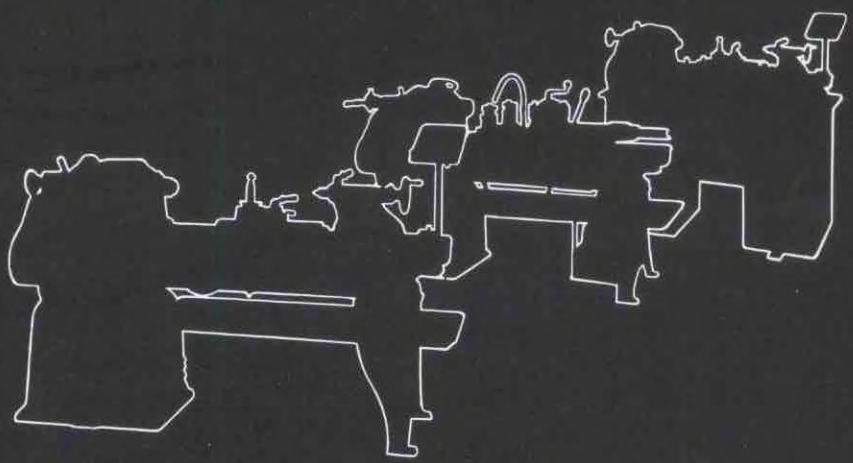
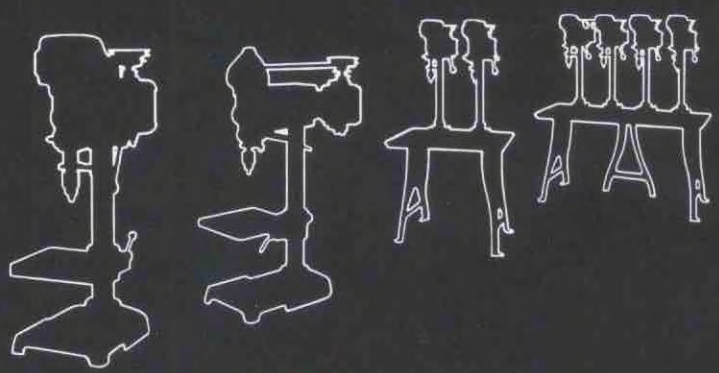
CATALOG 5205

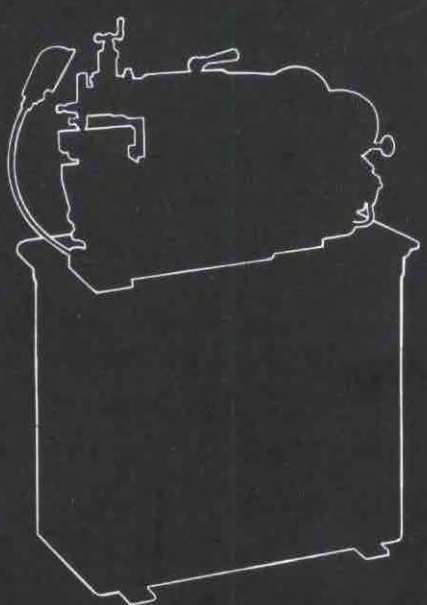
SOUTH BEND



LATHES

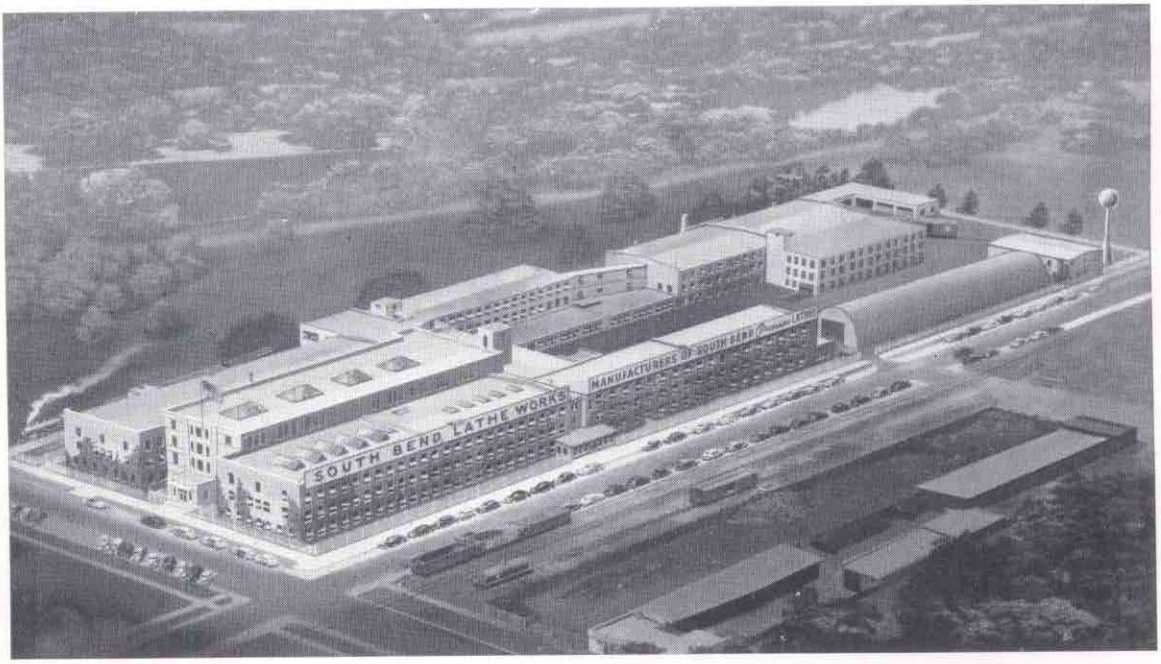


DRILL PRESSES



BENCH SHAPERS

ACCESSORIES



South Bend Lathe Works

The South Bend Lathe Works was founded in 1906 by John J. O'Brien and Miles W. O'Brien, twin brothers who had served toolmaker apprenticeships in some of the finest of the old New England shops. After supplementing their practical training with engineering courses at Purdue University, the O'Brien brothers established their factory at South Bend, on the banks of the beautiful St. Joseph river. Bringing to the midwest a rich heritage of Yankee ingenuity, their products were a success from the beginning.

Operated first as a partnership and incorporated in 1914, the business remained a closely held corporation until 1936 when its stock was first listed on a Chicago stock exchange. Currently listed on the Midwest Stock Exchange of Chicago, the stock is now owned by a diversified group of shareholders residing in all parts of the United States.

Recognizing the fact that there is no substitute for experience, it has been the policy of this company to employ well trained mechanics and to encourage promising young men to remain after their apprenticeship with the company has been completed. Today a large percentage of our workmen are "old timers" having service records of more than twenty-five years.

Catalog 5205

SOUTH BEND *Precision* LATHES
DRILL PRESSES - SHAPERS

Warranty

The South Bend Lathe Works warrants its products to conform to or excel the specifications set forth in the manufacturer's catalogs in use at the time of sale and reserves the right, at its own discretion, without notice and without making similar changes in articles previously manufactured, to make changes in materials, design, finish, or specifications. The South Bend Lathe Works warrants products of its own factory against defects of material or workmanship for a period of one year from the date of sale. The manufacturer's liability under this warranty shall be limited to replacing, free of charge, f.o.b. South Bend, Indiana, any such parts proving defective within the period of this warranty but the manufacturer will not be responsible for transportation charges or consequential damages. The South Bend Lathe Works makes no warranty with respect to electrical equipment or purchased extras as described in the manufacturer's catalogs.

Finish—Shipping Weights—Case Sizes

All sizes of South Bend Lathes, the Precision Model Drill Presses and the 7" Bench Shaper are attractively finished in the new South Bend light gray enamel. Accessories are finished to match. Shipping weights of all machines include an allowance for a normal amount of electrical equipment and accessories, and have been carefully estimated. However, they should be considered approximate as there is some variation due to the variation in the weight of the lumber and other packing materials used. Case sizes specified are based on current methods of packing and should be accurate within one cubic foot. However, we reserve the right to make changes in packing without notice, and such changes may alter the case size.

SOUTH BEND LATHE WORKS

Building Better Tools Since 1906

425 EAST MADISON STREET, SOUTH BEND 22, INDIANA, U.S.A.

CABLE ADDRESS "TWINS" SOUTH BEND

CODES USED

A. B. C. Fifth Edition Improved — Bentley's Complete Phrase and 2nd Editions
Western Union Five Letter Edition — Western Union Universal Edition
Acme — Lieber's — Standard — Our Own

SOUTH BEND *Precision* LATHES

Careful design and conscientious workmanship are combined in South Bend Lathes to give you a machine tool that you can depend on for years of satisfactory service. Continual research has resulted in many improvements and refinements which contribute to their accuracy, durability, and ease of operation. We know of no other lathe selling at anywhere near the price that can match the performance of South Bend.

As a part of our policy of continual improvement, new ideas, new methods, and new materials are developed and tested in our research laboratory. The equipment of this laboratory includes precision gauge blocks accurate to five-millionths of an inch, an optical comparator for testing the form and lead of screw threads, a profilometer for checking the smoothness of surface finishes, hardness testing equipment to make sure that heat-treated steel surfaces have just the right degree of hardness, precision lead screw testing equipment accurate to .00005" in 30", a dynamic balancing machine, and many other precision measuring instruments, gauges, and tools.

Parts for South Bend Lathes are economically produced in our modern factory equipped with efficient production machinery. Measuring instruments and tools are constantly checked to maintain uniform accuracy. Hundreds of special machines, jigs, fixtures, and gauges are used to assure interchangeability of parts. This simplifies assembly, lowers the cost of manufacture, and insures precision. South Bend Lathes are reasonable in price because the savings effected by efficient quantity production are passed on to the customer.

A careful inspection of any South Bend Lathe will disclose the most expert workmanship. The superior quality of workmanship is made possible by the highly specialized skills of our experienced employees and the excellent equipment of our shops. An experienced machinist can see at a glance that only the finest craftsmanship enters into the construction of South Bend Lathes.

The best materials available are used in building South Bend Lathes. That is why they last a lifetime if given the proper care. The headstock spindles are made from a special quality of alloy steel manufactured to exacting specifications of analysis and heat treatment. The spindle bearings are the best quality phosphor bronze. The lathe beds are of a special grade of hard, close-grained iron having unusual tensile strength and wearing qualities.

The lead screws on South Bend Lathes are made of a special grade of steel that has proved to be most satisfactory for this purpose. The compound rest top, carriage, headstock, and other units of the lathe are made of the specific grades of iron that are the most suitable for the respective parts. Even the gray enamel used in finishing South Bend Lathes is made exclusively for us to our specifications.

The scientifically correct design, the generous proportions of bearing surfaces and the excellent facilities for oiling on South Bend Lathes assure permanent accuracy. We invite comparison with any other make of lathe, made either in this country or abroad. We are confident that you will find South Bend Lathes to be more accurate, and that they will retain their precision through years of service.

Fig. 2. Inspecting a Screw Thread with an Optical Comparator.

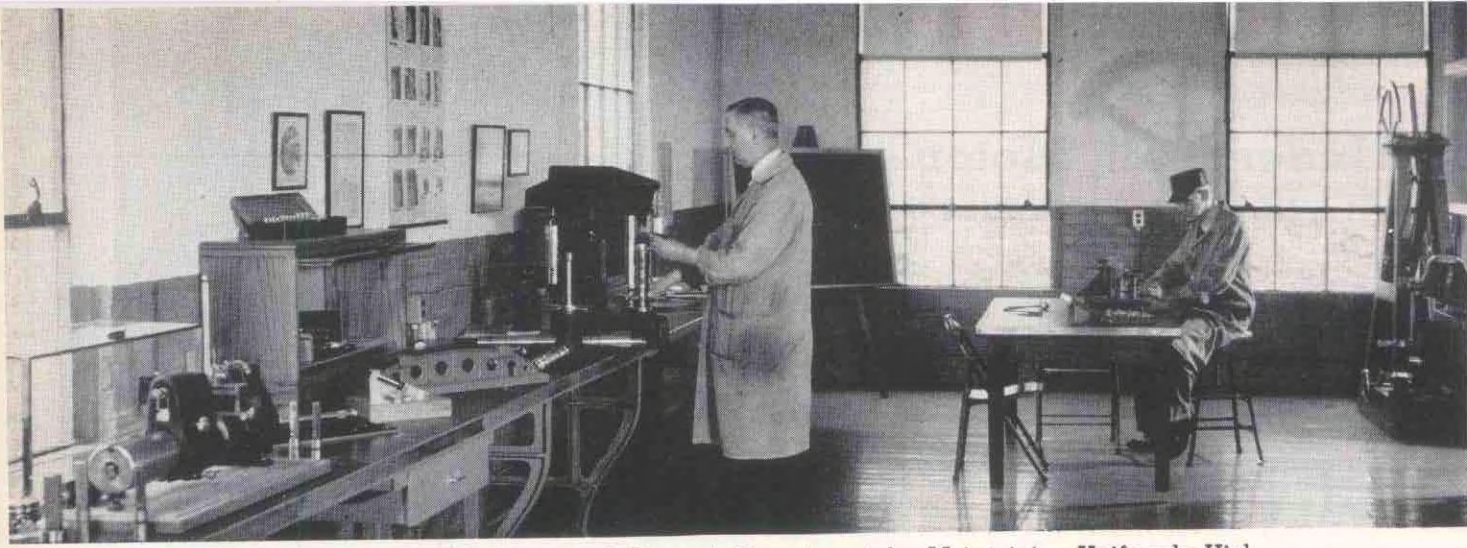


Fig. 3. Testing Laboratory and Research Department for Maintaining Uniformly High Standards of Workmanship and Materials for South Bend Lathes

Fig. 4. Checking a Fixture with Precision Surface Plate and Lapped Gauge Blocks

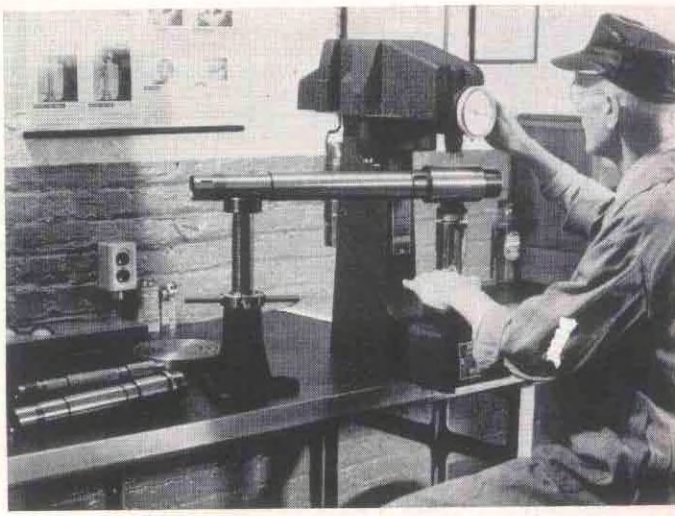


Fig. 5. Testing the Hardness of a Carburized Headstock Spindle Bearing Surface

Fig. 6. Below—Testing Gears for Accuracy of Tooth Form, Pitch Diameter, and Concentricity

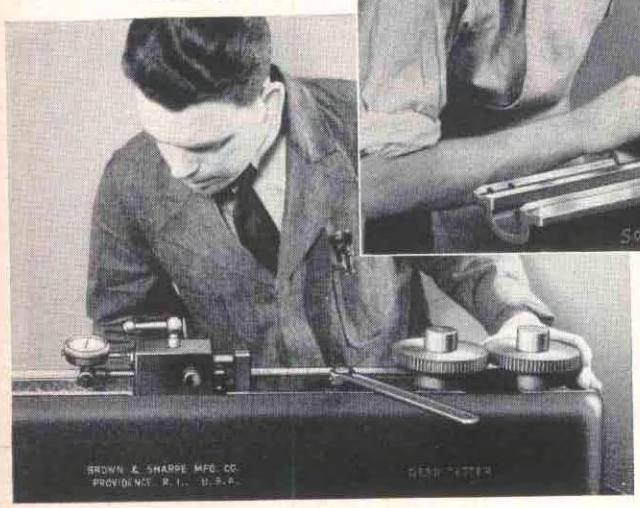
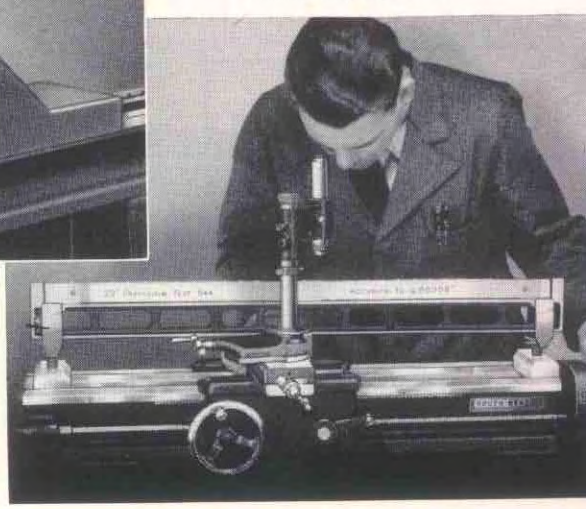


Fig. 7. Above—Testing the Saddle Cross Slide Dovetail for Squareness with V-Ways of the Lathe Bed

Fig. 8. Below—Testing a Lead Screw for Accuracy of Lead with Precision Optical Measuring Equipment



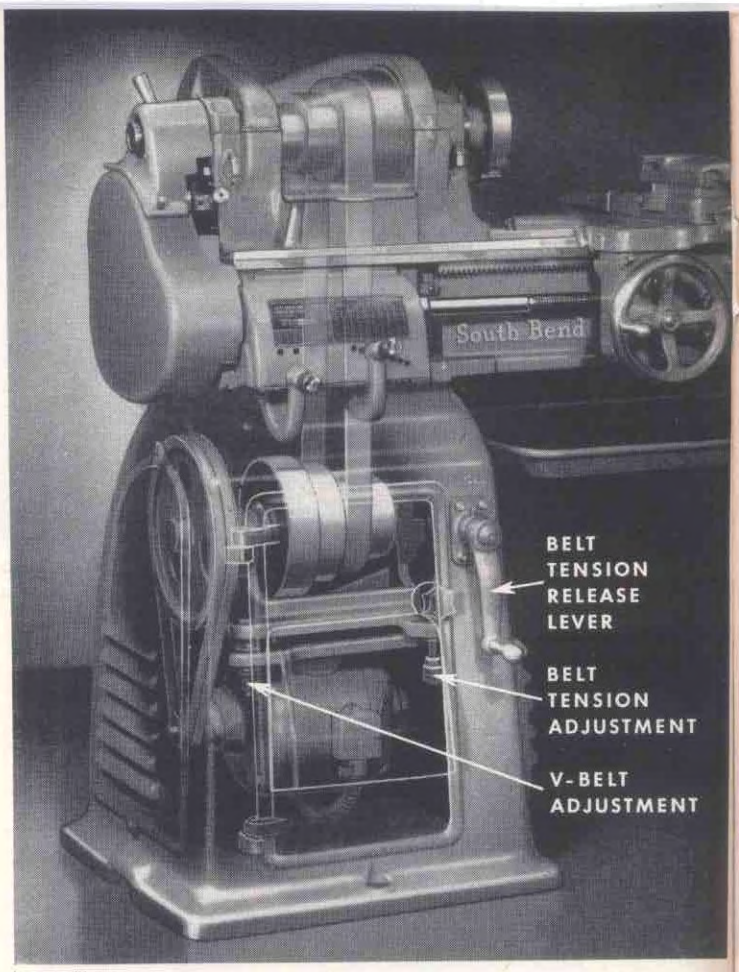
Underneath Motor Drive
PROVIDES SMOOTH POWER

The patented South Bend Underneath Belt Motor Drive is unique and exclusive. This fully enclosed drive is unusually compact, silent in operation, powerful, and economical. Although several attempts have been made to imitate it, in our opinion no competitive drive has approached it in excellence of design or quality of construction.

The motor and driving mechanism are mounted in the cabinet leg under the lathe headstock. There are no exposed belts, pulleys or gears. This contributes to the neat appearance of the lathe, and is also noteworthy as a safety feature. V-belts transmit the power from the motor to the lower cone pulley. An endless flat leather belt running over the cone pulleys passes up through the lathe bed. Both the V-belts and the flat leather belt have convenient belt tension adjustments, "B" and "C", Figs. 10, 11, and 12.

The advantage of the smooth direct belt drive to the spindle for high speeds, combined with the powerful back-geared drive for slow speeds are almost too obvious to require explanation. The belt drive back-geared headstock construction has fewer parts and is, therefore, more rugged and durable than the geared head design. The few gears used for slow spindle speeds are of ample proportion to stand the shock of a heavy, interrupted cut; an operation that has proved the Waterloo of many geared head lathes. The noise and vibration of high speed gears (principal defect of the geared head design) are totally absent, thus eliminating the possibility of chatter marks on the work caused by headstock gear vibration. The speed range of a geared head lathe is limited by the gearing, but the belt drive operates smoothly at all speeds.

The quick acting belt tension release "A", Figs. 10, 11, and 12, and convenient headstock back gear change lever permit changing spindle speeds quickly, usually in five to ten seconds. The cover over the headstock cone pulley is hinged and may be raised for easy access to the cone pulley belt. The belt tension can be easily adjusted to transmit just the required amount of power. This feature can be used as a safety factor to prevent damage to the lathe by careless or inexperienced operators who often take too heavy a cut or otherwise stall the motor. When the full power of the motor is required for taking heavy cuts, the belt tension can be tightened quickly and easily to transmit full power. The lower cone pulley shaft assembly is mounted on prelubricated and sealed ball bearings which require no oiling. Pulleys are carefully balanced for smooth operation at all speeds.



Patented

Fig. 9. Phantom View Showing Construction of South Bend Underneath Belt Motor Drive

The control switch is conveniently located to permit the operator to start or stop the rotation of the lathe spindle from an easy working position. Wiring between the motor and the switch is enclosed in a flexible metal conduit. Pushbutton operated motor controls can be supplied for all ½ h.p. and larger motors, and are required for all two-speed motors and for motors operating on currents above 230 volts. Drum type across-the-line reversing switch is optional for 230 volts or less. See page 73 for complete information on motors and controls.

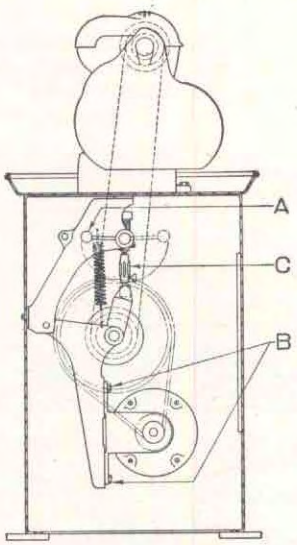


Fig. 10. Underneath Motor Drive Arrangement for 9" and Light Ten South Bend Lathes

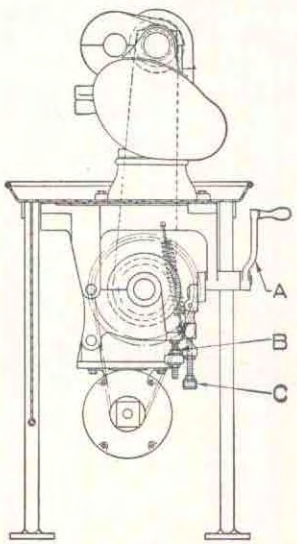


Fig. 11. Underneath Motor Drive Arrangement for 10"-1" Collet Bench Lathes

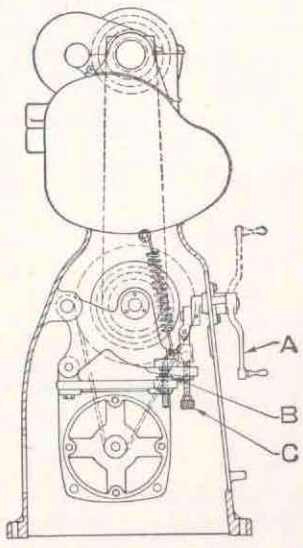


Fig. 12. Underneath Motor Drive Arrangement for 10" and Larger Floor Type Lathes

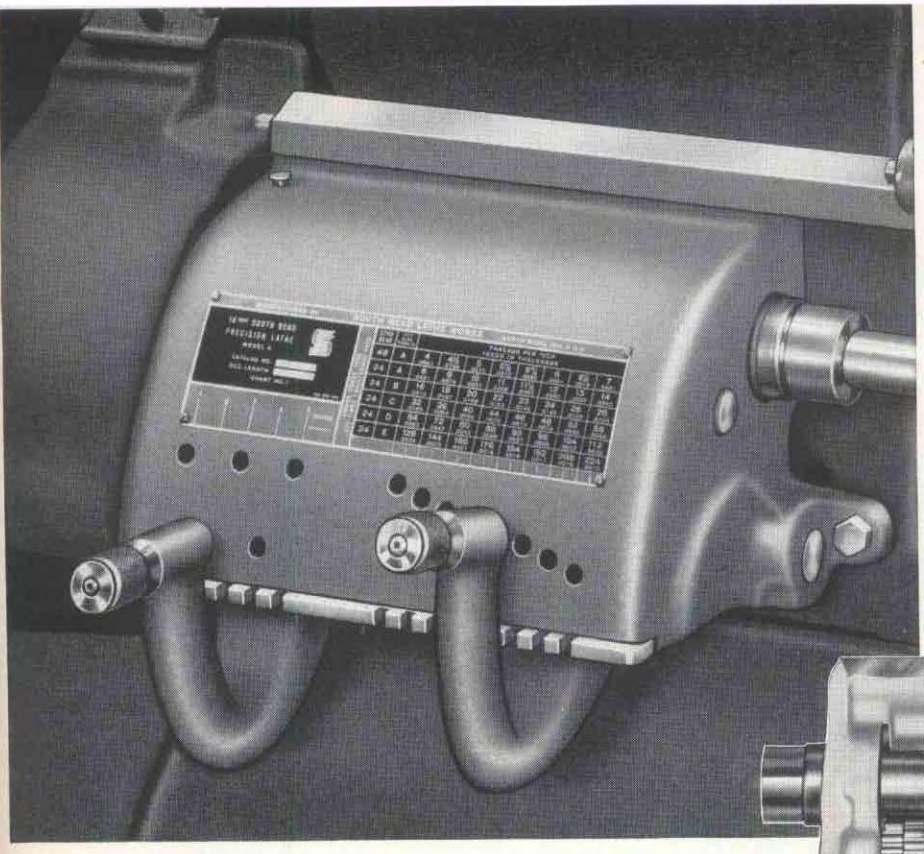


Fig. 13. Improved Quick Change Gear Box for South Bend Lathes

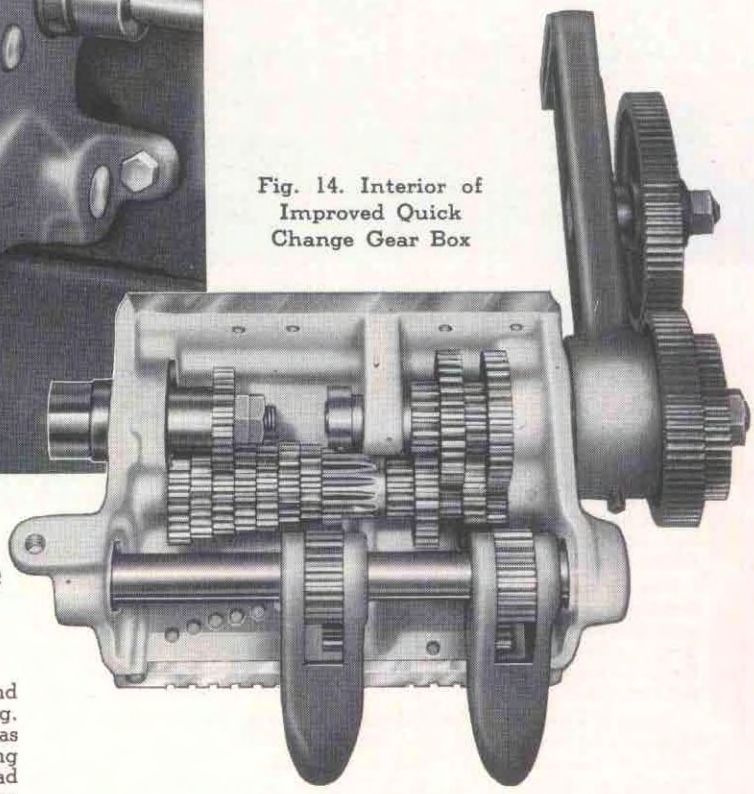


Fig. 14. Interior of Improved Quick Change Gear Box

Improved Quick Change Gear Mechanism

The improved quick change gear mechanism for South Bend Lathes is the result of careful research and thorough testing. Before this new gear box was approved for production, it was used for years on lathes in our own shops which were operating continuously on tough production jobs. Only after it had proved to be rugged, foolproof, and entirely satisfactory from the operator's standpoint was the final OK given. Designed to save time and give long dependable service, we are convinced that this new quick change gear equipment is the most convenient and durable available regardless of price.

A direct reading index chart shows positions in which the two conveniently located tumbler levers are placed for each of 48 screw thread pitches, 48 power longitudinal feeds, and 48 power cross-feeds. (For metric threads see page 46.) There are no sliding clutches or sliding primary end gears to change. Shifting a single lever changes feed instantly from coarse to fine, for roughing or finishing cuts.

Standard screw threads from 8 to 224 per inch are obtained by shifting the two tumbler levers on the gear box. The stud gear is changed for an additional series of coarse pitches ranging from 4 to 7 threads per inch. Provision is made for the use of special stud and intermediate gearing needed to cut metric screw threads, diametrical pitch worm threads, or other special screw threads. Metric transposing gears are listed on page 47. Prices of extra stud gears for special threads will be quoted on request. State pitches of threads to be cut.

The main frame of the gear box consists of a heavy one-piece casting which is attached to the lathe bed near the headstock. Special quality alloy steel is used for all gears and shafts. Gears are precision-cut for maximum accuracy and quiet operation. Shafts are carefully ground and fitted. The lead screw shaft revolves in an annular ball bearing and has a precision thrust bearing to eliminate end play and cam action. Tumbler gears are fitted with needle bearings. A single oil reservoir lubricates the entire quick change gear box.

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

14½ & 16 INCH SOUTH BEND PRECISION LATHE
MODEL A
CATALOG NO.
BED LENGTH
CHART NO. 1

A B C D E POSITION

POWER CROSS FEED .375 TIMES LONGITUDINAL FEED

STUD GEAR	LEFT HAND TUMBLER	THREADS PER INCH / FEEDS IN THOUSANDTHS							
48	A	4 .0841	4½ .0748	5 .0673	5½ .0612	5½ .0585	6 .0561	6½ .0518	7 .0481
24	A	8 .0421	9 .0374	10 .0337	11 .0306	11½ .0293	12 .0280	13 .0259	14 .0240
24	B	16 .0210	18 .0187	20 .0168	22 .0153	23 .0146	24 .0140	26 .0129	28 .0120
24	C	32 .0105	36 .0093	40 .0084	44 .0076	46 .0073	48 .0070	52 .0065	56 .0060
24	D	64 .0053	72 .0047	80 .0042	88 .0038	92 .0037	96 .0035	104 .0032	112 .0030
24	E	128 .0026	144 .0023	160 .0021	176 .0019	184 .0018	192 .0017	208 .0016	224 .0015

Fig. 15. Direct Reading Index Chart Showing Threads and Feeds Provided by Quick Change Gear Mechanism on 16-inch Swing Lathe

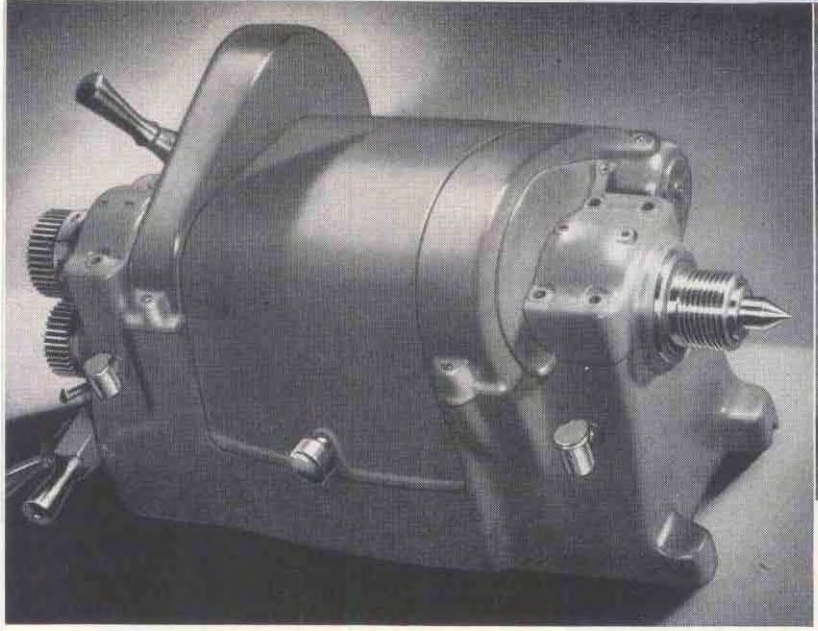


Fig. 16. Headstock for 16-inch Swing South Bend Lathe

Fig. 17. Headstock Spindle and Bearings

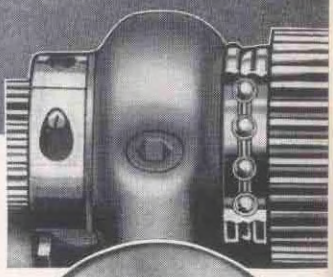


Fig. 18. Ball Thrust Bearing and Take-up Nut for Spindle

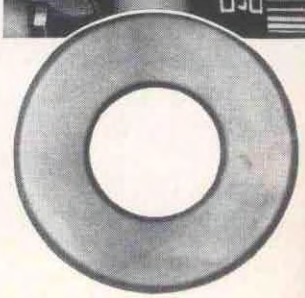


Fig. 19. Cross Section of Spindle Showing Thickness (3/64") of Carburized and Hardened Bearing Surfaces

Headstock and Spindle Construction

The headstock is the most important unit of the lathe, and it might be said that the life of the lathe is determined by the life of the headstock. Sturdy design, high quality materials, large bearings and excellent oiling facilities assure unusual life for South Bend Headstocks.

The main casting for the headstock is heavily reinforced and webbed for rigidity and permanent alignment of the spindle with the V-ways of the bed. The headstock base has unusually long bearings which are carefully hand-scraped and fitted to the bed ways. All moving parts (except spindle nose) are fully enclosed.

Direct belt drive to the spindle for high speeds assures smooth operation on small diameter work. Slow speeds for heavy cuts on large diameters are driven through the back gears. The threaded spindle nose shown is regularly supplied, but type L Long Taper Key Drive or type D1 Cam Lock Spindle can be supplied to order. See page 40.

The wrenchless bull gear lock permits engaging the headstock back gears without the use of a wrench. A quick acting spring latch reverse on the left end of the headstock enables the operator to change from right-hand to left-hand feeds or threads instantly. These two convenient features will appeal to any busy mechanic for they save a lot of time.

Much time, thought and care have gone into the design and development of the headstock spindle and bearings for South Bend Lathes. Hundreds of different designs have been tested, including many with ball and roller bearings.

Two plain bearing designs were selected as the most satisfactory. For 10-inch and larger lathes, a heat-treated spindle and replaceable bronze sleeve bearings were adopted. Preliminary research and testing of this bearing construction were so thorough that during the five years following its introduction not one spindle bearing was replaced because of wear. The spindle and bearing construction for the 9" lathe is similar, except that the spindle runs in integral cast-iron bearings.

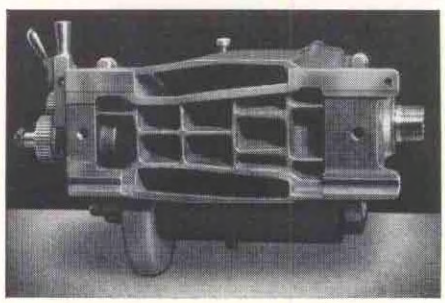


Fig. 20. Bottom View of Headstock Showing Rigid Cross-Ribbed Construction

The bearing surfaces on the spindle are carburized, hardened to Rockwell C 56 to 61, ground and superfinished to a smoothness of 5 microinches (.000005") r.m.s. The extreme smoothness and accuracy of the superfinished spindle bearing surface eliminates wear, reduces friction, permits higher spindle speeds and assures precision.

The bearings in which the spindle revolves are unusually large, and are precision bored and burnished to a smoothness of ten microinches (.000010") r.m.s. by the bearingizing process. The design permits using a large diameter spindle providing extreme rigidity and reducing the possibility of chatter. The bearings are accurately adjusted at the factory and should require no further adjustment for years. Provision is made for take-up when required.

Large oil reservoirs and an improved circulating capillary oiling system provide a complete film of clean filtered oil which separates the rotating spindle from the bearings. As long as sufficient oil is supplied to maintain an adequate oil film, there can be no metal to metal contact in this bearing, no wear and no friction other than the fluid friction of the lubricant. An efficient oil return system retains the oil so that only an occasional replenishing is required.

There is prevalent much misunderstanding and misinformation relative to the respective merits of so-called anti-friction bearings. Certainly they are unequalled for certain applications where low cost or low starting torque are of greater importance than precision and durability. However, it has been our experience that for the spindles of precision lathes such as we manufacture, properly designed and fitted plain bearings are superior, and even though more costly than other types of bearings, their performance justifies the added expense.

The principal advantages of the plain bearing are that it provides better support for the spindle, permits using a larger diameter spindle, eliminates the possibility of chatter marks in the work due to vibration set up by balls or rollers, runs more smoothly and quietly, wears longer, and is adjustable.

On the other hand, a spindle revolving in a ball bearing can only run as true as the combined eccentricity of the outer and inner surfaces of both the outer and inner races, and is supported only by the point of contact between the ball or roller and the bearing race. A slight pit, worn spot, or other imperfection in the bearing race will cause vibrations which result in the familiar chatter marks so often encountered on lathes with ball or roller bearings. The frequent replacement of ball or roller bearings is an annoyance to say nothing of the expense.

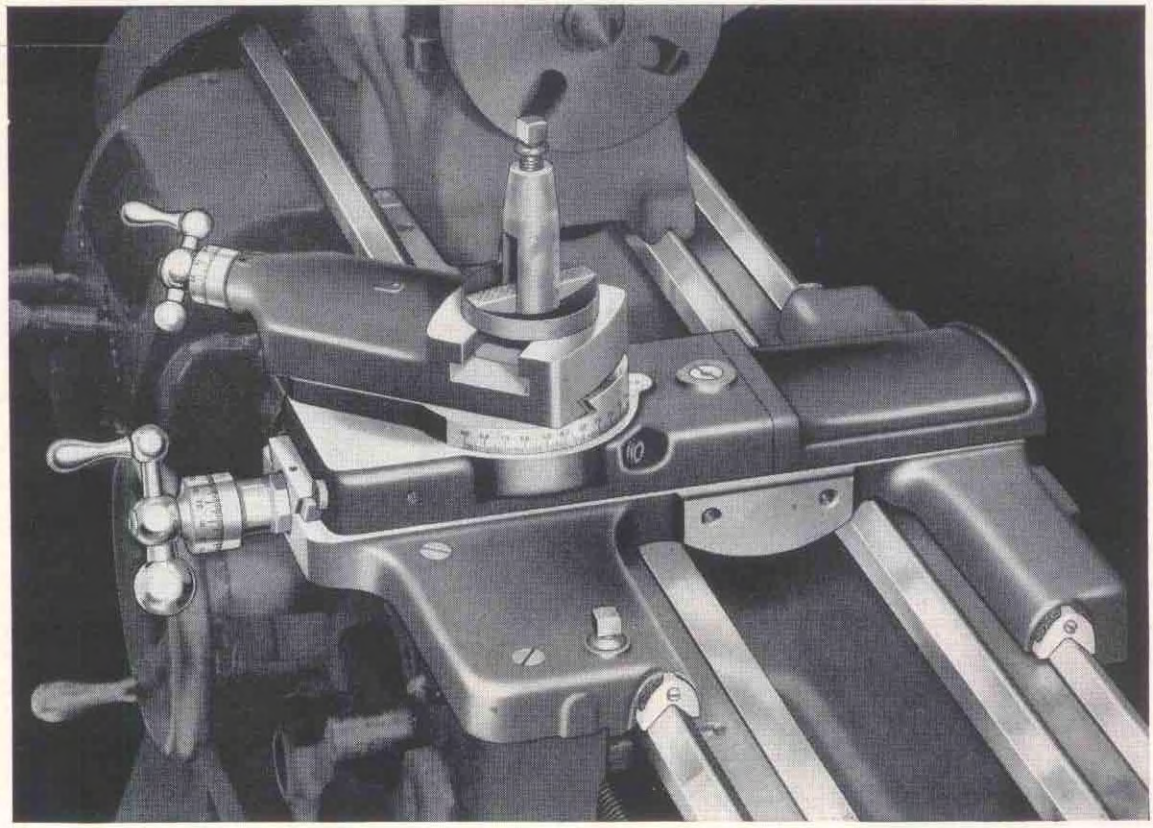


Fig. 21. Improved Saddle and Compound Rest for South Bend Lathes

Improved Saddle and Compound Rest

The saddles for South Bend Lathes have unusually long bearings carefully hand-scraped to conform with the outer V-ways of the lathe bed. Felt pad wipers are attached to each end of the saddle to clean and oil the V-ways of the bed. The cross slide bridge is wide and deep, providing a rigid support for the tool rest. The cross slide dovetail is hand-scraped square with the V-ways of the saddle.

The back of the saddle is machined to receive the taper attachment. A carriage lock screw, conveniently located on the right-hand front wing of the saddle, is provided for locking the carriage securely to the lathe bed for cutting-off and for precision facing operations.

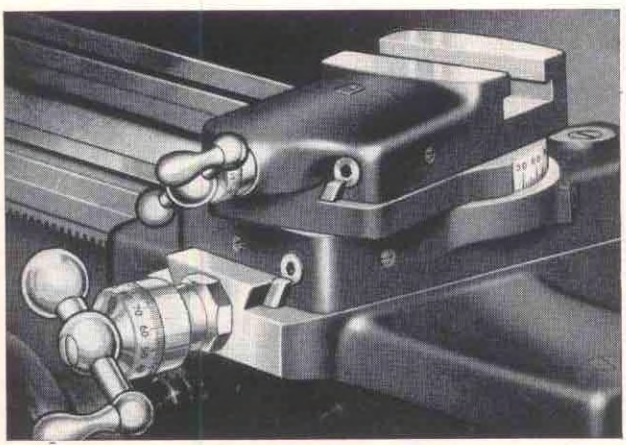


Fig. 22. Close-up Showing Adjustable Tapered Gibs Used on Compound Rest Base and Top Dovetails of 10″-1″ Collet and larger South Bend Lathes

Both the compound rest base and the compound rest top dovetails are hand-scraped, and on 10-inch 1″ collet lathes and larger sizes, the dovetails have adjustable tapered gibs. Dovetails on 9-inch and Light Ten Lathes have flat gibs with screw adjustment. The compound rest base is drilled and tapped for the thread cutting stop screw. The compound rest swivel bearing is accurately ground and fitted. The swivel is graduated 180-degrees and may be set at any angle for turning and boring bevels and tapers.

The cross-feed screw and compound rest screw have large diameter easy reading micrometer collars which are accurately graduated to read in thousandths of an inch advance of the cutting tool. Graduations reading in the metric system can be supplied to order. The graduated collars are adjustable and may be set at zero whenever desired. Crank handles for both the compound rest screw and cross-feed screw are nicely balanced and are made of polished steel.

The tool post, tool post ring, and tool post rocker are made of steel, heat-treated and hardened. Rocker adjustment is provided for adjusting the cutting edge of the tool to the desired height. A forged steel heat-treated tool post wrench is supplied as regular equipment. Wrench has box opening on one end and fits the carriage lock screw as well as the tool post screw.

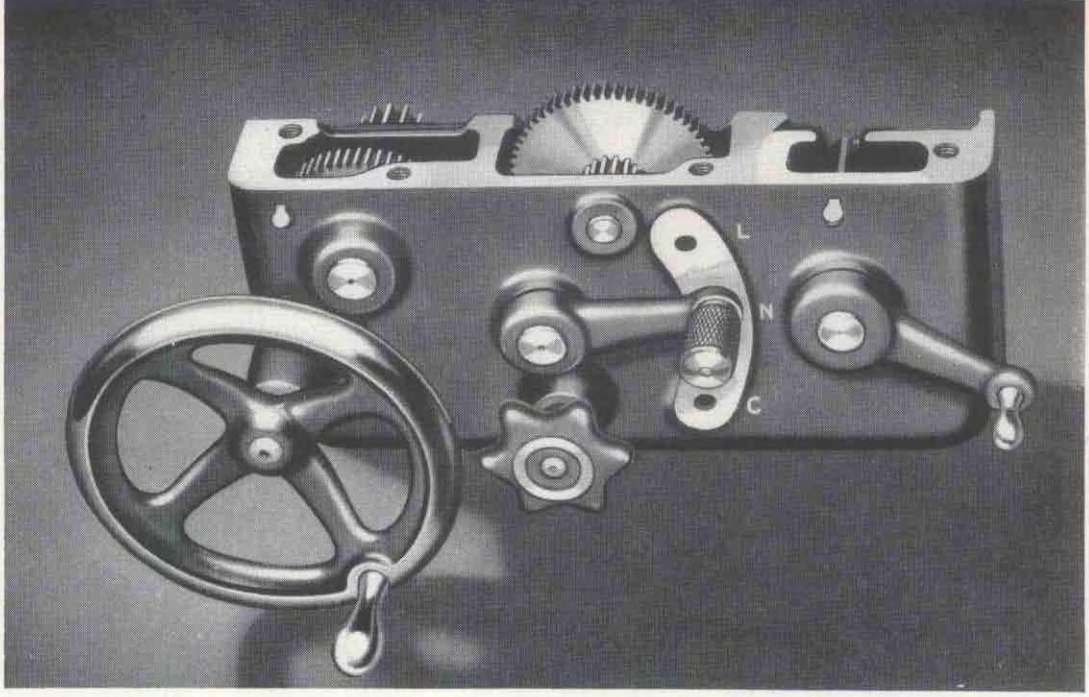


Fig. 23. Front View of Double Wall Apron Showing Rigid Box Type Construction

One-Piece Double Wall Apron

For 10″—1″ and Larger South Bend Lathes

The one-piece double wall apron supplied on all 10″—1″ Collet and larger lathes is rigidly constructed and provides substantial support for both ends of the gear shafts. A tumbler gear shift is used to change from power cross-feed to power longitudinal feed.

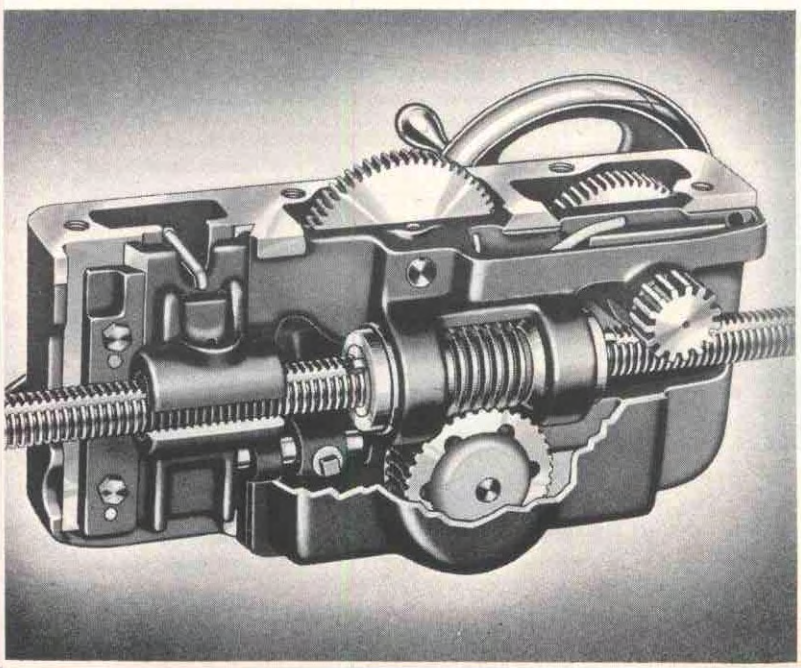
The multiple disc friction clutch used for operating both the power cross-feeds and the power longitudinal feeds is shown in Fig. 25. Alternate steel discs precision ground on both sides to close tolerances for flatness and thickness are keyed to the clutch shaft and worm wheel respectively. A slight turn of the clutch knob will engage the clutch, placing the power carriage feed in operation. Clutch will engage or release instantly, is smooth in operation and will not stick or slip under heavy cuts.

The half-nuts for thread cutting are close-coupled and are dovetailed into the back wall of the apron, as shown in Fig. 24. The half-nuts and threads of the lead screw are used only when cutting screw threads. A spline in the lead screw drives the worm which operates the power carriage feeds.

An automatic built-in safety device makes it impossible to engage the worm driven power feeds and half-nut feeds at the same time. When the feed lever is in either position "L" or "C", Fig. 23, the half-nuts are locked and cannot be engaged with the lead screw. To engage the half-nuts with the lead screw, the feed lever must be in the "N" or neutral position.

Gears in the apron are made of steel and have reservoir and felt wick oiling system. The rack pinion, shown at right end of apron, Fig. 24, is rigidly supported by substantial bearings in both the front wall and back wall of the apron.

Fig. 24. (Below) Back View of New Double Wall Apron



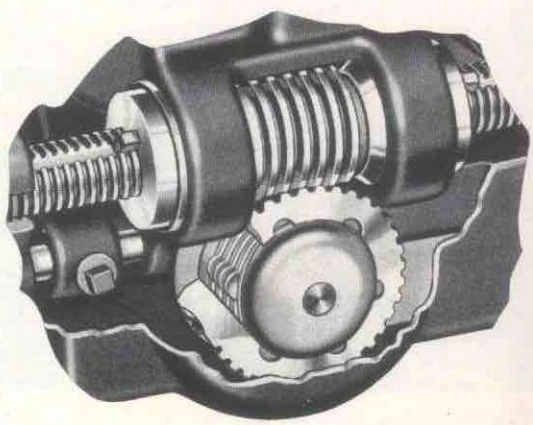


Fig. 25. (Above) Cut-away View Showing the Multiple Disc Friction Feed Clutch

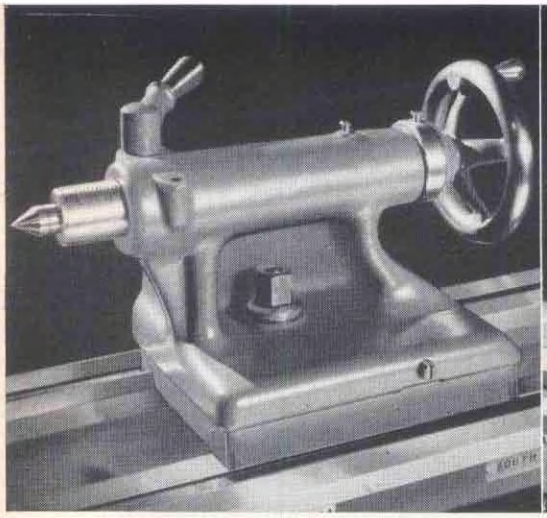


Fig. 26. Tailstock Design Used on 13" and Larger Lathes

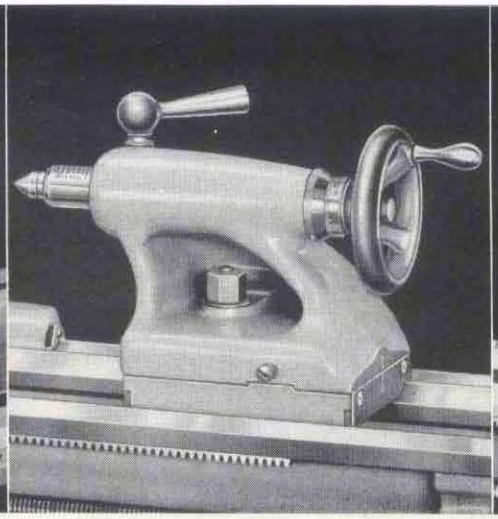


Fig. 27. Tailstock Design Used on 10" Swing Lathes

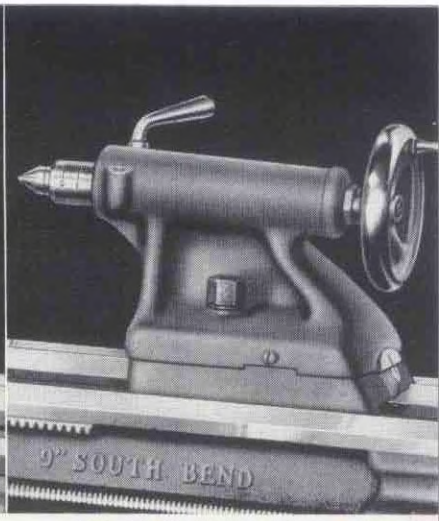


Fig. 28. Tailstock Design Used on 9" Swing Lathes

Tailstocks for South Bend Lathes

Tailstocks for all South Bend Lathes are rigidly constructed to provide solid support for the work. Generous bearing surfaces are carefully fitted to assure precision alignment of the tailstock spindle with the bed ways and the headstock spindle. On all 10" and larger lathes, felt wipers are attached to both ends of the tailstock base to clean and oil the bed ways. A substantial clamp and bolt with convenient box type wrench are provided for locking the tailstock securely at any point along the length of the lathe bed.

The tailstock top is offset to allow the compound rest to swivel over the tailstock base, parallel with the lathe bed. A sensitive screw adjustment is provided to set over the tailstock top for taper turning. Witness marks indicating the position of the tailstock top are conveniently placed on the right end of the tailstock where they can be seen with ease.

The tailstock screw has long wearing Acme thread and a large diameter handwheel which assure smooth and easy operation, especially important for drilling and reaming jobs. Graduations on the tailstock spindle indicate its movement for drilling to accurate depths and similar operations. Graduations read in sixteenths of an inch, except for the 10" swing lathes which have graduations reading in tenths of an inch. Metric graduations can be supplied to order. Tailstock screws for 10" lathes are fitted with graduated collars reading in thousandths of an inch advancement of the spindle.

Tailstocks for 10" swing and larger lathes have an improved internal clutch device which securely locks the spindle without altering the alignment of the centers. Tailstocks for 9" swing lathes have split barrel and binding lever for locking tailstock spindle. A witness mark is scribed on the tailstock spindle at center height for adjusting height of cutter bit. The tailstock center is made of tool steel, is hardened and precision ground all over, and is automatically ejected as the spindle is retracted.

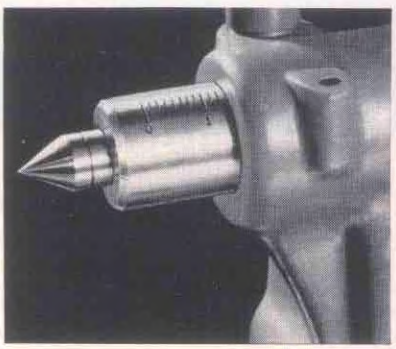


Fig. 29. Close-up of Tailstock Spindle Graduations and Witness Mark

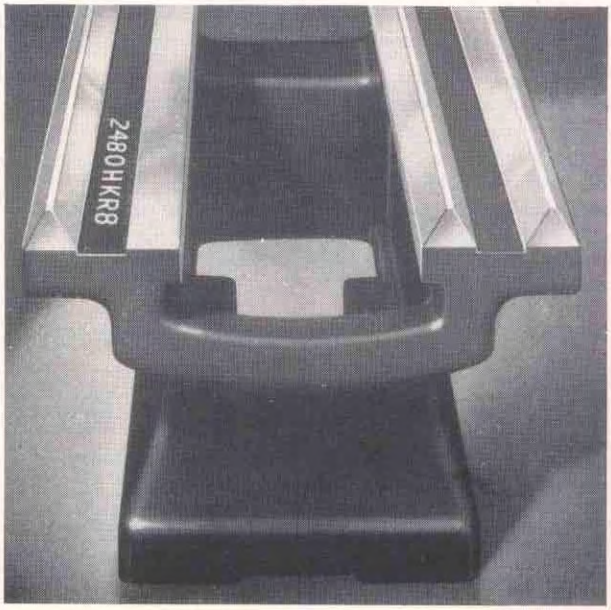
Rigidly Constructed Lathe Bed

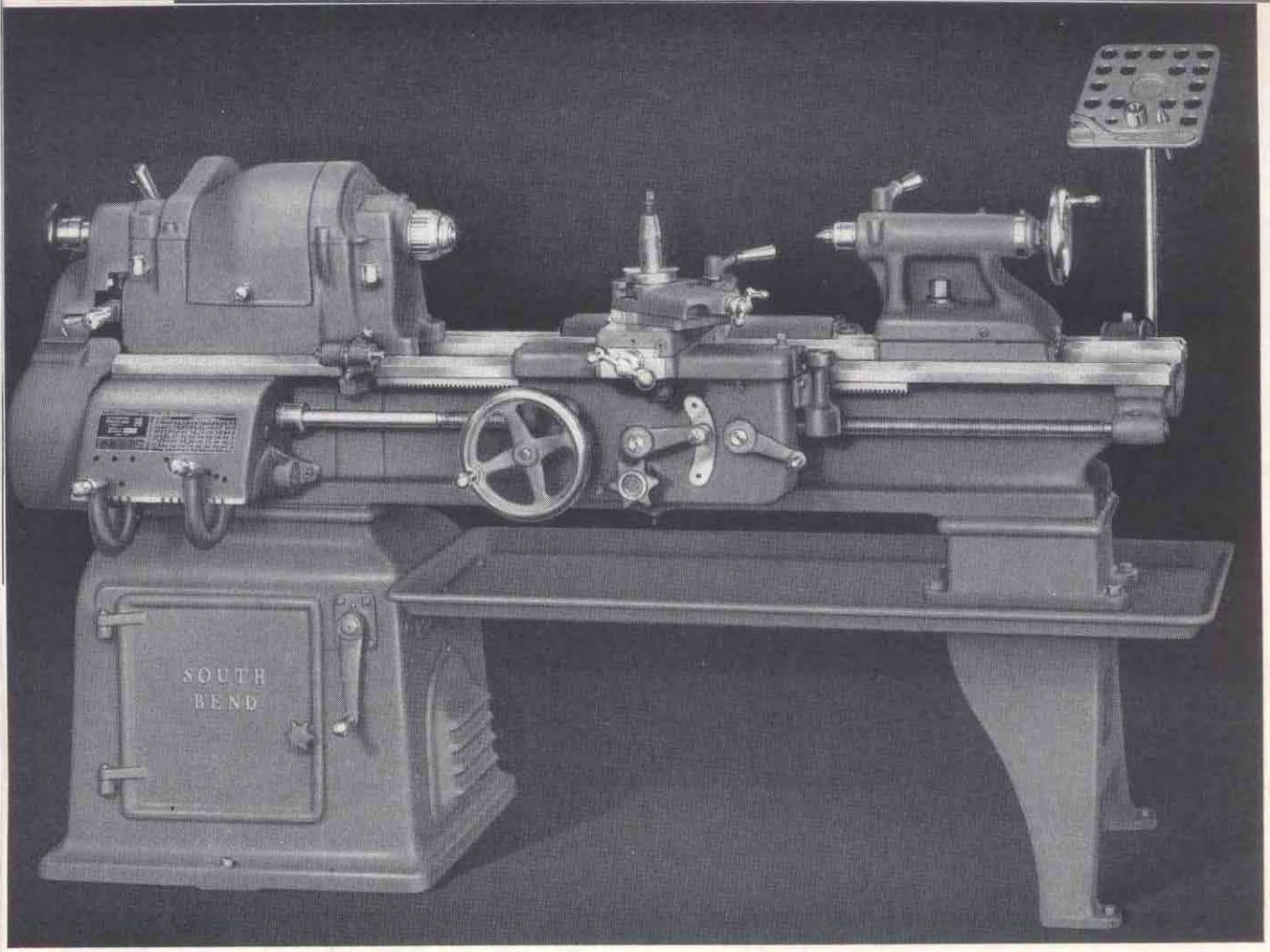
Three V-ways Assure Precision Alignment of Headstock, Tailstock, and Carriage

Beds for South Bend Lathes are heavily constructed with large braces cast in at short intervals. The beds are made of a special grade of iron with 30 to 70 per cent steel (depending on size) which produces a hard close-grained casting having unusual strength and long wearing qualities.

Three large V-ways and one flat way on the bed assure permanent precision alignment of the headstock, carriage, and tailstock. Being cast integral with the bed, there is no possibility of the bed ways working loose and shifting in service. The carriage slides on the two outside V-ways and the headstock and tailstock are aligned by the inside V-way. The ways are carefully precision finished the entire length of the bed.

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





16-inch Toolroom *Precision* Lathe

Eight Spindle Speeds—Back-Geared—Belt Drive to Spindle

We sincerely believe that this is the finest lathe of this size and type that you can buy at anywhere near the price. Capable of the most exacting operations, it has ample power and capacity for most toolroom jobs. Special accuracy tests are made on each lathe during the assembling and testing to assure utmost precision. Husky castings and large, carefully fitted bearings provide the rigidity so essential to smooth operation and a durability that assures long life.

New two-lever gear box gives you quicker, easier changes for threads and feeds. Powerful multiple disc friction clutch in apron permits engaging or disengaging power turning and facing feeds instantly. Direction of feed is reversed by shifting the feed reverse lever conveniently located on the left end of the headstock. Apron has an automatic safety interlock which makes it impossible to damage the lathe or the work by engaging a second feed accidentally when one power carriage feed is already in operation.

Toolroom attachments included in price of lathe consist of: precision lead screw; handwheel type draw-in collet attachment (without collets); collet rack; telescopic taper attachment; thread dial indicator; chip pan; and micrometer carriage stop.

Regular equipment included in price of lathe consists of: 4 V-belts; flat leather belt; large and small face plates; heat-treated steel tool post; adjustable thread cutting stop; tool steel centers for headstock and tailstock spindles; headstock spindle sleeve; wrenches; quick change gear box; installation plan; and book "How to Run a Lathe." Electrical equipment is not included in the price of the lathe.

16-inch Toolroom Lathes with Eight-Speed Drive

Catalog Number	Bed Length Feet	Between Centers Inches	Cubic Feet Boxed	Boxed Weight Pounds	Crated Weight Pounds	
CL8117C	6	33 1/4	95	2925	2525	
CL8117D	7	45 1/4	101	3175	2605	
CL8117E	8	57 1/4	111	3375	2685	

Specifications of 16-inch Toolroom Lathes

CAPACITY OF LATHE
- Swing over bed and saddle wings ..... 16 1/4"
- Swing over saddle cross slide ..... 9 5/8"

SPINDLE SPEEDS
- Standard spindle speeds (approximate, not exact)
- r.p.m. of spindle, direct belt drive .. 980, 610, 390, 240
- r.p.m. of spindle, back-gear drive .. 125, 80, 50, 30

HEADSTOCK
- Hole through spindle ..... 1 5/8"
- Maximum collet capacity ..... 1"
- Spindle nose diameter and threads ..... 2 5/8"-6
- Size of center, Morse taper ..... No. 3
- Width cone pulley step ..... 2 1/4"
- Large face plate diameter ..... 13 1/4"
- Small face plate diameter ..... 8 1/16"
- Front spindle bearing, diameter ..... 2 7/8"

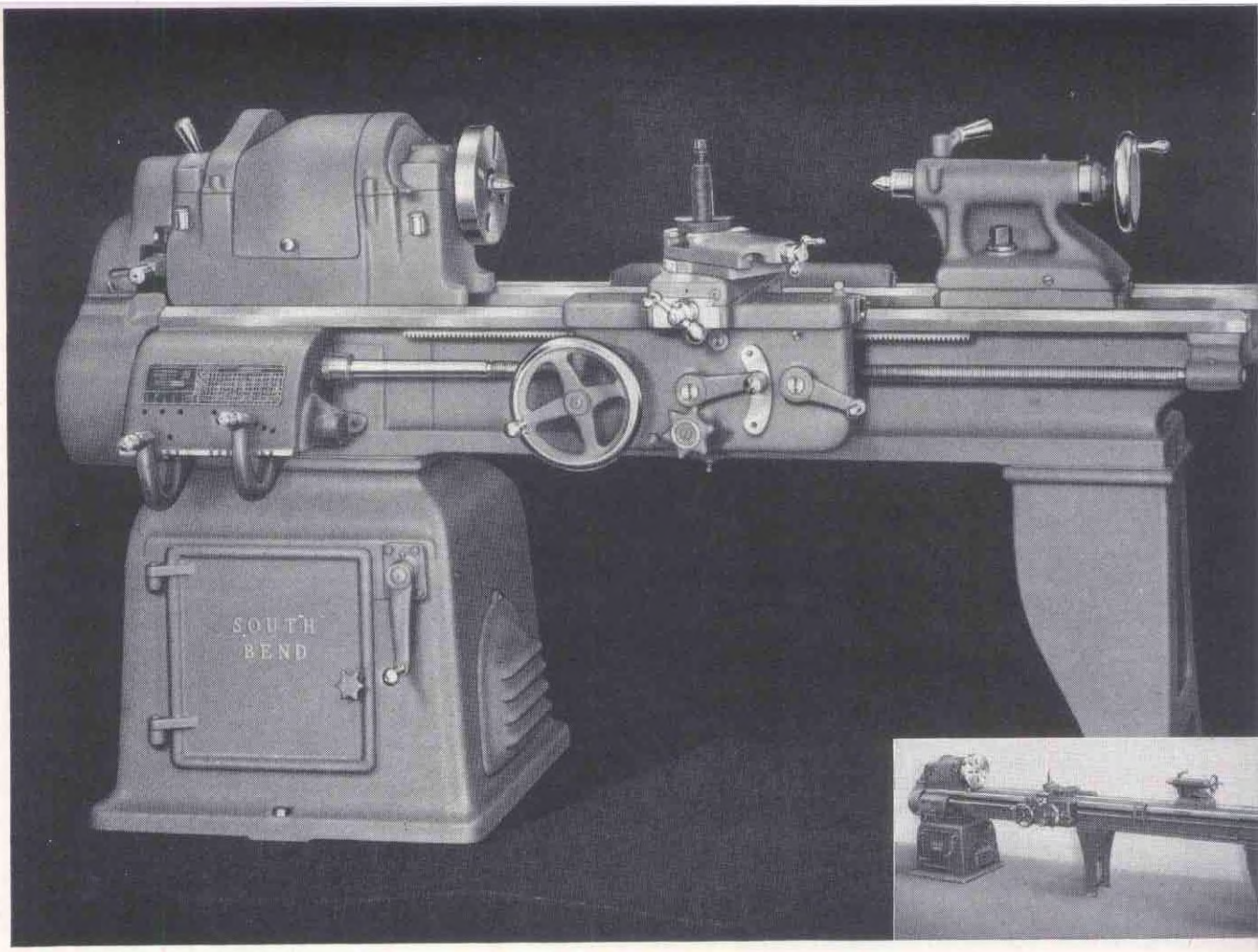
TAILSTOCK
- Size of center, Morse taper ..... No. 3
- Spindle travel ..... 5 3/4"
- Each graduation on tailstock spindle ..... 1/16"
- Tailstock top set-over for taper turning ..... 1"

COMPOUND REST
- Cross slide travel ..... 10 1/16"
- Angular hand feed of compound rest top slide .... 3 3/4"

THREADS AND FEEDS
- Thread cutting range—48 pitches R.H. or L.H. ..... 4 to 224 per inch
- Longitudinal feeds through friction clutch—48 feeds R.H. or L.H. ..... .0015" to .0841"
- Cross-feeds through friction clutch—48 feeds ..... .0008" to .0315"
- Lead screw, 29° Acme thread ..... 1 1/8" dia.-6 thrds.

TOOL POST
- Size of tool holder shank ..... 5/8" x 1 3/16"
- Size of cutter bit for tool holder ..... 3/8" sq.

MOTOR
- Standard size of motor required ..... 1 1/2 h.p.



16-inch Quick Change Gear *Precision* Lathe

Eight Spindle Speeds—Back-Geared—Belt Drive to Spindle

You get maximum lathe value per dollar of cost in this model. It is much the same as the toolroom lathe described on the preceding page, but does not have the taper attachment, collet attachment, and other toolroom accessories, which are usually not needed for general shop use. This reduces the cost, and any attachment needed can be selected from the accessory pages in the back of this catalog.

Having ample power and capacity for efficient production on almost any size or type of job, this lathe is one of the most popular for manufacturing and maintenance work. Large diameter easy reading graduated collars on cross-feed and compound rest screws save time and effort in positioning the cutting tool. Compound rest swivel also has clear cut graduations and may be set at any angle for machining bevels and short tapers. Tailstock spindle is graduated for drilling to accurate depths and witness mark is provided for adjusting tailstock top set-over for taper turning. Tailstock center is self-ejecting.

Regular equipment included in price of lathe consists of: 4 V-belts; flat leather belt; large and small face plates; heat-treated steel tool post; adjustable thread cutting stop; tool steel centers for headstock and tailstock spindles; headstock 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.

16-inch Quick Change Gear Lathes with Eight-Speed Drive

Catalog Number	Bed Length Feet	Between Centers Inches	Cubic Feet Boxed	Boxed Weight Pounds	Crated Weight Pounds	
CL117C	6	33¼	85	2700	2300	
CL117D	7	45¼	91	2950	2380	
CL117E	8	57¼	101	3150	2460	
CL117G	10*	81¼	117	3550	2800	
CL117H	12*	105¼	134	3900	2975	

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

Specifications of 16-inch Quick Change Gear Lathes

CAPACITY OF LATHE
- Swing over bed and saddle wings ..... 16¼"
- Swing over saddle cross slide ..... 9⅝"
- Swing over cross slide without chip guard ..... 11⅛"

SPINDLE SPEEDS
- Standard spindle speeds (approximate, not exact)
- r.p.m. of spindle, direct belt drive .. 980, 610, 390, 240
- r.p.m. of spindle, back-gear drive .. 125, 80, 50, 30

HEADSTOCK
- Hole through spindle ..... 1⅜"
- Maximum collet capacity ..... 1"
- Spindle nose diameter and threads ..... 2⅜"-6
- Size of center, Morse taper ..... No. 3
- Width cone pulley step ..... 2¼"
- Large face plate diameter ..... 13¼"
- Small face plate diameter ..... 8⅛"
- Front spindle bearing, diameter ..... 2⅞"

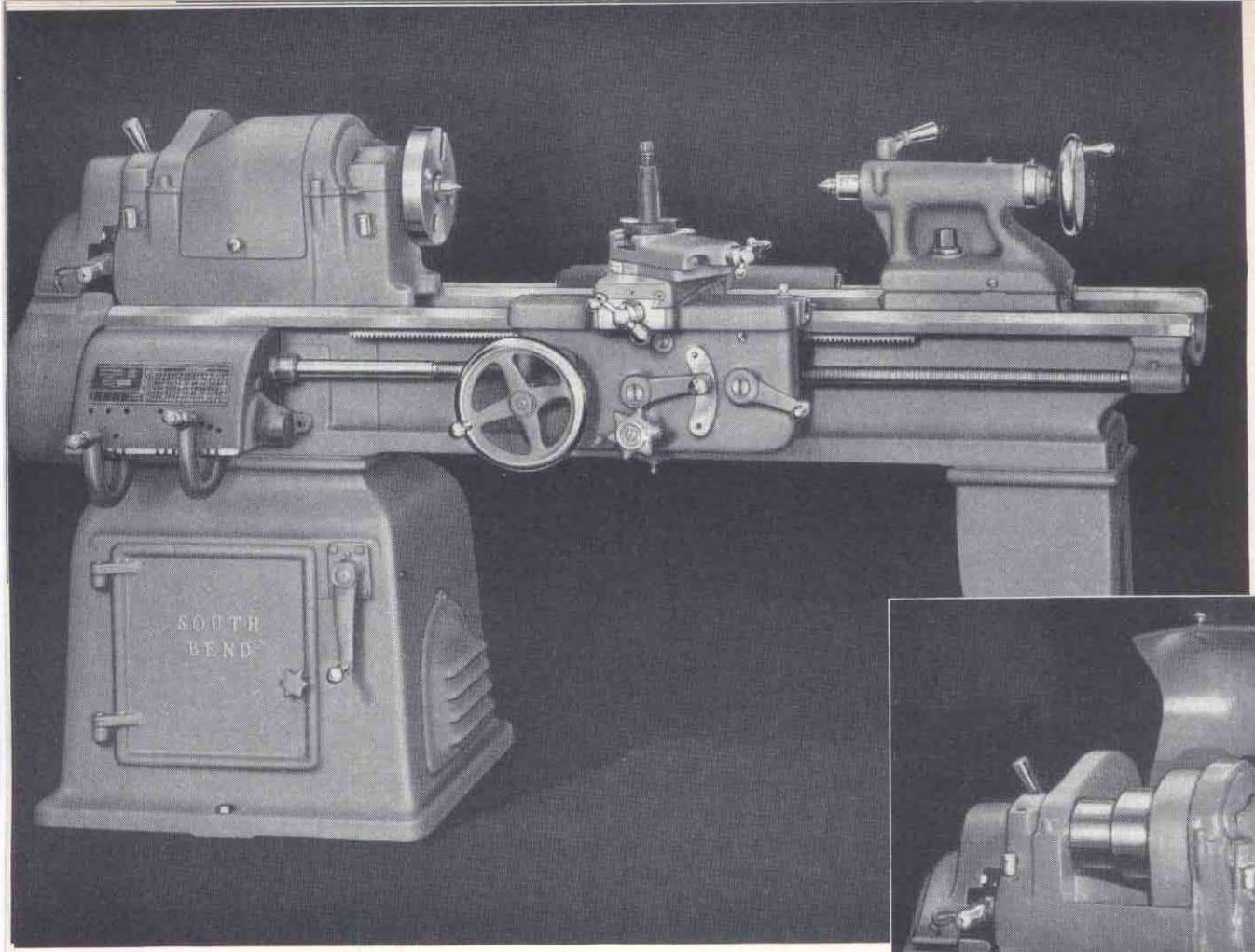
TAILSTOCK
- Size of center, Morse taper ..... No. 3
- Spindle travel ..... 5¾"
- Each graduation on tailstock spindle ..... 1/16"
- Tailstock top set-over for taper turning ..... 1"

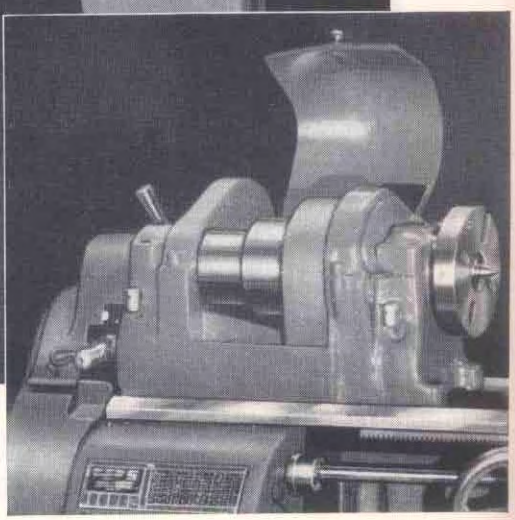
COMPOUND REST
- Cross slide travel without taper attachment ..... 10½"
- Cross slide travel with taper attachment ..... 10⅛"
- Angular hand feed of compound rest top slide ..... 3¾"

THREADS AND FEEDS
- Thread cutting range—48 pitches R.H. or L.H. ..... 4 to 224 per inch
- Longitudinal feeds through friction clutch—48 feeds R.H. or L.H. ..... .0015" to .0841"
- Cross-feeds through friction clutch—48 feeds ..... .0006" to .0315"
- Lead screw, 29° Acme thread ..... 1⅛" dia.-6 thrds.

