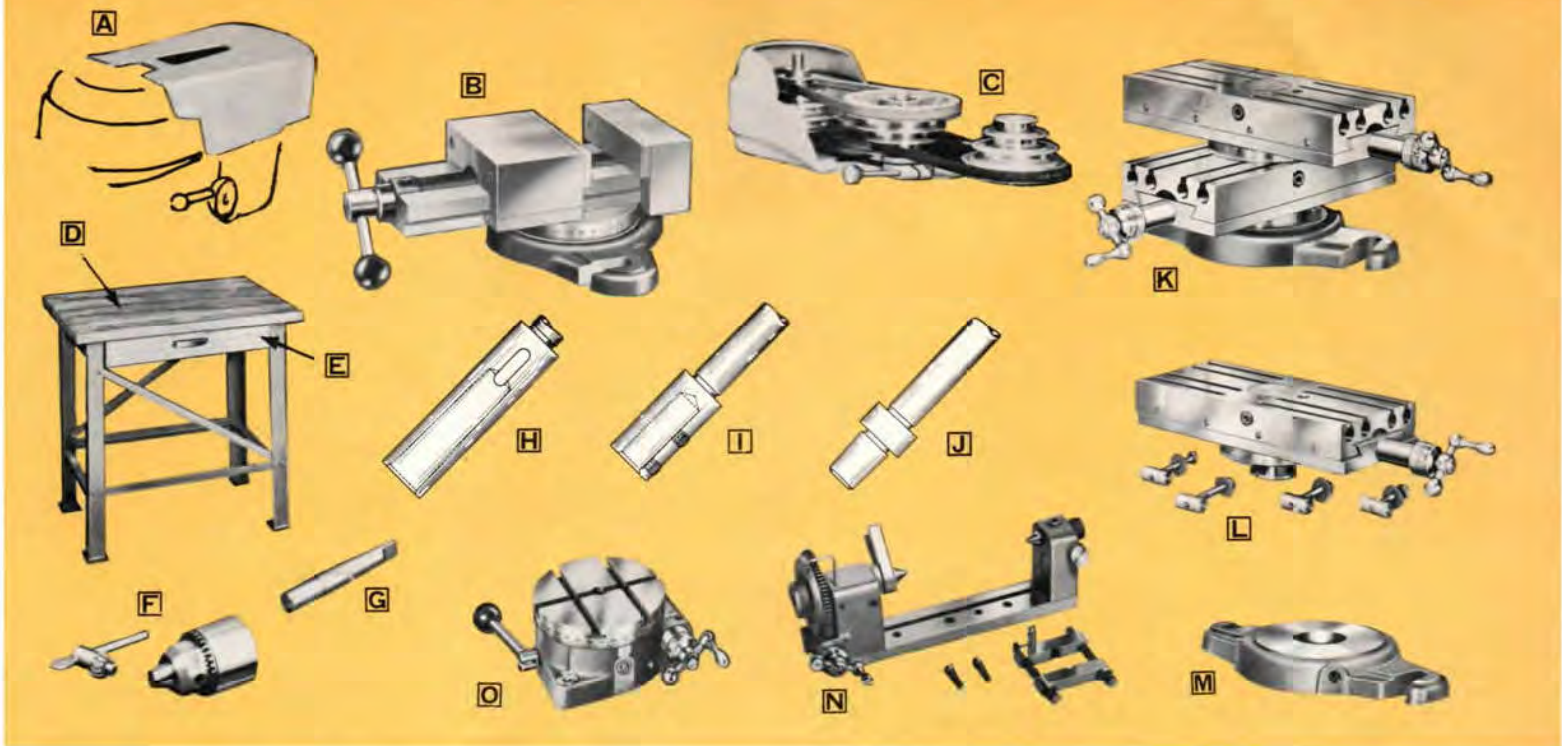
A TABLE SECTION. Each Table Section for production drill press is 14" wide, 21 1/4" long, 4 1/2" thick. Designed for strength with minimum weight. Connecting bolts and leveling mechanism, wrenches and instructions for assembling included with each table section. **CD552. Production Drill Press Table Section . . . \$46.75**

B TABLE ENDS. These table ends attach to the drill press table section (see A). Has coolant return grooves to match those of the drill press table. Drilled and tapped for coolant pipe. Table end is 2" wide, 21 1/4" long and same height as table. Pipe plug and hardware for attaching is included. **CD555. Table End. Price each \$12.65**

C END LEGS. The end legs for the production drill press are made of heavy gauge reinforced steel. Modern in design and shape, with steel reinforcing at top and bottom of each leg. Leg is drilled and tapped for attaching to drill press table. Two adjustable leveling bushings and pads plus hardware for attaching to table is included with each leg. Leg approx. 30" long, 17" wide. **CD554. End Leg. Price each \$39.25**

D INNER LEGS. Inner legs are constructed the same as the end legs. Heavy reinforced welded steel, drilled and tapped for attaching to drill press table. Included with inner leg is one adjustable leveling bushing and pad plus hardware for attaching to table of drill press. Inner leg is approximately 30" long, 6" wide. **CD553. Inner Leg. Price each \$22.00**





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..... **\$16.25**

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.. **\$31.25**

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. Drill Press Head cannot be moved up or down when using Multi-Speed Attachment.

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..... **\$19.60**

CD9135B. For 1/2 h.p. NEMA No. 66 frame motor. Price. **\$19.60**

Note: This attachment cannot be used with Head Positioning Attachment.

D WOOD TOP MACHINE STAND. This is a heavily constructed angle steel stand 29 3/8" high for mounting the drill press, bench shaper, or for other small machines. The glued wood top is 20" x 32" and is 1 3/8" thick. Steel parts are finished in gray enamel. Shipping weight 52 pounds.

CE9141. Wood Top Machine Stand (less drawer). Price.. **\$28.50**

E DRAWER FOR MACHINE STAND. Handy for keeping small tools, wrenches, etc. Finished to match stand CE9141. Drawer is 20 1/2" wide, 14" long, 3 3/8" deep. Price includes metal pull and wood slides. Shipping weight 9 pounds.

CE1780D. Drawer for use with Machine Stand. Price. . . . **\$9.05**

F CHUCK AND ARBOR FOR DRILL PRESS. This drill chuck and arbor are recommended for use with drill presses having spindles with No. 2 Morse taper.

CE1201. Jacobs 3-jaw smooth body drill chuck. 0 to 1/2" capacity with pinion key. Shipping weight 2 3/4 pounds. Price..... **\$12.20**

CE9110. No. 2 Morse taper shank arbor with tang, for fitting chuck No. CE1201 to drill press spindle No. CD9125. Shipping weight 3/4 pound. Price f.o.b. factory..... **\$2.30**

H EXTRA SPINDLES FOR DRILL PRESSES. Extra spindles are interchangeable with regular drill press spindles supplied with either the Single or Multiple Spindle Precision Model Drill Presses.

CD9125. Spindle "H" with No. 2 Morse taper hole for holding taper shank tools. Drift included. Ship. wt. 3 lbs. Price.... **\$10.40**

CD9128. Spindle with No. 3 Morse taper hole for holding taper shank tools. Drift included. Ship. wt. 5 lbs. Price..... **\$14.80**

CD9126. Utility spindle "I" with 1/2" x 1 1/8" deep straight hole for holding routing tools, etc. Ship. wt. 3 lbs. Price..... **\$8.10**

CD9127. Spindle "J" with short taper for 1/2" Drill Chuck No. CE1201. (Jacobs No. 34.) Ship. wt. 2 lbs. Price..... **\$5.90**

K UNIVERSAL TABLE. Both upper and lower slides have graduated swivels and may be turned through full 360°.

L 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.

