

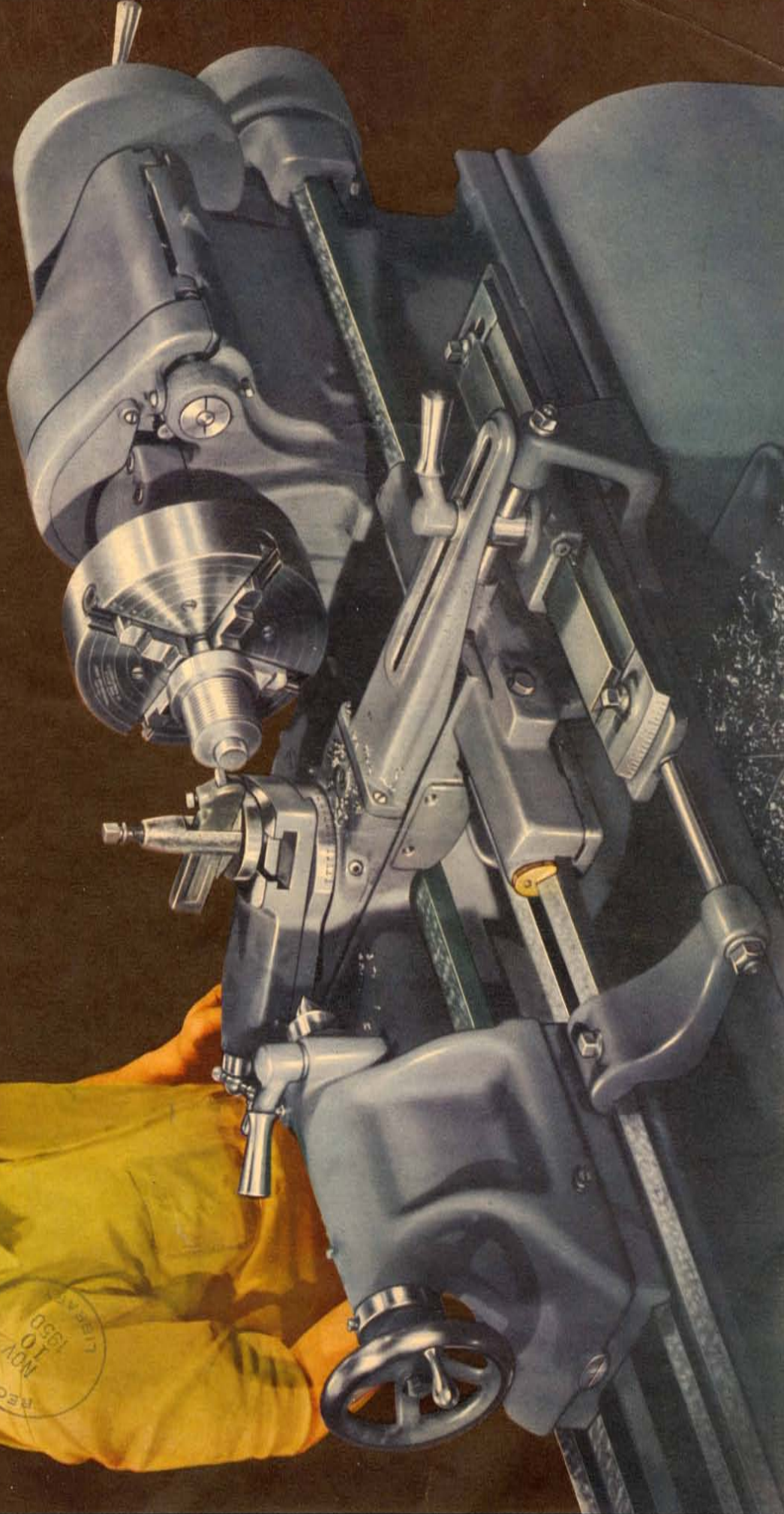
CATALOG 100-G

SOUTH BEND

Precision LATHES



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GUARANTEE. The South Bend Lathe Works warrants its products to conform to or exceed 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, i. e., 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.

WHO IS SOUTH BEND LATHE WORKS? It is a machine tool company with offices and factory at South Bend, Indiana. Founded in 1906 and incorporated in 1914 it remained a closely held enterprise until its stock was listed on The Chicago Stock Exchange in 1936. The Company is now owned by a diversified group of shareholders residing in all parts of the United States.

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

Catalog 100-G

SOUTH BEND *Precision* LATHES

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The South Bend Lathe Works was established in November, 1906, and for 41 years has manufactured South Bend Back-Geared Screw-Cutting Lathes exclusively.

The Lathes shown in this catalog are designed and built to meet the demands of modern industry. Spindle speeds have been increased for maximum efficiency when using high speed tungsten carbide cutting tools. Smooth vibration-free operation is achieved by using a back-geared headstock with direct belt drive to the spindle for high speeds. Superfinished headstock spindle bearing surfaces and large diameter bearings assure rigidity and permanent accuracy.

Extras for South Bend Lathes

Extras are attachments and accessories which may be fitted to the lathe for doing many classes of special work. Most of the

extras may be ordered either with the lathe or later.

These extras are listed on pages 56 to 64 inclusive in this catalog and each is clearly identified as being either a "Standard Extra" or a "Purchased Extra."

Standard Extras are items manufactured by us for use on South Bend Lathes, and include such items as draw-in collet chuck attachments, taper attachment, thread dial indicator, carriage stop, etc.

Purchased Extras are items which we do not manufacture but which we purchase from other manufacturers. In the case of such *Purchased Extras* we act only as a seller for the convenience of users of South Bend Lathes. *Purchased Extras* include motors and controls, lathe chucks, drill chucks, etc.



SOUTH BEND LATHE WORKS

Building Better Tools Since 1906

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

CABLE ADDRESS "TWINES" 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

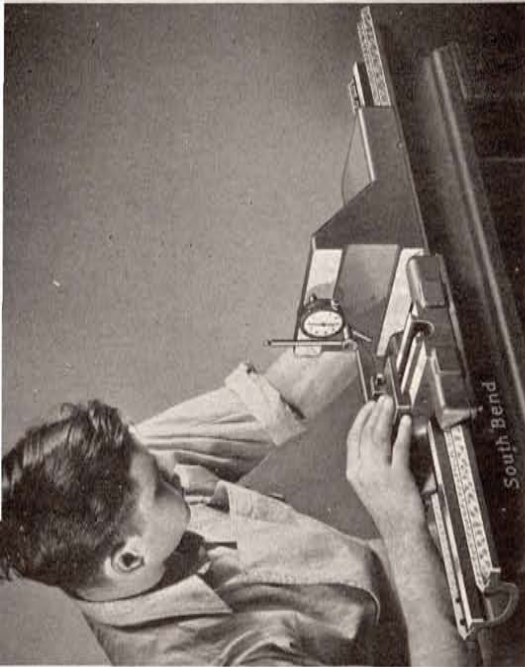


Fig. 1. Testing the Saddle Cross Slide Dovetail for Squareness with V-Ways of the Lathe Bed

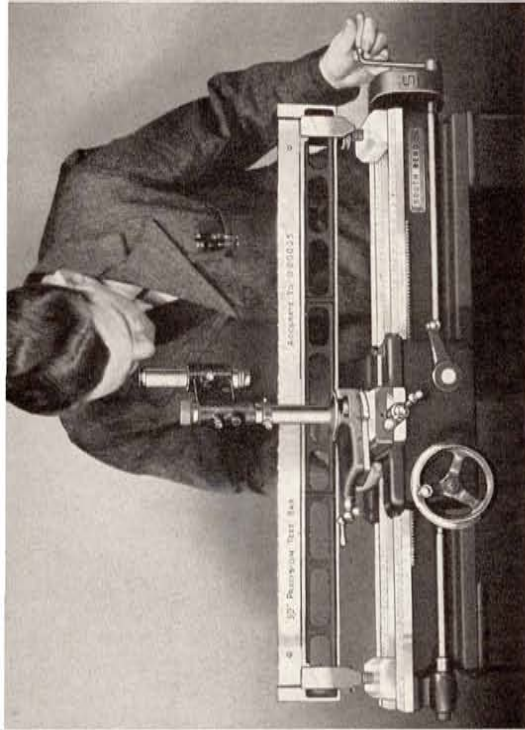


Fig. 2. Testing a Lead Screw for Accuracy of Lead with Precision Optical Measuring Equipment

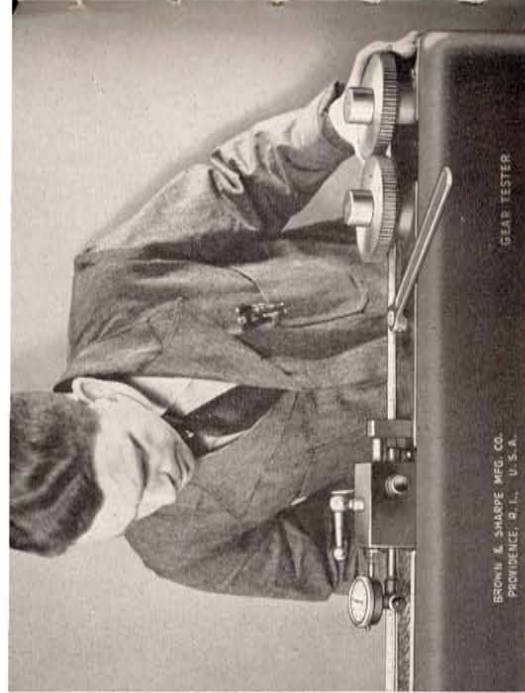


Fig. 3. Testing Gears for Accuracy of Tooth Form, Pitch Diameter, and Concentricity

SOUTH BEND Precision LATHES

The South Bend Lathe is a modern machine tool having many recently developed improvements and refinements. These include a new headstock with improved bearings and superfinished spindle, large diameter easy reading graduated collars, and an improved multiple disc friction feed clutch in the apron which will not stick or slip under heavy cuts.

The Back-geared Headstock provides the slow spindle speeds and power required for taking heavy cuts and for machining large diameter work. The headstock spindle bearings and the power transmission equipment are highly efficient so that the motor horsepower is effectively transmitted for useful cutting energy. South Bend Lathes have ample power for the type of work for which they are intended.

Large Diameter Handwheels, clear-cut easy reading graduations, and a convenient arrangement of controls contribute to the ease of operation of South Bend Lathes. This reduces operator fatigue, increases efficiency, and reduces mistakes, so that maximum production can be maintained on either toolroom or production operations.

SOUTH BEND LATHE WORKS



Fig. 4. Testing the Hardness of a Carbide Headstock Spindle Bearing Surface

Quantity Production of a Standardized Design makes it possible for us to manufacture a lathe of unquestionable quality at a comparatively low cost. Parts for South Bend Lathes are economically produced in our modern factory equipped with efficient production machinery. Hundreds of special machines, jigs, fixtures, and gauges are used to assure perfect interchangeability of parts. This simplifies assembly, lowers the cost of manufacture, and insures accuracy. South Bend Lathes are reasonable in price because the savings effected by quantity production are passed on to the consumer.

Testing and Research Laboratory

Years of Careful Research have resulted in a continual improvement in South Bend Lathes that has earned them an enviable position of leadership in the machine tool field. Established November 1, 1906, the South Bend Lathe Works has for 41 years been perfecting methods and equipment for manufacturing screw-cutting precision lathes.

In A Well-Equipped Research and Testing Laboratory, new ideas, new materials, and new methods are tested. Here measuring instruments and tools are constantly checked to maintain uniform accuracy in South Bend Lathes. 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.

Machine Tools of today are vastly superior to those of a quarter-century ago. Research in metallurgy has produced steel and iron having greater strength and durability. Better measuring equipment and methods make possible greater precision in the finishing and fitting of machine parts. The development of the superfinishing process has resulted in more perfect bearing surfaces.

South Bend Lathes have kept pace with the machine tool industry. Perfection of design and construction have increased their efficiency, durability, and ease of operation. Today, South Bend Lathes are better in every way.

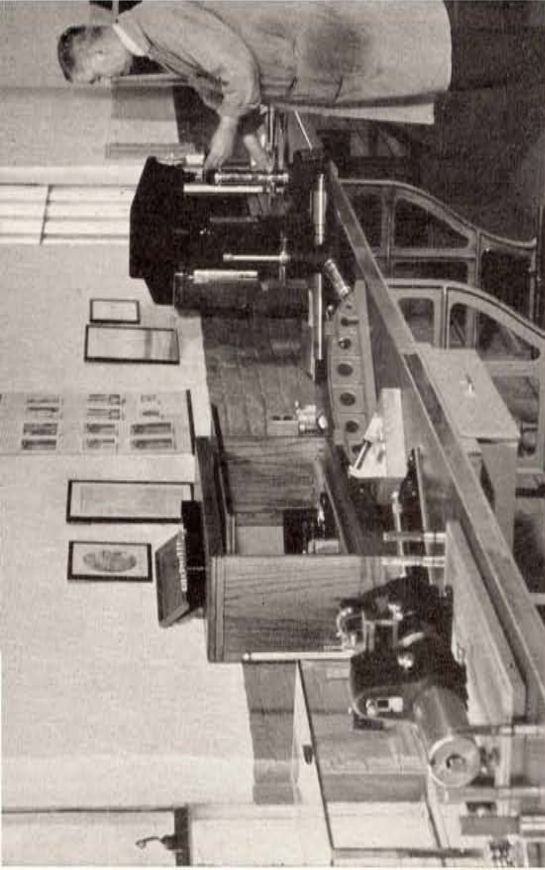


Fig. 5. Testing Laboratory and Research Department



Fig. 7. Inspecting a Screw Thread with an Optical Comparator

Fig. 6. Below—Checking a Fixture



Underneath Belt Motor Drive

For 10-inch and Larger Lathes

The South Bend Underneath Belt Motor Drive is an efficient and practical direct drive equipment for a back-gear screw-cutting lathe. This fully enclosed drive is unusually compact, silent in operation, powerful, and economical.

The Belt Drive to the spindle provides a smooth, steady flow of power, free from vibration and chatter. The power is transmitted from the motor to the counter-shaft by one or more V-belts, and from the counter-shaft up through the lathe bed to the headstock cone pulley by a flat leather belt. The pull of the belt is downward against the solid portion of the headstock.

Precision Adjustments, "B" and "C", Fig. 9, provide any desired tension for both the cone pulley belt and the motor V-belt. A belt tension release lever, "A", permits releasing the cone pulley belt tension instantly for shifting the belt to change spindle speeds. The cover over the headstock cone pulley is hinged and may be raised for easy access to the cone pulley belt.