TOOL POST
- Size of tool holder shank ..... ⅝" x 1⅜"
- Size of cutter bit for tool holder ..... ⅝" sq.

MOTOR
- Standard size of motor required ..... 1½ h.p.





Twelve-Speed 16-inch Lathes

Toolroom and Quick Change Gear Types

The new Twelve-Speed 16-inch Lathes are an important addition to the South Bend line. In the production shop, toolroom, maintenance department, or wherever maximum power and an extra wide range of spindle speeds are needed, these lathes will save time, labor, and money. Equipped with push-button control which provides instantaneous changes between corresponding high and low speeds, multiple operations requiring frequent speed changes such as drilling and tapping, boring and reaming or turning and facing can be performed with utmost efficiency. The low spindle speeds are approximately one-half the corresponding high speeds.

A two-speed three-phase A.C. reversing motor mounted in the base of the lathe develops two horsepower at high speed and one horsepower at low speed. The six-station pushbutton control conveniently mounted within easy reach of the operator permits starting, stopping, or reversing the motor instantly, either at high speed or low speed. Changes from high to low speed, forward or reverse, can be made without stopping the motor. The three step cone pulley permits using an extra wide (2 7/8") endless belt which efficiently and smoothly transmits power to the lathe spindle.

Except for the motor, controls, and necessary alterations in the driving mechanism, these lathes are the same as corresponding models shown on the preceding pages. They have the same equipment, and take the same chucks, tools, and accessories as the Eight-Speed 16-inch Lathes.

Catalog Number	Bed Length Feet	Between Centers Inches	Cubic Feet Boxed	Boxed Weight Pounds	Crated Weight Pounds
Twelve-Speed 16-inch Quick Change Gear Lathes					
CL155C	6	33 1/4	85	2775	2375
CL155D	7	45 1/4	91	3025	2455
CL155E	8	57 1/4	101	3225	2535
CL155G	10*	81 1/4	117	3625	2875
CL155H	12*	105 1/4	134	3975	3050
Twelve-Speed 16-inch Toolroom Lathes					
CL8155C	6	33 1/4	95	3000	2600
CL8155D	7	45 1/4	101	3250	2680
CL8155E	8	57 1/4	111	3450	2760

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

Specifications of Twelve-Speed 16-inch Lathes

CAPACITY OF LATHE
- Swing over bed and saddle wings ..... 16 1/4"
- Swing over saddle cross slide ..... 9 5/8"

SPINDLE SPEEDS (approximate, not exact)

	Direct Drive	Back-Geared
High speeds, r.p.m.	945, 550, 300	118, 70, 32
Low speeds, r.p.m.	475, 278, 150	60, 33, 20

HEADSTOCK
- Hole through spindle ..... 1 3/8"
- Maximum collet capacity ..... 1"
- Spindle nose diameter and threads ..... 2 3/4"-6
- Size of center, Morse taper ..... No. 3
- Width cone pulley step, 12-speed drive ..... 3"
- Large face plate diameter ..... 13 1/4"
- Small face plate diameter ..... 8 1/16"
- Front spindle bearing, diameter ..... 2 7/8"

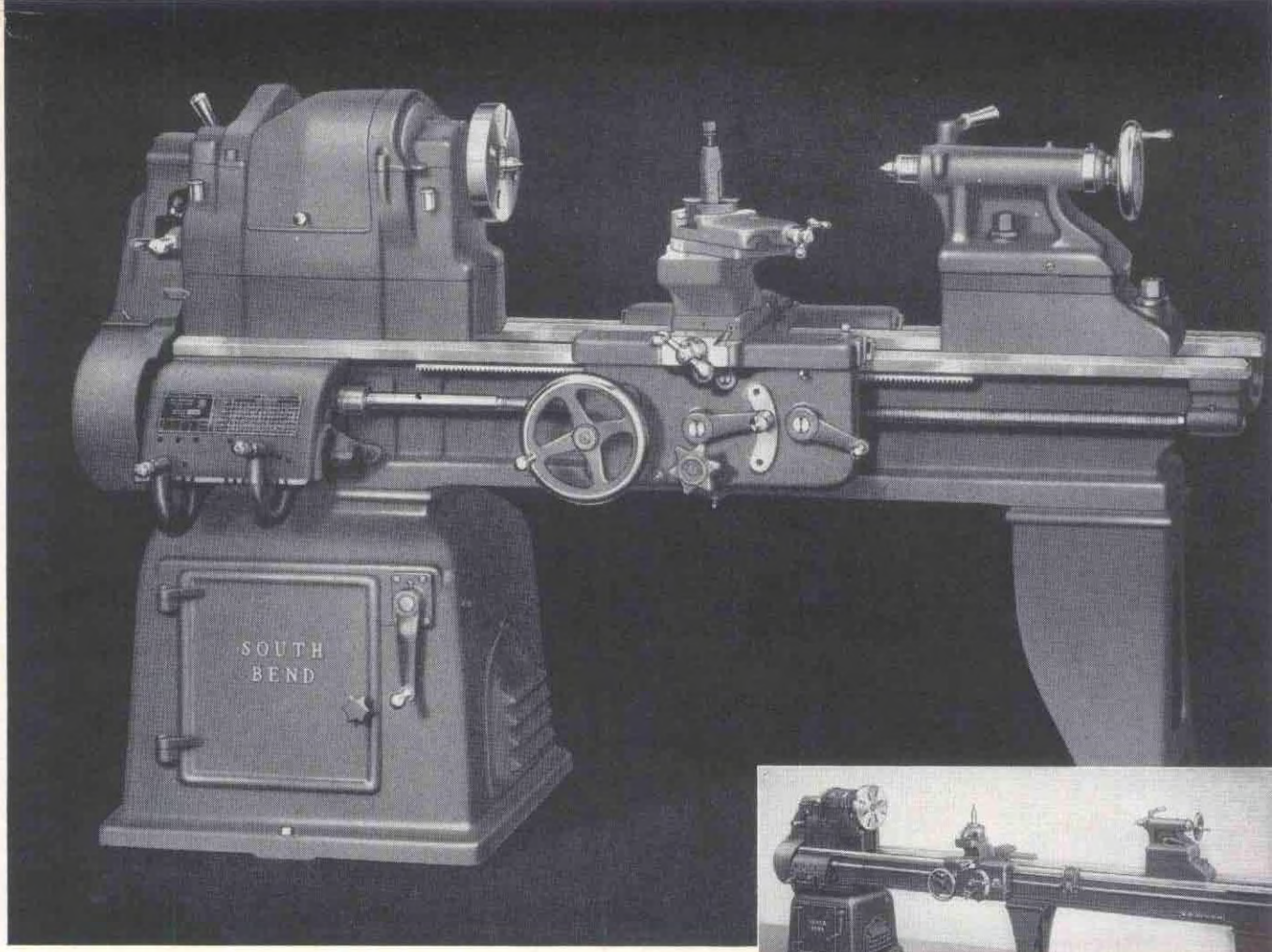
TAILSTOCK
- Size of center, Morse taper ..... No. 3
- Spindle travel ..... 5 3/4"
- Each graduation on tailstock spindle ..... 1/16"
- Tailstock top set-over for taper turning ..... 1"

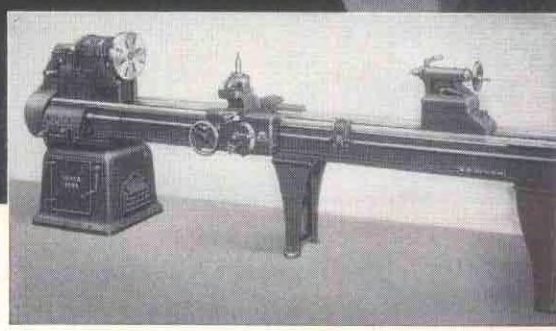
COMPOUND REST
- Cross slide travel without taper attachment ..... 10 1/2"
- Cross slide travel with taper attachment ..... 10 1/16"
- Angular hand feed of compound rest top slide ..... 3 3/4"

THREADS AND FEEDS
- Thread cutting range—48 pitches R.H. or L.H. ..... 4 to 224 per inch
- Longitudinal feeds through friction clutch—48 feeds R.H. or L.H. ..... .0015" to .0841"
- Cross-feeds through friction clutch—48 feeds ..... .0006" to .0315"
- Lead screw, 29° Acme thread ..... 1 1/8" dia.—6 thrds.

TOOL POST
- Size of tool holder shank ..... 5/8" x 1 3/8"
- Size of cutter bit for tool holder ..... 3/8" sq.

MOTOR
- Standard size of motor required ..... 2-1 h.p.





16-24-inch Large Swing Lathe

Eight or Sixteen-Speed Drive

The 16-24-inch Large Swing Lathe is a practical tool for machining large diameter work that is not excessively heavy. It is the same as the 16-inch Quick Change Gear Lathe except that the height of the centers is increased to take work up to 25⅛" in diameter over the bed and 18¾" in diameter over the saddle cross slide.

The large capacity of this lathe makes it a valuable tool for the shop requiring a general purpose precision lathe for large diameter jobs, such as boring jig plates, turning and boring wheels, machining pulleys, turning brake drums, and similar work. Although this lathe has ample capacity for large awkward jobs, it is not too heavy and cumbersome for efficient operation on small parts.

The underneath motor drive (patented) provides a series of eight spindle speeds with a one-speed motor, or sixteen spindle speeds with a two-speed motor, as listed below. A precision belt tension adjustment is provided. The belt drive to the spindle is silent in operation and free from gear vibration.

Regular equipment included in price of lathe is same as for 16-inch Quick Change Gear Lathe as listed on page 11.

Catalog Number	Bed Length Feet	Between Centers Inches	Cubic Feet Boxed	Boxed Weight Pounds	Crated Weight Pounds
16-24" Large Swing Lathes with Eight-Speed Drive					
CL198C	6	30	93	3100	2480
CL198D	7	42	99	3200	2560
CL198E	8	54	108	3300	2640
CL198G	10*	78	127	3700	2980
CL198H	12*	102	150	3900	3155
16-24" Large Swing Lathes with Sixteen-Speed Drive					
CL179C	6	30	93	3175	2555
CL179D	7	42	99	3275	2635
CL179E	8	54	108	3375	2715
CL179G	10*	78	127	3775	3055
CL179H	12*	102	150	3975	3230

*Center leg is supplied with 10' and 12' bed lengths.

Specifications of 16-24" Large Swing Lathes

CAPACITY OF LATHE

Swing over bed	25⅛"
Swing over saddle wings	24⅜"
Swing over saddle cross slide	18¾"
Swing over cross slide without chip guard	19¼"

SPINDLE SPEEDS (approximate, not exact)

	Direct Drive	Back-Geared
8-speed drive	470, 280, 175, 105	60, 35, 22, 15
16 sp. dr., high speeds	900, 550, 340, 203	116, 70, 45, 30
16 sp. dr., low speeds	455, 274, 170, 104	60, 34, 24, 15

HEADSTOCK

Hole through spindle	1⅜"
Maximum collet capacity	1"
Spindle nose diameter and threads	2¾"-6
Size of center, Morse taper	No. 3
Width cone pulley step	2¼"
Large face plate diameter	13¼"
Small face plate diameter	8 1/16"
Front spindle bearing, diameter	2⅞"

TAILSTOCK

Size of center, Morse taper	No. 3
Spindle travel	5¾"
Each graduation on tailstock spindle	1/16"
Tailstock top set-over for taper turning	1"

COMPOUND REST

Cross slide travel without taper attachment	10½"
Cross slide travel with taper attachment	10 1/16"
Angular hand feed of compound rest top slide	3¾"

THREADS AND FEEDS

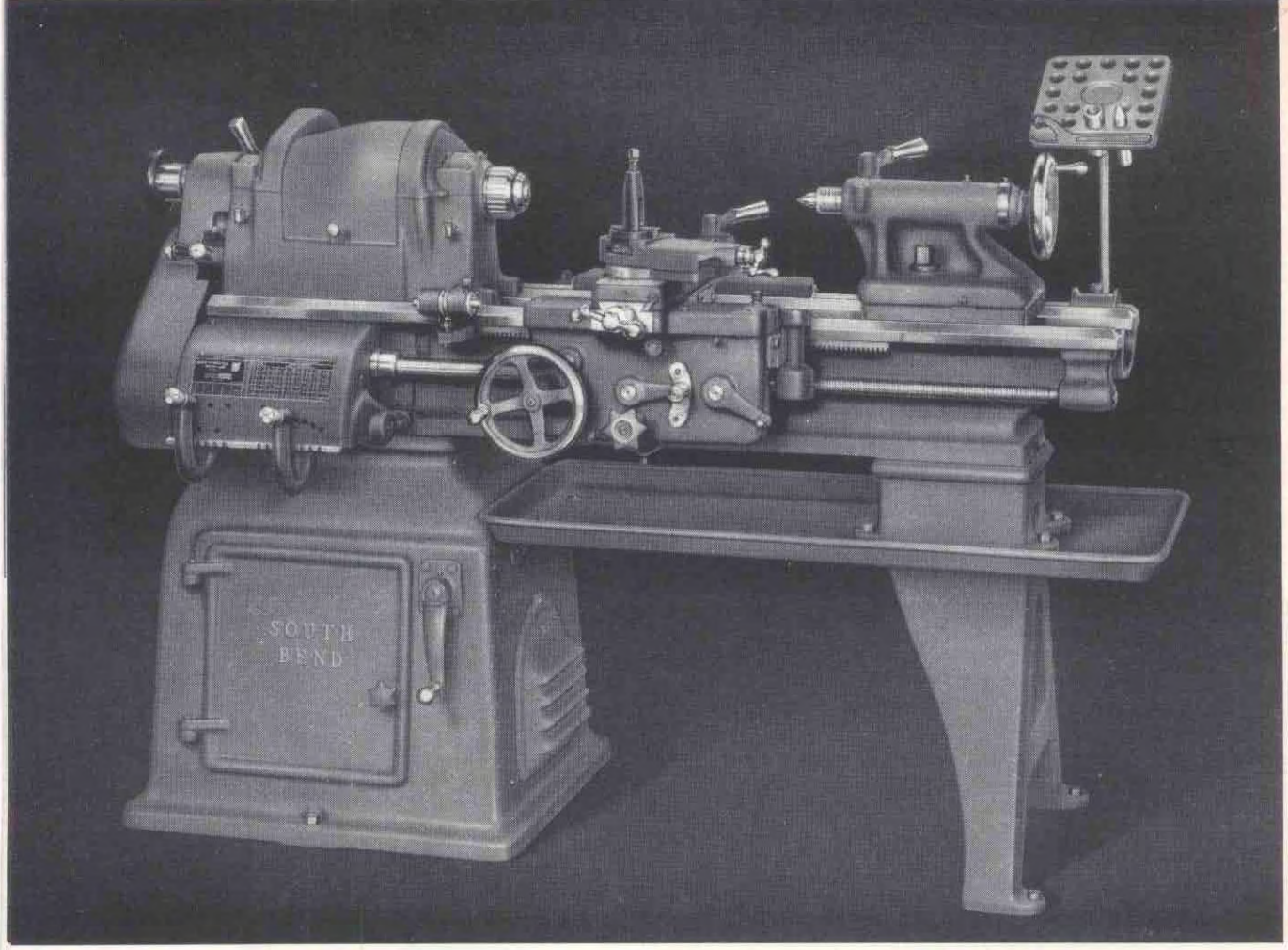
Thread cutting range—48 pitches R.H. or L.H.	4 to 224 per inch
Longitudinal feeds through friction clutch—48 feeds R.H. or L.H.	.0015" to .0841"
Cross-feeds through friction clutch—48 feeds	.0006" to .0315"
Lead screw, 29° Acme thread	1⅛" dia.—6 thrds.

TOOL POST

Size of tool holder shank	⅝" x 1⅜"
Size of cutter bit for tool holder	⅜" sq.

MOTOR (Standard size)

For 8-speed lathe (1-speed motor)	1½ h.p.
For 16-speed lathe (2-speed motor)	2-1 h.p.



14½-inch Toolroom *Precision* Lathe

Precision Lead Screw—Telescopic Taper Attachment

The perfect proportions of this superbly engineered model will appeal to the most discriminating technician. It has plenty of power, rigidity, and stamina for large jobs, yet it is not too heavy for economical operation on small work. Conveniently placed easy operating controls save time and effort.

Improved features of this lathe include an alloy steel headstock spindle, carburized, hardened, ground, and superfinished; improved headstock bearings; double wall apron with steel gears and multiple disc friction clutch for operating power cross-feeds and power longitudinal feeds; easy reading micrometer graduated collars; and improved two-lever quick change gear box for threads and feeds.

Toolroom attachments included in price of lathe consist of: precision lead screw; handwheel type draw-in collet attachment (without collets); collet rack; telescopic taper attachment; thread dial indicator; chip pan; and micrometer carriage stop.

Regular equipment included in price of lathe consists of: 4 V-belts; flat leather belt; large and small face plates; heat treated steel tool post; adjustable thread cutting stop; tool steel centers for headstock and tailstock spindles; headstock spindle sleeve; wrenches; quick change gear box; installation plan; and book "How to Run a Lathe." Electrical equipment is not included in the price of the lathe.

14½-inch Toolroom Lathes with Eight-Speed Drive

Catalog Number	Bed Length Feet	Between Centers Inches	Cubic Feet Boxed	Boxed Weight Pounds	Crated Weight Pounds	
CL8185B	5	24⅛	90	2685	2180	
CL8185C	6	36⅛	95	2785	2255	
CL8185D	7	48⅛	101	2935	2330	
CL8185E	8	60⅛	111	3085	2405	

Specifications of 14½-inch Toolroom Lathes

CAPACITY OF LATHE
- Swing over bed and saddle wings ..... 14⅝"
- Swing over saddle cross slide ..... 8 15/16"

SPINDLE SPEEDS
- Standard spindle speeds (approximate, not exact)
- r.p.m. of spindle, direct belt drive .875, 545, 350, 215
- r.p.m. of spindle, back-gear drive ... 130, 80, 50, 30

HEADSTOCK
- Hole through spindle ..... 1 3/16"
- Maximum collet capacity ..... 1"
- Spindle nose diameter and threads ..... 2⅜"-6
- Size of center, Morse taper ..... No. 3
- Width of cone pulley step for belt ..... 2 1/16"
- Large face plate diameter ..... 13¼"
- Small face plate diameter ..... 8 1/16"
- Front spindle bearing, diameter ..... 2⅝"

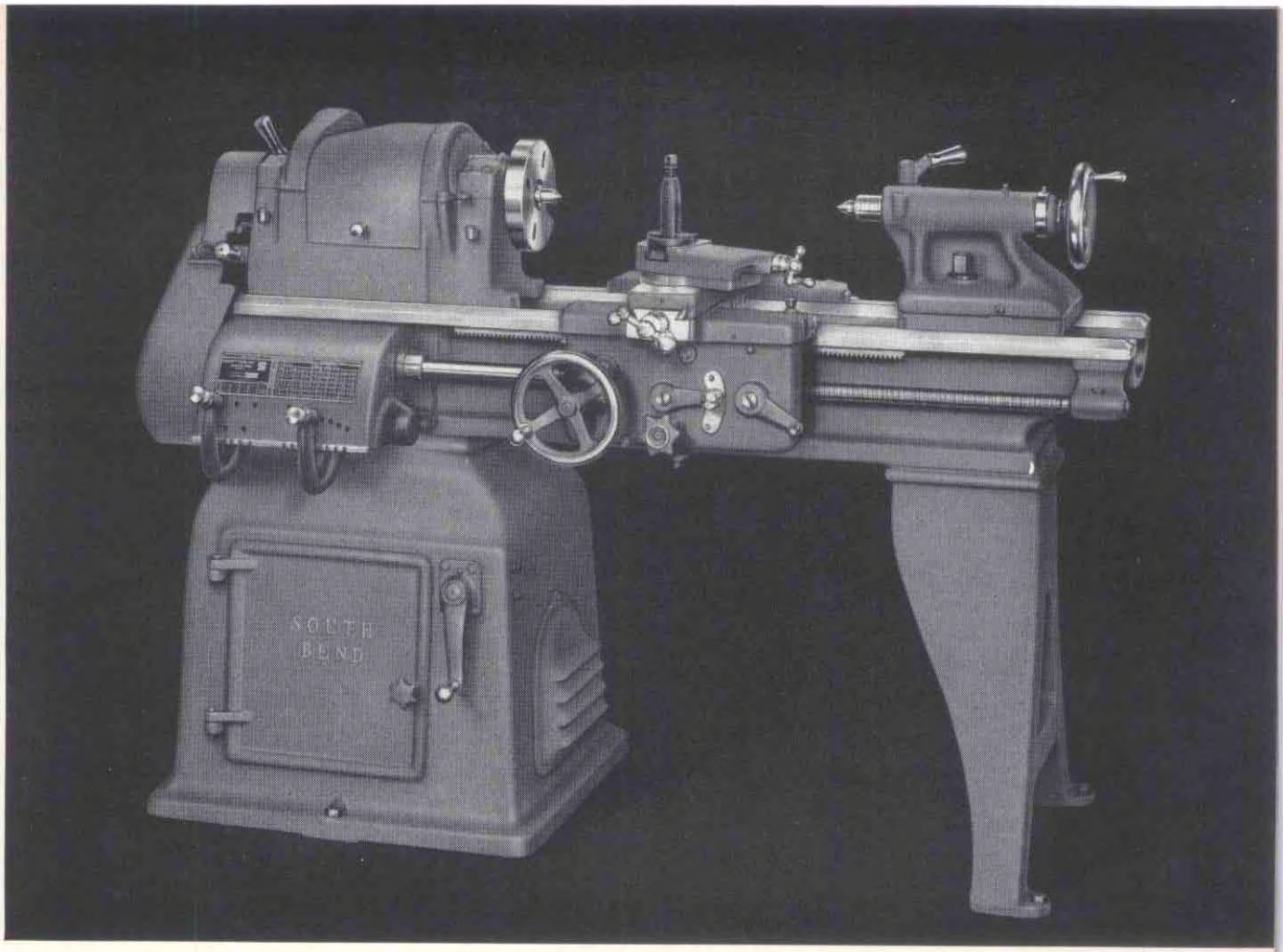
TAILSTOCK
- Size of center, Morse taper ..... No. 3
- Spindle travel ..... 5¼"
- Each graduation on tailstock spindle ..... 1/16"
- Tailstock top set-over for taper turning ..... 15/16"

COMPOUND REST
- Cross slide travel ..... 9¼"
- Angular hand feed of compound rest top slide ... 3⅜"

THREADS AND FEEDS
- Thread cutting range—48 pitches R.H. or L.H. ..... 4 to 224 per inch
- Longitudinal feeds through friction clutch—48 feeds R.H. or L.H. ..... .0015" to .0841"
- Cross-feeds through friction clutch—48 feeds ..... .0008" to .0315"
- Lead screw, 29° Acme thread ..... 1⅛" dia.—6 thrds.

TOOL POST
- Size of tool holder shank ..... ⅝" x 1⅜"
- Size of cutter bit for tool holder ..... ⅜" sq.

MOTOR
- Standard size of motor required ..... 1½ h.p.



14½-inch Quick Change Gear *Precision* Lathe

Eight Spindle Speeds—Back-Geared—Belt Drive to Spindle

Designed and built to give you years of satisfactory service, this is an economical lathe to buy and to use. It has the same power and capacity as the toolroom model shown on the opposite page, but is less costly because it does not have the taper attachment, collet attachment, and other toolroom accessories. However, any attachment that may be needed can be ordered with the lathe as an extra.

New two-lever gear box gives you quicker, easier changes for all threads and feeds. Powerful multiple disc friction clutch in apron permits engaging or disengaging power turning and facing feeds instantly. Direction of feed is reversed by shifting the feed reverse lever conveniently located at the left end of the headstock. An automatic safety interlock makes it impossible to damage the lathe or the work by engaging a second feed accidentally when one feed is already in operation.

The underneath motor drive (patented) is entirely self-contained and fully enclosed. It provides an unusually wide range of spindle speeds. A precision belt tension adjustment is provided. The endless belt drive to the spindle is silent in operation and develops smooth, steady power, free from gear vibration.

Regular equipment included in price of lathe consists of: 4 V-belts; flat leather belt; large and small face plates; heat-treated steel tool post; adjustable thread cutting stop; tool steel centers for headstock and tailstock spindles; headstock 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.

14½-inch Quick Change Gear Lathes with Eight-Speed Drive

Catalog Number	Bed Length Feet	Between Centers Inches	Cubic Feet Boxed	Boxed Weight Pounds	Crated Weight Pounds	
CL185B	5	24⅛	81	2500	1995	
CL185C	6	36⅛	85	2600	2070	
CL185D	7	48⅛	91	2750	2145	
CL185E	8	60⅛	100	2900	2225	

Specifications of 14½-inch Quick Change Gear Lathes

CAPACITY OF LATHE
- Swing over bed and saddle wings ..... 14⅝"
- Swing over saddle cross slide ..... 8¾"
- Swing over cross slide without chip guard ..... 10¼"

SPINDLE SPEEDS
- Standard spindle speeds (approximate, not exact)
- r.p.m. of spindle, direct belt drive .875, 545, 350, 215
- r.p.m. of spindle back-gear drive 130, 80, 50, 30

HEADSTOCK
- Hole through spindle ..... 1⅜"
- Maximum collet capacity ..... 1"
- Spindle nose diameter and threads ..... 2⅜"-6
- Size of center, Morse taper ..... No. 3
- Width of cone pulley step for belt ..... 2 1/16"
- Large face plate diameter ..... 13¼"
- Small face plate diameter ..... 8 1/16"
- Front spindle bearing, diameter ..... 2⅜"

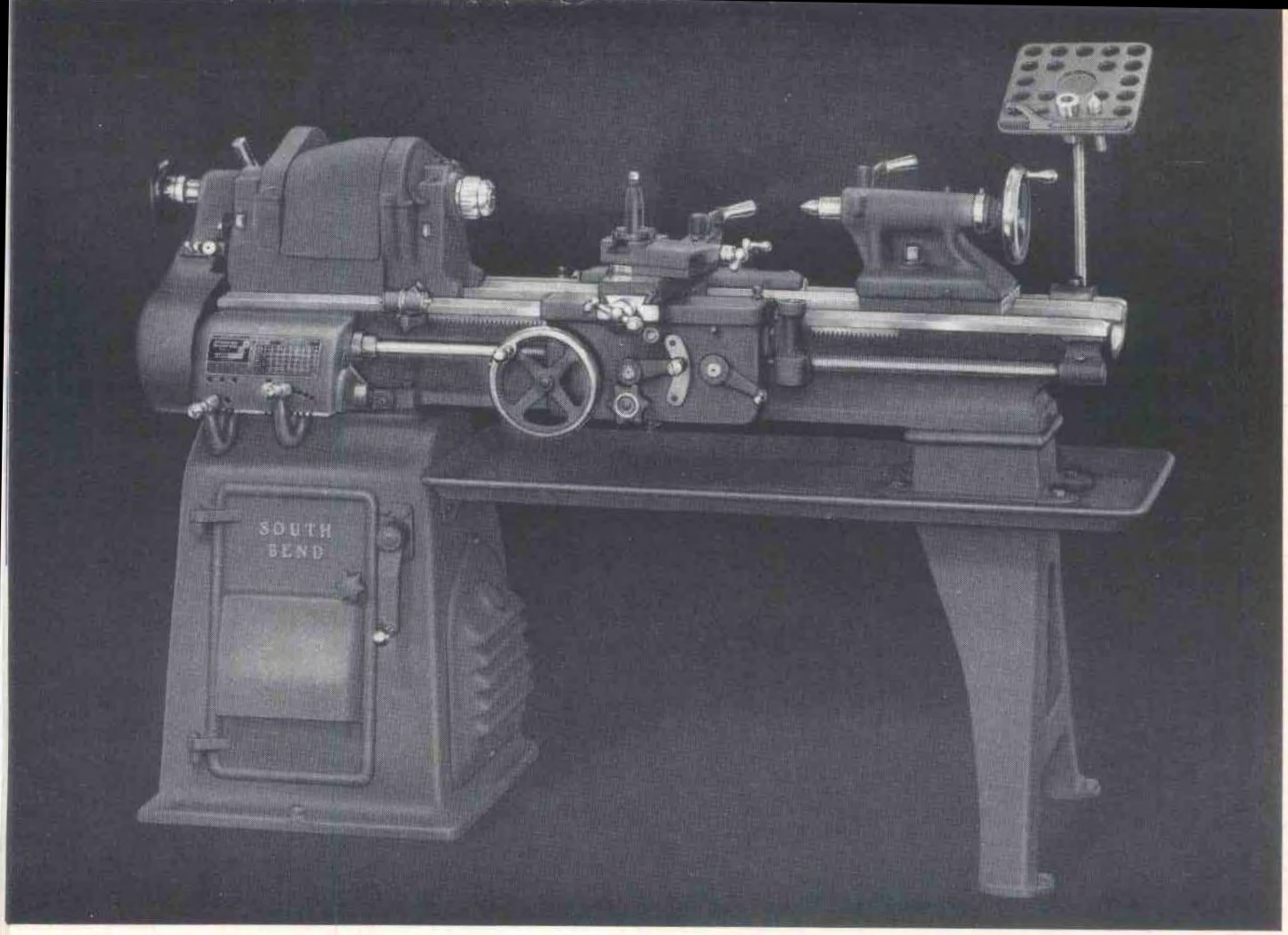
TAILSTOCK
- Size of center, Morse taper ..... No. 3
- Spindle travel ..... 5¼"
- Each graduation on tailstock spindle ..... 1/10"
- Tailstock top set-over for taper turning ..... 15/16"

COMPOUND REST
- Cross slide travel ..... 10"
- Angular hand feed of compound rest top slide ..... 3⅛"

THREADS AND FEEDS
- Thread cutting range—48 pitches R.H. or L.H. ..... 4 to 224 per inch
- Longitudinal feeds through friction clutch—48 feeds R.H. or L.H. ..... .0015" to .0841"
- Cross feeds through friction clutch—48 feeds ..... .0006" to .0315"
- Lead screw, 29° Acme thread ..... 1⅛" dia.-6 thrds.

TOOL POST
- Size of tool holder shank ..... ⅝" x 1⅜"
- Size of cutter bit for tool holder ..... ⅜" sq.

MOTOR
- Standard size of motor required ..... 1½ h.p.



13-inch Toolroom *Precision* Lathe

Precision Lead Screw—Telescopic Taper Attachment

The 13-inch Toolroom Lathe is especially popular for small and medium sized jobs requiring speed and accuracy. Having greater sensitivity and speed than larger lathes, it will save you time and effort on all work within its capacity. You can also save on first cost, power, and floor space by selecting one or more of these lathes for your shop.

Equipped with the South Bend Telescopic Taper Attachment, this lathe is unsurpassed for turning and boring precision tapers or cutting tapered screw threads. To engage the taper attachment, it is only necessary to tighten two binding screws. The telescopic cross-feed screw eliminates the necessity of disconnecting the cross-feed nut at any time. Before engaging the taper attachment, the cross-feed screw may be used to adjust the position of the cutting tool. A rigid connecting bar locks the compound rest base to the taper attachment slide block to eliminate all lost motion of the cross-feed screw assembly when tapers are being machined.

Toolroom attachments included in price of lathe consist of: precision lead screw; handwheel type draw-in collet attachment (without collets); collet rack; telescopic taper attachment; thread dial indicator; chip pan; and micrometer carriage stop.

Regular equipment included in price of lathe consists of: 2 V-belts; flat leather belt; large and small face plates; heat-treated steel tool post; adjustable thread cutting stop; tool steel centers for headstock and tailstock spindles; headstock spindle sleeve; wrenches; quick change gear box; installation plan; and book "How to Run a Lathe." Electrical equipment is not included in the price of the lathe.

13-inch Underneath Toolroom Lathes with Eight-Speed Drive

Catalog Number	Bed Length Feet	Between Centers Inches	Cubic Feet Boxed	Boxed Weight Pounds	Crated Weight Pounds	
CL8145B	5	28 1/4	81	1995	1665	
CL8145C	6	40 1/4	82	2150	1715	
CL8145D	7	52 1/4	90	2305	1770	

Specifications of 13-inch Toolroom Lathes

CAPACITY OF LATHE
- Swing over bed and saddle wings ..... 13 1/8"
- Swing over saddle cross slide ..... 8"

SPINDLE SPEEDS
- Standard spindle speeds (approximate, not exact)
- r.p.m. of spindle, direct belt drive ... 940, 628, 418, 270
- r.p.m. of spindle, back-gear drive 135, 90, 60, 40

HEADSTOCK
- Hole through spindle ..... 1 3/8"
- Maximum collet capacity ..... 1"
- Spindle nose diameter and threads ..... 2 1/4"-8
- Size of center, Morse taper ..... No. 3
- Width of cone pulley step for belt ..... 1 3/4"
- Large face plate diameter ..... 10 3/4"
- Small face plate diameter ..... 6 5/8"
- Front spindle bearing, diameter ..... 2 1/4"

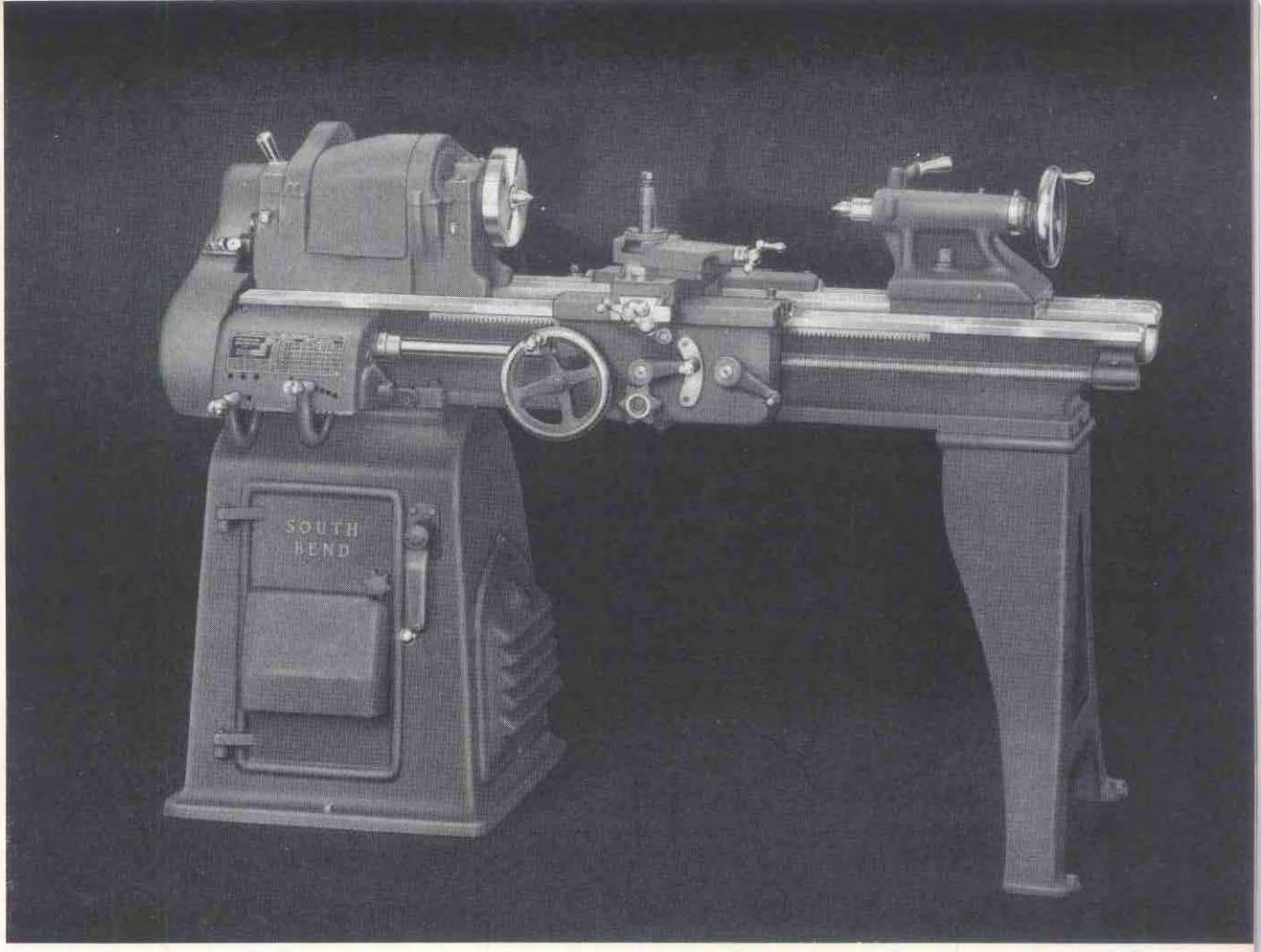
TAILSTOCK
- Size of center, Morse taper ..... No. 3
- Spindle travel ..... 4 1/4"
- Each graduation on tailstock spindle ..... 1/16"
- Tailstock top set-over for taper turning ..... 15/16"

COMPOUND REST
- Cross slide travel ..... 8 1/8"
- Angular hand feed of compound rest top slide .... 3 1/8"

THREADS AND FEEDS
- Thread cutting range—48 pitches R.H. or L.H. ..... 4 to 224 per inch
- Longitudinal feeds through friction clutch—48 feeds R.H. or L.H. ..... .0015" to .0841"
- Cross-feeds through friction clutch—48 feeds ..... .0006" to .0315"
- Lead screw, 29° Acme thread ..... 1" dia.—6 thrds.

TOOL POST
- Size of tool holder shank ..... 1/2" x 1 1/8"
- Size of cutter bit for tool holder ..... 5/16" sq.

MOTOR
- Standard size of motor required ..... 1 h.p.



13-inch Quick Change Gear *Precision* Lathe

Eight Spindle Speeds—Back-Geared—Belt Drive to Spindle

The 13-inch Quick Change Gear Lathe is efficient and economical for manufacturing or maintenance operations on work of average size. Its sensitivity and ease of operation save effort and speed production, especially on multiple operation jobs requiring several changes or adjustments of controls.

These lathes are carefully engineered to give you years of satisfactory service. Large bearings and excellent facilities for oiling reduce wear to a minimum. The time tested prismatic V-way construction assures permanent alignment of the headstock, tailstock, and carriage. The headstock spindle is of heat-treated alloy steel. Other important parts are made of similarly high quality materials selected for long service. Given the proper care, these lathes will retain their accuracy indefinitely.

Many practical attachments for this lathe are listed in the back of this catalog. These attachments and accessories greatly increase the usefulness of the lathe. They simplify tooling the lathe for operations that might otherwise require special fixtures or machinery.

Regular equipment included in price of lathe consists of: 2 V-belts; flat leather belt; large and small face plates; heat-treated steel tool post; adjustable thread cutting stop; tool steel centers for headstock and tailstock spindles; headstock spindle sleeve; wrenches; quick change gear box; installation plan; and book "How to Run a Lathe." Electrical equipment is not included in the price of the lathe.

13-inch Quick Change Gear Lathes with Eight-Speed Drive

Catalog Number	Bed Length Feet	Between Centers Inches	Cubic Feet Boxed	Boxed Weight Pounds	Crated Weight Pounds	
CL145A	4	16 1/4	60	1835	1460	
CL145B	5	28 1/4	69	1940	1510	
CL145C	6	40 1/4	70	2045	1560	
CL145D	7	52 1/4	78	2150	1615	

Specifications for 13-inch Quick Change Gear Lathes

CAPACITY OF LATHE
- Swing over bed and saddle wings ..... 13 1/8"
- Swing over saddle cross slide ..... 7 3/4"
- Swing over cross slide without chip guard ..... 8 3/4"

SPINDLE SPEEDS
- Standard spindle speeds (approximate, not exact)
- r.p.m. of spindle, direct belt drive .940, 628, 418, 270
- r.p.m. of spindle, back-gear drive 135, 90, 60, 40

HEADSTOCK
- Hole through spindle ..... 1 3/8"
- Maximum collet capacity ..... 1"
- Spindle nose diameter and threads ..... 2 1/4"-8
- Size of center, Morse taper ..... No. 3
- Width of cone pulley step for belt ..... 1 3/4"
- Large face plate diameter ..... 10 3/4"
- Small face plate diameter ..... 6 5/8"
- Front spindle bearing, diameter ..... 2 1/4"

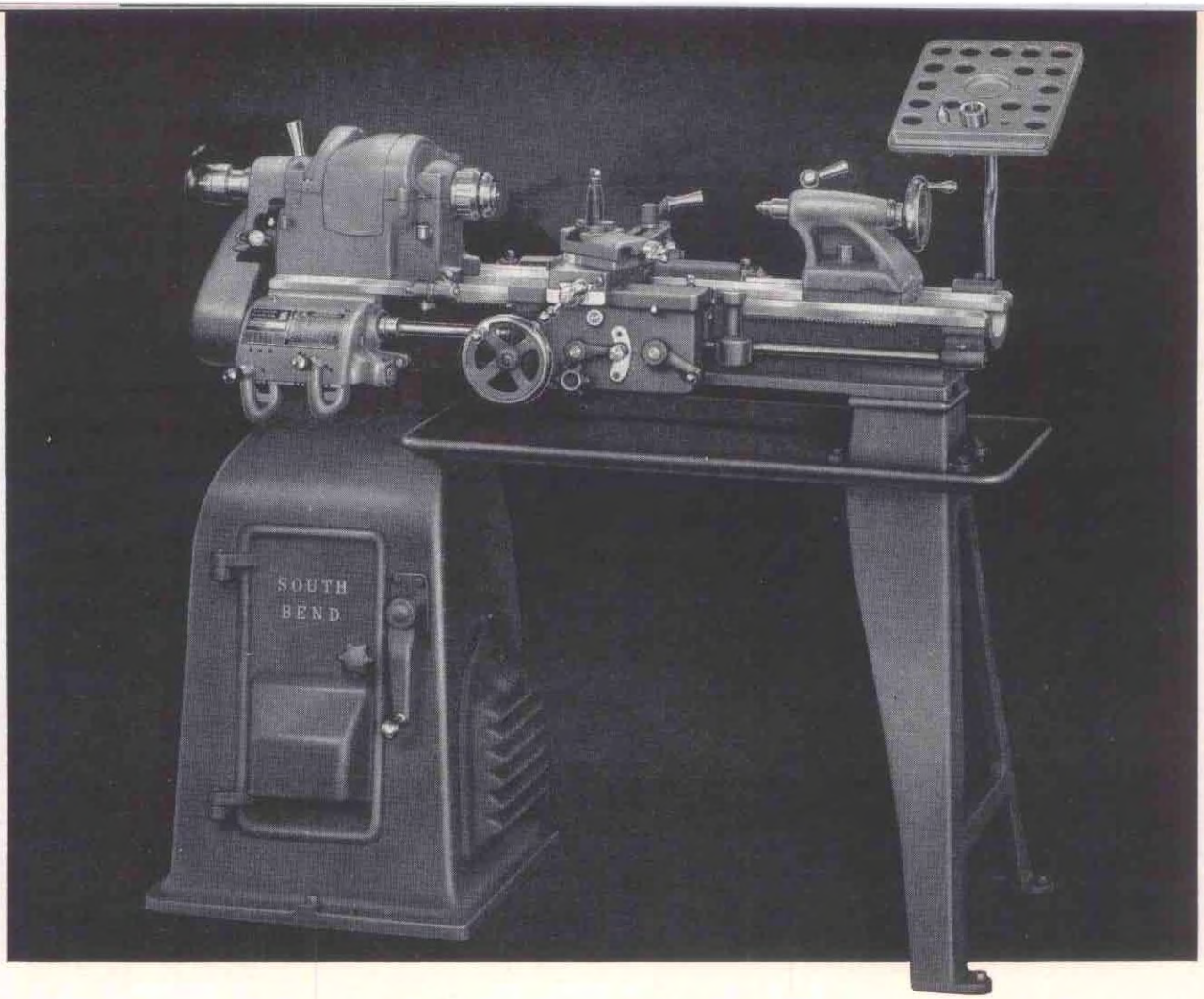
TAILSTOCK
- Size of center, Morse taper ..... No. 3
- Spindle travel ..... 4 1/4"
- Each graduation on tailstock spindle ..... 1/16"
- Tailstock top set-over for taper turning ..... 15/16"

COMPOUND REST
- Cross slide travel ..... 8 3/4"
- Angular hand feed of compound rest top slide .... 3 1/8"

THREADS AND FEEDS
- Thread cutting range—48 pitches R.H. or L.H. ..... 4 to 224 per inch
- Longitudinal feeds through friction clutch—48 feeds R.H. or L.H. ..... .0015" to .0841"
- Cross-feeds through friction clutch—48 feeds ..... .0006" to .0315"
- Lead screw, 29° Acme thread ..... 1" dia.-6 thrds.

TOOL POST
- Size of tool holder shank ..... 1/2" x 1 1/4"
- Size of cutter bit for tool holder ..... 5/16" sq.

MOTOR
- Standard size of motor required ..... 1 h.p.



10-inch Toolroom *Precision* Lathe

Precision Lead Screw—Telescopic Taper Attachment

This is one of our finest 10-inch swing lathes. Equipped with a precision lead screw, thread dial indicator, and thread cutting stop, you can use it with confidence for cutting screw threads on precision gauges, taps, dies, instrument parts, etc. The telescopic taper attachment makes taper turning and boring almost as easy as machining straight work.

New two-lever gear box gives you quicker, easier changes for threads and feeds. Powerful multiple disc friction clutch in apron permits engaging or disengaging power turning and facing feeds instantly. Direction of feed is reversed by shifting the feed reverse lever conveniently located on the left end of the headstock. An automatic safety interlock makes it impossible to damage the lathe or the work by engaging a second feed accidentally when one feed is already in operation.

Toolroom attachments included in price of lathe consist of: precision lead screw; handwheel type draw-in collet chuck attachment (without collets); collet rack; telescopic taper attachment; thread dial indicator; chip pan; and micrometer carriage stop.

Regular equipment included in price of lathe consists of: V-belt; flat leather belt; large and small face plates; heat-treated steel tool post; adjustable thread cutting stop; 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.

10-inch 1" Collet South Bend Toolroom Lathes with Floor Legs

Catalog Number	Bed Length Feet	Between Centers Inches	Cubic Feet Boxed	Boxed Weight Pounds	Crated Weight Pounds	
CL8187Y	3	14 1/4	45	1290	990	
CL8187Z	3 1/2	20 1/4	48	1310	1010	
CL8187A	4	26 7/8	48	1330	1030	

Specifications of 10-inch Toolroom Floor Lathes

CAPACITY OF LATHE
- Swing over bed and saddle wings ..... 10 1/8"
- Swing over saddle cross slide ..... 5 3/4"

SPINDLE SPEEDS (approximate, not exact)

	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

HEADSTOCK
- Collet capacity, maximum ..... 1"
- Headstock spindle hole ..... 1 3/8"
- Headstock spindle nose threads ..... 2 1/4"-8
- Size of center, Morse taper ..... No. 2
- Width of cone pulley step for belt ..... 1 1/16"
- Large face plate diameter ..... 8 3/8"
- Small face plate diameter ..... 5 5/8"
- Front spindle bearing diameter ..... 2 1/4"

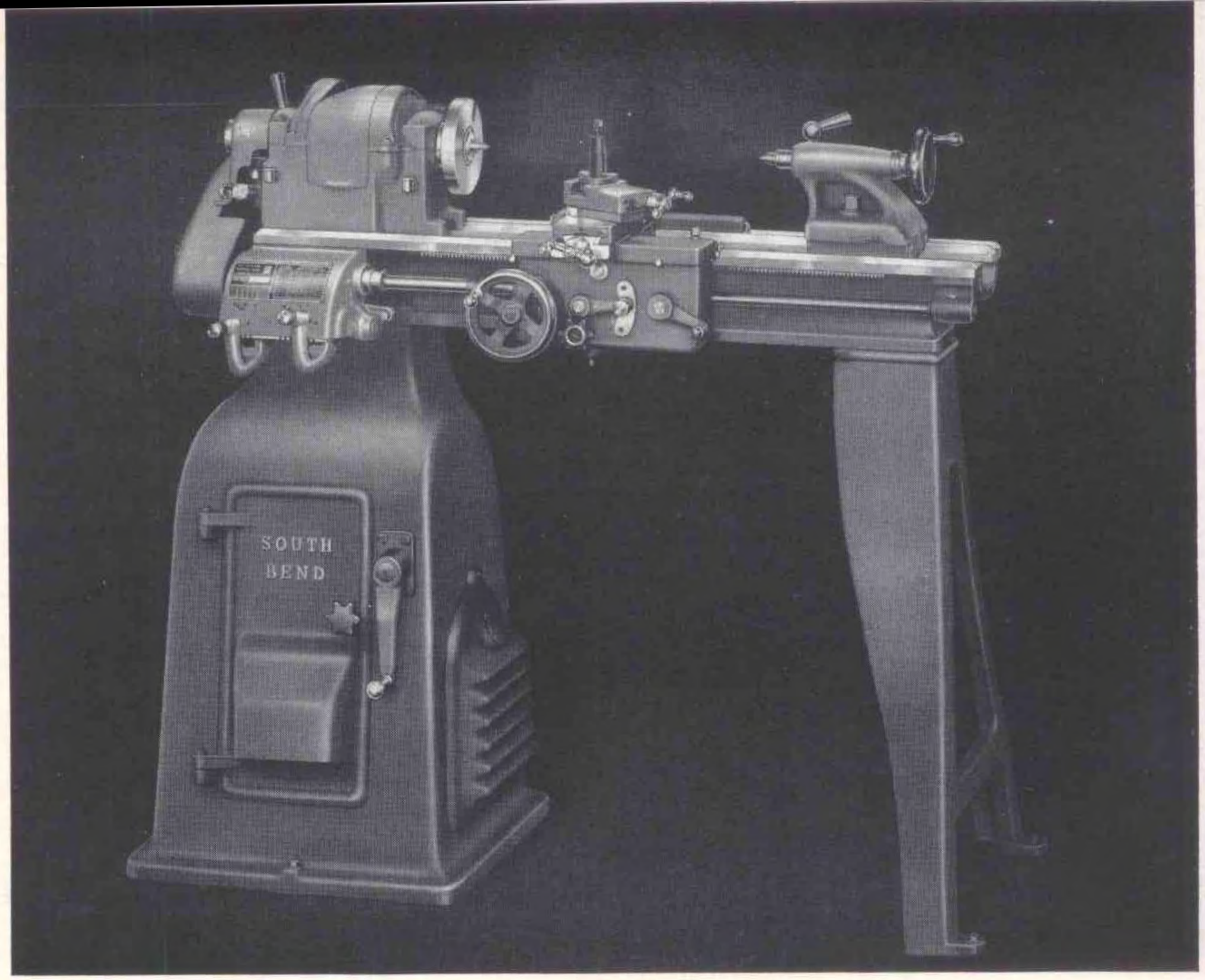
TAILSTOCK
- Size of center, Morse taper ..... No. 2
- Spindle travel ..... 2 1/2"
- Each graduation on tailstock spindle ..... 1/10"
- Tailstock top set-over for taper turning ..... 11/16"

COMPOUND REST
- Cross slide travel ..... 5 1/8"
- Angular hand feed of compound rest top slide ..... 2"

THREADS AND FEEDS
- Thread cutting range—48 pitches R.H. or L.H. ..... 4 to 224 per inch
- Longitudinal feeds through friction clutch—48 feeds R.H. or L.H. ..... .0015" to .0836"
- Cross-feeds through friction clutch—48 feeds ..... .0006" to .0303"
- Lead screw 29° Acme thread ..... 3/4" dia.—8 thrds.

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

MOTOR
- Standard size of motor required ..... 3/4 h.p.



10-inch Quick Change Gear *Precision* Lathe

Underneath Motor Drive—Back-geared—Belt Drive to Spindle

Ruggedly constructed throughout, this lathe has ample power for all work within its capacity. Motor and driving mechanism are fully enclosed. Direct belt drive to the spindle assures quiet, vibration free operation at high spindle speeds. Slow speeds for heavy cuts on large diameter work are driven through powerful back gears.

The tailstock spindle is graduated and the tailstock screw is fitted with a micrometer collar for drilling to a specified depth with extreme precision. Both the cross-feed screw and the compound rest screw have large diameter easy reading micrometer collars for adjusting the position of the cutting tool.

New two-lever gear box gives you quicker, easier changes for threads and feeds. Powerful multiple disc friction clutch in apron permits engaging or disengaging power turning and facing feeds instantly. Direction of feed is reversed by shifting the feed reverse lever conveniently located on the left end of the headstock. An automatic safety interlock makes it impossible to damage the lathe or the work by engaging a second feed accidentally when one feed is already in operation.

Regular equipment included in price of lathe consists of: V-belt; flat leather belt; large and small face plates; heat-treated steel tool post; adjustable thread cutting stop; 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.

10-inch 1" Collet South Bend Quick Change Gear Lathes with Floor Legs

Catalog Number	Bed Length Feet	Between Centers Inches	Cubic Feet Boxed	Boxed Weight Pounds	Crated Weight Pounds	
CL187Y	3	14 1/4	42	1230	930	
CL187Z	3 1/2	20 1/4	45	1250	950	
CL187A	4	26 7/8	45	1270	970	
CL187R	4 1/2	34 1/4	48	1290	990	

Specifications of 10-inch Quick Change Gear Floor Lathes

CAPACITY OF LATHE

Swing over bed and saddle wings ..... 10 1/8"
Swing over saddle cross slide ..... 5 7/8"
Swing over cross slide without chip guard ..... 6 3/4"

SPINDLE SPEEDS (approximate, not exact)

	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

HEADSTOCK

Collet capacity, maximum ..... 1"
Headstock spindle hole ..... 1 3/8"
Headstock spindle nose threads ..... 2 1/4"-8
Size of center, Morse taper ..... No. 2
Width of cone pulley step for belt ..... 1 5/16"
Large face plate diameter ..... 8 3/8"
Small face plate diameter ..... 5 5/8"
Front spindle bearing diameter ..... 2 1/4"

TAILSTOCK

Size of center, Morse taper ..... No. 2
Spindle travel ..... 2 1/8"
Each graduation on tailstock spindle ..... 1/10"
Tailstock top set-over for taper turning ..... 11/16"

COMPOUND REST

Cross slide travel ..... 6 1/4"
Angular hand feed of compound rest top slide ..... 2"

THREADS AND FEEDS

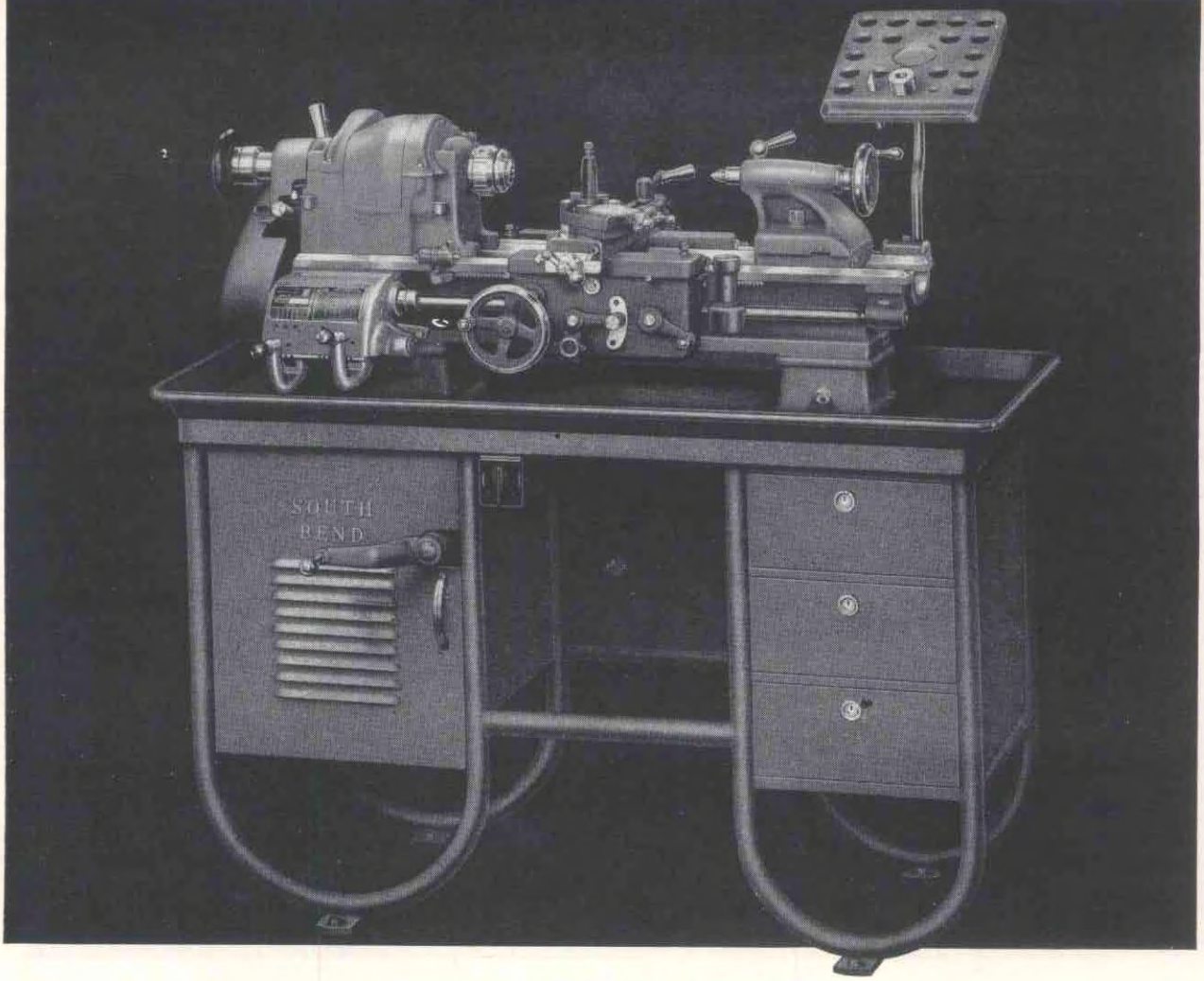
Thread cutting range—48 pitches R.H. or L.H. ..... 4 to 224 per inch
Longitudinal feeds through friction clutch—48 feeds R.H. or L.H. ..... .0015" to .0836"
Cross-feeds through friction clutch—48 feeds ..... .0006" to .0303"
Lead screw, 29° Acme thread ..... 3/4" dia.—8 thrds.

TOOL POST

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

MOTOR

Standard size of motor required ..... 3/4 h.p.



10-inch Toolroom *Precision* Bench Lathe

Precision Lead Screw—Telescopic Taper Attachment

Designed especially for precision toolroom operations, this lathe has many improvements and refinements that will make your most difficult lathe jobs easier. The telescopic taper attachment is graduated in both degrees and inches per foot for machining tapers up to 3½" per foot. A rigid connecting bar and binding lever remove the thrust from the cross-feed nut and lock the compound rest base rigidly to the taper attachment slide block to eliminate lost motion in the cross slide when turning or boring tapers.

New two-lever gear box gives you quicker, easier changes for threads and feeds. Powerful multiple disc friction clutch in apron permits engaging or disengaging power turning and facing feeds instantly. Direction of feed is reversed by shifting the feed reverse lever conveniently located on the left end of the headstock. An automatic safety interlock makes it impossible to damage the lathe or the work by engaging a second feed accidentally when one feed is already in operation.

Toolroom attachments included in price of lathe consist of: precision lead screw; handwheel type draw-in collet chuck attachment (without collets); collet rack; telescopic taper attachment; thread dial indicator; and micrometer carriage stop.

Regular equipment included in price of lathe consists of: steel bench with built-in chip pan and three drawers; V-belt; flat leather belt; large and small face plates; heat-treated steel tool post; adjustable thread cutting stop; 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.

10-inch 1" Collet South Bend Toolroom Bench Lathes

Catalog Number	Bed Length Feet	Between Centers Inches	Cubic Feet Boxed	Boxed Weight Pounds	Crated Weight Pounds	
CL8187YB	3	14¼	56	1310	960	
CL8187ZB	3½	20¼	56	1360	990	
CL8187AB	4	26⅜	65	1410	1060	

Specifications of 10-inch Toolroom Bench Lathes

CAPACITY OF LATHE
- Swing over bed and saddle wings ..... 10⅛"
- Swing over saddle cross slide ..... 5¾"

SPINDLE SPEEDS (approximate, not exact)

	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

HEADSTOCK
- Collet capacity, maximum ..... 1"
- Headstock spindle hole ..... 1⅜"
- Headstock spindle nose threads ..... 2¼"-8
- Size of center, Morse taper ..... No. 2
- Width of cone pulley step for belt ..... 1⅝"
- Large face plate diameter ..... 8¾"
- Small face plate diameter ..... 5⅝"
- Front spindle bearing diameter ..... 2¼"

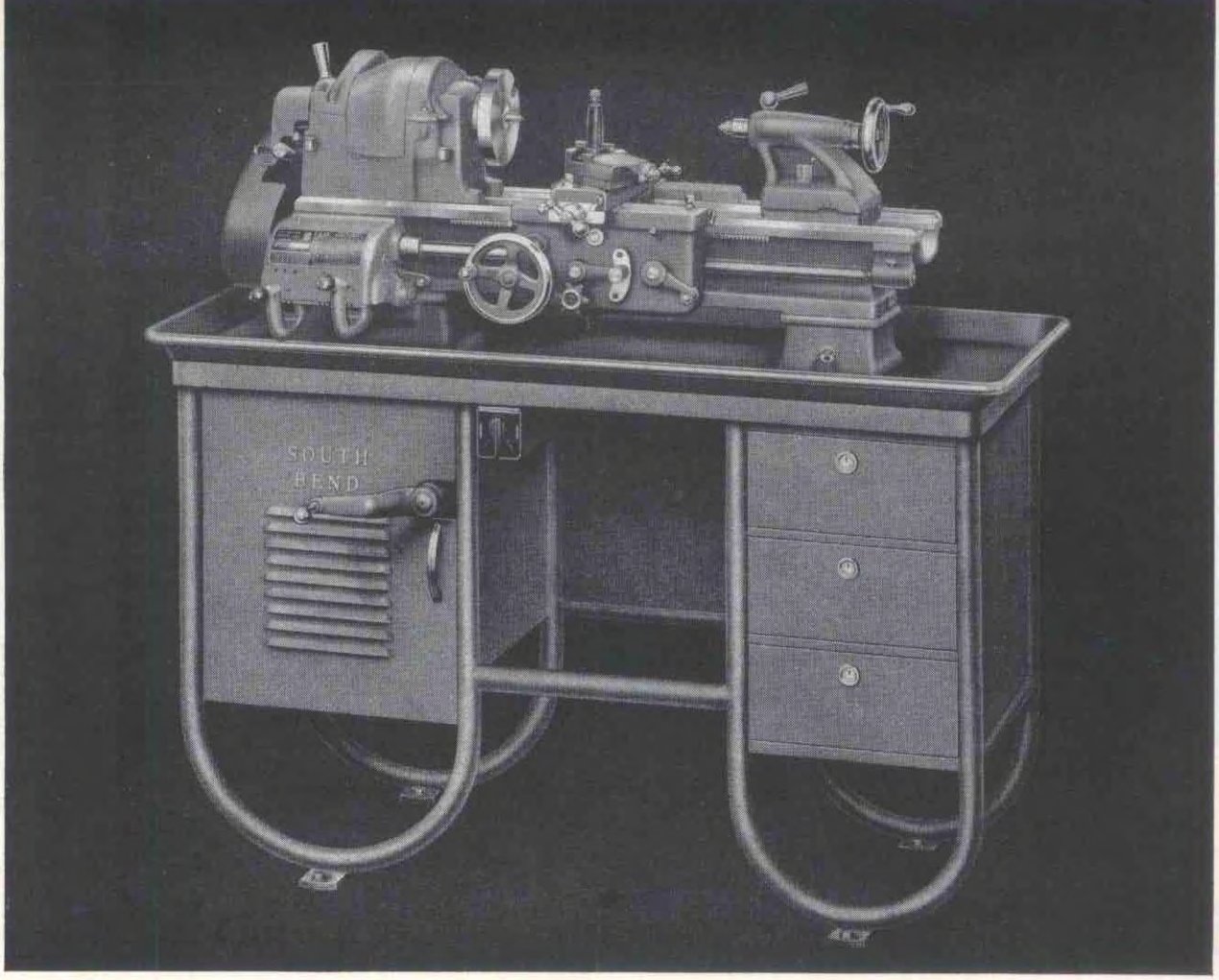
TAILSTOCK
- Size of center, Morse taper ..... No. 2
- Spindle travel ..... 2⅛"
- Each graduation on tailstock spindle ..... 1/10"
- Tailstock top set-over for taper turning ..... 1/16"

COMPOUND REST
- Cross slide travel ..... 5⅞"
- Angular hand feed of compound rest top slide ..... 2"

THREADS AND FEEDS
- Thread cutting range—48 pitches R.H. or L.H. ..... 4 to 224 per inch
- Longitudinal feeds through friction clutch—48 feeds R.H. or L.H. ..... .0015" to .0836"
- Cross-feeds through friction clutch—48 feeds ..... .0006" to .0303"
- Lead screw 29° Acme thread ..... ¾" dia.—8 thrds.

TOOL POST
- Size of tool holder shank ..... ⅜" x 13/16"
- Size of cutter bit for tool holder ..... ¼" sq.

MOTOR
- Standard size of motor required ..... ¾ h.p.



10-inch Quick Change Gear *Precision* Bench Lathe

Underneath Motor Drive—Back-geared—Belt Drive to Spindle

Mounted on a substantial welded steel bench with built-in chip pan and three roomy drawers, this is one of our most convenient models. Control switch is always within easy reach and permits starting, stopping or reversing lathe spindle instantly. Motor and driving mechanism are fully enclosed in cabinet beneath lathe headstock.

New two-lever gear box gives you quicker, easier changes for threads and feeds. Powerful multiple disc friction clutch in apron permits engaging or disengaging power turning and facing feeds instantly. Direction of feed is reversed by shifting the feed reverse lever conveniently located on the left end of the headstock. An automatic safety interlock makes it impossible to damage the lathe or the work by engaging a second feed accidentally when one feed is already in operation.

A complete line of practical attachments and accessories simplifies tooling the lathe for many classes of work, including some that might otherwise require special machinery or equipment. Most of these attachments and accessories may be purchased either with the lathe or later.

Regular equipment included in price of lathe consists of: steel bench with built-in chip pan and three drawers; V-belt; flat leather belt; large and small face plates; heat-treated steel tool post; adjustable thread cutting stop; 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 the price.

10-inch 1" Collet South Bend Quick Change Gear Bench Lathes

Catalog Number	Bed Length Feet	Between Centers Inches	Cubic Feet Boxed	Boxed Weight Pounds	Crated Weight Pounds	
CL187YB	3	14 1/4	56	1200	850	
CL187ZB	3 1/2	20 1/4	56	1250	880	
CL187AB	4	26 7/8	65	1300	950	
CL187RB	4 1/2	34 1/4	65	1350	980	

Specifications of 10-inch Quick Change Gear Bench Lathes

CAPACITY OF LATHE
- Swing over bed and saddle wings ..... 10 1/8"
- Swing over saddle cross slide ..... 5 7/8"
- Swing over cross slide without chip guard ..... 6 3/4"

SPINDLE SPEEDS (approximate, not exact)

	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

HEADSTOCK
- Collet capacity, maximum ..... 1"
- Headstock spindle hole ..... 1 3/4"
- Headstock spindle nose threads ..... 2 1/4"-8
- Size of center, Morse taper ..... No. 2
- Width of cone pulley step for belt ..... 1 5/16"
- Large face plate diameter ..... 8 3/16"
- Small face plate diameter ..... 5 5/8"
- Front spindle bearing diameter ..... 2 1/4"

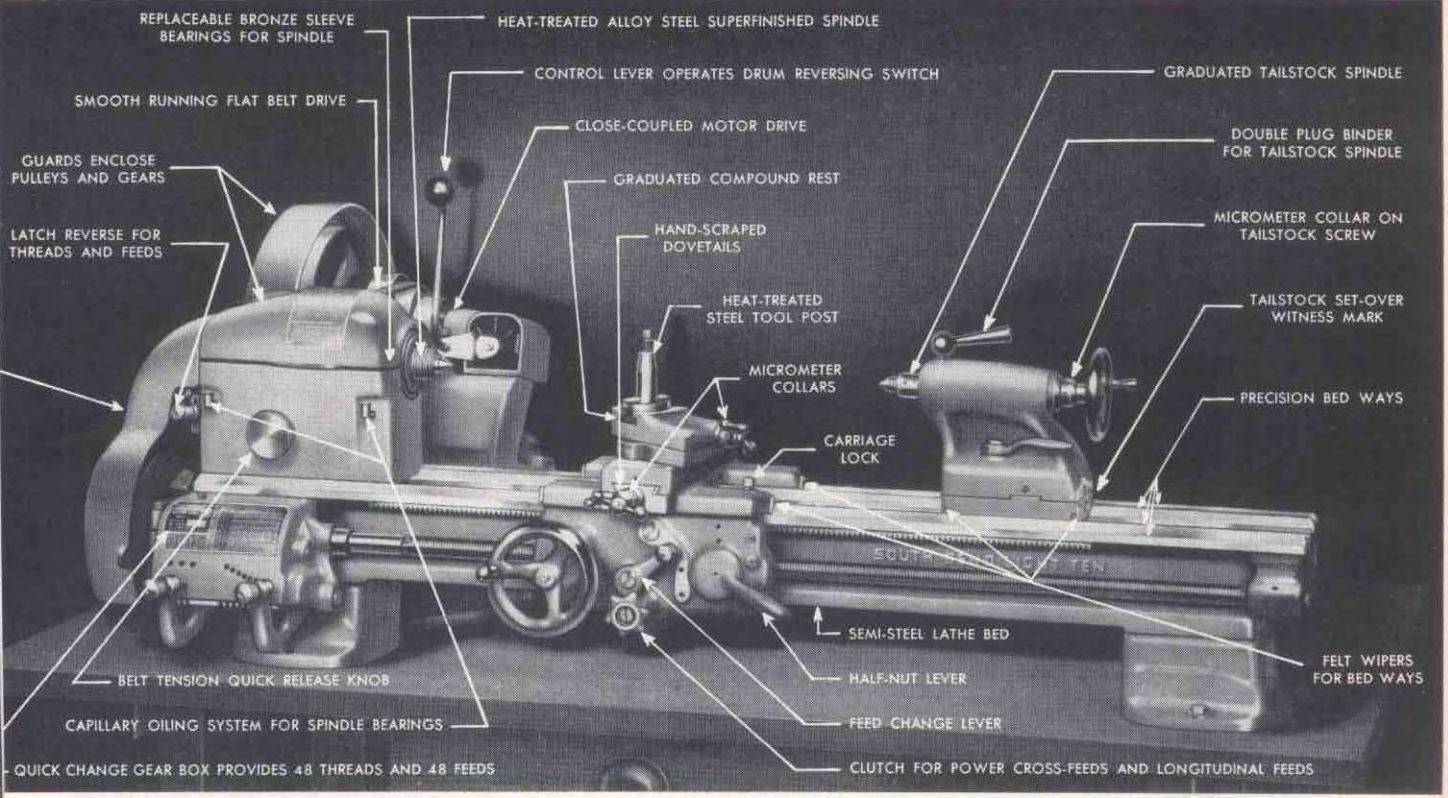
TAILSTOCK
- Size of center, Morse taper ..... No. 2
- Spindle travel ..... 2 1/8"
- Each graduation on tailstock spindle ..... 1/10"
- Tailstock top set-over for taper turning ..... 11/16"

COMPOUND REST
- Cross slide travel ..... 6 1/4"
- Angular hand feed of compound rest top slide ..... 2"

THREADS AND FEEDS
- Thread cutting range—48 pitches R.H. or L.H. ..... 4 to 224 per inch
- Longitudinal feeds through friction clutch—48 feeds R.H. or L.H. ..... .0015" to .0836"
- Cross-feeds through friction clutch—48 feeds ..... .0006" to .0303"
- Lead screw 29° Acme thread ..... 3/4" dia.—8 thrds.

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

MOTOR
- Standard size of motor required ..... 3/4 h.p.



Features of South Bend Light Ten Lathes

Forty-Five Years of experience in designing and building fine precision lathes have gone into the development of the new South Bend Light Ten Lathe. It is a modern precision tool having the most recently developed improvements and refinements. The workmanship and materials used in its construction are the best that can be obtained, and the highest standards of inspection are maintained throughout its manufacture.

Lathe Bed is rigidly constructed of a special grade of gray iron having thirty per cent steel, which produces a hard close-grained metal having unusual strength and long wearing qualities. The time proved superior design of the bed, having three V-ways and one flat way, assures permanent precision alignment of the headstock, tailstock, and carriage, practically unaffected by wear. The bed ways are carefully precision finished the entire length of the bed.

Back-Geared Headstock is hand-scraped to the bed to assure precision alignment of the spindle with the bed ways. A wrenchless bull gear lock permits engaging and disengaging the back gears without the use of a wrench. The cone pulley and back gears are enclosed in a hinged cover which may be raised to permit easy shifting of the cone pulley belt to change spindle speeds. An improved spring latch reverse on the left end of the headstock permits changing the direction of power carriage feeds instantly.

Bearings for headstock spindle are replaceable bronze sleeve type, and are precision bored and burnished to a smoothness of ten microinches (.000010")* by the bearingizing process. The use of large sleeve bearings to carry the radial load prevents chatter marks on the work due to vibrations which might be set up by ball or roller bearings. Large oil reservoirs and an improved capillary oiling system provide a complete film of clean filtered oil which separates the rotating spindle from the bearing. As long as sufficient oil is supplied to maintain an adequate oil film, there can be no metal to metal contact in this bearing, no wear and no friction other than the fluid friction of the lubricant. An efficient oil return system retains the oil so that only an occasional replenishing is required.

Headstock Spindle is made of a special quality alloy spindle steel, with all bearing surfaces carburized, hardened, and ground. Journal bearing surfaces are superfinished to a smoothness of five microinches (.000005")*. Spindle has ball thrust bearing and take-up nut for eliminating end play.