M 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 1/2" 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..... **\$137.00**

CE9157. Single Table "L" with one graduated swivel and four clamp bolts with nuts. Ship. wt. 19 pounds. Price..... **\$66.50**

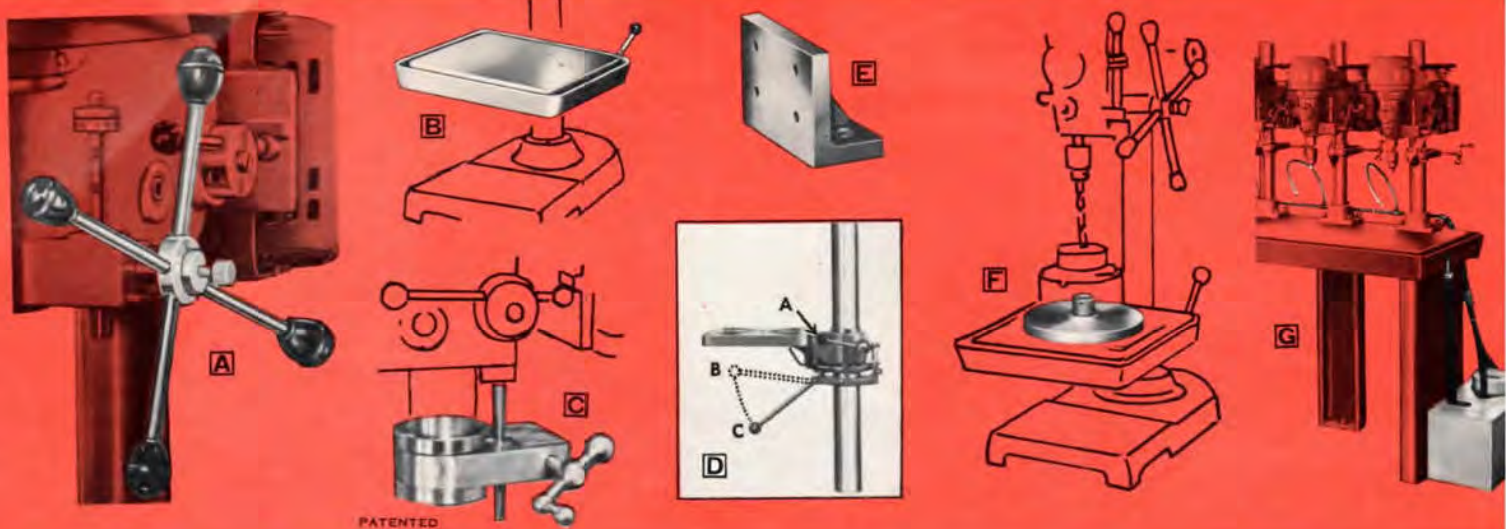
CE9159. Base only "M" for adapting single table to South Bend Drill Press. Ship. wt. 8 lbs. Price f.o.b. factory..... **\$5.10**

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. Shipping weight 12 lbs. Price f.o.b. factory..... **\$80.50**

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. Shipping weight 14 lbs. Price f.o.b. factory..... **\$65.00**



14" DRILL PRESS ACCESSORIES FOR MANY JOBS

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 \$3.80

B TABLE WITH COOLANT TROUGH is heavily constructed with large flat underneath edge for clamping. Precision ground work surface is 10½" square. Coolant trough has drain hole with ¼" pipe thread.

CD9165. Table with Coolant Trough in lieu of regular table at time drill press is purchased. Price f.o.b. factory \$11.85

CD9166. Table with Coolant Trough in addition to regular table or separate from drill press. Shipping weight 40 pounds. Price f.o.b. factory \$26.25

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 \$33.25

D NEW EASY-UP TABLE ELEVATOR. This attachment will "walk-up" the full length of drill press column. To operate, release table clamp A—then move raising lever from B to C in a pumping motion. Table climbs right up column. To lower, swing table slightly from left to right. Table will slide down column. Works equally well with table at 45° and swivels to any position around column.

CD9186. Easy-Up Drill Press Table Elevator for use with South Bend Drill Press (2.730 column) f.o.b. factory \$17.85

CD9180. Easy-Up Drill Press Table Elevator for use with any drill press with 2.750 column. f.o.b. factory \$22.85

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. Ship. wt. 4 pounds. Price f.o.b. factory \$10.50

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.

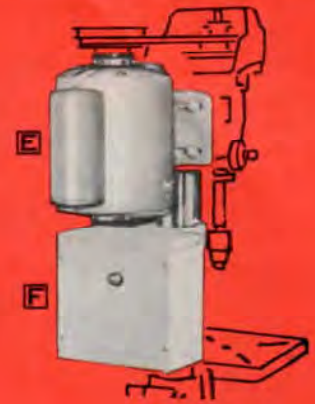
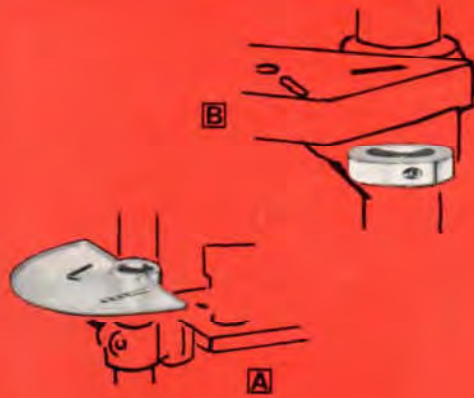
Catalog Number	Diameter of Plate	Thread Diameter	Threads per Inch	Shipping Weight	Price
CE3445	6¼"	1½"	8	7 lbs.	\$ 8.15
CE3446	6½"	1¾"	8	10 lbs.	9.50
CE3447	7½"	2¼"	8	13 lbs.	11.20
CE3448	11¼"	2¾"	6	14 lbs.	20.30

COOLANT PUMP EQUIPMENT FOR PRODUCTION TYPE DRILL PRESSES

G COOLANT PUMP EQUIPMENT for production type drill presses. See pages 83 & 84. 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. (Not fitted on sectional table drill presses.) Shipping weight approximately 154 pounds. See page 43 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	\$226.00	CD9203C	\$232.00	CD9303C	\$240.00	CD9403C	\$247.00
A.C.	3	60	220	CD9103D	226.00	CD9203D	232.00	CD9303D	240.00	CD9403D	247.00
A.C.	3	50	440	CD9103E	230.00	CD9203E	237.00	CD9303E	245.00	CD9403E	252.00
A.C.	3	60	440	CD9103F	230.00	CD9203F	237.00	CD9303F	245.00	CD9403F	252.00
A.C.	3	50	550	CD9103G	230.00	CD9203G	237.00	CD9303G	245.00	CD9403G	252.00
A.C.	3	60	550	CD9103H	230.00	CD9203H	237.00	CD9303H	245.00	CD9403H	252.00
A.C.	1	50	115	CD9101A	208.00	CD9201A	215.00	CD9301A	224.00	CD9401A	230.00
A.C.	1	60	115	CD9101B	203.00	CD9201B	212.00	CD9301B	218.00	CD9401B	227.00
A.C.	1	50	230	CD9101C	212.00	CD9201C	218.00	CD9301C	227.00	CD9401C	233.00
A.C.	1	60	230	CD9101D	207.00	CD9201D	214.00	CD9301D	222.00	CD9401D	229.00



A TOOL TRAY FOR DRILL PRESS. This is a convenient metal tool tray which may be clamped on the drill press column either above or below the table. Especially desirable for floor type drill presses.

CD9175. Tool Tray. Ship. wt. 5 lbs. Price f.o.b. factory . . . \$5.25

B 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 1½ pounds. Price f.o.b. factory . . . \$3.00

C 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 . . . \$2.60

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



Requires the use of short spindle No. CD9127 when used on Bench Drill Presses. (See J page 85).

Specifications

- Capacity under work hold down, maximum 5 1/4"
- Capacity guide rods to fence, maximum 4 7/8"
- Distance fence adjusts without moving base on table 1"
- Working depth of chisels:
- 1/4" 2 1/4"
- 3/8" 2 3/4"
- 1/2" 3 3/4"

Cat. No.	Description	Ship. Wt.	Price
CE9151	Mortising Attachment Fence Assembly	10 lbs.	\$15.45
CE9152	Mortising Chisel Holder	3 lbs.	5.10
CE9153	1/4" Mortising Chisel and Bit	1/2 lb.	9.65
CE9154	3/8" Mortising Chisel and Bit	3/4 lb.	9.65
CE9155	1/2" Mortising Chisel and Bit	1 lb.	11.10

MOTORS AND CONTROLS

E MOTORS FOR DRILL PRESSES. Motors listed below are recommended for use with South Bend 14" Drill Presses. Standard spindle speeds with 1725 r.p.m. motors are approximately 720 to 4325 r.p.m. and with 1140 r.p.m. motors 480 to 2885 r.p.m. These are all vertical mounting ball-bearing motors. All single phase motors are capacitor type. Prices of 230 v. single phase motors include 230 v. lamp in lieu of 115 v. lamp regularly supplied.

Motors operating on two or three phase A.C. require either remote control or across-the-line manual starter equipment described below the motor table.

Wiring and switches for single phase motors are supplied with Precision Model Drill Presses, and need not be ordered as extras. Information on motors for current characteristics not listed will be supplied on request.