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.

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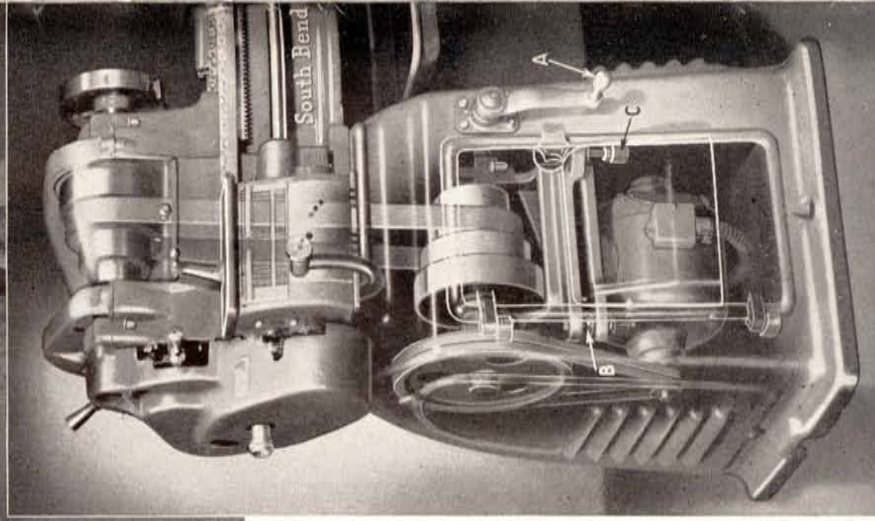
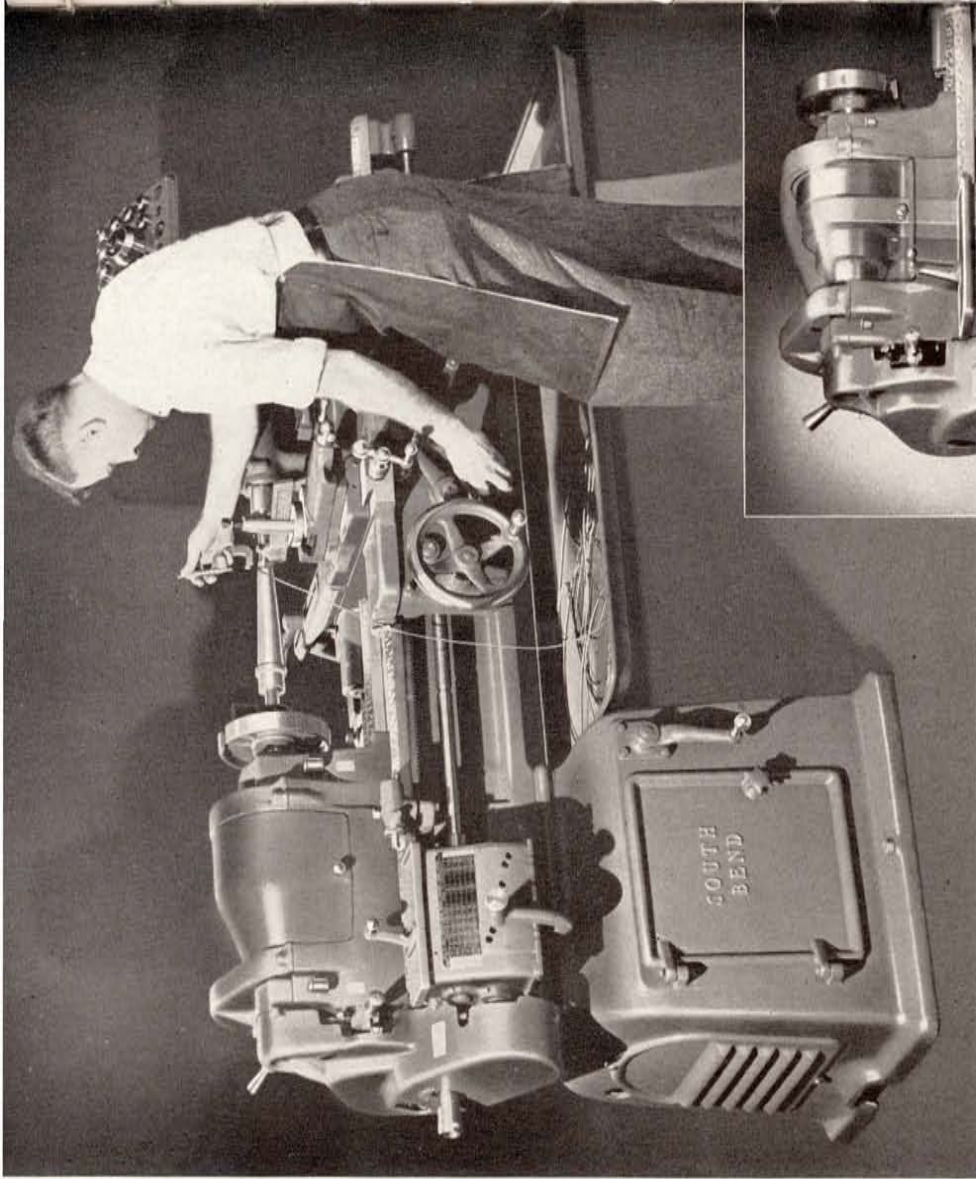


Fig. 8. Above—Underneath Belt Motor Driven Lathe (Patented)

Fig. 9. Right—Phantom View of Underneath Motor Drive for South Bend Lathes

Push-Button Operated motor controls can be supplied for all $\frac{1}{2}$ 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.

Headstock With Superfinished Spindle

For 10-inch and Larger Lathes

Headstock spindles for South Bend Precision Lathes are made of alloy spindle steel, with all bearing surfaces carburized, hardened, and ground. The journal bearing surfaces are superfinished to a smoothness of 5 microinches (.000005")*, and have a hardness of 56 to 61 Rockwell C. The extreme smoothness and accuracy of the superfinished spindle bearing surface eliminates wear, reduces friction, permits higher spindle speeds, and assures precision.

Replaceable sleeve type bearings for the headstock spindle are unusually large, and are precision bored. 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.

Hinged Guard Covers Bull Gear Lock

This headstock is rigidly constructed with all moving parts (except spindle nose) fully enclosed. A hinged guard† covers the

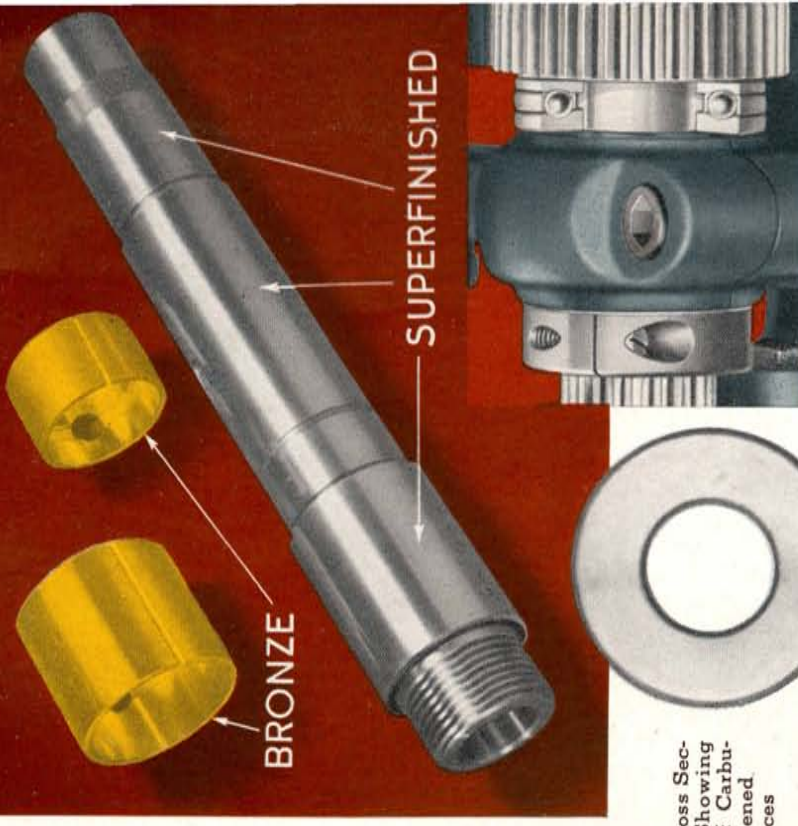


Fig. 10. Right—Headstock Spindle and Bearings

Fig. 11. Right—Cross Section of Spindle Showing Thickness ($\frac{3}{4}$ ") of Carburized and Hardened Bearing Surfaces

Fig. 13. Left—Headstock for 16" South Bend Lathe

Fig. 12. Ball Thrust Bearing and Take-up Nut for Spindle

wrenchless bull gear lock. 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.

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.

*Profilometer reading in microinches rms.

†A similar guard can be supplied for older models of South Bend Lathes. Price on request.

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SOUTH BEND 22, INDIANA, U.S.A.

SOUTH BEND
Precision LATHES



Quick Change Gear Mechanism

For 10-inch and Larger South Bend Lathes

Full quick change gear mechanism is supplied as standard equipment on all 10-inch and larger South Bend Lathes.* Changes for the various pitches of screw threads and power feeds are made by shifting levers on the gear box and by sliding the primary gears on the end of the lathe. Instant selection of any screw thread, power turning feed, or power cross-feed can be made. No loose change gears or pick-off gears are required.

A direct reading index chart attached to the gear box (Fig. 15) shows the arrangement of the levers for the various threads and feeds. Changes may be made with the lathe in operation, as it is impossible to place the levers in any position which will lock the gears. The primary sliding gear should not be changed while lathe is in operation.

The quick change gear mechanism provides for cutting 48 right-hand and 48 left-hand screw threads, ranging from 4 to 224 threads per inch. The threads per inch are shown in the large figures on the index chart attached to the gear box.

The quick change gear mechanism also provides a series of 48 power turning feeds and 48 power cross-feeds. The power turning feeds are shown in the small figures on the index chart.

*9-inch Lathes are supplied in both Quick Change Gear Type and Plain Change Gear Type. See pages 32 to 47.

14 1/2 & 16 INCH SOUTH BEND QUICK CHANGE GEAR LATHES													AUTOMATIC CROSS FEED EQUALS 375 TIMES LONGITUDINAL FEED	
SLIDING GEAR	TOP LEVER	THREADS PER INCH - FEEDS IN THOUSANDTHS												
IN	LEFT	4 .0641	4 1/2 .0748	5 .0673	5 1/2 .0612	5 3/4 .0585	6 .0561	6 1/2 .0518	7 .0481					
	CENTER	8 .0421	9 .0374	10 .0337	11 .0306	11 1/2 .0293	12 .0280	13 .0259	14 .0240					
	RIGHT	16 .0210	18 .0187	20 .0168	22 .0153	23 .0146	24 .0140	26 .0129	28 .0120					
OUT	LEFT	32 .1005	36 .0993	40 .0984	44 .0973	46 .0970	48 .0965	52 .0960	56 .0955					
	CENTER	64 .0953	72 .0947	80 .0942	88 .0938	92 .0937	96 .0932	104 .0930	112 .0924					
	RIGHT	128 .0926	144 .0923	160 .0921	176 .0919	184 .0918	192 .0917	208 .0916	224 .0915					

Fig. 14. Quick Change Gear Mechanism for 10-inch and Larger South Bend Lathes

Fig. 15. Index Plate for Quick Change Gear Box Used on 14½-inch and 16-inch South Bend Lathes

Double Wall Apron For 10-inch and Larger Lathes

The one-piece double wall apron shown at right 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. 18. Alternate steel discs 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. This clutch will engage or release instantly. It 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. 17. 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.

Automatic Safety in Apron

An automatic built-in safety device makes it impossible to engage the feeds and half-nuts at the same time. When the feed lever is in either position "L" or

"C" 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.

Self-Oiling Steel Gears in Apron

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. 17) is rigidly supported by substantial bearings in both the front wall and back wall of the apron.

Fig. 16. Above — Front View of Double Wall Apron Showing Rigid Box Type Construction

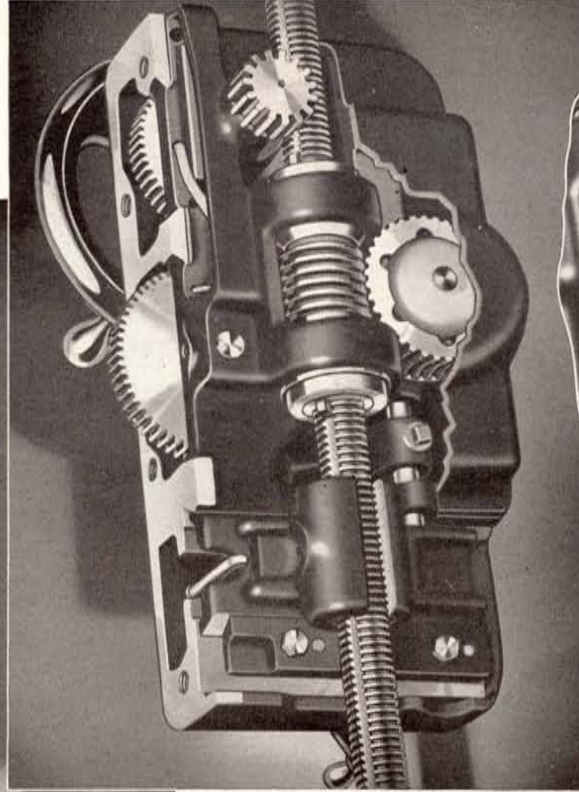
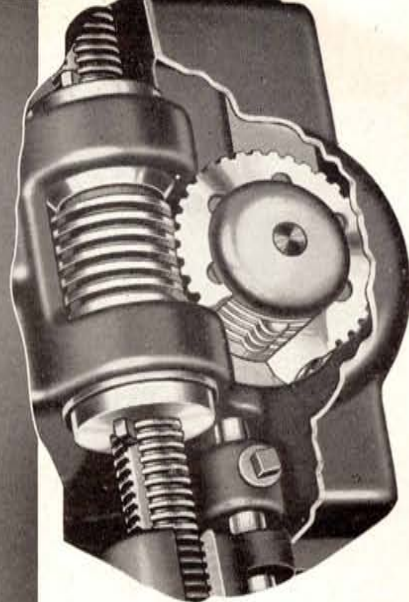


Fig. 17. Above — Back View of New Double Wall Apron

Fig. 18. Right — Cut-away View Showing the Multiple Disc Friction Feed Clutch



SOUTH BEND LATHE WORKS

SOUTH BEND

Precision LATHES

Saddle and Compound Rest

For 10-inch and Larger Lathes

The saddle for South Bend Lathes has 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.