Tailstock is substantially designed with long hand-scraped bearing on bed. Tailstock top has set-over for taper turning. A double plug binder locks the tailstock spindle without throwing it out of alignment. Tailstock spindle is graduated and is made of special quality spindle steel. For drilling operations, a micrometer collar on the tailstock spindle feed screw indicates movement of spindle in thousandths of an inch. Tailstock center is hardened and is self-ejecting. Felt wipers are attached to both ends of the tailstock base to clean and oil the bed ways.

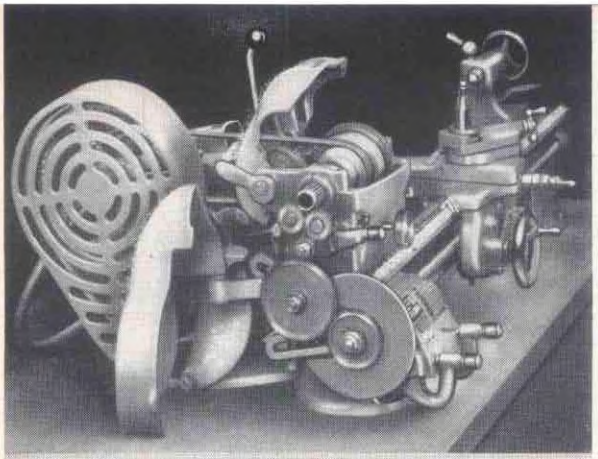
Quick Change Gear Box supplied on Model A and Toolroom Lathes permits changing thread cutting feeds, power longitudinal feeds, and power cross-feeds instantly by shifting two levers. Model B and Model C Lathes have independent change gears for changing threads and feeds.

Carriage has long bearings (9 1/16 inches) on V-ways of lathe bed, providing a solid support for the cutting tool and reducing wear to a minimum. V-ways of saddle are hand-scraped to match V-ways of lathe bed perfectly and are fitted with felt wipers to clean and oil the bed. Carriage lock for facing operations is conveniently located on front wing of saddle.

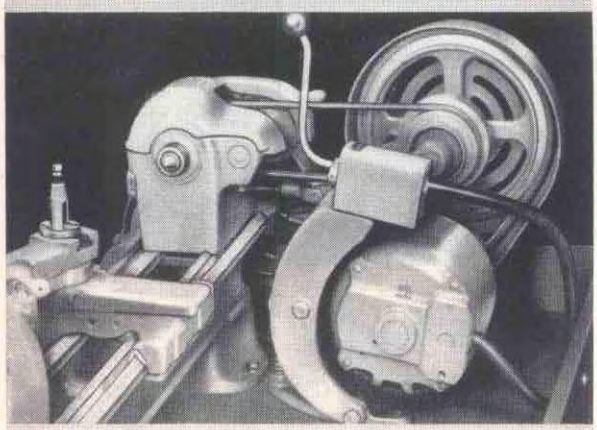
Apron for Model A and Model B Lathes (patented) is equipped with a worm driven by a spline in the lead screw, and a friction clutch for operating the power cross-feeds and the power longitudinal feeds. The threads of the lead screw are not used for the power longitudinal turning feeds. The plunger type feed change knob on the front of the apron has three positions: top for power longitudinal feeds; center for a neutral position; and bottom for the power cross-feeds. An automatic safety interlock prevents engaging half-nuts accidentally when the power turning or facing feeds are in operation. Apron for Model C Lathe has power longitudinal feeds driven through the lead screw and half-nuts, and hand operated cross-feed.

Compound Rest is graduated 180 degrees, swivels to any angle, and has improved locking device with double binder. Compound rest screw and cross-feed screw have large micrometer collars graduated to read in thousandths of an inch. Dovetails are hand-scraped and have adjustable gibs. Tool post is made of heat-treated steel.

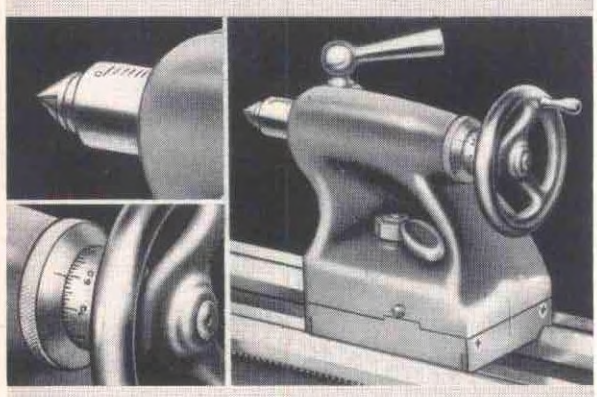
*Profilometer reading in microinches rms.



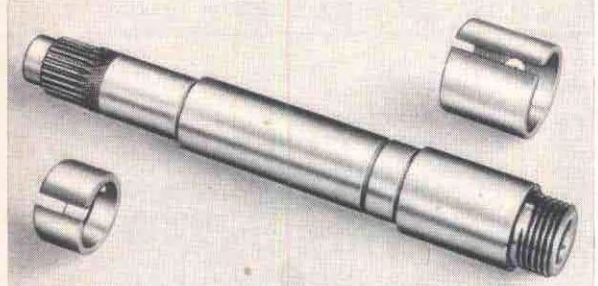
Headstock end of Light Ten Lathe with guards open showing cone pulley belt, end gearing, and quick acting spring latch reverse for threads and feeds.



View from tailstock end of Light Ten Lathe showing close-coupled horizontal motor drive mechanism.



Close-up of tailstock, with insets showing graduated spindle and micrometer graduated collar.



Heat-treated alloy steel superfinished spindle and replaceable bronze spindle bearings.

SPEED

High spindle speeds are essential for machining small diameters, drilling, polishing, diamond turning and boring, finishing plastics, machining brass, aluminum, magnesium, and many other similar operations. Slow speeds are just as important for cutting screw threads, reaming, machining large diameters, etc. The South Bend Light Ten Lathe has been designed to perform equally well over an unusually wide range of spindle speeds. The improved close-coupled horizontal motor drive (patented) provides twelve spindle speeds ranging from 48 to 1435 r.p.m. (approximately). Direct belt drive to the spindle assures smooth operation at high speeds. Slow speeds are driven through powerful back gears.

ACCURACY

Built by craftsmen who take pride in their work, the Light Ten Lathe is capable of machining to the exacting tolerances demanded in modern industry. The workmanship and materials entering into its construction are of a quality hard to equal in any other lathe, regardless of price. The bed ways are carefully precision finished to assure accurate alignment of the headstock, tailstock, and carriage. All dovetails are hand-scraped and flat bearing surfaces are ground, lapped, or hand-scraped. Even the bearing surfaces between the bed and legs are precision ground, just to make sure that no strain will be put on the bed when the leg bolts are tightened. Each lathe is critically tested under power, and must actually machine work to close tolerances before it can be approved for shipment from the factory.

ECONOMY

The Light Ten Lathe is economical to buy and to use. It is the lowest priced 10" Lathe in our line and it can be fitted with chucks, tools, and attachments at reasonable prices. The wide range of speeds and feeds available permit machining all classes of work at the correct speed and feed for maximum efficiency. Power consumption is held to a minimum by the use of a fractional horsepower motor and an efficient drive mechanism. The Light Ten Lathe is especially suited to small toolroom and manufacturing operations, which often cannot be economically handled on the larger and more costly heavy duty lathes.

CONVENIENCE

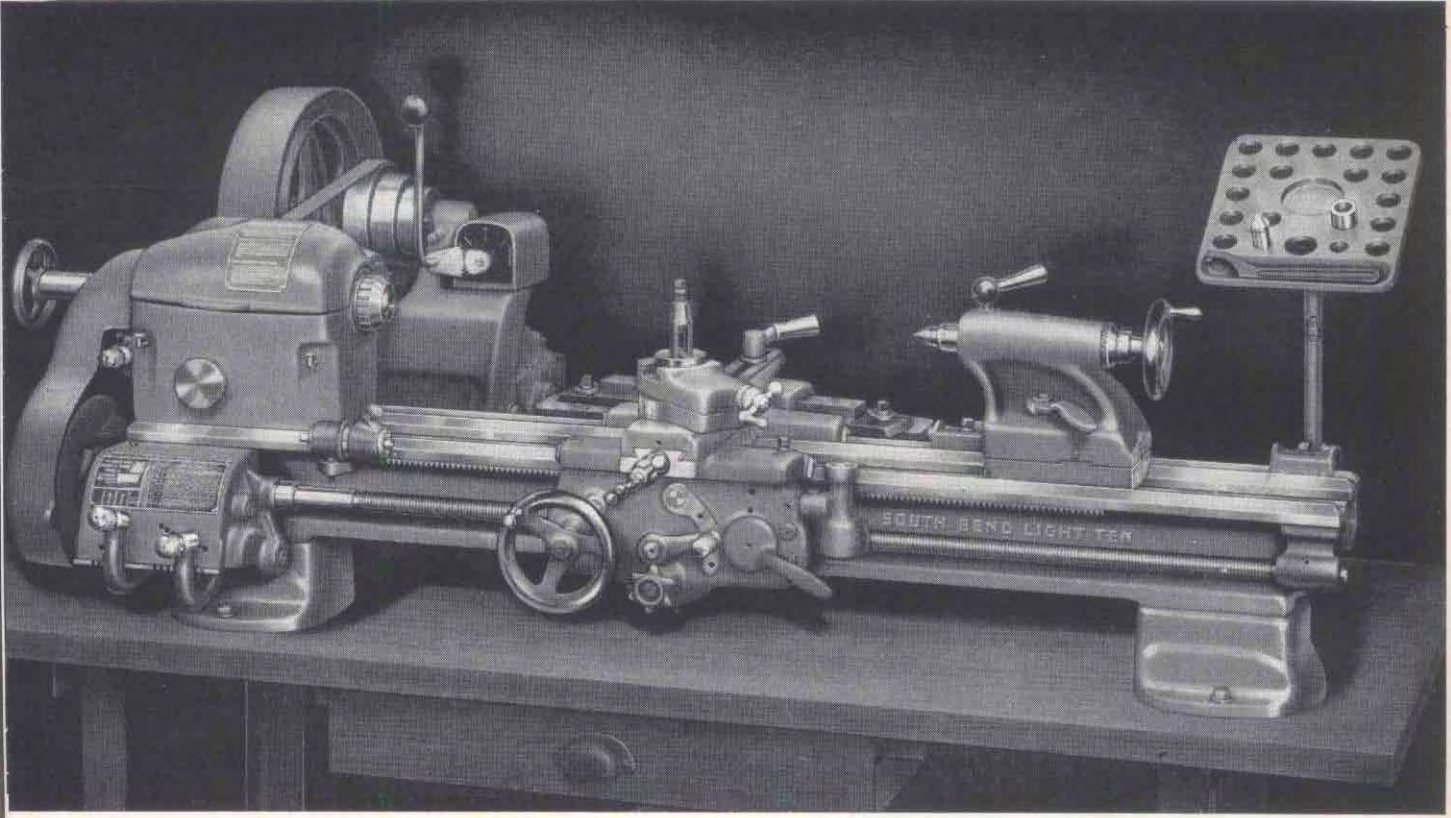
Large diameter handwheels, clear-cut easy reading graduations, and a convenient arrangement of controls contribute to the ease of operating the new Light Ten Lathe. This reduces operator fatigue, increases efficiency and prevents mistakes so that maximum production can be maintained on either toolroom or manufacturing operations. The quick change gear box on Model A and Toolroom Lathes makes threads or feeds instantly available.

SPINDLE BEARINGS

The weight of a needle applied point first will easily break through an oil film, yet the same film of oil between two optically flat surfaces will support almost an infinite load. To remove the "needle points," spindles for South Bend Light Ten Lathes are superfinished to a smoothness of five microinches, and bearing sleeves are burnished to ten microinches, approaching a surface smoothness equal to that of an optical flat. Conditions within the bearings are such that an almost unbreakable film of oil is maintained at all times. This provides extremely rigid support for the spindle, and the absence of metal to metal contact eliminates wear, reduces friction, and assures long, trouble-free service.

DURABILITY

The South Bend Light Ten Lathe is carefully engineered to give years of satisfactory service. Large bearing surfaces and excellent facilities for oiling, reduce wear to a minimum. The time tested prismatic V-way construction assures permanent precision alignment of the headstock, tailstock, and carriage. The headstock spindle is of heat-treated alloy steel. Other important parts are made of similarly high quality materials selected for long service. Given the proper care, the South Bend Light Ten will retain its accuracy indefinitely.



Light Ten Toolroom *Precision* Bench Lathe

Precision Lead Screw—Plain Taper Attachment

This is a very fine precision lathe for small work in the toolroom, manufacturing plant, maintenance department or repair shop. Although it is competitively priced, it has the same precision and many of the features and refinements usually found only on larger and much more expensive lathes. Its speed and ease of handling will save much time and effort on work within its capacity.

Twelve spindle speeds ranging from 48 to 1435 r.p.m. (approximately) are provided by the patented horizontal motor drive. Power is supplied by a ½ h.p. instant reversing motor mounted on a cradle back of the lathe. Direct drive to the spindle through a flat leather cone pulley belt assures smooth operation at high speeds. Slow speeds are driven through powerful back gears. A conveniently located control lever permits starting, stopping, or reversing the rotation of the lathe spindle instantly. The quick acting belt tension release and hinged cone pulley cover make it easy to shift the belt to change spindle speeds.

Large diameter replaceable sleeve type spindle bearings provide rigid support for the heat-treated alloy steel spindle. Bearing surfaces on the spindle are carburized, hardened, and superfinished for extreme precision and maximum durability. The threads on the spindle nose are held to close tolerances to assure precision and interchangeability of chucks and face plates. Spindle bearings have large oil reservoirs with capillary wicks which supply a continuous flow of clean filtered oil. After flowing through the bearing, the oil is collected and returned to the oil reservoir for recirculation.

Toolroom attachments included in price of lathe consist of: precision lead screw; handwheel type draw-in collet chuck attachment (without collets); collet rack; taper attachment; thread dial indicator; thread cutting stop; large face plate; and micrometer carriage stop.

Regular equipment included in price of lathe consists of: twelve-speed horizontal motor drive unit (patented); motor pulley with ¾" hole; V-belt; flat leather belt and lacing; power feed apron (patented); graduated compound rest; small face plate; heat-treated steel tool post; two 60-degree hardened tool steel centers; spindle sleeve; wrenches; quick change gear box; installation plan; and book "How to Run a Lathe." Bench and electrical equipment are not included in price of lathe.

Light Ten Toolroom Bench Lathes with Horizontal Motor Drive
Less Electrical Equipment and Bench

Catalog Number	Bed Length Feet	Between Centers Inches	Cubic Feet Boxed	Boxed Weight Pounds	Crated Weight Pounds	
CL8670Y	3	16⅛	22	650	520	
CL8670Z	3½	22⅛	22	665	535	
CL8670A	4	28⅛	22	690	550	

Specifications of Light Ten Toolroom Bench Lathes

CAPACITY OF LATHE
- Swing over bed, maximum ..... 10"
- Swing over saddle wings ..... 9 15/16"
- Swing over saddle cross slide ..... 5⅞"

SPINDLE SPEEDS (approximate, not exact)
- High spindle speeds
  - r.p.m. of spindle, direct belt drive 1435, 844, 502
  - r.p.m. of spindle, back-gear drive 276, 165, 96
- Low spindle speeds
  - r.p.m. of spindle, direct belt drive 706, 415, 244
  - r.p.m. of spindle, back-gear drive 137, 80, 48

HEADSTOCK
- Hole through spindle ..... 27/32"
- Maximum collet capacity ..... ⅝"
- Spindle nose diameter and threads per inch ..... 1½"-8
- Size of center, Morse taper ..... No. 2
- Width of cone pulley step for belt ..... 1"
- Large face plate diameter ..... 7⅜"
- Small face plate diameter ..... 5⅛"
- Front spindle bearing diameter ..... 1 15/16"

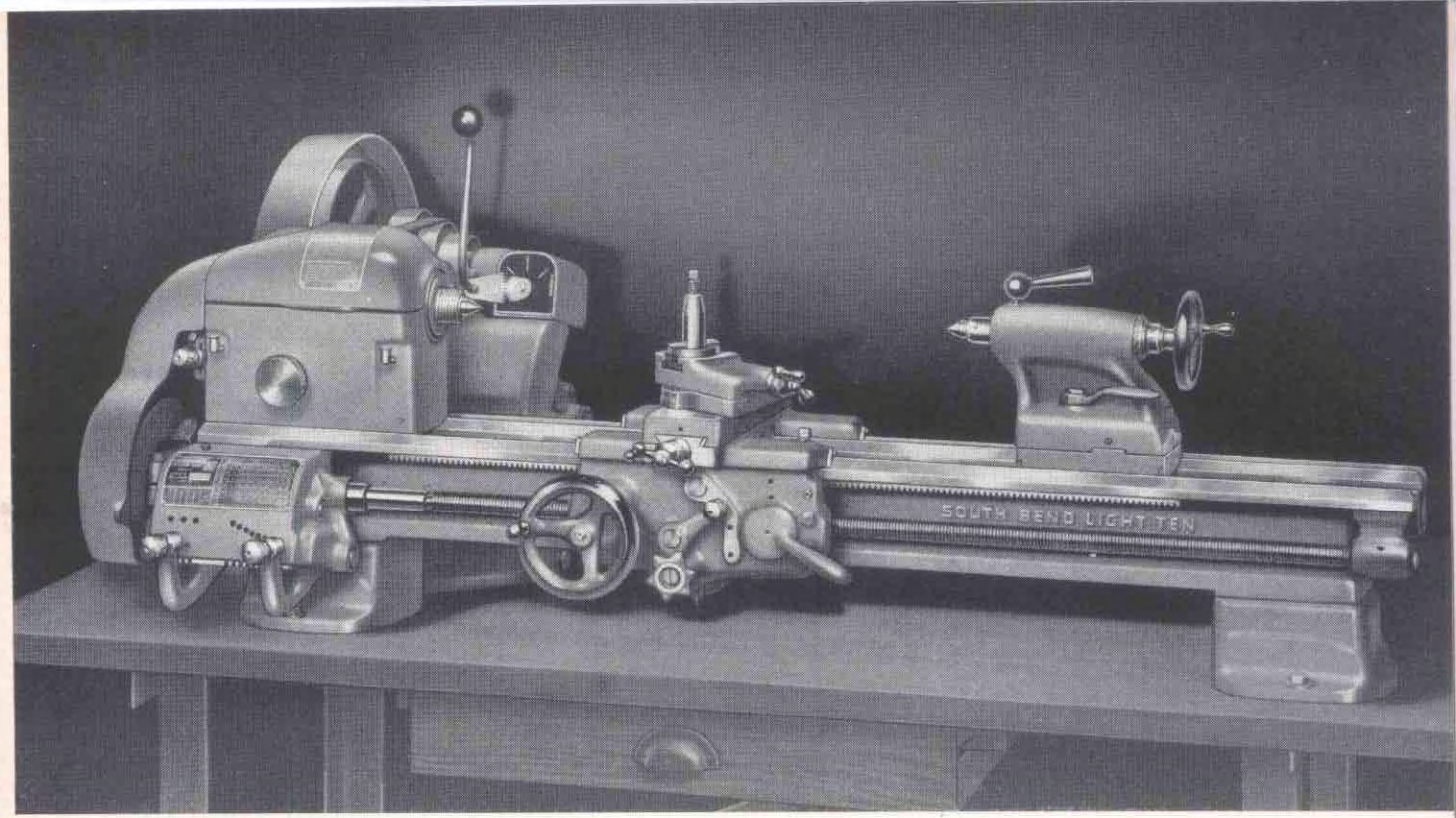
TAILSTOCK
- Size of center, Morse taper ..... No. 2
- Spindle travel ..... 2½"
- Each graduation on tailstock spindle ..... .001"
- Tailstock top set-over for taper turning ..... ⅜"

COMPOUND REST
- Cross slide travel ..... 5⅛"
- Angular hand feed of compound rest top slide ..... 2¼"

THREADS AND FEEDS
- Thread cutting range—48 pitches
  - R.H. or L.H. ..... 4 to 224 per inch
- Longitudinal feeds through friction clutch—48 feeds R.H. or L.H. ..... .0015" to .0853"
- Cross-feeds through friction clutch—48 feeds R.H. or L.H. ..... .0004" to .0255"
- Lead screw, 29° Acme thread ..... ¾" dia.—8 thrds.

TOOL POST
- Size of tool holder shank ..... ⅝" x 13/16"
- Size of cutter bit for tool holder ..... ¼" sq.

MOTOR
- Standard size of motor required ..... ½ h.p.



Light Ten Model A *Precision* Bench Lathe

Horizontal Motor Drive—Back-Geared—Quick Change

This is an exceptional value in a really fine small lathe with big lathe features including the double tumbler quick change gear box, power feed apron (patented), superfinished spindle, graduated tailstock spindle with micrometer collar on screw, and heavy bed with prismatic V-ways. Except for the taper attachment and other toolroom attachments, it has most of the features and refinements of the toolroom lathe shown on the opposite page.

Quick and easy selection of a desired thread cutting, turning, or facing feed is made by placing the two levers on the gear box in the positions indicated by the direct reading index chart. Direction of feed is changed by shifting the spring latch reverse gear lever conveniently located on the left end of the headstock. All gears are precision cut to assure accuracy and smooth, quiet operation.

The patented apron construction is unsurpassed for convenience, ease of operation, and efficiency. Power feeds are driven through worm gearing and are engaged by turning the clutch knob to the right. A large oil reservoir provides ample lubrication for the clutch and power feed gearing. The worm is driven by a spline in the lead screw so that the threads of the lead screw are used only when the half-nuts are engaged for cutting screw threads. An automatic safety interlock makes it impossible to damage the lathe by accidentally engaging two opposing feeds at the same time. The large handwheel is geared to the rack on the lathe bed for positioning the carriage and for hand-operated longitudinal feeds.

Graduations on the tailstock spindle reading in tenths of an inch, and on the tailstock screw micrometer collar reading in thousandths of an inch permit drilling or reaming to a specified depth with extreme precision. The hardened tailstock center is automatically ejected when the spindle is fully retracted into the tailstock barrel. An internal clutch securely locks the tailstock spindle without disturbing its alignment.

Regular equipment included in price of lathe consists of: twelve-speed horizontal motor drive unit (patented); motor pulley with ¾" hole; V-belt; flat leather belt and lacing; power feed apron (patented); graduated compound rest; small face plate; heat-treated steel tool post; two 60-degree hardened tool steel centers; spindle sleeve; wrenches; quick change gear box; installation plan; and book "How to Run a Lathe." Bench and electrical equipment are not included in price of lathe.

Light Ten Model A Bench Lathes with Horizontal Motor Drive
Less Electrical Equipment and Bench

Catalog Number	Bed Length Feet	Between Centers Inches	Cubic Feet Boxed	Boxed Weight Pounds	Crated Weight Pounds
CL670Y	3	16⅛	21	600	490
CL670Z	3½	22⅛	21	615	505
CL670A	4	28⅛	23	640	520
CL670B	4½	34⅛	26	670	535

Specifications of Light Ten Model A Bench Lathes

CAPACITY OF LATHE
- Swing over bed, maximum ..... 10"
- Swing over saddle wings ..... 9 15/16"
- Swing over saddle cross slide chip guard ..... 6¼"

SPINDLE SPEEDS (approximate, not exact)
- High spindle speeds
  - r.p.m. of spindle, direct belt drive 1435, 844, 502
  - r.p.m. of spindle, back-gear drive 276, 165, 96
- Low spindle speeds
  - r.p.m. of spindle, direct belt drive 706, 415, 244
  - r.p.m. of spindle, back-gear drive 137, 80, 48

HEADSTOCK
- Hole through spindle ..... 27/32"
- Maximum collet capacity ..... ⅝"
- 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 ..... 5⅛"
- Front spindle bearing diameter ..... 1 13/16"

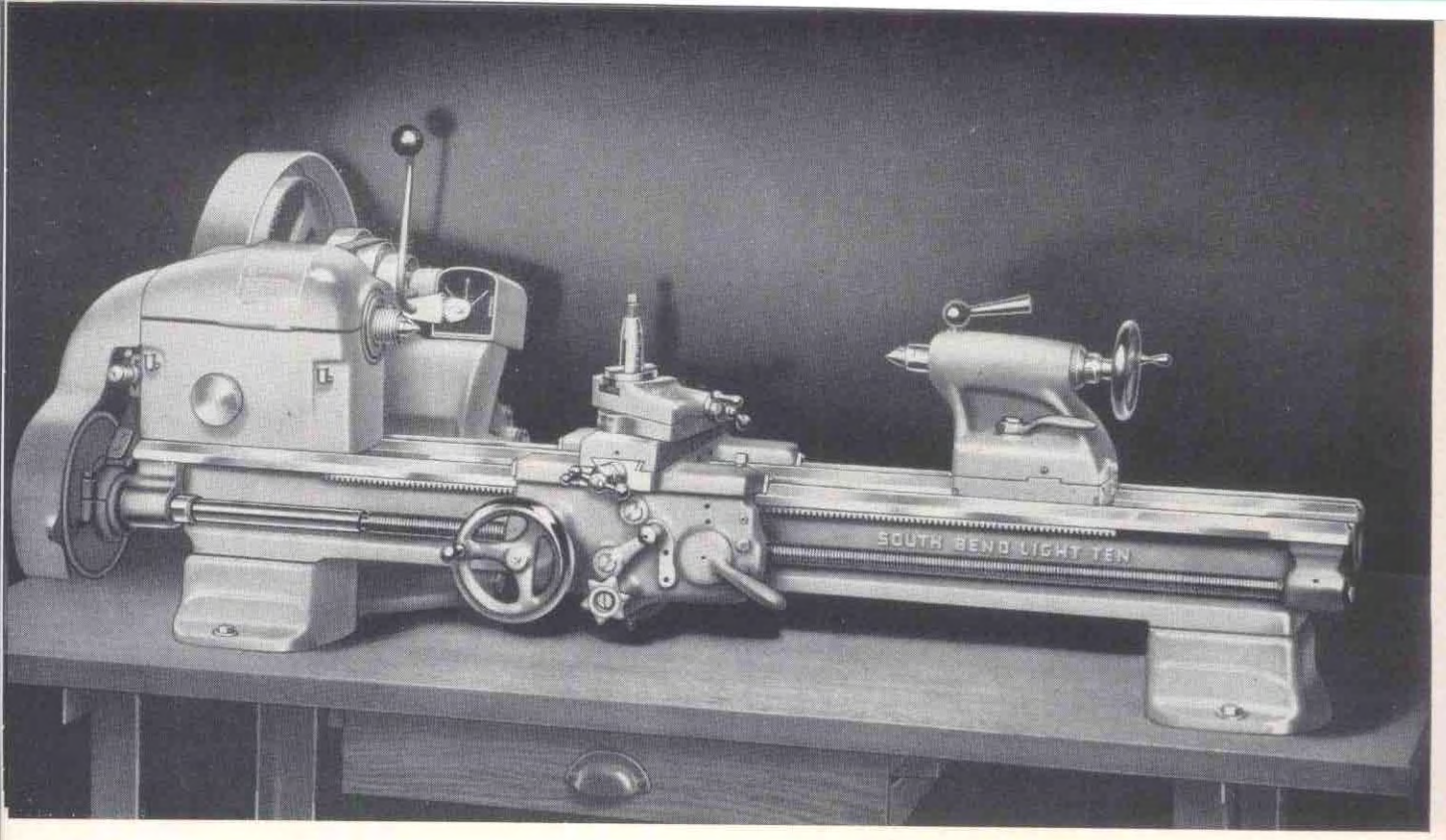
TAILSTOCK
- Size of center, Morse taper ..... No. 2
- Spindle travel ..... 2½"
- Each graduation on tailstock spindle ..... 1/10"
- Tailstock top set-over for taper turning ..... ⅝"

COMPOUND REST
- Cross slide travel ..... 5⅞"
- Angular hand feed of compound rest top slide ..... 2¼"

THREADS AND FEEDS
- Thread cutting range—48 pitches R.H. or L.H. ..... 4 to 224 per inch
- Longitudinal feeds through friction clutch—48 feeds R.H. or L.H. ..... .0015" to .0853"
- Cross-feeds through friction clutch—48 feeds R.H. or L.H. ..... .0004" to .0255"
- Lead screw, 29° Acme thread ..... ¾" dia.—8 thrds.

TOOL POST
- Size of tool holder shank ..... ⅜" x 13/16"
- Size of cutter bit for tool holder ..... ¼" sq.

MOTOR
- Standard size of motor required ..... ½ h.p.



Light Ten Model B *Precision* Bench Lathe

Horizontal Motor Drive—Back-Geared—Power Cross-Feeds

This is an attractively priced model, especially suited for production operations or other work which requires few changes of threads and feeds. It is the same as the Model A Lathe shown on the preceding page, except that it does not have the quick change gear box.

A set of independent change gears is supplied with each lathe for cutting various pitches of screw threads and for power longitudinal and cross-feeds. An index chart attached to the lathe shows the arrangement of the gears for cutting 45 pitches of screw threads, 4 to 160 per inch and 26 power longitudinal feeds .0021″ to .0155″. Twenty-three power cross-feeds range from .0009″ to .0046″.

The patented apron construction is unsurpassed for convenience, ease of operation, and efficiency. Power feeds are driven through worm gearing and are engaged by turning the clutch knob to the right. A large oil reservoir provides ample lubrication for the clutch and power feed gearing. The worm is driven by a spline in the lead screw so that the threads of the lead screw are used only when the half-nuts are engaged for cutting screw threads. An automatic safety interlock makes it impossible to damage the lathe by accidentally engaging two opposing feeds at the same time. The large handwheel is geared to the rack on the lathe bed for positioning the carriage and for hand-operated longitudinal feeds.

Large diameter easy reading graduated collars on cross-feed and compound rest screws save time and effort in positioning the cutting tool. The compound rest swivel has clear cut accurately divided graduations and may be set at any angle for machining bevels and short tapers. The carriage lock for facing operations is located on the right side of the front saddle wing.

Regular equipment included in price of lathe consists of: twelve-speed horizontal motor drive unit (patented); motor pulley with ¾″ hole; V-belt; flat leather belt and lacing; power feed apron (patented); graduated compound rest; small face plate; heat-treated steel tool post; two 60-degree hardened tool steel centers; spindle sleeve; wrenches; set of change gears; installation plan; and book "How to Run a Lathe." Bench and electrical equipment are not included in price of lathe.

Light Ten Model B Bench Lathes with Horizontal Motor Drive
Less Electrical Equipment and Bench

Catalog Number	Bed Length Feet	Between Centers Inches	Cubic Feet Boxed	Boxed Weight Pounds	Crated Weight Pounds	
CL667Y	3	16⅛	21	585	475	
CL667Z	3½	22⅛	21	600	490	
CL667A	4	28⅛	23	625	505	
CL667R	4½	34⅛	26	655	520	

Specifications of Light Ten Model B Bench Lathes

CAPACITY OF LATHE
- Swing over bed, maximum ..... 10″
- Swing over saddle wings ..... 9 15/16″
- Swing over saddle cross slide chip guard ..... 6¼″

SPINDLE SPEEDS (approximate, not exact)
- High spindle speeds
  - r.p.m. of spindle, direct belt drive 1435, 844, 502
  - r.p.m. of spindle, back-gear drive 276, 165, 96
- Low spindle speeds
  - r.p.m. of spindle, direct belt drive 706, 415, 244
  - r.p.m. of spindle, back-gear drive 137, 80, 48

HEADSTOCK
- Hole through spindle ..... 21/32″
- Maximum collet capacity ..... 5/8″
- Spindle nose diameter and threads per inch ..... 1½″-8
- Size of center, Morse taper ..... No. 2
- Width of cone pulley step for belt ..... 1″
- Small face plate diameter ..... 5⅛″
- Front spindle bearing diameter ..... 1 13/16″

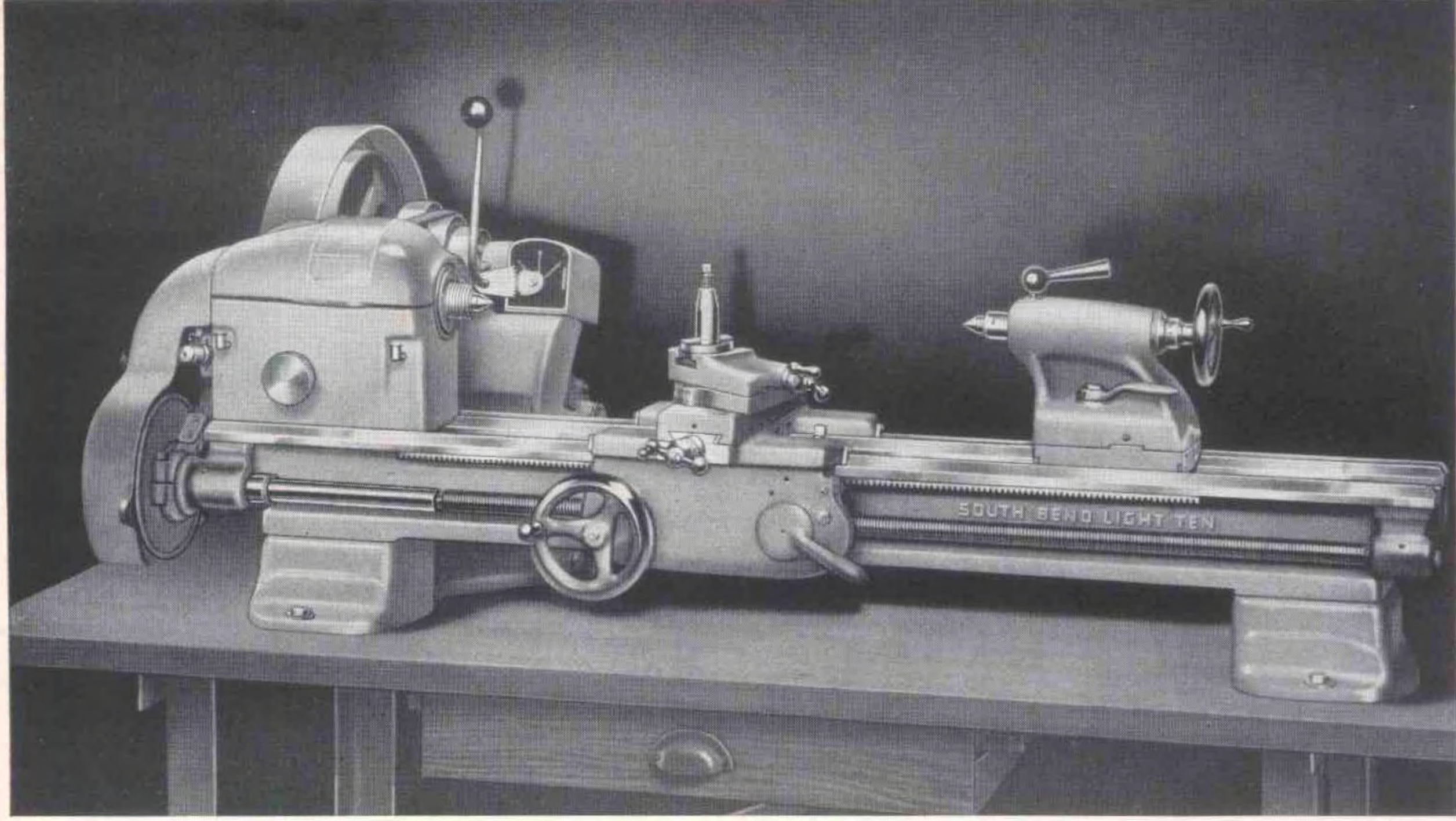
TAILSTOCK
- Size of center, Morse taper ..... No. 2
- Spindle travel ..... 2⅛″
- Each graduation on tailstock spindle ..... .001″
- Tailstock top set-over for taper turning ..... 5/8″

COMPOUND REST
- Cross slide travel ..... 5⅞″
- Angular hand feed of compound rest top slide ..... 2¼″

THREADS AND FEEDS
- Thread cutting range—45 pitches R.H. or L.H. ..... 4 to 160 per inch
- Longitudinal feeds through friction clutch—26 feeds R.H. or L.H. ..... .0021″ to .0155″
- Cross-feeds through friction clutch—23 feeds R.H. or L.H. ..... .0009″ to .0046″
- Lead screw, 29° Acme thread ..... ¾″ dia.—8 thrds.

TOOL POST
- Size of tool holder shank ..... ⅝″ x 13/16″
- Size of cutter bit for tool holder ..... ¼″ sq.

MOTOR
- Standard size of motor required ..... ½ h.p.



Light Ten Model C *Precision* Bench Lathe

Horizontal Motor Drive—Back-Geared—Hand Cross-Feed

One of our best small lathe values, this model is especially popular for use in small shops. It is also widely used in the larger shops for production operations on small parts. Except that it does not have the friction clutch and worm drive for power cross-feeds and power longitudinal feeds, it is the same as the lathe shown on the preceding page.

Change gears supplied with the lathe permit cutting 45 pitches of screw threads ranging from 4 to 160 per inch, right or left-hand. The change gears are also used for lead screw driven power longitudinal turning feeds .0021" to .0156". Cross-feeds are hand operated. A chart attached to the lathe shows the arrangement of the gears for all screw threads and power turning feeds.

The horizontal motor drive (patented) provides a series of twelve spindle speeds approximately 48 to 1435 r.p.m. Motor and driving mechanism are mounted on a tilting cradle back of the lathe. Power is transmitted from the motor to a countershaft by a V-belt, and from the countershaft cone pulley to the lathe spindle by a smooth running flat leather belt. A hinged cover encloses the headstock cone pulley. A quick acting belt tension release knob located on the front of the headstock permits releasing the cone pulley belt tension for easy shifting of the belt to change spindle speeds.

Graduations on the tailstock spindle reading in tenths of an inch, and on the tailstock screw micrometer collar reading in thousandths of an inch permit drilling or reaming to a specified depth with extreme precision. The hardened tailstock center is automatically ejected when the spindle is fully retracted into the tailstock barrel. An internal clutch securely locks the tailstock spindle without disturbing its alignment.

Regular equipment included in price of lathe consists of: twelve-speed horizontal motor drive unit (patented); motor pulley with ¾" hole; V-belt; flat leather belt and lacing; plain apron; graduated compound rest; small face plate; heat-treated steel tool post; two 60-degree hardened tool steel centers; headstock spindle sleeve; wrenches; set of change gears; installation plan; and book "How to Run a Lathe." Bench and electrical equipment are not included in price of lathe.

Light Ten Model C Bench Lathes with Horizontal Motor Drive Less Electrical Equipment and Bench

Catalog Number	Bed Length Feet	Between Centers Inches	Cubic Feet Boxed	Boxed Weight Pounds	Crated Weight Pounds	
CL653Y	3	16⅛	21	575	465	
CL653Z	3½	22⅛	21	590	480	
CL653A	4	28⅛	23	615	495	
CL653R	4½	34⅛	26	645	510	

Specifications of Light Ten Model C Bench Lathes

CAPACITY OF LATHE

Swing over bed, maximum ..... 10"
Swing over saddle wings ..... 9 15/16"
Swing over saddle cross slide chip guard ..... 6¼"

SPINDLE SPEEDS (approximate, not exact)

High spindle speeds
r.p.m. of spindle, direct belt drive 1435, 844, 502
r.p.m. of spindle, back-gear drive 276, 165, 96
Low spindle speeds
r.p.m. of spindle, direct belt drive 706, 415, 244
r.p.m. of spindle, back-gear drive 137, 80, 48

HEADSTOCK

Hole through spindle ..... 27/32"
Maximum collet capacity ..... ⅝"
Spindle nose diameter and threads per inch .... 1½"-8
Size of center, Morse taper ..... No. 2
Width of cone pulley step for belt ..... 1"
Small face plate diameter ..... 5⅛"
Front spindle bearing diameter ..... 1 15/16"

TAILSTOCK

Size of center, Morse taper ..... No. 2
Spindle travel ..... 2⅛"
Each graduation on tailstock spindle ..... .001"
Tailstock top set-over for taper turning ..... ⅝"

COMPOUND REST

Cross slide travel ..... 5⅞"
Angular hand feed of compound rest top slide .... 2¼"

THREADS AND FEEDS

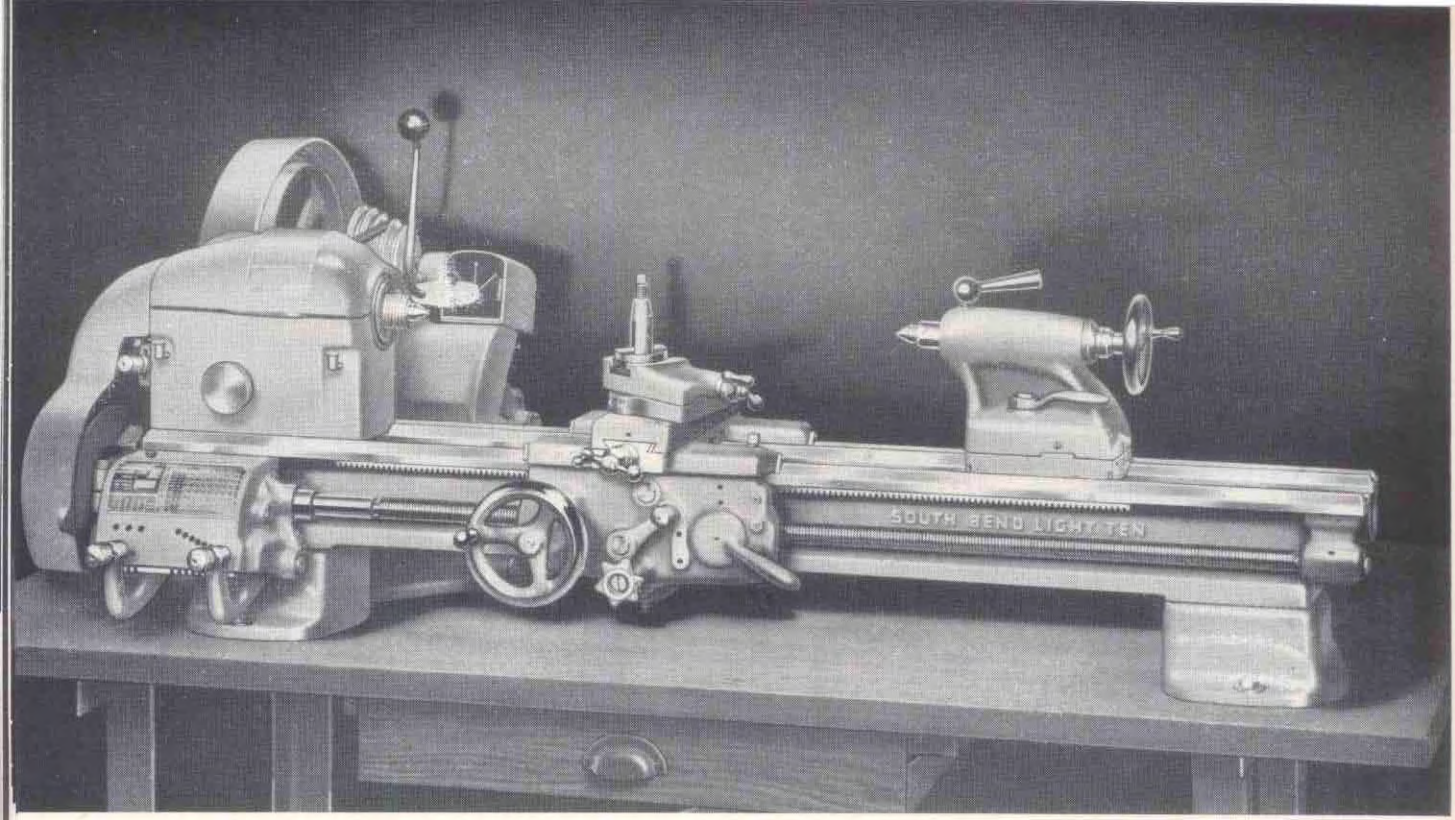
Thread cutting range—45 pitches
R.H. or L.H. ..... 4 to 160 per inch
Longitudinal feeds through lead screw and half-nut—14 feeds R.H. or L.H. .... .0021" to .0156"
Lead screw, 29° Acme thread ..... ¾" dia.—8 thrds.

TOOL POST

Size of tool holder shank ..... ⅜" x 13/16"
Size of cutter bit for tool holder ..... ¼" sq.

MOTOR

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



Light Ten V-Belt Drive *Precision* Bench Lathes

Sixteen Spindle Speeds—Models A, B, and C

The Light Ten Model A V-Belt Horizontal Motor Driven Bench Lathe is illustrated above. The Model B and Model C Lathes are also made with this drive. Except for the complete V-belt drive equipment, these lathes are the same as corresponding models described on the preceding pages.

The V-belt drive provides a series of sixteen spindle speeds as listed in the specifications below. Power is transmitted from the motor to the countershaft by a V-belt, and from the countershaft to the lathe spindle by a second V-belt. The V-belt cone pulleys on the countershaft and lathe spindle have four steps. A quick acting belt tension release permits releasing the tension of the cone pulley belt for shifting to change spindle speeds. Since the V-belt is endless, the headstock and countershaft must be disassembled to replace the cone pulley V-belt when this becomes necessary.

Drive equipment included in the price of the lathe consists of: horizontal motor drive unit (patented); motor pulley with ¾" hole; V-belt cone pulleys for headstock and drive unit; and V-belts.

Regular equipment included in price of lathe consists of: power feed apron on models A and B or plain apron on model C; quick change gear box on model A or set of change gears on models B and C; graduated compound rest; face plate; tool post; two 60-degree centers; spindle sleeve; wrenches; installation plan; and book "How to Run a Lathe." Bench and electrical equipment are not included in price.

Light Ten V-Belt Drive Bench Lathes

Catalog Number	Bed Length Feet	Between Centers Inches	Cubic Feet Boxed	Boxed Weight Pounds	Crated Weight Pounds
Model A Lathes with Sixteen-Speed V-Belt Drive					
CL770Y	3	16⅛	21	600	490
CL770Z	3½	22⅛	21	615	505
CL770A	4	28⅛	23	640	520
CL770R	4½	34⅛	26	670	535
Model B Lathes with Sixteen-Speed V-Belt Drive					
CL767Y	3	16⅛	21	585	475
CL767Z	3½	22⅛	21	600	490
CL767A	4	28⅛	23	625	505
CL767R	4½	34⅛	26	655	520
Model C Lathes with Sixteen-Speed V-Belt Drive					
CL753Y	3	16⅛	21	575	465
CL753Z	3½	22⅛	21	590	480
CL753A	4	28⅛	23	615	495
CL753R	4½	34⅛	26	645	510

Specifications of V-Belt Drive Light Ten Lathes

CAPACITY OF LATHE
- Swing over bed, maximum ..... 10"
- Swing over saddle wings ..... 9 15/16"
- Swing over saddle cross slide chip guard ..... 6¼"

SPINDLE SPEEDS (approximate, not exact)

	Direct Drive	Back-Geared
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 ..... 21/32"
- Maximum collet capacity ..... 5/8"
- Spindle nose diameter and threads per inch ..... 1½"-8
- Size of center, Morse taper ..... No. 2
- Width of cone pulley step for belt ..... 1"
- Small face plate diameter ..... 5½"
- Front spindle bearing diameter ..... 1 13/16"

TAILSTOCK
- Size of center, Morse taper ..... No. 2
- Spindle travel ..... 2⅜"
- Each graduation on tailstock spindle ..... 1/16"
- Tailstock top set-over for taper turning ..... ⅜"

COMPOUND REST
- Cross slide travel ..... 5⅞"
- Angular hand feed of compound rest top slide ..... 2¼"

THREAD CUTTING RANGE
- 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 ..... ¾" dia.—8 thrds.

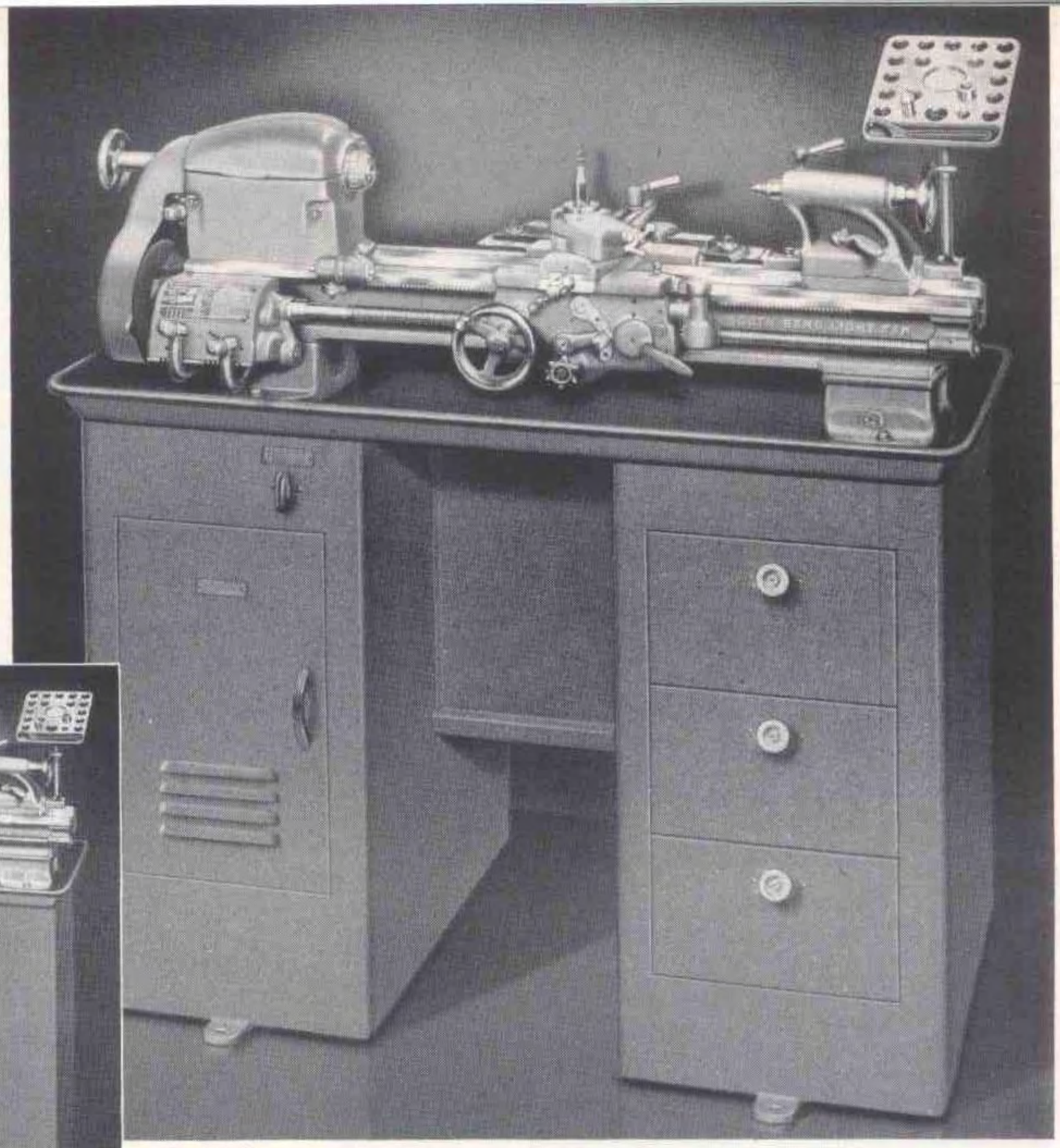
POWER LONGITUDINAL FEEDS
- Model A—48 feeds through clutch ..... .0015" to .0353"
- Model B—26 feeds through clutch ..... .0021" to .0155"
- Model C—14 feeds through half-nuts ..... .0021" to .0156"

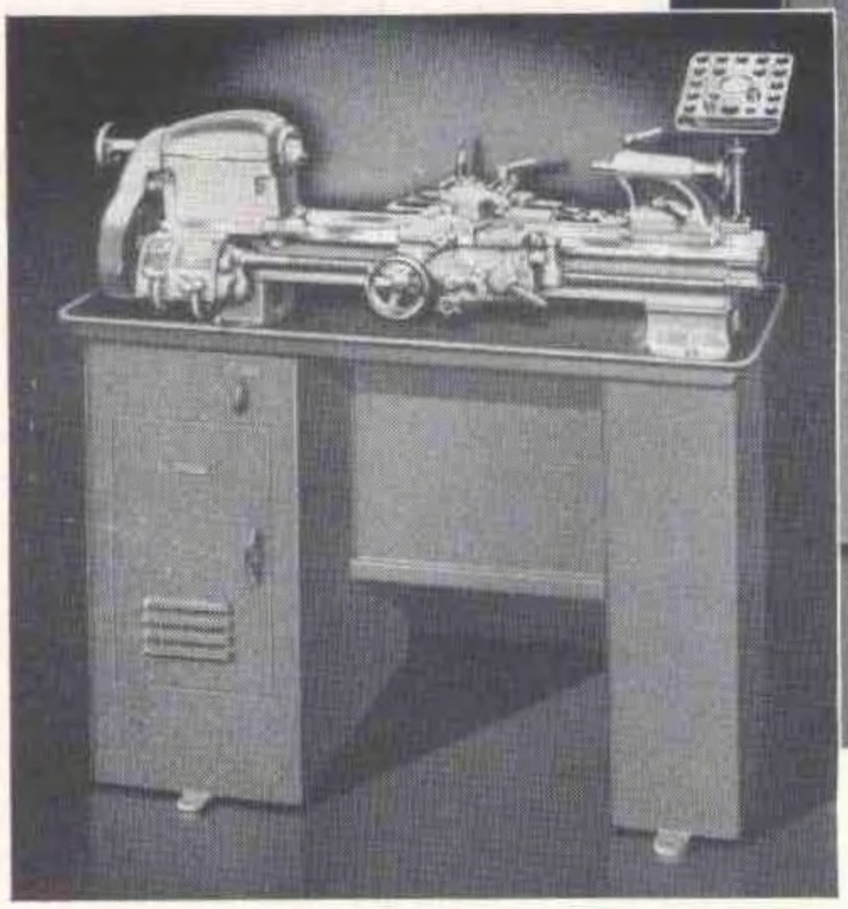
POWER CROSS-FEEDS
- Model A—48 feeds ..... .0004" to .0255"
- Model B—23 feeds ..... .0009" to .0046"

TOOL POST
- Size of tool holder shank ..... ⅝" x 13/16"
- Size of cutter bit for tool holder ..... ¼" sq.

MOTOR
- Standard size of motor required ..... ½ h.p.

Light Ten Toolroom *Precision* Floor Lathe





Patented

Precision Lead Screw—Plain Taper Attachment

One of our finest small lathes, this superbly engineered model is as convenient and efficient in operation as it is neat and attractive in appearance. Reasonable in price, it has the same precision and many of the features and refinements usually found only on larger and more expensive lathes. Especially suited for exacting toolroom and manufacturing operations, its speed and ease of handling will save time and effort on all work within its capacity.

The metal column base on which the lathe is mounted is constructed throughout of heavy gauge welded steel and finished in gray wrinkle finish enamel. It is available with three drawers as shown in the large illustration, or without the drawers. Each drawer is 10¾" x 5½" x 14" inside and is fitted with lock and key. A built-in chip pan with ⅝" bead around the edge forms the top of the metal column base.

The patented motor drive unit, enclosed in the cabinet underneath the lathe headstock, provides twelve spindle speeds ranging from 50 to 1365 r.p.m. 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.

Toolroom attachments included in price of lathe consist of: precision lead screw; handwheel type draw-in collet chuck attachment (without collets); collet rack; taper attachment; thread dial indicator; thread cutting stop; large face plate; and micrometer carriage stop.

Regular equipment included in price of lathe consists of: metal column base with chip pan; underneath belt motor drive unit (patented); motor pulley with ¾" hole; V-belt; flat leather belt and lacing; power feed apron (patented); graduated compound rest; face plate; tool post; two heat-treated tool steel 60-degree centers; spindle sleeve; wrenches; quick change gear box; installation plan; and book "How to Run a Lathe." Electrical equipment is not included in price.

Light Ten Toolroom Floor Lathes with Underneath Motor Drive and Metal Column Base

Catalog Number	Bed Length Feet	Between Centers Inches	Cubic Feet Boxed	Boxed Weight Pounds	Crated Weight Pounds	
On Metal Column Base with Three Drawers						
CL8370ZD	3 ⅓	22⅛	47	940	750	
On Metal Column Base without Drawers						
CL8370Z	3 ⅓	22⅛	47	925	735	

Specifications of Light Ten Toolroom Floor Lathes

CAPACITY OF LATHE
- Swing over bed ..... 10"
- Swing over saddle wings ..... 9 15/16"
- Swing over saddle cross slide ..... 5 7/8"

SPINDLE SPEEDS (approximate, not exact)

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

HEADSTOCK
- Hole through spindle ..... 27/32"
- Maximum collet capacity ..... 5/8"
- Spindle nose diameter and threads per inch ..... 1½"-8
- Size of center, Morse taper ..... No. 2
- Width of cone pulley step for belt ..... 1"
- Small face plate diameter ..... 5⅛"
- Front spindle bearing, diameter ..... 1 13/16"

TAILSTOCK
- Size of center, Morse taper ..... No. 2
- Spindle travel ..... 2⅛"
- Each graduation on tailstock spindle ..... .001"
- Tailstock top set-over for taper turning ..... ⅝"

COMPOUND REST
- Cross slide travel ..... 5⅝"
- Angular hand feed of compound rest top slide ..... 2¼"

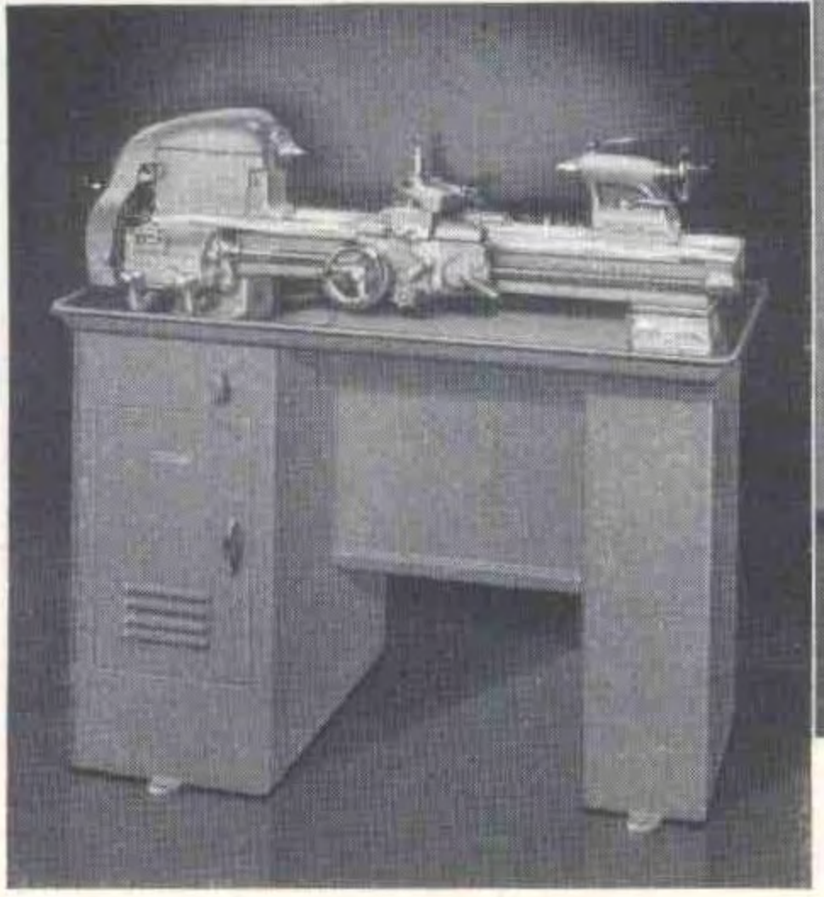
THREADS AND FEEDS
- Thread cutting range—48 pitches R.H. or L.H. ..... 4 to 224 per inch
- Longitudinal feeds through friction clutch—48 feeds R.H. or L.H. ..... .0015" to .0853"
- Cross-feeds through friction clutch—48 feeds ..... .0004" to .0255"
- Lead screw, 29° Acme thread ..... ¾" dia.—8 thrds.

TOOL POST
- Size of tool holder shank ..... ⅝" x 13/16"
- Size of cutter bit for tool holder ..... ¼" sq.

MOTOR
- Standard size of motor required ..... ½ h.p.

Light Ten *Precision* Floor Lathes

Models A, B, & C



Patented

Underneath Motor Drive—Back-Geared—Belt Drive

These lathes are the same as corresponding models of Light Ten Bench Lathes, except for the underneath motor drive and the necessary alterations in the headstock. Fully enclosed in the metal column base, the motor and driving mechanism are protected from dust, dirt, and chips. Base is available with three drawers, 10¾" x 5½" x 14" as shown in large illustration, or without drawers. A built-in chip pan with ⅝" bead around the edge forms the top of the metal column base. Twelve spindle speeds, approximately 50 to 1365 r.p.m. are provided. Regular equipment included in price of lathe is same as for corresponding models of bench lathes listed on preceding pages. Electrical equipment is not included in price of lathe.

Light Ten Lathes on Metal Column Base with Three Drawers

Catalog Number	Bed Length Feet	Between Centers Inches	Cubic Feet Boxed	Boxed Weight Pounds	Crated Weight Pounds	
Model A Light Ten Lathe						
CL370ZD	3½	22⅛	47	910	720	
Model B Light Ten Lathe						
CL367ZD	3½	22⅛	47	895	705	
Model C Light Ten Lathe						
CL353ZD	3½	22⅛	47	885	695	

Light Ten Lathes on Metal Column Base Without Drawers

Catalog Number	Bed Length Feet	Between Centers Inches	Cubic Feet Boxed	Boxed Weight Pounds	Crated Weight Pounds	
Model A Light Ten Lathe						
CL370Z	3½	22⅛	47	895	705	
Model B Light Ten Lathe						
CL367Z	3½	22⅛	47	880	690	
Model C Light Ten Lathe						
CL353Z	3½	22⅛	47	870	680	

Specifications

CAPACITY OF LATHE
- Swing over bed, maximum ..... 10"
- Swing over saddle wings ..... 9 15/16"
- Swing over saddle cross slide chip guard ..... 6¼"

SPINDLE SPEEDS (approximate, not exact)

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

HEADSTOCK
- Hole through spindle ..... 27/32"
- Maximum collet capacity ..... ⅝"
- Spindle nose diameter and threads per inch ..... 1½"-8
- Size of center, Morse taper ..... No. 2
- Width of cone pulley step for belt ..... 1"
- Small face plate diameter ..... 5⅛"
- Front spindle bearing, diameter ..... 1 15/16"

TAILSTOCK
- Size of center, Morse taper ..... No. 2
- Spindle travel ..... 2⅛"
- Each graduation on tailstock spindle ..... .001"
- Tailstock top set-over for taper turning ..... ⅝"

COMPOUND REST
- Cross slide travel ..... 5⅞"
- Angular hand feed of compound rest top slide ..... 2¼"

THREAD CUTTING RANGE
- 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 ..... ¾" dia.—8 thrds.

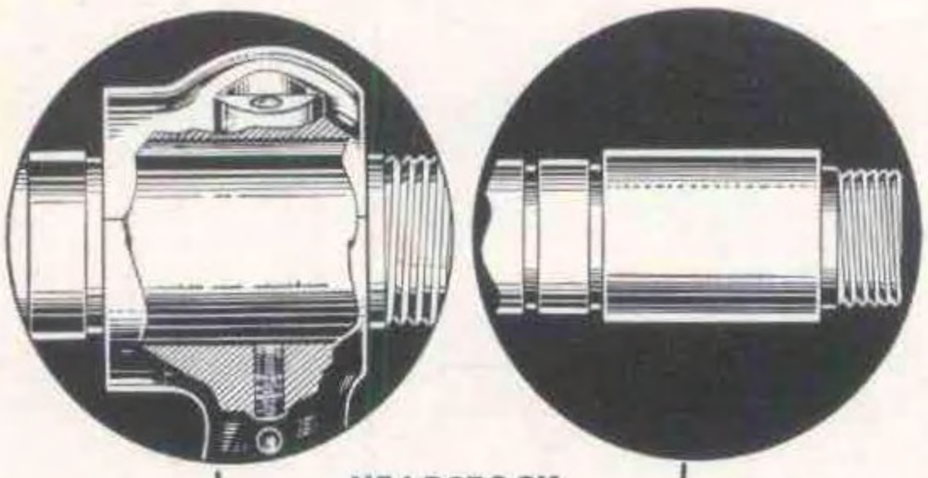
POWER LONGITUDINAL FEEDS
- Model A—48 feeds ..... .0015" to .0853"
- Model B—26 feeds ..... .0021" to .0155"
- Model C—14 feeds ..... .0021" to .0156"

POWER CROSS-FEEDS
- Model A—48 feeds ..... .0004" to .0255"
- Model B—23 feeds ..... .0009" to .0046"

TOOL POST
- Size of tool holder shank ..... ⅝" x 13/16"
- Size of cutter bit for tool holder ..... ¼" sq.

MOTOR
- Standard size of motor required ..... ½ h.p.

FEATURES of Model A 9" *Precision* Lathes



HEADSTOCK

Bearings are line bored and bearingized for precision fit. Ample lubrication from oil reservoirs. Spindle carburized, hardened, and ground; with bearing surfaces superfinished to .000005" rms.

BELT RELEASE

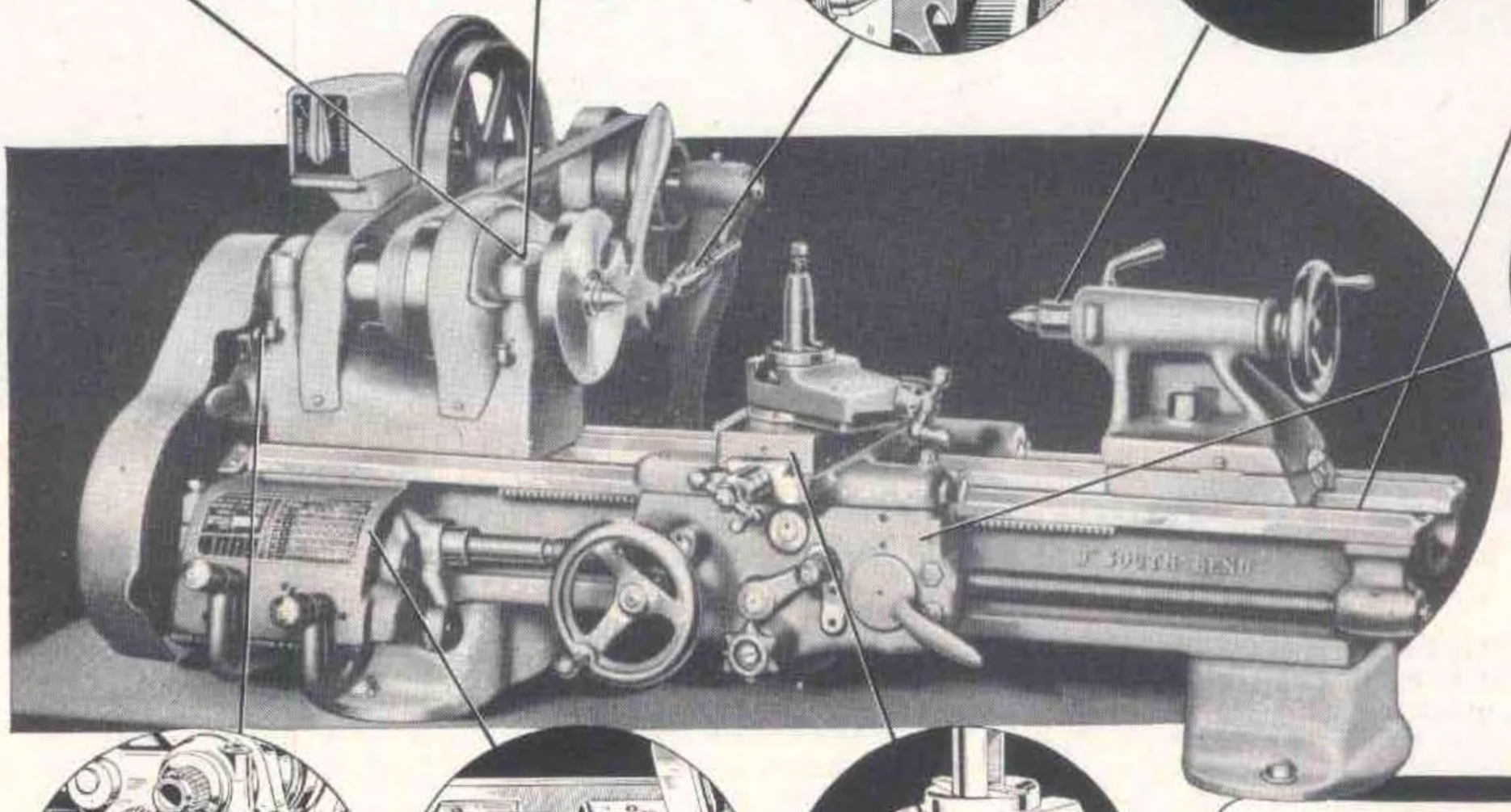
Instant release of belt tension for speed changes. Proper tension of headstock spindle drive belt is easily adjusted.

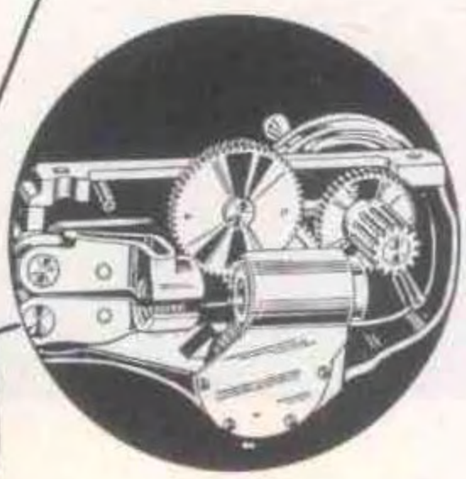
TAILSTOCK

Has set-over for taper turning. Graduated spindle has witness mark for aligning cutter bit. Hardened center self-ejecting.

BED

Three V-ways and flat way are precision finished entire length for accurate alignment of headstock, tailstock, and carriage.



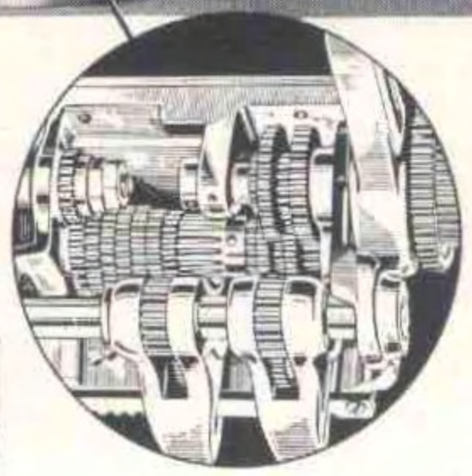


APRON

Has powerful friction clutch and large half-nuts. Safety interlock prevents engaging opposing feeds. All gears machine cut.

REVERSE GEARS

Easily shifted for reversing lead screw rotation and feeds, positive lock. All the gears used in this lathe are machine cut.



GEAR BOX

Screw threads and power feeds selected by shifting two tumblers as indicated on index chart. All gears machine cut steel.

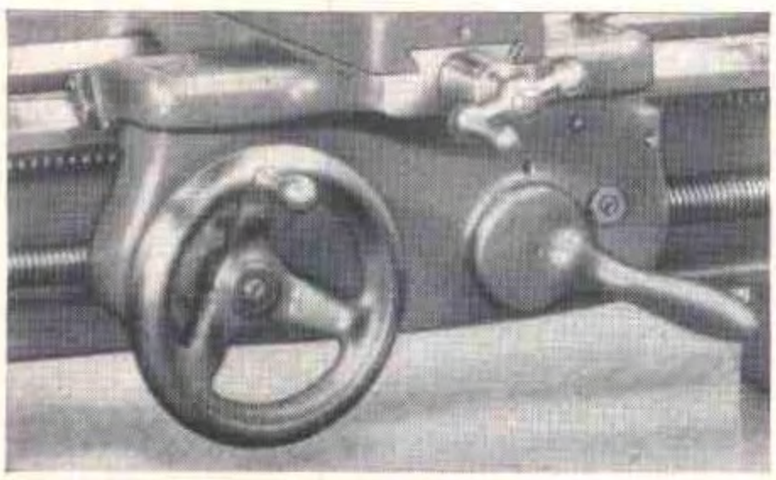
CARRIAGE

V-ways and dovetails hand-scraped. Engine divided micrometer collars on feed screws. Compound rest base graduated 180 degrees.

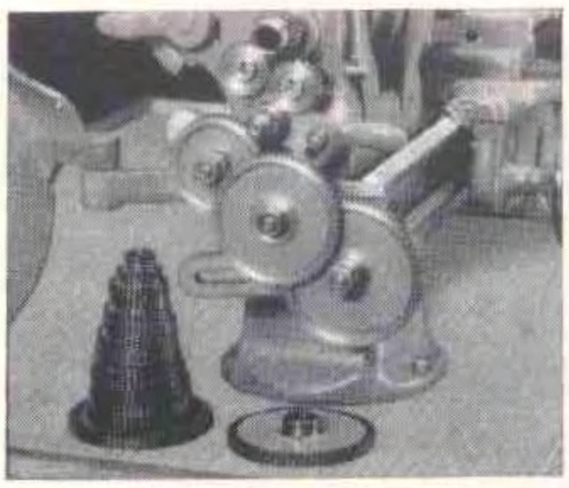
Specifications . . .