Cat. No.	R.P.M.	H.P.	Current	Volts	Phase	Cycle	Price
CE4910B	1725	1/2	A.C.	115	1	60	\$35.00
CE4910D	1725	1/2	A.C.	230	1	60	35.00
CE4911A	1425	1/2	A.C.	115	1	50	38.50
CE4911C	1425	1/2	A.C.	230	1	50	38.50
CE4912D	1725	1/2	A.C.	208-220	3	60	34.00
CE4912C	1425	1/2	A.C.	208-220	3	50	34.00
CE4913S	1425	1/2	A.C.	380	3	50	34.00
CE4913F	1725	1/2	A.C.	440	3	60	37.00
CE4913E	1425	1/2	A.C.	440	3	50	37.00
CE4920B	1725	1/2	A.C.	115	1	60	41.50
CE4920D	1725	1/2	A.C.	230	1	60	41.50
CE4921A	1425	1/2	A.C.	115	1	50	45.50
CE4921C	1425	1/2	A.C.	230	1	50	45.50
CE4924D	1725	1/2	A.C.	208-220	3	60	41.00
CE4924C	1425	1/2	A.C.	208-220	3	50	41.00
CE4924S	1425	1/2	A.C.	380	3	50	41.00
CE4924F	1725	1/2	A.C.	440	3	60	41.00
CE4924E	1425	1/2	A.C.	440	3	50	41.00
CE4932B	1140	1/2	A.C.	115	1	60	51.00
CE4932D	1140	1/2	A.C.	230	1	60	51.00
CE4933D	1140	1/2	A.C.	208-220	3	60	51.00
CE4933F	1140	1/2	A.C.	440	3	60	51.00
CE4934B	1140	1/2	A.C.	115	1	60	66.00
CE4934D	1140	1/2	A.C.	230	1	60	66.00
CE4935D	1140	1/2	A.C.	208-220	3	60	85.50
CE4935F	1140	1/2	A.C.	440	3	60	85.50

F CONTROLS FOR TWO AND THREE PHASE MOTORS. All two and three phase motors for drill presses require either remote control or across-the-line manual starter equipment. Remote control equipment includes step-down transformers and relays which reduce current to operating switch to 110 volts, and provide overload protection and low voltage release.

CE4901. Across-the-line Manual Starter for three phase or two phase three wire 208-220/440 v., 50/60 cycle A.C. motors. Shipping weight 5 pounds. Price f.o.b. factory . . . \$15.00

CE4909E. Remote Control* for three phase or two phase three wire 208-220/440 v., 50 cycle A.C. motors. Shipping weight 23 pounds. Price f.o.b. factory . . . \$90.00

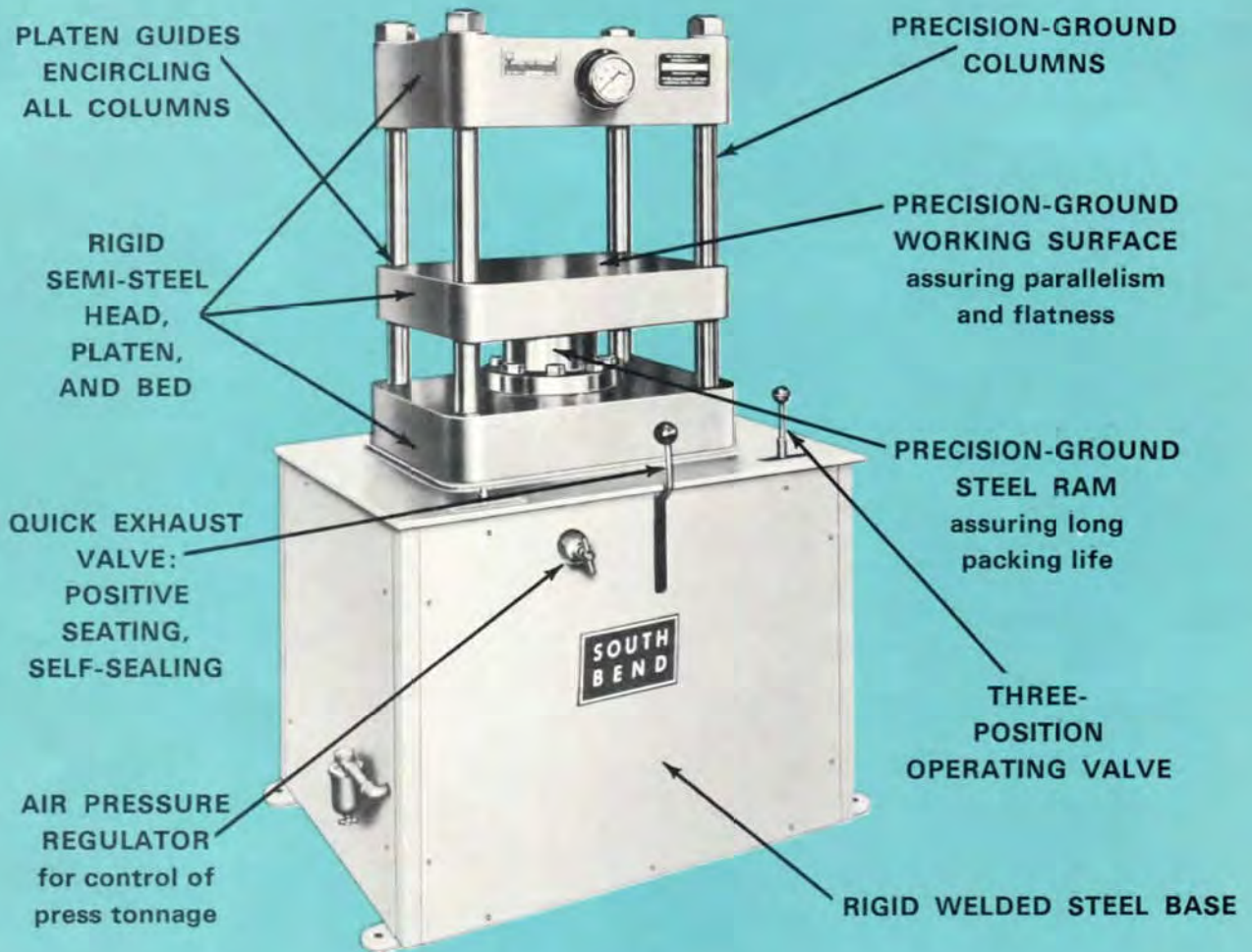
CE4909F. Remote Control* for two phase or three phase 208-220/440 v., 60 cy. A.C. motors. Ship. wt. 23 lbs. Price . . . \$90.00

CE4909S. Remote Control* for three phase 380 v., 50 cycle A.C. motors. Ship. wt. 23 lbs. Price f.o.b. factory . . . \$94.00

*Not furnished mounted.

SOUTH BEND

HYDRAULIC PRESSES



The complete press is mounted on a rugged welded steel base which houses the valves and the Power-Petuator.

Exposed piping is held to a minimum, making for a pleasing streamlined appearance.

Platen and top-head are drilled for mounting electrically-heated or steam-heated hot plates.

ARE TRUE OIL-HYDRAULIC PRESSES

The Hydrolair® is a true oil-hydraulic press that requires neither motors nor pumps, its hydraulic intensifier being powered solely by compressed air — regular “shop air” in most installations. By virtue of this unique operating principle, versatile, performance-proved Hydrolairs are amazingly economical both in purchase price and operating expense, substantially lowering your cost of production!

Hydrolairs are easy to use — equipped with simple, convenient controls which anyone can operate. Pressures ranging from 5 tons to maximum can be set as desired by regulating the air pressure valve. Control is normally exercised by use of two

levers, one directing shop air for rapid advance or pressing, the other regulating a quick exhaust valve to permit rapid oil passage to and from the cylinder during the rapid advance and return strokes.

Hydrolairs do not have a lot of intricate valving as on the conventional pump-type hydraulic press. Also, due to the unique hydraulic circuit employed, Hydrolairs are not subject to line shocks as are ordinary presses. Everything is readily accessible through removal of a large access plate on front of the base. This simplicity of construction throughout practically eliminates down-time ... reduces maintenance expense to the barest minimum!

SOUTH BEND HYDRAULIC PRESSES

Hydrolairs® have a wide range of uses. Following are some of the principal types of work these busy, money-making presses are right now performing in a host of industrial plants throughout the nation. While this list is by no means complete, it does give a general idea of the Hydrolair's wide range of application:

- | | |
|---|------------------------|
| Trimming | Rubber Molding |
| Hobbing | Die Try Out |
| Laboratory Research Work | Laminating |
| Compacting | Assembly / Disassembly |
| Swaging | Gluing |
| Plastics Molding (within range of pressing speed) | |

Hydrolairs are ideally suited for these production techniques and for every other pressure purpose within their size and capacity range.