Both the compound rest base and the compound rest top dovetails are hand-scraped and have adjustable

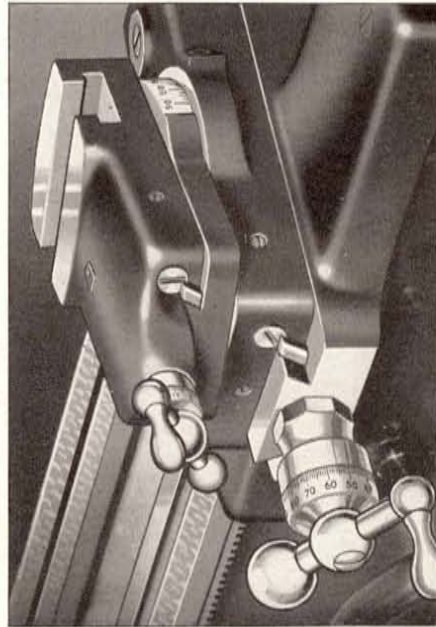


Fig. 20. Close-up Showing Adjustable Tapered Gibbs Used on Compound Rest Base and Top Dovetails of 10-inch and Larger South Bend Lathes

SOUTH BEND LATHE WORKS

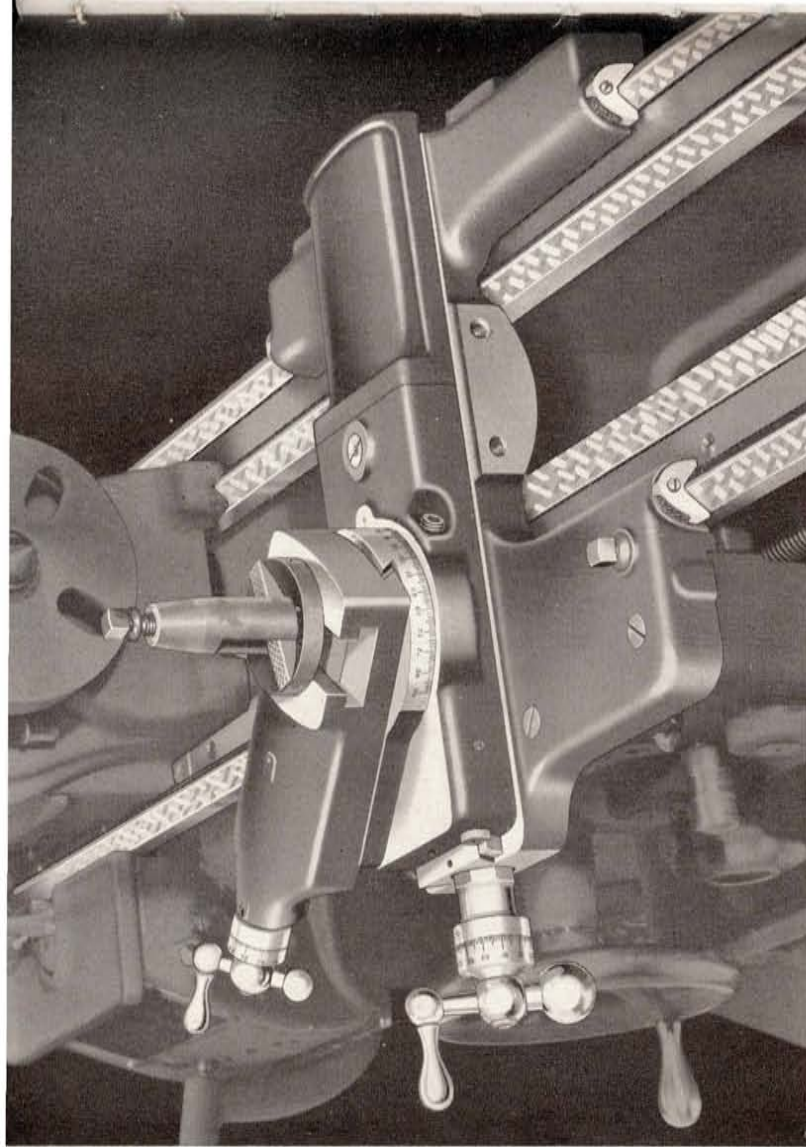


Fig. 19. Improved Saddle and Compound Rest for South Bend Lathes

tapered gibbs. 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 accurately graduated collars reading in thousandths of an inch. These collars are adjustable and may be set at zero whenever desired. Crank handles for both compound rest screw and cross-feed screw are 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.

Heavy Semi-Steel 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 50 to 70 per cent steel which makes 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. The carriage slides on the two outside V-ways and the headstock and tailstock are aligned by the inside V-ways. The ways are carefully hand-scraped 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 on the 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.

Tailstock

For 10-inch and Larger Lathes

The tailstock for 10-inch and larger South Bend Lathes is offset to allow the compound rest to swivel parallel to the bed. A sensitive screw adjustment is provided to set over the tailstock top for taper turning.

The tailstock spindle is graduated in sixteenths of an inch for drilling to accurate depths. An improved double plug binder securely locks the spindle without altering the alignment of the centers. A witness mark is scribed on tailstock spindle at center height for adjusting height of cutter bit.

The tailstock center is made of tool steel hardened and ground all over, and is self-ejecting. The tailstock for the 9" South Bend Lathe is similar in design, having off-set top, graduated spindle, and set over for taper turning.

SOUTH BEND LATHE WORKS

SOUTH BEND

Precision LATHES

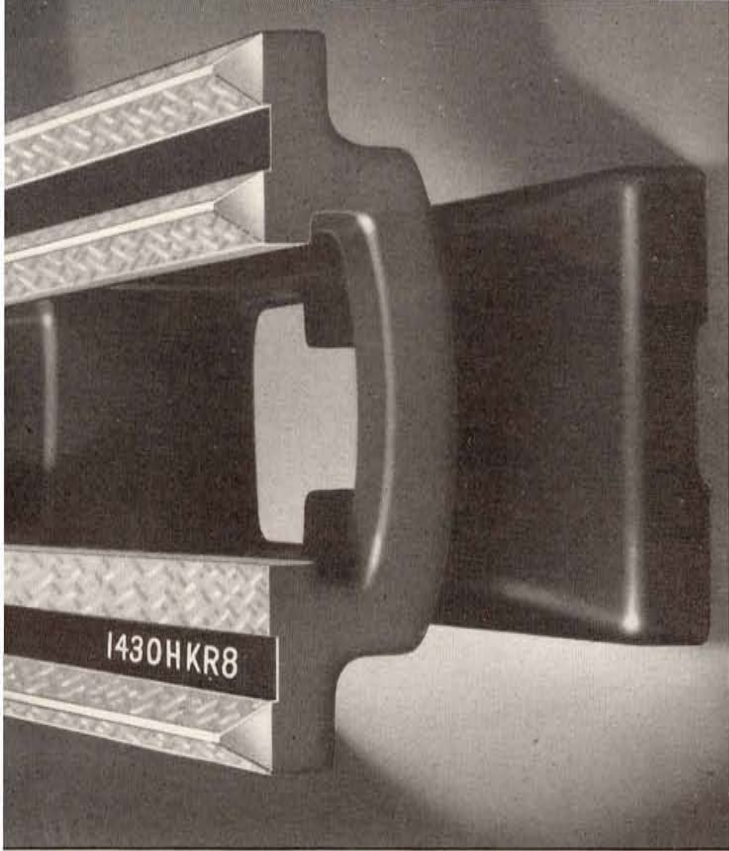
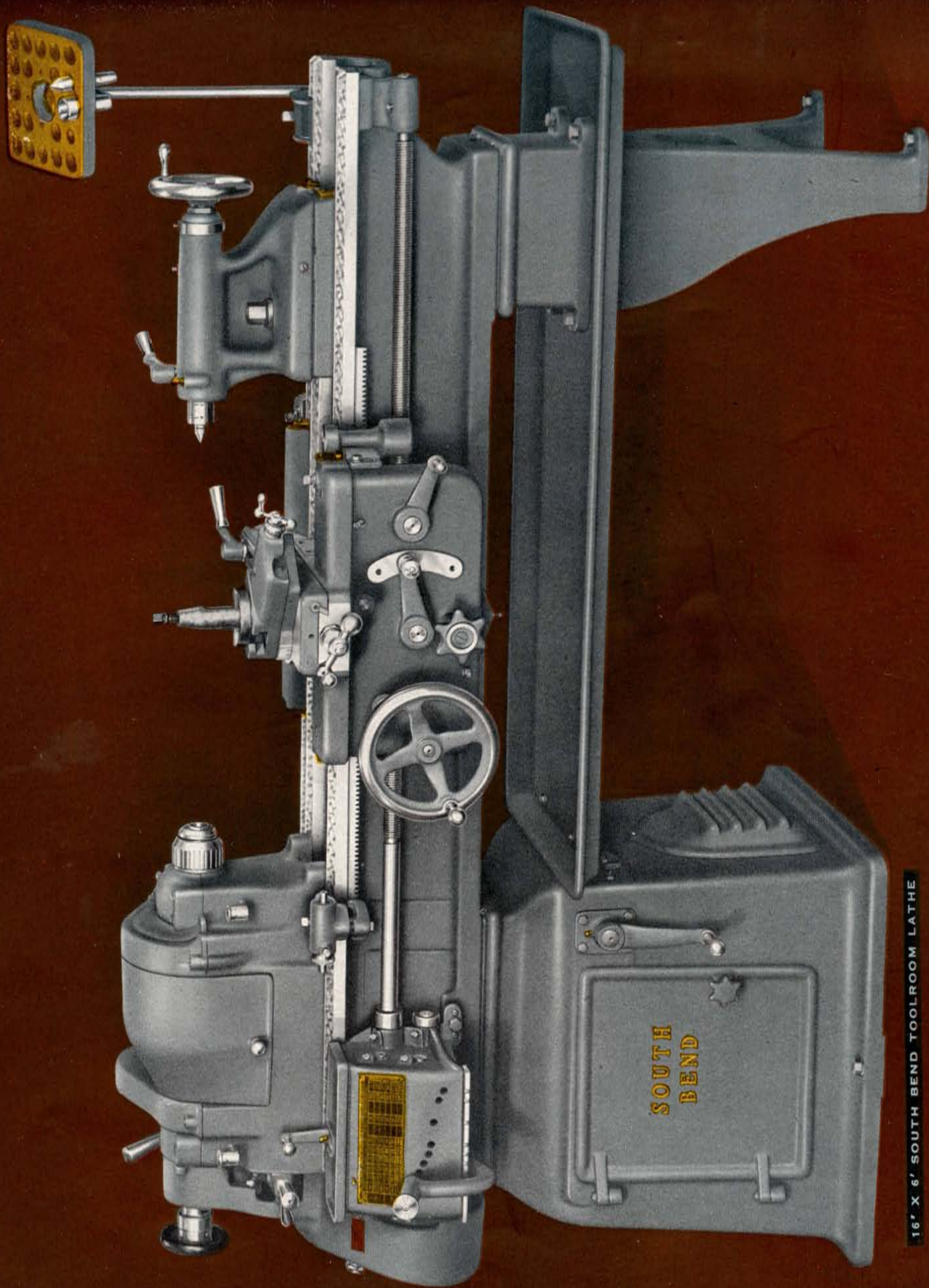


Fig. 21 End View of Lathe Bed

Fig. 22 Tailstock Used on South Bend Lathes





16' X 6' SOUTH BEND TOOLROOM LATHE

16-inch Toolroom Precision Lathe

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

The 16-inch Toolroom Lathe with full quick change gear equipment, as illustrated at the left, is the result of forty-one years of experience in building fine lathes. The workmanship and materials are the best that can be obtained, and the highest standards of accuracy are maintained throughout its manufacture.

The Underneath Motor Drive provides a series of eight spindle speeds with a one-speed motor, or twelve 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.

Improved Features of lathe include: 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; quick change gear box for threads and feeds; and semi-steel lathe bed.

Toolroom Attachments included in price of this lathe consist of: 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". Motor and control are not included in the price of the lathe.

16-inch Toolroom Underneath Motor Driven Lathes

Eight-Speed Drive		Twelve-Speed Drive		Bed Length Feet	Distance Between Centers	Ship Wt. Crated Pounds
Cat. No.	Code	Cat. No.	Code			
8117-C	Bzwit	8155-C	Borem	6	33 1/2"	2525
8117-D	Bzwom	8155-D	Borig	7	45 1/2"	2605
8117-E	Bzwh	8155-E	Borow	8	57 1/2"	2695

SPECIFICATIONS

CAPACITY OF LATHE
Swing over bed and saddle wings..... 16 1/4"
Swing over saddle cross slide..... 9 3/4"

SPINDLE SPEEDS (r.p.m. subject to 5% variation)
Direct Belt Drive Back-Gear Drive
8-speed drive..... 885, 535, 338, 209 111, 67, 43, 26
12-sp. dr., low speeds..... 440, 250, 132 55, 31, 16
12-sp. dr., high speeds..... 880, 500, 265 111, 63, 33

HEADSTOCK
Hole through spindle..... 1 3/8"
Maximum collet capacity*..... 1"
Spindle nose diameter and threads per inch..... 2 3/8"-6

Size of center, Morse taper..... No. 3
Width of cone pulley step for belt, 8-speed drive..... 2 1/4"
Width of cone pulley step for belt, 12-speed drive..... 3"
Large face plate diameter..... 13 1/4"
Small face plate diameter..... 8 1/2"
Front spindle bearing, diameter..... 2 1/8"

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"