South Bend 9" Model A Lathe

SWING	over bed—9¼" over cross slide—5½"
BED LENGTHS	3, 3½, 4, and 4½ feet
DISTANCE BETWEEN CENTERS	16" to 34"
SPINDLE SPEEDS (12)	50 to 1270 r.p.m.
POWER FEEDS:	
Longitudinal (48)	.0015" to .0853"
Cross-feed (48)	.0004" to .0255"
THREADS (48 pitches)	4 to 224 per inch
MAXIMUM COLLET CAPACITY	½ inch
SPINDLE BORE	¾ inch
TAILSTOCK TOP SET-OVER	⅝ inch



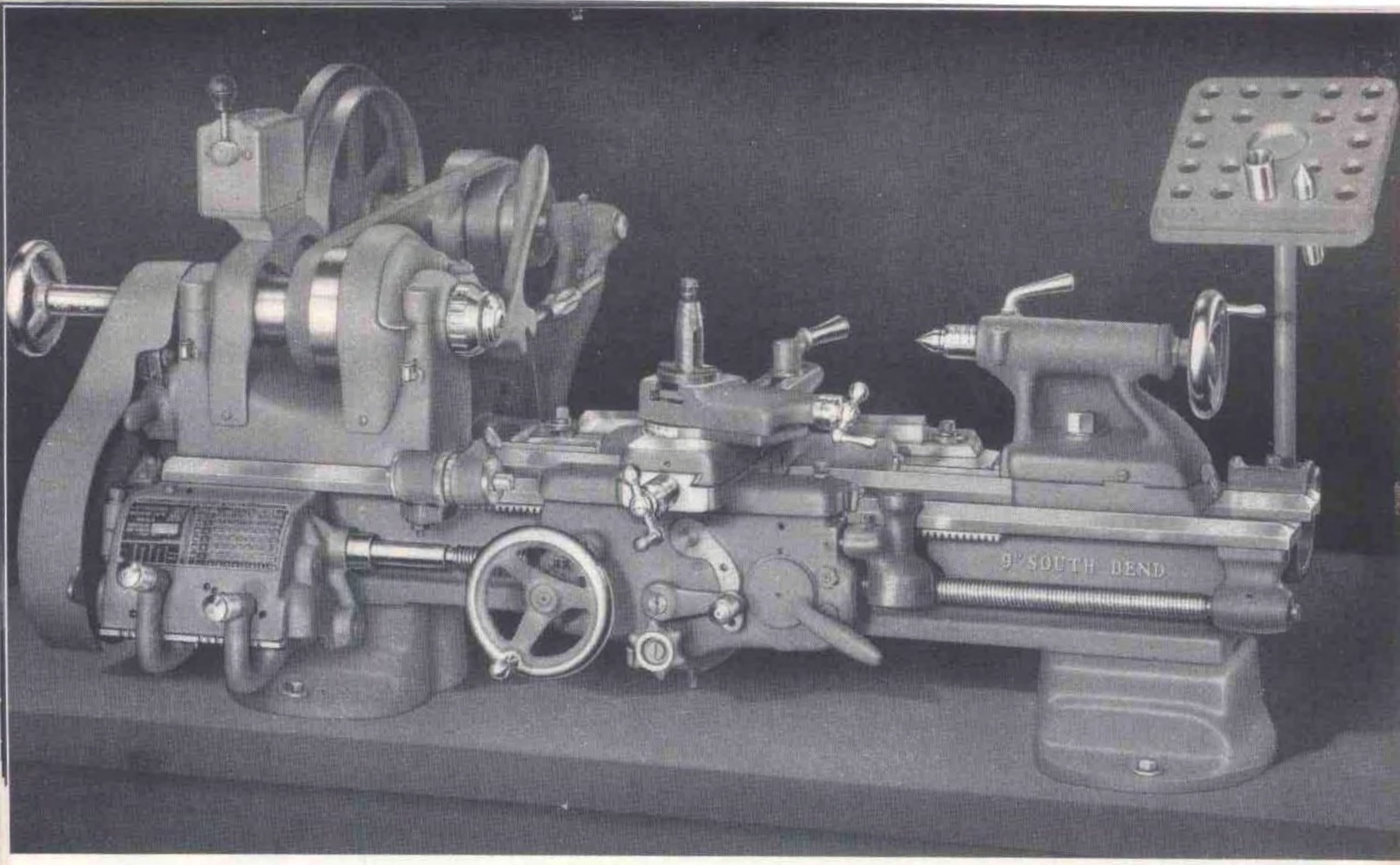
Apron Supplied on Model C 9-inch Lathe



Change Gears for Models B and C

MODEL B 9-inch Lathes are the same as the Model A Lathes, except that instead of the quick change gear box, a set of independent change gears is supplied for cutting screw threads and for power feeds.

MODEL C 9-inch Lathes are the same as the Model B Lathes, except that they do not have the worm drive in the apron for operating the power feeds. Lead screw and half-nuts are used for power longitudinal feeds, and the cross-feeds are hand-operated.



9-inch Toolroom *Precision* Bench Lathe

Precision Lead Screw—Plain Taper Attachment

Although this is our lowest priced toolroom model, it is made to the same exacting tolerances and must pass the same rigid tests for alignment and precision as our larger and more expensive toolroom lathes. Having maximum sensitivity and ease of handling, it is most efficient on all work within its capacity. You can save valuable time and floor space by selecting one or more of these fine lathes for your small tool, die, and gauge work.

Twelve spindle speeds ranging from 50 to 1270 r.p.m. (approximately) are provided by the patented horizontal motor drive. Power is supplied by a ½ h.p. instant reversing motor mounted on a cradle back of the lathe. Direct drive to the spindle through a flat leather cone pulley belt assures smooth operation at high speeds. Slow speeds are driven through powerful back gears. A conveniently located control permits starting, stopping, or reversing the rotation of the lathe spindle instantly. The quick acting belt tension release makes it easy to shift the belt to change spindle speeds.

Large diameter bearings provide rigid support for the heat-treated alloy steel spindle. Bearing surfaces on the spindle are carburized, hardened, and superfinished for extreme precision and maximum durability. The threads on the spindle nose are held to close tolerances to assure precision and interchangeability of chucks and face plates. Spindle bearings have large oil reservoirs with capillary wicks which supply a continuous flow of clean filtered oil. After flowing through the bearing, the oil is collected and returned to the oil reservoir beneath the spindle for recirculation.

Toolroom attachments included in price of lathe consist of: precision lead screw; handwheel type draw-in collet chuck attachment (without collets); collet rack; taper attachment; thread dial indicator; thread cutting stop; large face plate; and micrometer carriage stop.

Regular equipment included in price of lathe consists of: twelve-speed horizontal motor drive unit (patented); motor pulley with ¾" hole; V-belt; flat leather belt and lacing; power feed apron (patented); graduated compound rest; small face plate; heat-treated steel tool post; two 60-degree hardened tool steel centers; spindle sleeve; wrenches; quick change gear box; installation plan; and book "How to Run a Lathe." Bench and electrical equipment are not included in price of lathe.

9-inch Toolroom Bench Lathes with Horizontal Motor Drive

Catalog Number	Bed Length Feet	Between Centers Inches	Cubic Feet Boxed	Boxed Weight Pounds	Crated Weight Pounds	
CL8644Y	3	16	19	550	440	
CL8644Z	3½	22	19	565	455	
CL8644A	4	28	20	580	470	

Specifications of 9-inch Toolroom Bench Lathes

CAPACITY OF LATHE
- Swing over bed and saddle wings ..... 9¼"
- Swing over saddle cross slide ..... 5"

SPINDLE SPEEDS (approximate, not exact)

	Direct Drive	Back-Geared
High speeds, r.p.m.	1270, 750, 446	250, 145, 86
Low speeds, r.p.m.	692, 410, 244	134, 81, 50

HEADSTOCK
- Hole through spindle ..... ¾"
- Maximum collet capacity ..... ½"
- Spindle nose diameter and threads per inch ..... 1½"-8
- Size of center, Morse taper ..... No. 2
- Width of cone pulley step for belt ..... 1"
- Large face plate diameter ..... 7⅜"
- Small face plate diameter ..... 5⅛"
- Front spindle bearing, diameter ..... 1 13/16"

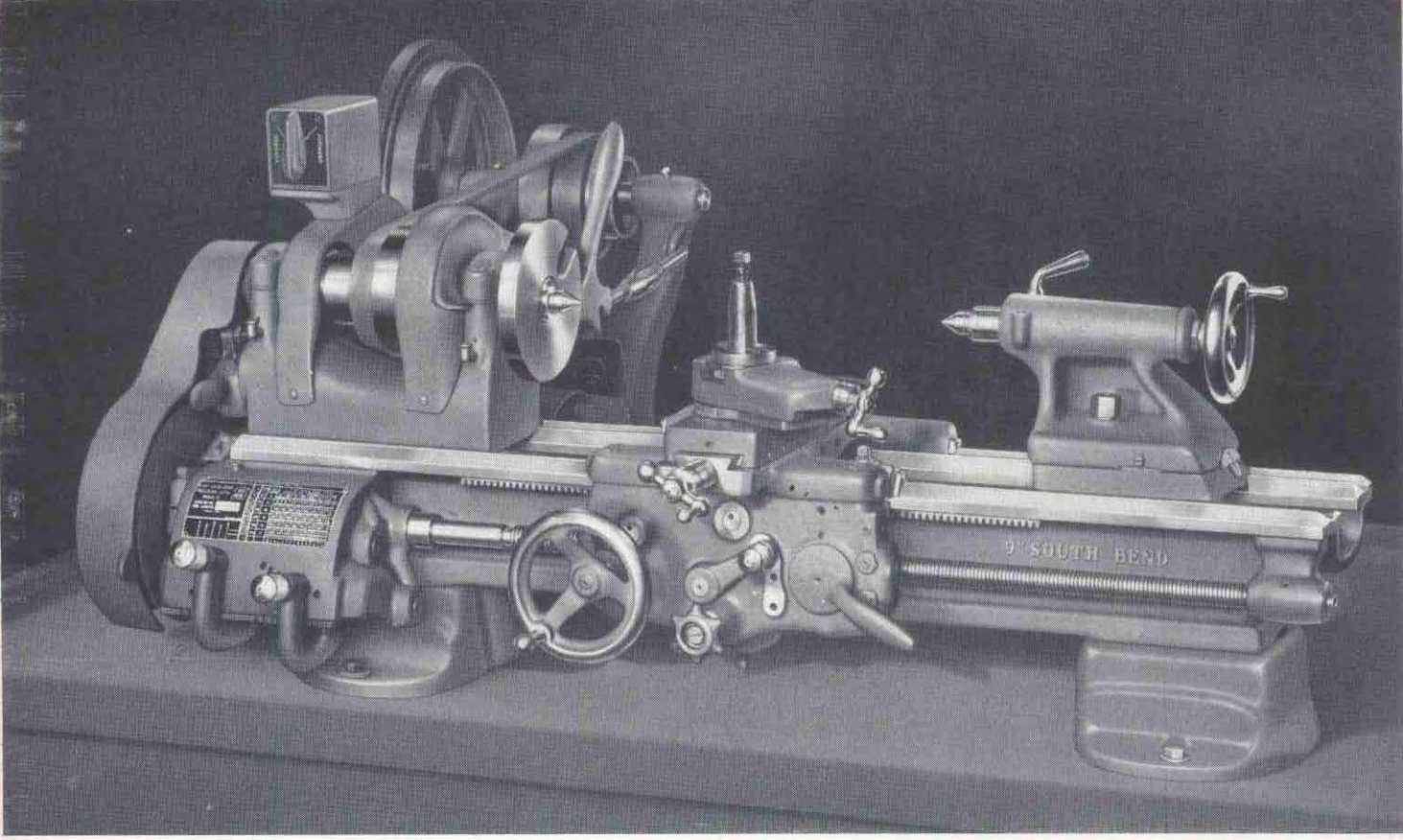
TAILSTOCK
- Size of center, Morse taper ..... No. 2
- Spindle travel ..... 2⅛"
- Each graduation on tailstock spindle ..... .001"
- Tailstock top set-over for taper turning ..... ⅝"

COMPOUND REST
- Cross slide travel ..... 5⅝"
- Angular hand feed of compound rest top slide ..... 2¼"

THREADS AND FEEDS
- Thread cutting range—48 pitches R.H. or L.H. ..... 4 to 224 per inch
- Longitudinal feeds through friction clutch—48 feeds R.H. or L.H. ..... .0015" to .0853"
- Cross-feeds through friction clutch—48 feeds ..... .0004" to .0255"
- Lead screw, 29° Acme thread ..... ¾" dia.—8 thrds.

TOOL POST
- Size of tool holder shank ..... ⅜" x 13/16"
- Size of cutter bit for tool holder ..... ¼" sq.

MOTOR
- Standard size of motor required ..... ½ h.p.



9-inch Model A *Precision* Bench Lathe

Horizontal Motor Drive—Back-Geared—Quick Change

The 9-inch Model A South Bend Lathe is a precision tool, capable of machining work to the exacting tolerances demanded in modern industry. It is recommended for the production of small accurate parts in the manufacturing plant, for precision work in the toolroom, for general use in the machine shop, laboratory, and shops of all kinds engaged in the machining of steel, cast iron, bronze, tool steel, fibre, plastics, and similar materials. Many practical attachments available simplify tooling.

Quick and easy selection of a desired thread cutting, turning, or facing feed is made by placing the two levers on the gear box in the positions indicated by the direct reading index chart. Direction of feed is changed by shifting the spring latch reverse gear lever conveniently located on the left end of the headstock. All gears are precision cut to assure accuracy and smooth, quiet operation.

The patented apron construction is unsurpassed for convenience, ease of operation, and efficiency. Power feeds are driven through worm gearing and are engaged by turning the clutch knob to the right. A large oil reservoir provides ample lubrication for the clutch and power feed gearing. The worm is driven by a spline in the lead screw so that the threads of the lead screw are used only when the half-nuts are engaged for cutting screw threads. An automatic safety interlock makes it impossible to damage the lathe by accidentally engaging two opposing feeds at the same time. The large handwheel is geared to the rack on the lathe bed for positioning the carriage and for hand-operated longitudinal feeds.

Graduations on the tailstock spindle permit drilling or reaming to a specified depth. The hardened tailstock center is automatically ejected when the spindle is fully retracted into the tailstock barrel.

Regular equipment included in price of lathe consists of: twelve-speed horizontal motor drive unit (patented); motor pulley with ¾" hole; V-belt; flat leather belt and lacing; power feed apron (patented); graduated compound rest; small face plate; heat-treated steel tool post; two 60-degree hardened tool steel centers; spindle sleeve; wrenches; quick change gear box; installation plan; and book "How to Run a Lathe." Bench and electrical equipment are not included in price of lathe.

9-inch Model A Bench Lathes with Horizontal Motor Drive

Catalog Number	Bed Length Feet	Between Centers Inches	Cubic Feet Boxed	Boxed Weight Pounds	Crated Weight Pounds	
CL644Y	3	16	17	500	390	
CL644Z	3½	22	17	515	404	
CL644A	4	28	19	530	420	
CL644R	4½	34	22	545	435	

Specifications of 9-inch Model A Bench Lathes

CAPACITY OF LATHE

Swing over bed and saddle wings	9¼"
Swing over saddle cross slide	5½"

SPINDLE SPEEDS (approximate, not exact)

	Direct Drive	Back-Geared
High speeds, r.p.m.	1270, 750, 446	250, 145, 86
Low speeds, r.p.m.	692, 410, 244	134, 81, 50

HEADSTOCK

Hole through spindle	¾"
Maximum collet capacity	½"
Spindle nose diameter and threads per inch	1½"-8
Size of center, Morse taper	No. 2
Width of cone pulley step for belt	1"
Small face plate diameter	5⅛"
Front spindle bearing, diameter	$1\frac{15}{16}$"

TAILSTOCK

Size of center, Morse taper	No. 2
Spindle travel	2½"
Each graduation on tailstock spindle	.001"
Tailstock top set-over for taper turning	⅜"

COMPOUND REST

Cross slide travel	5⅞"
Angular hand feed of compound rest top slide	2¼"

THREADS AND FEEDS

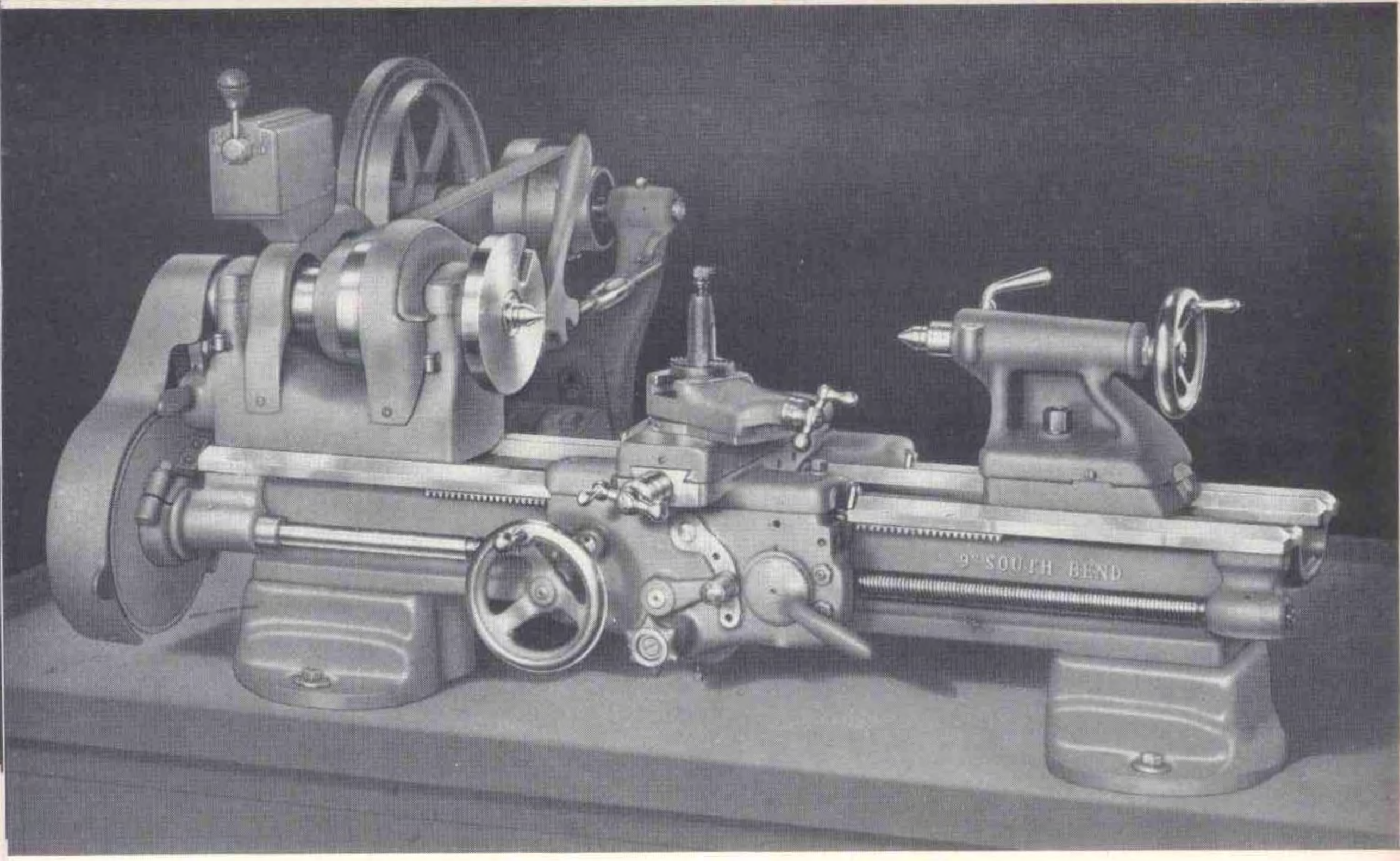
Thread cutting range—48 pitches R.H. or L.H.	4 to 224 per inch
Longitudinal feeds through friction clutch—48 feeds R.H. or L.H.	.0015" to .0853"
Cross-feeds through friction clutch—48 feeds	.0004" to .0255"
Lead screw, 29° Acme thread	¾" dia.—8 thrds.

TOOL POST

Size of tool holder shank	⅝" x $\frac{15}{16}$"
Size of cutter bit for tool holder	¼" sq.

MOTOR

Standard size of motor required	½ h.p.



9-inch Model B *Precision* Bench Lathe

Horizontal Motor Drive—Back-Geared—Power Cross-Feeds

This is a popular model for manufacturing operations and other work which does not require frequent changes of threads and feeds. Except that it does not have the quick change gear box it is the same as the Model A Lathe shown on the preceding page.

A set of independent change gears is supplied with each lathe for cutting various pitches of screw threads and for power longitudinal and cross-feeds. An index chart attached to the lathe shows the arrangement of the gears for cutting 45 pitches of screw threads, 4 to 160 per inch and 26 power longitudinal feeds .0021″ to .0155″. Power cross-feeds range from .0009″ to .0046″.

The patented apron construction is unsurpassed for convenience, ease of operation, and efficiency. Power feeds are driven through worm gearing and are engaged by turning the clutch knob to the right. A large oil reservoir provides ample lubrication for the clutch and power feed gearing. The worm is driven by a spline in the lead screw so that the threads of the lead screw are used only when the half-nuts are engaged for cutting screw threads. An automatic safety interlock makes it impossible to damage the lathe by accidentally engaging two opposing feeds at the same time. The large handwheel is geared to the rack on the lathe bed for positioning the carriage and for hand-operated longitudinal feeds.

Large diameter easy reading graduated collars on cross-feed and compound rest screws save time and effort in positioning the cutting tool. The compound rest swivel has clear cut accurately divided graduations and may be set at any angle for machining bevels and short tapers. The carriage lock for facing operations is located on the right side of the front saddle wing.

Regular equipment included in price of lathe consists of: twelve-speed horizontal motor drive unit (patented); motor pulley with ¾″ hole; V-belt; flat leather belt and lacing; power feed apron (patented); graduated compound rest; small face plate; heat-treated steel tool post; two 60-degree hardened tool steel centers; spindle sleeve; wrenches; set of change gears; installation plan; and book "How to Run a Lathe." Bench and electrical equipment are not included in price of lathe.

9-inch Model B Bench Lathes with Horizontal Motor Drive

Catalog Number	Bed Length Feet	Between Centers Inches	Cubic Feet Boxed	Boxed Weight Pounds	Crated Weight Pounds	
CL677Y	3	16	17	485	375	
CL677Z	3½	22	17	500	390	
CL677A	4	28	19	515	405	
CL677R	4½	34	22	530	420	

Specifications of 9-inch Model B Bench Lathes

CAPACITY OF LATHE

Swing over bed and saddle wings ..... 9¼″
Swing over saddle cross slide ..... 5½″

SPINDLE SPEEDS (approximate, not exact)

	Direct Drive	Back-Geared
High speeds, r.p.m.	1270, 750, 446	250, 145, 86
Low speeds, r.p.m.	692, 410, 244	134, 81, 50

HEADSTOCK

Hole through spindle ..... ¾″
Maximum collet capacity ..... ½″
Spindle nose diameter and threads per inch ..... 1½″-8
Size of center, Morse taper ..... No. 2
Width of cone pulley step for belt ..... 1″
Small face plate diameter ..... 5⅛″
Front spindle bearing, diameter ..... 1 15/16″

TAILSTOCK

Size of center, Morse taper ..... No. 2
Spindle travel ..... 2⅛″
Each graduation on tailstock spindle ..... 1/16″
Tailstock top set-over for taper turning ..... ⅝″

COMPOUND REST

Cross slide travel ..... 5⅞″
Angular hand feed of compound rest top slide ..... 2¼″

THREADS AND FEEDS

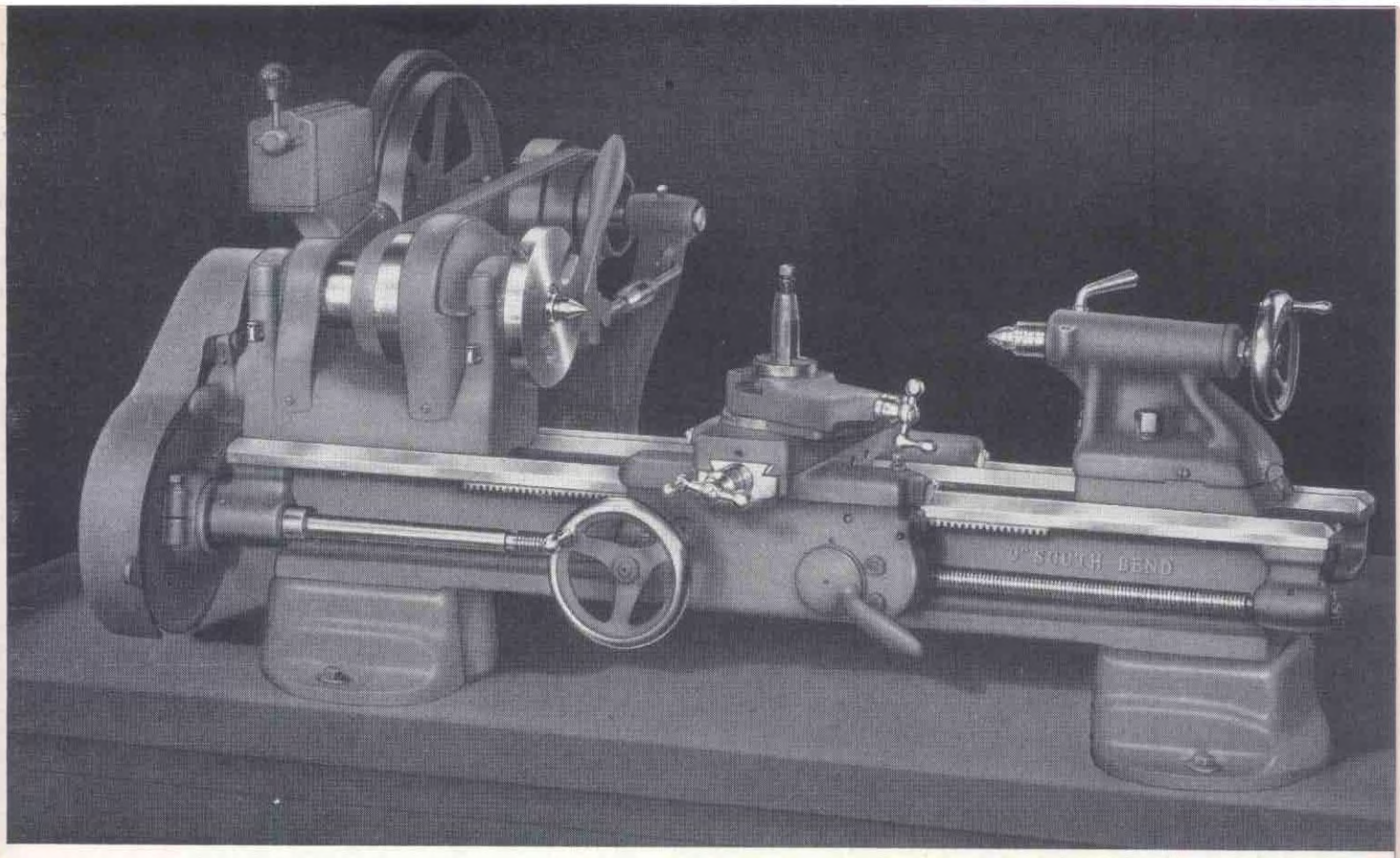
Thread cutting range—45 pitches R.H. or L.H. ..... 4 to 160 per inch
Longitudinal feeds through friction clutch—26 feeds R.H. or L.H. ..... .0021″ to .0155″
Cross-feeds through friction clutch—23 feeds ..... .0009″ to .0046″
Lead screw, 29° Acme thread ..... ¾″ dia.—8 thrds.

TOOL POST

Size of tool holder shank ..... ⅜″ x 13/16″
Size of cutter bit for tool holder ..... ¼″ sq.

MOTOR

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



9-inch Model C *Precision* Bench Lathe

Horizontal Motor Drive—Back-Geared—Hand Cross-Feed

One of the most attractively priced models, this lathe is especially popular for repair and maintenance work in small shops. It is also widely used for manufacturing small parts. Groups of six or more lathes are often mounted on a single bench to save floor space.

Change gears supplied with the lathe provide for cutting 45 pitches of screw threads ranging from 4 to 160 per inch, right or left-hand. The change gears are also used for lead screw driven power longitudinal turning feeds .0021" to .0156". A chart attached to the lathe shows the arrangement of the gears for all screw threads and power feeds. Cross-feeds are hand-operated.

The horizontal motor drive (patented) provides a series of twelve spindle speeds approximately 50 to 1270 r.p.m. Motor and driving mechanism are mounted on a tilting cradle back of the lathe. Power is transmitted from the motor to the countershaft cone pulley by a V-belt, and to the lathe spindle by a smooth running flat leather belt. A turnbuckle mechanism is provided so that the belt tension can be easily adjusted to transmit the required amount of power with maximum efficiency. A quick acting belt tension release lever permits releasing the cone pulley belt tension for easy shifting of the belt to change spindle speeds.

Regular equipment included in price of lathe consists of: twelve-speed horizontal motor drive unit (patented); motor pulley with ¾" hole; V-belt; flat leather belt and lacing; power feed apron; graduated compound rest; small face plate; heat-treated steel tool post; two 60-degree hardened tool steel centers; spindle sleeve; wrenches; set of change gears; installation plan; and book "How to Run a Lathe." Bench and electrical equipment are not included in price of lathe.

9-inch Model C Bench Lathes with Horizontal Motor Drive

Catalog Number	Bed Length Feet	Between Centers Inches	Cubic Feet Boxed	Boxed Weight Pounds	Crated Weight Pounds	
CL615Y	3	16	17	475	365	
CL615Z	3½	22	17	490	380	
CL615A	4	28	19	505	395	
CL615R	4½	34	22	520	410	

Specifications of 9-inch Model C Bench Lathes

CAPACITY OF LATHE

Swing over bed and saddle wings	9¼"
Swing over saddle cross slide	5½"

SPINDLE SPEEDS (approximate, not exact)

	Direct Drive	Back-Geared
High speeds, r.p.m.	1270, 750, 446	250, 145, 86
Low speeds, r.p.m.	692, 410, 244	134, 81, 50

HEADSTOCK

Hole through spindle	¾"
Maximum collet capacity	½"
Spindle nose diameter and threads per inch	1½"-8
Size of center, Morse taper	No. 2
Width of cone pulley step for belt	1"
Small face plate diameter	5⅛"
Front spindle bearing, diameter	1 15/16"

TAILSTOCK

Size of center, Morse taper	No. 2
Spindle travel	2⅜"
Each graduation on tailstock spindle	.001"
Tailstock top set-over for taper turning	⅝"

COMPOUND REST

Cross slide travel	5⅛"
Angular hand feed of compound rest top slide	2¼"

THREADS AND FEEDS

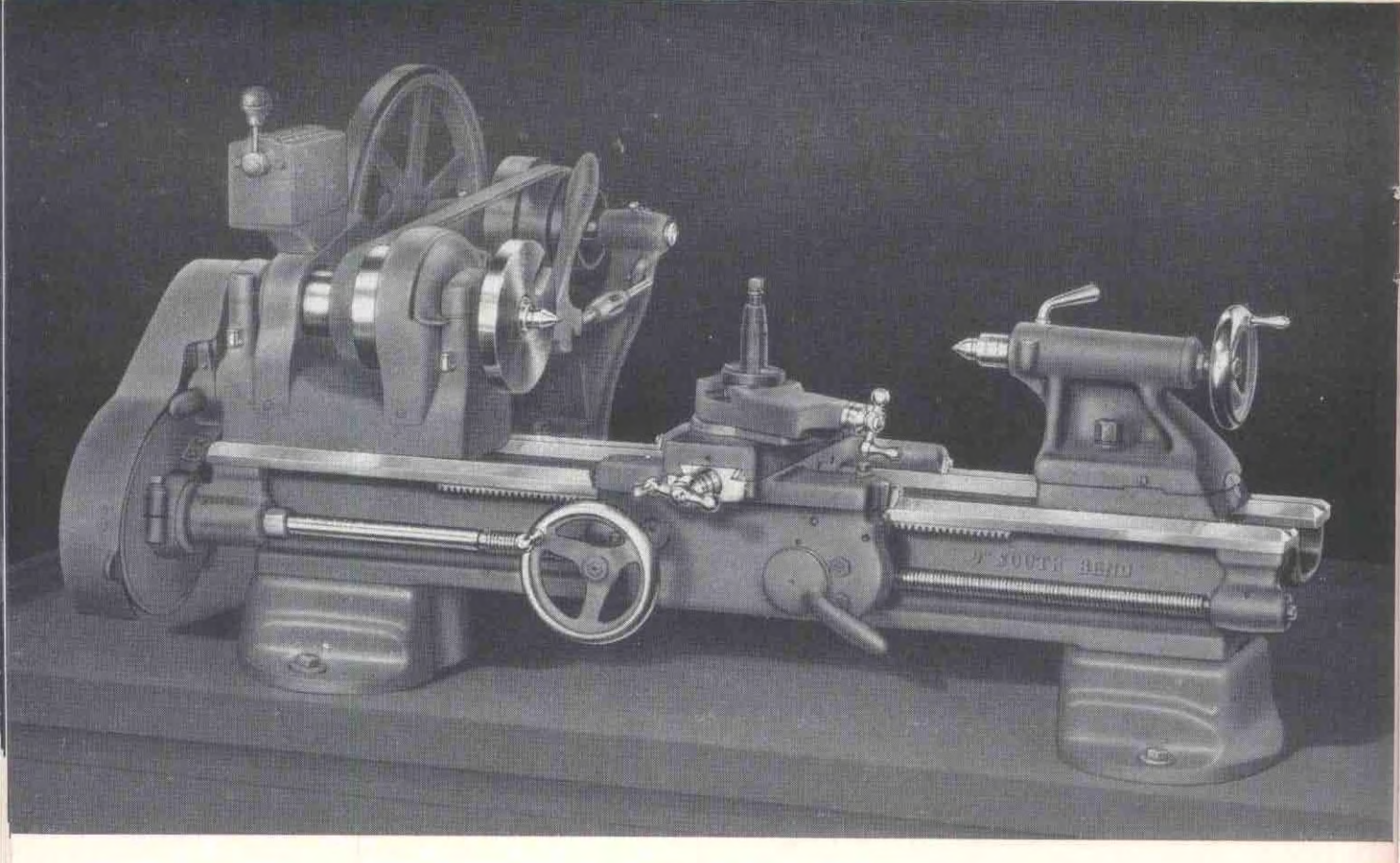
Thread cutting range—45 pitches R.H. or L.H.	4 to 160 per inch
Longitudinal feeds through half-nuts and lead screw—14 feeds R.H. or L.H.	.0021" to .0156"
Cross-feed	Hand-operated
Lead screw, 29° Acme thread	⅜" dia.—8 thrds.

TOOL POST

Size of tool holder shank	⅜" x 13/16"
Size of cutter bit for tool holder	¼" sq.

MOTOR

Standard size of motor required	½ h.p.



9-inch Six-Speed *Precision* Bench Lathes

Model A—Model B—Model C

The 9-inch Model C Bench Lathe with six-speed horizontal motor drive is illustrated above. The 9-inch Model A and Model B Bench Lathes are also available with this drive. Except for the drive equipment, these lathes are the same as corresponding models described on preceding pages.

The six-speed drive provides a series of six spindle speeds ranging from 50 to 680 r.p.m., (approximately). This drive is recommended for those who do not need the higher spindle speeds provided by the twelve-speed drive. The drive unit is made in two sizes, to accommodate either a ¼ h.p. or a ½ h.p. motor. The motor and drive unit are mounted on a tilting cradle back of the lathe. Power is transmitted from the motor to the countershaft cone pulley by a V-belt, and to the lathe spindle by a smooth running flat leather belt. A turnbuckle mechanism is provided so that the belt tension can be easily adjusted to transmit the required amount of power with maximum efficiency. A quick acting belt tension release lever permits releasing the belt tension for easy shifting of the belt to change spindle speeds.

The drive equipment, included in the price of the lathe, consists of: six-speed horizontal motor drive unit for ¼ h.p. or ½ h.p. motor; motor pulley with ½" hole (for ¼ h.p. motor) or ¾" hole (for ½ h.p. motor); V-belt; flat leather belt; and lacing.

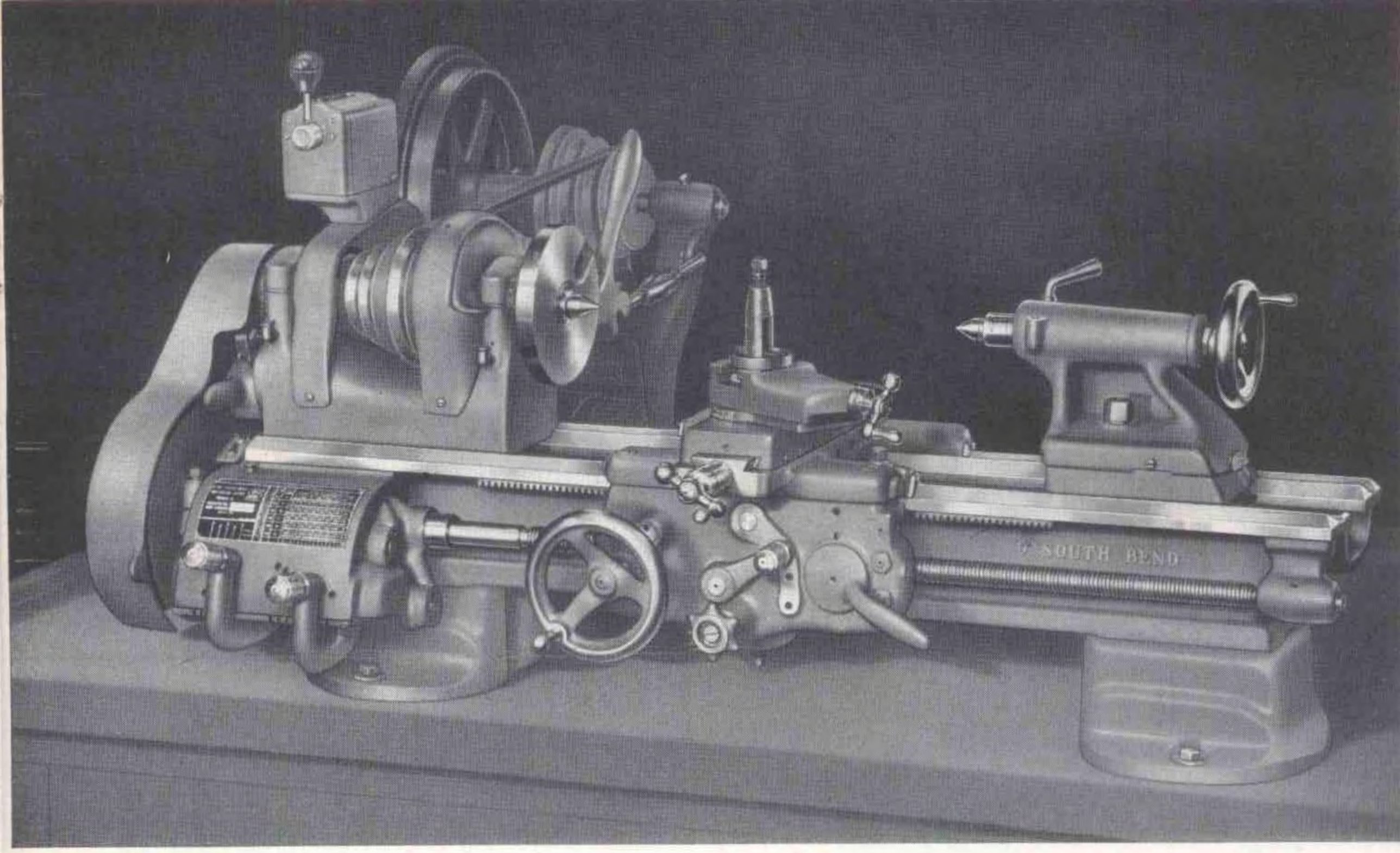
Regular equipment is the same as for corresponding models with twelve-speed drive as listed on preceding pages. Bench and electrical equipment are not included in price of lathe.

9-inch Six-Speed Bench Lathes
With Drive Unit for ¼ h.p. Motor

Catalog Number	Bed Length Feet	Between Centers Inches	Cubic Feet Boxed	Boxed Weight Pounds	Crated Weight Pounds
Model A Lathes					
CL444Y	3	16	17	465	355
CL444Z	3½	22	17	480	375
CL444A	4	28	19	500	395
CL444R	4½	34	22	525	415
Model B Lathes					
CL477Y	3	16	17	450	345
CL477Z	3½	22	17	465	365
CL477A	4	28	19	490	385
CL477R	4½	34	22	520	405
Model C Lathes					
CL415Y	3	16	17	440	335
CL415Z	3½	22	17	460	355
CL415A	4	28	19	490	375
CL415R	4½	34	22	520	395

9-inch Six-Speed Bench Lathes
With Drive Unit for ½ h.p. Motor

Catalog Number	Bed Length Feet	Between Centers Inches	Cubic Feet Boxed	Boxed Weight Pounds	Crated Weight Pounds
Model A Lathes					
CL2444Y	3	16	17	490	380
CL2444Z	3½	22	17	510	400
CL2444A	4	28	19	530	420
CL2444R	4½	34	22	550	440
Model B Lathes					
CL2477Y	3	16	17	480	370
CL2477Z	3½	22	17	500	390
CL2477A	4	28	19	520	410
CL2477R	4½	34	22	540	430
Model C Lathes					
CL2415Y	3	16	17	470	360
CL2415Z	3½	22	17	490	380
CL2415A	4	28	19	510	400
CL2415R	4½	34	22	530	420



9-inch V-Belt Drive *Precision* Bench Lathe

8 or 16 Spindle Speeds—Models A, B, and C

The 9-inch Model A V-belt Horizontal Motor Driven Bench Lathe is illustrated above. The Model B and Model C Lathes are also made with this drive. Except for the complete V-belt drive equipment, these lathes are the same as corresponding models described on the preceding pages.

The V-belt drive provides a series of eight spindle speeds 54 to 640 r.p.m., approximately, or sixteen spindle speeds 54 to 1200 r.p.m., approximately. Power is transmitted from the motor to the countershaft by a V-belt, and from the countershaft to the lathe spindle by a second V-belt. The V-belt cone pulleys on the countershaft and lathe spindle have four steps. A quick acting belt tension release permits releasing the tension of the cone pulley belt for shifting to change spindle speeds. Since the V-belt is endless, the headstock and countershaft must be disassembled to replace the cone pulley V-belt.

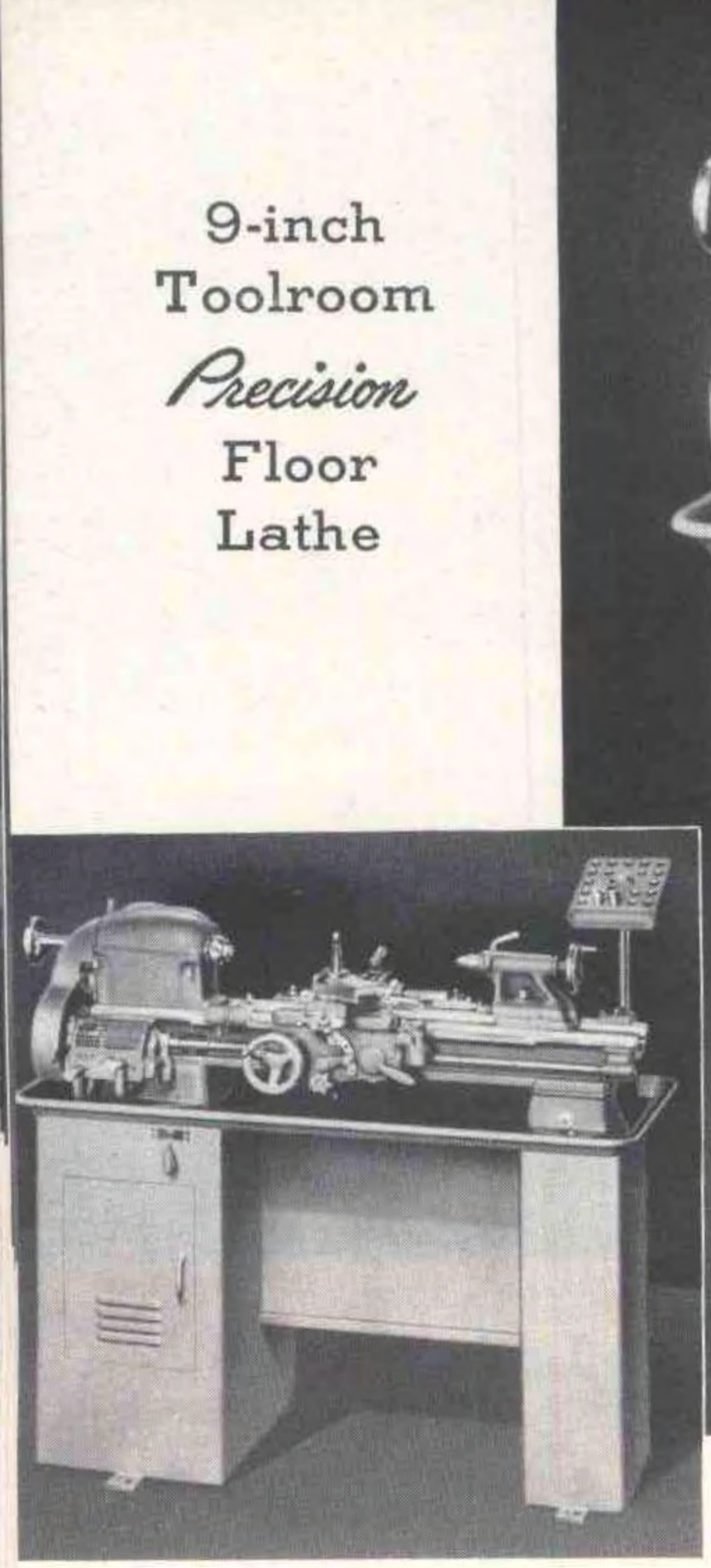
Drive equipment included in the price of the lathe consists of: horizontal motor drive unit (patented) for ¼ h.p. or ½ h.p. motor; motor pulley with ½" or ¾" hole; V-belt cone pulleys for headstock and drive unit; and V-belts.

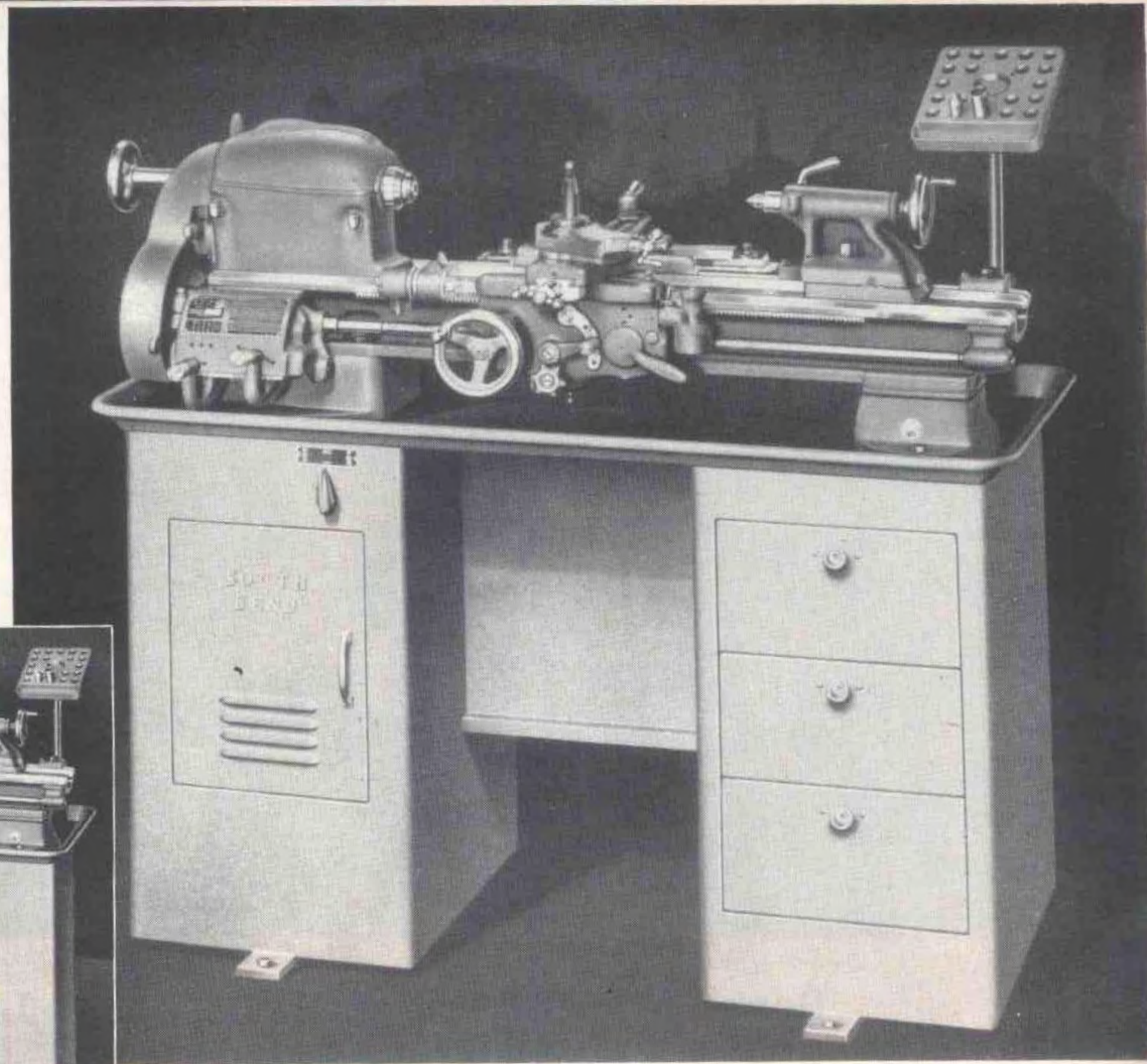
Regular equipment included in price consists of: power feed apron (patented) on models A and B or plain apron on model C; quick change gear box on model A or set of change gears on models B and C; graduated compound rest; face plate; tool post; two 60-degree centers; spindle sleeve; wrenches; installation plan; and book "How to Run a Lathe." Bench and electrical equipment are not included in price of lathe.

9-inch V-Belt Drive Bench Lathes

Bed Length Feet	Between Centers Inches	16-Speed Drive for ½ h.p. Motor				8-Speed Drive for ½ h.p. Motor				8-Speed Drive for ¼ h.p. Motor			
		Catalog Number	Cubic Feet Boxed	Boxed Weight Pounds	Crated Weight Pounds	Catalog Number	Cubic Feet Boxed	Boxed Weight Pounds	Crated Weight Pounds	Catalog Number	Cubic Feet Boxed	Boxed Weight Pounds	Crated Weight Pounds
Model A Lathes with V-Belt Drive													
3	16	CL744Y	17	500	390	CL2544Y	17	490	380	CL544Y	17	465	355
3½	22	CL744Z	17	515	405	CL2544Z	17	510	400	CL544Z	17	480	375
4	28	CL744A	19	530	420	CL2544A	19	530	420	CL544A	19	500	395
4½	34	CL744R	22	545	435	CL2544R	22	550	440	CL544R	22	525	415
Model B Lathes with V-Belt Drive													
3	16	CL777Y	17	485	375	CL2577Y	17	480	370	CL577Y	17	450	345
3½	22	CL777Z	17	500	390	CL2577Z	17	500	390	CL577Z	17	465	365
4	28	CL777A	19	515	405	CL2577A	19	520	410	CL577A	19	490	385
4½	34	CL777R	22	530	420	CL2577R	22	540	430	CL577R	22	520	405
Model C Lathes with V-Belt Drive													
3	16	CL715Y	17	475	365	CL2515Y	17	470	360	CL515Y	17	440	335
3½	22	CL715Z	17	490	380	CL2515Z	17	490	380	CL515Z	17	460	355
4	28	CL715A	19	505	395	CL2515A	19	510	400	CL515A	19	490	375
4½	34	CL715R	22	520	410	CL2515R	22	530	420	CL515R	22	520	395

9-inch Toolroom *Precision* Floor Lathe





Patented

Precision Lead Screw—Plain Taper Attachment

Convenient and efficient in operation, this excellently designed model is one of our finest 9-inch swing lathes. 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 and finished in gray wrinkle finish enamel. It is available with three drawers as shown in the large illustration, or without the drawers. Each drawer is 10¾" x 5½" x 14" inside and is fitted with lock and key. A built-in chip pan with ⅝" bead around the edge forms the top of the metal column base.

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.

Toolroom attachments included in price of lathe consist of: precision lead screw; handwheel type draw-in collet chuck attachment (without collets); collet rack; taper attachment; thread dial indicator; thread cutting stop; large face plate; and micrometer carriage stop.

Regular equipment included in price of lathe consists of: metal column base with chip pan; underneath belt motor drive unit, (patented); motor pulley with ¾" hole; V-belt; flat leather belt; power feed apron (patented); graduated compound rest; 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.

9-inch Toolroom Floor Lathes
With Underneath Motor Drive and Metal Column Base

Catalog Number	Bed Length Feet	Between Centers Inches	Cubic Feet Boxed	Boxed Weight Pounds	Crated Weight Pounds	
On Metal Column Base with Three Drawers						
CL8344ZD	3½	22	47	1090	820	
On Metal Column Base Without Drawers						
CL8344Z	3½	22	47	1080	810	

Specifications of 9-inch Toolroom Floor Lathes

CAPACITY OF LATHE
- Swing over bed and saddle wings ..... 9¼"
- Swing over saddle cross slide ..... 5"

SPINDLE SPEEDS (approximate, not exact)

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

HEADSTOCK
- Hole through center ..... ¾"
- Maximum collet capacity ..... ½"
- Spindle nose diameter and threads per inch ..... 1½"-8
- Size of center, Morse taper ..... No. 2
- Width of cone pulley step for belt ..... 1"
- Large face plate diameter ..... 7⅝"
- Small face plate diameter ..... 5⅛"
- Front spindle bearing, diameter ..... 1 13/16"

TAILSTOCK
- Size of center, Morse taper ..... No. 2
- Spindle travel ..... 2⅛"
- Each graduation on tailstock spindle ..... 1/16"
- Tailstock top set-over for taper turning ..... ⅝"

COMPOUND REST
- Cross slide travel ..... 5⅝"
- Angular hand feed of compound rest top slide ..... 2¼"

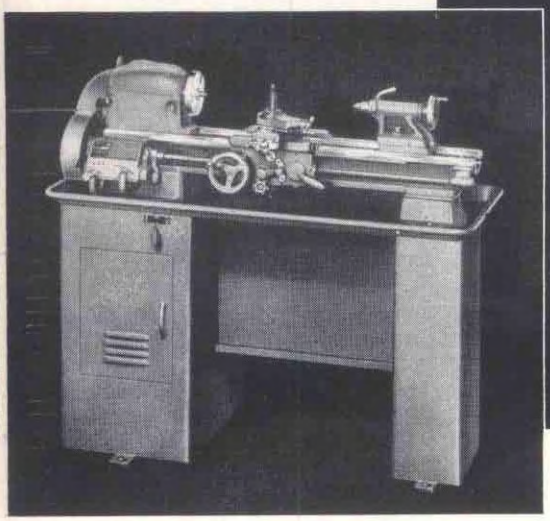
THREADS AND FEEDS
- Thread cutting range—48 pitches R.H. or L.H. ..... 4 to 224 per inch
- Longitudinal feeds through friction clutch—48 feeds R.H. or L.H. ..... .0015" to .0853"
- Cross-feeds through friction clutch—48 feeds ..... .0004" to .0255"
- Lead screw, 29° Acme thread ..... ¾" dia.—8 thrds.

TOOL POST
- Size of tool holder shank ..... ⅝" x 13/16"
- Size of cutter bit for tool holder ..... ¼" sq.

MOTOR
- Standard size of motor required ..... ½ h.p.

9-inch *Precision* Floor Lathes

Models A, B, & C



Patented

Underneath Motor Drive—Back-Geared—Belt Drive

These lathes are the same as corresponding models of 9-inch Bench Lathes, except for the underneath motor drive and the necessary alterations in the headstock. Fully enclosed in the metal column base, the motor and driving mechanism are protected from dust, dirt, and chips. Base is available with three drawers, 10¾" x 5½" x 14" as shown in large illustration, or without drawers. Twelve spindle speeds, approximately 50 to 1365 r.p.m. are provided. Regular equipment included in price of lathe is same as for corresponding models of bench lathes. Electrical equipment is not included in price of lathe.

9-inch Lathes on Metal Column Base With Three Drawers

Catalog Number	Bed Length Feet	Between Centers Inches	Cubic Feet Boxed	Boxed Weight Pounds	Crated Weight Pounds
Model A 9-inch Lathe					
CL344ZD	3½	22	47	1030	700
Model B 9-inch Lathe					
CL377ZD	3½	22	47	1020	685
Model C 9-inch Lathe					
CL315ZD	3½	22	47	1010	675

9-inch Lathes on Metal Column Base Without Drawers

Catalog Number	Bed Length Feet	Between Centers Inches	Cubic Feet Boxed	Boxed Weight Pounds	Crated Weight Pounds
Model A 9-inch Lathe					
CL344Z	3½	22⅛	47	1020	695
Model B 9-inch Lathe					
CL377Z	3½	22⅛	47	1010	680
Model C 9-inch Lathe					
CL315Z	3½	22⅛	47	1000	670

Specifications of 9-inch Underneath Motor Driven Lathes

CAPACITY OF LATHE
Swing over bed and saddle wings ..... 9¼"
Swing over saddle cross slide ..... 5½"

SPINDLE SPEEDS (approximate, not exact)

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

HEADSTOCK
Hole through spindle ..... ¾"
Maximum collet capacity ..... ½"
Spindle nose diameter and threads per inch ..... 1½"-8
Size of center, Morse taper ..... No. 2
Width of cone pulley step for belt ..... 1"
Small face plate diameter ..... 5⅛"
Front spindle bearing, diameter ..... 1 15/16"

TAILSTOCK
Size of center, Morse taper ..... No. 2
Spindle travel ..... 2⅛"
Each graduation on tailstock spindle ..... 1/16"
Tailstock top set-over for taper turning ..... ⅜"

COMPOUND REST
Cross slide travel ..... 5⅛"
Angular hand feed of compound rest top slide ..... 2¼"

THREAD CUTTING RANGE
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 ..... ¾" dia.—8 thrds.

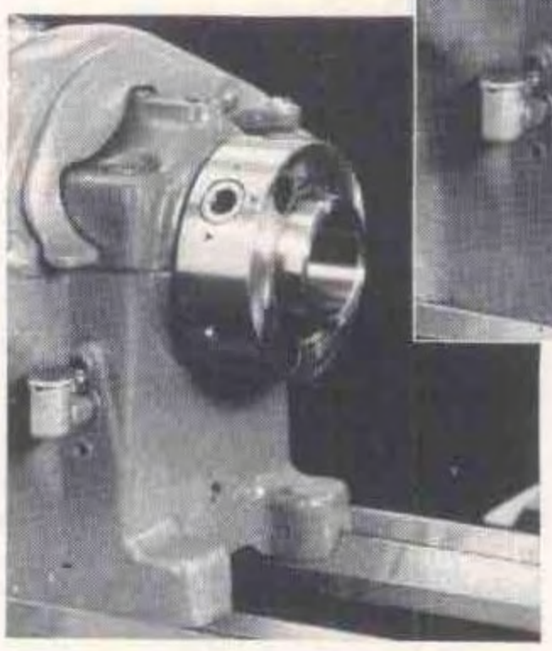
POWER LONGITUDINAL FEEDS
Model A—48 feeds ..... .0015" to .0853"
Model B—26 feeds ..... .0021" to .0155"
Model C—14 feeds ..... .0021" to .0156"

POWER CROSS-FEEDS
Model A—48 feeds ..... .0004" to .0255"
Model B—23 feeds ..... .001" to .0046"

TOOL POST
Size of tool holder shank ..... ⅜" x 13/16"
Size of cutter bit for tool holder ..... ¼" sq.

MOTOR
Standard size of motor required ..... ½ h.p.

Right—Type L Long Taper Key Drive Spindle Nose.



Left—Type D1 Cam Lock Spindle Nose.

Type L and Type D1 Spindles for South Bend Lathes

All South Bend Lathes, 10"-1" Collet and larger, can be supplied with Type L Long Taper Key Drive Spindles, or 4" Type D1 Cam Lock Spindles in lieu of the regular threaded spindles at extra cost. Price includes fitting large and small face plates which are supplied with the lathe, but does not include fitting chucks, draw-in collet attachments, or other accessories. 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.

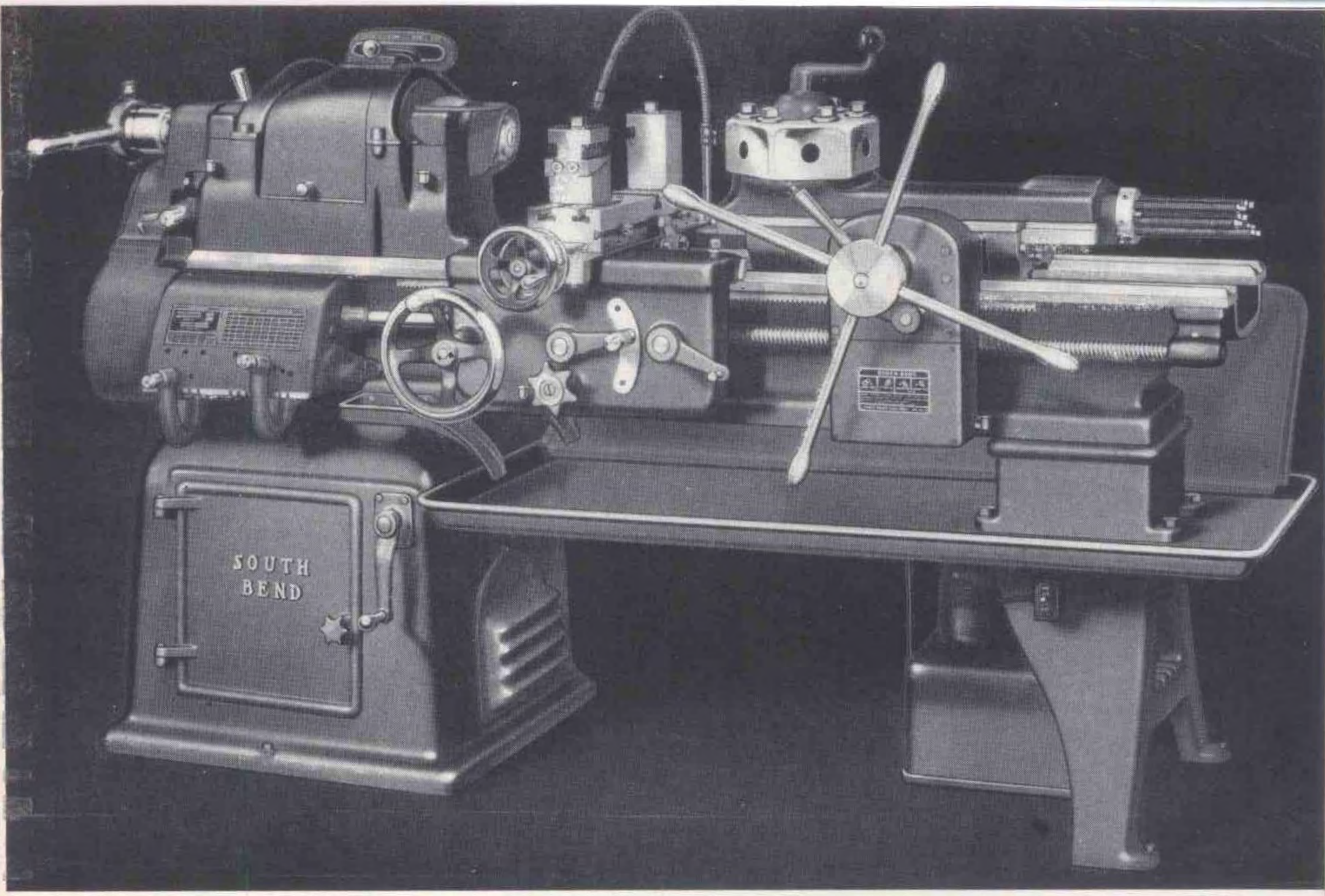
Size of Lathe	Long Taper Key Drive Spindle Nose In Lieu of Regular Threaded Spindle Nose			Cam Lock Spindle Nose In Lieu of Regular Threaded Spindle Nose		
	Cat. No.	Size		Cat. No.	Size	
10"-1" C. & Ser. 1000	CA8050L	00		CB8050L	4"	
13"-1" Collet	CA8050T	00		CB8050T	4"	
14½"-1" Collet	CA8050F	00		CB8050F	4"	
16", 16-24", & 2-H	CA8050H	00		CB8050H	4"	

Accessories for Lathes With Type L Long Taper Key Drive Spindles

Description	For 10" Lathe		For 13" Lathe		For 14½" Lathe		For 16", 16-24", 2-H	
	Catalog Number		Catalog Number		Catalog Number		Catalog Number	
Handwheel Collet Attachment	CA4306L		CA4306T		CA4306F		CA4306H	
Handlever Collet Attachment	CA5206L		CA5206T		CA5206F		CA5206H	
Closer for Step Chucks 3" and 4" maximum capacity	CA6309LH		CA6309LH		CA6309LH		CA6309LH	
Closer for Step Chucks 5" and 6" maximum capacity	CA6311LH		CA6311LH		CA6311LH		CA6311LH	
Small Face Plate	CA2175L		CA2175T		CA2175FH		CA2175FH	
Large Face Plate	CA2180L		CA2180T		CA2180FH		CA2180FH	
Fixture Plate	CA46LT		CA46LT		CA46FH		CA46FH	
6" 4-Jaw Independent Chuck	CA4006		.....		.....		.....	
6" 4-Jaw Independent Chuck	CA4206		CA4206		.....		.....	
7½" 4-Jaw Independent Chuck	CA4207		CA4207		CA4207		CA4207	
9" 4-Jaw Independent Chuck	.....		CA4209		CA4209		CA4209	
10" 4-Jaw Independent Chuck	.....		.....		CA4210		CA4210	
12" 4-Jaw Independent Chuck	.....		.....		.....		CA4212	
5" 3-Jaw Universal Chuck with one set of reversible jaws	CA6005		CA6005		.....		.....	
5" 3-Jaw Universal Chuck with two sets of jaws—one pinion	CA3005		CA3005		.....		.....	
5" 3-Jaw Universal Chuck with two sets of jaws—three pinions	CA3505		CA3505		CA3505		CA3505	
6" 3-Jaw Universal Chuck with one set of reversible jaws	CA6506		CA6506		CA6506		CA6506	
6" 3-Jaw Universal Chuck with two sets of jaws	CA3506		CA3506		CA3506		CA3506	
7½" 3-Jaw Universal Chuck with two sets of jaws	.....		CA3507		CA3507		CA3507	
9" 3-Jaw Universal Chuck with two sets of jaws	.....		.....		CA3509		CA3509	
Chuck Plate fitted to chuck	CA2935		CA2935		CA2935		CA2935	
Semi-Machined Chuck Plate—5"	CA2704RH		CA2704RH		CA2704RH		CA2704RH	
Semi-Machined Chuck Plate—6¼"	CA2707RH		CA2707RH		CA2707RH		CA2707RH	
Semi-Machined Chuck Plate—9"	CA2709RH		CA2709RH		CA2709RH		CA2709RH	
Collet Splash Guard	CA5223L		CA5223T		CA5223F		CA5223H	

Accessories for Lathes With 4" Type D1 Cam Lock Spindles

Description	For 10" Lathe		For 13" Lathe		For 14½" Lathe		For 16", 16-24", 2-H	
	Catalog Number		Catalog Number		Catalog Number		Catalog Number	
Handwheel Collet Attachment	CB4306L		CB4306T		CB4306F		CB4306H	
Handlever Collet Attachment	CB5206L		CB5206T		CB5206F		CB5206H	
Closer for Step Chucks 3" and 4" maximum capacity	CB6309LH		CB6309LH		CB6309LH		CB6309LH	
Closer for Step Chucks 5" and 6" maximum capacity	CB6311LH		CB6311LH		CB6311LH		CB6311LH	
Small Face Plate	CB2175L		CB2175T		CB2175FH		CB2175FH	
Large Face Plate	CB2180L		CB2180T		CB2180FH		CB2180FH	
Fixture Plate	CB46LT		CB46LT		CB46FH		CB46FH	
6" 4-Jaw Independent Chuck	CB4006		.....		.....		.....	
6" 4-Jaw Independent Chuck	CB4206		CB4206		.....		.....	
7½" 4-Jaw Independent Chuck	CB4207		CB4207		CB4207		CB4207	
9" 4-Jaw Independent Chuck	.....		CB4209		CB4209		CB4209	
10" 4-Jaw Independent Chuck	.....		.....		CB4210		CB4210	
12" 4-Jaw Independent Chuck	.....		.....		.....		CB4212	
5" 3-Jaw Universal Chuck with one set of reversible jaws	CB6005		CB6005		.....		.....	
5" 3-Jaw Universal Chuck with two sets of jaws—one pinion	CB3005		CB3005		.....		.....	
5" 3-Jaw Universal Chuck with two sets of jaws—three pinions	CB3505		CB3505		CB3505		CB3505	
6" 3-Jaw Universal Chuck with one set of reversible jaws	CB6506		CB6506		CB6506		CB6506	
6" 3-Jaw Universal Chuck with two sets of jaws	CB3506		CB3506		CB3506		CB3506	
7½" 3-Jaw Universal Chuck with two sets of jaws	.....		CB3507		CB3507		CB3507	
9" 3-Jaw Universal Chuck with two sets of jaws	.....		.....		CB3509		CB3509	
Chuck Plate fitted to chuck	CB2935		CB2935		CB2935		CB2935	
Semi-Machined Chuck Plate—5"	CB2704RH		CB2704RH		CB2704RH		CB2704RH	
Semi-Machined Chuck Plate—6¼"	CB2707RH		CB2707RH		CB2707RH		CB2707RH	
Semi-Machined Chuck Plate—9"	CB2709RH		CB2709RH		CB2709RH		CB2709RH	
Collet Splash Guard	CB5223L		CB5223T		CB5223F		CB5223H	



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

No. 2-H Turret Lathe

Power Feed Carriage and Turret

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

The universal carriage has 48 power cross-feeds, 48 power longitudinal feeds, and 48 thread cutting feeds ranging from 4 to 224 per inch. All changes are made through the quick change gear box at the headstock end of the lathe. Front and back tool blocks are supplied on the screw feed cross slide and a 4-way turret tool block is available to order. The large diameter micrometer graduated collar on the cross slide handwheel permits adjusting the cutting tools with extreme accuracy.

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

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

Equipment included in the price of lathe consists of: universal carriage with screw feed double tool slide having front and rear square tool blocks; power feed ram-type turret; quick change gear box; oil pan; coolant return assembly; splash guards; wrenches; and installation plan.

No. 2-H Turret Lathes

Catalog Number	Bed Length Feet	Cubic Feet Boxed	Boxed Weight Pounds	Crated Weight Pounds	
CL2CT	6	112	3175	2810	
CL2DT	7	127	3300	2900	

Note—Electrical equipment, handlever collet attachment, coolant reservoir, coolant pump, splash pan, and piping are not included in price of lathe.

Specifications of No. 2-H Turret Lathes

CAPACITY OF LATHE

Hole through spindle ..... 1⅜"
Swing over double tool cross slide ..... 6⅞"
Swing over bed and saddle wings ..... 16¼"
Width of lathe bed ..... 11⅝"
Spindle nose diameter and threads per inch ..... 2⅜"-6
Maximum collet capacity through handlever collet chuck ..... 1"

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 ..... 1½"
Center of turret hole to top of turret slide ..... 2½"
Effective feed of turret slide ..... 5⅞"
Distance between opposite flats ..... 9⅜"
Maximum distance between spindle nose and turret face at beginning of indexing movement ..... 6 ft. bed 28¼", 7 ft. bed 40¼"

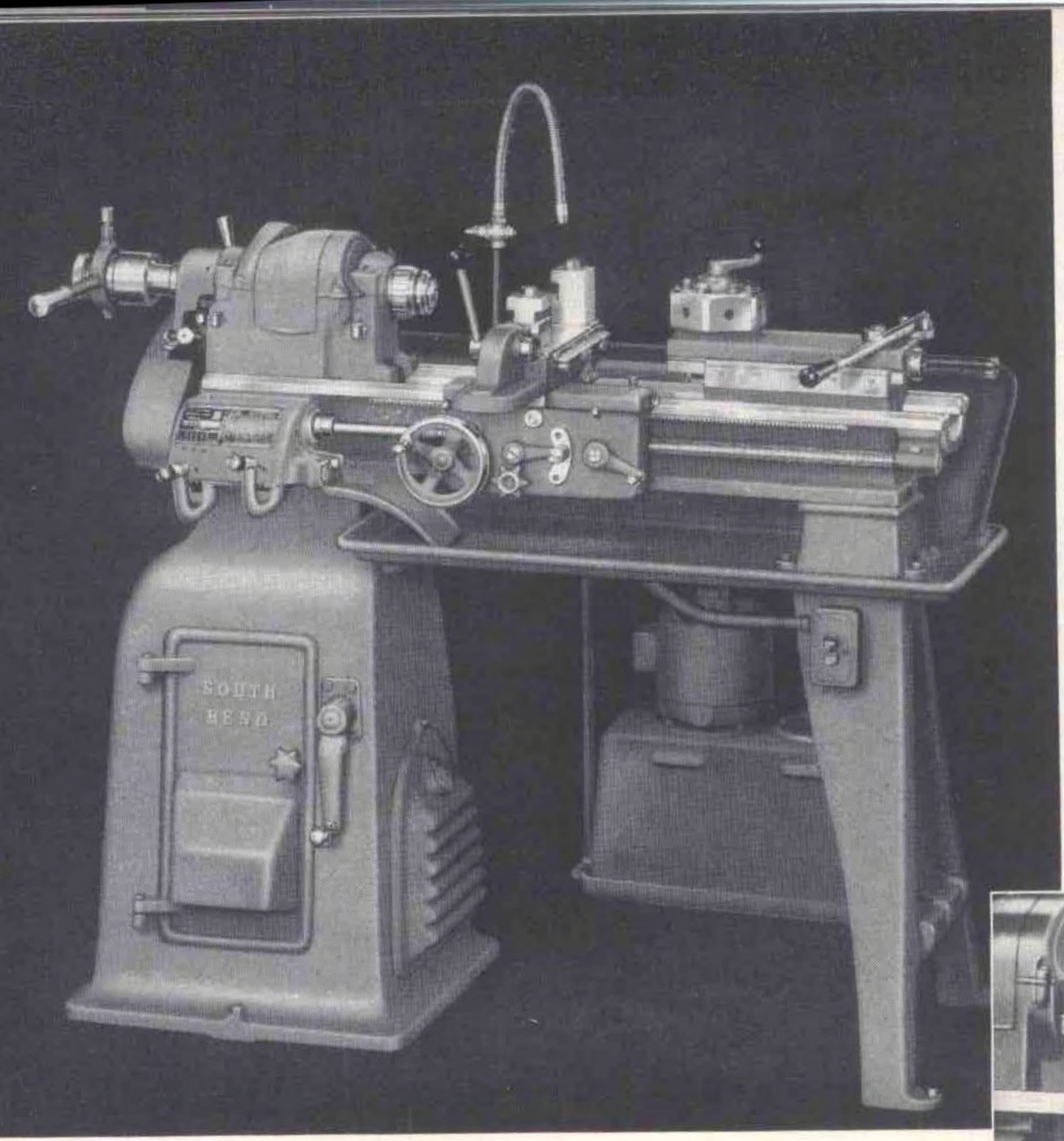
UNIVERSAL CARRIAGE

Thread cutting range ..... 4 to 224 per inch
Power longitudinal feeds ..... .0015" to .0841"
Maximum longitudinal travel of universal carriage, hand or power feed ..... 6 ft. bed 22½"
7 ft. bed 34½"

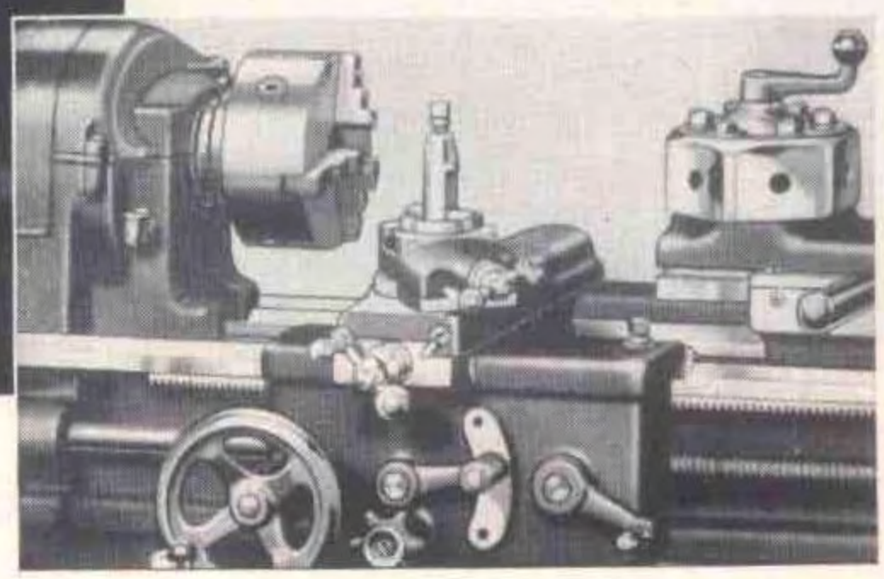
MOTOR

For operating on 3-phase A.C. ..... 2-speed, 1800-900 r.p.m., 2 h.p.-1 h.p.
For operating on 1-phase A.C. or D.C. ..... 1-speed, 1800 r.p.m., 1½ h.p.