While powered solely by economical compressed air, the Hydrolair itself is a 100% hydraulic press, with all the advantages of hydraulic pressure application. Developed specifically for small-press users, these unique presses are highly compact in design, occupying a relatively small floor area. But don't be misled by their small size! They are exceptionally rugged and sturdy, dependable for trouble-free performance at economical operating cost and with the minimum of maintenance.

HERE'S THE AMAZING

"Power-Potuator"

AIR HYDRAULIC INTENSIFIER



PATENTED

This compact unit is the real secret of the South Bend Hydrolair's exceptional efficiency and economy. Utilizing ready-at-hand, low cost shop air as a power source, this patented South Bend development provides a continuous high-pressure stroke, maintaining any pre-set pressure for as long as desired.

Air-Powered

JUST HOOK UP TO YOUR
SHOP AIR LINES



30
TON



50
TON



100
TON

SOUTH BEND HYDROLAIR PRESSES ARE AVAILABLE IN 30, 50 and 100 TON MODELS.

Standard equipment includes air filter, oil filter, air pressure reducing valve, hydraulic pressure gage and necessary controls.

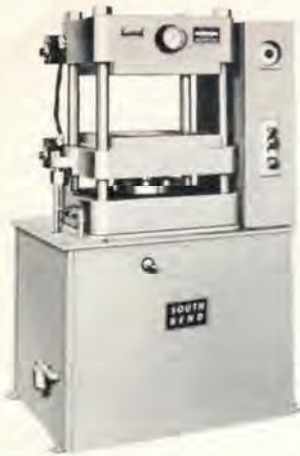
CP30H. 30 ton Hydrolair Hydraulic, Double Acting Press, with standard equipment as listed above. Shipping weight 1150 lbs. Price f.o.b. factory..... **\$1600**

CP50H. 50 ton Hydrolair Hydraulic Press with standard equipment as listed above. Shipping weight 2600 lbs. Price f.o.b. factory. . **\$2900**

CP100H. 100 ton Hydrolair Hydraulic Press including standard equipment as listed above. Shipping weight 7000 lbs. Price f.o.b. factory. **\$7520**

Prices do not include hot plates, or any electrical equipment: See page 91.

See complete specifications on page 90.



ELECTRIC PUSHBUTTON CONTROL

Electric control on the Hydrolair® Press provides a semi-automatic cycle with a timed high pressure dwell. Adjustable limit switches are used to control up-stop, down-stop, and slow-down speed change position of the platen.

A timed breathe cycle can also be incorporated in the circuit. Full push-button controls are used with a selector for semi-automatic or manual operation of the press.

On semi-automatic cycle, depressing the close button will close the press at rapid advance speed until the slow-down limit switch

is tripped. At that point the press automatically slows down to pressing speed and energizes the cure timer. Upon closing of the press, pressure is applied and work is done, and pressure is held for setting of the timer. Standard timer range is 0 to 20 minutes. Longer timer ranges are available. When the timer has timed out, the press will automatically open until the down-stop limit switch is tripped. The press is then ready to start another cycle.

Each electric pushbutton control system is engineered to meet your specific need and is an extra cost feature.

DOUBLE ACTING SOUTH BEND HYDRAULIC PRESSES

The 30 ton Hydrolair Press is equipped with a stepped, double acting ram as standard equipment. This feature offers the advantage of power stripping which, in many applications, can

speed up your operation.

The 50 ton and the 100 ton models can have this feature built in at extra cost.

SPECIFICATIONS

	30-TON	50-TON	100-TON
Platen Size	10" x 10"	18" x 18"	24" x 24"
Clearance, left to right, between columns	12¼"	18½"	26½"
Stroke	6"	6"	12"
Opening: Fixed Top Head	—	14"	24"
*Adjustable Top Head	5" to 13¾"	available at extra cost	available at extra cost
Average Speeds of Operation, inches per minute:			
Advance	100	80	80
Press (at no load)	8	5	5**
Return	60	60	75
Ram Diameter*	3¾"—4*	6"	8"
Stripping Pressure — Double-Acting	2 Ton	8 Ton†	12 Ton†
Operating Pressure	5200	4000	4400
Air-Line Pressure Required	65 PSI	50 PSI	55 PSI
Air Consumption — cubic feet of free air, approximate:			
Per 4" rapid advance stroke	0.65	1.05	2.10
Per ¼" pressing stroke	1.35	1.75	3.50
Floor to Top of Platen (press open)	45½"	42"	44"
Overall Dimensions	29" x 19" x 65"	40" x 29" x 65"	52" x 36" x 80"
Weight, Lbs.	1325	2400	6500

*Double Acting Press has stepped ram.

**100 ton Model is furnished with two Power-Patuators.

† Double Acting Feature on 50 and 100 ton presses is available at extra cost.

OPTIONAL MODIFICATIONS

Efficient hydraulic press operation depends in a large measure upon the proper control equipment desired and its flexibility and adaptability to the work requirements. As there are many variations in press applications, it is natural that no one control is suitable for every operation. South Bend Hydrolair® presses can be supplied with any type of control equipment. The following are a few of the accessories and press variations available at extra cost.

ELECTRIC HOT PLATES

All electric hot plates are ground to a smooth finish and are parallel within .002 of an inch. These plates are available for either alternating or direct current. The 110 volt single-phase AC is available only on 30-ton presses. 220 or 440 volt three-phase AC is available on the entire line including 30, 50 and 100 ton models. 550 volt or DC application upon request. Temperature control is by thermostat. The price of one set of electric hot plates includes one thermostat. All plates provided with ¼" insulation between plates and press members.

Electric water-cooled hot plates are also available in the same current ranges as listed above.

LOW PRESSURE CIRCUIT

The normal Hydrolair circuit permits accurate control of tonnages between 5 tons and maximum by simple adjustment of the air regulator valve on front of press. For accurate control of tonnages below 5 tons, a special low-pressure relief valve is used plus a second hydraulic gauge for accurate reading of the adjusted low-pressure tonnages.

LONGER OR SHORTER OPENING

All Hydrolairs can be modified to provide a longer or shorter opening, by extending length of the columns.

STEAM-HEATED HOT PLATES

All steam-heated hot plates are ground to a smooth finish and are parallel within .002 of an inch. All plates are provided with drilled passages for a labyrinth type steam flow, and with same insulation as on electric plates. Steam plates may be used for chilling if desired.

MULTIPLE PLATENS

For laminating operations, multiple platens are available. These platens will be precision ground on both sides. The platens can be arranged for electric or steam heating, with or without water cooling.

ACCESSORIES AVAILABLE AT ADDITIONAL COST

Electric Hot Plate						Electric Water Cooled Hot Plate					
	Cat. No.	F. Degree	Ph.	Volt.	Price Per Pair		Cat. No.	F. Degree	Ph.	Volt.	Price Per Pair
30 Ton Lab. or Hydrolair	CP4114	400	1	115	\$ 490	30 Ton Lab. or Hydrolair	CP4130	400	1	115	\$ 575
	CP4116	400	1	230	490		CP4132	400	1	230	575
	CP4118	400	3	220	490		CP4134	400	3	220	575
	CP4122	400	3	440	490		CP4138	400	3	440	575
	CP4146	600	1	115	725		CP4162	600	1	115	855
	CP4148	600	1	230	725		CP4164	600	1	230	855
50 Ton	CP4150	600	3	220	725	CP4166	600	3	220	855	
	CP4154	600	3	440	725	CP4170	600	3	440	855	
	CP4119	400	3	220	\$ 845	CP4135	400	3	220	\$1280	
	CP4123	400	3	440	845	CP4139	400	3	440	1230	
100 Ton	CP4151	600	3	220	1030	CP4167	600	3	220	1450	
	CP4155	600	3	440	1030	CP4171	600	3	440	1450	
	CP4120	400	3	220	\$1225	CP4136	400	3	220	\$2115	
	CP4124	400	3	440	1225	CP4140	400	3	440	2115	
	CP4152	600	3	220	1395	CP4168	600	3	220	2295	
	CP4156	600	3	440	1395	CP4172	600	3	440	2295	

CP4178	Steam Hot Plates for 30 Ton Press (less flexible connections) pair.....	\$200
CP4179	Steam Hot Plates for 50 Ton Press (less flexible connections) pair.....	\$305
CP4180	Steam Hot Plates for 100 Ton Press (less flexible connections) pair.....	\$560

Following Special Equipment, priced same for Lab-30-50-100 Ton Presses.