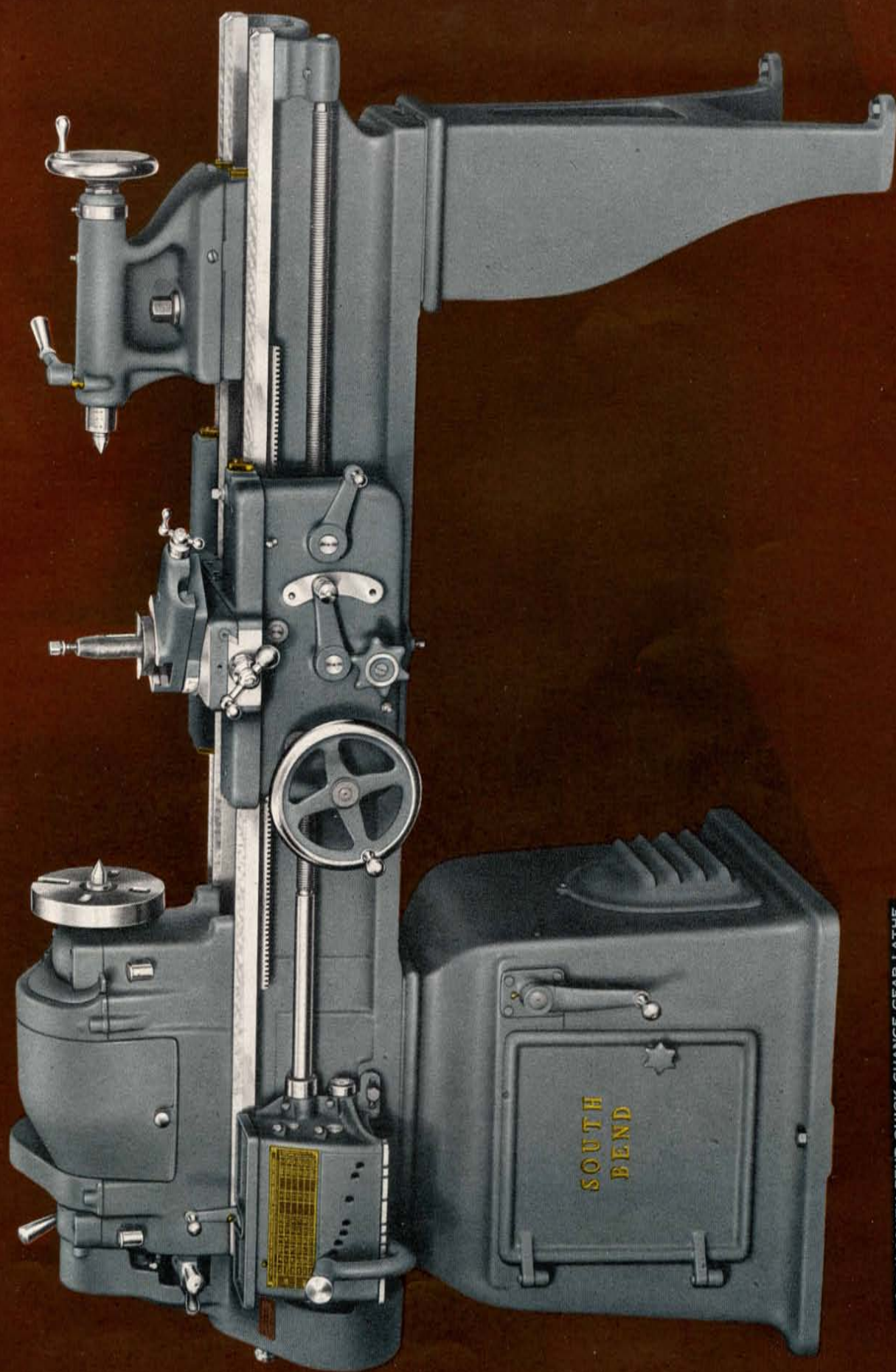
COMPOUND REST
Cross slide travel..... 10 1/2"
Angular hand feed of compound rest top slide..... 3 3/4"

*Collets for 16" Lathes are interchangeable with collets for 10"-1" Collet Capacity Lathes. Draw-in Collet Attachment is not interchangeable.

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 .0312"
Lead screw, 29° Acme thread..... 1 1/8" Diam.—6 Threads

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 motor for 8-sp. dr. lathe (1-sp. motor)..... 1 1/2 h.p.
Standard size motor for 12-sp. dr. lathe (2-sp. motor)..... 2-1 h.p.



16" X 6' SOUTH BEND QUICK CHANGE GEAR LATHE

16-inch Quick Change Gear Precision Lathe

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

The 16-inch Quick Change Gear Lathe is popular for both production operations and toolroom work. The full quick change gear box provides an unusually wide range of screw threads, power cross-feeds, and power turning feeds.

The Underneath Motor Drive provides a series of eight spindle speeds with a one-speed motor, or twelve 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.

Improved Features of lathe include: 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 semi-steel lathe bed.

Standard Extras and Purchased Extras for this lathe are shown in the back of catalog. These attachments and accessories greatly increase the usefulness of the lathe. Most of the attachments may be purchased either with the lathe or later.

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; No. 3 Morse taper tool steel centers for headstock and tailstock spindles; spindle sleeve; wrenches; quick change gear box; installation plan; and book "How to Run a Lathe". Motor and control are not included in price of lathe.

16-inch Quick Change Gear Underneath Motor Driven Lathes

Eight-Speed Drive		Twelve-Speed Drive		Bed Length Feet	Distance Between Centers	Ship. Wt. Crated Pounds
Cat. No.	Code	Cat. No.	Code			
117-C	Bawac	155-C	Rapup	6	33 1/2"	2300
117-D	Bzawak	155-D	Rapur	7	45 1/2"	2380
117-E	Bawin	155-E	Batar	8	57 1/2"	2460
117-G	Bawor	155-G	Batek	10	81 1/2"	2620
117-H	Bawus	155-H	Batez	12	105 1/2"	2850

SPECIFICATIONS

CAPACITY OF LATHE

Swing over bed and saddle wings..... 16 1/4"
Swing over saddle with chip guard removed..... 11 1/8"
Swing over saddle with chip guard..... 9 5/8"

SPINDLE SPEEDS (r.p.m. subject to 5% variation)

8-speed drive..... 885, 535, 338, 209, 111, 67, 43, 26
12-sp. dr., low speeds..... 440, 250, 132, 55, 31, 16
12-sp. dr., high speeds..... 880, 500, 265, 111, 63, 33

HEADSTOCK

Hole through spindle..... 1 3/8"
Maximum collet capacity*..... 1"
Spindle nose diameter and threads per inch..... 2 3/8" x 6

Size of center, Morse taper..... No. 3
Width of cone pulley step for belt, 8-speed drive..... 2 3/4"
Width of cone pulley step for belt, 12-speed drive..... 3"
Large face plate diameter..... 13 1/4"
Small face plate diameter..... 8 1/8"
Front spindle bearing, diameter..... 2 1/8"

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 1/2"
Angular hand feed of compound rest top slide..... 3 3/4"

*Collets for 16" Lathes are interchangeable with collets for 10"—11" Collet Capacity Lathes. Draw-in Collet Attachment is not interchangeable.

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 .0312"
Lead screw, 29° Acme thread..... 1 1/8" Diam.—6 Threads

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 motor for 8-sp. dr. lathe (1-sp. motor)..... 1 1/2 h.p.
Standard size motor for 12-sp. dr. lathe (2-sp. motor)..... 2.1 h.p.



14 1/2" X 5" SOUTH BEND TOOLROOM LATHE

14 1/2-inch Toolroom Precision Lathe

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

The 14 1/2-inch Toolroom Lathe with full quick change gear equipment, as illustrated at the left, is the result of forty-one years of experience in building fine lathes. The workmanship and materials are the best that can be obtained, and the highest standards of accuracy are maintained throughout its manufacture.

The Underneath Motor Drive is especially desirable for Toolroom Lathes. This fully enclosed drive provides an unusually wide range of spindle speeds. A precision belt tension adjustment is provided. The belt drive to the spindle is silent in operation and develops smooth power, free from gear vibration.

Improved Features of lathe include: 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; quick change gear box for threads and feeds; and semi-steel lathe bed.

Toolroom Attachments included in price of this lathe consist of: 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". Motor and control are not included in the price of the lathe.

14 1/2-inch Toolroom Underneath Motor Driven Lathes

	Bed Length	5-ft.	6-ft.	7-ft.	8-ft.
Catalog Number.....		8183-B	8183-C	8183-D	8183-E
Distance Between Centers.....		24 1/2-in.	36 1/2-in.	48 1/2-in.	60 1/2-in.
Shipping Weight, Crated.....		2180 lbs.	2255 lbs.	2330 lbs.	2405 lbs.
Code Word.....		Cwcoz	Cwcaz	Cwceen	Cwcis

SPECIFICATIONS

CAPACITY OF LATHE

Swing over bed and saddle wings..... 14 5/8"
Swing over saddle cross slide..... 8 1/8"

SPINDLE SPEEDS

Standard spindle speeds (subject to 5% variation)
r.p.m. of spindle, direct belt driven.... 800, 482, 300, 181
r.p.m. of spindle, back-gears engaged.... 121, 72, 45, 27

HEADSTOCK

Hole through spindle..... 1 1/8"
Maximum collet capacity..... 3/4"
Spindle nose diameter and threads per inch..... 2 1/4"-6

Size of center, Morse taper..... No. 3
Width of cone pulley step for belt..... 2 1/8"
Large face plate diameter..... 12"
Small face plate diameter..... 7 3/8"
Front spindle bearing, diameter..... 2 5/8"

TAILSTOCK

Size of center, Morse taper..... No. 3
Spindle travel..... 5 1/4"
Each graduation on tailstock spindle..... 1/16"
Tailstock top set over for taper turning..... 15/16"

COMPOUND REST

Cross slide travel..... 10"
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 .0312"
Lead screw, 29° Acme thread..... 1 1/8" Diam.—6 Threads

TOOL POST

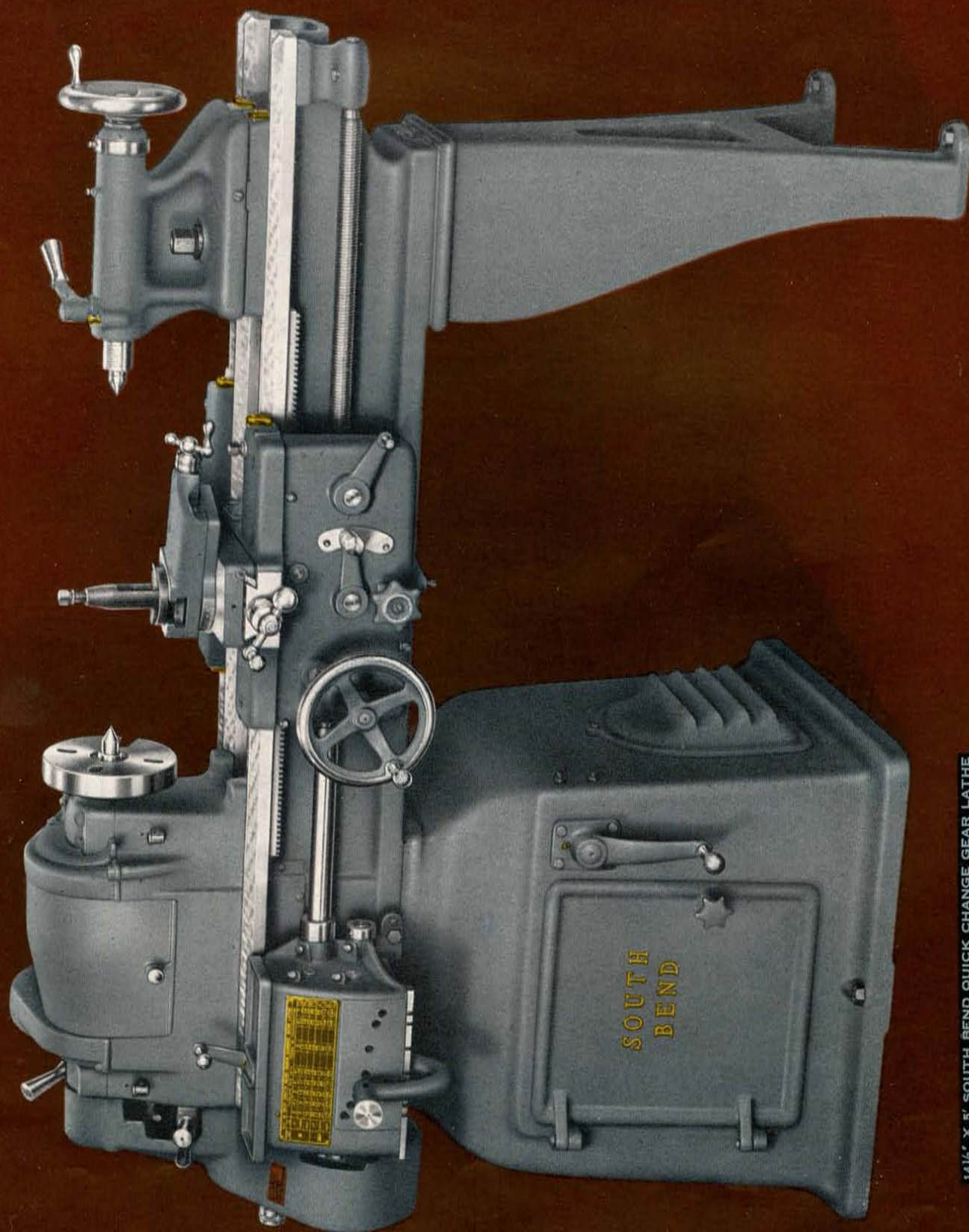
Size of tool holder shank..... 5/8" x 1 3/8"
Size of cutter bit for tool holder..... 3/8" sq.

MOTOR

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

SOUTH BEND LATHE WORKS

SOUTH BEND 22, INDIANA, U.S.A.



14 1/2" X 5' SOUTH BEND QUICK CHANGE GEAR LATHE

14 1/2-inch Quick Change Gear Precision Lathe

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

The 14 1/2-inch Quick Change Gear Lathe is popular for both production operations and toolroom work. The full quick change gear box provides an unusually wide range of screw threads and power feeds.

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

Improved Features of lathe include: 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 semi-steel lathe bed.

Standard Extras and Purchased Extras for this lathe are shown in the back of catalog. These attachments and accessories greatly increase the usefulness of the lathe. Most of the attachments may be purchased either with the lathe or later.

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; No. 3 Morse taper tool steel centers for headstock and tailstock spindles; spindle sleeve; wrenches; quick change gear box; installation plan; and book "How to Run a Lathe". Motor and control are not included in price of lathe.