CL1006Z TURRET LATHE



Compound rest cross slide with power feed, shown below, is supplied as regular equipment with each lathe and is interchangeable with the handlever cross slide



The handlever collet attachment, splash pan, lathe chuck, coolant equipment, and electrical equipment shown in these illustrations, are not included in price of lathe

The No. CL1006Z South Bend Turret Lathe has the stamina for exacting, close-tolerance operations, ample power for smooth performance, and the rigidity for producing a fine finish. Designed for the efficient production of duplicate parts, it is especially desirable for second operation work.

Mounted on the inside bed ways, the turret can be locked in position at any point along the length of the bed. The turret head indexes automatically when the handlever is moved to the extreme right, and has individual stops for each of the six turret faces. The turret head is so constructed that it will index within plus or minus .0005", measured 4" from turret face. Accurate indexing is assured by the use of hardened, ground, and superfinished index pin which operates in ground and lapped bushings. The turret head may be back-indexed or spun to skip tool positions. A sturdy binder permits locking the turret head securely for taking heavy cuts.

Equipped with front and rear tool blocks, the handlever cross slide can be used for multiple turning, forming, facing, and cutting-off operations. Adjustable stops limit the movement of the cross-feed in either direction, in or out. The handlever can be removed and the cross-feed screw attached, permitting use of power cross-feeds and longitudinal feeds with the double tool cross slide.

A compound rest cross slide, supplied in addition to the double tool cross slide, has power cross-feed and power longitudinal feed. The compound rest swivel is graduated 180° and may be set at any angle for machining bevels and short tapers.

Catalog Number CL1006Z Underneath Motor Driven Quick Change Gear Floor Leg Turret Lathe with 3½ ft. bed, power feed universal carriage, handlever bed turret, double tool cross slide, compound rest cross slide, oil pan, and coolant return assembly. Approximate shipping weight crated, 1050 lbs. Boxed weight 1350 lbs. Cubic feet boxed 45.

NOTE: Splash pan, tailstock, centers, spindle sleeve, face plates, draw-in collet chuck attachment, thread cutting stop, coolant equipment, and electrical equipment are not included in price of lathe.

Specifications of CL1006Z Turret Lathe

CAPACITY OF LATHE

Hole through spindle	1 3/8"
Swing over bed and saddle wings	10 1/8"
Width of lathe bed	7 1/16"
Spindle nose diameter and threads per inch	2 1/4"-8
Maximum collet capacity through handlever collet chuck	1"
Maximum capacity through universal lathe chuck	1 3/8"

SPINDLE SPEEDS (approximate, not exact)

	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

TURRET

Diameter of holes in turret faces*	5/8"
Center of turret hole to top of turret slide	1 1/2"
Effective feed of turret slide	4"
Distance between opposite flats	4 7/8"
Maximum distance between spindle nose and turret face at beginning of indexing movement	19 3/8"

UNIVERSAL CARRIAGE

Thread cutting range	4 to 224 per inch
Power longitudinal feeds	.0015" to .0836"
Maximum longitudinal travel of universal carriage, hand or power feed	16"

DOUBLE TOOL CROSS SLIDE

Swing over double tool cross slide	3 3/16"
Cross travel of cross slide	3 5/8"
Maximum size cutter bit tool block opening will take	7/16" x 7/16"
Power cross-feeds	.0006" to .0309"

COMPOUND REST CROSS SLIDE

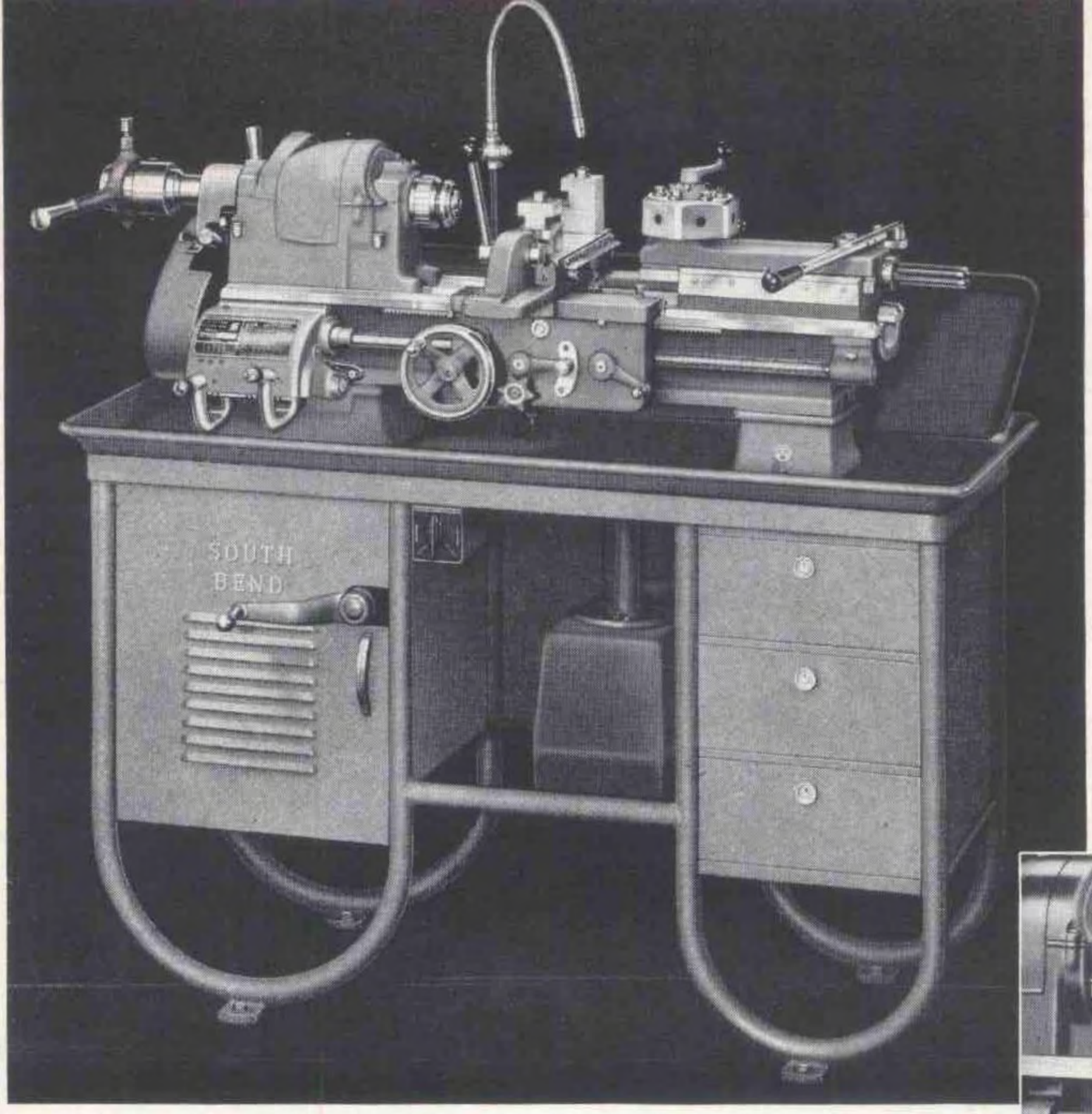
Swing over compound cross slide	5 7/8"
Cross slide will travel	6 1/4"
Angular hand feed of top slide	2"
Size of tool holder shank for tool post	3/8" x 1 1/16"
Size of cutter bits tool holder takes	1/4" x 1/4"
Power cross-feeds	.0006" to .0309"

MOTOR

Standard size of motor required	3/4 h.p.

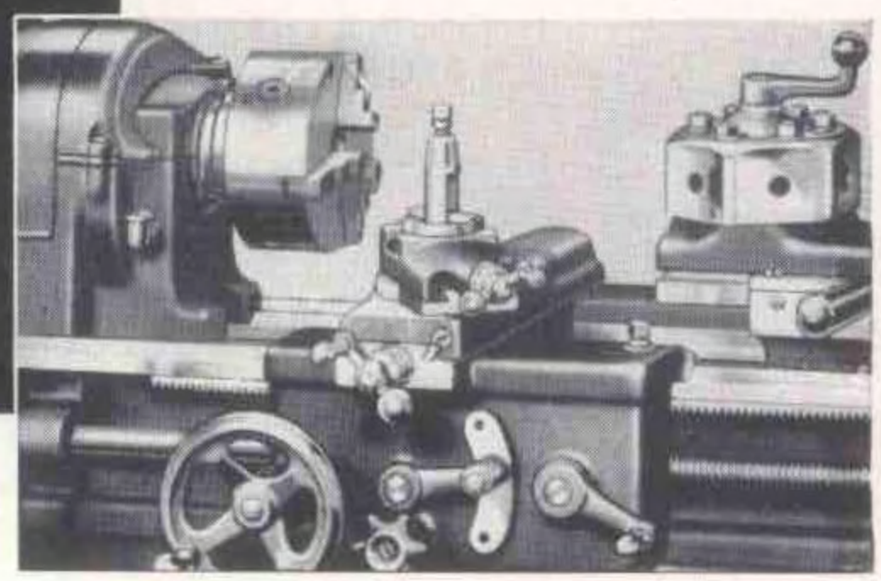
*Can be supplied to order with 3/4" holes in turret head. No extra charge.

CL1005Z TURRET LATHE



Handlever collet attachment, lathe chuck, coolant equipment, splash pan back of lathe, and electrical equipment shown in illustrations are not included in price of lathe

Compound rest cross slide with power feed, shown below, is supplied as regular equipment with each lathe and is interchangeable with the handlever cross slide



Mounted on a rigid tubular steel welded bench with built-in chip pan and three roomy drawers, the CL1005Z South Bend Turret Lathe is one of our most popular and convenient models. It meets the demand for fast, efficient production, and is easily adaptable to a wide variety of work. There is no excessive weight in moving parts to slow down operation and cause fatigue. Yet, it has the stamina for exacting, close tolerance operations, ample power for smooth performance and the rigidity for producing a fine finish.

The turret can be locked in position at any point along the length of the bed, and the turret base can be placed close to the headstock to eliminate excessive overhang of the work or the turret tools. The turret head indexes automatically when the lever is moved to the extreme right, and has individual stops for each of the six turret faces. Turret head may be back indexed or spun to skip tool positions.

Equipped with front and rear tool blocks, the handlever cross slide has adjustable stops which limit the movement of the cross-feed in either direction, in or out. The handlever can be removed and the cross-feed screw attached, permitting use of all power cross-feeds and longitudinal feeds with the double tool cross slide.

A compound rest cross slide, supplied in addition to the handlever cross slide, has power cross-feed and power longitudinal feed. Compound rest swivel is graduated 180° for machining bevels and short tapers.

CL1005Z Underneath Motor Driven Quick Change Gear Bench Turret Lathe with 3½ ft. bed, power feed universal carriage, steel bench with built-in oil pan, handlever bed turret, double tool cross slide, compound rest cross slide, and coolant return assembly. Approximate shipping weight (crated with steel bench) 950 lbs., boxed weight 1250 lbs. Cubic feet boxed 56.

NOTE: Splash pan, tailstock, centers, spindle sleeve, face plates, draw-in collet chuck attachment, lathe chuck, thread cutting stop, coolant equipment, and electrical equipment are not included in price of lathe.

Specifications of CL1005Z Turret Lathe

CAPACITY OF LATHE

Hole through spindle	1⅜"
Swing over bed and saddle wings	10⅛"
Width of lathe bed	7 7/16"
Spindle nose diameter and threads per inch	2¼"-8
Maximum collet capacity through handlever collet chuck	1"
Maximum capacity through universal lathe chuck	1⅜"

SPINDLE SPEEDS (approximate, not exact)

	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

TURRET

Diameter of holes in turret faces*	⅝"
Center of turret hole to top of turret slide	1½"
Effective feed of turret slide	4"
Distance between opposite flats	4⅞"
Maximum distance between spindle nose and turret face at beginning of indexing movement	19⅜"

UNIVERSAL CARRIAGE

Thread cutting range	4 to 224 per inch
Power longitudinal feeds	.0015" to .0836"
Maximum longitudinal travel of universal carriage, hand or power feed	16"

DOUBLE TOOL CROSS SLIDE

Swing over double tool cross slide	3 5/16"
Cross travel of cross slide	3⅝"
Maximum size cutter bit tool block opening will take	7/16" x 7/16"
Power cross-feeds	.0006" to .0303"

COMPOUND REST CROSS SLIDE

Swing over compound cross slide	5 7/8"
Cross slide will travel	6¼"
Angular hand feed of top slide	2"
Size of tool holder shank for tool post	⅝" x 13/16"
Size of cutter bits tool holder takes	¼" x ¼"
Power cross-feeds	.0006" to .0309"

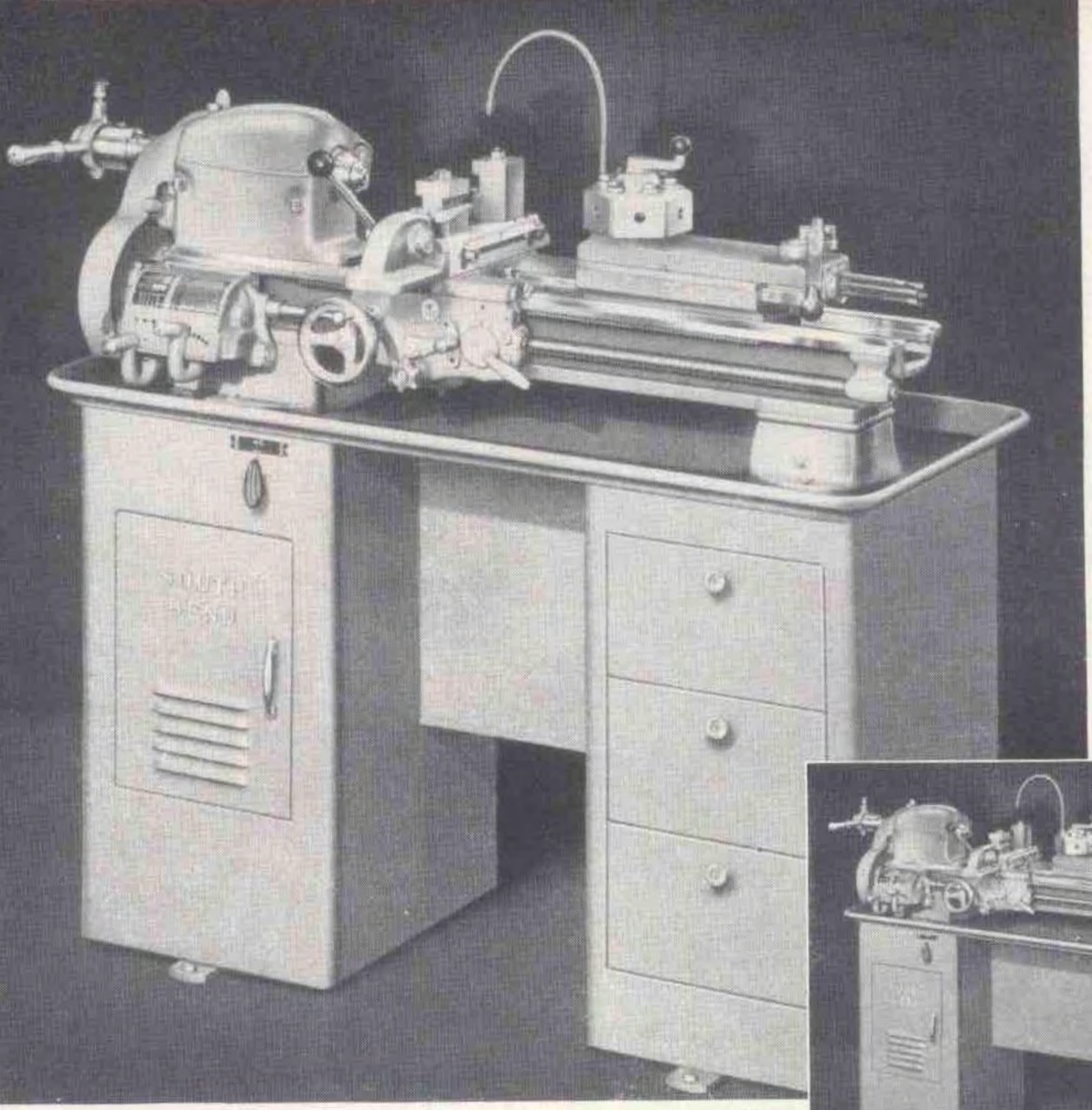
MOTOR

Standard size of motor required	¾ h.p.

*Can be supplied to order with ¾" holes in turret head. No extra charge.

SERIES 900 TURRET LATHES

Compound rest cross slide with power feed, shown below, is supplied as regular equipment with each lathe and is interchangeable with the handlever cross slide



The handlever collet attachment, lathe chuck, coolant equipment, and electrical equipment shown in these illustrations are not included in price of lathe

Series 900 South Bend Turret Lathes are practical for manufacturing small precision parts. Designed for extreme precision, the turret head will index within plus or minus .0005", measured 4" from the turret face. The metal column base on which the lathe is mounted is made with drawers as shown in the large illustration, or without drawers as shown in small insert.

Mounted on the inside bed ways, the turret base clears the saddle wings of the universal carriage, which slides on the outer bed ways. This construction permits the turret to be placed close to the headstock and eliminates excessive overhang of the work or the turret tools. The turret head indexes automatically when the lever is moved to the extreme right, and has individual stops for each of the six turret faces. Turret head may be back indexed or spun to skip tool positions.

Equipped with front and rear tool blocks, the handlever cross slide has adjustable stops which limit the movement of the cross-feed in either position, in or out. The handlever can be removed and the cross-feed screw attached, permitting use of all power cross-feeds and longitudinal feeds with the double tool cross slide.

A compound rest cross slide, supplied in addition to the handlever cross slide, has power cross-feed and power longitudinal feed. Compound rest swivel is graduated 180° for machining bevels and short tapers.

CL930ZD. Underneath Motor Driven Quick Change Gear Turret Lathe with 3½ ft. bed, mounted welded steel column base with drawers, built-in oil pan, underneath motor drive unit, power feed universal carriage, handlever bed turret, double tool cross slide, compound rest cross slide, and coolant return assembly. Approximate shipping weight crated 800 lbs., boxed weight 1130 lbs. Cubic feet boxed 47.

CL930Z. Same as above but mounted on welded steel column base without drawers. Approximate shipping weight crated 795 lbs., boxed weight 1120 lbs. Cubic feet boxed 47.

NOTE: Splash pan, tailstock, centers, spindle sleeve, face plates, draw-in collet chuck attachment, thread cutting stop, coolant equipment, and electrical equipment are not included in price of lathe.

Specifications of Series 900 Turret Lathes

CAPACITY OF LATHE

Hole through spindle	¾"
Swing over bed and saddle wings	9¼"
Width of lathe bed	5 15/16"
Spindle nose diameter and threads per inch	1½"-8
Maximum capacity through collet chuck	½"
Maximum capacity through universal lathe chuck	¾"

SPINDLE SPEEDS (approximate, not exact)

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

TURRET

Diameter of holes in turret faces*	⅝"
Center of turret hole to top of turret slide	1 1/16"
Effective feed of turret slide	4"
Distance between opposite flats	4⅞"
Maximum distance between spindle nose and turret face at beginning of indexing movement	20⅝"

UNIVERSAL CARRIAGE

Thread cutting range	4 to 224 per inch
Power longitudinal feeds	.0015" to .0853"
Maximum longitudinal travel of universal carriage, hand or power feed	18"

DOUBLE TOOL CROSS SLIDE

Swing over double tool cross slide	3 3/16"
Cross travel of cross slide	3⅝"
Maximum size cutter bit tool block opening will take	5/16" x 5/16"
Power cross-feeds	.0004" to .0255"

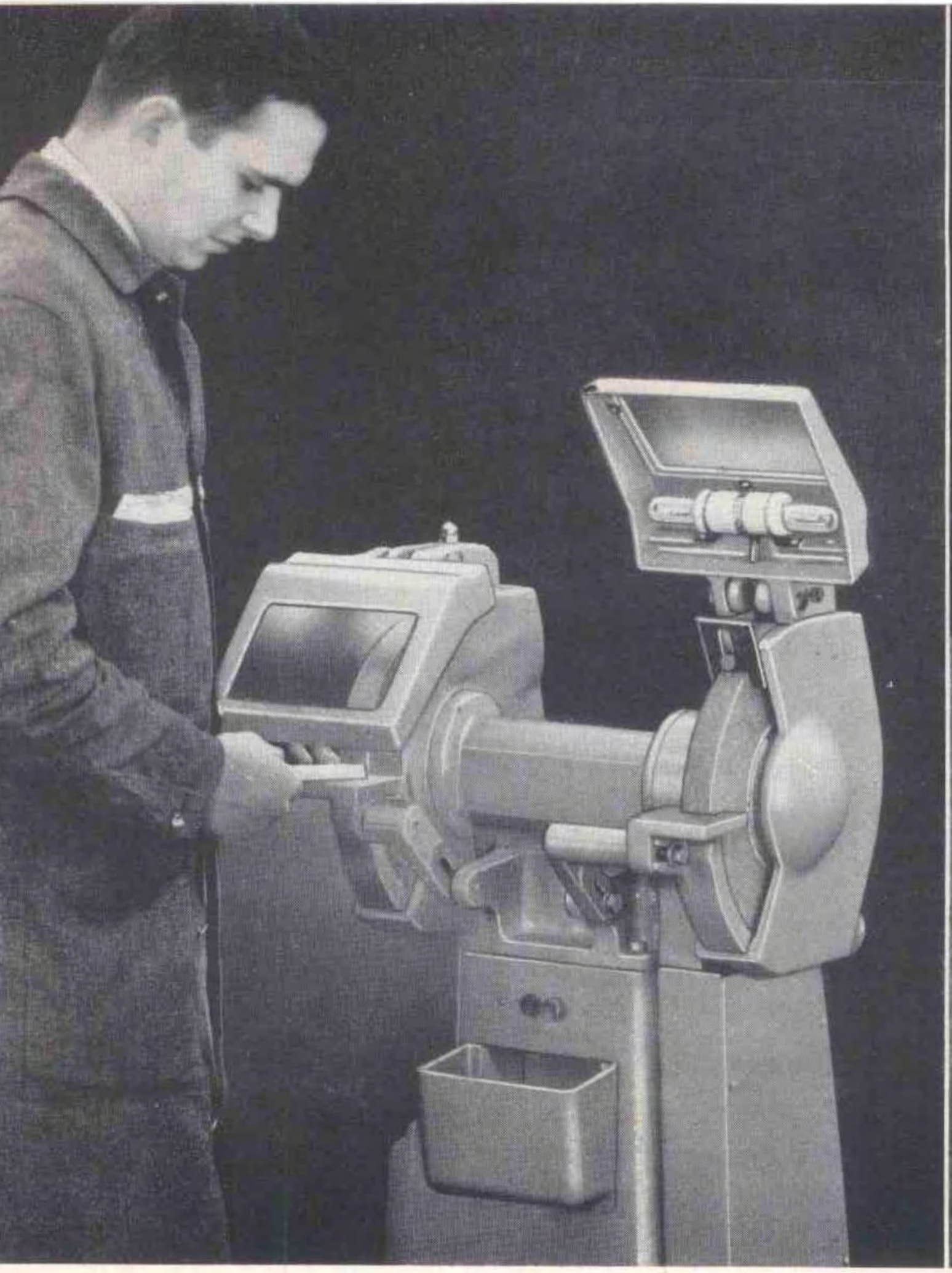
COMPOUND REST CROSS SLIDE

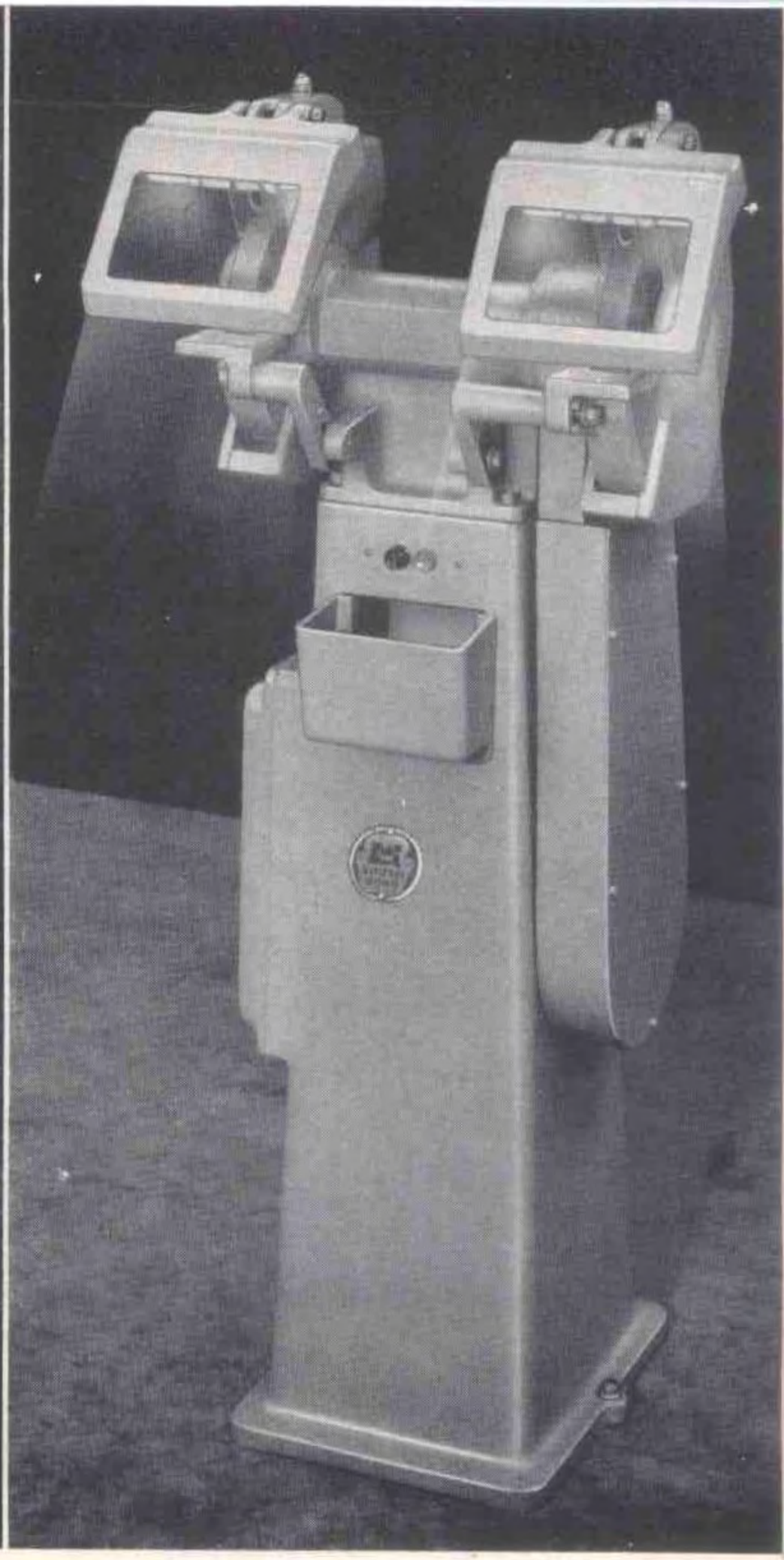
Swing over compound rest cross slide	5 1/16"
Cross slide will travel	5⅞"
Angular hand feed of top slide	2¼"
Size of tool holder shank for tool post	⅜" x 13/16"
Size cutter bits tool holder takes	¼" x ¼"
Power cross-feeds	.0004" to .0255"

MOTOR

Standard size of motor required	¼ h.p.

*Can be supplied to order with ¾" holes in turret head. No extra charge.





New South Bend Pedestal Grinder

V-Belt Drive to Ball-Bearing Spindle—Built-in Illumination

A great deal of careful research has gone into the design of this new South Bend Pedestal Tool Grinder. To provide ample work clearance the grinding wheels are widely separated and the motor is mounted in the pedestal instead of between the wheels. Additional clearance for the work is obtained by mounting the grinding wheel spindle toward the front of the pedestal. This construction also provides ample toe room for the operator. The U-shaped tool rests are adjustable to any angle and are also adjustable for wheel wear. The large water pot for cooling work is conveniently located and is removable for cleaning.

Large safety glass eye shields are hinged and are easily adjusted to three positions. Two light bulbs enclosed in the frame of each shield throw ample light directly onto the work. Close-fitting adjustable spark guards built into the heavy wheel guards provide added protection. Wheel guards have removable end plates and large dust outlets for connecting with dust collector or exhaust ducts.

A two pole pushbutton switch is conveniently mounted on the front of the grinder frame. The fully enclosed motor and V-belt drive the grinding wheel spindle which revolves on sealed ball bearings. This construction practically eliminates vibration, removes the weight of the grinding wheels from the motor bearings and protects the motor from the abrasive dust of the grinding wheels.

The grinder is made with ½ h.p. motor and 8″ wheels or with ¾ h.p. motor and 10″ wheels. Equipment includes one coarse and one fine wheel for general work, tool rests, wheel guards, motor, switch, V-belt, and eye shields with built-in illumination. Bench type mounting cannot be supplied.

Specifications

Wheel Size: With ¾ h.p. motor, 10″ dia., 1″ face, ⅝″ hole.
With ½ h.p. motor, 8″ dia., 1″ face, ⅝″ hole.

Spindle: Sealed ball bearings. Approximate speed 2450 r.p.m.

Motor: Standard 2875 r.p.m. 50 cycle or 3450 r.p.m. 60 cycle and D.C.

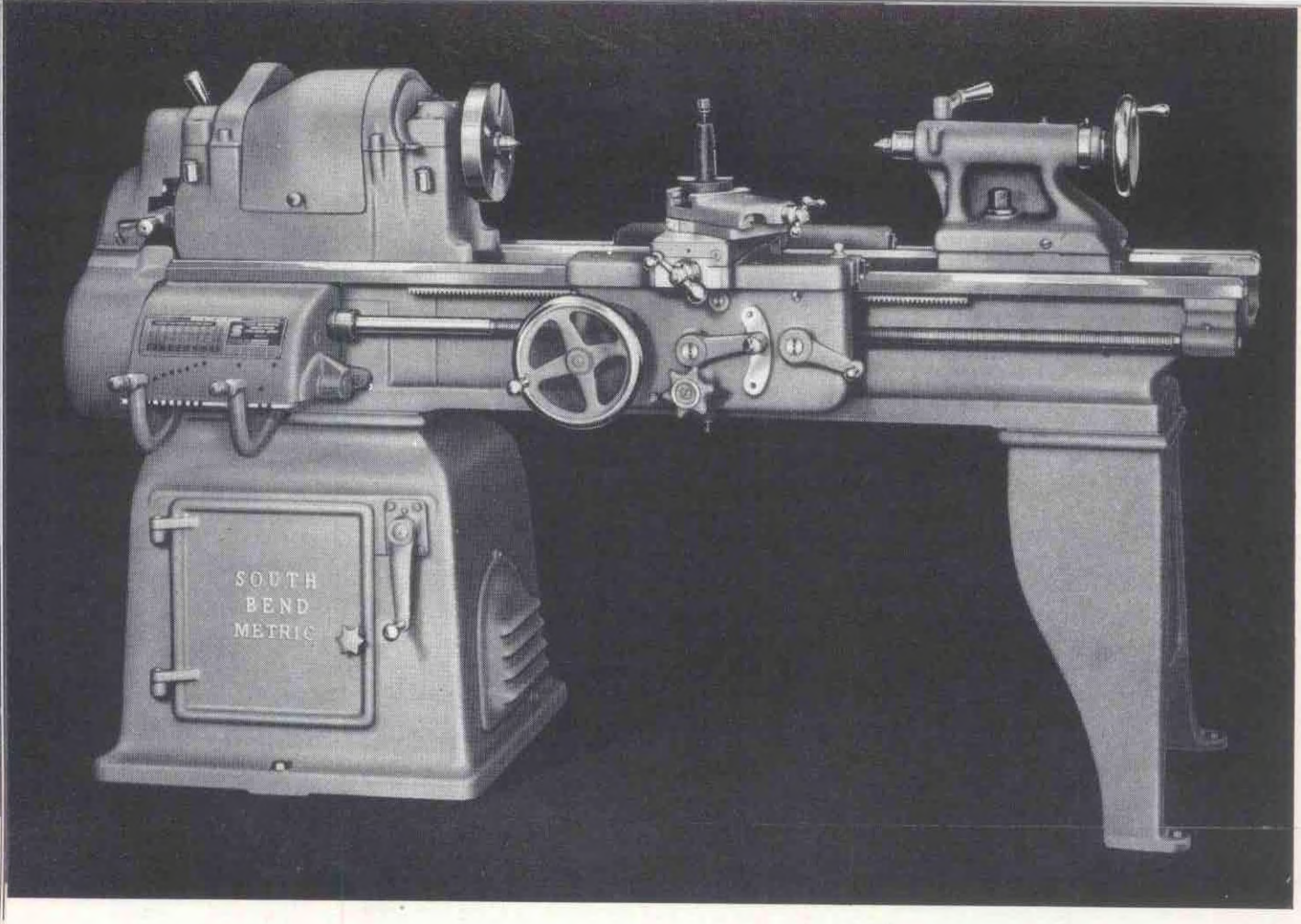
Over-all Dimensions: 10″ Grinder, 49½″ high, 18½″ wide, 20½″ deep.
8″ Grinder, 49½″ high, 18″ wide, 20½″ deep.

Shipping Weight: 10″ grinder 397 lbs. crated, 437 lbs. boxed for export.
8″ grinder 380 lbs. crated, 420 lbs. boxed for export.

Export Space: 16 cubic feet boxed.

South Bend Pedestal Grinder

½ h.p. Motor 8″ Wheel		¾ h.p. Motor 10″ Wheel		Motor Specifications		
Cat. No.		Cat. No.		Volts	Phase	Cycle
CE2611A		CE2621A		115 A.C.	1	50
CE2611B		CE2621B		115 A.C.	1	60
CE2611C		CE2621C		230 A.C.	1	50
CE2611D		CE2621D		230 A.C.	1	60
CE2613C		CE2623C		220 A.C.	3	50
CE2613D		CE2623D		220 A.C.	3	60
CE2613F		CE2623F		440 A.C.	3	60
CE2610K		CE2620K		115 D.C.	..	..
CE2610L		CE2620L		230 D.C.	..	..



Metric System Lathes

Made in All Sizes with All Types of Drives

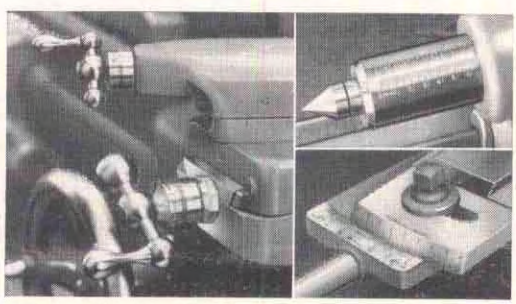
All South Bend Lathes can be supplied in the metric system, with metric lead screw and gearing for cutting standard pitches of metric screw threads, and metric cross-feed and compound rest feed screws having micrometer collars with metric graduations. The tailstock spindles and taper attachment are graduated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

The metric quick change gear box supplied on all Metric Quick Change Gear and Toolroom South Bend Lathes is shown on the lathe in the illustration above. Changes for the various pitches of metric screw threads and power feeds are made by shifting the two levers on front of the gear box.

A direct reading index chart attached to the gear box shows the arrangement of the levers for the various threads and feeds. (See illustration below.) The screw threads cut range from 0.2 mm pitch to 7.5 mm pitch, as listed on the index chart. Power longitudinal feeds obtained through the gear box range from 0.068 mm to 0.512 mm per revolution of the spindle.

With the metric quick change gear mechanism, it is impossible to lock the gears. All gears in the gear box are made of steel and are precision cut and tested for accuracy. Large bearing surfaces and ample oiling facilities assure smooth operation and long life.

Regular equipment supplied with metric lathes is the same as for corresponding models with English equipment. All South Bend attachments and accessories can be used with the metric lathes. The taper attachment, milling attachment, micrometer carriage stop, and double tool cross slides can be supplied with metric graduations. Metric collets are also available. Write for Circular 5125 describing South Bend Metric Lathes.



Metric Lathes have Metric Graduations on Cross-Feed Screw, Compound Rest Screw, Tailstock Spindle, and Taper Attachment

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

PITCHES IN mm—PASOS EN mm—PAS EN mm								POSITION POSICION	STUD AMBOL ARBRE
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	"
1.500	1.400	1.300	1.200	1.100	1.000	0.900	0.800	C	20
0.750	0.700	0.650	0.600	0.550	0.500	0.450	0.400	B	"
0.375	0.350	0.325	0.300	0.275	0.250	0.225	0.200	A	"
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	"

SOUTH BEND LATHE

CATALOG NO.

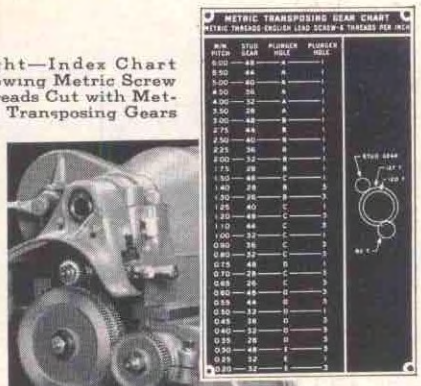
BED LENGTH

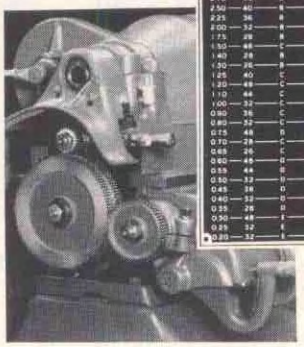
Positions Posiciones A B C D

CROSS FEEDS 1/10 OF PITCHES
AVANCES TRANSVERSALES 1/10 DE LOS PASOS
AVANCES TRANSVERSALES 1/10 DES PAS

Direct Reading Index Plate is Attached to Metric Quick Change Gear Box to Show Positions of Levers for Metric Screw Threads and Power Carriage Feeds

Right—Index Chart Showing Metric Screw Threads Cut with Metric Transposing Gears





Left—South Bend Lathe Equipped with Metric Transposing Gears

Metric Transposing Gears

For Cutting Metric Screw Threads

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

When lathes are ordered with metric transposing gears, the graduations on the tailstock spindle, the cross-feed screw, and the compound rest screw can be supplied to read in the metric system, or in the English system, as desired. Catalog numbers listed below apply to equipment for current models of lathes only.

Metric Transposing Gears Ordered With Lathe

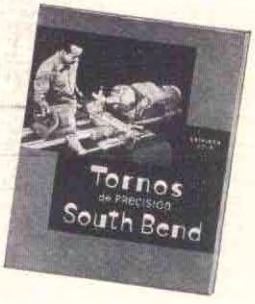
Size of Lathe	With Metric Graduations		With English Graduations	
	Cat. No.		Cat. No.	
9" Model A	CL1941NK		CL1955NK	
9" Model B	CL2263N		CL2261N	
9" Model C	CL2263N		CL2261N	
Light Ten Model A	CL1941NK		CL1955NK	
Light Ten Model B	CL2263K		CL2261K	
Light Ten Model C	CL2263K		CL2261K	
10" Quick Change	CL1941R		CL1955R	
13" Quick Change	CL1941T		CL1955T	
14½" Quick Change	CL1941F		CL1955F	
16", 16-24", & 2-H Q.C.	CL1941H		CL1955H	

Metric Transposing Gears Ordered Separate From Lathe

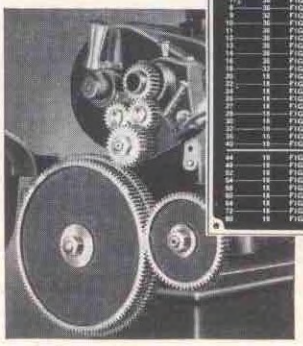
Size of Lathe	Ship. Wt.	Cat. No.	
9" Model A	8 lbs.	CL1957NK	
9" Models B & C	21 lbs.	CL1961N	
Light Ten Model A	8 lbs.	CL1957NK	
Light Ten Models B & C	21 lbs.	CL1961K	
10" Quick Change	51 lbs.	CL1957R	
13" Quick Change	73 lbs.	CL1957T	
14½" Quick Change	121 lbs.	CL1957F	
16", 16-24", & 2-H Q.C.	65 lbs.	CL1957H	

Spanish and Portuguese Catalogs

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



Right—Index Chart Showing English Screw Threads Cut with English Transposing Gears



Left—South Bend Lathe Equipped with English Transposing Gears

English Transposing Gears

For Cutting English Screw Threads

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

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

English Transposing Gears Ordered With Lathe

Size of Lathe	With Metric Graduations		With English Graduations	
	Cat. No.		Cat. No.	
9" Model A	CL2284NK		CL2288NK	
9" Model B	CL2255N		CL2253N	
9" Model C	CL2256N		CL2254N	
Light Ten Model A	CL2284NK		CL2288NK	
Light Ten Model B	CL2255K		CL2253K	
Light Ten Model C	CL2256K		CL2254K	
10" Quick Change	CL2284R		CL2288R	
13" Quick Change	CL2284T		CL2288T	
14½" Quick Change	CL2284F		CL2288F	
16", 16-24", & 2-H Q.C.	CL2284H		CL2288H	

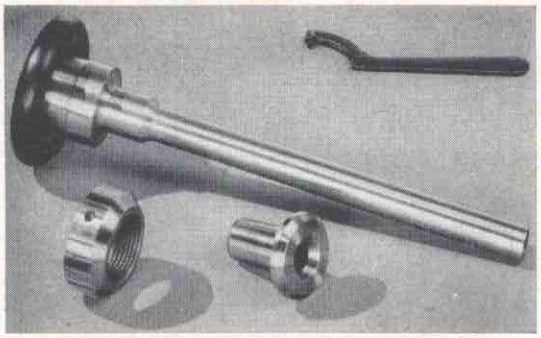
English Transposing Gears Ordered Separate From Lathe

Size of Lathe	Ship. Wt.	Cat. No.	
9" Model A	8 lbs.	CL2289NK	
9" Model B	21 lbs.	CL1283N	
9" Model C	21 lbs.	CL1284N	
Light Ten Model A	8 lbs.	CL2289NK	
Light Ten Model B	21 lbs.	CL1283K	
Light Ten Model C	21 lbs.	CL1284K	
10" Quick Change	51 lbs.	CL2289R	
13" Quick Change	73 lbs.	CL2289T	
14½" Quick Change	121 lbs.	CL2289F	
16", 16-24", & 2-H Q.C.	65 lbs.	CL2289H	

Metric Thread Dial

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

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

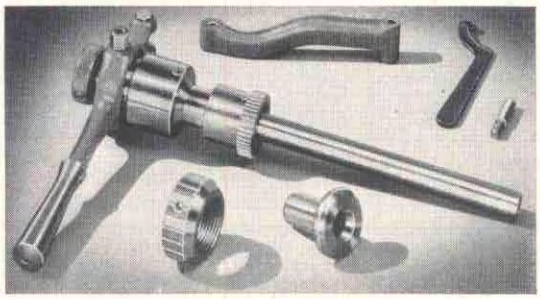


Handwheel Collet Attachment

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

Bar and tube stock can be fed through the hollow draw bar which operates the collet. When the handwheel is tightened, the collet automatically grips and centers the work. Equipment includes steel draw-bar with handwheel, spindle nose cap, spanner wrench, and heat-treated steel closing sleeve. Collets are not included. See page 49.

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

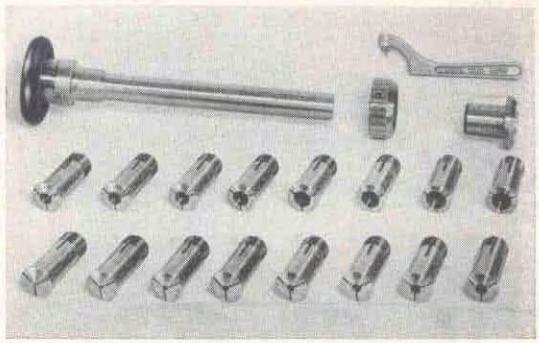


Handlever Collet Attachment

Speed and accuracy are combined in the Handlever Collet Attachment. Without stopping the lathe spindle, the collet can be released, bar stock fed through the spindle, and the collet tightened again. The gripping action of the collet is adjustable and can be set for any desired tension.

Equipment includes adjustable chuck closing mechanism and hollow draw-bar, spindle nose cap, spanner wrench for nose cap and heat-treated steel closing sleeve. Collets are not included. See page 49. This attachment should be ordered with the lathe so that it can be properly fitted to the lathe and tested before it is shipped from the factory.

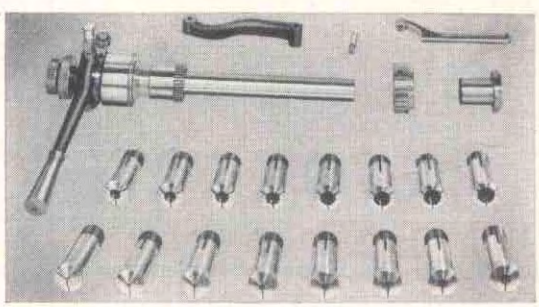
Catalog Number	Size of Lathe	Collet Used	Max. Collet Cap.	Shipping Weight
CL5206N	9" and Series 900	No. 3	1/2"	10 lbs.
CL5206K	Light Ten	No. 6K	5/8"	10 lbs.
CL5206R	10"-11/16" Collet	No. 2	11/16"	19 lbs.
CL5206L	10"-1" Col. & Ser. 1000	No. 5	1"	20 lbs.
CL5206Q	13"-1" Collet	No. 5	1"	25 lbs.
CL5206M	14 1/2"-1" Collet	No. 5	1"	31 lbs.
CL5206H	16", 16-24", & 2-H	No. 5	1"	32 lbs.



Handwheel Collet Attachment Complete With Collets

You can save time and money by ordering your collet attachment complete with collets as listed below. Price includes Handwheel Collet Attachment with complete set of steel collets in sixteenths, in sizes from 1/16" capacity up to the maximum capacity shown in table. Each collet packed in individual plastic case. Additional collet sets in 32nds and 64ths may be selected from page 49.

Catalog Number	Size of Lathe	Number of Collets	Max. Collet Cap.	Shipping Weight
CL5415N	9" and Series 900	8	1/2"	9 lbs.
CL5415K	Light Ten	10	5/8"	10 lbs.
CL5415R	10"-11/16" Collet	11	11/16"	24 lbs.
CL5415L	10"-1" Col. & Ser. 1000	16	1"	28 lbs.
CL5415Q	13"-1" Collet	16	1"	33 lbs.
CL5415M	14 1/2"-1" Collet	16	1"	35 lbs.
CL5415H	16", 16-24", & 2-H	16	1"	35 lbs.



Handlever Collet Attachment Complete With Collets

To be complete, your collet equipment should include a set of collets in sixteenths. Delay caused by waiting for a missing collet size can be more costly than the complete equipment. Price includes handlever collet attachment with a complete set of steel collets in sixteenths, in sizes from 1/16" capacity up to the maximum capacity shown in table. Each collet packed in individual plastic case. Additional collet sets in 32nds and 64ths may be selected from page 49. Also collets for square and hexagonal work.

Catalog Number	Size of Lathe	Number of Collets	Max. Collet Cap.	Shipping Weight
CL5416N	9" and Series 900	8	1/2"	14 lbs.
CL5416K	Light Ten	10	5/8"	15 lbs.
CL5416R	10"-11/16" Collet	11	11/16"	29 lbs.
CL5416L	10"-1" Col. & Ser. 1000	16	1"	35 lbs.
CL5416Q	13"-1" Collet	16	1"	44 lbs.
CL5416M	14 1/2"-1" Collet	16	1"	51 lbs.
CL5416H	16", 16-24", & 2-H	16	1"	52 lbs.

Steel and Brass Collets

For Use With Collet Attachments

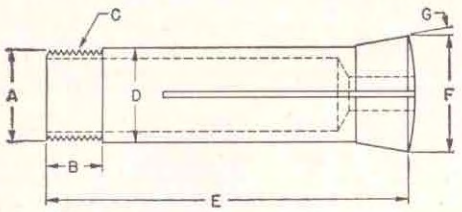
South Bend Collets, manufactured with the same exacting care as South Bend Lathes, deliver long, dependable service on precision work. Each collet is carefully inspected and tested, and packed in a substantial plastic box with transparent lid through which the size can be read for easy selection.

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

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

Steel Collet

Collet Box



Specifications of Collets for South Bend Lathes

Collet No.	3	6K	2	5
Sizes of Lathes Used on*	9" & Series 900	Light Ten	10"-11 5/16" Collet	10"-1" Col. 13", 14 1/2" 16", 16-24", & 2H
A, Thread Diameter, in.	.645	.770	.850	1.245
B, Thread Length, in.	3/4	3/4	15/16	3/4
C, Threads per in.	26	26	20	20
D, Body Diameter, in.	.6495	.8425	.8595	1.2495
E, Collet Length, in.	2 11/16	3	3 5/16	3 9/32
F, Head Diameter, in.	.852	1.160	1.095	1.452
G, Angle of Head, deg.	12	15	15	10

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

Collets With Standard Hole Sizes for Round Work

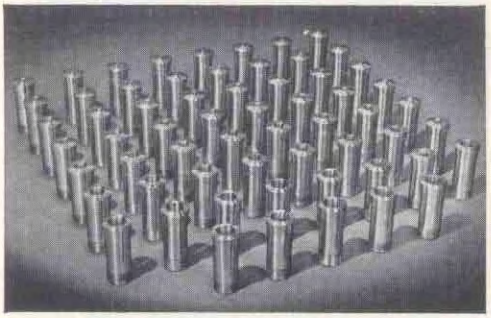
Collet No.	Collet Capacity in 64ths for Round Work	Ship. Wt.	Brass Collets Cat. No.		Steel Collets Cat. No.	
3	1/16" to 1/2"	6 ozs.	CE2825		CE2830	
6K	1/16" to 5/8"	8 ozs.	CE2826		CE2831	
2	1/16" to 11/16"	8 ozs.	CE2827		CE2832	
5	1/16" to 1"	1 lb.	CE2828		CE2833	

Collets With Decimal Hole Sizes for Round Work

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

Collets With Metric Hole Sizes for Round Work

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



Collets in Sets

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

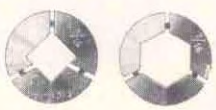
Steel Collets in Sets

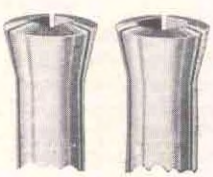
Collet No.	Catalog No.	Collets in Set	Size of Collets	Ship. Wt.
3	CE2047	8	1/16" to 1/2" in 16ths	3 lbs.
	CE2476	7	3/32" to 15/32" in odd 32nds	3 lbs.
	CE2477	14	5/64" to 31/64" in odd 64ths	6 lbs.
6K	CE2441	10	1/16" to 5/8" in 16ths	7 lbs.
	CE2442	9	3/32" to 19/32" in odd 32nds	7 lbs.
	CE2443	18	5/64" to 39/64" in odd 64ths	12 lbs.
2	CE2432	11	1/16" to 11/16" in 16ths	6 lbs.
	CE2478	10	3/32" to 21/32" in odd 32nds	6 lbs.
	CE2479	20	5/64" to 43/64" in odd 64ths	12 lbs.
5	CE2435	16	1/16" to 1" in 16ths	11 lbs.
	CE2482	15	3/32" to 31/32" in odd 32nds	11 lbs.
	CE2483	30	5/64" to 63/64" in odd 64ths	20 lbs.

Brass Collets in Sets

Collet No.	Catalog No.	Collets in Set	Size of Collets	Ship. Wt.
3	CE2235	8	1/16" to 1/2" in 16ths	3 lbs.
	CE2534	7	3/32" to 15/32" in odd 32nds	3 lbs.
	CE2535	14	5/64" to 31/64" in odd 64ths	6 lbs.
6K	CE2485	10	1/16" to 5/8" in 16ths	7 lbs.
	CE2486	9	3/32" to 19/32" in odd 32nds	7 lbs.
	CE2487	18	5/64" to 39/64" in odd 64ths	12 lbs.
2	CE2238	11	1/16" to 11/16" in 16ths	6 lbs.
	CE2536	10	3/32" to 21/32" in odd 32nds	6 lbs.
	CE2537	20	5/64" to 43/64" in odd 64ths	12 lbs.
5	CE2241	16	1/16" to 1" in 16ths	11 lbs.
	CE2540	15	3/32" to 31/32" in odd 32nds	11 lbs.
	CE2541	30	5/64" to 63/64" in odd 64ths	20 lbs.

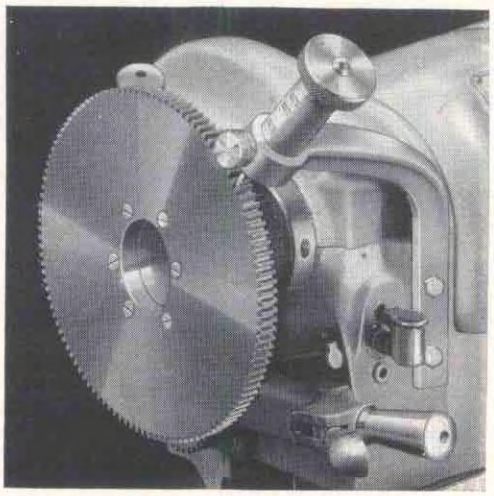
Collets for Square and Hexagon Work





Collets for holding square and hexagon stock can be supplied to order, as listed below. These collets are made of steel, and are properly heat-treated for long service. Collets are made in sixty-fourths, from 1/8" across flats up to maximum capacity shown in table.

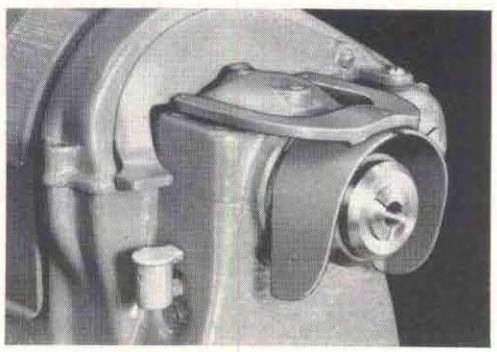
Collet No.	Shipping Weight	Collets for Square Work Catalog No.	Collets for Square Work Max. Cap.	Collets for Hexagon Work Catalog No.	Collets for Hexagon Work Max. Cap.
3	6 ozs.	CE2176	11/32"	CE2181	7/16"
6K	8 ozs.	CE2189	7/16"	CE2186	13/32"
2	8 ozs.	CE2177	15/32"	CE2182	19/32"
5	1 lb.	CE2178	23/32"	CE2183	7/8"



Indexing Attachment for 10″ Lathe Headstock

With this attachment the lathe spindle can be accurately indexed for fluting, splining, graduating, cross-drilling, and similar operations. Changeable index wheels are attached to the left end of the spindle, leaving the spindle nose free for mounting chucks, face plates, or other work holding fixtures. The index wheels do not interfere with work passed through the headstock. A spring latch index pin is rigidly attached to the headstock and engages the index wheel to position the spindle. The 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.

CL2505L. Indexing Attachment for 10″-1″ Collet Lathe. Shipping weight 30 lbs.



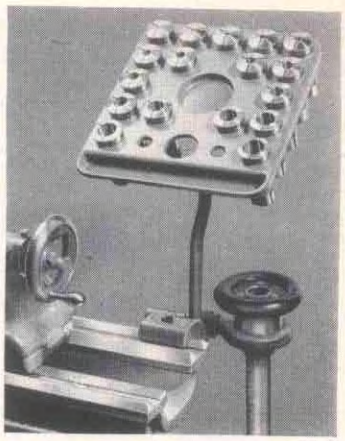
Collet Splash Guard

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

Cat. No.	Size and Type of Lathe	Ship. Wt.
CL5223NK	9″, Light Ten & Ser. 900 U.M.D.	2 lbs.
CL5200N	9″ Horizontal M.D.	2 lbs.
CL5200K	Light Ten H.M.D.	2 lbs.
CL5223R	10″ & Ser. 1000 U.M.D.	2 lbs.
CL5223T	13″ Underneath M.D.	2 lbs.
CL5223F	14½″ Underneath M.D.	3 lbs.
CL5223H	16″, 16-24″, & 2-H U.M.D.	3 lbs.

Collet Rack

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



Collet Racks for South Bend Lathes

Catalog Number	Size of Lathe	Rack Holds	Ship. Wt.
CE1770N	9″ and Series 900	19 Collets	9 lbs.
CE1770K	Light Ten	17 Collets	10 lbs.
CE1770R	10″-11/16″ Collet	17 Collets	10 lbs.
CE1770L	10″-1″ Collet & Series 1000	17 Collets	10 lbs.
CE1770Q	13″-1″ Collet	17 Collets	12 lbs.
CE1770M	14½″-1″ Collet	17 Collets	14 lbs.
CE1770H	16″, 16-24″, and No. 2-H	17 Collets	15 lbs.

Collet Chest

for 9″ Lathe Only

Protects Collets from Damage

For Holding Collets and Collet Attachment

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

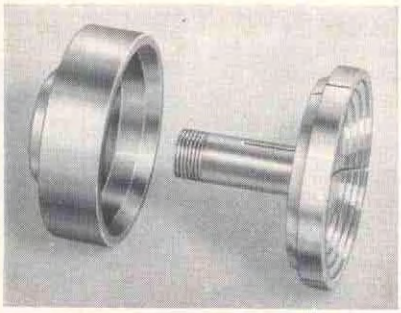
Cat. No. CE2225. Shipping weight 7 lbs.

Special Combination Sets

Collet Chest With Collet Attachment and Collets

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

Cat. No.	Description
CE2220	Collet chest, 9″ handwheel collet attachment, 29 steel collets for round work, 1/16″ to 1/2″ in 64ths. Shipping weight 14 lbs.
CE2228	Collet chest, 9″ handwheel collet attachment, 8 steel collets for round work, 1/16″ to 1/2″ in 16ths. Shipping weight 12 lbs.
CE2290	Collet chest, 9″ handwheel collet attachment, 29 brass collets for round work, 1/16″ to 1/2″ in 64ths. Shipping weight 14 lbs.
CE2293	Collet chest, 9″ handwheel collet attachment, 8 brass collets for round work 1/16″ to 1/2″ in 16ths. Shipping weight 12 lbs.

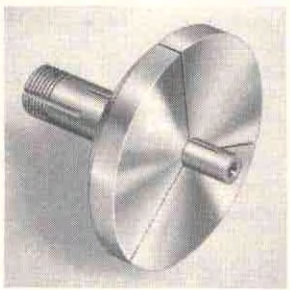


Step Chuck Equipment

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

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

Step Chuck Blanks



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

Step chuck blanks are made in various sizes having 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. See upper table in right hand column.

Step Chuck Blanks

Catalog Number	Nominal Size	Size Lathe	Max. Cap.	Shipping Weight
CE5916*	2″	9″ and Series 900	2″	2 lbs.
CE5917	3″		3″	3 lbs.
CE5918	4″		4″	5 lbs.
CE5919	5″		5″	8 lbs.
CE5920	6″		6″	12 lbs.
CE5936*	2″	Light Ten	2″	3 lbs.
CE5937	3″		3″	4 lbs.
CE5938	4″		4″	6 lbs.
CE5939	5″		5″	8 lbs.
CE5940	6″		6″	12 lbs.
CE5921*	2″	10″-11/16″ Collet	2″	4 lbs.
CE5922	3″		3″	4 lbs.
CE5923	4″		4″	5 lbs.
CE5924	5″		5″	9 lbs.
CE5925	6″		6″	13 lbs.
CE5926*	2″	10″, Series 1000, 13″, 14½″, 16″, 16-24″, & 2-H	2″	4 lbs.
CE5927	3″		3″	4 lbs.
CE5928	4″		4″	5 lbs.
CE5929	5″		5″	9 lbs.
CE5930	6″		6″	13 lbs.

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

Closers for Step Chucks

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

Step Chuck Closers

Catalog Number	Size Lathe	Takes Step Chuck Sizes	Shipping Weight
CL6309NK CL6311NK	9″, Light Ten, & Series 900	3″ and 4″ 5″ and 6″	3 lbs. 5 lbs.
CL6309R CL6311R	10″-11/16″ Collet	3″ and 4″ 5″ and 6″	4 lbs. 5 lbs.
CL6309LQ CL6311LQ	10″, Series 1000 & 13″—1″ Collet	3″ and 4″ 5″ and 6″	4 lbs. 6 lbs.
CL6309MH CL6311MH	14½″, 16″, 16-24″, & 2-H	3″ and 4″ 5″ and 6″	5 lbs. 7 lbs.

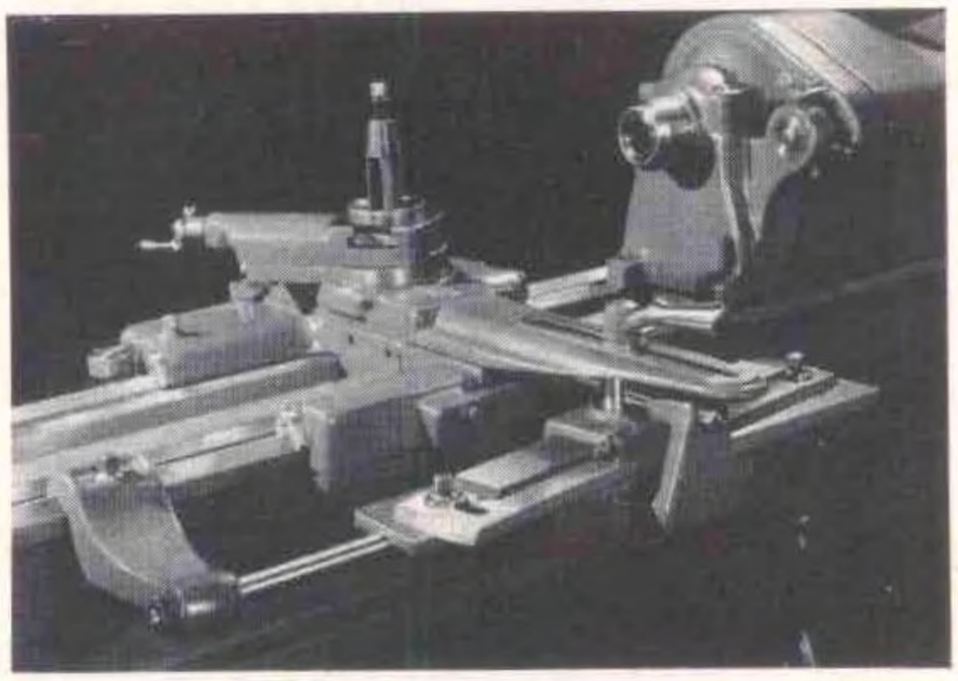
Finished Step Chucks

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

Finished Step Chucks

Cat. No.	Nominal Size	Size Lathe	Diameters of Steps	Ship. Wt. Lbs.
CE5960*	2″	9″ & Series 900	2″, 1¾″, 1½″, 1″	2 lbs.
CE5961	3″		3″, 2¾″, 2½″, 2¼″, 2″, 1½″	3 lbs.
CE5962	4″		4″, 3½″, 3¼″, 3″, 2¾″, 2½″	5 lbs.
CE5963	5″		5″, 4½″, 4″, 3½″, 3¼″, 3″	8 lbs.
CE5964	6″		6″, 5½″, 5″, 4½″, 4¼″, 4″	12 lbs.
CE5965*	2″	Light Ten	2″, 1¾″, 1½″, 1″	3 lbs.
CE5966	3″		3″, 2¾″, 2½″, 2¼″, 2″, 1½″	4 lbs.
CE5967	4″		4″, 3½″, 3¼″, 3″, 2¾″, 2½″	6 lbs.
CE5968	5″		5″, 4½″, 4″, 3½″, 3¼″, 3″	8 lbs.
CE5969	6″		6″, 5½″, 5″, 4½″, 4¼″, 4″	12 lbs.
CE5970*	2″	10″-11/16″ Col.	2″, 1¾″, 1½″, 1″	4 lbs.
CE5971	3″		3″, 2¾″, 2½″, 2¼″, 2″, 1½″	4 lbs.
CE5972	4″		4″, 3½″, 3¼″, 3″, 2¾″, 2½″	5 lbs.
CE5973	5″		5″, 4½″, 4″, 3½″, 3¼″, 3″	9 lbs.
CE5974	6″		6″, 5½″, 5″, 4½″, 4¼″, 4″	13 lbs.
CE5975*	2″	Series 1000, 10″, 13″, 14½″, 16″, 16-24″, & 2-H—1″ Col.	2″, 1¾″, 1½″, 1″	4 lbs.
CE5976	3″		3″, 2¾″, 2½″, 2¼″, 2″, 1½″	4 lbs.
CE5977	4″		4″, 3½″, 3¼″, 3″, 2¾″, 2½″	5 lbs.
CE5978	5″		5″, 4½″, 4″, 3½″, 3¼″, 3″	9 lbs.
CE5979	6″		6″, 5½″, 5″, 4½″, 4¼″, 4″	13 lbs.

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



Taper Attachment

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

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

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

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

The taper attachment must be fitted to lathe at factory.

Taper Attachment With English Graduations

Cat. No.	Size of Lathe	Swing Over Cross Slide	Maximum Taper			Approx. Ship. Wt.	
			At One Setting	Per Foot	In Degrees		
CL428NK	9"	5"	7"	3 1/2"	16 1/2	35 lbs.	
CL428NK	Lt. 10	5 7/8"	7"	3 1/2"	16 1/2	35 lbs.	
CL1545R	10"	5 3/4"	8 1/2"	3 1/2"	16 1/2	40 lbs.	
CL1545T	13"	8"	9 1/4"	3 1/2"	16 1/2	65 lbs.	
CL1545F	14 1/2"	8 15/16"	9 1/4"	3 1/2"	16 1/2	80 lbs.	
CL1545H	16"	9 5/8"	11 1/2"	3 1/2"	16 1/2	100 lbs.	
CL1545H	16-24"	18 3/4"	11 1/2"	3 1/2"	16 1/2	100 lbs.	

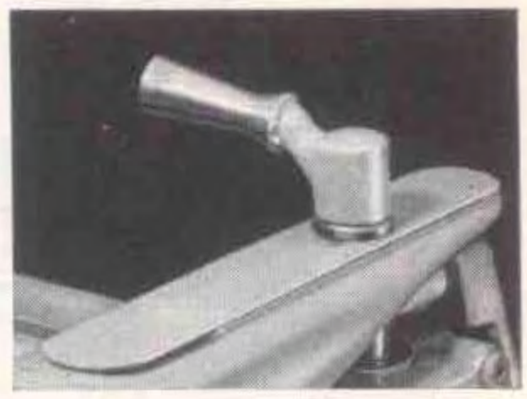
Taper Attachment With Metric Graduations

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

Taper Attachment With Metric Graduations

Catalog No.	Size of Lathe	Swing Over Cross Slide	Maximum Taper			Approx. Ship. Wt.	
			At One Setting	Per cm	In Degrees		
CL428NKME	9"	5"	7"	3 mm	16 1/2	35 lbs.	
CL428NKME	Lt. 10	5 7/8"	7"	3 mm	16 1/2	35 lbs.	
CL1545RME	10"	5 3/4"	8 1/2"	3 mm	16 1/2	40 lbs.	
CL1545TME	13"	8"	9 1/4"	3 mm	16 1/2	65 lbs.	
CL1545FME	14 1/2"	8 15/16"	9 1/4"	3 mm	16 1/2	80 lbs.	
CL1545HME	16"	9 5/8"	11 1/2"	3 mm	16 1/2	100 lbs.	
CL1545HME	16-24"	18 3/4"	11 1/2"	3 mm	16 1/2	100 lbs.	

Chip Guard for Taper Attachment

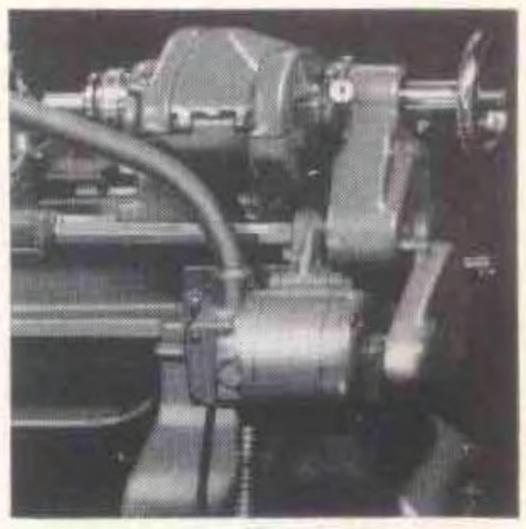


This sheet metal guard fits over the slot in the taper attachment connecting bar to prevent chips and dirt from falling through the slot onto the cross-feed screw. Taper attachment binding screw passes through guard and binding lever holds guard securely in position. Guard is reversible to permit using taper attachment on large or small work. For current models of South Bend Lathes only.

Chip Guard for Taper Attachment

Cat. No.	Lathe Size	Ship. Wt.	
CL3285NK	9" and Light Ten	1 lb.	
CL3285R	10"	1 lb.	
CL3285T	13"	1 lb.	
CL3285F	14 1/2"	1 lb.	
CL3285H	16" and 16-24"	1 lb.	

Independent Power Feed Attachment For 10" Lathe



This attachment is especially desirable for manufacturing dental amalgum, diamond turning and diamond boring operations, and other work requiring extremely smooth, fine feeds, or high spindle speeds. The rate of feed is determined by the speed of the lathe spindle. For example, when the spindle revolves at 2500 r.p.m., the power longitudinal feeds range from .00029" to .016" per revolution of the spindle, approximately. This attachment should be ordered with the lathe and fitted at the factory.

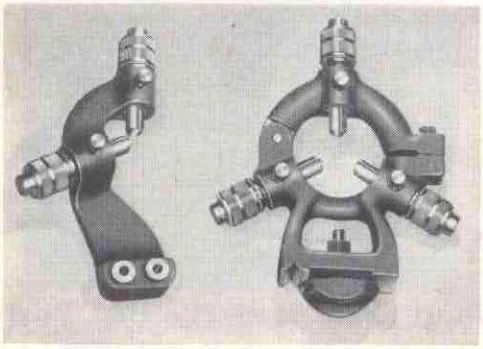
Independent Power Feed Attachment for 10-Inch Lathe

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

Lubricating Oil

Recommended for South Bend Lathes and other machinery requiring a high quality lubricant. Oil for general lubrication has about the same body as SAE 20, and the spindle oil for 9" lathes is similar in body to SAE 10. Spindle oil for 10"-1" Collet and larger lathes has a viscosity of approximately 70 seconds Saybolt Universal at 100°F.

Cat. No.	Quantity	Ship. Wt.	
Oil for General Lubrication of Lathe and Other Machinery			
CE1603	1 quart	3 lbs.	
CE1906	12 quarts	31 lbs.	
Oil for Spindle Bearings of 9" and Light Ten Lathes and Apron Clutch Mechanism of All Sizes of Lathes			
CE1602	1 quart	3 lbs.	
CE1904	12 quarts	31 lbs.	
Oil for Spindle Bearings of 10"-1" Collet and Larger Lathes			
CE1600	1 quart	3 lbs.	
CE1905	12 quarts	31 lbs.	



Telescoping Jaw Steady Rest and Follower Rest

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

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

Steady Rest

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

Telescoping Jaw Steady Rest

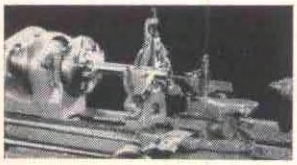
Catalog Number	Size Lathe	Maximum Capacity	Minimum Capacity	Shipping Weight	
CL2400N	9 inch	3 in.	5/16 in.	11 lbs.	
CL2400K	Light Ten	3 in.	5/16 in.	11 lbs.	
CL2400R	10 inch	3 in.	5/16 in.	13 lbs.	
CL2400T	13 inch	3 3/4 in.	5/16 in.	21 lbs.	
CL2400F	14 1/2 inch	4 3/4 in.	5/16 in.	28 lbs.	
CL2400H	16" & 2-H	4 3/4 in.	5/16 in.	30 lbs.	
CL2400V	16-24"	4 3/4 in.	5/16 in.	47 lbs.	

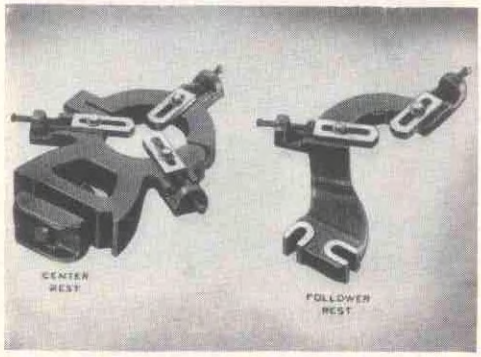
Follower Rest

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

Telescoping Jaw Follower Rest

Catalog Number	Size Lathe	Maximum Capacity	Minimum Capacity	Shipping Weight	
CL2395N	9 inch	2 in.	5/16 in.	7 lbs.	
CL2395K	Light Ten	2 in.	5/16 in.	7 lbs.	
CL2395R	10 inch	2 1/2 in.	5/16 in.	9 lbs.	
CL2395T	13 inch	3 1/4 in.	5/16 in.	11 lbs.	
CL2395F	14 1/2 inch	4 1/4 in.	5/16 in.	15 lbs.	
CL2395H	16" & 2-H	4 1/4 in.	5/16 in.	17 lbs.	
CL2395V	16-24"	4 1/4 in.	5/16 in.	21 lbs.	