Low Pressure Circuit (including Low Pressure Relief Valve, Low Pressure Gage and Shut Off Valve) (Fitted).....	\$150
6" Additional Opening (or portion of 6").....	25
6" Decreased Opening (or portion of 6").....	25

HOT PLATES 30-TON 50-TON 100-TON

	30-TON	50-TON	100-TON
ELECTRIC: 400° F. Max.			
Plate Dimensions.....	10"x10"x1 ¼"	18"x18"x1 ¼"	24"x24"x2"
Cartridges/Plate.....	6 @ 450 W	6 @ 800 W	6 @ 1250 W
Total Power Capacity.....	2700 W/plate	4800 W/plate	7500 W/plate
ELECTRIC: 600° F. Max.			
Plate Dimensions.....	10"x10"x1 ¼"	18"x18"x2"	24"x24"x2"
Cartridges/Plate.....	6 @ 450 W	8 @ 850 W	10 @ 1250 W
Total Power Capacity.....	2700 W/plate	6800 W/plate	12,500 W/plate
ELECTRIC: 400° F. Max.			
Arranged for Water Cooling			
Plate Dimensions.....	10"x10"x2 ¼"	18"x18"x3"	24"x24"x3"
Total Power Capacity.....	Same as above	Same as above	Same as above
Water Connection.....	½" I.P.T.	¾" I.P.T.	¾" I.P.T.
ELECTRIC: 600° F. Max.			
Arranged for Water Cooling			
Plate Dimensions.....	10"x10"x2 ½"	18"x18"x3"	24"x24"x3"
Total Power Capacity.....	Same as above	Same as above	Same as above
Water Connection.....	½" I.P.T.	¾" I.P.T.	¾" I.P.T.
STEAM HEATED			
Plate Dimensions.....	10"x10"x1 ¼"	18"x18"x1 ¼"	24"x24"x2"
Number and Size of Passages.....	6—¾" dia.	6—¾" dia.	8—¾" dia.
Connection.....	½" I.P.T.	¾" I.P.T.	¾" I.P.T.

SOUTH BEND LABORATORY PRESS

This Laboratory Press, with available accessories, is ideal for research work, compression testing, laminating and other pressure applications.

The quick closing feature practically eli-

30 TON CAPACITY, 4 COLUMN BENCH TYPE

PLATEN

Size.....10" x 10"

Construction. Machine-finished surface.

Full guides encircle the four columns.

OPENING BETWEEN PLATEN

AND TOPHEAD.....6" to 13 ¾"

(Top Head Adjustable — Press will close 0" between hot plates.)

CLEARANCE LEFT TO RIGHT,

BETWEEN COLUMNS.....12 ¾"

RAM

Diameter.....4"

Stroke.....6"

minates manual effort and makes this press practical for small production operations.

Shop air (50 lbs. p.s.i. — minimum) raises the platen instantly. Just a few strokes of the lever builds up required pressure.

STANDARD GAUGE

4 ½" diameter calibrated in pounds per sq. in. and tons to 30-ton ram pressure. In addition, a partial-range gauge and shut-off valve can be furnished, 3 ½" diameter calibrated in pounds per sq. in. and tons to 6 tons, when greater reading accuracy of the lower pressure is desired.

HOT PLATES, Size.....10" x 10" Electrically Heated Plates and Steam Heated Plates.

OVERALL DIMEN-

SIONS: 16 ¾" x 13 ½" x 41 ¼" high

SHIPPING WEIGHT.....660 lbs.

COLUMNS
THREADED
FOR
ADJUSTING
TOP HEAD



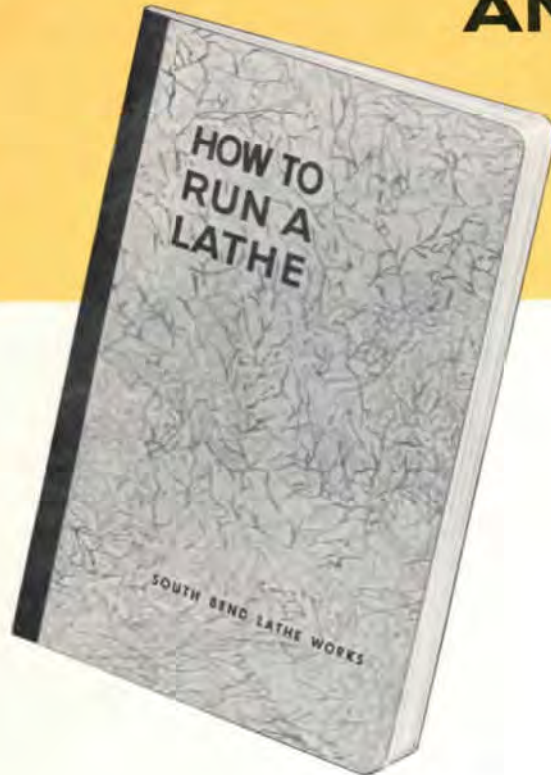
PLATEN
GUIDED ON
4 COLUMNS
FOR MORE
ACCURATE
ALIGNMENT

30-TON CAPACITY

CP30L—30 Ton Laboratory Press, including pumping unit, gauge and air rapid advance unit.....\$680

Description and prices on Hot Plates, same as for 30 Ton Hydrolair.

BOOKS AND CHARTS



HOW TO RUN A LATHE

"How to Run a Lathe" is a complete reference book and manual on the care and operation of the back-gear screw-cutting lathe. It is a practical handbook for the machinist, lathe operator, apprentice, or shop man. Clearly written in simple, non-technical language, the instruction material is easy for the beginner to understand. This authoritative text contains 128 pages 5½" x 7½" and is illustrated with more than 360 photographs and sketches.

Now in its 55th 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.

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

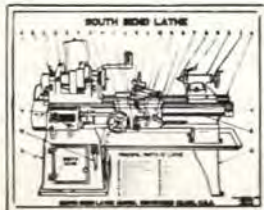
CE3450. "How to Run a Lathe," paper binding, price postpaid..... **\$0.50**

Note: "How to Run a Lathe" is printed in the English, Spanish, Portuguese, and French languages. State language wanted if other than English. Special prices quoted on lots of 25 or more.

QUIZ SHEETS

A diagram of a lathe is printed on a sheet 11" x 8½", with letters and arrows indicating the principal parts of the machine. Below is a blank space for each letter in which the student may write the name of each part.

CE3465. Package of 100 Quiz Sheets..... **75c**

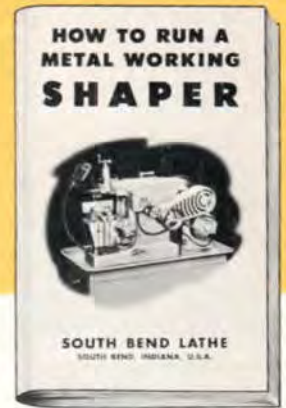


HOW TO RUN A DRILL PRESS

This book tells how to lay out work, set up jobs, sharpen drills, and use drill press attachments and accessories. It identifies the various parts of the drill press, explains their functions and adjustment. Special classes of work such as drilling glass, buffing, mortising, etc., are included. Contains 24 pages 5½" x 7½" and more than 75 illustrations.

CE3455. "How to Run a Drill Press," paper binding, price postpaid..... **25c**

Note: Special prices quoted on lots of 25 or more.



HOW TO RUN A SHAPER

The care and operation of the small metalworking bench shaper are fully covered in this manual. Clearly written text tells how to set up jobs and grind cutting tools. Various types of shaper operations are illustrated and described. Contains 24 pages 5½" x 7½", and 64 illustrations.

CE3456. "How to Run a Shaper," paper binding, price postpaid..... **25c**

Note: Special prices quoted on lots of 25 or more.

4 WALL CHARTS

13" x 19" or Larger

- CE250,** "How to Become a Machinist."
- CE777,** "Decimal Equivalents."
- CE890,** "Principal Parts of a Lathe."
- CE199,** "Tap Drill Sizes."

Price 15c each postpaid.



PROJECT BOOK

This 104-page book contains drawings and instruction sheets for 34 practical projects. They range from simple articles for beginners to useful tools requiring considerable skill and experience to make. Drawings show all dimensions clearly. The instruction sheets guide the student step by step through all operations for each project.

CE3475. South Bend Project Book, paper binding, price postpaid..... **\$1.00**

Note: The South Bend Machine Shop Course Books, printed in Portuguese are similar to the above project book, but contain only 10 projects. Priced at 50c per copy postpaid. Special prices quoted on lots of 25 or more.



ORDER FORM

Place your order with the South Bend Lathe distributor nearest you.