14 1/2-inch Quick Change Gear Underneath Motor Driven Lathes

	5-ft.	6-ft.	7-ft.	8-ft.
Catalog Number	183-B	183-C	183-D	183-E
Distance Between Centers	24 1/2-in.	36 1/2-in.	48 1/2-in.	60 1/2-in.
Shipping Weight, Crated	1995 lbs.	2070 lbs.	2145 lbs.	2225 lbs.
Code Word	Cwbas	Cwbock	Cwblim	Cwbox

SPECIFICATIONS

CAPACITY OF LATHE

Swing over bed and saddle wings	14 5/8"
Swing over saddle with chip guard removed	10 1/4"
Swing over saddle with chip guard	8 3/4"

SPINDLE SPEEDS

Standard spindle speeds (subject to 5% variation)	
r.p.m. of spindle, direct belt driven	800, 482, 300, 181
r.p.m. of spindle, back-gears engaged	121, 72, 45, 27

HEADSTOCK

Hole through spindle	1 1/8"
Maximum collet capacity	3/4"
Spindle nose diameter and threads per inch	2 1/4"-6

Size of center, Morse taper	No. 3
Width of cone pulley step for belt	2 1/8"
Large face plate diameter	12"
Small face plate diameter	7 3/8"
Front spindle bearing, diameter	2 3/8"

TAILSTOCK

Size of center, Morse taper	No. 3
Spindle travel	5 1/4"
Each graduation on tailstock spindle	1 1/8"
Tailstock top set over for taper turning	1 1/8"

COMPOUND REST

Cross slide travel	10"
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 .0312"
Lead screw, 23° Acme thread	1 1/8" Diam.—6 Threads

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	1 1/2 h.p.
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13' X 5' SOUTH BEND TOOLROOM LATHE

13-inch Toolroom Precision Lathe

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

The 13-inch Toolroom Lathe with full quick change gear equipment, as illustrated at the left, is the result of forty-one years of experience in building fine lathes. The workmanship and materials are the best that can be obtained, and the highest standards of accuracy are maintained throughout its manufacture.

The Underneath Motor Drive is especially desirable for Toolroom Lathes. This fully enclosed drive provides an unusually wide range of spindle speeds. A precision belt tension adjustment is provided. The belt drive to the spindle is silent in operation and develops smooth power, free from gear vibration.

Improved Features of lathe include: 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; quick change gear box for threads and feeds; and semi-steel lathe bed.

Toolroom Attachments included in price of this lathe consist of: 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". Motor and control are not included in the price of the lathe.

13-inch Underneath Motor Driven Toolroom Lathes

	Bed Length	5-ft.	6-ft.	7-ft.
Catalog Number.....		8113-B	8113-C	8113-D
Distance Between Centers.....		28-in.	40-in.	52-in.
Shipping Weight, Crated.....		1665 lbs.	1715 lbs.	1770 lbs.
Code Word.....		Gykab	Gyken	Gykic

SPECIFICATIONS

CAPACITY OF LATHE

Swing over bed and saddle wings..... 13 $\frac{1}{8}$ "
Swing over saddle cross slide..... 8"

SPINDLE SPEEDS

Standard spindle speeds (subject to 5% variation)
r.p.m. of spindle, direct belt driven.... 875, 567, 373, 239
r.p.m. of spindle, back-gears engaged.... 128, 81, 54, 34

HEADSTOCK

Hole through spindle..... 1"
Maximum collet capacity*..... 1 $\frac{1}{16}$ "
Spindle nose diameter and threads per inch..... 1 $\frac{7}{8}$ "-8

*Collets for 13" Lathes are interchangeable with collets for 10" Regular Lathes. Draw-in Collet Attachment is not interchangeable.

Size of center, Morse taper..... No. 3
Width of cone pulley step for belt..... 13 $\frac{1}{4}$ "
Large face plate diameter..... 10 $\frac{3}{4}$ "
Small face plate diameter..... 6 $\frac{1}{2}$ "
Front spindle bearing, diameter..... 2 $\frac{1}{4}$ "

TAILSTOCK

Size of center, Morse taper..... No. 3
Spindle travel..... 4 $\frac{1}{4}$ "
Each graduation on tailstock spindle..... 1 $\frac{1}{16}$ "
Tailstock top set over for taper turning..... 1 $\frac{1}{8}$ "

COMPOUND REST

Cross slide travel..... 8 $\frac{1}{2}$ "
Angular hand feed of compound rest top slide..... 31 $\frac{1}{2}$ "

THREADS AND FEEDS

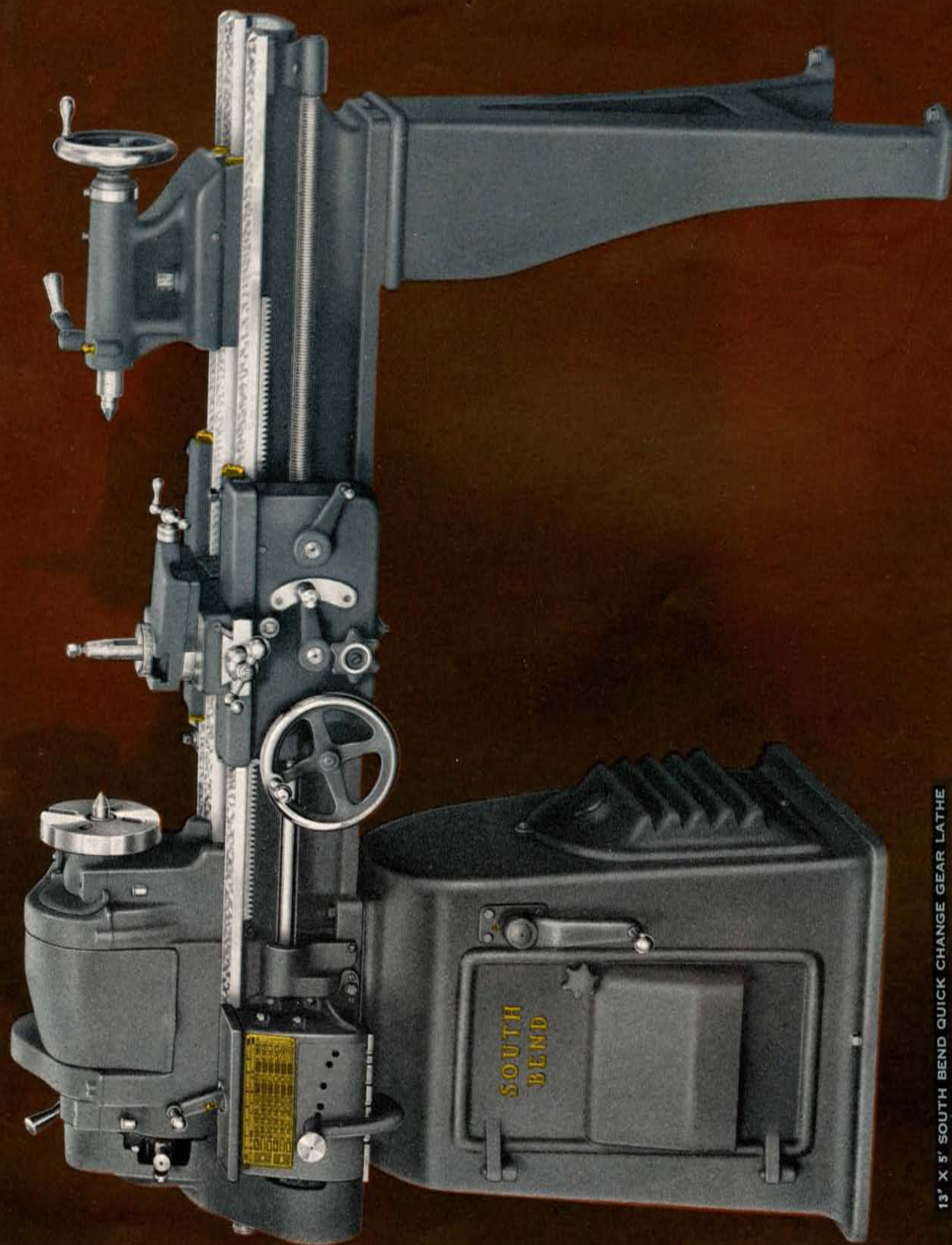
Thread cutting range—48 pitches
R.H. or L.H..... 4 to 224 per inch
Longitudinal feeds through friction clutch—48 feeds R.H. or L.H..... .0015" to .0841"
Cross-feeds through friction clutch—48 feeds..... .0006" to .0312"
Lead screw, 29° Acme thread..... 1" Diam.—6 Threads

TOOL POST

Size of tool holder shank..... 1 $\frac{1}{2}$ " x 11 $\frac{1}{16}$ "
Size of cutter bit for tool holder..... 5 $\frac{1}{16}$ " sq.

MOTOR

Standard size of motor required..... 1 h.p.
Attachment is not interchangeable.



13' X 5' SOUTH BEND QUICK CHANGE GEAR LATHE

13-inch Quick Change Gear Precision Lathe

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

The 13-inch Quick Change Gear Lathe is popular for both production operations and toolroom work. The full quick change gear box provides an unusually wide range of screw threads and power feeds.

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

Improved Features of lathe include: 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 semi-steel lathe bed.

Standard Extras and Purchased Extras for this lathe are shown in the back of catalog. These attachments and accessories greatly increase the usefulness of the lathe. Most of the attachments may be purchased either with the lathe or later.

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". Motor and control are not included in the price of the lathe.

13-inch Quick Change Gear Underneath Motor Driven Lathes

Bed Length	4-ft.	5-ft.	6-ft.	7-ft.
Catalog Number.....	113-A	113-B	113-C	113-D
Distance Between Centers.....	16-in.	28-in.	40-in.	52-in.
Shipping Weight, Crated.....	1460 lbs.	1510 lbs.	1560 lbs.	1615 lbs.
Code Word.....	Gygac	Gygem	Gygis	Gygot

SPECIFICATIONS

CAPACITY OF LATHE

Swing over bed and saddle wings.....	13 $\frac{1}{8}$ "
Swing over saddle with chip guard removed.....	8 $\frac{3}{4}$ "
Swing over saddle with chip guard.....	7 $\frac{3}{4}$ "

SPINDLE SPEEDS

Standard spindle speeds (subject to 5% variation)	
r.p.m. of spindle, direct belt driven.....	875, 567, 373, 239
r.p.m. of spindle, back-gears engaged....	128, 81, 54, 34

HEADSTOCK

Hole through spindle.....	1"
Maximum collet capacity.....	1 $\frac{1}{8}$ "
Spindle nose diameter and threads per inch.....	1 $\frac{1}{8}$ " 8

Size of center, Morse taper.....	No. 3
Width of cone pulley step for belt.....	1 $\frac{3}{4}$ "
Large face plate diameter.....	10 $\frac{3}{4}$ "
Small face plate diameter.....	6 $\frac{5}{8}$ "
Front spindle bearing, diameter.....	2 $\frac{1}{4}$ "

TAILSTOCK

Size of center, Morse taper.....	No. 3
Spindle travel.....	4 $\frac{1}{4}$ "
Each graduation on tailstock spindle.....	1 $\frac{1}{8}$ "
Tailstock top set over for taper turning.....	15 $\frac{1}{16}$ "

COMPOUND REST

Cross slide travel.....	8 $\frac{1}{8}$ "
Angular hand feed of compound rest top slide.....	3 $\frac{1}{8}$ "

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 .0312"
Lead screw, 29° Acme thread.....	1" Diam.—6 Threads

TOOL POST

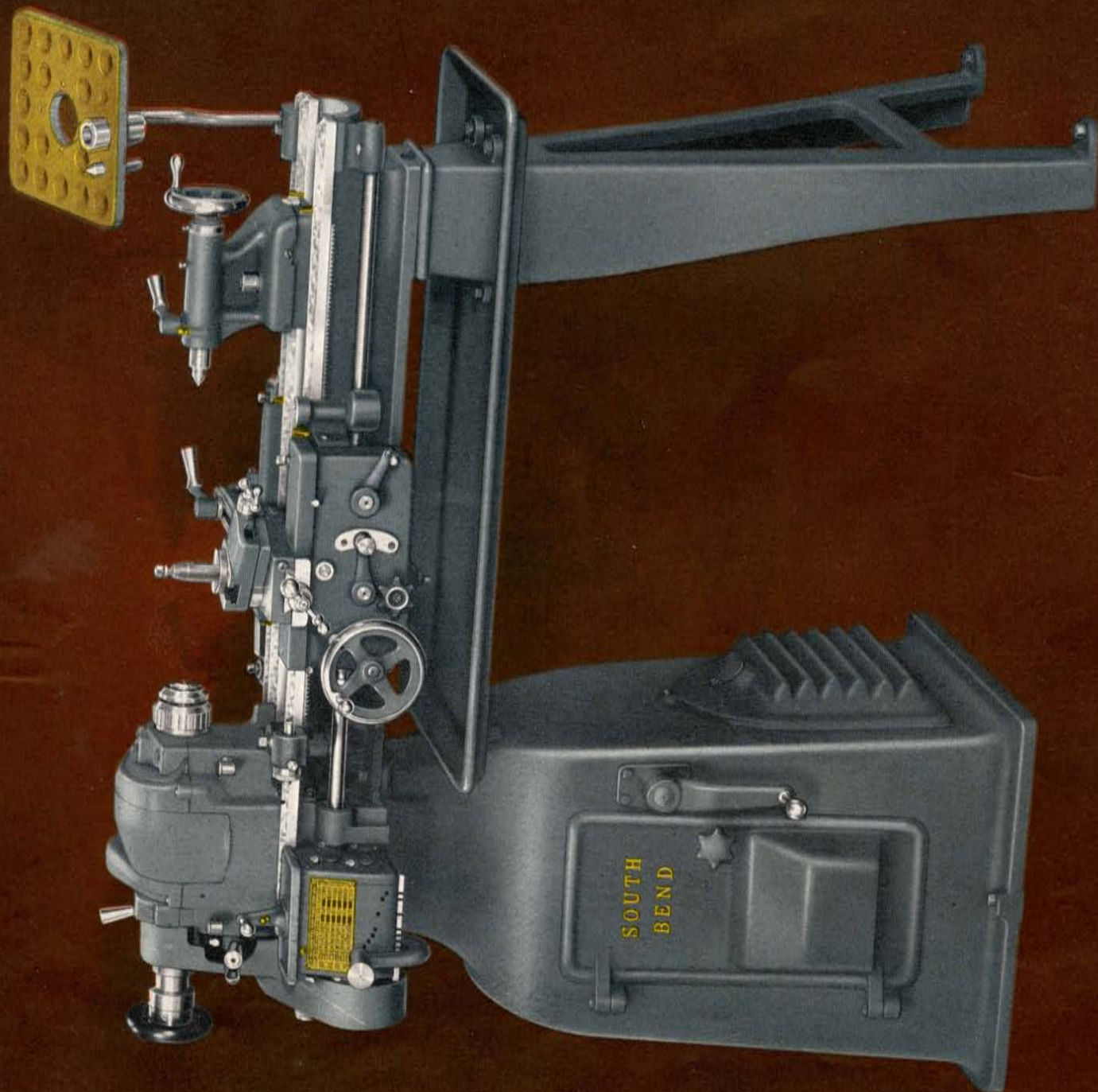
Size of tool holder shank.....	1 $\frac{1}{2}$ " x 1 $\frac{1}{8}$ "
Size of cutter bit for tool holder.....	5 $\frac{1}{8}$ " sq.