Regular Steady Rest and Follower Rest

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

Steady Rest

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

Regular Steady Rest

Catalog Number	Size Lathe	Maximum Capacity	Minimum Capacity	Shipping Weight	
CL1177N	9 in.	3 in.	1/4 in.	10 lbs.	
.....	Light Ten	.....	.....	.....	Not Made
CL1177R	10 in.	3 in.	1/4 in.	11 lbs.	
CL1177T	13 in.	3 3/4 in.	3/8 in.	19 lbs.	
CL1177F	14 1/2 in.	4 3/4 in.	3/8 in.	27 lbs.	
CL1177H	16" & 2-H	4 3/4 in.	3/8 in.	29 lbs.	
CL1177V	16–24 in.	4 3/4 in.	3/8 in.	47 lbs.	

Follower Rest

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

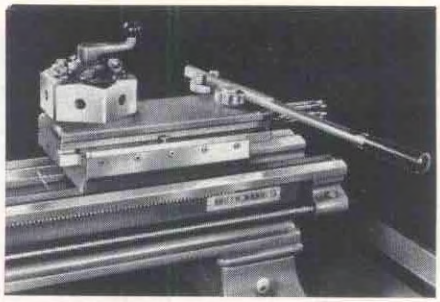
Regular Follower Rest

Catalog Number	Size Lathe	Maximum Capacity	Minimum Capacity	Shipping Weight	
CL1353N	9 in.	2 in.	5/16 in.	4 lbs.	
.....	Light Ten	.....	.....	.....	Not Made
CL1353R	10 in.	2 1/2 in.	5/16 in.	6 lbs.	
CL1353T	13 in.	3 1/4 in.	5/16 in.	9 lbs.	
CL1353F	14 1/2 in.	4 1/4 in.	5/16 in.	12 lbs.	
CL1353H	16 in.	4 1/4 in.	5/16 in.	13 lbs.	
CL1353V	16-24 in.	4 1/4 in.	5/16 in.	18 lbs.	

Extra Large Steady Rest

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

Cat. No.	Lathe	Ship. Wt.	
Telescoping Jaw Extra Large Steady Rest			
CL2266H	16" & No. 2-H	65 lbs.	
CL2266V	16-24"	85 lbs.	
Regular Style Extra Large Steady Rest			
CL2258H	16" & No. 2-H	75 lbs.	
CL2258V	16-24"	95 lbs.	



Handlever Bed Turret

for 9″, 10″, and 13″ South Bend Lathes

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

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

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

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

The effective feed of the turret slide is 4″. Center of turret hole to top of turret slide 1½″. Takes standard turret tools with ⅝″ diameter shank*. Distance between opposite flats on turret head is 4⅞″. 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	
CL1611N	9″	76 lbs.	
CL1611K	Light Ten	76 lbs.	
CL1611R	10″	83 lbs.	
CL1611T	13″	130 lbs.	

*Can be supplied to order with ⅜″ holes in turret face. No extra charge.

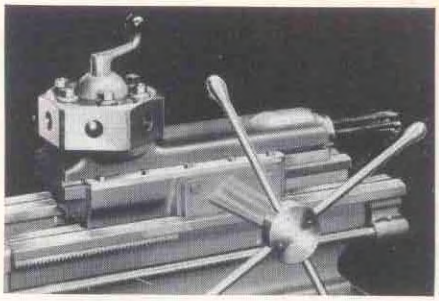
Compound Rest Cross Slide

for No. 2-H Turret Lathe

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

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

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



Hand Feed Turnstile Bed Turret

for 16″ South Bend Lathe

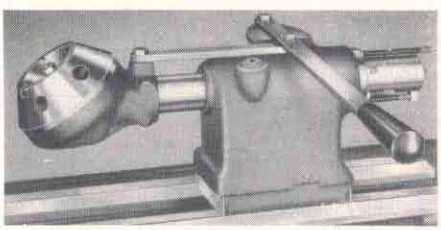
The Hand Feed Turnstile Bed Turret is mounted on the inside bed ways of the lathe. The large turnstile is provided for hand operated turret slide feeds. No power feed is available.

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

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

Effective feed of turret slide 5⅞″. Center of turret hole to top of turret slide 2½″. Takes standard turret tools with 1½″ diameter shank. Distance between opposite turret flats is 9⅜″. Maximum distance between spindle nose and turret face at beginning of indexing movement is 28¼″ on 6′ bed lathe. When turret is ordered separate from lathe, the purchaser must assume the responsibility of fitting and boring.

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

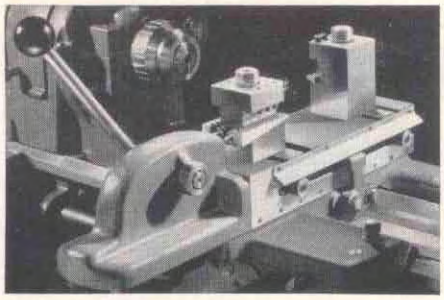


Handlever Turret

for 9″, 10″, and 13″ South Bend Lathes

This handlever turret is mounted on the lathe bed in place of the tailstock. The turret head has six holes for tools with ⅝″ 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 for the turret slide is 3¾ inches.

Cat. No.	Size Lathe	Shipping Weight	
CL2045N	9″	50 lbs.	
CL2045K	Light Ten	50 lbs.	
CL2045R	10″	60 lbs.	
CL2045T	13″	90 lbs.	

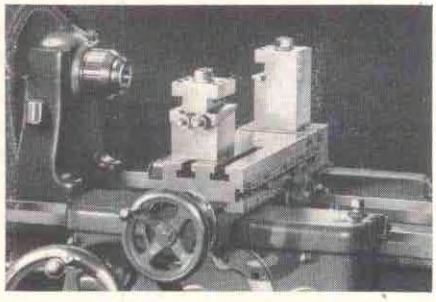


Handlever Double Tool Cross Slide
for 9″ and 10″ South Bend Lathes

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

This cross slide has front and back square tool blocks in which 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 precision adjustment for the height of the cutter bits.

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

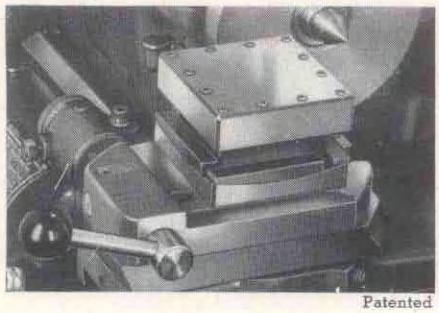


Screw Feed Double Tool Cross Slide
for 13″ and 16″ South Bend Lathes

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

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

Catalog Number	Size Lathe	Cross-Feed	Size Bit	Shipping Weight	
CL2027T CL2027TI	13″ 16″	ENGLISH	7/16″ sq. 5/8″ sq.	60 lbs. 95 lbs.	
CL2027TME CL2027HME	13″ 16″	METRIC	7/16″ sq. 5/8″ sq.	60 lbs. 95 lbs.	



Patented

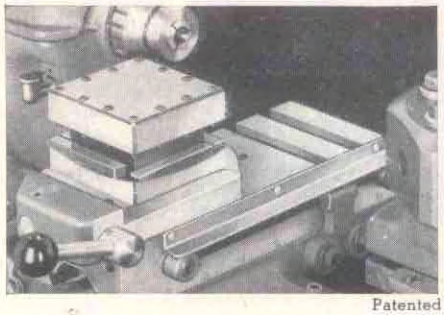
Square Turret Tool Block
for Compound Cross Slide

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

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

Square Turret Tool Block for Compound Cross Slide

Catalog Number	Size of Lathe	Size Square	Takes Tools	Shipping Weight	
CL3375N	9″ and Ser. 900	3″	3/8″ x 3/8″	13 lbs.	
CL3375K	Light Ten	3″	3/8″ x 3/8″	14 lbs.	
CL3375R	10″ and Ser. 1000	3″	3/8″ x 3/8″	15 lbs.	
CL3375T	13″	3″	3/8″ x 3/8″	24 lbs.	
CL3375F	14 1/2″	4″	5/8″ x 5/8″	36 lbs.	
CL3375H	16″ and 16-24″	4″	5/8″ x 5/8″	40 lbs.	



Patented

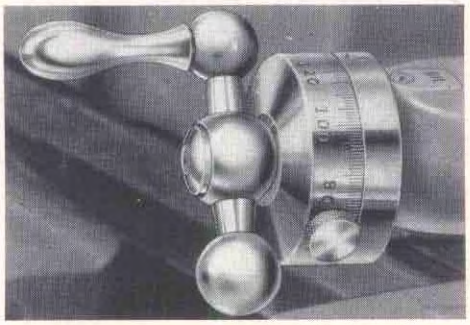
Square Turret Tool Block
for Double Tool Cross Slide

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

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

Square Turret Tool Block for Double Tool Slide

Catalog Number	Size of Lathe	Size Square	Takes Tools	Ship. Weight	
CL3376NR	9″, Series 900, 10″ & Series 1000	3″	3/8″ x 3/8″	10 lbs.	
CL3376K	Light Ten	3″	3/8″ x 3/8″	11 lbs.	
CL3376T	13″	3″	3/8″ x 3/8″	20 lbs.	
CL3376H	16″ & No. 2-H	4″	5/8″ x 5/8″	28 lbs.	



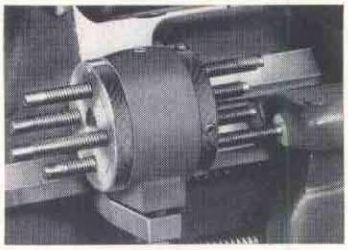
Direct Reading Micrometer Collars

In Lieu of Regular Collars

Direct reading micrometer collars indicate the amount of stock removed from the work directly, in thousandths of an inch. As the cutting tool is fed in, each graduation indicates a movement of one-half thousandth, or a reduction in the diameter of the work of one thousandth. The regular collars have only one-half as many graduations, and each graduation indicates a reduction of two thousandths in the diameter of the work. Direct reading micrometer collars can be supplied in lieu of the regular collars for the compound rest feed screw and the cross-feed screw, provided they are ordered with the lathe.

Catalog Number	Size Lathe
CL2520NK CL2520R CL2520TH CL2520P	9", Lt. Ten, & Series 900 10" and Series 1000 13", 14½", 16", & 16-24" No. 2-H

Four Position Carriage Stop

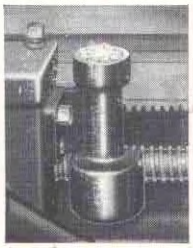


Much time can be saved in positioning the cutting tool for repetitive operations, by using this four position carriage stop. Each of the four adjustable stops may be set for a different tool position, and may be revolved into position to locate the carriage for each of four successive cuts. This attachment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

Catalog Number	Size Lathe	Shipping Weight
CL2135NK	9" & Light Ten	6 lbs.
CL2135RT	10" & 13"	6 lbs.
CL2135FH	14½", 16", 16-24", & 2-H	10 lbs.

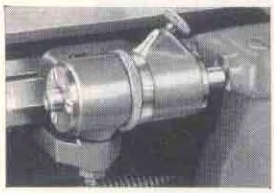
Thread Dial Indicator

Eliminates reversing of lathe spindle when cutting threads. Dial is numbered and graduated to show when to close half-nuts on lead screw to catch the thread on each successive cut, after returning carriage to the starting point. For English pitches only. See page 47 for metric thread dial.



Catalog Number	Size Lathe	Shipping Weight
CL810NK	9" & Light Ten	2 lbs.
CL810R	10"	3 lbs.
CL810TH	13", 14½", 16", 16-24", 2-H	5 lbs.

Micrometer Stop



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

Size Lathe	Ship Wt.	English Graduations		Metric Graduations	
		Cat. No.		Cat. No.	
9" & Light Ten	2 lbs.	CL968NK		CL968NKME	
10"	4 lbs.	CL968R		CL968RME	
13"	4 lbs.	CL968T		CL968TME	
14½", 16", 16-24", & 2-H	7 lbs.	CL968FH		CL968FHME	

Plain Carriage Stop

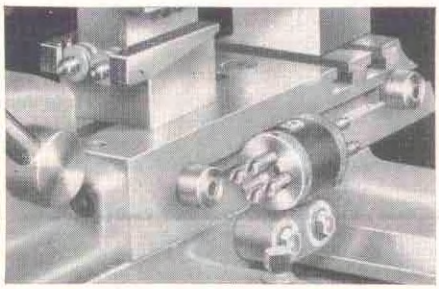
This stop may be clamped onto the front V-way of the lathe bed, on either side of the saddle, to locate the position of the cutting tool for facing, necking, cutting shoulders, machining grooves, and similar operations.

Catalog Number	Size Lathe	Shipping Weight
CL758NK	9" & Light Ten	2 lbs.
CL758R	10"	4 lbs.
CL758T	13"	4 lbs.
CL758FH	14½", 16", 16-24", & 2-H	7 lbs.

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
CL2250NK	9" & Light Ten	½ lb.
CL2250R	10"	½ lb.
CL2250T	13"	1 lb.
CL2250F	14½"	1 lb.
CL2250H	16" & 16-24"	2 lbs.



Four Position Cross Slide Stop

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

Cat. No.	Size Lathe	Ship. Wt.
CL2154NR	9", 10", Ser. 900, Ser. 1000	2 lbs.
CL2154T	13"	3 lbs.
CL2154H	16" and No. 2-H	3 lbs.

Coolant Pump and Reservoir

The coolant equipment listed below is for use with South Bend Lathes equipped with oil pans. The oil pump is self-priming as it is below the oil level. Equipment includes coolant pump, tubing, reservoir, ¼ h.p. motor, and switch. Price includes fitting to lathe at factory.

Coolant Pump and Reservoir Fitted to 10″-1″ Collet or Larger Floor Leg Lathes, No. 2-H, or Series 1000 Floor Leg Turret Lathes

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

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

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

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

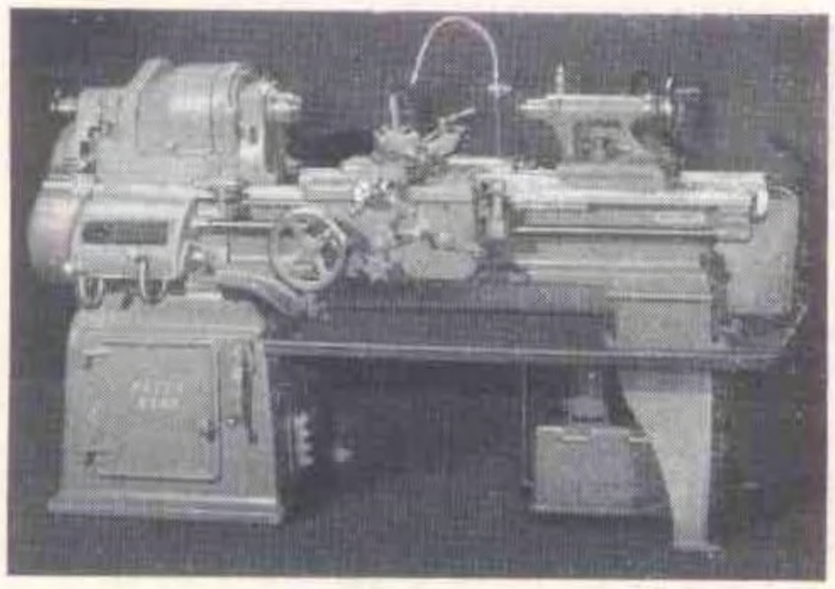
Cat. No. CL2195NK—Making chip pan oil tight on 9″ or Light Ten Lathe.

Cat. No. CL2195R—Making chip pan oil tight on 10″ Lathe.

Coolant Pump Not Fitted to Lathe

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

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



Oil Pans, Splash Pans, and Chip Pans

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

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

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

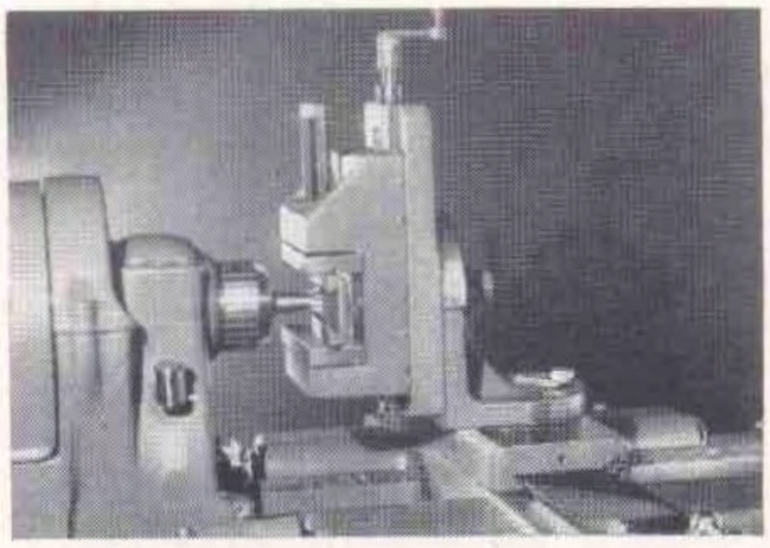
Chip Pans are intended for collecting chips only and are not necessarily oil tight. Chip pans extend from the headstock leg to the tailstock end of bed.

Pans for Floor Leg South Bend Lathes

Size Lathe	Oil Pan Cat. No.		Chip Pan Cat. No.		Splash Pan Cat. No.	
Series 900 9″ and Lt. Ten x 3½′	.....		.....		CL2057Z	
10″ x 3′	CL2020Y		CL1987Y		CL2059Z	
10″ x 3½′	CL2020Z		CL1987Z		CL2059Z	
Series 1000 10″ x 4′	.....		.....		CL2059Z	
10″ x 4½′	CL2020A		CL1987A		CL2059R	
13″ x 4′	CL2020R		CL1987R		CL2059R	
13″ x 5′	CL2022A		CL1989A		CL2060A	
13″ x 6′	CL2022B		CL1989B		CL2060B	
13″ x 7′	CL2022C		CL1989C		CL2060C	
14½″ x 5′	CL2022D		CL1989D		CL2060D	
14½″ x 6′	CL2023B		CL1990B		CL2062B	
14½″ x 7′	CL2023C		CL1990C		CL2062C	
14½″ x 8′	CL2023D		CL1990D		CL2062D	
16″ x 6′	CL2023E		CL1990E		CL2062H	
16″ x 7′	CL2024C		CL1991C		CL2062C	
16″ x 8′	CL2024D		CL1991D		CL2062D	
16″ x 10′	CL2024E		CL1991E		CL2062H	
16″ x 12′	CL2024G		CL1991G		CL2062H	
16-24″ x 6′	CL2024H		CL1991H		CL2062H	
16-24″ x 7′	.....		CL1991C		.....	
16-24″ x 8′	.....		CL1991D		.....	
16-24″ x 10′	.....		CL1991E		.....	
16-24″ x 12′	.....		CL1991G		.....	
2-H x 6′	.....		CL1991H		.....	
2-H x 7′	.....		.....		CL2062C	
	.....		.....		CL2062D	

Pans for South Bend Bench Lathes

Size Lathe	Chip Pan Cat. No.		Splash Pan Cat. No.	
9″ and Lt. Ten x 3′	CL1297Y		CL2056Y	
9″ and Lt. Ten x 3½′	CL1297Z		CL2057Z	
9″ and Lt. Ten x 4′	CL1297A		CL2057R	
9″ and Lt. Ten x 4½′	CL1297R		CL2057R	
10″ x 3′	CL1377Y		CL2057Z	
10″ x 3½′	CL1377Z		CL2057Z	
Series 1000	.....		CL2057Z	
10″ x 4′	CL1377A		CL2057R	
10″ x 4½′	CL1377R		CL2057R	



Milling and Keyway Cutting Attachment

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

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

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

Milling and Keyway Cutting Attachment

Cat. No.	Size Lathe Ins.	Vert. Feed Ins.	Cross-Feed Ins.	Vise Holds Ins.	Jaw Depth Ins.	Jaw Width Ins.	Ship. Wt. Lbs.
CL2680NK	9"-Lt.10	2 1/2	5 7/8	1 1/2	13/16	3	13
CL2680R	10	3	5 7/8	1 3/4	15/16	3 1/2	25
CL2680T	13	4 1/4	8 1/8	2 7/8	1 11/16	4 7/8	40
CL2680F	14 1/2	6	10	4	2	5 3/4	50
CL2680H	16	6	10 1/2	4	2	5 3/4	65
CL2680H	16-24	6	10 1/2	4	2	5 3/4	65

Metric Milling Attachment

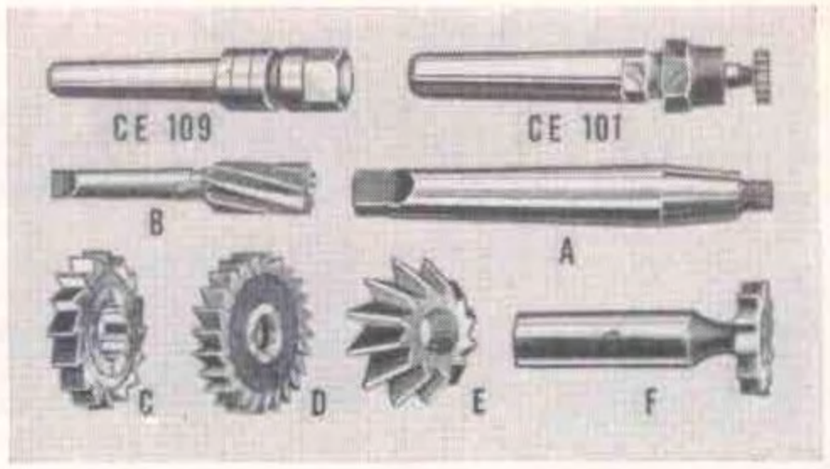
The milling and keyway cutting attachments shown above can be supplied with metric graduations in lieu of English graduations. Prices and specifications are same as for corresponding sizes with English graduations. Specify catalog numbers listed below for milling attachments with metric graduations.

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

Milling Attachment Chest

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

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



Milling Arbors and Cutters

Milling Arbors CE109, CE101, and A

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

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

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

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

CE101. Collet Chuck for Woodruff Cutters (F) with 1/2" diameter shank. Shipping weight 2 lbs.

Spiral End Mills (B)

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

Cat. No.	Dia. Mill	Morse Taper		Cat. No.	Dia. Mill	Morse Taper	
CE3893	1/2"	No. 2		CE3808	3/4"	No. 3	
CE3894	5/8"	No. 2		CE3809	7/8"	No. 3	
CE3895	3/4"	No. 2		CE3810	1"	No. 3	
CE3896	7/8"	No. 2		CE3811	1 1/8"	No. 3	
CE3897	1"	No. 2		CE3812	1 1/4"	No. 3	

Plain Milling Cutters (C)

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

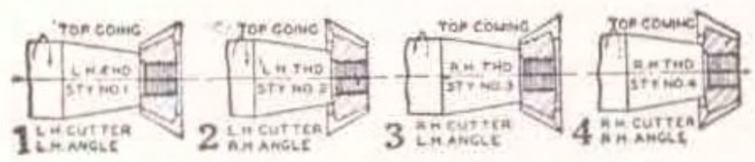
Cat. No.	Face Width	O.D.		Cat. No.	Face Width	O.D.	
CE3920	3/16"	2 1/2"		CE3924	7/16"	2 1/2"	
CE3921	1/4"	2 1/2"		CE3925	1/2"	2 1/2"	
CE3922	5/16"	2 1/2"		CE3926	5/8"	2 1/2"	
CE3923	3/8"	2 1/2"		CE3927	3/4"	2 1/2"	

Side Milling Cutters (D)

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

Cat. No.	Face Width	O.D.		Cat. No.	Face Width	O.D.	
CE3930	1/4"	3"		CE3934	1/2"	3"	
CE3931	5/16"	3"		CE3935	3/4"	4"	
CE3932	3/8"	3"		CE3936	7/8"	4"	
CE3933	7/16"	3"					

Angular Cutters (E)



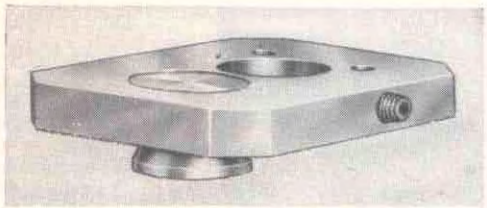
High Speed Steel With Threaded Hole
1 1/4" O.D., 7/16" Face, 60° Included Angle

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

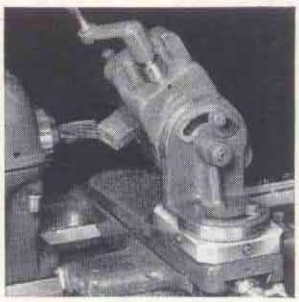
Woodruff Keyseat Cutters (F)

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

Cat. No.	Cutter Dia.	Cutter Face		Cat. No.	Cutter Dia.	Cutter Face	
CE3940	1/2"	1/16"		CE3948	1"	1/4"	
CE3941	1/2"	1/8"		CE3949	1"	5/16"	
CE3942	5/8"	1/8"		CE3950	1 1/8"	5/16"	
CE3943	3/4"	1/8"		CE3951	1 1/8"	1/4"	
CE3944	3/4"	5/16"		CE3952	1 1/8"	5/16"	
CE3945	7/8"	5/16"		CE3953	1 1/4"	5/16"	
CE3946	7/8"	1/4"		CE3954	1 1/4"	1/4"	
CE3947	1"	5/16"		CE3955	1 1/4"	3/8"	



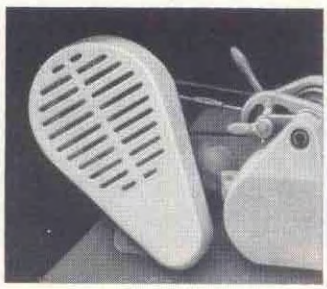
Off-set Base for Milling Attachment



To increase the capacity of the milling attachment for the 9″ and Light Ten lathes, the off-set base illustrated above is used. The base consists of a 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 1½″ farther away from the center line of the lathe spindle. This permits milling parts that might otherwise be too large for machining. See illustration at right. Price of off-set base includes necessary screws for mounting.

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

Motor Belt Guard for 9″ Bench Lathe



This guard is designed to enclose the motor pulley, motor V-belt, and countershaft drive pulley of 9-inch Horizontal Motor Driven Bench Lathes. It can be used with any 9-inch Horizontal Motor Drive Unit made since Feb. 1940. Guard is attached to the motor drive frame by a cap screw or bolt and a dowel pin. Frame must be drilled for pin and bolt or tapped for screw.

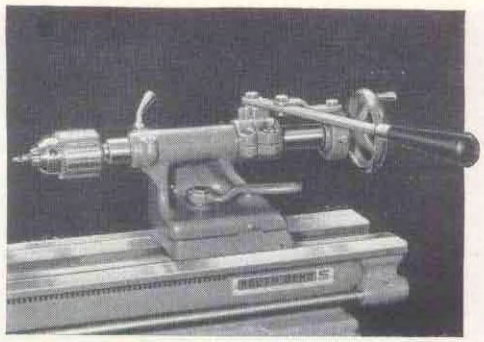
CL2885. Motor Belt Guard for 9″ Horizontal Motor Drive with ⅓ h.p. or ¼ h.p. motor. Ship. wt. 26 lbs.

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

Extra Tool Posts

Machining time can often be saved by using 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.
		Dia.	Opening	Block	
CE2450NK	9″ & Lt. Ten	55/64	13/32 x 7/8	¼ x ¼ x 1¾	2 lbs.
CE2450R	10″	31/32	15/32 x 1	¼ x 1¾ x 1½	2 lbs.
CE2450T	13″	1 3/16	19/32 x 1¼	⅝ x 1¾ x 1⅞	3 lbs.
CE2450F	14½″	1 11/32	21/32 x 1¾	½ x 2 x 2⅜	4 lbs.
CE2450H	16″	1½	25/32 x 1¾	½ x 2¼ x 2½	5 lbs.

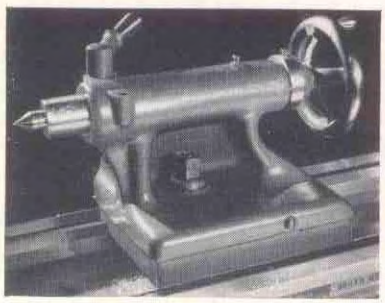


Handlever Tailstock

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

Handlever Tailstock for South Bend Lathes

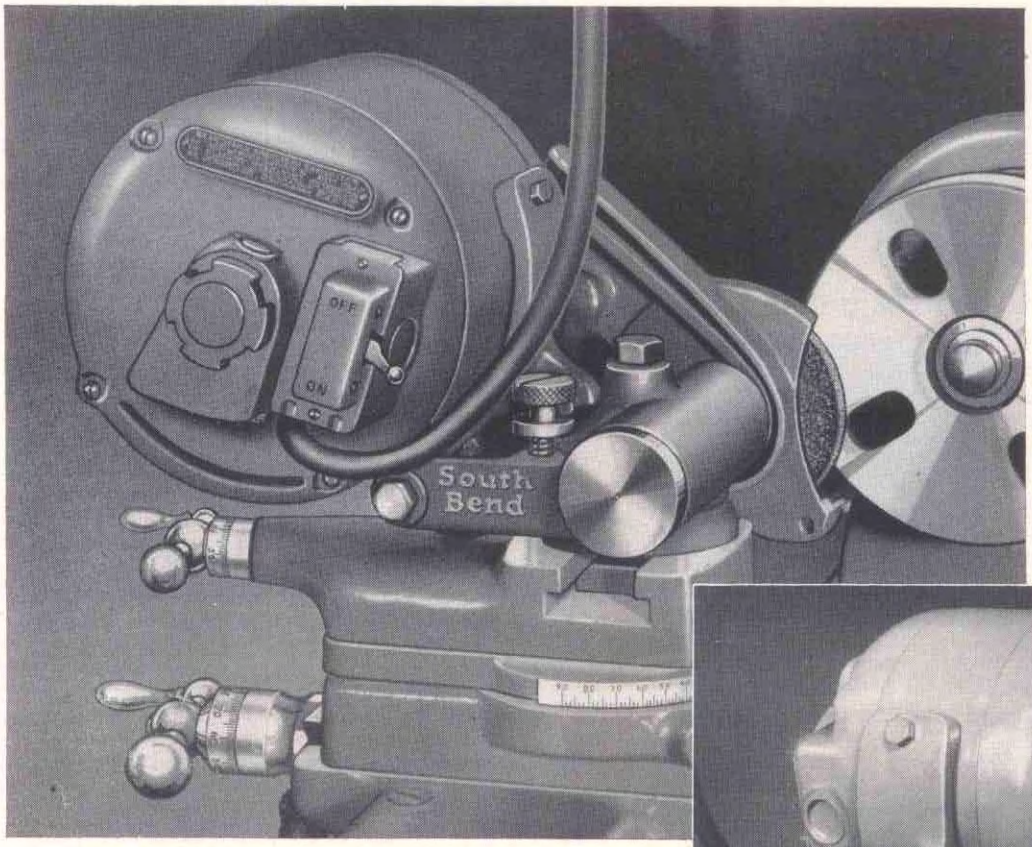
Size Lathe	Lgth. of Feed Inches	Shpg. Weight Lbs.	In Lieu of Regular Tailstock		In Addition to Regular Tailstock	
			Cat. No.		Cat. No.	
9″	2⅝	25	CL519N		CL1197N	
Light Ten	2⅝	25	CL519K		CL1197K	
10″	2⅝	33	CL519R		CL1197R	



Tailstock
for South Bend Turret Lathes

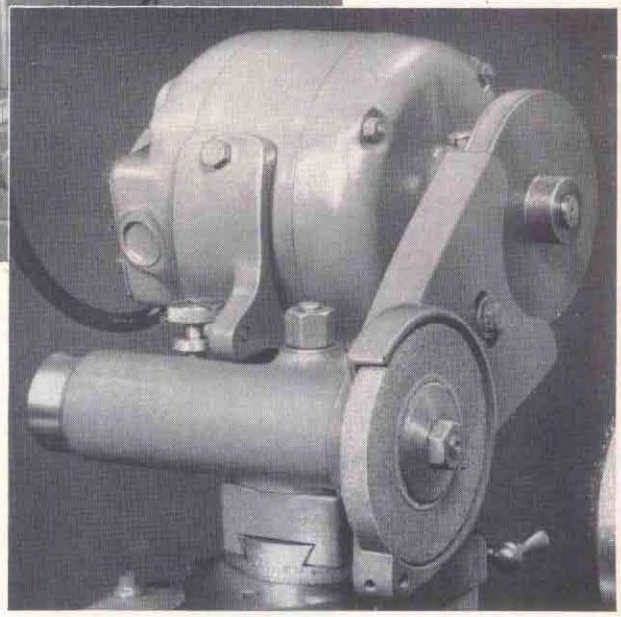
Prices of South Bend No. 2-H, Series 900, and Series 1000 Turret Lathes do not include tailstock, but a standard set-over type tailstock as illustrated above can be supplied to order. The tailstock mounts on the lathe bed, in place of the turret, for machining work between centers. Tailstock spindle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

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



Left—External Grinding Attachment Mounted on 16-inch South Bend Lathe.

Below—External Grinding Attachment Mounted on 9-inch South Bend Lathe.



External Grinding Attachment

This powerful and efficient grinding attachment is recommended for grinding bushings, sharpening reamers and cutters, and other external grinding. Designed to fit the various sizes of South Bend Lathes, it is easily adaptable for use on other makes of lathes. The spindle revolves in pre-lubricated, precision ball bearings which are sealed to protect them from damage by dust, grit and metal particles produced when grinding. Supplied with ¼ h.p., constant speed continuous duty motor, and 4" x ½" No. CE2759 general purpose grinding wheel. Grinders with popular motors are listed below. Write for information on grinders having motors with other current characteristics. Shipping weight approximately 55 lbs.

External Grinding Attachments for South Bend Lathes

Catalog Number	Size Lathe	Dia. Will Grind	Motor Specifications			
			Volts	Phase	Cycle	
CE300KNK	9" and Light Ten	5"	115 D.C.	..	..	
CE300LNK		5"	230 D.C.	..	..	
CE301ANK		5"	115 A.C.	1	50	
CE301BNK		5"	115 A.C.	1	60	
CE301CNK		5"	230 A.C.	1	50	
CE301DNK		5"	230 A.C.	1	60	
CE303CNK		5"	220 A.C.	3	50	
CE303DNK		5"	220 A.C.	3	60	
CE303FNK		5"	440 A.C.	3	60	
CE300KR	10"	5 3/4"	115 D.C.	..	..	
CE300LR		5 3/4"	230 D.C.	..	..	
CE301AR		5 3/4"	115 A.C.	1	50	
CE301BR		5 3/4"	115 A.C.	1	60	
CE301CR		5 3/4"	230 A.C.	1	50	
CE301DR		5 3/4"	230 A.C.	1	60	
CE303CR		5 3/4"	220 A.C.	3	50	
CE303DR		5 3/4"	220 A.C.	3	60	
CE303FR		5 3/4"	440 A.C.	3	60	
CE300KT	13"	7 3/4"	115 D.C.	..	..	
CE300LT		7 3/4"	230 D.C.	..	..	
CE301AT		7 3/4"	115 A.C.	1	50	
CE301BT		7 3/4"	115 A.C.	1	60	
CE301CT		7 3/4"	230 A.C.	1	50	
CE301DT		7 3/4"	230 A.C.	1	60	
CE303CT		7 3/4"	220 A.C.	3	50	
CE303DT		7 3/4"	220 A.C.	3	60	
CE303FT		7 3/4"	440 A.C.	3	60	

Catalog Number	Size Lathe	Dia. Will Grind	Motor Specifications			
			Volts	Phase	Cycle	
CE300KF	14 1/2"	8 3/4"	115 D.C.	..	..	
CE300LF		8 3/4"	230 D.C.	..	..	
CE301AF		8 3/4"	115 A.C.	1	50	
CE301BF		8 3/4"	115 A.C.	1	60	
CE301CF		8 3/4"	230 A.C.	1	50	
CE301DF		8 3/4"	230 A.C.	1	60	
CE303CF		8 3/4"	220 A.C.	3	50	
CE303DF		8 3/4"	220 A.C.	3	60	
CE303FF		8 3/4"	440 A.C.	3	60	
CE300KH	16"	9 5/8"	115 D.C.	..	..	
CE300LH		9 5/8"	230 D.C.	..	..	
CE301AH		9 5/8"	115 A.C.	1	50	
CE301BH		9 5/8"	115 A.C.	1	60	
CE301CH		9 5/8"	230 A.C.	1	50	
CE301DH		9 5/8"	230 A.C.	1	60	
CE303CH		9 5/8"	220 A.C.	3	50	
CE303DH		9 5/8"	220 A.C.	3	60	
CE303FH		9 5/8"	440 A.C.	3	60	
CE300KH	16-24"	18 3/4"	115 D.C.	..	..	
CE300LH		18 3/4"	230 D.C.	..	..	
CE301AH		18 3/4"	115 A.C.	1	50	
CE301BH		18 3/4"	115 A.C.	1	60	
CE301CH		18 3/4"	230 A.C.	1	50	
CE301DH		18 3/4"	230 A.C.	1	60	
CE303CH		18 3/4"	220 A.C.	3	50	
CE303DH		18 3/4"	220 A.C.	3	60	
CE303FH		18 3/4"	440 A.C.	3	60	

Extra Grinding Wheels For External Grinding Attachment

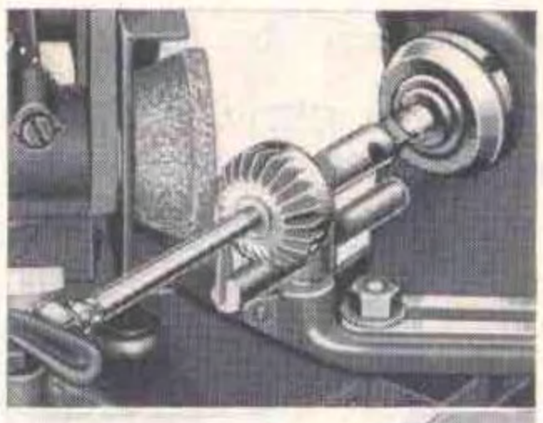
For rapid grinding and smooth finish, the correct grade of grinding wheel should be selected. The grinding wheels listed cover the more important classes of work. Wheels listed in table are 4" in diameter with ½" face and ½" hole, to fit external grinding attachment. Shipping weight 2 lbs.

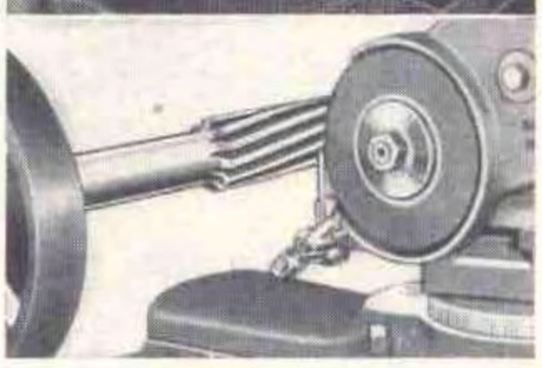
Cat. No.	Type of Work	Class of Work	
CE2759	General Work	Rough or Finish	
CE2758	Cutting Tools	Rough or Finish	
CE2774	Automobile Valves	Rough or Finish	
CE2757	Cast Iron	Finish Grinding	
CE2769	Soft Steel	Finish Grinding	

No. CE3236. Cup Grinding Wheel, 3¼" O.D., 1¼" face, ½" hole for sharpening reamers and cutters.

Reamer Grinding Stops

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





Cat. No.	Size Lathe	Ship. Wt.	
CE1512N	9"	7 lbs.	
CE1512K	Lt. Ten	8 lbs.	
CE1512R	10"	9 lbs.	
CE1512T	13"	14 lbs.	
CE1512F	14½"	20 lbs.	
CE1512H	16"	24 lbs.	
CE1512V	16-24"	30 lbs.	

Diamond Dresser

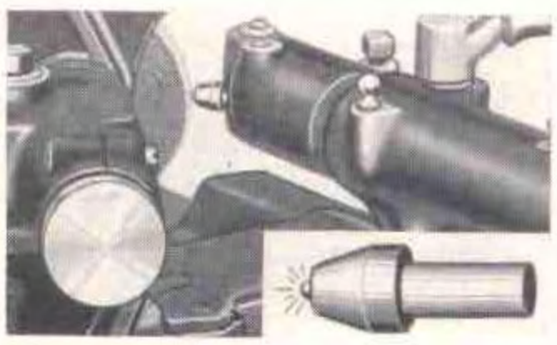
For satisfactory operation, the grinding wheel should be trued frequently with a diamond dresser. This dresser must be mounted in the Reamer Grinding Stop fixture, listed above. Price does not include the fixture.

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

Tailstock Diamond Holding Fixture

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

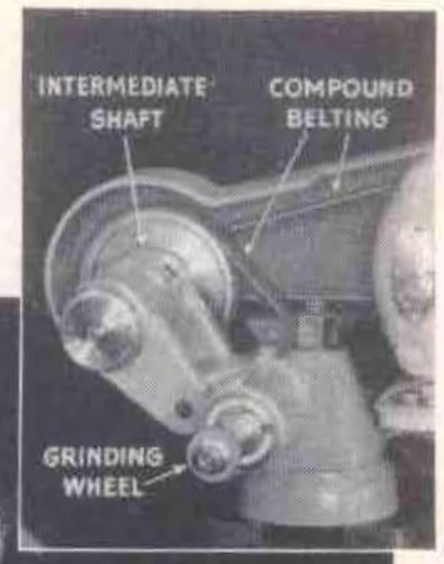
Cat. No.	Size Lathe	Ship. Wt.	
CE91NK	9" & Lt. Ten	3 lbs.	
CE91R	10"	3 lbs.	
CE91T	13"	4 lbs.	
CE91F	14½"	4 lbs.	
CE91H	16" & 16-24"	5 lbs.	

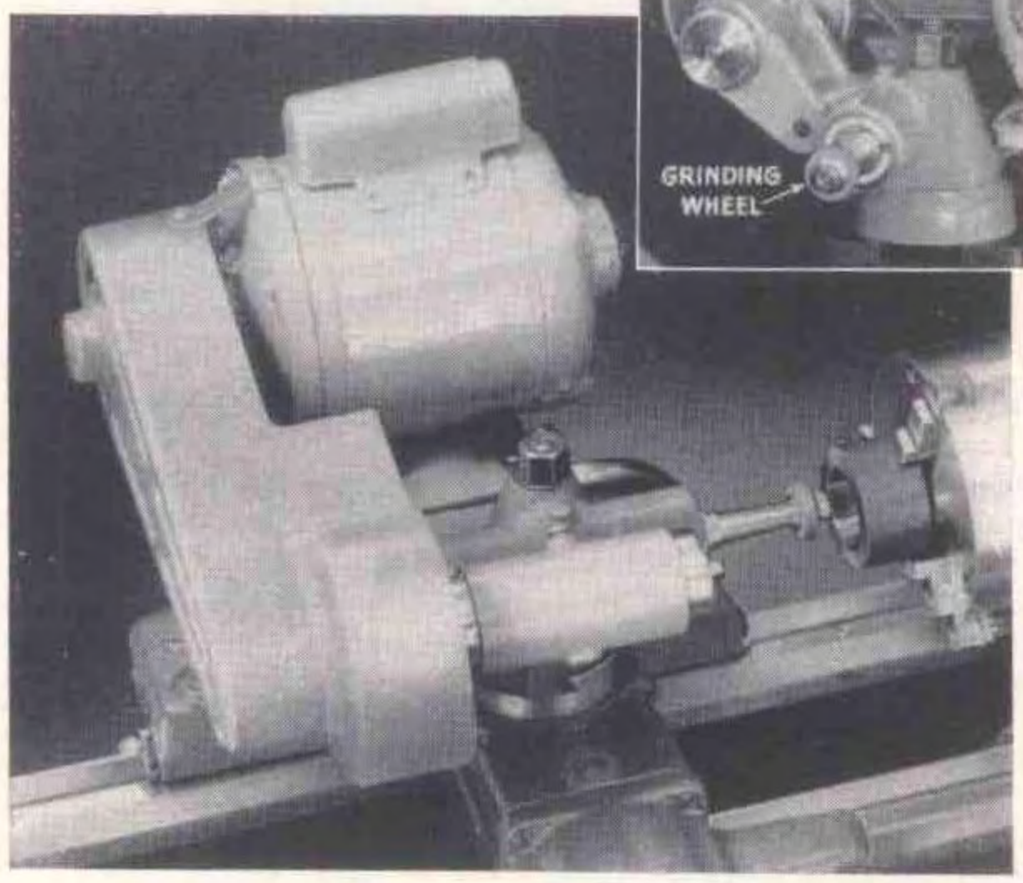


No. CE406. Diamond Dresser. Shipping weight ½ lb.

Right—Compound Belting Drives Grinding Wheel at 30,000 r.p.m.

Below—Internal Grinding Attachment on 10" Lathe.





Internal Grinding Attachment

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

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

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

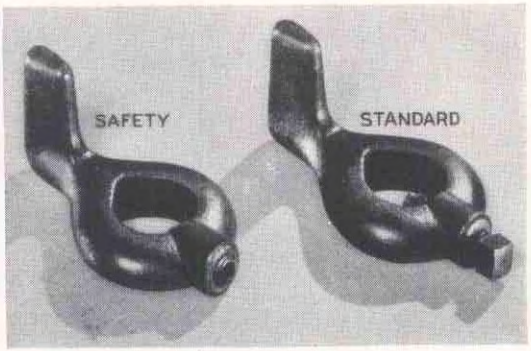
This grinder can be easily adapted for use on other makes of lathes or on other machine tools. Grinders have 1 ph., 60 cy., 115 v., A.C. motor, and accessories as listed below under specifications. Shipping weight 51 lbs.

Specifications

Grinding wheel speed ..... 30,000 r.p.m.
Maximum depth of ground hole with 1-inch wheel ..... 3⅞ inches
Maximum wheel diameter recommended ..... 1 inch
Accessories supplied:
Four ¼" wheel arbors; lengths 2 3/16", 2 15/16", 3 9/16", and 4 7/16".
Four grinding wheels: ¼" bore; ¼" face; ⅝", ¾", ⅞", and 1" diameters.
One chuck for mounted wheels ..... ⅛" capacity
Eight-foot extension cord, plug, and switch.

Catalog Number	Lathe Size	Base to Center of Wheel	
CE601BNK	9" & Light Ten	1 1/32 in.	
CE601BR	10 in.	1 1/32 in.	
CE601BT	13 in.	1⅝ in.	
CE601BF	14½ in.	1 27/32 in.	
CE601BH	16" & 16-24"	2 1/16 in.	

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



Standard and Safety Lathe Dogs

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

Lathe Dogs for 13″ and Larger Lathes

Cap. In.	Ship. Wt.	STANDARD Cat. No.	SAFETY Cat. No.	Wrenches for Safety Dogs Cat. No.
½	1 lb.	CE3843	CE3826	CE2385
¾	1 lb.	CE3844	CE3827	CE2386
1	2 lbs.	CE3845	CE3828	CE2387
1¼	2 lbs.	CE3846	CE3829	CE2388
1½	3 lbs.	CE3847	CE3830	CE2389
1¾	3 lbs.	CE3848	CE3831	CE2389
2	4 lbs.	CE3849	CE3832	CE2389
2½	5 lbs.	CE3850	CE3833	CE2390
3	6 lbs.	CE3851	CE3834	CE2390
3½	7 lbs.	CE3852	CE3835	CE2390
4	9 lbs.	CE3853	CE3836	CE2390

Lathe Dogs for 9″ and 10″ Lathes

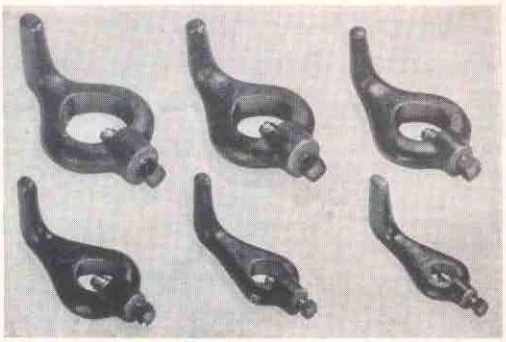
Cap. In.	Ship. Wt.	STANDARD Cat. No.	SAFETY Cat. No.	Wrenches for Safety Dogs Cat. No.
⅜	1 lb.	CE3837	CE3820	CE2385
½	1 lb.	CE3838	CE3821	CE2385
¾	2 lbs.	CE3839	CE3822	CE2386
1	2 lbs.	CE3840	CE3823	CE2387
1¼	3 lbs.	CE3841	CE3824	CE2388
1½	3 lbs.	CE3842	CE3825	CE2388

Clamp Lathe Dog

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

Clamp Lathe Dogs

Catalog Number	Capacity: Maximum Opening	Capacity: Distance Between Screws	Size Lathe Used With	Shipping Weight
CE160	1⅝″	1¾″	9″ & larger	1 lb.
CE161	1⅞″	2¼″	13″ & larger	2 lbs.
CE162	2⅛″	2¾″	13″ & larger	3 lbs.
CE163	3¼″	3½″	14½″ & larger	4 lbs.



Sets of Lathe Dogs

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

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

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

Cat. No. CE2105. Set of 6 Standard Lathe Dogs, ⅜″ to 1½″ capacity for 9″ and 10″ lathes. Ship wt. 6 lbs.

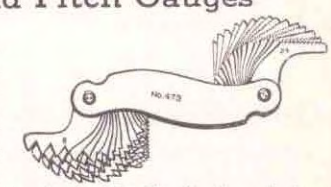
Cat. No. CE2107. Set of 6 Safety Lathe Dogs, ⅜″ to 1½″ capacity for 9″ and 10″ lathes. Ship. wt. 6 lbs.

Center Gauge

The center gauge is a useful tool for the lathe operator. The 60° included angle is used for checking the angle of the lathe center point. The two small 60° notches in the side of the tool are used for grinding and setting the point of the lathe tool for cutting screw threads. Engine divided graduations in each corner are 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.

No. CE650 Center Gauge. Shipping weight 2 ozs.

Screw Thread Pitch Gauges

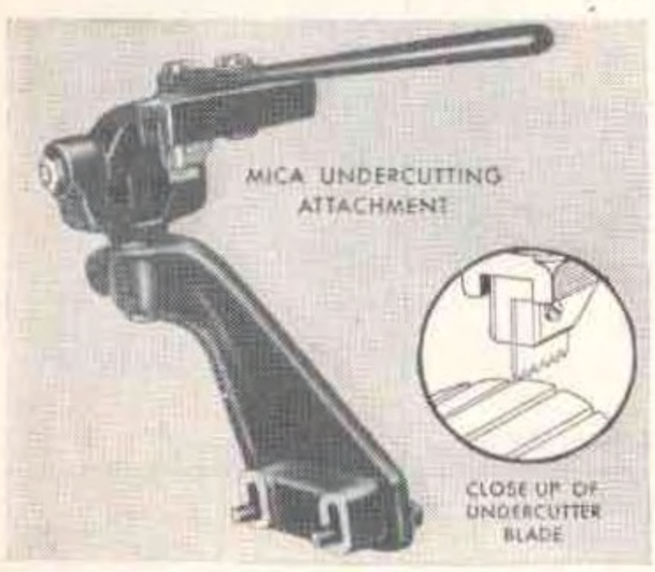


With one of these handy gauges you can check the pitches of internal and external screw threads quickly and accurately. Made of steel, with each blade marked to indicate threads per inch. Each blade has standard 60° U. S. thread form accurately milled and held well within commercial tolerances. Can be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

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

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

Mica Undercutting Attachment



PATENTED

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

Catalog No	Size Lathe	Ship. Weight	
CL675N	9"	7 lbs.	
CL675KR	Lt. Ten & 10"	10 lbs.	
CL675T	13"	12 lbs.	
CL675F	14½"	15 lbs.	
CL675H	16"	17 lbs.	

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

Adjustable Collet Bushing Chuck

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

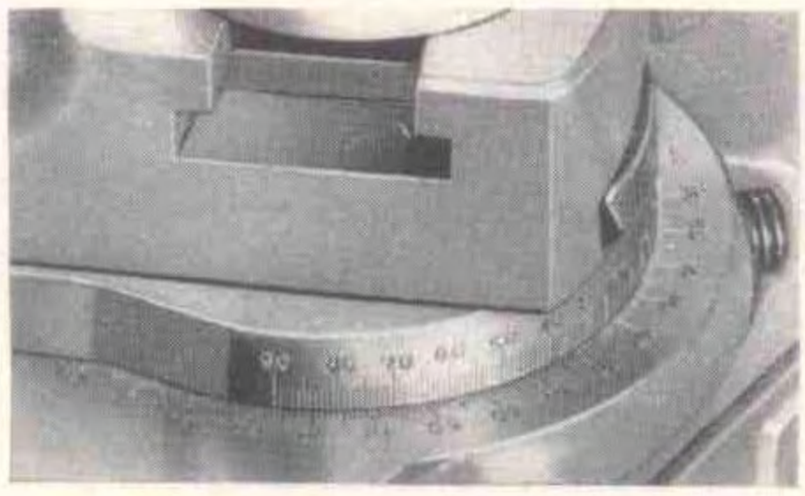
Description	Cat. No.	Shank	Shipping Weight	
Adjustable Collet Bushing Chuck only	CE1615NR	No. 2	2 lbs.	
	CE1615TH	No. 3	2 lbs.	
Adjustable Collet Bushing Chuck with set of 3 collets, 9/16", 5/8", and .637" capacity for popular armatures	CE1608NR	No. 2	3 lbs.	
	CE1608TH	No. 3	4 lbs.	

Cat. No. CE1659. Extra Collets for round work, any capacity ⅛" to 1" round by 16ths, ship. wt. 1 lb.

Complete Armature Service Equipment Kit

Consisting of mica undercutting attachment with two cutter blades; adjustable collet bushing chuck with set of three collets; drill chuck, ⅛" 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.

Catalog No.	Size Lathe	Shipping Weight	
CL2330N	9"	20 lbs.	
CL2330K	Light Ten	22 lbs.	
CL2330R	10"	22 lbs.	
CL2330T	13"	26 lbs.	
CL2330F	14½"	28 lbs.	
CL2330H	16"	30 lbs.	



Compound Rest Base Graduated 360°

The compound rest base of any South Bend Lathe can be graduated 360° as illustrated above. Every tenth graduation in each quarter of the circle is numbered from 0° to 90°, the 0° graduations being at the front and back and 90° graduations on the sides. Having graduations all the way around, it is easy to adjust the angular setting of the compound rest swivel from the front of the lathe. These graduations supplement those on the compound rest swivel, which is graduated 180°. When 360° graduations are wanted, they should be specified when the lathe is ordered.

CL3260. Graduating Compound Rest Base 360°, any size of South Bend Lathe.

Swiveling Machine Handles

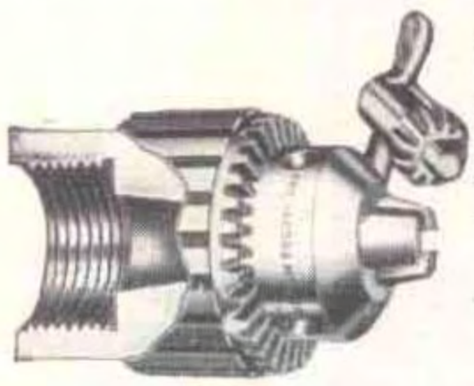
Swivel type machine handles can be supplied in lieu of the regular solid machine handles for the apron handwheel, cross-feed knob, and tailstock handwheel of 10"-1" Collet and larger South Bend Lathes. The swivel handle is made in two parts, having an outer sleeve which revolves on a spindle. When swivel machine handles are wanted in lieu of the solid machine handles, they must be specified when lathe is ordered.

Swivel Machine Handles in Lieu of Solid Machine Handles

Cat. No.	Size Lathe		Cat. No.	Size Lathe	
CL2605R	10"-1" Collet		CL2605F	14½"	
CL2605T	13"		CL2605H	16"	

Jacobs Valve Chuck

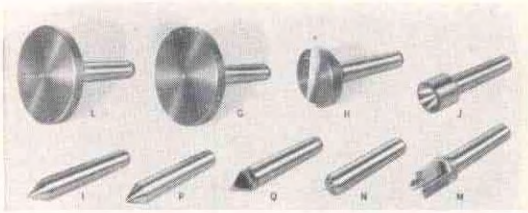
Chuck has 1½"—8 thread to fit spindle nose of 9" and Light Ten lathes only. Has hollow body for holding automobile engine valves for refacing. Also used for holding small rods, bars, and tubes for machining. ⅝" chuck can be used in tailstock of lathe when fitted with solid arbor No. CE2304 or CE2305. Price and weight includes pinion key.



Cat. No.	Capacity	Ship. Wt.	
CE907	⅛" to ⅝"	3⅜ lbs.	
CE925	3/16" to ¾"	4¼ lbs.	

Ground Cutter Bits for Truing Commutators

Size of Bit	Single Bit			Lot of Six Bits		
	Cat. No.	Ship. Wt.		Cat. No.	Ship. Wt.	
¼" sq.	CE1363	4 ozs.		CE1744	10 ozs.	
5/16" sq.	CE1365	5 ozs.		CE1746	10½ ozs.	
⅜" sq.	CE1366	5 ozs.		CE1747	11 ozs.	



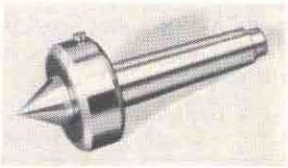
Lathe Centers and Drill Pads

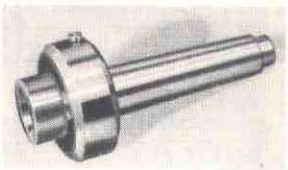
G—Drill Pad, used in tailstock to support flat work for drilling.
H—Crotch Center, used in tailstock for drilling round work.
I—60° Center made of tool steel, heat-treated, hardened, and ground all over. For use in headstock or tailstock.
J—60° Hollow Center for supporting centerless armature shafts,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

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

Ball Bearing Live Centers

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





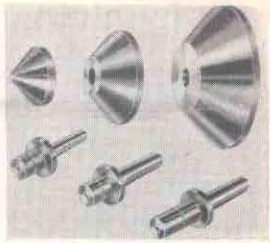
Catalog Number	Style of Center	Morse Taper	Shipping Weight
CE3900	60° Point	No. 2	3 lbs.
CE3901	60° Point	No. 3	5 lbs.
CE3903	60° Hollow	No. 2	3 lbs.
CE3904	60° Hollow	No. 3	5 lbs.

Die Holder

For holding standard 1" or 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
CE1829	1" diameter	No. 2	2 lbs.
CE1834	1" diameter	No. 3	3 lbs.
CE1838	1½" diameter	No. 2	2 lbs.
CE1839	1½" diameter	No. 3	3 lbs.

Pipe Centers



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

Pipe Centers

Cat. No.	Takes Pipe	Requires Shank	Shipping Weight
CE2160	½" to 3"	CE2172 or CE2174	4 lbs.
CE2161	3" to 5"		6 lbs.
CE2162	5" to 8"	CE2173	17 lbs.

Pipe Center Shanks

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

Hardened Pipe Center

CE2163. Takes pipe ½" to 3". Same as CE2160, but made of heat-treated and hardened steel.

Knock-out Bar

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

Catalog Number	Size Lathe	Outside Dia.	Total Length	Ship. Weight
CE1475NK	9" & Lt. Ten	¾"	16"	4 lbs.
CE1475R	10"-11⅛" Col.	1"	17 3/16"	5 lbs.
CE1475L	10"-11" Col.	1⅜"	17 3/16"	7 lbs.
CE1475QH	13", 14½", 16", 16-24", & 2-H	1⅜"	28 1/16"	7 lbs.

Combination Center Drill and Countersink

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

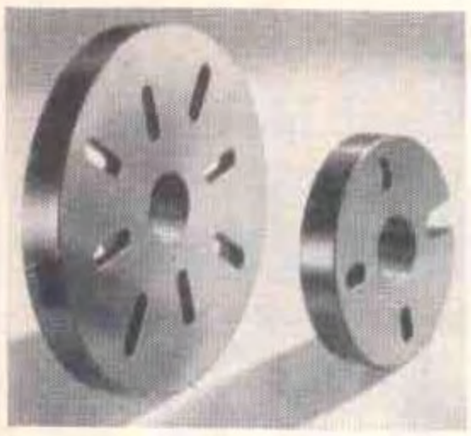
Dia. of Drill	Dia. of Body	Single Drill		Lot of Twelve	
		Cat. No.	Ship. Wt.	Cat. No.	Ship. Wt.
3/64"	⅛"	CE2087	4 ozs.	CE2555	8 ozs.
1/16"	13/64"	CE2041	4 ozs.	CE2556	8 ozs.
5/64"	15/64"	CE2088	4 ozs.	CE2557	8 ozs.
3/32"	.302"	CE2042	4 ozs.	CE2558	8 ozs.
1/8"	.302"	CE2043	4 ozs.	CE2559	1 lb.
5/32"	7/16"	CE2044	6 ozs.	CE2560	2 lbs

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

Center Drill Holder

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

Catalog Number	Taper Shank	Diameter Will Hold	Shipping Weight
CE2338	No. 2	⅛"	1 lb.
CE2340	No. 2	13/64"	1 lb.
CE2339	No. 2	15/64"	1 lb.
CE2341	No. 2	.302"	1 lb.
CE2342	No. 2	7/16"	1 lb.
CE2346	No. 3	⅛"	2 lbs.
CE2343	No. 3	13/64"	2 lbs.
CE2347	No. 3	15/64"	2 lbs.
CE2344	No. 3	.302"	2 lbs.
CE2345	No. 3	7/16"	2 lbs.



Face Plates

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

Small Face Plates for South Bend Lathes

Catalog Number	Size Lathe	Outside Dia.	Thread	Shipping Weight	
CL2175NK	9", Lt. Ten & Series 900	5⅛"	1½"—8	4 lbs.	
CL2175R	10"-11/16" Collet	5⅝"	1⅞"—8	5 lbs.	
CL2175L	10"-1" Collet & Series 1000	5⅝"	2¼"—8	5 lbs.	
CL2175Q	13"-1" Collet	6⅝"	2¼"—8	8 lbs.	
CL2175MH	14½", 16", 16-24", 1" Collet, & No. 2-H	8 1/16"	2⅜"—6	13 lbs.	

Large Face Plates for South Bend Lathes

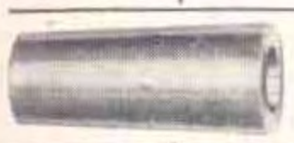
Catalog Number	Size Lathe	Outside Dia.	Thread	Shipping Weight	
CL2180NK	9", Lt. Ten & Series 900	7⅜"	1½"—8	8 lbs.	
CL2180R	10"-11/16" Collet	8⅜"	1⅞"—8	10 lbs.	
CL2180L	10"-1" Collet & Series 1000	8⅜"	2¼"—8	10 lbs.	
CL2180Q	13"-1" Collet	10¾"	2¼"—8	19 lbs.	
CL2180MH	14½", 16", 16-24", & 2-H	13¼"	2⅜"—6	38 lbs.	
CL2180V*	16-24"	22¾"	2⅜"—6	96½ lbs.	

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

Multi-Tapped Face Plate

This heavily constructed face plate has six slots and thirty tapped holes for clamping work or special work holding fixtures. The cored slots are 7/16" wide, and the tapped holes have 5/16"—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 ⅞" thick.

Catalog Number	Size Lathe	Outside Dia.	Spindle Thread	Shipping Weight	
CL1483NK	9", Lt. Ten & Ser. 900	8½"	1½"—8	13 lbs.	
CL1483R	10"-11/16" Col.	8½"	1⅞"—8	13 lbs.	
CL1483LQ	10" & 13", 1" Col. & Ser. 1000	8½"	2¼"—8	13 lbs.	



Spindle Sleeves for Lathes

Catalog Number	Size Lathe	Taper Inside	Ship. Wt.	
CL205NK	9", Light Ten and Series 900	No. 2	1 lb.	
CL205R	10"-11/16" Collet	No. 2	1 lb.	
CL205T	10"-11/16" Collet	No. 3	1 lb.	
CL205L	10"-1" C., Ser. 1000, 13", 14½", 16", 16-24" and 2-H	No. 2	2 lbs.	
CL205H	10"-1" C., Ser. 1000, 13", 14½", 16", 16-24", and 2-H	No. 3	2 lbs.	

Taper Reducing Sleeve

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

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

Fixture Plate

This Fixture Plate is used for mounting special fixtures, jigs, holding devices, and tools on the spindle nose of the lathe. Being accurately machined all over, and threaded to fit the spindle nose of the lathe, its use will save much time and expense when tooling up a lathe for a production operation which calls for a special holding fixture fitted to the spindle nose.

Catalog Number	Size Lathe	Outside Dia.	Spindle Thread	Shipping Weight	
CL46NK	9", Lt. Ten & Ser. 900	7½"	1½"—8	9 lbs.	
CL46R	10"-11/16" Col.	9"	1⅞"—8	14 lbs.	
CL46L	10"-1" Col. & Ser. 1000	9"	2¼"—8	14 lbs.	
CL46Q	13"-1" Collet	10¼"	2¼"—8	22 lbs.	
CL46MH	14½", 16", 16-24", & No. 2-H	11¾"	2⅜"—6	29 lbs.	

Threaded Chuck Plate

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

Catalog Number	Size Lathe	Spindle Nose Th'd	O.D. of Plate	Shipping Weight	
CE2703NK	9", Lt. Ten and Series 900	1½"—8	3½"	3 lbs.	
CE2704NK			5"	4 lbs.	
CE2709NK			7½"	10 lbs.	
CE2703LQ	10"-1" Col. 13"-1" Col. Ser. 1000	2¼"—8	3½"	4 lbs.	
CE2704LQ			5"	5 lbs.	
CE2705LQ			5½"	6 lbs.	
CE2707LQ			6¼"	7 lbs.	
CE2708LQ			7½"	11 lbs.	
CE2709LQ			9"	13 lbs.	
CE2710LQ			10¼"	18 lbs.	
CE2703RT	10"-11/16" Col.	1⅞"—8	3½"	4 lbs.	
CE2704RT			5"	6 lbs.	
CE2705RT			5½"	8 lbs.	
CE2707RT			6¼"	9 lbs.	
CE2708RT			7½"	12 lbs.	
CE2709RT			9"	16 lbs.	
CE2710RT			10¼"	20 lbs.	
CE2704MH	14½", 16", 16-24", 1" Col., & 2-H	2⅜"—6	5"	8 lbs.	
CE2705MH			5½"	8 lbs.	
CE2706MH			6"	9 lbs.	
CE2707MH			6¼"	9 lbs.	
CE2708MH			7½"	13 lbs.	
CE2710MH			10¼"	20 lbs.	
CE2711MH			11¾"	24 lbs.	

Chuck Plates Fitted to Chucks

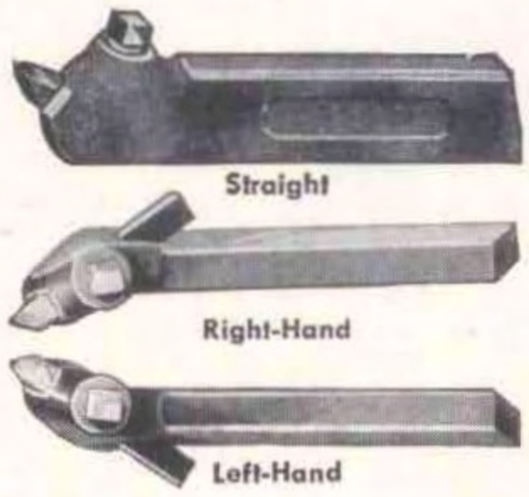
Catalog numbers listed below cover fitting charges when chucks are shipped to us to be fitted with chuck plates threaded to fit South Bend Lathes. Fitting charges do not include transportation costs.

Catalog Number	Size Lathe	
CE2935NK	9", Light Ten, & Series 900	
CE2935RT	10"-11/16" Collet	
CE2935LQ	10"-1" Collet, Series 1000, & 13"-1" Collet	
CE2935MH	14½", 16", 16-24", 1" Collet, & 2-H	

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.

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

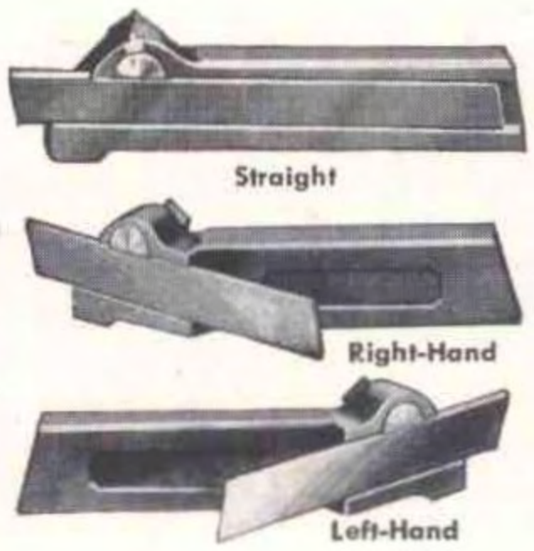


Cat. No.	Size Lathe	Size Shank	Size Cutter	Ship. Wt.
Straight Shank Turning Tool Holders				
CE847S	9", Lt. Ten, & 10"	3/8" x 13/16"	1/4" x 1/4"	1 lb.
CE846S	9", Lt. Ten, & 10"	3/8" x 13/16"	1/4" x 1/4"	2 lbs.
CE852S	13"	1/2" x 1 1/8"	5/16" x 5/16"	3 lbs.
CE853S	14 1/2", 16" & 16-24"	5/8" x 1 3/8"	3/8" x 3/8"	3 lbs.
Right-Hand Turning Tool Holders				
CE847R	9", Lt. Ten, & 10"	3/8" x 13/16"	1/4" x 1/4"	1 lb.
CE846R	9", Lt. Ten, & 10"	3/8" x 13/16"	1/4" x 1/4"	2 lbs.
CE852R	13"	1/2" x 1 1/8"	5/16" x 5/16"	3 lbs.
CE853R	14 1/2", 16" & 16-24"	5/8" x 1 3/8"	3/8" x 3/8"	3 lbs.
Left-Hand Turning Tool Holders				
CE847L	9", Lt. Ten, & 10"	3/8" x 13/16"	1/4" x 1/4"	1 lb.
CE846L	9", Lt. Ten, & 10"	3/8" x 13/16"	1/4" x 1/4"	2 lbs.
CE852L	13"	1/2" x 1 1/8"	5/16" x 5/16"	3 lbs.
CE853L	14 1/2", 16" & 16-24"	5/8" x 1 3/8"	3/8" x 3/8"	3 lbs.

Cutting-off Tool Holders

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

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



Cat. No.	Size Lathe	Size Shank	Size Cutter	Ship. Wt.
Straight Shank Cutting-off Tool Holders				
CE833S	9", Lt. Ten, & 10"	3/8" x 13/16"	3/32" x .595"	1 lb.
CE736S	9", Lt. Ten, & 10"	5/16" x 13/16"	5/64" x .475"	2 lbs.
CE883S	13"	1/2" x 1 1/8"	1/8" x .735"	3 lbs.
CE884S	14 1/2", 16" & 16-24"	5/8" x 1 3/8"	1/8" x .870"	3 lbs.
Right-Hand Cutting-off Tool Holders				
CE833R	9", Lt. Ten, & 10"	3/8" x 13/16"	3/32" x .595"	1 lb.
CE736R	9", Lt. Ten, & 10"	5/16" x 13/16"	5/64" x .475"	2 lbs.
CE883R	13"	1/2" x 1 1/8"	1/8" x .735"	3 lbs.
CE884R	14 1/2", 16" & 16-24"	5/8" x 1 3/8"	1/8" x .870"	3 lbs.
Left-Hand Cutting-off Tool Holders				
CE736L	9", Lt. Ten, & 10"	5/16" x 13/16"	5/64" x .475"	2 lbs.
CE883L	13"	1/2" x 1 1/8"	1/8" x .735"	3 lbs.
CE884L	14 1/2", 16" & 16-24"	5/8" x 1 3/8"	1/8" x .870"	3 lbs.

Cutter Bit Grinding Gauge

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

No. CE2169. Shipping weight 1/2 lb.

Ground Cutter Bits for Forged Turning Tool Holders

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

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

Ground High Speed Steel Cutter Bits

Size Square Inch	Length Cutter Inches	Single Bit Cat. No.	Single Bit Ship. Wt.	Set of 6 Bits Cat. No.	Set of 6 Bits Ship. Wt.
1/4	2	CE1305	4 ozs.	CE1779	10 ozs.
5/16	2 1/2	CE1313	5 ozs.	CE1777	10 1/2 ozs.
3/8	3	CE1316	5 ozs.	CE1778	11 ozs.

Ground Cutter Bits for 10 in 1 Tool Holders

High speed steel cutter bits ground for use in 10 in 1 tool holder listed on page 69. 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 Cat. No.	Single Bit Ship. Wt.	Set of 4 Bits Cat. No.	Set of 4 Bits Ship. Wt.
3/8	3	CE2267	5 ozs.	CE2776	1 lb.
1/2	4	CE2268	8 ozs.	CE2777	2 lbs.
5/8	4 3/8	CE2269	1 lb.	CE2778	3 lbs.

Unground Cutter Bits

These cutter bits are the same quality as those listed above but they are not ground. They are heat-treated and hardened and are ready for use when sharpened. Specify catalog number and size when ordering cutter bits.

Unground High Speed Steel Cutter Bits

Catalog Number	Size Square	Length Cutter	Shipping Weight
CE3531	3/16"	1"	3 ozs.
CE3532	3/16"	1 1/2"	3 ozs.
CE3533	1/4"	2"	4 ozs.
CE3534	5/16"	2 1/2"	5 ozs.
CE3535	3/8"	3"	5 ozs.
CE3536	7/16"	3 1/2"	7 ozs.
CE3537	1/2"	4"	12 ozs.
CE3538	5/8"	4 3/8"	1 lb.

Unground High Speed Steel Cutter Bits in Lots

Size Square Inch	Length Cutter Inches	Lot of 6 Bits Cat. No.	Lot of 6 Bits Ship. Wt.	Lot of 24 Bits Cat. No.	Lot of 24 Bits Ship. Wt.
3/16	1	.....	.....	CE2370	1 lb.
3/16	1 1/2	.....	.....	CE2371	1 lb.
1/4	2	CE1629	10 ozs.	CE2372	2 lbs.
5/16	2 1/2	CE1632	10 1/2 ozs.	CE2373	3 lbs.
3/8	3	CE1633	11 ozs.	CE2374	4 lbs.
7/16	3 1/2	CE2501	2 lbs.	CE2375	6 lbs.
1/2	4	CE2502	3 lbs.	CE2393	13 lbs.
5/8	4 3/8	CE2503	4 lbs.	CE2376	15 lbs.