CUSTOMER _____
STREET _____
CITY _____ STATE _____ ZIP CODE _____

ORDER NO. _____

DATE _____

Please enter my order for the following:

QUANTITY	CATALOG NUMBER	ITEM	PRICE EA.	TOTAL PRICE

TOTAL AMOUNT OF ORDER _____

NOTE: ALL PRICES F.O.B. SOUTH BEND, INDIANA

- TERMS:
- Cash with order \$ _____
 - C. O. D.
 - Time Payment
 - Net 30 days—To rated firms, schools and government.

- SHIP BY:
- Parcel Post
 - Express
 - Air parcel Post
 - R. R. Freight
 - Truck Line _____ Carrier

SOUTH BEND LATHE 5% TIME PAYMENT PLAN

SUMMARY OF TERMS

Equipment sold on the Time Payment Plan. All "South Bend" Machine Tools*, together with necessary motors, controls, accessories and attachments for such machines, PLEASE NOTE: Only products sold by South Bend Lathe, may be financed on its Payment Plan.

Plans Available. There are four plans. The 12 months plan provides for Time Balance to be paid in 11 equal monthly installments with a Final Payment for odd amount remaining due. The 18 months plan calls for 17 equal monthly installments and a Final Payment for the odd amount remaining due. The 24 months plan calls for 23 equal monthly installments and a Final Payment for the odd amount remaining due. The 36 months plan calls for 35 equal monthly installments and a Final Payment for the odd amount remaining due. Be sure to pick up figures for finance charge and monthly payments from plan to be used.

Down Payment. It is intended that in all cases a cash down payment of a reasonable amount will be made by purchaser when Payment Plan order is placed. This matter is to be worked out with "South Bend" distributor from whom purchase is made.

Finance Charge. Finance Charge shown in schedule represents single carrying charge which is made for financing the unpaid balance under plan selected. The charge is 5% (or less) per annum on the original unpaid balance under all four plans, 12, 18, 24, and 36 months.

Monthly Payments. Figures in Monthly Payment column in schedule on page 95, represent amount of payment to be made 11, 17, 23, or 35 times during life of contract depending on

plan selected. Final payment usually will vary and will be more or less than amount of monthly payments, depending upon amount of Unpaid Balance being financed.

Freight and Sales Tax. Freight and/or applicable state or city sales tax may be included in the balance to be financed if down payment is in an amount equal to at least 20% of the total cash price of the equipment plus actual amount of freight and/or sales tax shown on contract.

Unpaid Balance in Excess of \$3,000. Schedule shows finance charge and monthly payments for unpaid balances up to \$3,000. To determine Finance Charge and Monthly Payments when unpaid balance (cash price of order less down payment) exceeds \$3,000, add any 2 or more combinations in schedule which total unpaid balance. For example, for Finance Charge on \$3,050, add finance charge for \$2,900 and for \$150 shown in schedule; for \$4,335, add finance charge for \$3,000 and for \$1,335. Follow same procedure to determine monthly payments.

Refund of Finance Charge. Appropriate amount refunded if contract is paid up in advance.

Government Regulations. In case of government regulations affecting terms of this Time Payment Plan, adjustments of these terms will be made to conform to such regulations for equipment subsequently purchased on payment plan terms.

Worksheet. Below is a worksheet for use in determining figures from the 12, 18, 24, or 36 months plans shown in schedule on page 95, which are to be inserted in Conditional Sale Contract. Be sure to pick up figures for Finance Charge and Monthly Payments from the correct plan.

TOTAL CASH PRICE OF THIS ORDER.....\$ _____

DOWN PAYMENT:

 Cash with Order.....\$ _____

 Allowance for Trade-in.....\$ _____

TOTAL DOWN PAYMENT.....\$ _____

UNPAID BALANCE (Cash Price less Down Payment).....\$ _____

FINANCE CHARGE (See Schedule on page 95).....\$ _____

TIME BALANCE (Unpaid Balance plus Finance Charge).....\$ _____

TO BE PAID AS FOLLOWS:

 _____ Monthly Payments of.....\$ _____

 Final Payment of.....\$ _____

(SEE PAGE 95 FOR SCHEDULE OF MONTHLY PAYMENTS)

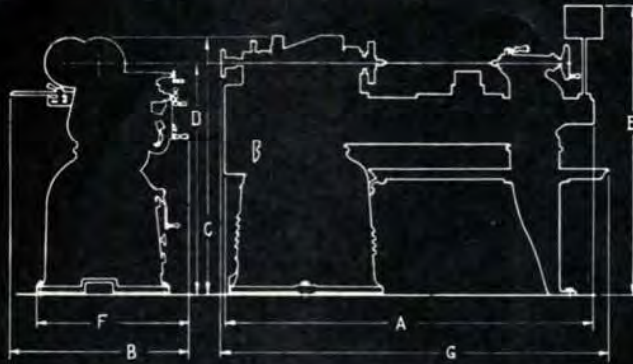
SOUTH BEND LATHE 5% TIME PAYMENT PLAN

SCHEDULE OF PAYMENTS

IF UNPAID BALANCE IS	12 MONTHS PLAN		18 MONTHS PLAN		24 MONTHS PLAN		36 MONTHS PLAN	
	Finance Charge	Monthly Payments	Finance Charge	Monthly Payments	Finance Charge	Monthly Payments	Finance Charge	Monthly Payments
\$ 100.00 to \$ 109.99	\$ 5.00	\$ 9.25	\$ 7.50	\$ 6.25	\$ 10.00	\$ 4.75	\$ 15.00	\$ 3.25
110.00 to 120.99	5.50	10.00	8.25	6.75	11.00	5.25	16.50	3.50
121.00 to 131.99	6.05	11.25	9.00	7.50	12.10	5.75	18.15	3.75
132.00 to 142.99	6.60	12.50	9.90	8.25	13.20	6.25	19.80	4.25
143.00 to 153.99	7.15	13.50	10.70	9.00	14.30	6.75	21.45	4.50
154.00 to 164.99	7.70	14.50	11.55	9.50	15.40	7.25	23.10	5.00
165.00 to 175.99	8.25	15.50	12.35	10.25	16.50	7.75	24.75	5.25
176.00 to 186.99	8.80	16.50	13.20	11.00	17.60	8.25	26.40	5.75
187.00 to 197.99	9.35	17.50	14.00	11.75	18.70	8.75	28.05	6.00
198.00 to 208.99	9.90	18.25	14.85	12.50	19.80	9.25	29.70	6.50
209.00 to 219.99	10.45	19.25	15.65	13.00	20.90	9.75	31.35	6.75
220.00 to 230.99	11.00	20.25	16.50	13.75	22.00	10.50	33.00	7.00
231.00 to 241.99	11.55	21.25	17.30	14.50	23.10	11.00	34.65	7.50
242.00 to 252.99	12.10	22.25	18.15	15.25	24.20	11.50	36.30	7.75
253.00 to 263.99	12.65	23.25	18.95	15.75	25.30	12.00	37.95	8.25
264.00 to 285.99	13.20	25.00	19.80	16.50	26.40	12.50	39.60	8.50
286.00 to 307.99	14.30	27.00	21.45	18.00	28.60	13.50	42.90	9.25
308.00 to 329.99	15.40	29.00	23.10	19.25	30.80	14.50	46.20	10.00
330.00 to 351.99	16.50	30.75	24.75	20.75	33.00	15.75	49.50	10.75
352.00 to 373.99	17.60	32.75	26.40	22.25	35.20	16.75	52.80	11.50
374.00 to 395.99	18.70	34.75	28.05	23.50	37.40	17.75	56.10	12.25
396.00 to 417.99	19.80	36.50	29.70	25.00	39.60	18.75	59.40	13.00
418.00 to 439.99	20.90	38.50	31.35	26.25	41.80	19.75	62.70	13.50
440.00 to 461.99	22.00	40.50	33.00	27.50	44.00	21.00	66.00	14.25
462.00 to 483.99	23.10	42.50	34.65	29.00	46.20	22.00	69.30	15.00
484.00 to 505.99	24.20	44.25	36.30	30.25	48.40	23.00	72.60	15.75
506.00 to 527.99	25.30	46.25	37.95	31.50	50.60	24.00	75.90	16.50
528.00 to 560.99	26.40	49.00	39.60	33.25	52.80	25.00	79.20	17.25
561.00 to 593.99	28.05	52.00	42.05	35.25	56.10	26.75	84.15	18.25
594.00 to 626.99	29.70	54.75	44.55	37.50	59.40	28.25	89.10	19.50
627.00 to 659.99	31.35	57.75	47.00	39.50	62.70	29.75	94.05	20.50
660.00 to 692.99	33.00	60.25	49.50	41.25	66.00	31.50	99.00	21.50
693.00 to 725.99	34.65	63.50	51.95	43.25	69.30	33.00	103.95	22.75
726.00 to 758.99	36.30	66.50	54.45	45.25	72.60	34.50	108.90	23.75
759.00 to 791.99	37.95	69.25	56.90	47.25	75.90	36.25	113.85	24.75
792.00 to 835.99	39.60	73.00	59.40	49.75	79.20	37.75	118.80	26.00
836.00 to 879.99	41.80	77.00	62.70	52.50	83.60	39.75	125.40	27.25
880.00 to 923.99	44.00	80.75	66.00	55.00	88.00	42.00	132.00	28.75
924.00 to 967.99	46.20	84.75	69.30	57.75	92.40	44.00	138.60	30.25
968.00 to 1011.99	48.40	88.50	72.60	60.50	96.80	46.25	145.20	31.75
1012.00 to 1055.99	50.60	92.25	75.90	63.00	101.20	48.25	151.80	33.00
1056.00 to 1110.99	52.80	97.00	79.20	66.25	105.60	50.25	158.40	34.50
1111.00 to 1165.99	55.55	102.00	83.30	69.50	111.10	53.00	166.65	36.25
1166.00 to 1220.99	58.30	106.75	87.45	72.75	116.60	55.60	174.90	38.25
1221.00 to 1275.99	61.05	111.50	91.55	76.00	122.10	58.25	183.15	40.00
1276.00 to 1341.99	63.80	117.25	95.70	80.00	127.60	61.00	191.40	41.75
1342.00 to 1407.99	67.10	123.00	100.65	84.00	134.20	64.00	201.30	44.00
1408.00 to 1495.99	70.40	130.75	105.60	88.75	140.80	67.25	211.20	46.25
1496.00 to 1583.99	74.80	138.25	112.20	94.25	149.60	71.50	224.40	49.00
1584.00 to 1671.99	79.20	146.00	118.80	99.50	158.40	75.50	237.60	52.00
1672.00 to 1759.99	83.60	153.75	125.40	104.75	167.20	79.75	250.80	54.75
1760.00 to 1847.99	88.00	161.50	132.00	110.00	176.00	84.00	264.00	57.75
1848.00 to 1935.99	92.40	169.25	138.60	115.50	184.80	88.25	277.20	60.50
1936.00 to 2023.99	96.80	176.75	145.20	120.75	193.60	92.50	290.40	63.50
2024.00 to 2111.99	101.20	184.50	151.80	126.00	202.40	96.75	303.60	66.25
2112.00 to 2199.99	105.60	192.25	158.40	131.25	211.20	100.75	316.80	69.25
2200.00 to 2309.99	110.00	201.75	165.00	137.50	220.00	105.00	330.00	72.25
2310.00 to 2419.99	115.50	211.50	173.25	144.25	231.00	110.25	346.50	75.75
2420.00 to 2529.99	121.00	221.00	181.50	150.75	242.00	115.50	363.00	79.50
2530.00 to 2694.99	126.50	235.25	189.75	159.75	253.00	120.75	379.50	83.10
2695.00 to 2859.99	134.75	249.75	202.10	170.25	269.50	128.75	404.25	88.50
2860.00 to 3000.00	143.00	262.00	214.50	178.75	286.00	136.75	429.00	93.75