MOTOR

Standard size of motor required.....	1 h.p.
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*Collets for 13" Lathes are interchangeable with collets for 10" Regular Lathes. Draw-in Collet Attachment is not interchangeable.

10" X 3½" SOUTH BEND
TOOLROOM LATHE



10-inch Toolroom Precision Lathe

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

The 10-inch Toolroom Lathe is made in two types: "1" Collet" and "1 1/16" Collet". The 10-inch 1" Collet Toolroom Lathe is equipped with a special headstock having 1 3/8" spindle hole which provides 1" maximum collet capacity. The 10-inch 1 1/16" Collet Toolroom Lathe is equipped with a headstock having 1" spindle hole which provides 1 1/16" maximum collet capacity.

Toolroom Attachments included in price of lathe consist of: 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". Motor and control are not included in price of lathe.

10-inch 1" Collet Toolroom Lathes With Underneath Motor Drive and Floor Legs

Bed Length	3-ft.	3 1/2-ft.	4-ft.
Catalog Number.....	8187-Y	8187-Z	8187-A
Distance Between Centers.....	14 3/4-in.	20 3/4-in.	26 3/4-in.
Shipping Weight, Crated.....	935 lbs.	960 lbs.	985 lbs.
Code Word.....	Jyfab	Jyrek	Jyric

10-inch 1 1/16" Collet Toolroom Lathes With Underneath Motor Drive and Floor Legs

Bed Length	3-ft.	3 1/2-ft.	4-ft.
Catalog Number.....	8199-YF	8199-ZF	8199-AF
Distance Between Centers.....	14 3/4-in.	20 3/4-in.	26 3/4-in.
Shipping Weight, Crated.....	935 lbs.	960 lbs.	985 lbs.
Code Word.....	Kwhec	Kwheel	Kwhen

SPECIFICATIONS

CAPACITY OF LATHE

Swing over bed and saddle wings.....

Swing over saddle cross slide.....

SPINDLE SPEEDS (subject to 5% variation)

Low spindle speeds

r.p.m. of spindle, direct belt driven.....

r.p.m. of spindle, back-gears engaged.....

High spindle speeds

r.p.m. of spindle, direct belt driven.....

r.p.m. of spindle, back-gears engaged.....

HEADSTOCK

Hole through spindle.....

Maximum collet capacity.....

Spindle nose diameter and threads per inch.....

Size of center, Morse taper.....

Width of cone pulley step for belt.....

Large face plate diameter.....

Small face plate diameter.....

Front spindle bearing diameter.....

10-inch 1 1/16" Collet

10 1/8"

5 3/4"

700, 434, 277

129, 79, 50

1357, 837, 535

248, 153, 97

1"

1 1/8"

No. 2

1 1/2"

8 3/8"

5 3/8"

2 1/4"

TAILSTOCK

Size of center, Morse taper.....

Spindle travel.....

Each graduation on tailstock spindle.....

Tailstock top set over for taper turning.....

COMPOUND REST

Cross slide travel.....

Angular hand feed of compound rest top slide.....

THREADS AND FEEDS

Thread cutting range—48 pitches R.H. or L.H.....

Longitudinal feeds through friction clutch—

48 feeds R.H. or L.H.....

Cross-feeds through friction clutch—48 feeds.....

Lead screw, 29° Acme thread.....

TOOL POST

Size of tool holder shank.....

Size of cutter bit for tool holder.....

MOTOR

Standard size of motor required.....

10-inch 1" Collet

No. 2

2 1/8"

1 1/8"

57 1/2"

4-224 per inch

.0015" to .0836"

.0006" to .0309"

3/4" Diam.

8 Threads

3/8" x 1 1/2"

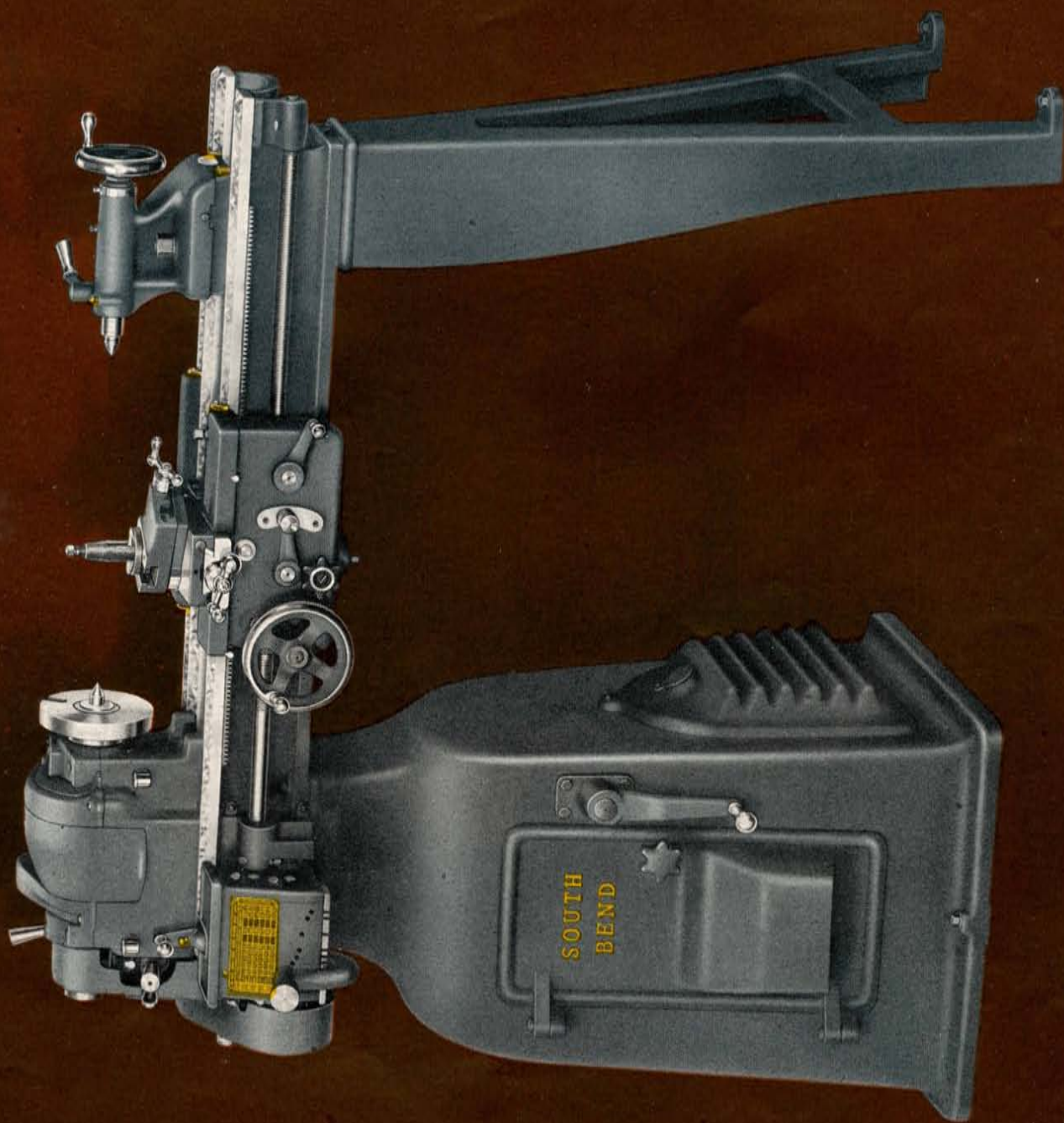
1/4" sq.

3/4 h.p.

Collets for 10"—1" Collet Lathes are interchangeable with collets for 16" Lathes.

*Collets for 10"—1 1/16" Collet Lathes are interchangeable with collets for 13" Lathes.

10" X 3 1/2" SOUTH BEND
QUICK CHANGE GEAR
LATHE



10-inch Quick Change Gear Precision Lathe

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

The 10-inch Quick Change Gear Lathe is made in two types: "1" Collet" and "1 1/16" Collet". The 10-inch 1" Collet Lathe is equipped with a special headstock having 1 3/8" spindle hole which provides 1" maximum collet capacity. The 10-inch 1 1/16" Collet Lathe is equipped with a headstock having 1" spindle hole which provides 1 1/16" maximum collet capacity.

Standard Extras and Purchased Extras for these lathes are listed in the back of this catalog. These attachments and accessories greatly increase the usefulness of the lathes. Most attachments may be purchased either with the lathe or later.

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". Motor and control are not included in price of lathe.

10-inch 1" Collet Quick Change Gear Lathes With Underneath Motor Drive and Floor Legs

Bed Length	3-ft.	3 1/2-ft.	4-ft.	4 1/2-ft.
Catalog Number	187-Y	187-Z	187-A	187-R
Distance Between Centers	14 3/4-in.	20 3/4-in.	26 3/4-in.	32 3/4-in.
Shipping Weight, Crated	810 lbs.	835 lbs.	860 lbs.	885 lbs.
Code Word	jysac	jyseh	jysam	jysor

10-inch 1 1/16" Collet Quick Change Gear Lathes With Underneath Motor Drive and Floor Legs

Bed Length	3-ft.	3 1/2-ft.	4-ft.	4 1/2-ft.
Catalog Number	199-YF	199-ZF	199-AF	199-RF
Distance Between Centers	14 3/4-in.	20 3/4-in.	26 3/4-in.	32 3/4-in.
Shipping Weight, Crated	810 lbs.	835 lbs.	860 lbs.	885 lbs.
Code Word	Kwhab	Kwhal	Kwhar	Kwhat

SPECIFICATIONS

CAPACITY OF LATHE

Swing over bed and saddle wings.....

Swing over saddle with chip guard removed.....

Swing over saddle with chip guard.....

SPINDLE SPEEDS (subject to 5% variation)

Low spindle speeds.....

r.p.m. of spindle, direct belt driven.....

r.p.m. of spindle, back-gears engaged.....

High spindle speeds.....

r.p.m. of spindle, direct belt driven.....

r.p.m. of spindle, back-gears engaged.....

HEADSTOCK

Hole through spindle.....

Maximum collet capacity.....

Spindle nose diameter and threads per inch.....

Size of center, Morse taper.....

Width of cone pulley step for belt.....

Large face plate diameter.....

Small face plate diameter.....

Front spindle bearing diameter.....

10-inch 1 1/16" Collet

10 1/16"

6 3/4"

5 7/8"

700, 434, 277

129, 79, 50

1357, 837, 535

248, 153, 97

1"

1 1/16"

1 7/8"-8

No. 2

1 1/2"

8 3/8"

5 5/8"

2 1/4"

TAILSTOCK

Size of center, Morse taper.....

Spindle travel.....

Each graduation on tailstock spindle.....

Failstock top set over for taper turning.....

COMPOUND REST

Cross slide travel.....

Angular hand feed of compound rest top slide.....

THREADS AND FEEDS

Thread cutting range—48 pitches R.H. or L.H.....

Longitudinal feeds through friction clutch—

48 feeds R.H. or L.H.....

Cross-feeds through friction clutch—48 feeds.....

Lead screw, 29° Acme thread.....

TOOL POST

Size of tool holder shank.....

Size of cutter bit for tool holder.....

MOTOR

Standard size of motor required.....

3/4 h.p.

10-inch 1 1/16" Collet

No. 2

2 1/16"

1 1/16"

5 7/8"

2

4,224 per inch

.0015" to .0836"

.0006" to .0309"

3/4" Diam.

8 Threads

3/8" x 1 1/16"

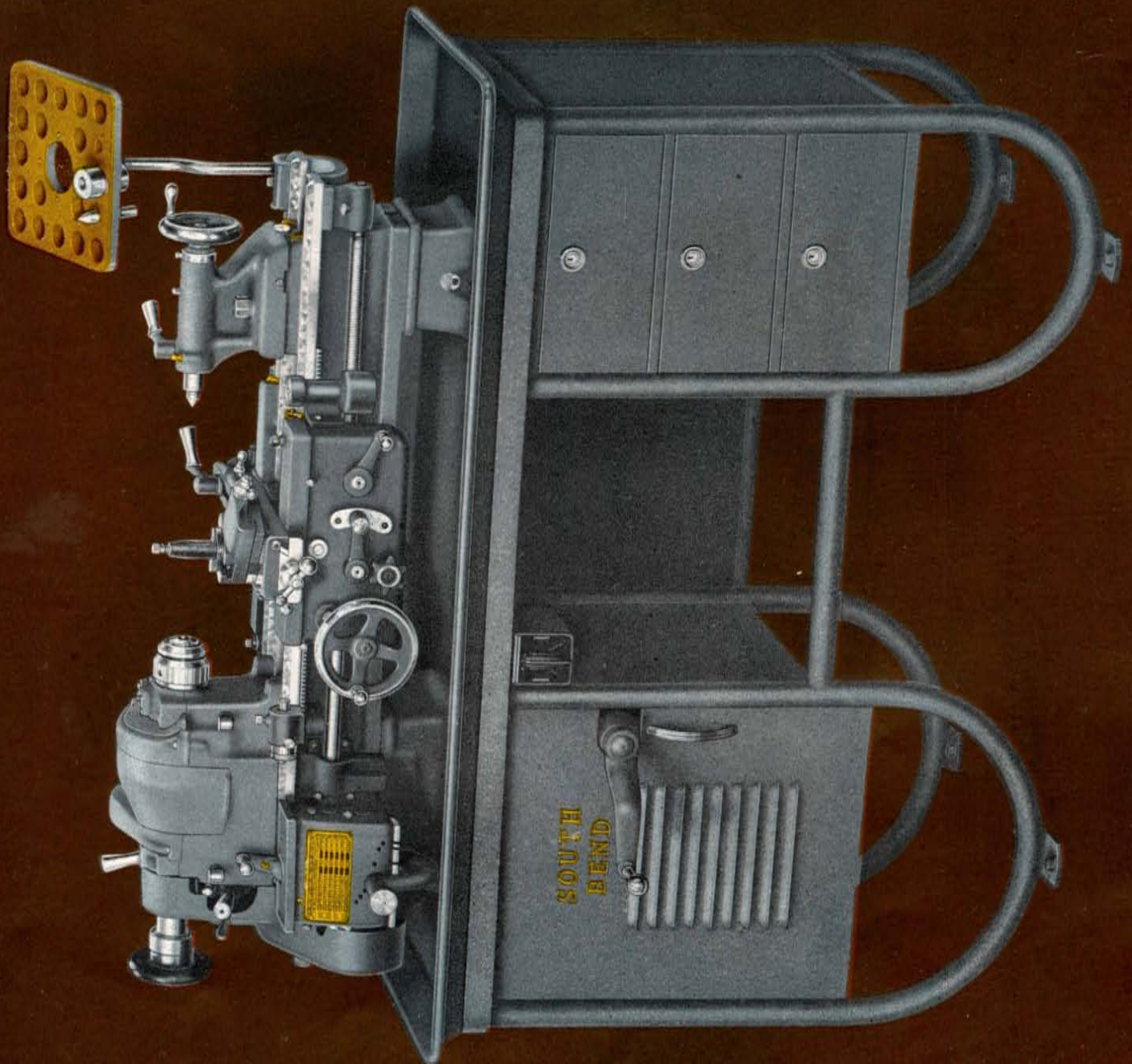
1/4" sq.