Blades for Cutting-off Tool Holders

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

Cat. No.	Size of Blade	Ship. Wt.
CE876	3/32" x .595" x 5"	5 ozs.
CE1192	5/64" x .475" x 4 1/2"	5 ozs.
CE878	1/8" x .735" x 6"	6 ozs.
CE879	1/8" x .870" x 7"	8 ozs.

Style "B" Boring Tool

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

Cat. No.	Size of Lathe	Size of Shank, Inches	Size Bar Inches	Size of Cutter, Inch	Ship. Wt. Lbs.
CE423	9", Lt. 10, & 10"	5/16 x 3/4	1/2 x 7 5/8	3/16 x 5/16	2
CE431	13"	1/2 x 1 1/8	3/4 x 11	1/4 x 1/4	5
CE432	14 1/2", 16", 16-24"	5/8 x 1 3/8	15/16 x 13 1/4	5/16 x 5/16	8

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.
CE3175	9", Lt. 10, & 10"	5/16 x 3/4	1/4 x 5	2
CE3176	13"	1/2 x 1 1/8	5/8 x 7	4
CE3177	14 1/2", 16", 16-24"	5/8 x 1 3/8	7/16 x 8	6

Solid Boring Bar

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

Cat. No.	Bar Inches	Ship. Wt.
CE3856	1/8 x 4	3 ozs.
CE3857	3/16 x 4 1/2	4 ozs.
CE3858	1/4 x 5	5 ozs.
CE3859	5/16 x 6	5 ozs.
CE3860	3/8 x 7	8 ozs.
CE3861	7/16 x 8	1 lb.

Sleeve Boring Bar

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

Cat. No.	Size of Bar	Size of Cutter Bit	Ship. Wt.
CE2419	1/2" x 7 5/8"	3/16" x 3/16"	1 lb.
CE2420	3/4" x 11"	1/4" x 1/4"	2 lbs.
CE2421	15/16" x 13 1/4"	5/16" x 5/16"	4 lbs.

Plain Boring Bar

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

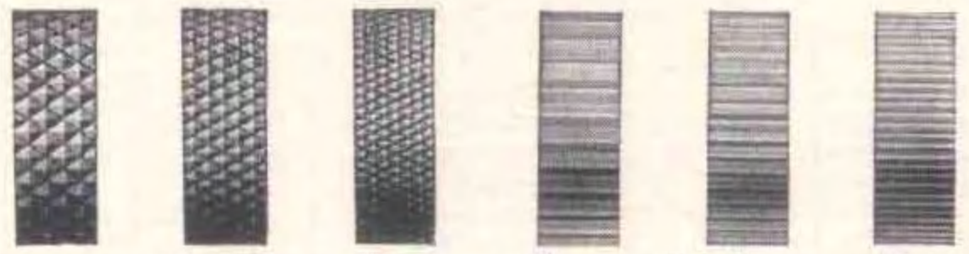
Cat. No.	Bar Size	Cutter Bit	Ship. Wt.
CE2119	3/4" x 12 1/8"	1/4" x 1/4"	3 lbs.
CE2121	1 1/4" x 18"	7/16" x 7/16"	8 lbs.

Knurling Tool

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

Cat. No.	Size Lathe	Shank Size	Ship Wt.
CE820	9", Lt. 10, & 10"	5/8" x 3/4"	2 lbs.
CE665	9", Lt. 10, & 10"	5/16" x 3/4"	2 lbs.
CE893	13"	1/2" x 1 1/8"	2 lbs.
CE894	14 1/2", 16", & 16-24"	5/8" x 1 3/8"	3 lbs.

Extra Knurls for Knurling Tool



For use with Knurling Tool listed above, and with 10 in 1 Tool Holder listed on page 69. Illustrations above show actual size of knurling produced. Supplied in pairs.

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

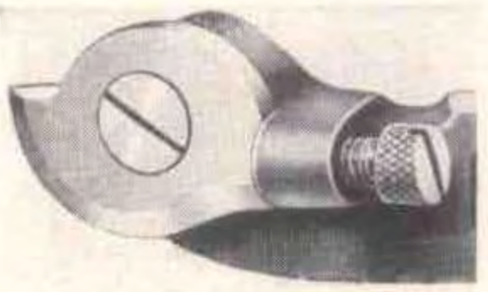
†Fits all sizes of 10 in 1 Tool Holders.

Threading Tool

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

Cat. No.	Size of Lathe	Size of Shank	Ship. Wt.
CE845	9", Lt. 10, & 10"	3/8" x 3/4"	2 lbs.
CE648	9", Lt. 10, & 10"	5/16" x 3/4"	2 lbs.
CE867	13"	1/2" x 1 1/8"	3 lbs.
CE868	14 1/2", 16", & 16-24"	5/8" x 1 3/8"	4 lbs.

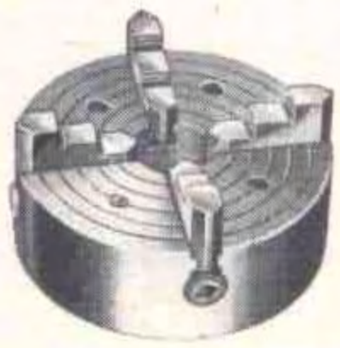
Extra Cutters for Threading Tool



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

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

4-Jaw Independent Lathe Chucks

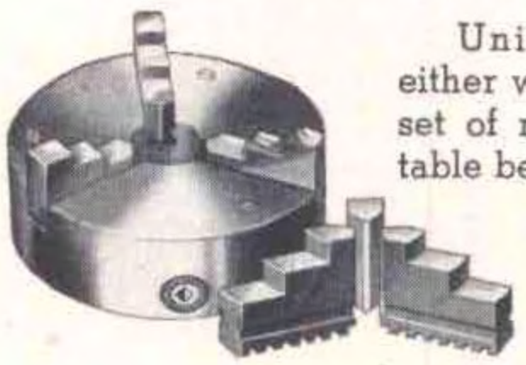


These chucks have four reversible jaws with individual screw adjustment. Chuck body is ground and chuck jaws are hardened and ground.

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

Catalog Number	Size of Chuck	Size of Lathe	Ship. Wt.	
CL4006NK	**6″**	**9″ and Light Ten**	**13 lbs.**	
CL4206NK	6″	9″ and Light Ten	18 lbs.	
CL4006R	6″	10″-11/16″ Collet	13 lbs.	
CL4206R	**6″**	**10″-11/16″ Collet**	**18 lbs.**	
CL4207R	7 1/2″	10″-11/16″ Collet	37 lbs	
CL4006L	6″	10″-1″ Collet	13 lbs.	
CL4206LQ	**6″**	**10″-1″ Collet**	**18 lbs.**	
CL4207LQ	7 1/2″	10″-1″ Collet	38 lbs.	
CL4206LQ	6″	13″-1″ Collet	18 lbs.	
CL4207LQ	**7 1/2″**	**13″-1″ Collet**	**38 lbs.**	
CL4209Q	9″	13″-1″ Collet	46 lbs.	
CL4207MH	7 1/2″	14 1/2″-1″ Collet	38 lbs.	
CL4209MH	**9″**	**14 1/2″-1″ Collet**	**46 lbs.**	
CL4210MH	10″	14 1/2″-1″ Collet	57 lbs.	
CL4207MH	7 1/2″	16″, 16-24″, & 2-H	38 lbs.	
CL4209MH	9″	16″, 16-24″, & 2-H	46 lbs.	
CL4210MH	**10″**	**16″, 16-24″, & 2-H**	**57 lbs.**	
CL4212H	12″	16″, 16-24″, & 2-H	96 lbs.	

3-Jaw Universal Lathe Chucks



Universal Chucks are supplied either with two sets of jaws or with one set of reversible jaws as indicated in table below. Chuck body is ground and jaws are hardened. Chuck jaws are moved simultaneously by a scroll, and work is automatically centered. Price includes wrench and threaded chuck plate fitted to lathe spindle. Size of chuck recommended for each size lathe is shown in **bold face type.**

Catalog Number	Size of Chuck	Size of Lathe	Ship. Wt.	
Universal Chucks With One Set of Reversible Jaws				
CL6005NK	**5″**	**9″ and Light Ten**	**12 lbs.**	
CL6506NK	6″	9″ and Light Ten	26 lbs.	
CL6005R	5″	10″-11/16″ Collet	12 lbs.	
CL6005LQ	5″	10″-1″ Collet	12 lbs.	
CL6506R	**6″**	**10″-11/16″ Collet**	**26 lbs.**	
CL6506LQ	**6″**	**10″-1″ Collet**	**26 lbs.**	
CL6005LQ	5″	13″-1″ Collet	12 lbs.	
CL6506LQ	6″	13″-1″ Collet	26 lbs.	
Universal Chucks With Two Sets of Jaws				
CL3005NK	5″	9″ and Light Ten	13 lbs.	
CL3505NK	5″	9″ and Light Ten	19 lbs.	
CL3506NK	6″	9″ and Light Ten	28 lbs.	
CL3005R	5″	10″-11/16″ Collet	13 lbs.	
CL3505R	5″	10″-11/16″ Collet	19 lbs.	
CL3506R	6″	10″-11/16″ Collet	28 lbs.	
CL3005L	5″	10″-1″ Collet	13 lbs.	
CL3505LQ	5″	10″-1″ Collet	19 lbs.	
CL3506LQ	6″	10″-1″ Collet	28 lbs.	
CL3505LQ	5″	13″-1″ Collet	19 lbs.	
CL3506LQ	**6″**	**13″-1″ Collet**	**28 lbs.**	
CL3507Q	7 1/2″	13″-1″ Collet	47 lbs.	
CL3505MH	5″	14 1/2″-1″ Collet	19 lbs.	
CL3506MH	6″	14 1/2″-1″ Collet	28 lbs.	
CL3507MH	**7 1/2″**	**14 1/2″-1″ Collet**	**47 lbs.**	
CL3509MH	9″	14 1/2″-1″ Collet	59 lbs.	
CL3505MH	5″	16″, 16-24″, & 2-H	19 lbs.	
CL3506MH	6″	16″, 16-24″, & 2-H	28 lbs.	
CL3507MH	**7 1/2″**	**16″, 16-24″, & 2-H**	**47 lbs.**	
CL3509MH	9″	16″, 16-24″, & 2-H	59 lbs.	

Face Plate Chuck

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

Catalog Number	Size of Lathe	Spindle Thread	Shipping Weight	
CL2155NK	9″ and Lt. Ten	1 1/2″—8	14 lbs.	
CL2155R	10″-11/16″ Col.	1 5/8″—8	16 lbs.	
CL2155L	10″-1″ Collet	2 1/4″—8	16 lbs.	

3-Jaw Drill Chucks

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

Cat. No.	Make of Chuck	Capacity of Chuck	Net Wt. Lbs.	Ship. Wt. Lbs.	
CE1200	Jacobs	0 to 3/8 in.	1 1/8	1 7/8	
CE1201	Jacobs	0 to 1/2 in.	1 3/4	2 3/8	
CE1202	Jacobs	3/16 to 3/4 in.	3 1/8	3 1/2	
CE1206	Jacobs	3/8 to 1 in.	6 5/8	7 1/2	
CE219	Almond	0 to 3/8 in.	1 3/8	1 7/8	
CE220	Almond	0 to 1/2 in.	1 3/4	2 1/2	
CE327	Almond	1/8 to 3/4 in.	3 1/8	3 3/4	
CE328	Almond	3/8 to 1 in.	5 5/8	6 3/8	

Taper Arbors for Drill Chucks

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

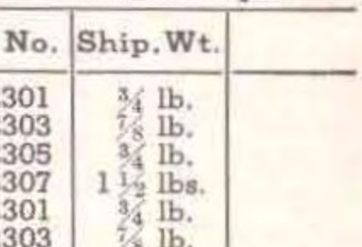
For Drill Chuck	No. 2 Morse Taper			No. 3 Morse Taper		
	Cat. No.	Ship. Wt.		Cat. No.	Ship. Wt.	
CE1200	CE2300	3/8 lb.		CE2301	3/4 lb.	
CE1201	CE2302	1/2 lb.		CE2303	7/8 lb.	
CE1202	CE2304	1/2 lb.		CE2305	3/4 lb.	
CE1206	CE2306	1 1/8 lbs.		CE2307	1 1/2 lbs.	
CE219	CE2300	3/8 lb.		CE2301	3/4 lb.	
CE220	CE2302	1/2 lb.		CE2303	7/8 lb.	
CE327	CE2308	3/4 lb.		CE2309	1 1/8 lbs.	
CE328	CE2308	3/4 lb.		CE2309	1 1/8 lbs.	

Straight Arbors for Drill Chucks

For Fitting Drill Chuck to Hole in Turret Head

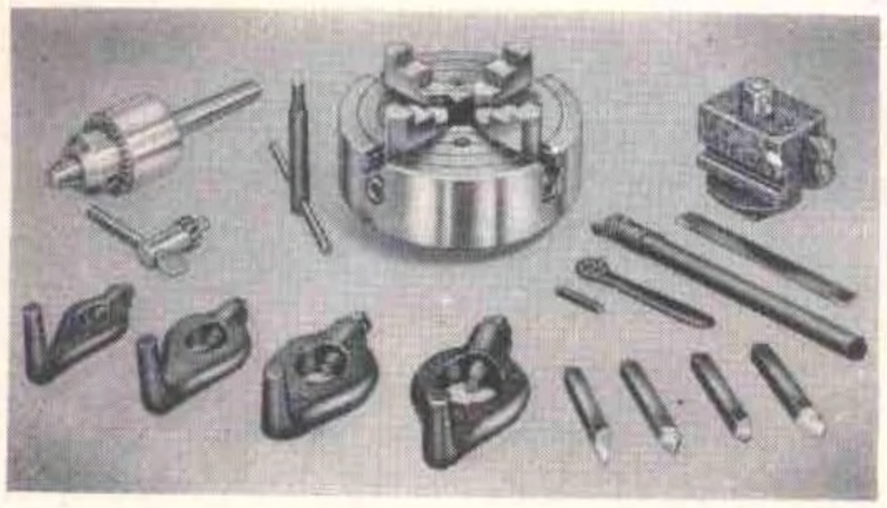
For Drill Chucks	5/8″ Diameter		3/4″ Diameter		1 1/2″ Diameter	
	Cat. No.		Cat. No.		Cat. No.	
CE1200 or CE219	CE2360		CE2361		CE2377	
CE1201 or CE220	CE2362		CE2363		CE2378	
CE1202	CE2364		CE2365		CE2379	
CE1206	CE2366		CE2367		CE2380	
CE327 or CE328	CE2368		CE2369		CE2381	

Semi-Machined Drill Chuck Arbors



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

Cat. No.	Shank	Ship. Wt.	
CE1500	No. 2 Morse Taper	1 lb.	
CE1501	No. 3 Morse Taper	2 lbs.	
CE2325	5/8″ Diameter Straight	1 lb.	
CE2326	3/4″ Diameter Straight	1 lb.	



Chuck and Tool Assortments

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

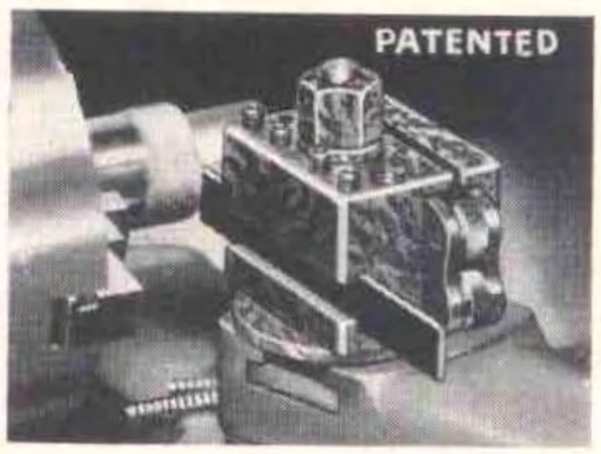
11-Tool Assortment with Independent Lathe Chuck

Item	Description
1	4-Jaw Independent Lathe Chuck fitted to lathe. Sizes: 6 in. on 9" and 10" Lathes; 7½ in. on 13" Lathe; 9 in. on 14½" Lathe; 10 in. on 16" and 16-24" Lathes.
2	Jacobs 3-Jaw Drill Chuck. Sizes: ½ in. on 9" and 10" Lathes; ¾ in. on 13" and 14½" Lathes; 1 in. on 16" and 16-24" Lathes.
3	Arbor Fitted to above Drill Chuck.
4	10 in 1 Tool Holder with medium diamond knurls.
5	4 Ground Cutter Bits for 10 in 1 Tool Holder.
6	Cut-off Blade for 10 in 1 Tool Holder.
7	Sleeve Boring Bar for 10 in 1 Tool Holder.
8-11	4 Malleable Lathe Dogs. Sizes: ½", ¾", 1", and 1¼" on 9" and 10" Lathes; ½", ¾", 1", and 1½" on all others.

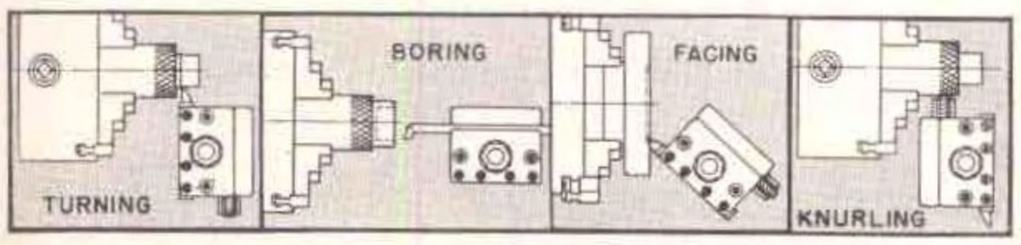
Complete Assortments as Listed Above

Catalog Number	Size Lathe	Shipping Weight	
CL2820NK	9" & Lt. Ten	25 lbs.	
CL2820R	10"-11/16" Collet	30 lbs.	
CL2820L	10"-1" Collet	31 lbs.	
CL2820Q	13"-1" Collet	52 lbs.	
CL2820M	14½"-1" Collet	75 lbs.	
CL2820H	16" & 16-24"	89 lbs.	

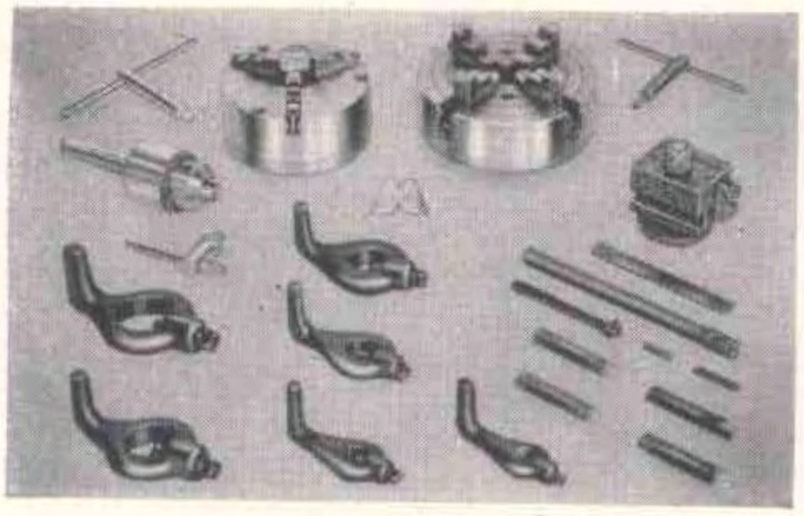
10 in 1 Tool Holder



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



Catalog Number	Size Lathe Inches	Holds Cutter Bits Inch	Holds Boring Bars Inches	Holds Cut-off Blades Inch	Ship. Wt. Lbs.	
CE1413NK	9 & Lt. Ten	3/8 x 3/8	3/8 to 3/4	3/32 x .595	5	
CE1413R	10	3/8 x 3/8	3/8 to 3/4	3/32 x .595	5	
CE1413T	13	1/2 x 1/2	1/2 to 1 1/4	1/8 x .735	7	
CE1413F	14½	5/8 x 5/8	1/2 to 1 1/4	1/8 x .870	10	
CE1413H	16 & 16-24	5/8 x 5/8	1/2 to 1 1/4	1/8 x .870	10	



15-Tool Assortment for 9" and Light Ten Lathes

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

Item	Cat. No.	Description
1	CL4006NK	6" Four-Jaw Independent Lathe Chuck, fitted
2	CL6005NK	5" Three-Jaw Universal Lathe Chuck, fitted
3	CE1201	Jacobs Three-Jaw Drill Chuck, ½" capacity
4	CE2302	Taper Shank Arbor (No. 2 M.T.) fitted to Drill Chuck
5	CE1413NK	10 in 1 Tool Holder equipped with self-aligning knurling head having medium diamond knurls
6	CE2776	Set of 4 Ground Cutter Bits for 10 in 1 Tool Holder
7	CE876	Cutting-off Blade for 10 in 1 Tool Holder
8	CE2419	Sleeve Boring Bar for 10 in 1 Tool Holder. ½" x 7⅝" Bar.
9	CE3837	⅜" Malleable Lathe Dog
10	CE3838	½" Malleable Lathe Dog
11	CE3839	¾" Malleable Lathe Dog
12	CE3840	1" Malleable Lathe Dog
13	CE3841	1¼" Malleable Lathe Dog
14	CE3842	1½" Malleable Lathe Dog
15	CE2169	Cutter Bit Grinding Gauge

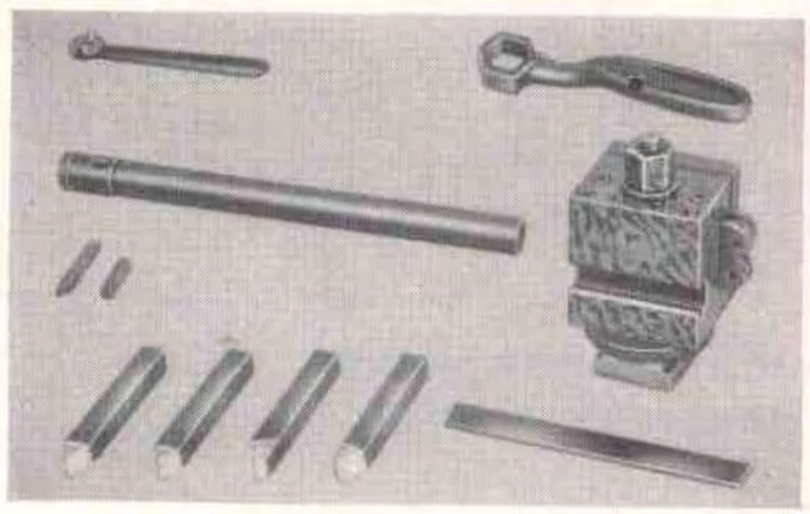
CL2845NK. Fifteen Tool Assortment as listed above. Shipping weight 38 lbs.

11-Tool Assortment With Universal Chuck

For 9-inch and Light Ten Lathes Only

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

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



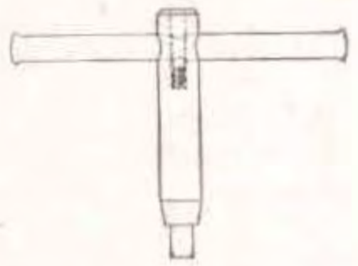
10 in 1 Tool Holder Kit

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

For specifications of tool holder see column at left. Descriptions and illustrations of cutter bits, boring bars, cut-off blades, and extra knurls, see pages 66 and 67.

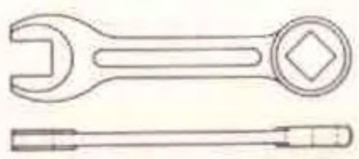
Catalog No. of Kit	Size of Lathe	Items Included in Kit			Ship. Weight	
		Cutter Bits	Boring Bar	Cut-off Blade		
CE2930NK	9" & Light 10	CE2776	CE2419	CE876	7 lbs.	
CE2930R	10"	CE2776	CE2419	CE876	7 lbs.	
CE2930T	13"	CE2777	CE2420	CE378	12 lbs.	
CE2930F	14½"	CE2778	CE2421	CE879	18 lbs.	
CE2930H	16" & 16-24"	CE2778	CE2421	CE879	18 lbs.	

Chuck Wrenches



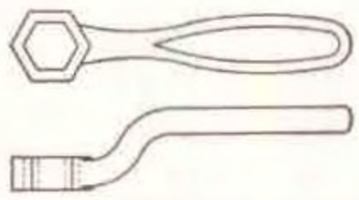
Catalog Number	Size Square	Shipping Weight	
CE2741	.250″	2 lbs.	
CE2748	.277″	2 lbs.	
CE2742	.297″	1 lb.	
CE2743	.375″	2 lbs.	
CE2749	.400″	2 lbs.	
CE2744	.420″	2 lbs.	
CE2745	.437″	2 lbs.	
CE2746	.570″	2 lbs.	

Tool Post Wrenches



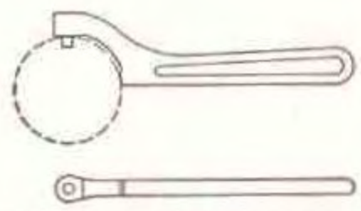
Catalog Number	Size Lathe	Open End	Closed End	Lgth.	Thick-ness	Ship. Wt.	
CE2650NK	9″	3/8″	3/8″	4″	3/8″	4 ozs.	
CE2650R	10″	7/16″	7/16″	4″	3/8″	6 ozs.	
CE2650T	13″	1/2″	1/2″	6″	9/16″	1 lb.	
CE2650FH	14½″, 16″, & 16-24″	9/16″	9/16″	6″	9/16″	1 lb.	

Tailstock Wrenches



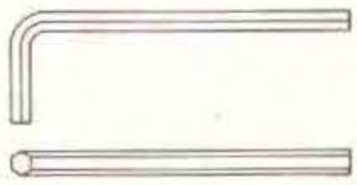
Catalog Number	Size Lathe	Open-ing	Ex-treme Lgth.	Thick-ness	Ship. Wt.	
CE2653NK	9″	13/16″	5 3/16″	7/16″	6 ozs.	
CE2653R	10″	29/32″	6 5/8″	5/8″	1 lb.	
CE2653T	13″	1 3/32″	7 7/8″	11/16″	2 lbs.	
CE2653FH	14½″, 16″, & 16-24″	1 9/32″	9½″	1″	2 lbs.	

Spanner Wrenches



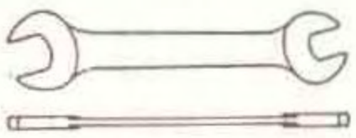
Catalog No.	Circle Diameter	Extreme Length	Pin Size	Shipping Weight	
CE2739	1 5/16″	4″	3/16″	5 ozs.	
CE2740	1 1/2″	5″	7/32″	6 ozs.	
CE2734	2 1/4″	6 1/2″	17/64″	1 lb.	
CE2735	2 3/4″	7 1/2″	19/64″	1 lb.	
CE2736	3″	8″	5/16″	1 lb.	
CE2737	3 1/4″	8 1/2″	21/64″	1 lb.	
CE2738	3 3/8″	9″	11/32″	2 lbs.	

Hollow Hexagon Head Set Screw Wrenches



Catalog Number	Size Hex.	Extreme Length	Extreme Height	Shipping Weight	
CE2391	3/32″	3 1/8″	3/4″	3 ozs.	
CE2392	1/8″	2 15/16″	7/8″	3 ozs.	
CE2385	5/32″	2 11/16″	1″	3 ozs.	
CE2386	3/16″	2 3/8″	1 1/8″	4 ozs.	
CE2387	7/32″	2 3/32″	1 1/4″	4 ozs.	
CE2388	1/4″	3 7/16″	1 3/8″	4 ozs.	
CE2389	5/16″	4 1/16″	1 9/16″	4 ozs.	
CE2390	3/8″	4 7/16″	1 13/16″	6 ozs.	

Double End Wrenches



Catalog No.	Large Opening	Small Opening	Length	Thick-ness	Shipping Weight	
CE2655	1/2″	3/8″	4 7/8″	1/4″	8 ozs.	
CE2656	25/32″	1/2″	6 1/2″	17/32″	1 lb.	

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.

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

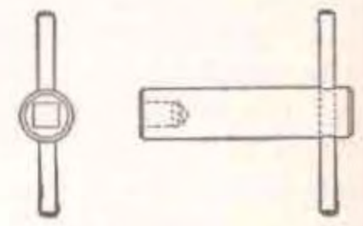
Waterproof Service Covers For Lathes

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. See also pages 81, 86.

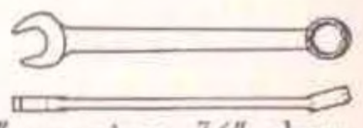
Catalog Number	Size, Inches Wdth.	Lgth.	Ht.	Suggested for	Ship. Wt.	
CE2695	32	48	17	9″ & 10″ Lathe, 3′ & 3½′ Bed	2 lbs.	
CE2696	32	60	17	9″ & 10″ Lathe 4′ & 4½′ Bed	3 lbs.	
CE2697	38	72	25	13″ & 14½″ Lathe, 4′ & 5′ Bed	3 lbs.	
CE2698	38	96	25	13″, 14½″, 16″, 16-24″ & 2-H Lathe, 6′ & 7′ Bed	3 lbs	

Socket Wrench

CE2750. Socket Wrench for nut ½″ square. Fits stroke adjustment nut on South Bend 7″ Shaper. Ship. wt. 1½ lbs.

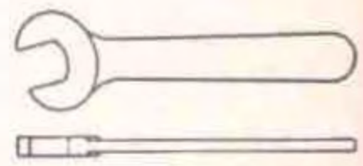


Open End Box Wrench



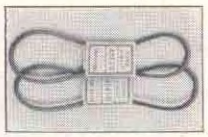
CE2675. Open End Box Wrench. 7/8″ opening, 7/8″ close, ½″ thick, 10½″ long. Shipping weight 1 lb.

Single End Wrenches



Catalog Number	Opening	Length	Thickness	Shipping Weight	
CE2657	9/16″	5 1/2″	21/64″	7 ozs.	
CE2658	19/32″	5 1/2″	21/64″	8 ozs.	
CE2670	7/8″	6 5/8″	1/4″	1 lb.	
CE2671	1 1/16″	8 1/2″	5/16″	1 lb.	

V-Belts



Rubber V-Belts for use with South Bend Lathes and other power driven machinery. Specify catalog number, maximum width, and outside circumference when ordering. Ship. wt. each, approximately ½ lb.

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

Motor Pulleys for V-Belts

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

Cat. No.	Dia.	Bore	Cat. No.	Dia.	Bore
1-Groove Pulleys for 11/16" V-Belts. Approx. ship. wts., 2 3/32" and 2 15/32" pulleys ½ lb., 3" and 3 45/64" pulleys 1¾ lbs.					
CE6342	2 3/32"	½"	CE6348	3"	½"
CE6343	2 3/32"	5/8"	CE6349	3"	5/8"
CE6344	2 3/32"	¾"	CE6350	3"	¾"
CE6345	2 15/32"	½"	CE6351	3 45/64"	½"
CE6346	2 15/32"	5/8"	CE6352	3 45/64"	5/8"
CE6347	2 15/32"	¾"	CE6353	3 45/64"	¾"
2-Groove Pulleys for ½" V-Belts. Approx. ship. wts., 2 17/32" pulleys 1 ½ lbs., 2 63/64" pulleys 2 lbs.					
CE6354	2 17/32"	¾"	CE6357	2 63/64"	¾"
CE6355	2 17/32"	7/8"	CE6358	2 63/64"	7/8"
CE6356	2 17/32"	1"	CE6359	2 63/64"	1"
4-Groove Pulleys for ½" V-Belts. Approx. ship. wts., 2 17/32" and 2 63/64" pulleys 2 lbs., 3 3/64" and 3 49/64" pulleys 4 lbs.					
CE6360	2 17/32"	¾"	CE6366	3 3/64"	¾"
CE6361	2 17/32"	7/8"	CE6367	3 3/64"	7/8"
CE6362	2 17/32"	1"	CE6368	3 3/64"	1"
CE6363	2 63/64"	¾"	CE6369	3 49/64"	¾"
CE6364	2 63/64"	7/8"	CE6370	3 49/64"	7/8"
CE6365	2 63/64"	1"	CE6371	3 49/64"	1"

Flat Leather Belts

Price includes belt lace and lacing instructions. Belts are long enough to permit skiving and gluing if desired. Ship. wt. each, approx. ½ lb.

Catalog Number	Flat Leather Belt For Use On	Size and Kind of Belting
CE2323N	9" Horiz. M.D. Lathes with ½ h.p. motor	Single Ply—Oak Tan 15/16" x 58"
CE2312N	9" Horiz. M.D. Lathes with ½ h.p. motor	Double Ply—Vim Oak 15/16" x 58"
CE2313K	Light Ten Horiz. M.D. Lathes with ½ h.p. motor	Double Ply—Vim Oak 15/16" x 51"
CE2315N	9" UMD Lathes	Double Ply—Vim Oak 15/16" x 66¼"
CE2315K	Light 10 UMD Lathes	Double Ply—Vim Oak 15/16" x 67"
CE2315R	10" UMD Bench Lathes	Double Ply—Vim Oak 1⅛" x 64¾"
CE2316R	10" UMD Floor Lathes	Double Ply—Vim Oak 1⅛" x 67¾"
CE2316T	13" UMD Lathes	Double Ply—Vim Oak 1⅜" x 67⅜"
CE2316F	14½" UMD Lathes	Double Ply—Vim Oak 1⅜" x 70⅞"
CE2316H	16" UMD Lathes	Double Ply—Vim Oak 2⅛" x 74½"
CE2316V	16-24" UMD Lathes	Double Ply—Vim Oak 2⅛" x 82½"
CE2317H	16" UMD Lathes with 3 step cone pulley, or 2-H Turret Lathes	Double Ply—Vim Oak 2⅜" x 74½"

Belt Splicing Cement

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

Touch-Up Enamel

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

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

Shop Aprons

Made of good quality 8 oz. white duck. Short apron (illustrated) is 22" long, 18" wide, with two roomy pouch type side pockets and one small center pocket 6¾" deep suitable for carrying scale, calipers, micrometer, etc. Long apron (not illustrated) is 41" long, 28" wide, with one large pocket and two smaller pockets.

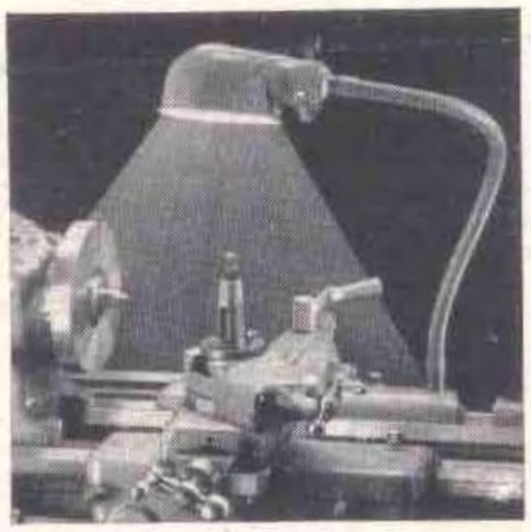
CE8520. Short Shop Apron. Ship. wt. 1 lb.

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

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

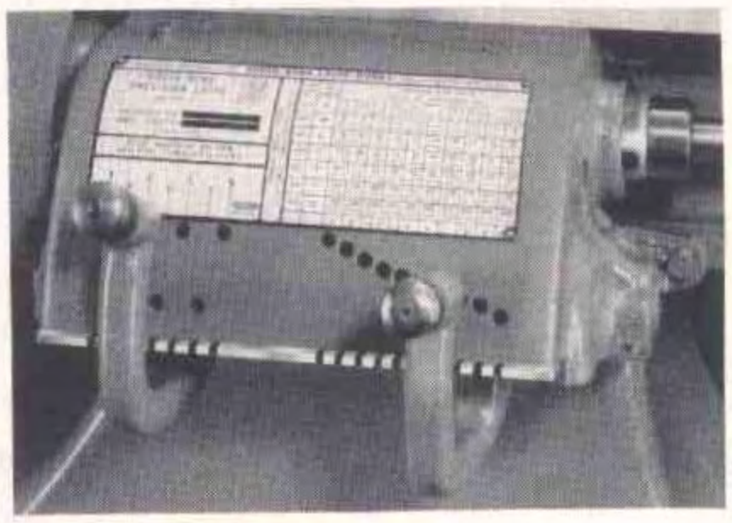
CE8523. Lot of six Long Shop Aprons. Ship. wt. 3½ lbs.

Work Light for Lathe



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

CE2815. Work Light for lathe, including clamp for attaching to lathe bed. Shipping weight 5 lbs.



Wide Range Gear Box for 10″-1″ Collet Lathe

This gear box provides 70 changes for threads and feeds instead of the 48 changes available with the regular gear box. It is made for the 10″-1″ Collet Lathe only. Screw threads cut range from 4 to 480 per inch and include all pitches available with the regular gear box. In addition the following threads can be cut: 6¾, 7½, 13½, 15, 27, 30, 54, 60, 108, 120, 216, 240, 256, 288, 320, 352, 368, 384, 416, 432, 448, and 480 per inch. Power longitudinal feeds range from .0007″ to .0836″. Must be ordered with lathe and fitted at factory.

CL2635R. Wide Range Gear Box in lieu of regular gear box for 10″-1″ Collet Lathe.

Wood Turning Rest

The Wood Turning Rest mounts on the compound rest base of the lathe to permit the use of hand tools for wood turning. Price of hand rest includes socket, one small rest 4″ wide, and one large rest 12″ wide. See page 64 for spur centers and cup centers for wood turning.

Cat. No.	Size Lathe	Shipping Weight	
CL896N	9″	6 lbs.	
CL896K	Light Ten	6 lbs.	
CL896R	10″	7 lbs.	
CL896T	13″	9 lbs.	
CL896F	14½″	12 lbs.	
CL896H	16″ & 16-24″	14 lbs.	

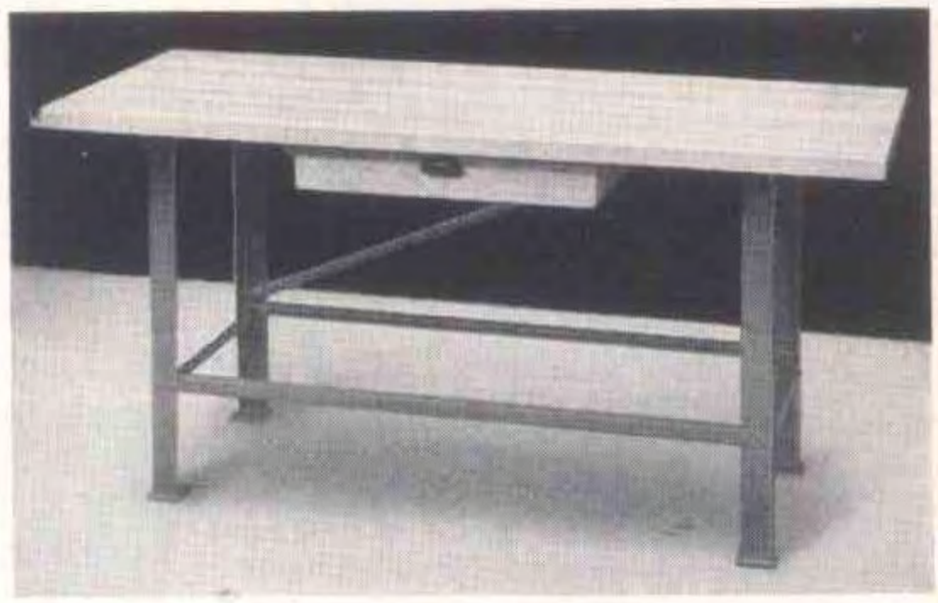
Patented Design

Tubular Steel Benches

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

Heavy gauge sheet metal panels are securely welded into the tubular frame. A built-in chip pan with ⅝″ bead around the edge forms the top of the bench. This permits using a coolant if desired, and prevents chips from falling to the floor. Six drawers 10½″ wide, 15″ long, 5½″ deep (inside dimensions) provide ample storage space for chucks, tools, lathe accessories, etc. Bench is nicely finished in gray wrinkle enamel.

CE1737. Tubular Steel Bench, 32″ high, 32″ wide, 51½″ long, for 9″ and Light Ten Horizontal Motor Driven Bench Lathes with 3′ or 3½′ bed lengths. Shipping weight 336 lbs.



Angle Steel Bench With Wood Top

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

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

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

Drawer for Bench

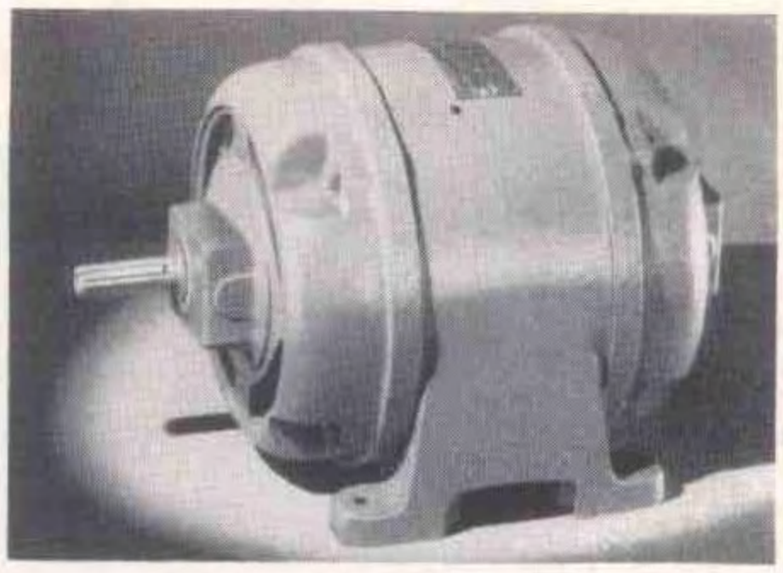
CE1780D. Drawer for above bench, 20⅛″ wide, 14″ long, 3 3/16″ deep. Shipping weight 9 lbs.

Motors and Controls for Lathes

Reversing motors are recommended for South Bend Lathes because they permit reversing the lathe spindle for tapping, thread cutting, and similar operations. All motors listed below are of the instant reversing type with the exception of Cat. No. CE3256B, which is a start-stop reversing motor. Single phase A.C. motors are capacitor type, with the exception of CE3256B, which is a split-phase start-stop reversing type motor.

Size of Lathe	Current Characteristics				MOTORS Table 1			CONTROLS FOR MOTORS Table 2	Table 3	Table 4
	Type of Current	Phase	Cycle	Voltage	Catalog Number	h.p.	Speeds	DRUM SWITCH CONTROLS Not required if equipment in Table No. 3 is ordered	PUSH-BUTTON LINE-STARTER CONTROLS Not used with No. 2-H Turret Lathe	CONTROLS FOR No. 2-H TURRET LATHES
16-inch 16-24-inch and 2-H	A.C.	3	60	220	CE2130	2–1	Two-Speed	.....	CE2567	CE1217
	A.C.	3	60	440	CE2131	2–1		.....	CE2568	CE1205
	A.C.	3	50	220	CE2147	2–1		.....	CE2565	CE1209
	A.C.	3	50	440	CE2148	2–1		.....	CE2566	CE1219
	A.C.	3	60	550	CE3372	2–1		.....	CE2578	CE1290
16-inch 16-24-inch 14½-inch and 2-H	A.C.	3	50	220	CE2545C	1½	One-Speed	CE790	CE2573	CE1263
	A.C.	3	60	220	CE2545D	1½		CE790	CE2573	CE1263
	A.C.	3	50	440	CE2545E	1½		.....	CE2574	CE1299
	A.C.	3	60	440	CE2545F	1½		.....	CE2574	CE1299
	A.C.	3	50	550	CE2547G	1½		.....	CE2579	CE1196
	A.C.	3	60	550	CE2547H	1½		.....	CE2579	CE1196
	A.C.	1	50	115	CE2548A	1½		CE790	CE2577	CE1263
	A.C.	1	60	115	CE2548B	1½		CE790	CE2577	CE1263
	A.C.	1	50	230	CE2548C	1½		CE790	CE2573	CE1263
	A.C.	1	60	230	CE2548D	1½		CE790	CE2573	CE1263
	D.C.	...	....	115	CE2549	1½		CE2564	CE2575	CE1242
	D.C.	...	....	230	CE2550	1½		CE2563	CE2576	CE1245
13-inch	A.C.	3	50	220	CE2625C	1	One-Speed	CE790	CE2569	
	A.C.	3	60	220	CE2625D	1		CE790	CE2569	
	A.C.	3	50	440	CE2625E	1		.....	CE2570	
	A.C.	3	60	440	CE2625F	1		.....	CE2570	
	A.C.	3	50	550	CE2627G	1		.....	CE2580	
	A.C.	3	60	550	CE2627H	1		.....	CE2580	
	A.C.	1	50	115	CE2628A	1		CE790	CE2573	
	A.C.	1	60	115	CE2628B	1		CE790	CE2573	
	A.C.	1	50	230	CE2628C	1		CE790	CE2573	
	A.C.	1	60	230	CE2628D	1		CE790	CE2573	
	D.C.	...	....	115	CE2629	1		CE2564	CE2571	
	D.C.	...	....	230	CE2630	1		CE2563	CE2572	
10-inch and 1000 Series	A.C.	3	50	220	CE2801C	¾	One-Speed	CE790	CE2569	
	A.C.	3	60	220	CE2801D	¾		CE790	CE2569	
	A.C.	3	50	440	CE2801E	¾		.....	CE2570	
	A.C.	3	60	440	CE2801F	¾		.....	CE2570	
	A.C.	3	50	550	CE2803G	¾		.....	CE2580	
	A.C.	3	60	550	CE2803H	¾		.....	CE2580	
	A.C.	1	60	115	CE2804	¾		CE790	CE2573	
	A.C.	1	60	230	CE2805	¾		CE790	CE2569	
	A.C.	1	50	115	CE2806A	¾		CE790	CE2573	
	A.C.	1	50	230	CE2806B	¾		CE790	CE2569	
	D.C.	...	....	115	CE2807	¾		CE2564	CE2571	
	D.C.	...	....	230	CE2808	¾		CE2563	CE2572	
Light Ten, 9-inch and 900 Series with Underneath Motor Drive	A.C.	3	50	220	CE3227C	½	One-Speed	CE790	CE2569	
	A.C.	3	60	220	CE3227D	½		CE790	CE2569	
	A.C.	3	50	440	CE3227E	½		.....	CE2570	
	A.C.	3	60	440	CE3227F	½		.....	CE2570	
	A.C.	3	50	550	CE4927G	½		.....	CE2580	
	A.C.	3	60	550	CE4927H	½		.....	CE2580	
	A.C.	1	60	115	CE3583B*	½		CE790	CE2569	
	A.C.	1	60	230	CE3584D	½		CE790	CE2569	
	A.C.	1	50	230	CE3582C	½		CE790	CE2569	
	A.C.	1	50	115	CE3581A*	½		CE790	CE2569	
	D.C.	...	....	115	CE4930	½		CE790	CE2553	
	D.C.	...	....	230	CE4931	½		CE790	CE2553	
Light Ten and 9-inch with 16, 12, 8, or 6-Speed Horizontal Motor Drive	A.C.	3	50	220	CE3227C	½	One-Speed	CE790	CE2569NF	
	A.C.	3	60	220	CE3227D	½		CE790	CE2569NF	
	A.C.	3	50	440	CE3227E	½		.....	CE2570NF	
	A.C.	3	60	440	CE3227F	½		.....	CE2570NF	
	A.C.	3	50	550	CE4927G	½		.....	CE2580NF	
	A.C.	3	60	550	CE4927H	½		.....	CE2580NF	
	A.C.	1	60	115	CE3228*	½		CE789	CE2569NF	
	A.C.	1	60	230	CE3229	½		CE790	CE2569NF	
	A.C.	1	50	230	CE3230	½		CE790	CE2569NF	
	A.C.	1	50	115	CE3240*	½		CE789	CE2569NF	
	D.C.	...	....	115	CE4930	½		CE790	CE2553NF	
	D.C.	...	....	230	CE4931	½		CE790	CE2553NF	
9-inch with 6-speed or 8-speed Horizontal Motor Drive	A.C.	3	50	220	CE3250C	¼	One-Speed	CE790	.....	
	A.C.	3	60	220	CE3250D	¼		CE790	.....	
	A.C.	1	60	115	CE3256B	⅓		CE789	.....	
	A.C.	1	60	115	CE3252*	¼		CE789	.....	
	A.C.	1	60	230	CE3253	¼		CE790	.....	
	A.C.	1	50	115	CE3242*	¼		CE789	.....	
	A.C.	1	50	230	CE3243	¼		CE790	.....	
	D.C.	...	....	115	CE3254	¼		CE790	.....	
	D.C.	...	....	230	CE3369	¼		CE790	.....	

*Equipped with 6-ft. extension cord and plug when ordered with lathe.

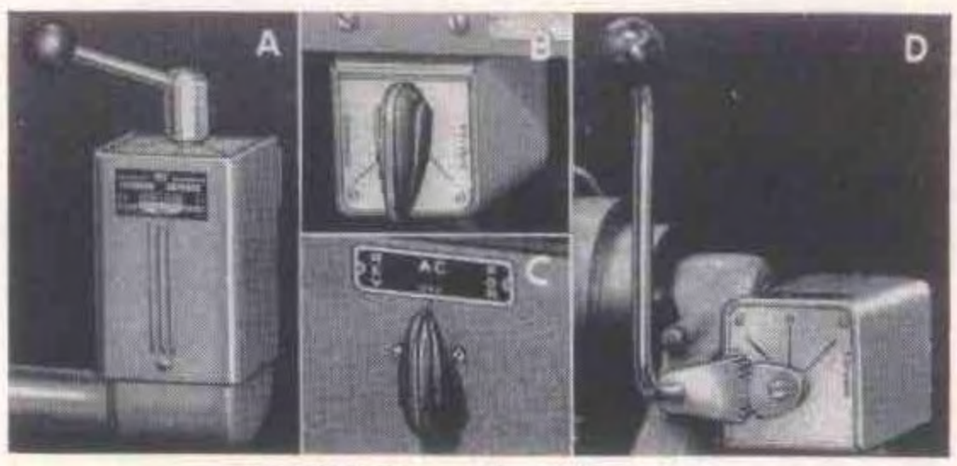


Motors are listed in tabulation No. 1. Controls are listed in tabulations Nos. 2, 3, and 4. The control equipment required for each size and type of motor is listed on the same line with the motor.

Two-speed motors are listed for No. 2-H Turret lathes, 16-inch lathes and 16-24 inch lathes only. These motors have two forward speeds and two reverse speeds which with the cone pulley and back gears of the lathe, provide twelve or sixteen spindle speeds, forward and reverse.

Drum switch controls listed in Table No. 2 are optional for ½ h.p. and larger motors operating on 230 volts or less, with the exception of the two speed motors which require the controls listed in Tables 3 and 4. Resistance panels are included in the prices of controls for D.C. motors ¾ h.p. and larger.

Pushbutton operated linestarter controls listed in Table No. 3 are required for all two-speed motors, and for all motors operating on currents higher than 230 volts. These controls are optional for all other motors ½ h.p. and larger. Pushbutton controls provide overload and low voltage protection. Transformer reduces pushbutton current to 110 volts. Necessary resistance panels are supplied for D.C. motors ¾ h.p. and larger.



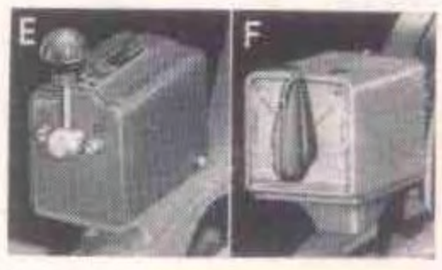
CE 790 Drum Control Switch

A—As mounted on 10" and larger floor type lathes
B—As mounted on 10"-1" Collet Bench Lathes
C—As mounted on 9" and Light Ten Metal Column Base Lathes
D—As mounted on Light Ten Bench Lathes

Other Controls

E—Drum Control Switch CE789 as mounted on 9" Bench Lathe

F—Drum Control Switch CE790 as mounted on 9" Bench Lathe



G—Pushbutton Station for linestarter control used with one-speed motor

H—Pushbutton Station for linestarter control used with two-speed motor

I—Linestarter Control equipment for two-speed motor (mounted on back of lathe)

J—Control Equipment for No. 2-H Turret Lathe (mounted on back of lathe)

How to Run a Lathe

A Practical Handbook on Lathe Operation

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

Now in its 51st 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
Erecting and Leveling the Lathe
Operation of Lathe Controls
Lathe Tools and Their Application
How to Take Accurate Measurements
Machining Work Between Centers
Chuck Work
Taper Turning and Boring
Drilling, Reaming, and Tapping
Cutting Screw Threads
Special Classes of Work

How to Run a Lathe—Edition 51, 128 pages 5⅛" x 7⅞", more than 360 illustrations. Price postpaid to any address 25c in paper binding, $1.00 in leatherette binding.

Note: "How to Run a Lathe" is printed in the English, Spanish, Portuguese, and French languages. State language wanted if other than English.

Motion Picture Films On Lathe Operation

The South Bend motion pictures on lathe operation may be borrowed without charge by industrial organizations, industrial and vocational schools, colleges, universities, Army and Navy training schools, industrial apprentice schools, and other recognized organizations teaching machine shop practice. When films are supplied on a free loan basis, the borrower pays the shipping charges both ways. All films supplied on a free loan basis are 16 mm sound films in full color.

Those who desire to keep these films permanently may purchase them at prices listed below.

Catalog Number	Subject	Factory Price
	English Language Films	
CE1620C	Film No. I, "The Metal Working Lathe"	$100.00
CE1621C	Film No. II, "Plain Turning"	110.00
CE1663C	Film No. III, "Grinding Cutter Bits"	115.00
	Spanish Language Films	
CE2714C	Film No. I, "The Metal Working Lathe"	$100.00
CE2715C	Film No. II, "Plain Turning"	110.00
CE2716C	Film No. III, "Grinding Cutter Bits"	115.00
	French Language Films	
CE2717C	Film No. I, "The Metal Working Lathe"	$100.00
CE2718C	Film No. II, "Plain Turning"	110.00
CE2719C	Film No. III, "Grinding Cutter Bits"	115.00

How to Run a Drill Press

This book tells how to lay out work, set up jobs, sharpen drills, and use drill press attachments and accessories. It identifies the various parts of the drill press, explains their functions and adjustment. Special classes of work such as drilling glass, buffing, mortising, etc., are included. Contains 32 pages 5⅛" x 7⅞" and more than 75 illustrations. Price postpaid $0.25.

How to Run a Shaper

The care and operation of the small metal working bench shaper are fully covered in this manual. Clearly written text tells how to set up jobs and grind cutting tools. Various types of shaper operations are illustrated and described. Contains 32 pages 5⅛" x 7⅞", and 70 illustrations. Price postpaid $0.25.

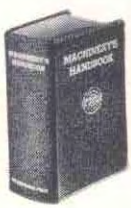
Machine Shop Book

The South Bend Machine Shop Course books are published in the English, French, Spanish, and Portuguese languages. They contain a series of projects ranging from simple articles beginners can make to useful tools requiring considerable skill and experience. Drawings show all dimensions clearly. Instruction sheets guide the student step by step through all operations for each project. These books are widely used by leading vocational schools.

Book No. 39-B. Printed in English, 32 pages, 8½" x 11", twelve projects. Price postpaid, U. S. money.....$0.50

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

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



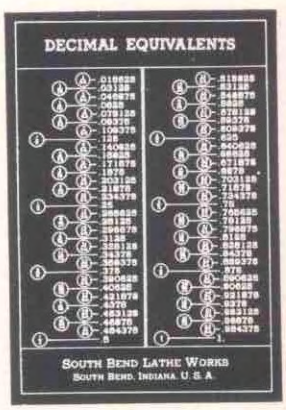
Machinery's Handbook

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

Cat. No. CE700. Machinery's Handbook.

Wall Charts

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



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

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

Wall Chart CE890, "Principal Parts of a Lathe." Size 21¾" wide by 17⅜" high. Price each postpaid..10c

Wall Chart CE199, "Tap Drill Sizes." Size 13" wide by 19" high. Price each postpaid.....10c

Wall Chart CE891, "Partes Principales Del Torno." Size 22" wide by 17" high. Printed in Spanish. Price each postpaid.....10c

Wall Chart CE800, "Como Llegar A Ser Un Maquinista." Size 15½" wide by 20" high. Printed in Spanish. Price each postpaid.....10c

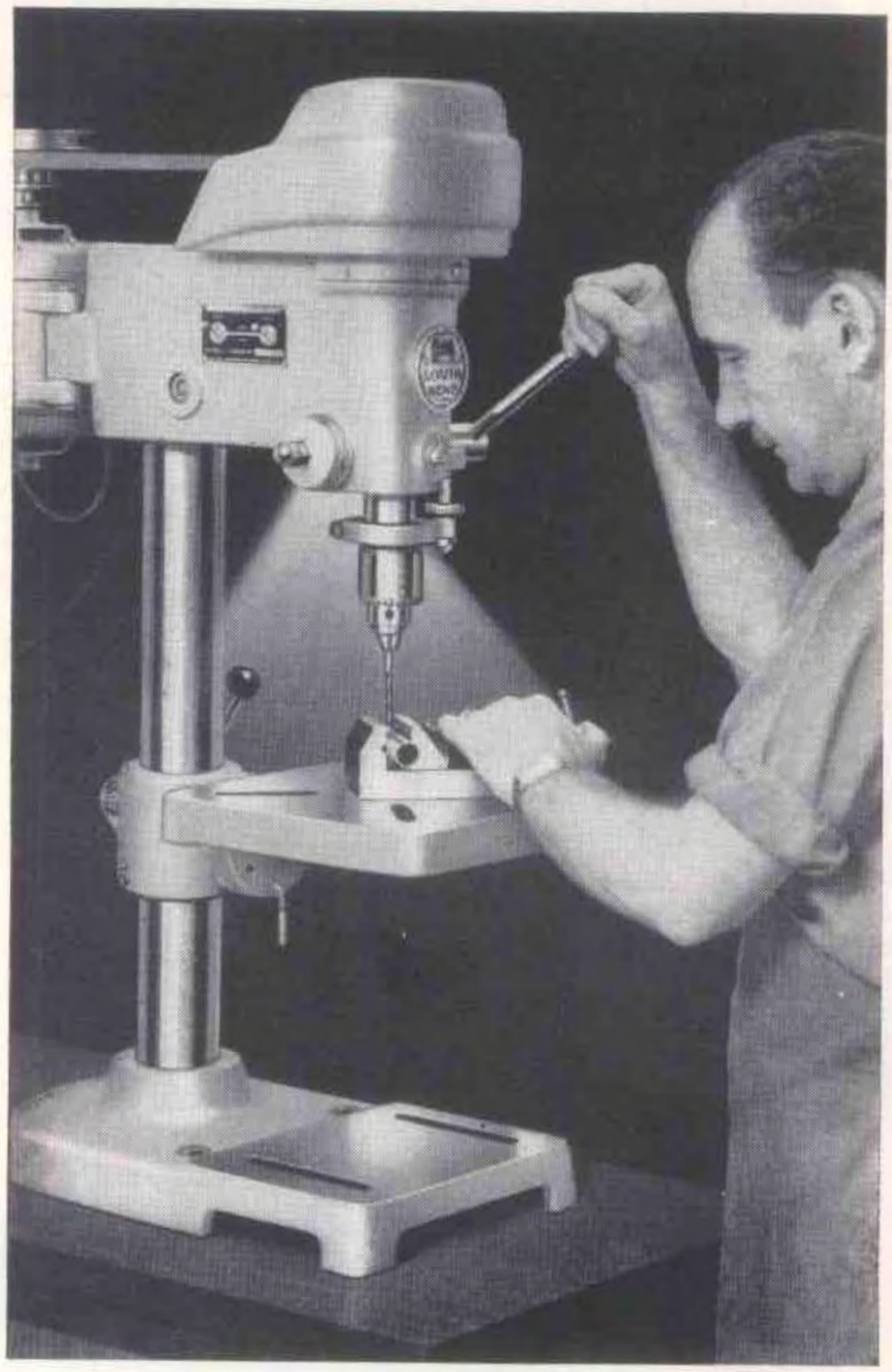
14-inch South Bend *Precision* Model Drill Press

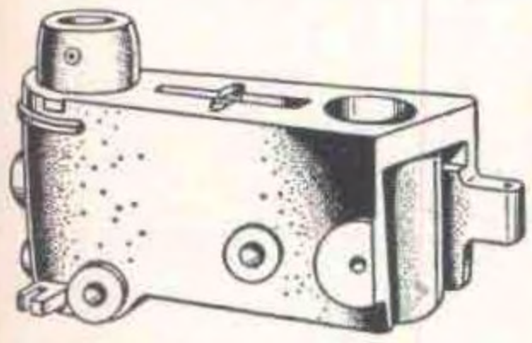
The South Bend 14-inch Precision Model Drill Press is the result of several years of careful research and thorough testing. Designed by the same engineering staff and produced with the same excellent manufacturing facilities employed in the production of South Bend Precision Lathes, this drill press is a superior tool unsurpassed for accuracy, ease of operation, versatility, and dependable performance. It is ruggedly constructed, and will maintain its precision accuracy indefinitely under severe industrial service.

Being a completely new design, the Precision Model Drill Press introduces several original features which add to its convenience and ease of operation. A built-in light with independent switch provides shadowless illumination on the work area, eliminating the necessity of installing a separate lighting fixture. A quick-acting belt tension release lever simplifies speed changes and returns the vertical mounted motor to its original position after each change, thus maintaining the same belt tension for each of the four cone pulley steps.

SPECIFICATIONS

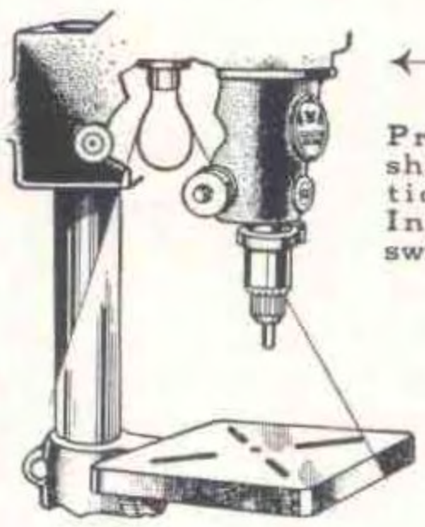
Maximum drill size in iron or steel	1/2"
Drills to center of	14 1/4" circle
Net weight, bench type, less motor	130 lbs.
Net weight, floor type, less motor	165 lbs.
Chuck capacity	0 to 1/2"
Spindle speeds, four, approx. r.p.m.	720 to 4325
Spindle travel, maximum	4"
Spindle run out, maximum	.001"
Spindle, square with table within	.002" in 5"
Chuck to base, maximum, bench type	16"
Chuck to base, maximum, floor type	45 1/4"
Chuck to table, maximum, bench type	11 3/8"
Chuck to table, maximum, floor type	40 3/4"
Base, work surface, bench type	7" x 10"
Base, work surface, floor type	8" x 12"
Table, work surface	10" x 10"
Table tilt	Any angle
Column diameter	2 3/4"
Motor, size recommended	1/3 or 1/2 h.p.
Motor, speed recommended	1725 r.p.m.





ONE-PIECE HEAD CASTING

Insures accurate alignment. Heavy, rigid construction. Internal clutch locks the head to column. Column bearing is NOT split.

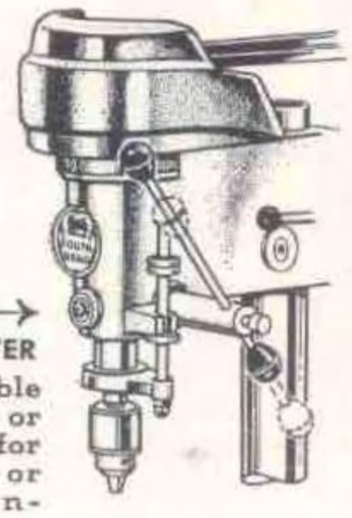


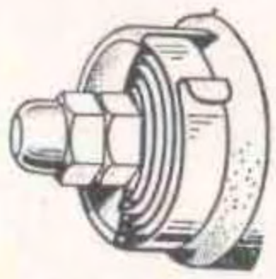
BUILT-IN LIGHT

Provides shielded, shadowless illumination on work area. Independent on-off switch is built-in.

ADJUSTABLE FEED LEVER

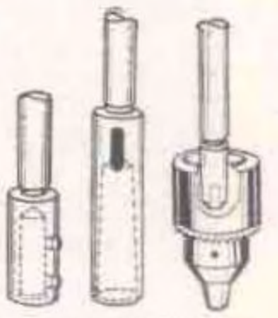
Feed lever is adjustable and can be centered or extended as desired for increased leverage or for greater convenience.





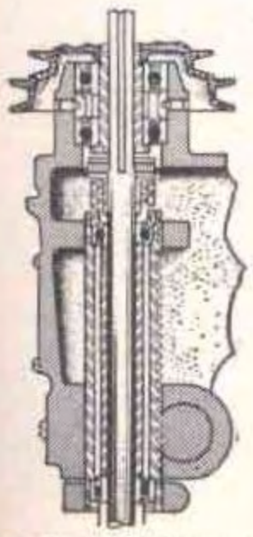
ADJUSTABLE QUILL RETURN SPRING

Retracts quill instantly upon release of feed lever. Tension of spring adjustable.



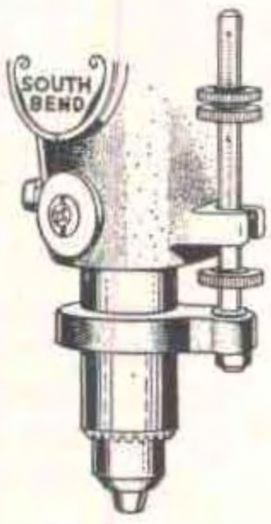
INTERCHANGEABLE SPINDLES

Spindles available to take No. 2 Morse taper shank tools, and for 1/2" straight shank tools, router bits, shaper cutters.



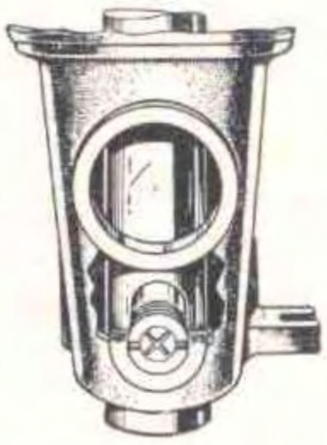
FOUR PRECISION BALL BEARINGS

Two on spindle, two on drive sleeve. Prelubricated and sealed precision type, no oiling required.



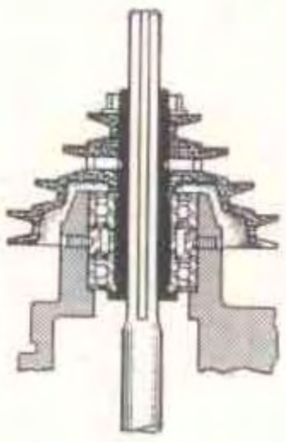
DEPTH GAUGE

Controls feed depth, length of return stroke, or locks spindle in any position. 16th graduations.



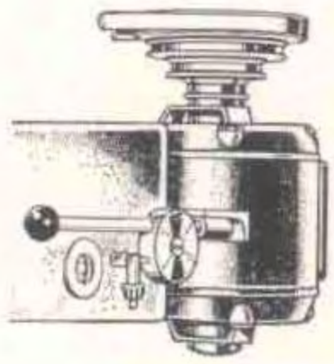
QUILL BEARING ADJUSTMENT

Shoe-type take-up provides feather-touch tension and secure locking. Quill bearing is NOT split.



FREE-FLOATING SPINDLE

Design prevents misalignment, side thrust and whip. Precision splines in spindle and sleeve.



BELT TENSION RELEASE

Flip of lever removes tension from belt for easy speed changes. Proper belt tension maintained.

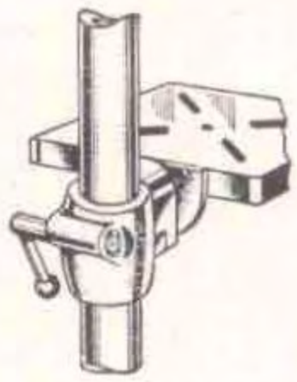


TABLE LOCK

Internal clutch securely locks table to column. Eliminates misalignment. Column bearing is NOT split.

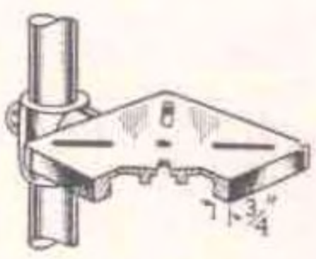
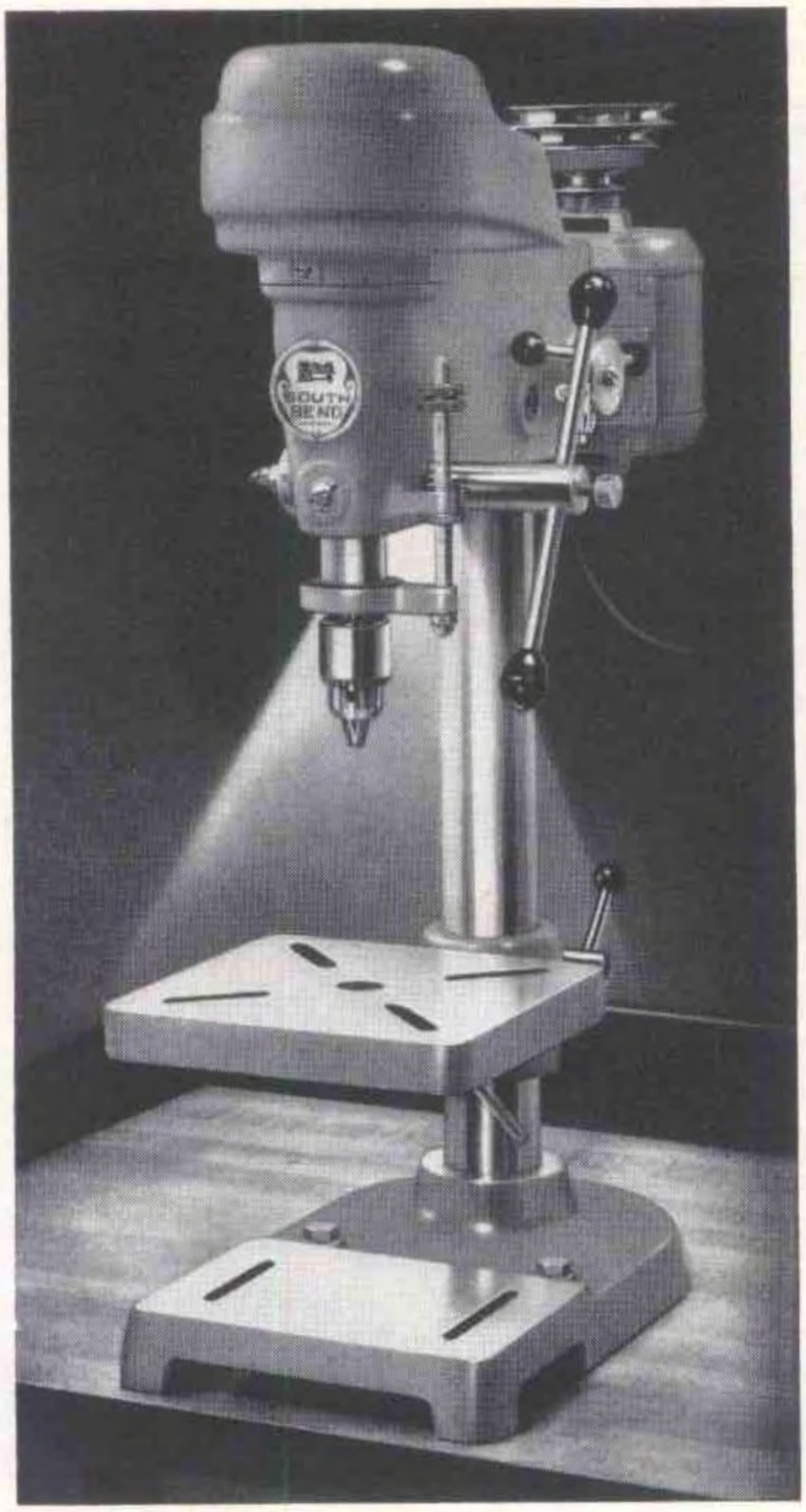


TABLE HAS WIDE CLAMPING RIB

Heavy rib 3/4" wide strengthens table and provides flat surface underneath for clamping work securely to table.



Precision Model
14-inch Bench Drill Press

Perfectly proportioned for mounting on any substantial work bench, table, or machine stand, this is one of our most popular drill presses. Base has bolt holes for securing to bench, and precision ground work surface with two slots for clamping. Maximum distance between base and chuck is 16″ and between table and chuck is 11⅜″. See preceding page for other specifications and features.

The free-floating spindle design prevents misalignment, side thrust, and whip. Two precision ball bearings carry the drive sleeve and two additional ball bearings carry the spindle, which is spline driven. All ball bearings, being pre-lubricated and sealed, require no oiling. Quill bearing adjustment provides feather-touch tension and secure locking.

Regular equipment supplied with each Precision Model Bench Drill Press includes motor base, balanced motor pulley, balanced spindle pulley, V-belt, built-in work light, wiring in drill press head, spindle equipment as indicated in table, and toggle switches for work light and motor, but does not include motor. See page 80 for drill press motors.

Precision Model Bench Drill Presses

Catalog Number	Spindle Equipment	Cubic Feet Boxed	Boxed Weight Pounds	Crated Weight Pounds	
CD400B	½″ Jacobs Key Chuck	9	255	190	
CD414B	No. 2 Morse Taper Socket	9	255	190	

Precision Model
14-inch Floor Drill Press

Except for the tall column and large base for floor mounting, this is the same as the bench drill press shown at the left. Base is heavily constructed and of ample size to provide substantial support. Precision ground work surface on base has two slots for clamp bolts. Maximum distance between base and chuck is 45¼″ and between table and chuck is 40¾″. For other specifications and features see preceding page.

The full tilt type table, with 10″ x 10″ precision ground top surface, has slots for clamping fixtures or work. An improved type of double plug 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.

Regular equipment supplied with each Precision Model Floor Drill Press includes motor base, balanced motor pulley, balanced spindle pulley, V-belt, built-in work light, wiring in drill press head, spindle equipment as indicated in table, and switches for work light and motor, but does not include motor.