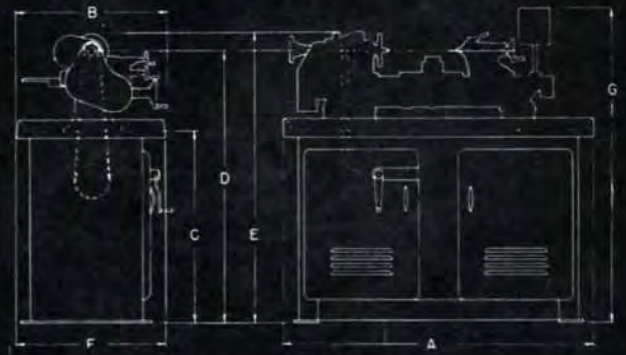
FLOOR SPACE REQUIRED FOR SOUTH BEND MACHINE TOOLS

DIMENSIONS A TO G GIVEN IN TABLES BELOW ARE IN INCHES



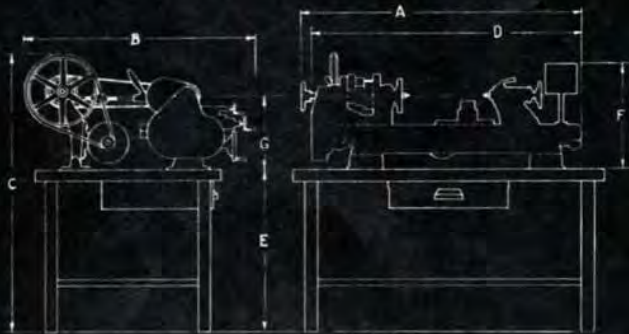
UNDERNEATH MOTOR DRIVEN FLOOR LATHES

Size Lathe	Bed Length	A	B	C	D	E	F	G
13"	5'	65 ³ / ₄	34 ¹ / ₄	45 ¹ / ₂	41 ¹ / ₂	52 ¹¹ / ₁₆	26 ³ / ₄	70
14 ¹ / ₂ "	6'	78 ¹ / ₂	36 ³ / ₄	46 ¹ / ₂	41 ¹ / ₄	50 ¹¹ / ₁₆	27 ¹ / ₂	84
16"	8'	102 ¹ / ₂	41 ³ / ₄	46 ³ / ₄	42 ¹ / ₂	54 ¹ / ₂	28 ³ / ₄	106 ³ / ₄
16-24"	10'	126 ¹ / ₂		51 ¹ / ₂	46 ³ / ₄		28 ³ / ₄	



UNDERNEATH MOTOR DRIVEN METAL CABINET LATHES

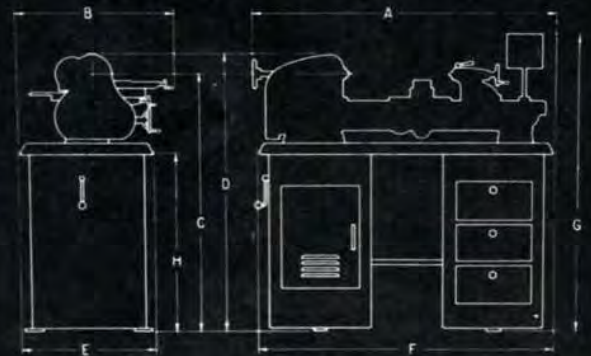
Size Lathe	Bed Length	A	B	C	D	E	F	G
10"	3 ¹ / ₂ '	51 ³ / ₄	25 ²¹ / ₃₂	32	45 ²³ / ₃₂	49 ⁹ / ₃₂	25	54 ¹ / ₃₂
10"	4'	65 ³ / ₄	25 ²¹ / ₃₂	32	45 ²³ / ₃₂	49 ⁹ / ₃₂	25	54 ¹ / ₃₂
10"	4 ¹ / ₂ '	65 ³ / ₄	25 ²¹ / ₃₂	32	45 ²³ / ₃₂	49 ⁹ / ₃₂	25	54 ¹ / ₃₂



HORIZONTAL MOTOR DRIVEN BENCH LATHES

Size Lathe	Bed Length	A	B	C	D	E	F	G
9"	3 ¹ / ₂ '	47 ¹ / ₂	37	49 ¹³ / ₁₆	45 ³ / ₄	29 ⁹ / ₁₆ *	19 ¹ / ₂	12 ¹¹ / ₃₂
9"	4'	53 ¹ / ₂	37	49 ¹³ / ₁₆	51 ³ / ₄	29 ⁹ / ₁₆ *	19 ¹ / ₂	12 ¹¹ / ₃₂
9"	4 ¹ / ₂ '	59 ¹ / ₂	37	49 ¹³ / ₁₆	57 ³ / ₄	29 ⁹ / ₁₆ *	19 ¹ / ₂	12 ¹¹ / ₃₂
10-K	3 ¹ / ₂ '	47 ¹ / ₂	38 ¹ / ₂	51 ¹ / ₁₆	45 ³ / ₄	29 ⁹ / ₁₆ *	19 ¹ / ₂	12 ⁷ / ₆₄
10-K	4'	53 ¹ / ₂	38 ¹ / ₂	51 ¹ / ₁₆	51 ³ / ₄	29 ⁹ / ₁₆ *	19 ¹ / ₂	12 ⁷ / ₆₄
10-K	4 ¹ / ₂ '	59 ¹ / ₂	38 ¹ / ₂	51 ¹ / ₁₆	57 ³ / ₄	29 ⁹ / ₁₆ *	19 ¹ / ₂	12 ⁷ / ₆₄

*Benches also made 34" high.