3/4 h.p.

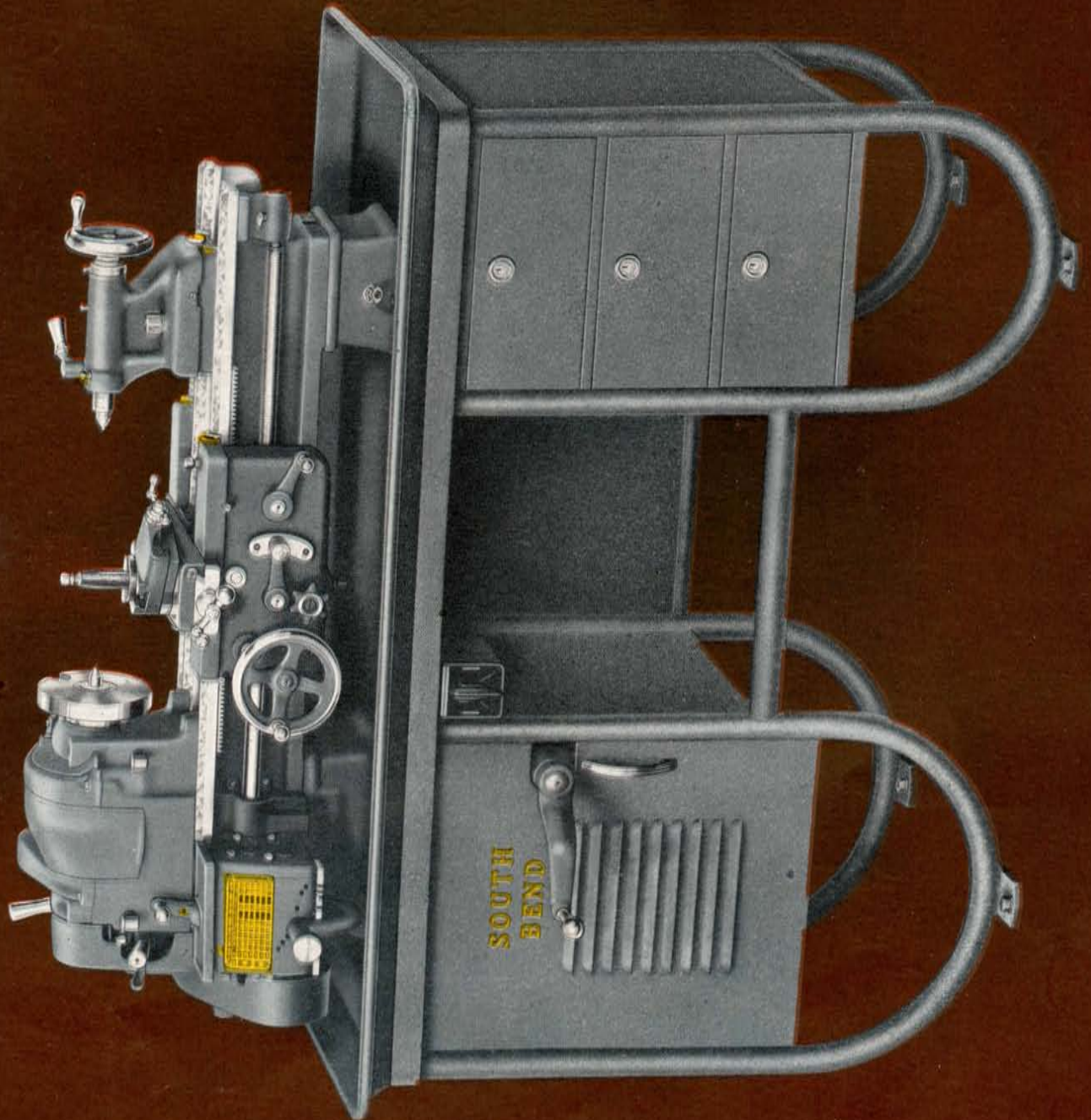
3/4 h.p.

*Collets for 10"—1 1/16" Collet Lathes are interchangeable with collets for 13" Lathes. Collets for 10"—1" Collet Lathes are interchangeable with collets for 16" Lathes.

10" X 3' SOUTH BEND
TOOLROOM BENCH
LATHE



10" X 3' SOUTH BEND
QUICK CHANGE GEAR
BENCH LATHE



10-inch Quick Change Gear Precision Bench Lathe

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

The 10-inch Quick Change Gear Bench Lathe is made in two types: "1" Collet" and "1 $\frac{1}{16}$ " Collet". The 10-inch 1" Collet Lathe is equipped with a special headstock having 1 $\frac{3}{8}$ " spindle hole which provides 1" maximum collet capacity. The 10-inch 1 $\frac{1}{16}$ " Collet Lathe is equipped with a headstock having 1" spindle hole which provides 1 $\frac{1}{16}$ " maximum collet capacity.

Standard Extras and Purchased Extras for these lathes are shown in the back of this catalog. These attachments and accessories greatly increase the usefulness of the lathes. Most attachments may be purchased either with the lathe or later.

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; steel bench; and book "How to Run a Lathe". Motor and control are not included in the price.

**10-inch 1" Collet Quick Change Gear Bench Lathes
With Underneath Motor Drive and Steel Bench**

Bed Length	3-ft.	3½-ft.	4-ft.	4½-ft.
Catalog Number	187 YS	187 ZS	187 AS	187 BS
Distance Between Centers	14¾-in.	20¾-in.	26¼-in.	32¾-in.
Shipping Weight, (Crated with Bench)	850 lbs.	880 lbs.	950 lbs.	990 lbs.
Code Word	lytab	lyten	lytis	lytob

**10-inch 11/16" Collet Quick Change Gear Bench Lathes
With Underneath Motor Drive and Steel Bench**

Bed Length		3-ft.	3½-ft.	4-ft.	4½-ft.
Catalog Number		199-Y5	199-Z5	199-AS	199-BS
Distance Between Centers		14¼-in.	20¼-in.	25¼-in.	32¾-in.
Shipping Weight, (Crated with Bench)		850 lbs	880 lbs.	950 lbs.	980 lbs.
Code Word		Kwkad	Kwkcn	Kwkak	Kwkax

SPECIFICATIONS

CAPACITY OF LATHE

Swing over bed and saddle wings.
Swing over saddle with chip guard removed.
Swing over saddle with chip guard.

SPINDLE SPEEDS (subject to 5% variation)

Low spindle speeds
r.p.m. of spindle, direct belt driven.....
r.p.m. of spindle, back-gears engaged.....
High spindle speeds
r.p.m. of spindle, direct belt driven.....
r.p.m. of spindle, back-gears engaged.....

HEADSTOCK

Hole through spindle.....
Maximum collet capacity *.....
Spindle nose diameter and threads per inch.....
Size of center, Morse taper.....
Width of cone pulley step for belt.....
Large face plate diameter.....
Small face plate diameter.....
Front spindle bearing diameter.....

*Collets for 10" — 11 1/2" Collet Lathes are interchangeable with collets for 13" Lathes.

TAILSTOCK

Size of center, Morse taper
Spindle travel
Each graduation on tailstock spindle
Tailstock top set over for taper turning

COMPOUND REST

Cross slide travel.....

Angular hand feed of compound rest top slide.....

THREADS AND FEEDS

- Thread cutting range—48 pitches R.H. or L.H.
- Longitudinal feeds through friction clutch—48 feeds R.H. or L.H.
- Cross-feeds through friction clutch—48 feeds.
- Lead screw, 29° Acme thread.

TOOT POST

TOOL POST
Size of tool holder shank.....
Size of cutter bit for tool holder.....

MOTOR

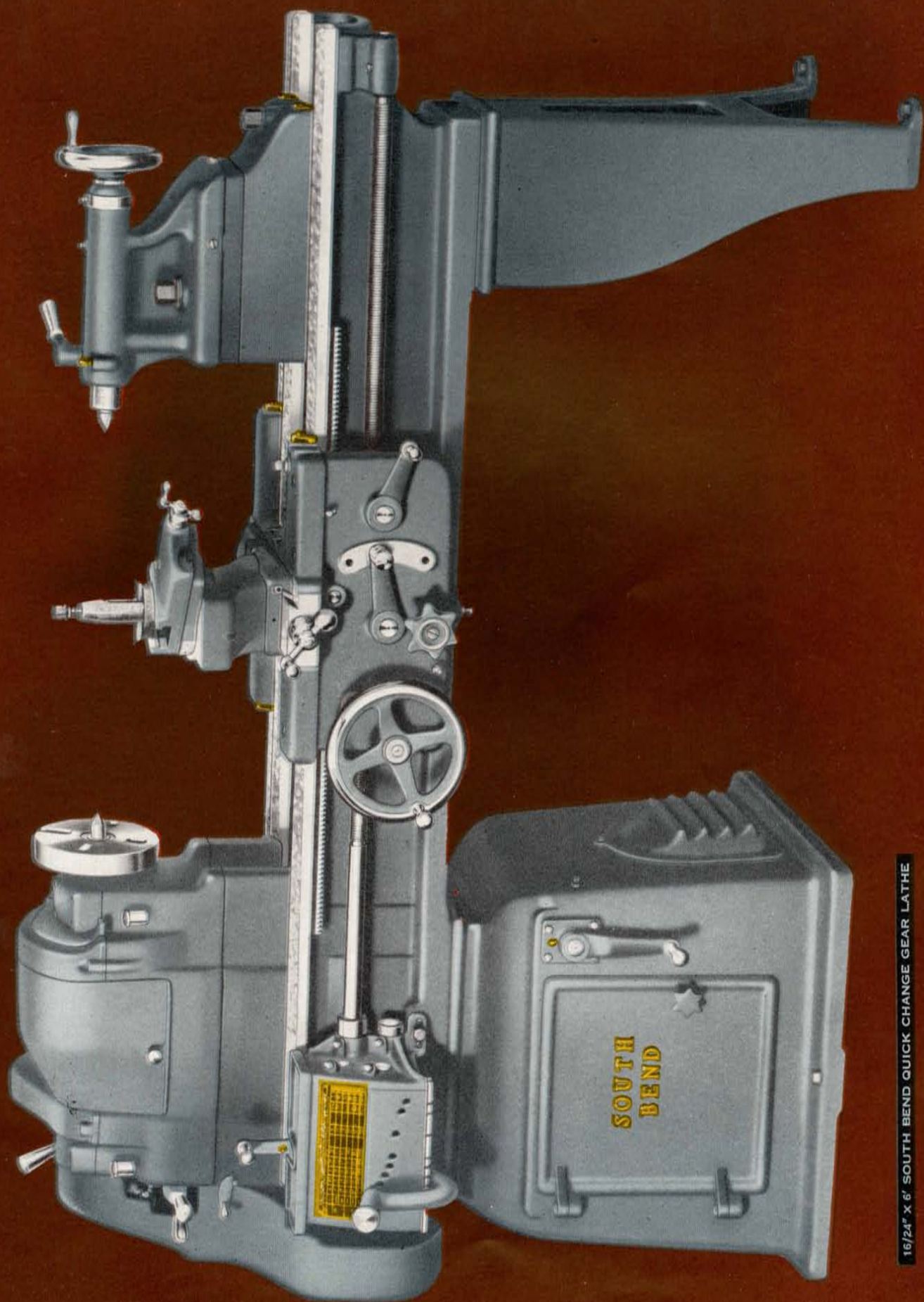
MOTOR
Standard size of motor required

collets for 10"-1" Collet Lathes are interchangeable with collets for 16" Lathes.

SOUTH BEND LATHE WORKS

29

SOUTH BEND 22, INDIANA, U.S.A.



16/24" x 6' SOUTH BEND QUICK CHANGE GEAR LATHE

16/24-inch Quick Change Gear Precision Lathe

A Large Swing General Purpose Lathe — Eight or Sixteen Spindle Speeds

The 16/24-inch General Purpose Lathe is a practical tool for machining large diameter work that is not excessively heavy. This lathe is the same as the 16-inch Quick Change Gear Lathe, except that the height of the centers is increased by the use of raising blocks, making the swing of the lathe 24 $\frac{1}{4}$ " in diameter over the bed and 18 $\frac{3}{4}$ " in diameter over the saddle bridge.

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, truing brake drums, and similar work. Although this lathe has ample capacity for large awkward jobs, it is not too heavy and cumbersome for efficient operation on small parts.

The Underneath Motor Drive 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.

Improved Features of this lathe include: alloy steel head-

stock 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 semi-steel lathe bed.

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; No. 3 Morse taper tool steel centers for headstock and tailstock spindles; spindle sleeve; wrenches; quick change gear box; installation plan; and book "How to Run a Lathe." Motor and control are not included in price of lathe.

16/24-inch Quick Change Gear Underneath Motor Driven Lathes

Eight-Speed Drive		Sixteen-Speed Drive		Bed Length Feet	Distance Between Centers	Ship. Wt. Crated Pounds
Cat. No.	Code	Cat. No.	Code			
198-C	Bavis	179-C	Tyrob	6	30"	2480
198-D	Bawah	179-D	Tyrog	7	42"	2560
198-E	Bawex	179-E	Tyrom	8	54"	2640
198-G	Bawis	179-G	Tyror	10	78"	2800
198-H	Bawox	179-H	Tyrow	12	102"	3030

SPECIFICATIONS

CAPACITY OF LATHE
Swing over bed and saddle wings..... 24 $\frac{1}{4}$ "
Swing over saddle with chip guard removed..... 19 $\frac{1}{4}$ "
Swing over saddle with chip guard..... 18 $\frac{3}{4}$ "

SPINDLE SPEEDS (r.p.m. subject to 5% variation)
Direct Belt Drive Back-Gear Drive
8-speed drive..... 447, 262, 160, 94 56, 33, 20, 12
16-speed dr., low speeds..... 364, 221, 136, 83 46, 30, 17, 11
16-speed dr., high speeds..... 727, 442, 272, 167 92, 60, 34, 22

HEADSTOCK
Hole through spindle..... 1 $\frac{1}{2}$ "
Maximum collet capacity*..... 1"
Spindle nose diameter and threads per inch..... 2 $\frac{3}{8}$ " 6
Size of center, Morse taper..... No. 3

Width of cone pulley step for belt..... 2 $\frac{1}{4}$ "
Large face plate diameter..... 13 $\frac{1}{4}$ "
Small face plate diameter..... 8 $\frac{1}{2}$ "
Front spindle bearing, diameter..... 2 $\frac{3}{8}$ "

TAILSTOCK
Size of center, Morse taper..... No. 3
Spindle travel..... 5 $\frac{3}{4}$ "
Each graduation on tailstock spindle..... 1"
Tailstock top set over for taper turning..... 1"

COMPOUND REST
Cross slide travel..... 10 $\frac{1}{2}$ "
Angular hand feed of compound rest top slide..... 3 $\frac{1}{4}$ "

*Collets for 16/24" Lathes are interchangeable with collets for 10"-1" Collet Capacity Lathes. Draw-in Collet Attachment is not interchangeable.