Precision Model Floor Drill Presses

Catalog Number	Spindle Equipment	Cubic Feet Boxed	Boxed Weight Pounds	Crated Weight Pounds	
CD400F	½″ Jacobs Key Chuck	19	365	235	
CD414F	No. 2 Morse Taper Socket	19	365	235	

Precision Model Single and Multiple Spindle Drill Presses for Production Operations

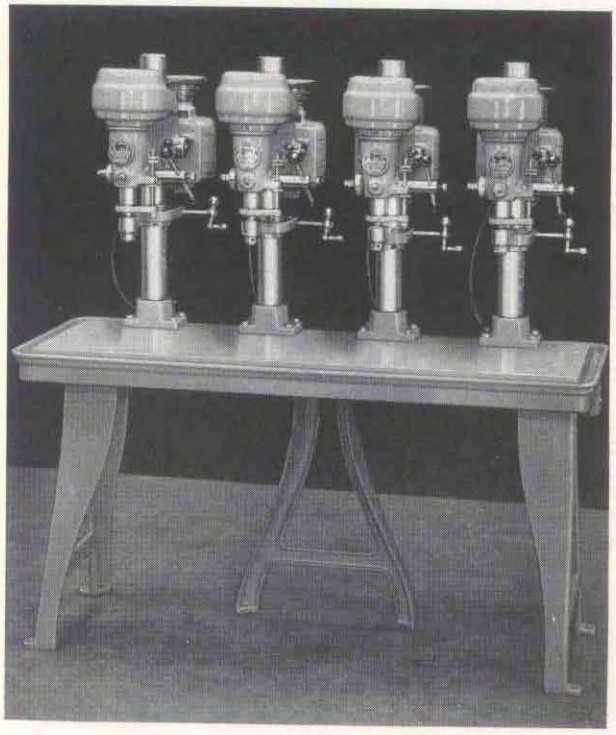
Much time can be saved on production drill press work by using one of these multiple spindle models so that two or more operations can be performed in rapid sequence. Each spindle can be adjusted independently to the correct position and speed for most convenient and efficient operation.

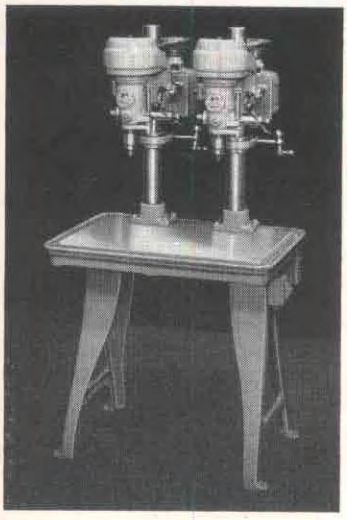
These drill presses consist of our standard 14" Precision Model drill press heads mounted on heavy, accurately machined work tables having large coolant return grooves. Either bench mounting (not illustrated) or heavy cast legs for floor installation as illustrated, can be supplied. The open leg construction facilitates cleaning and permits the operator to sit comfortably if desired.

Regular equipment supplied with each drill press head includes: head positioning mechanism, ½" drill chuck with key, motor base, motor pulley, V-belt, built-in work light, wiring and toggle switches. Motors and remote control equipment are not included. Drill presses can also be supplied less chucks or with spindles for No. 2 Morse taper shank tools. Information furnished on request.

CD454F. South Bend Four Spindle Drill Press with floor legs and regular equipment. Table work surface 14" x 55". Over-all size of drill press 59½" wide, 33" deep, 70 1/16" high. Approximate shipping weight crated 1200 lbs. Boxed weight 1320 lbs., cubic feet boxed 57.

CD454B. Four Spindle Bench Drill Press, same as above but without floor legs and with table for bench mounting. Over-all height 38 11/16", approximate shipping weight crated 1035 lbs. Boxed weight 1200 lbs., cubic feet boxed 57.





CD452F. South Bend Two Spindle Drill Press with floor legs and regular equipment. Table work surface 14" x 28¾". Over-all size of drill press 33⅛" wide, 33" deep, 69 13/16" high. Approx. ship. wt. crated 628 lbs. Boxed weight 725 lbs., cubic feet boxed 34.

CD452B. Two Spindle Bench Drill Press same as above but without floor legs and with table for bench mounting. Over-all height 38 7/16", approx. ship. wt. crated 546 lbs. Boxed weight 645 lbs., cubic feet boxed 34.

CD453F. South Bend Three Spindle Drill Press with floor legs and regular equipment. Table work surface 14" x 55". Over-all size of drill press 59½" wide, 33" deep, 70 1/16" high. Approximate shipping weight crated 1065 lbs. Boxed weight 1185 lbs., cubic feet boxed 57.

CD453B. Three Spindle Bench Drill press, same as above but without floor legs and with table for bench mounting. Over-all height 38 11/16", approx. ship. wt. crated 902 lbs. Boxed weight 1065 lbs., cubic feet boxed 57.

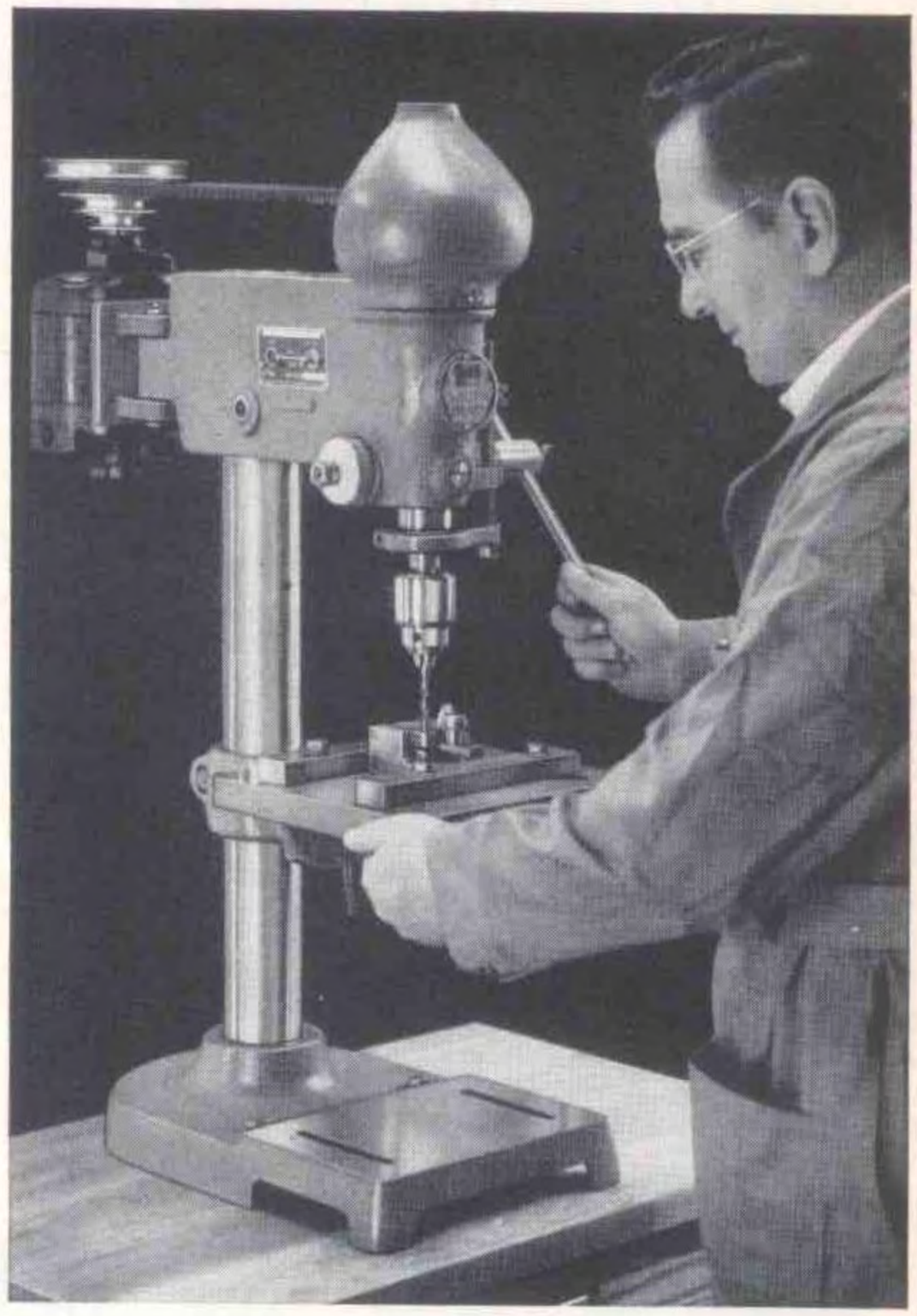
CD451F. South Bend Single Spindle Drill Press with floor legs and regular equipment. Table work surface 13⅞" x 15¾". Over-all size of drill press 20" wide, 33" deep, 68 13/16" high. Approx. ship. wt. crated 375 lbs. Boxed weight 475 lbs., cubic feet boxed 22.

CD451B. Single Spindle Drill Press same as above but without floor legs and with table for bench mounting. Over-all height 37 9/16", approx. ship. wt. crated 293 lbs. Boxed weight 393 lbs., cubic feet boxed for export 22.

14-inch South Bend *Economy* Model Drill Press

Ruggedly constructed for industrial service, the Economy Model Drill Press is one of our best values. Husky castings and quality bearings assure smooth operation and long, dependable service. All casting surfaces not machined are attractively finished with good quality enamel.

An automatic belt tension device keeps the belt at just the right tension for efficient power transmission. The rigid, one-piece head casting keeps the spindle permanently in alignment with the precision ground table. Four prelubricated precision ball bearings align the six-spline drive sleeve and spindle quill.



SPECIFICATIONS

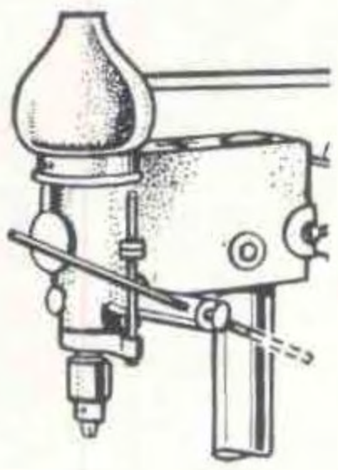
Maximum drill size in iron or steel	½"
Drills to center of	14¼" circle
Net weight, bench type, less motor	120 lbs.
Net weight, floor type, less motor	150 lbs.
Chuck capacity	0 to ½"
Spindle speeds, four, approx. r.p.m.	720 to 4325
Spindle travel, maximum	4"
Spindle run out, maximum	.003"*
Spindle, square with table within	.0075" in 5"*
Chuck to base, maximum, bench type	16"
Chuck to base, maximum, floor type	45¼"
Chuck to table, maximum, bench type	11⅜"
Chuck to table, maximum, floor type	40¾"
Base work surface, bench type	7" x 10"
Base work surface (not machined) floor type	8" x 12"
Table, work surface	10" x 10"
Table tilt	Any angle
Column diameter	2¾"
Motor, size recommended	⅓ or ½ h.p.
Motor, speed recommended	1725 r.p.m.

*For those who require greater accuracy we recommend our 14" Precision Model Drill Press. See page 75.

Features of *Economy* Model Drill Press

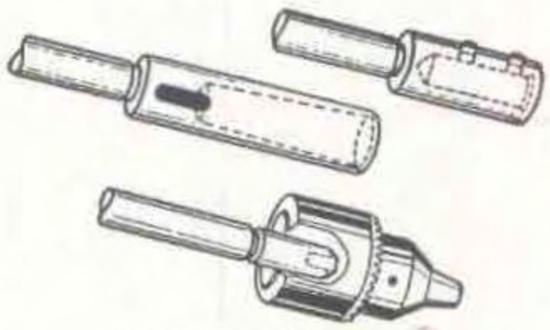
ADJUSTABLE FEED LEVER

Feed lever is adjustable and can be centered or extended as desired for increased leverage or for greater convenience.



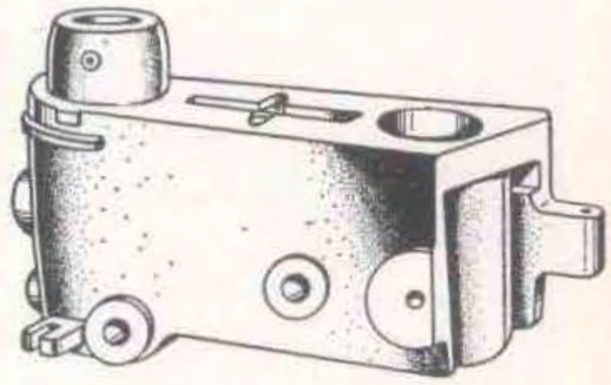
ADJUSTABLE QUILL RETURN SPRING

Retracts quill instantly upon release of feed lever. Tension of spring is adjustable.



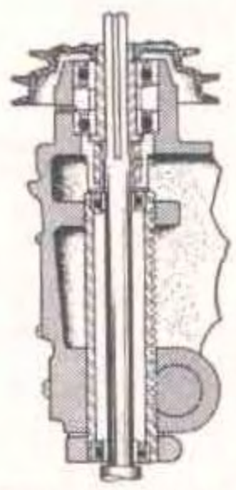
INTERCHANGEABLE SPINDLES

Spindles available to take No. 2 Morse taper shank tools, and for ½" straight shank tools, router bits, shaper cutters, and other tools having ½" shanks.



ONE-PIECE HEAD CASTING

Insures accurate alignment. Heavy rigid construction. Internal clutch locks the head to column. Column bearing is NOT split.

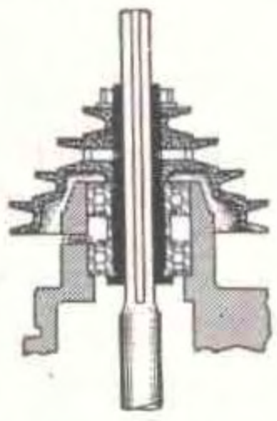


FOUR PRECISION BALL BEARINGS

Two on spindle, two on drive sleeve. Prelubricated and sealed precision type, no oiling required.

AUTOMATIC BELT TENSION

Coil spring permits releasing tension from belt for easy speed changes. Proper tension for belt is maintained automatically.



FREE-FLOATING SPINDLE

Design prevents misalignment, side thrust and whip. Six splines in spindle and drive sleeve.

DEPTH GAUGE

Controls feed depth, adjustable for any depth of feed up to 4". Graduations read in sixteenths.

QUILL BEARING ADJUSTMENT

Take-up screw provides tension adjustment and secure locking. Quill bearing is NOT split.

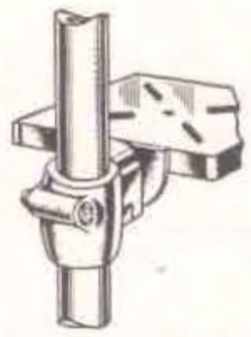


TABLE LOCK

Internal clutch securely locks table to column. Eliminates misalignment. Column bearing is NOT split.

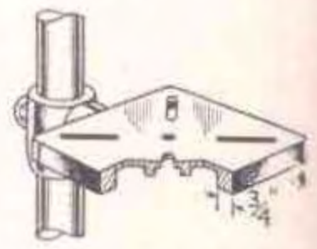
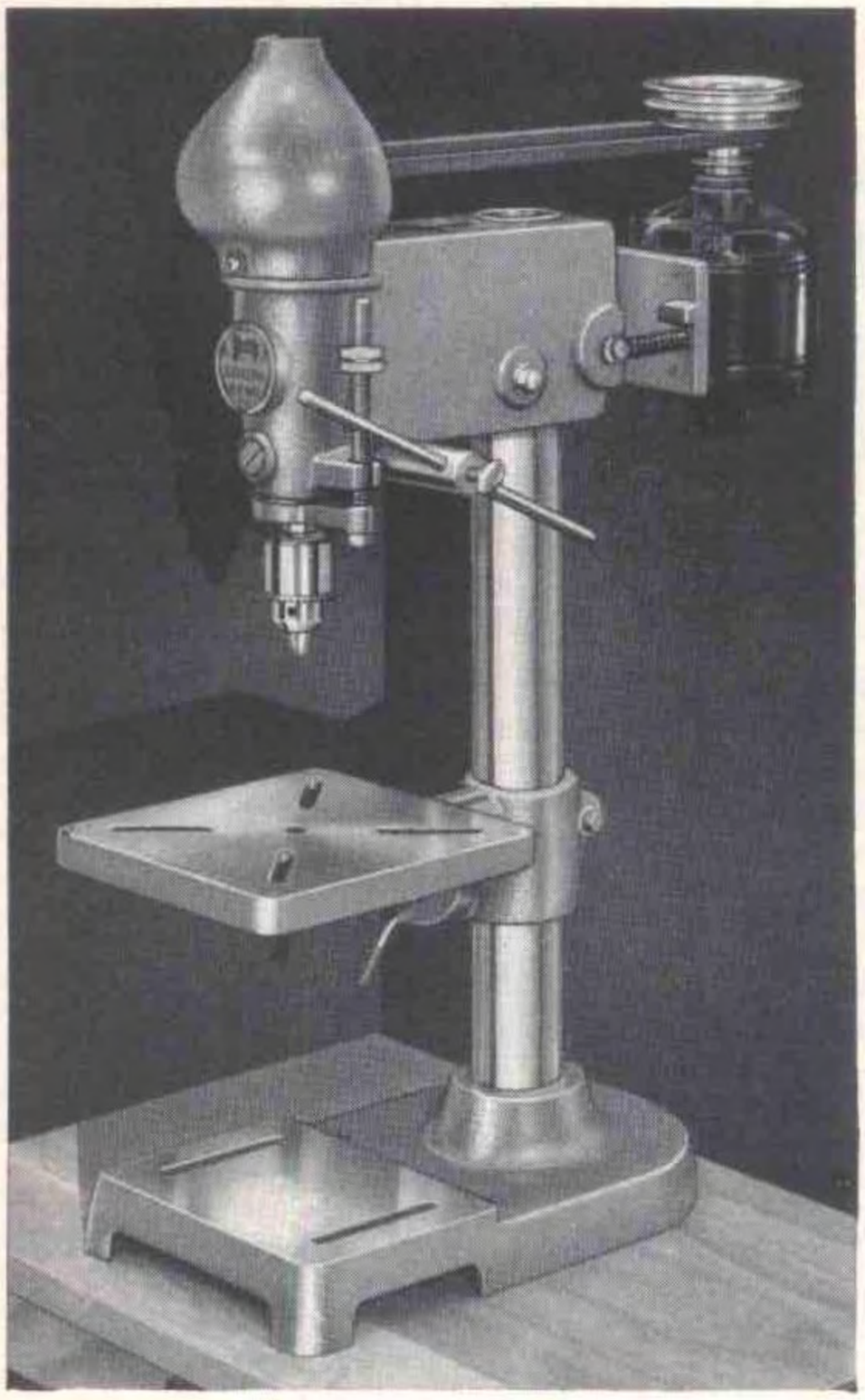
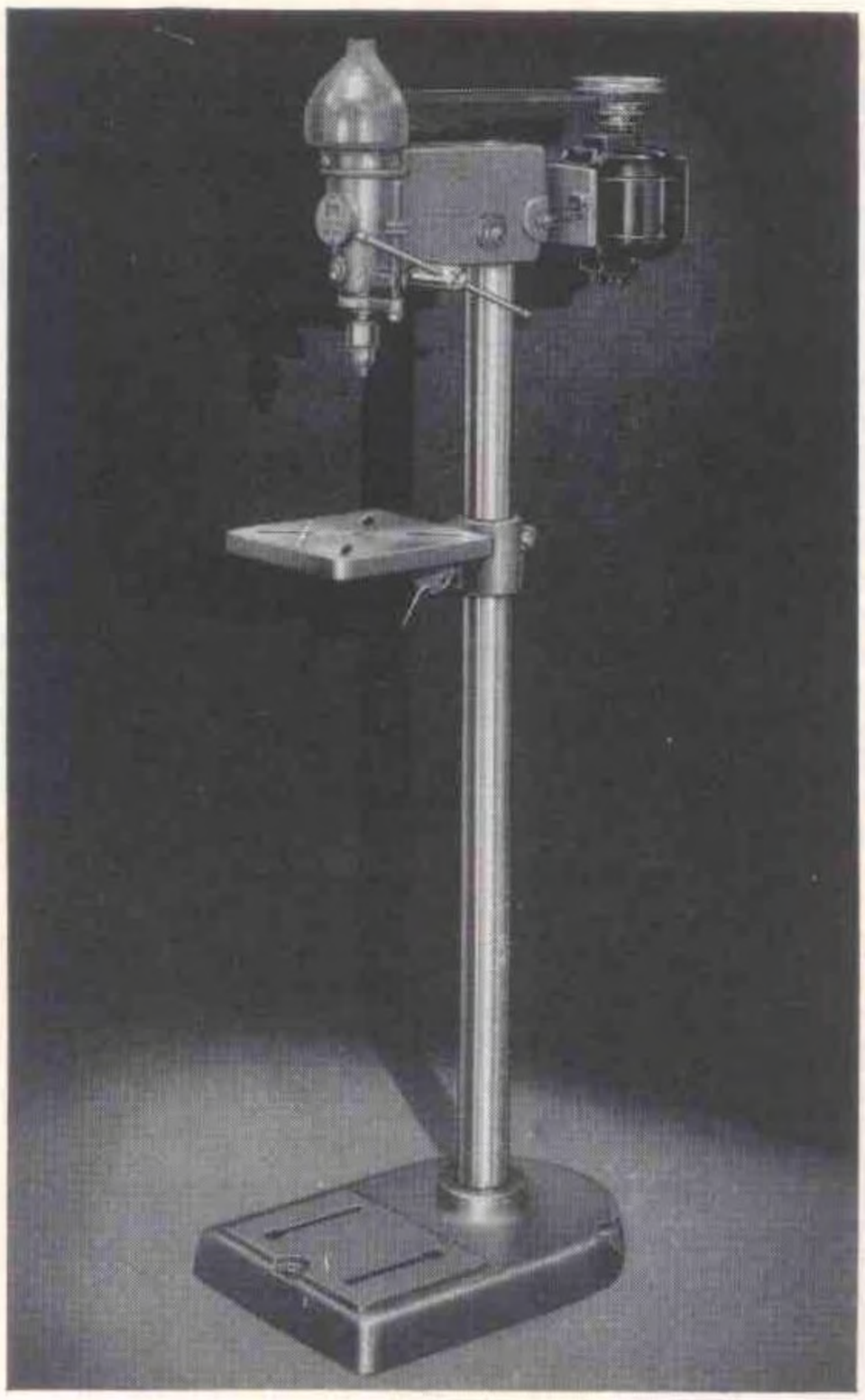


TABLE HAS WIDE CLAMPING RIB

Heavy rib ¾" wide strengthens table and provides flat surface underneath for clamping work securely to table.





Economy Model
14-inch Bench Drill Presses

The substantial design and quality workmanship of the 14" Economy Model Bench Drill Press will appeal to the experienced shop man. Constructed throughout of sturdy, well proportioned parts, it is extremely rigid and will operate smoothly at all normal speeds.

The column is made of heavy seamless steel tubing which is precision ground the entire length. Both the table and base have accurately ground work surfaces with slots for clamp bolts. Table and head both swivel on column and can be placed in any desired position. Improved internal clutch binders lock head and table securely to column without disturbing alignment. See preceding page for specifications.

Regular equipment supplied with each Economy Model Bench Drill Press includes motor base, motor pulley, spindle pulley, and spindle equipment as indicated in table, but does not include motor or switches.

Economy Model Bench Drill Presses

Catalog Number	Spindle Equipment	Cubic Feet Boxed	Boxed Weight Pounds	Crated Weight Pounds	
CD401B	With short taper for No. 34 Jacobs Chuck, without chuck.	9	246	181	
CD402B	With No. 2 Morse taper socket.	9	246	181	
CD403B	With No. 34, Jacobs key type ½" drill chuck.	9	247	182	

Economy Model
14-inch Floor Drill Presses

Except for the large base and tall pedestal, the floor type drill presses are the same as the bench type drill presses shown at the left. The heavy cast iron base provides a substantial support for the drill press, and is slotted for clamp bolts. Work surface on base is not machined. Maximum distance from work surface on base to chuck is 45¼".

The drill press head and table are securely locked to the precision ground seamless steel column by an improved internal clutch mechanism. Both table and head are adjustable and can be used in any position desired. The table has a precision ground work surface and tilts to any angle, with locating pin for vertical and horizontal positions. See preceding page for specifications.

Regular equipment supplied with each Economy Model Floor Drill Press includes motor base, motor pulley, spindle pulley, V-belt, and spindle equipment as listed in table, but does not include motor or switches.

Economy Model Floor Drill Presses

Catalog Number	Spindle Equipment	Cubic Feet Boxed	Boxed Weight Pounds	Crated Weight Pounds	
CD401F	With short taper for No. 34 Jacobs Chuck, without chuck.	19	356	232	
CD402F	No. 2 Morse taper socket.	19	356	232	
CD403F	With No. 34 Jacobs key type ½" drill chuck.	19	357	233	

Motors for South Bend Drill Presses

Motors listed below are recommended for use with South Bend 14" Drill Presses. These are all vertical mounting ball-bearing motors with the exception of No. CE3256B, which is a sleeve bearing motor. All single phase motors are capacitor type with the exception of No. CE3256B which is split-phase. Prices of 230 V. single phase and D.C. motors include 230 V. lamp in lieu of 115 V. lamp regularly supplied with drill press.

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. When motors are ordered for Economy Model Drill Presses it is recommended that a suitable drill press head wiring kit be selected from the column at the right, and ordered with the motor. Wiring and switches for single phase or D.C. 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.

Motors for South Bend 14" Drill Presses

Cat. No.	H.P.	Current	Volts	Phase	Cycle
CE4910B	1/3	A.C.	115	1	60
CE3256B	1/3	A.C.	115	1	60
CE4910D	1/3	A.C.	230	1	60
CE4911A	1/3	A.C.	115	1	50
CE4911C	1/3	A.C.	230	1	50
CE4912D	1/3	A.C.	220	3	60
CE4912C	1/3	A.C.	220	3	50
CE4913S	1/3	A.C.	380	3	50
CE4913F	1/3	A.C.	440	3	60
CE4913E	1/3	A.C.	440	3	50
CE4920B	1/2	A.C.	115	1	60
CE4920D	1/2	A.C.	230	1	60
CE4921A	1/2	A.C.	115	1	50
CE4921C	1/2	A.C.	230	1	50
CE4916R	1/2	A.C.	125	1	50
CE4915Q	1/2	A.C.	250	1	50
CE4922Y	1/2	A.C.	115	1	40
CE4922Z	1/2	A.C.	230	1	40
CE4914D	1/2	A.C.	220	2	60
CE4914C	1/2	A.C.	220	2	50
CE4914F	1/2	A.C.	440	2	60
CE4914E	1/2	A.C.	440	2	50
CE4924D	1/2	A.C.	220	3	60
CE4924C	1/2	A.C.	220	3	50
CE4924S	1/2	A.C.	380	3	50
CE4924F	1/2	A.C.	440	3	60
CE4924E	1/2	A.C.	440	3	50
CE4930	1/2	D.C.	115	...	...
CE4931	1/2	D.C.	230	...	...

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.

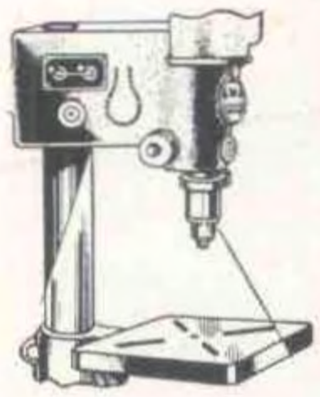
CE4901. Across-the-line Manual Starter for two phase or three phase 220 to 440 v., 50 or 60 cycle A.C. motors. Shipping weight 5 lbs.

CE4909E. Remote Control for two phase or three phase, 220 v. or 440 v., 50 cycle A.C. motors. Shipping weight 23 lbs.

CE4909F. Remote Control for two phase or three phase, 220 v. or 440 v., 60 cycle A.C. motors. Shipping weight 23 lbs.

CE4909S. Remote Control for three phase 380 v. A.C. motors. Shipping weight 23 lbs.

Drill Press Head Wiring Kits*



For Economy Model Drill Presses Only

All heads for South Bend Economy Model Drill Presses are cored and drilled to receive the wiring kits listed below.

CE9105. Toggle Switch Wiring Kit for single phase or D.C. motors up to 250 volts. Includes eight feet of Neoprene covered No. 16 two wire lead in cable, toggle switch and wire for motor, toggle switch and wire for lamp, receptacle for standard base lamp bulb, clip, wiring instructions, and escutcheon plate with pins for mounting switches in Drill Press Head. Shipping weight 1¼ lbs.

CE9160. Across-the-line Manual Starter Wiring Kit for single phase or D.C. motors up to 250 volts. Includes eight feet of Neoprene covered No. 16 three wire lead in cable, across-the-line push button switch and wire for motor, toggle switch and wire for lamp, receptacle for standard base lamp bulb, clip, wiring instructions, and box for mounting switches in drill press head. Shipping weight 3 lbs.

CE9107. Toggle Switch Wiring Kit for use with remote controls CE4909E and CE4909F. Includes toggle switch and wire for operating motor through remote control, toggle switch and wire for 115 volt lamp, receptacle for standard base lamp bulb, clip, wiring instructions, and escutcheon plate with pins for mounting switches in drill press head.

CE3655. Feed-through Cord Switch for insertion in extension cord for 115 V. to 230 V. single phase or D.C. motors only. Shipping weight ¼ lb.

CE3658. Extension Cord for motor. Neoprene covered No. 16 two wire cord with plug attached, length six feet. For single phase or D.C. motors only. Shipping weight ½ lb.

CE3659. Extension Cord for motor. Neoprene covered No. 16 two wire cord with plug attached, length eight feet. For single phase or D.C. motors only. Shipping weight ¾ lb.

CE3660. Extension Cord. Neoprene covered No. 16 three wire cord (one wire used for grounding) with plug attached, length six feet. For single phase or D.C. motors only. Ship. wt. 1 lb.

CE3661. Extension Cord. Neoprene covered No. 16 three wire cord (one wire used for grounding) with plug attached, length eight feet. For single phase or D.C. motors only. Ship. wt. 1 lb.

*No wiring is installed in South Bend Economy Model Drill Presses at the factory. For those who prefer to have wiring installed at the factory we recommend the South Bend Precision Model Drill Press.

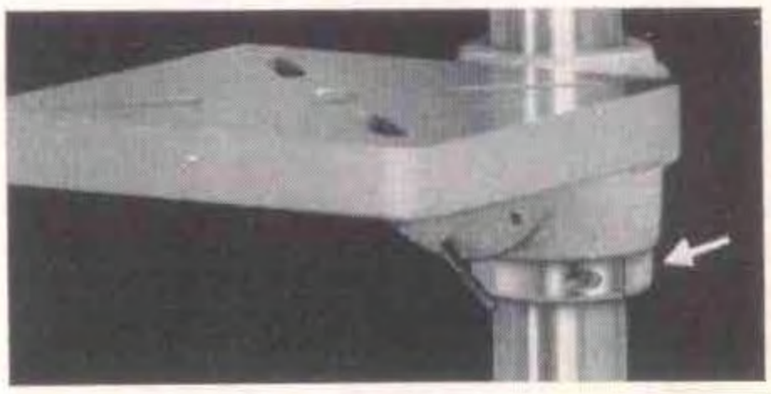
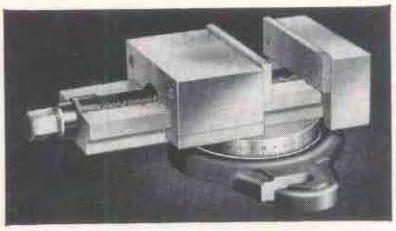


Table Support Ring

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.

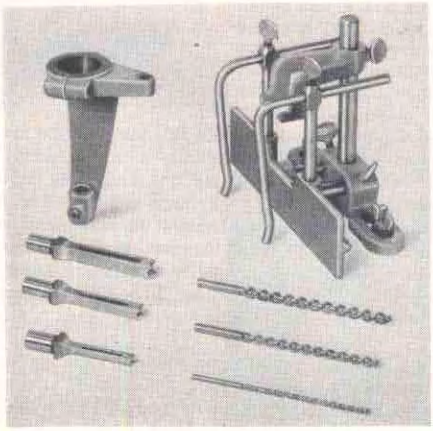
CE9140. Table Support Ring. Shipping weight 1½ lbs.



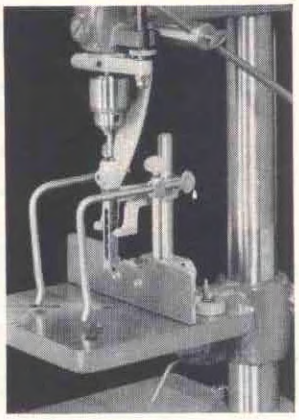
Swivel Machine Vise

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

CE9100. Swivel Drill Press Vise. Shipping weight 18 pounds.



Mortising Attachment



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

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

Specifications

Capacity under work hold down, maximum	5 11/16″
Capacity guide rods to fence, maximum	4 7/16″
Distance fence adjusts without moving base on table	1″
Working depth of chisels:	
¼″	2 1/16″
⅝″	2 ¾″
½″	3 5/16″

Cat. No.	Description
CE9151.	Mortising Attachment Fence Assembly. Ship. wt. 10 lbs.
CD9152.	Mortising Chisel Holder. Shipping weight 3 lbs.
CE9153.	¼″ Mortising Chisel and Bit. Shipping weight ½ lb.
CE9154.	⅜″ Mortising Chisel and Bit. Shipping weight ¾ lb.
CE9155.	½″ Mortising Chisel and Bit. Shipping weight 1 lb..

Wood Top Machine Stand

This is a heavily constructed angle steel stand 29⅜″ high for mounting the bench shaper, drill press, or for other small machines.The glued wood top is 20″ x 32″ and is 1 3/16″ thick. Steel parts are finished in gray enamel. Shipping weight 52 lbs.

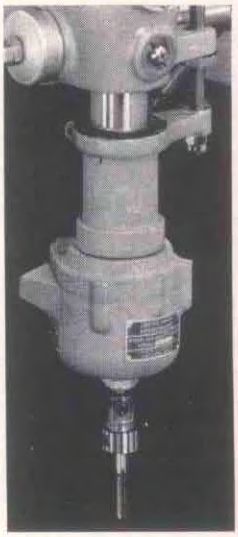
CE9141. Wood Top Machine Stand (less drawer).

Drawer for Machine Stand

Handy for keeping small tools, wrenches, etc. Finished to match stand CE9141. Drawer is 20⅛″ wide, 14″ long, 3 3/16″ deep. Price includes metal pull and wood slides. Shipping weight 9 lbs.

CE1780D. Drawer for use with Machine Stand.

Tapping Attachment



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

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

CE9146. Tapping head No. 10 to 5/16″ tap capacity with No. 2 Morse taper arbor.
Shipping weight 7½ lbs.

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

CD9148. Tapping head No. 10 to 5/16″ tap capacity, quill mounting.
Shipping weight 7½ lbs.

Protect Your Drill Press With This 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 dust and 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. (For other sizes see pages 70 and 86.)

CE2693. Waterproof Service Cover for Drill Press, Shipping weight 2 lbs.

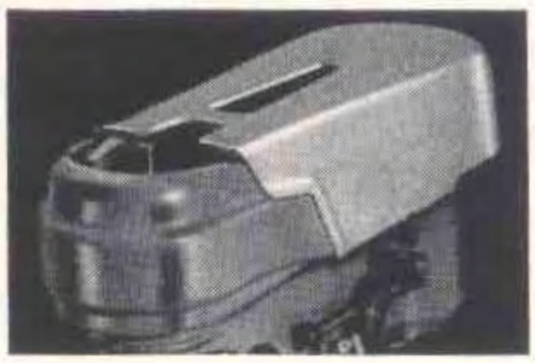
Multi-Speed Attachment

The Multi-Speed Attachment for South Bend 14" Precision Model and Economy Model Drill Presses provides twelve spindle speeds 380 to 8,010 r.p.m. when used with 1725 r.p.m. motor. The attachment consists of an eccentric spindle, which is mounted in the drill press column to support a 4-step auxiliary cone pulley with two V-belts.

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

CD9135A. For ⅓ h.p. motor.
CD9135B. For ½ h.p. motor.

Belt Guard



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

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

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

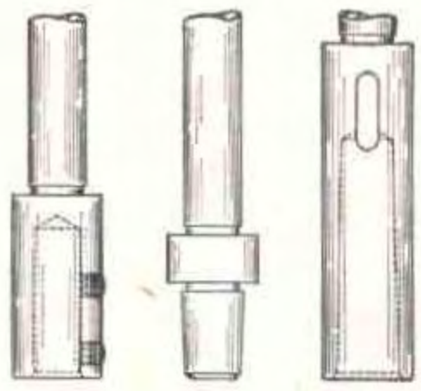
CD9138. Belt Guard for use with Economy Model Drill Press only, when supplied separate from drill press. Shipping weight 50 lbs.

Balanced Pulleys for Economy Model Drill Press

Accurately machined and balanced spindle and motor pulleys for smooth operation at high speeds. Recommended for use with Multi-Speed Attachment on Economy Model Drill Presses. (Supplied as standard equipment on Precision Model Drill Presses.) Specify diameter of motor shaft when ordering. Shipping weight 8½ lbs.

CE9133. Pair of pulleys with drill press in lieu of regular pulleys.
CE9160. Balanced Spindle Pulley only. Shipping weight 3 lbs.
CE9161. Balanced Motor Pulley with ½" hole. Ship. wt. 3 lbs.
CE9162. Balanced Motor Pulley with ⅝" hole. Ship. wt. 3 lbs.
CE9163. Balanced Motor Pulley with ¾" hole. Ship. wt. 3 lbs.

Extra Spindles for Drill Presses



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

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

CD9126. Utility spindle with ½" x 1⅝" deep straight hole for holding routing tools, etc. Shipping weight 3 lbs.

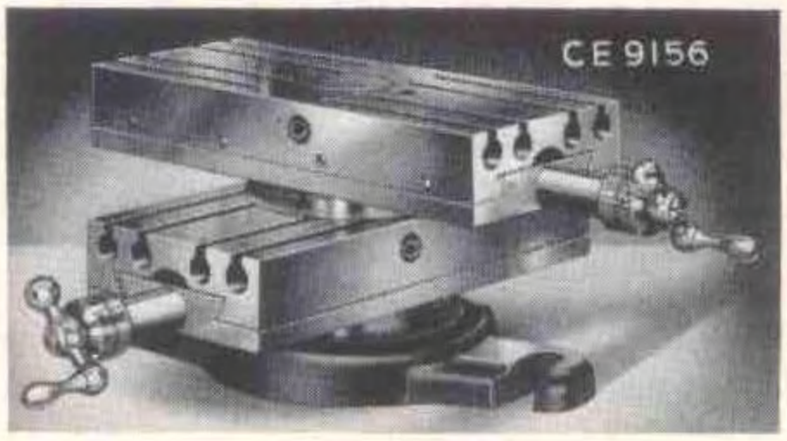
CD9127. Spindle with short taper for ½" Drill Chuck No. CE1201 (Jacobs No. 34). Shipping weight 2 lbs.

Chuck and Arbor for Drill Press

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

CE1201. Jacobs 3-jaw smooth body drill chuck, 0 to ½" capacity with pinion key. Shipping weight 2⅜ pounds.

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



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 8⅞" and maximum travel is 4" for either slide. Table has four slots for clamping work. Clamp bolts fit snugly into round slots in such a way that there is little danger of breaking out or otherwise damaging the slots. Supplied with base for use on drill press, milling machines, etc., also with a specially designed base for mounting on the South Bend 7" Shaper. Slides and bases may be purchased separately if desired.

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

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

CE9157. Single Table with one graduated swivel and four clamp bolts with nuts. Shipping weight 19 lbs.

CE9158. Base only for adapting single table to South Bend 7" Shaper. Shipping weight 3 lbs.

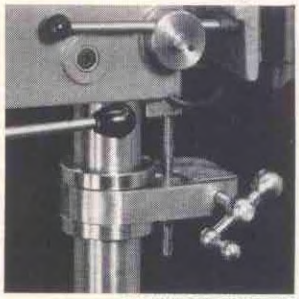
CE9159. Base only for adapting single table to South Bend Drill Press or other machine tool. Shipping weight 8 lbs.

Tap and Die Sets

This is a Henry L. Hanson lightweight tap and die set packed in a compact tough composition case that will withstand hard usage. Set consists of one each No. 25 Die Stock, No. 88 Tap and Reamer Wrench, No. 1E Tap wrench, No. 514 Screw Pitch Gauge, Screw Driver, and one each carbon steel Tap and Die in following sizes: 4 x 36, 6 x 32, 8 x 32, 10 x 24, 10 x 32, and 12 x 24 machine screw standard; ¼ x 20, 5/16 x 18, ⅜ x 16, 7/16 x 14, and ½ x 13 NC (U.S. Standard); ¼ x 28, 5/16 x 24, ⅜ x 24, 7/16 x 20, and ½ x 20 NF (SAE Standard, and ⅛" pipe thread. Dies are 1" outside diameter. Dies are supplied in adjustable type as listed. Shipping weight 6 lbs.

CE2187. Tap and Die Set with Adjustable Dies.

Head Positioning Attachment

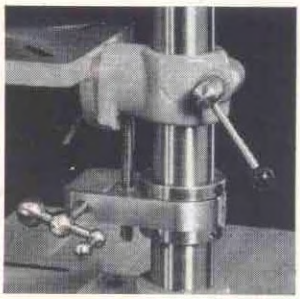


PATENT APPLIED FOR

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, but can be fitted to any drill press having 2¾" column.

CE9131. Head Positioning Attachment. Ship. wt. 10 lbs.

Table Positioning Attachment

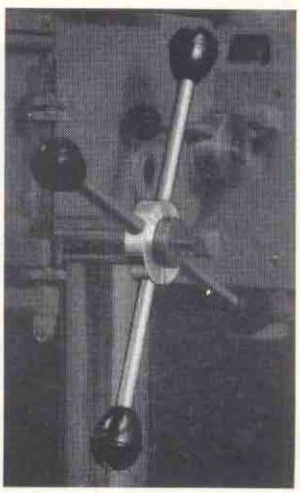


PATENT APPLIED FOR

This Table Positioning Attachment raises or lowers the drill press table. It provides precision adjustment and can be fitted to any drill press having a 2¾" diameter column. The attachment consists of a vertical screw operated by a steel ball crank through worm gearing. It is positioned on column by adjusting two lock rings and provides 4" of adjustment without resetting when the table is in the normal horizontal position. The adjustment is reduced to 3½" when the table is set at 45°, which is the maximum angle for the table when the positioning adjustment is used. Swivels around column with table.

CE9130. Table Positioning Attachment. Ship. wt. 10 lbs.

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, but can also be used with Economy Model Drill Press.

CD9155. Turnstile Feed Lever Attachment. Ship. wt. 3 lbs.

Coolant Pump Equipment for Production Type Drill Presses

This coolant pump equipment is designed for use with the production type drill presses described on page 77. It includes a self priming coolant pump driven by a ¼ h.p. motor, toggle switch, coolant reservoir, necessary piping, and individual nozzle with shut off valve for each spindle of the drill press. Price includes fitting coolant equipment to drill press at factory. Shipping weight approximately 154 lbs.

CURRENT				CATALOG NUMBERS FOR COOLANT EQUIPMENT			
Type	Phase	Cycle	Volts	One Spindle Drill Press	Two Spindle Drill Press	Three Spindle Drill Press	Four Spindle Drill Press
A.C.	3	50	220	CD9103C	CD9203C	CD9303C	CD9403C
A.C.	3	60	220	CD9103D	CD9203D	CD9303D	CD9403D
A.C.	3	50	440	CD9103E	CD9203E	CD9303E	CD9403E
A.C.	3	60	440	CD9103F	CD9203F	CD9303F	CD9403F
A.C.	3	50	550	CD9103G	CD9203G	CD9303G	CD9403G
A.C.	3	60	550	CD9103H	CD9203H	CD9303H	CD9403H
A.C.	2	50	220	CD9102C	CD9202C	CD9302C	CD9402C
A.C.	2	60	220	CD9102D	CD9202D	CD9302D	CD9402D
A.C.	1	50	115	CD9101A	CD9201A	CD9301A	CD9401A
A.C.	1	60	115	CD9101B	CD9201B	CD9301B	CD9401B
A.C.	1	50	230	CD9101C	CD9201C	CD9301C	CD9401C
A.C.	1	60	230	CD9101D	CD9201D	CD9301D	CD9401D
D.C.	...	..	115	CD9100K	CD9200K	CD9300K	CD9400K
D.C.	...	..	230	CD9100L	CD9200L	CD9300L	CD9400L

Universal Coolant Pump Equipment

This coolant equipment may be ordered for drill presses, or other machine tools for which specially designed coolant equipment is not available. Reservoir may be set on floor or attached to machine. Equipment consists of: coolant pump, tubing, reservoir, tray, ¼ h.p. motor, switch, and wire for connecting motor and switch. Shipping weight approximately 110 lbs.

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

South Bend 7-inch *Precision* Bench Shaper

The South Bend 7" Shaper has been developed to meet toolroom 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 parts within its capacity.

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.

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 assures rigidity.

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.

CS100. South Bend 7" Precision Bench Shaper with vise, drive unit for ⅓ h.p. motor, motor pulley, V-belts, guards, work light, and switches, but without motor, steel stand, or tool holder. Shipping weight crated 330 lbs. Boxed weight 400 lbs., cubic feet boxed 12.

Specifications of South Bend 7" Precision Shaper

Ram

Length of Ram Stroke	0 to 7"
Strokes Per Minute, approximate	42-75-120-195
Cutting Speeds	3 to 114 feet per minute

Tool

Length of Feed	3"

Head

Tool Post Takes Tool Holder Shank	⅜" x 13/16"
Swivels	360°

Vise

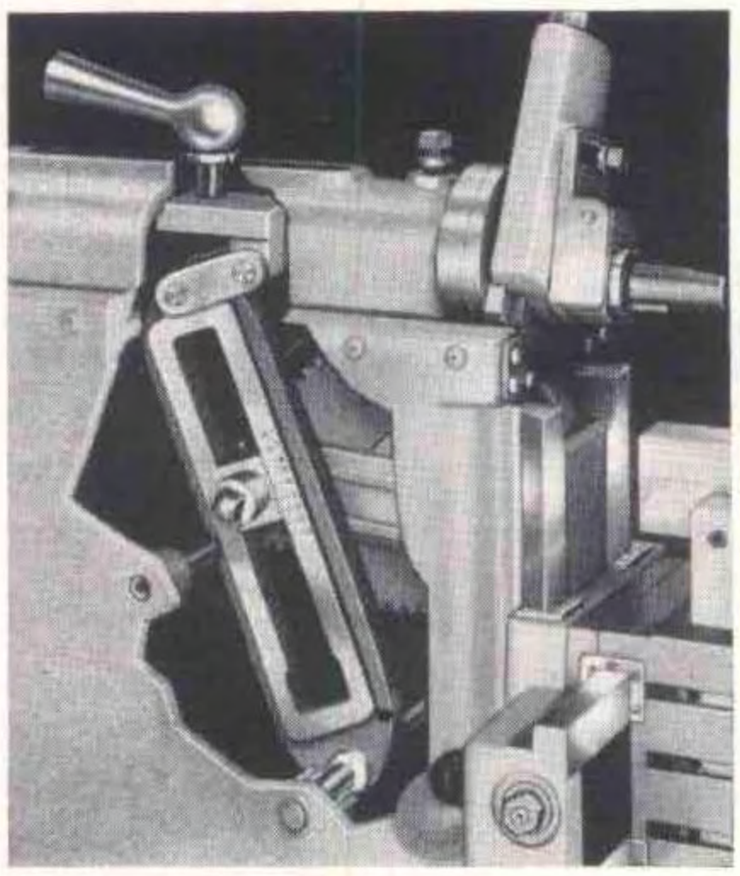
Width of Jaws	4"
Depth of Jaws	1"
Maximum Opening	4"

Table

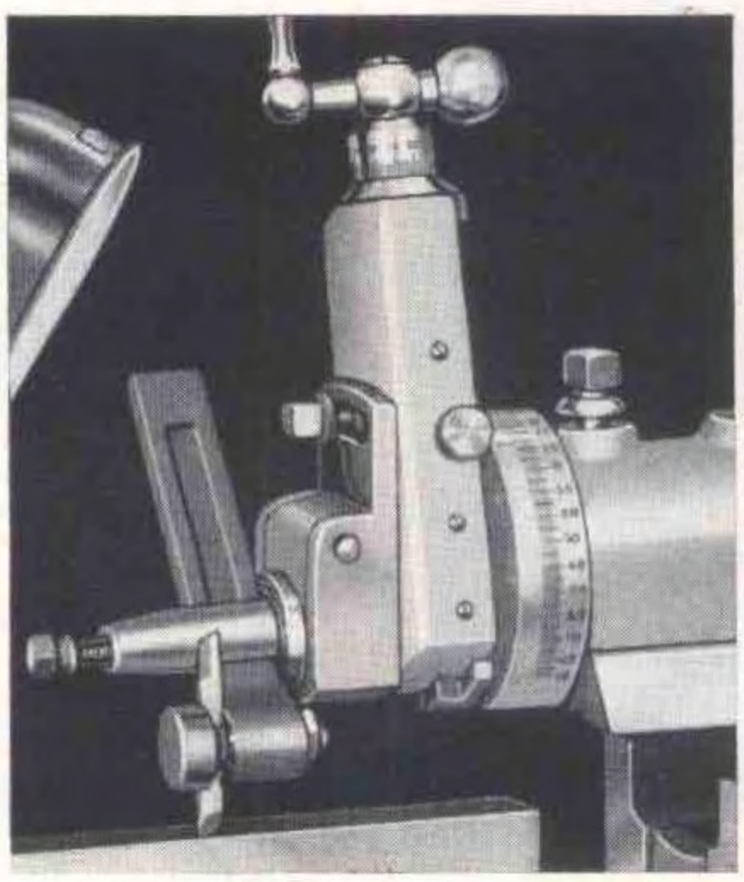
Length of Top	6 5/16"
Width of Top	5"
Depth of Table	5⅜"
Horizontal Travel	9½"
Vertical Travel	5"
Distance from Ram	½" to 5½"
Power Cross-Feeds (reversible)	.002" to .012"
Width of Slots	5/16"
Holes for Clamp Bolts	9/32"

Motor

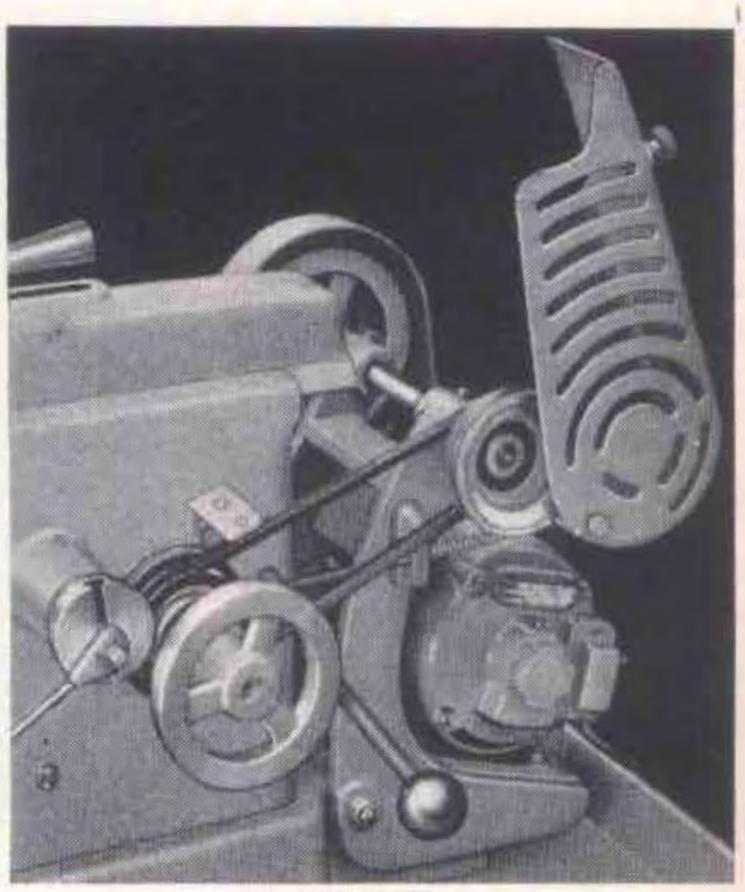
Size Recommended	⅓ or ½ h.p.



Rocker and crank with graduated eccentric adjustment for stroke



Tool head locks in any position. Rugged clapper box also adjustable

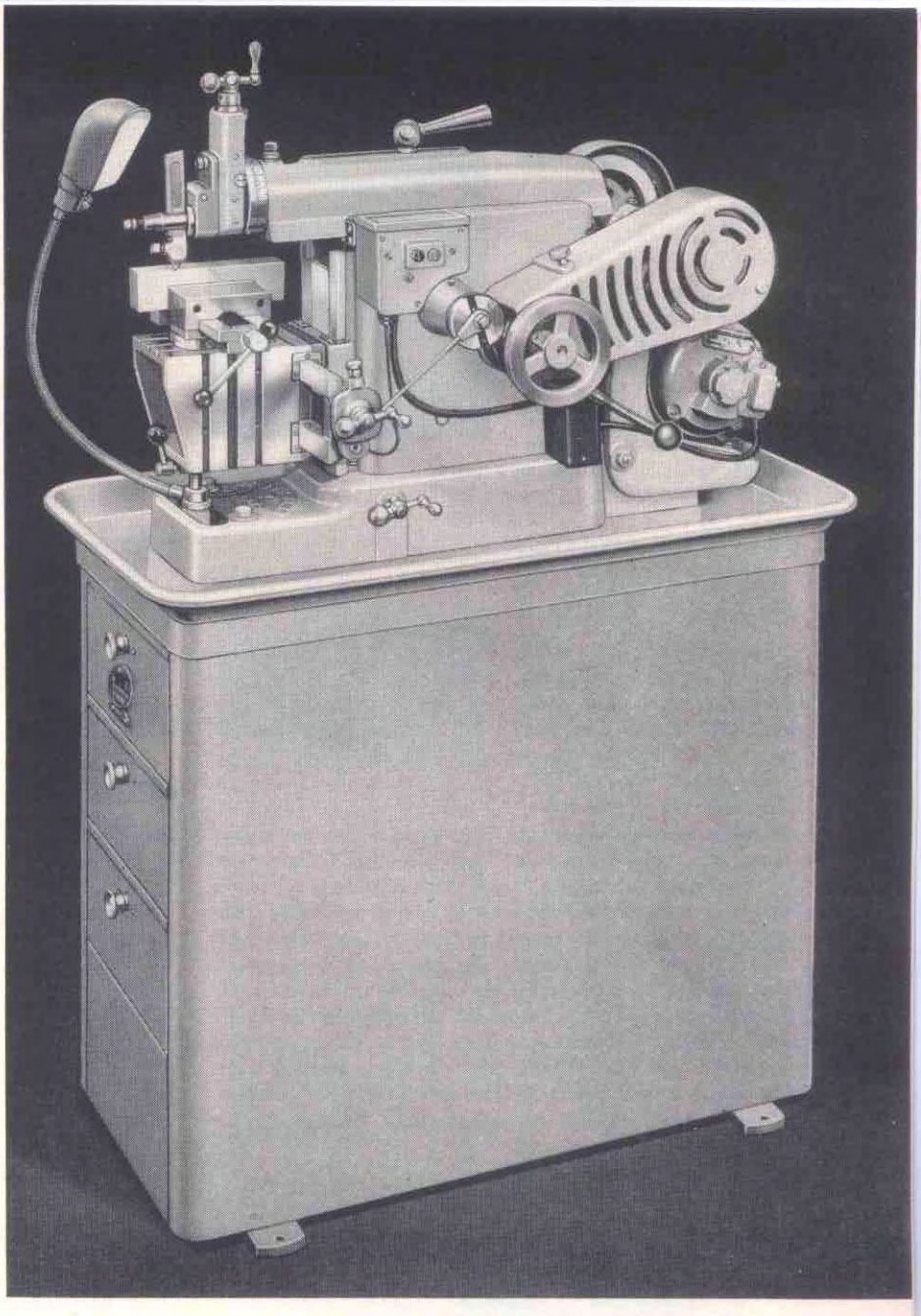


Guards on all belts and pulleys. Quick-acting belt tension release

FEATURES

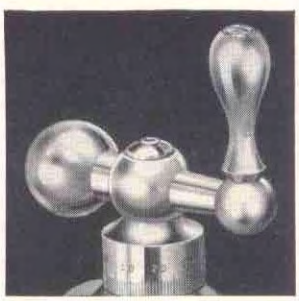
- Built-in work light prevents eye strain.
- Reversible power cross-feeds .002″ to .012″.
- Built-in motor drive with quick acting belt tension release for changing speeds.
- Swivel vise graduated in degrees.
- Swivel tool head graduated in degrees.
- Convenient stroke adjustment 0 to 7″.

★



Note: Motor, tool holder, and steel stand shown in illustration are not included in regular equipment of shaper. See page 86.

Swiveling Machine Handles



Swiveling machine handles for the shaper can be supplied in lieu of the solid machine handles furnished as regular equipment, provided they are specified when the shaper is ordered.

CS9636. Swiveling Machine Handles for tool head feed screw, table cross-feed screw, and table vertical feed screw, in lieu of solid machine handles if ordered with shaper.

Angle Plate

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

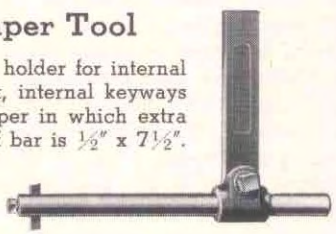
CE9640. Ship. wt. 4 lbs.

Shaper Tool Holder

An extremely rigid forged steel tool holder for ¼″ 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.

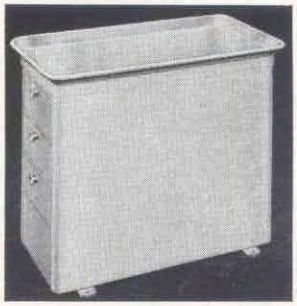
Extension Shaper Tool



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 ½″ x 7½″. Takes cutter bit 3/16″ x 3/16″. Shipping weight 2 pounds.

CS9631. Extension Shaper Tool.

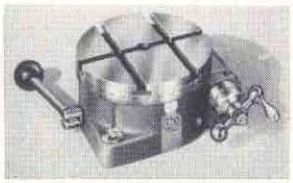
Steel Machine Stand



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 28⅜". Shipping weight 150 pounds.

CS9600. Steel Stand for Shaper.

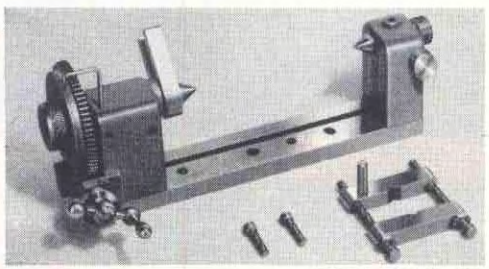
Indexing Table



PATENT APPLIED FOR

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 bolt holes, indexing clutch teeth, machining square, 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.

CE9144. Indexing Table. Shipping weight 14 lbs.



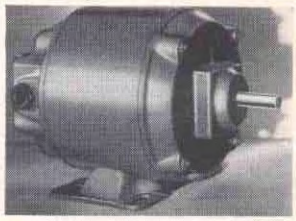
PATENT APPLIED FOR

Indexing Centers

This is an indispensable device for cutting splines or flutes in shafts, laying out work, accurate cross drilling, gear cutting, milling or shaping hexagons, squares, etc. Base has bolt holes for clamping on table of drill press, milling machine or shaper. Takes work between centers up to 5" in diameter, 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.

Motors for South Bend Shapers



Motors listed below are recommended for use with South Bend 7" Shapers. These are all ball-bearing motors with the exception of No. CS3256B, which is a sleeve bearing motor. All single phase motors are capacitor type with the exception of the No. CS3256B, which is split-phase. Prices of ½ h.p. motors include special mounting base. Prices of 230 V., single phase and D.C. motors include 230 V. lamp in lieu of 115 V. lamp which is regularly supplied with shaper.

Remote control equipment described below the motor table is optional for motors operating on two phase or three phase alternating current. Information on motors for current characteristics not listed will be supplied on request. Approximate ship. wts.: ⅓ h.p. motors 40 lbs., ½ h.p. motors 50 lbs.

Motors for South Bend 7" Bench Shapers

Cat. No.	H.P.	Current	Volts	Phase	Cycle
CS4910B	⅓	A.C.	115	1	60
CS3256B	⅓	A.C.	115	1	60
CS4910D	⅓	A.C.	230	1	60
CS4911A	⅓	A.C.	115	1	50
CS4911C	⅓	A.C.	230	1	50
CS4912D	⅓	A.C.	220	3	60
CS4912C	⅓	A.C.	220	3	50
CS4913S	⅓	A.C.	380	3	50
CS4913F	⅓	A.C.	440	3	60
CS4913E	⅓	A.C.	440	3	50
CS4920B	½	A.C.	115	1	60
CS4920D	½	A.C.	230	1	60
CS4921A	½	A.C.	115	1	50
CS4921C	½	A.C.	230	1	50
CS4916R	½	A.C.	125	1	50
CS4915Q	½	A.C.	250	1	50
CS4922Y	½	A.C.	115	1	40
CS4922Z	½	A.C.	230	1	40
CS4914D	½	A.C.	220	2	60
CS4914C	½	A.C.	220	2	50
CS4914F	½	A.C.	440	2	60
CS4914E	½	A.C.	440	2	50
CS4924D	½	A.C.	220	3	60
CS4924C	½	A.C.	220	3	50
CS4924S	½	A.C.	380	3	50
CS4924F	½	A.C.	440	3	60
CS4924E	½	A.C.	440	3	50
CS4930	½	D.C.	115	...	...
CS4931	½	D.C.	230	...	...

Controls for Two and Three Phase Motors

Remote control equipment includes step-down transformers and relays which reduce the current to the operating switch to 110 volts. This equipment is optional for motors operating on two phase or three phase alternating current.

CE9609E. Remote Control for two phase or three phase, 220 v. or 440 v., 50 cycle A.C. motors. Shipping weight 14 lbs.

CE9609F. Remote control for two phase or three phase, 220 v. or 440 v., 60 cycle A.C. motors. Shipping weight 14 lbs.

CE9609S. Remote control for three phase 380 v. A.C. motors. Shipping weight 14 lbs.

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. (For other sizes see pages 70 and 81.)

CE2694. Waterproof Service Cover for Shaper, shipping weight 2 lbs.

ORDER FORM

For Products Of

SOUTH BEND LATHE WORKS

TO: South Bend Lathe Works
South Bend 22, Indiana or

..... Date....., 195.....
Distributor

.....
Address

Please enter my order for the following:

Quantity	Catalog Number	Size and Description	Price F.O.B. South Bend
			$

Mailing Address.....
Street and Number

.....
City County State

Shipping Address.....
Street and Number

.....
City County State

.....
Buyer's Signature

Amount of Order . . . . $.....

Payment Enclosed . . . .

Please Ship By

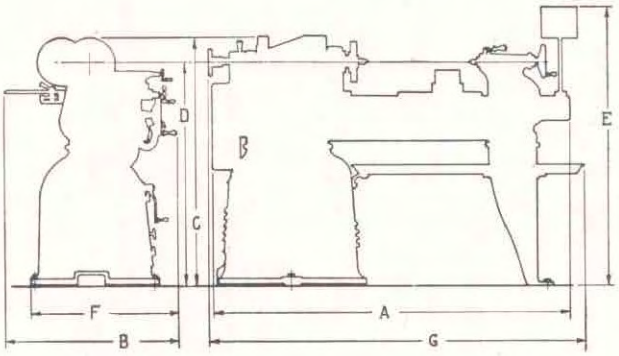
☐ Rail Freight ☐ Rail Express ☐ Motor Truck

.....
Name of Truck Line or Railroad

By.....
Partner if Partnership, Officer if Corporation

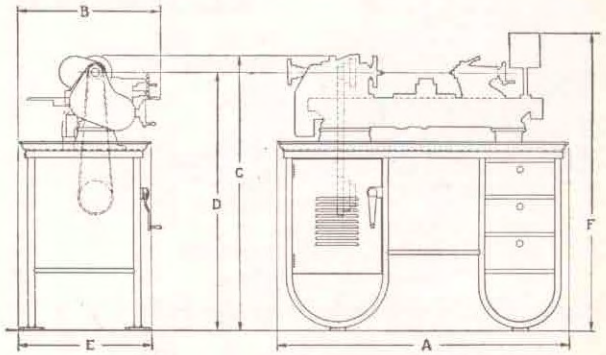
Floor Space Required for South Bend Machine Tools

Dimensions A to G given in tables below are in inches



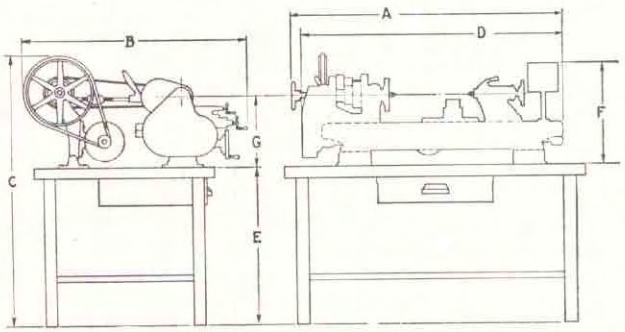
Underneath Motor Driven Floor Lathes

Size Lathe	Bed Length	A	B	C	D	E	F	G
10"	3'	44	27 3/4	44 23/32	41 13/32	50 21/32	24	46
13"	5'	65 5/16	34 1/4	45 1/2	41 1/2	52 11/32	26 1/16	70
14 1/2"	6'	78 1/2	36 3/4	46 1/2	41 9/16	50 11/16	27 1/2	84
16"	8'	102 1/2	41 3/8	46 3/4	42 1/32	54 1/32	28 5/8	106 7/8
16-24"	10'	126 1/2		51 1/2	46 25/32		28 5/8	



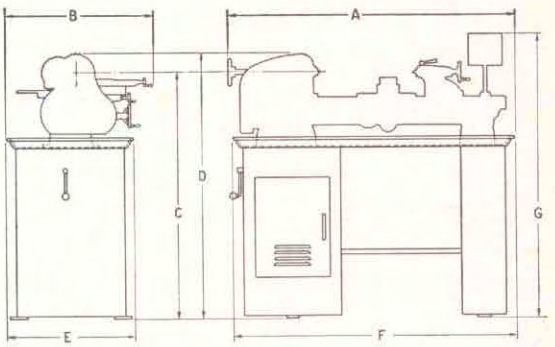
Underneath Motor Driven Bench Lathes

Size Lathe	Bed Length	A	B	C	D	E	F
10"	3 1/2'	51 1/2	26 1/8	47 15/32	44 5/32	22	52 13/32



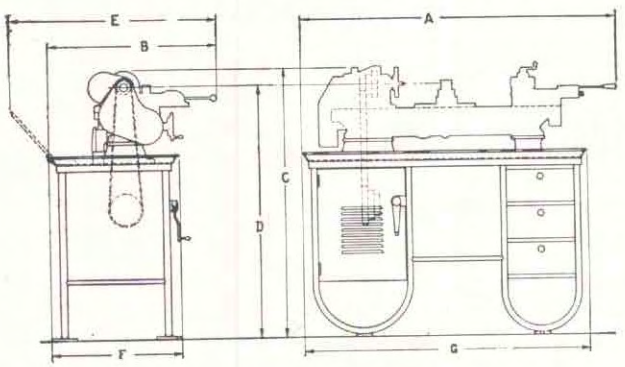
Horizontal Motor Driven Bench Lathes

Size Lathe	Bed Length	A	B	C	D	E	F	G
9"	3'	41 1/2	37	49 15/16	39 3/8	29 3/16	19 1/2	12 11/32
Lt. Ten	3'	41 1/2	32 3/4	49 1/4	39 3/8	29 3/16	19 5/8	12 17/64



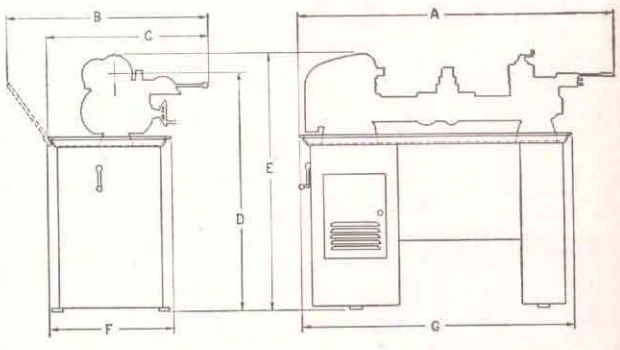
Underneath Motor Driven Metal Column Base Lathes

Size Lathe	Bed Length	A	B	C	D	E	F
9"	3 1/2'	49 3/32	25 1/4	41 23/32	44 23/32	21 1/2	48 1/4
Lt. Ten	3 1/2'	49 3/32	25 1/4	42 1/8	45 3/16	21 1/2	48 1/4



Series 1000 Bench Turret Lathe

Size Lathe	Bed Length	A	B	C	D	E	F	G
1000	3 1/2'	63 1/4	30 9/16	47 15/32	44 5/32	40 1/8	22	51 1/2

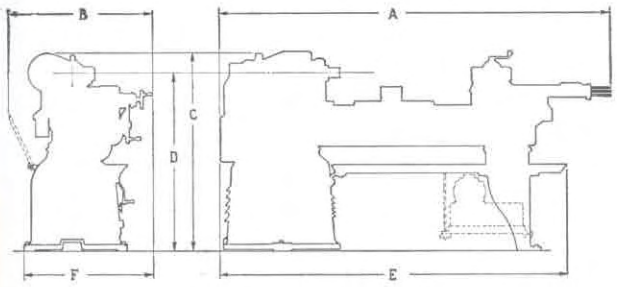


Series 900 Metal Column Base Turret Lathes

Size Lathe	Bed Length	A	B	C	D	E	F	G
900	3 1/2'	60	36 1/4	28 1/4	41 23/32	44 23/32	21 1/2	48 1/4

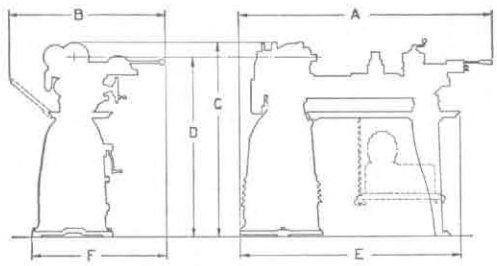
Floor Space Required for South Bend Machine Tools

Dimensions A to H in tables below are in inches



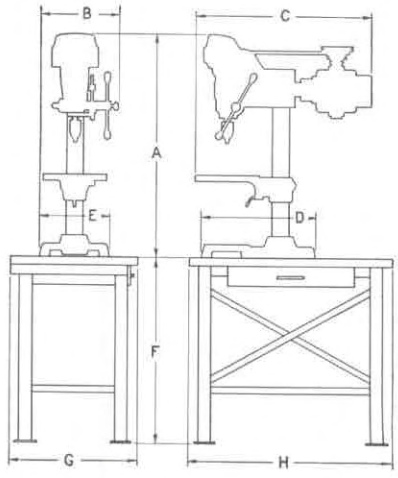
No. 2-H Turret Lathe

Size Lathe	Bed Length	A	B	C	D	E	F
2-H	6′	93½	37	46¾	42$\frac{1}{32}$	81½	28¾



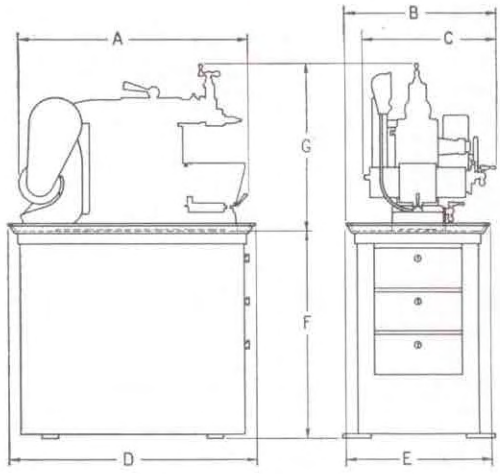
Series 1000 Turret Lathe

Size Lathe	Bed Length	A	B	C	D	E	F
1000	3½′	62¼	35¼	44$\frac{23}{32}$	41$\frac{13}{32}$	51	29¼



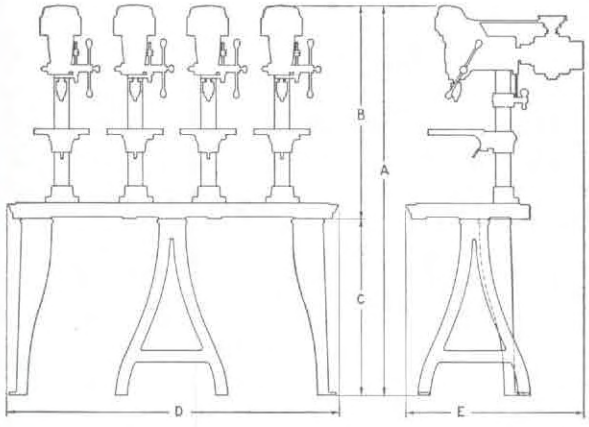
14″ Bench Drill Presses and Stand

Model	A	B	C		D	E	F	G	H
			⅓ h.p.	½ h.p.					
Economy	35$\frac{13}{16}$	12¼	27¾	29	17¾	10¾	29⅜	20	32
Precision	35$\frac{9}{16}$	12¼	27¾	29	17¾	10¾	29⅜	20	32



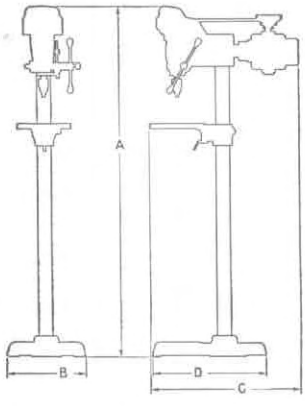
7″ Shaper and Stand

Machine	A		B	C	D	E	F	G
	⅓ h.p.	½ h.p.						
7″	31¾	35¼	20½	19	36	19	28⅜	26



Drill Presses for Production Operations

Spindles	A	B	C	D	E	
					⅓ h.p.	½ h.p.
1	68$\frac{15}{16}$	37$\frac{9}{16}$	31⅜	19$\frac{15}{16}$	31$\frac{21}{32}$	32$\frac{29}{32}$
2	69$\frac{13}{16}$	38$\frac{7}{16}$	31⅜	32$\frac{15}{16}$	31$\frac{21}{32}$	32$\frac{29}{32}$
3	70$\frac{1}{16}$	38$\frac{11}{16}$	31⅜	58$\frac{15}{16}$	31$\frac{21}{32}$	32$\frac{29}{32}$
4	70$\frac{1}{16}$	38$\frac{11}{16}$	31⅜	58$\frac{15}{16}$	31$\frac{21}{32}$	32$\frac{29}{32}$



Floor Type Drill Presses

Machine	A	B	C		D
			⅓ h.p.	½ h.p.	
14″ Economy	65$\frac{13}{16}$	15	27¾	29	21
14″ Precision	65$\frac{9}{16}$	15	27¾	29	


SOUTH
BEND
LATHE WORKS
TRADE MARK
OUTH
TWINS
BEND
ENGINE LATHES