UNDERNEATH MOTOR DRIVEN METAL CABINET 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	22 ¹ / ₂	49 ³ / ₄	48 ¹³ / ₁₆	29 ¹ / ₈
10-K	3 ¹ / ₂ '	49 ³ / ₃₂	25 ¹ / ₄	42 ¹ / ₈	45 ³ / ₁₆	22 ¹ / ₂	49 ³ / ₄	49 ³ / ₁₆	29 ¹ / ₈
9"	4 ¹ / ₂ '	63 ³ / ₃₂	25 ¹ / ₄	41 ²³ / ₃₂	44 ²³ / ₃₂	22 ¹ / ₂	63 ³ / ₄	48 ¹³ / ₁₆	29 ¹ / ₈
10-K	4 ¹ / ₂ '	63 ³ / ₃₂	25 ¹ / ₄	42 ¹ / ₈	45 ³ / ₁₆	22 ¹ / ₂	63 ³ / ₄	49 ³ / ₁₆	29 ¹ / ₈



10" UNDERNEATH MOTOR DRIVEN FLOOR LATHES

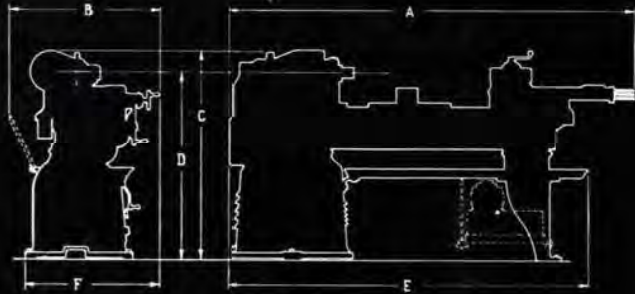
Size Lathe	Bed Length	A	B	C	D	E	F
10"	3 ¹ / ₂ '	52 ¹ / ₂	28 ³ / ₄	46 ¹ / ₂	43 ³ / ₄	51 ¹ / ₄	25 ¹ / ₂
10"	4'	59 ¹ / ₂	28 ³ / ₄	46 ¹ / ₂	43 ³ / ₄	51 ¹ / ₄	25 ¹ / ₂
10"	4 ¹ / ₂ '	66 ¹ / ₂	28 ³ / ₄	46 ¹ / ₂	43 ³ / ₄	51 ¹ / ₄	25 ¹ / ₂

The drawings shown here indicate the amount of the floor space that these lathes occupy when installed in your shop.

The drawings give the entire length and width of the lathe. It shows the distance from the floor to the center of the lathe and the height overall.

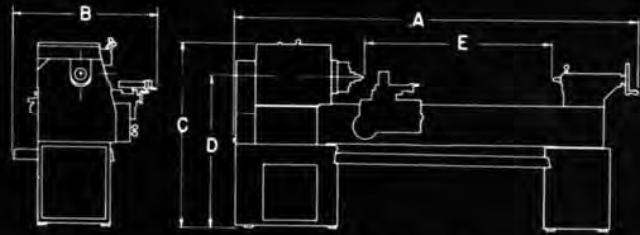
FLOOR SPACE REQUIRED FOR SOUTH BEND MACHINE TOOLS

DIMENSIONS A TO H IN TABLES BELOW ARE IN INCHES



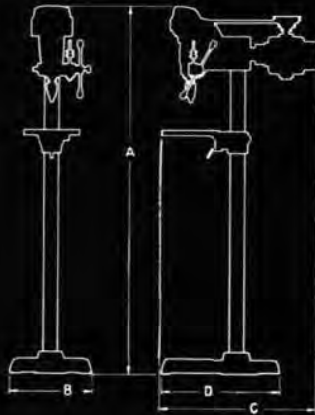
13" AND 16" TURRET LATHES

Size Lathe	Bed Length	A	B	C	D	E	F
13"	5'	72¼"	39¼"	45¾"	41½"	68½"	30¾"
16"	6'	93½"	37"	46¾"	42½"	81½"	28¾"



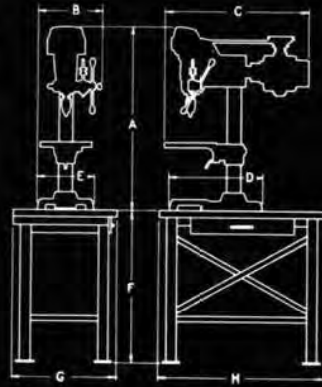
17" GEARED HEAD LATHE

Size Lathe	Bed Length	A	B	C	D	E
17"	6'6"	93¼"	39"	53"	44"	30"
17"	8'6"	117¼"	39"	53"	44"	54"
17"	10'	141¼"	39"	53"	44"	78"
17"	12'	165¼"	39"	53"	44"	102"



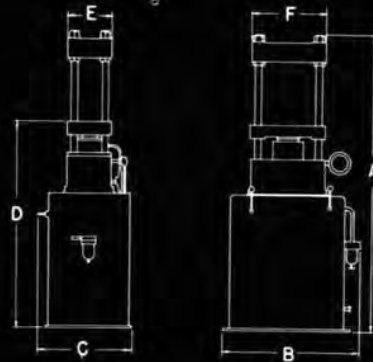
FLOOR TYPE DRILL PRESSES

A	B	C		D
		½ h.p.	½ h.p.	
65¾"	15"	27¾"	29"	21"



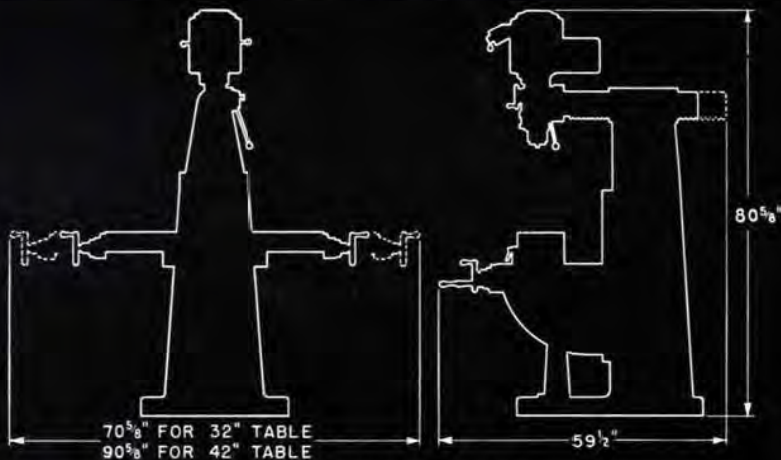
14" BENCH DRILL PRESSES

A — 35¾"	D — 17¾"
B — 12¼"	E — 10¾"
C — ½ h.p. motor — 27¾"	F — 29¾"
C — ½ h.p. motor — 29"	G — 20"
	H — 32"



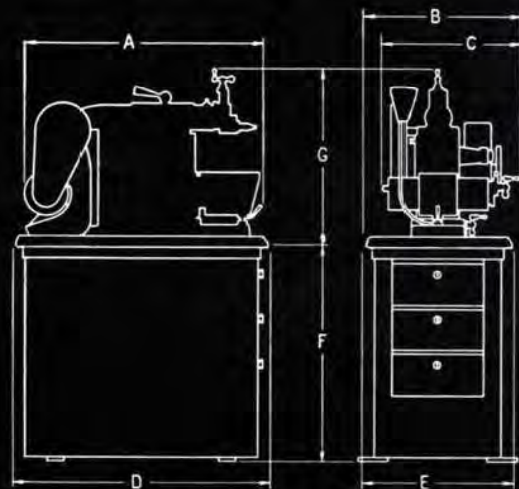
HYDROLAIR HYDRAULIC PRESSES

Size Press	A	B	C	D	E	F
30-Ton	65¾"	31¼"	21¾"	46"	10¼"	17"
50-Ton	65½"	43"	33½"	42¼"	18"	24"
100-Ton	80"	55"	36"	44"	24"	36¼"



MILLING MACHINE

Good light on the work prevents scrap — equip each lathe with South Bend work light. See page 49.



7" SHAPER AND STAND

A		B	C	D	E	F	G
½ h.p.	½ h.p.						
31¼"	35¼"	20½"	19"	36"	19"	28¾"	26"



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