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 .0312"
Lead Screw, 29° Acme thread..... 1 $\frac{1}{8}$ " Dia.—6 Threads

TOOL POST

Size of tool holder shank..... 1 $\frac{1}{2}$ "
Size of cutter bit for tool holder..... 3 $\frac{1}{8}$ " sq.

MOTOR

Standard size motor for 8 sp. dr. lathe (1-sp. motor)..... 1 $\frac{1}{2}$ h.p.
Standard size motor for 16-sp. dr. lathe (2-sp. motor)..... 2.1 h.p.

Features of 9-inch South Bend Lathes

Four Drives

Each of the three models of 9-inch lathes can be supplied in four different types of drives: the Underneath Motor Drive, the *Twelve-Speed* Horizontal Motor Drive, the *Six-Speed* Horizontal Motor Drive, and V-Belt Drive providing either eight or sixteen spindle speeds.

The Underneath Motor Drive (pages 45 and 47) is fully enclosed in the base of the lathe underneath the headstock. This drive provides a series of twelve spindle speeds ranging from 41 to 1270 r.p.m.

The Twelve-Speed Horizontal Motor Drive (pages 35 through 41) provides a series of twelve spindle speeds ranging from 41 to 1270 r.p.m. The motor drive equipment is mounted on the bench back of the lathe.

The Twelve-Speed Horizontal Motor Drive (pages 35 through 41) provides a series of twelve spindle speeds ranging from 41 to 1270 r.p.m. The motor drive equipment is mounted on the bench back of the lathe.

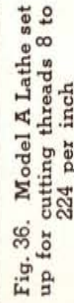
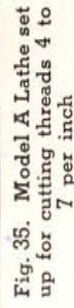
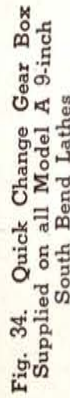


Fig. 37. Index Chart Showing Threads and Feeds Available on all Model A 9-inch South Bend Lathes

The Six-Speed Horizontal Motor Drive (page 43) is similar to the Twelve-Speed Horizontal Motor Drive, except that a single step motor pulley is used instead of a two step motor pulley, giving the lathe six spindle speeds instead of twelve spindle speeds.

The V-Belt Horizontal Motor Drive (not shown in this catalog) has cone pulleys for V-belt instead of flat belt.

Gear Box for Model A Lathe

The quick change gear box supplied on all Model A 9-inch Lathes is shown in Fig. 34, page 32. Changes for the various screw threads and power feeds are made by shifting the two levers on the front of the gear box.

Screw threads and power feeds available through the gear box are listed on the index chart, Fig. 37, page 32. By shifting the levers on the gear box any thread from 8 to 224 per inch is instantly available. Coarse threads ranging from 4 to 7 per inch are obtained by changing the stud gear. See Figs. 35 and 36.

Power Feed Apron for Model A and Model B Lathes

The Model A and Model B 9-inch Lathes are equipped with a power feed apron as shown in Fig. 38. This apron is equipped with a worm drive and 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 on lathes equipped with the power feed apron.

The 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 when the power feed friction clutch feeds are in operation.

Plain Apron for Model C Lathes

Model C 9-inch lathes are equipped with a plain geared screw feed apron as illustrated in Fig. 39. Power longitudinal turning feeds are obtained by engaging the half-nuts with the lead screw. The cross-feed on the Model C 9-inch Lathe is hand operated.

SOUTH BEND LATHE WORKS

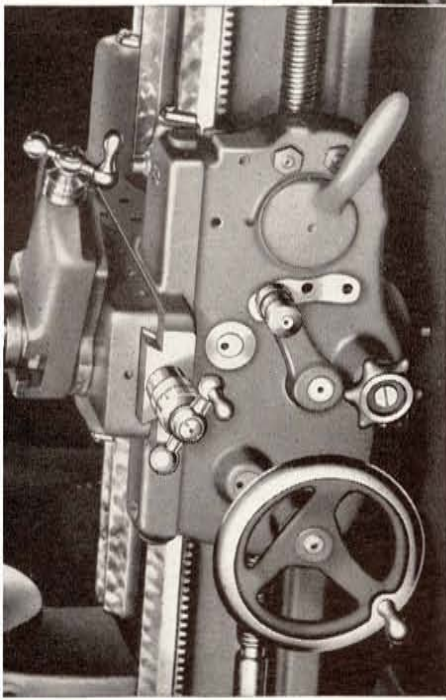


Fig. 38. Above—Power Feed Apron for Model A and Model B 9-inch South Bend Lathes

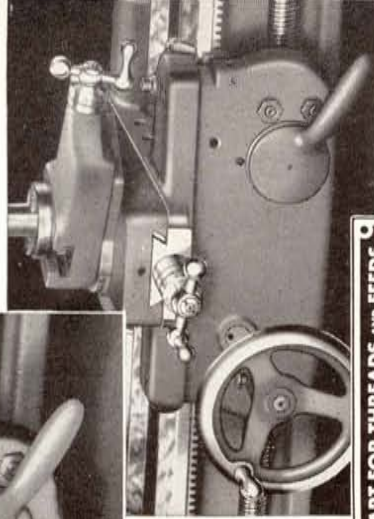


Fig. 39. Right—Plain Apron for Model C 9-inch South Bend Lathes

CHART FOR THREADS AND FEEDS

9-INCH MODEL B LATHE

INCHES PER MINUTE	FEED	SCREW	LONG FEED	LONG FEED
1/2	1/2	1/2	1/2	1/2
1/4	1/4	1/4	1/4	1/4
1/8	1/8	1/8	1/8	1/8
1/16	1/16	1/16	1/16	1/16
1/32	1/32	1/32	1/32	1/32
1/64	1/64	1/64	1/64	1/64
1/128	1/128	1/128	1/128	1/128
1/256	1/256	1/256	1/256	1/256
1/512	1/512	1/512	1/512	1/512
1/1024	1/1024	1/1024	1/1024	1/1024
1/2048	1/2048	1/2048	1/2048	1/2048
1/4096	1/4096	1/4096	1/4096	1/4096
1/8192	1/8192	1/8192	1/8192	1/8192
1/16384	1/16384	1/16384	1/16384	1/16384
1/32768	1/32768	1/32768	1/32768	1/32768
1/65536	1/65536	1/65536	1/65536	1/65536
1/131072	1/131072	1/131072	1/131072	1/131072
1/262144	1/262144	1/262144	1/262144	1/262144
1/524288	1/524288	1/524288	1/524288	1/524288
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THROUGH PRINTER CUTTER
IN MACHES PER REVOLUTION
OF HORIZONTAL SPINDLE

FIG. 1

FIG. 2

FIG. 3

FIG. 4

FIG. 5

FIG. 6

FIG. 7

FIG. 8

FIG. 9

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FIG. 91

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FIG. 94

FIG. 95

FIG. 96

FIG. 97

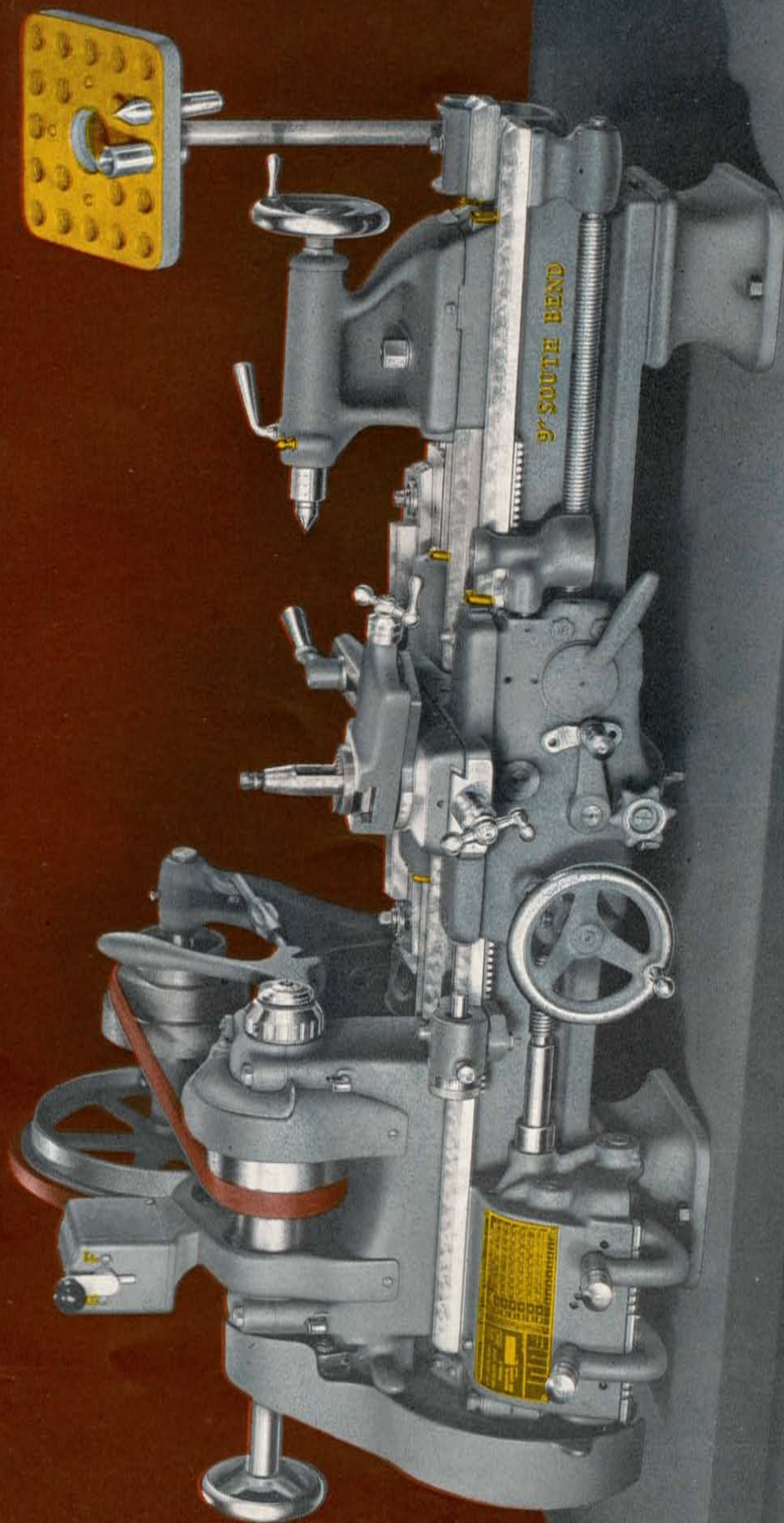
FIG. 98

FIG. 99

FIG. 100

FIG. 101

FIG. 102



9" X 3' SOUTH BEND TOOLROOM BENCH LATHE WITH TWELVE-SPEED DRIVE

9-inch Toolroom Precision Bench Lathe

Twelve-Speed Drive — Back-Geared — Belt Drive to Spindle

Power Longitudinal Feeds and Power Cross-Feeds

The 9-inch Toolroom Bench Lathe with *Twelve-Speed* horizontal motor drive is illustrated at the left. This is the same as the Model A lathe (page 37) except for the toolroom attachments.

Convenience and Ease of Operation are assured by the simple, practical design of this lathe. Well placed controls, large easy reading micrometer dials, lever reverse for threads, large feeds, graduated compound rest, wrenchless bull gear lock, large handwheels, and other features save time and effort.

The Quick Change Gear Box provides for cutting right- and left-hand screw threads from 4 to 224 per inch. Power longitudinal feeds .0015" to .0853" and power cross-feeds .0004" to .0252" are also obtained through the gear box. See page 32.

The Power Feed Apron has a smooth operating worm drive and friction clutch which permits engaging or disengaging the power cross-feed or the power longitudinal feed instantly. See illustration on page 33.

Drive Equipment consists of: *Twelve-Speed* horizontal motor drive unit providing a series of 12 spindle speeds ranging from 41 to 1270 r.p.m.; motor pulley with $\frac{3}{4}$ " hole; V-belt; flat leather belt and lacing. Motor and control are not included in price.

This lathe is also made with Underneath Motor Drive as described on page 45.

Toolroom Attachments included in price of lathe consist of: 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: power feed apron; graduated compound rest; small face plate; tool post; two 60-degree centers; spindle sleeve; wrenches; quick change gear box; installation plan; and book "How to Run a Lathe". Bench is not included in price of lathe.

9-inch Toolroom Bench Lathe
With *Twelve-Speed* Horizontal Motor Drive—Less Bench

Bed Length	3-ft	3½-ft.	4-ft.
Catalog Number.....	8644-Y	8644-Z	8644-A
Distance Between Centers.....	16-in.	22-in.	28-in.
Shipping Weight, Crated.....	400 lbs.	425 lbs.	450 lbs.
Code Word.....	Nybic	Nybok	Nybur

SPECIFICATIONS

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

SPINDLE SPEEDS (subject to 5% variation)

Low spindle speeds
r.p.m. of spindle, direct belt driven..... 638, 370, 212
r.p.m. of spindle, back-gears engaged..... 127, 72, 41
High spindle speeds
r.p.m. of spindle, direct belt driven..... 1270, 716, 408
r.p.m. of spindle, back-gears engaged..... 246, 138, 79

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..... 7⅞"
Small face plate diameter..... 5⅞"
Front spindle bearing, diameter..... 1⅜"

TAILSTOCK

Size of center, Morse taper..... No. 2
Spindle travel..... 2⅞"
Each graduation on tailstock spindle..... 1/16"
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

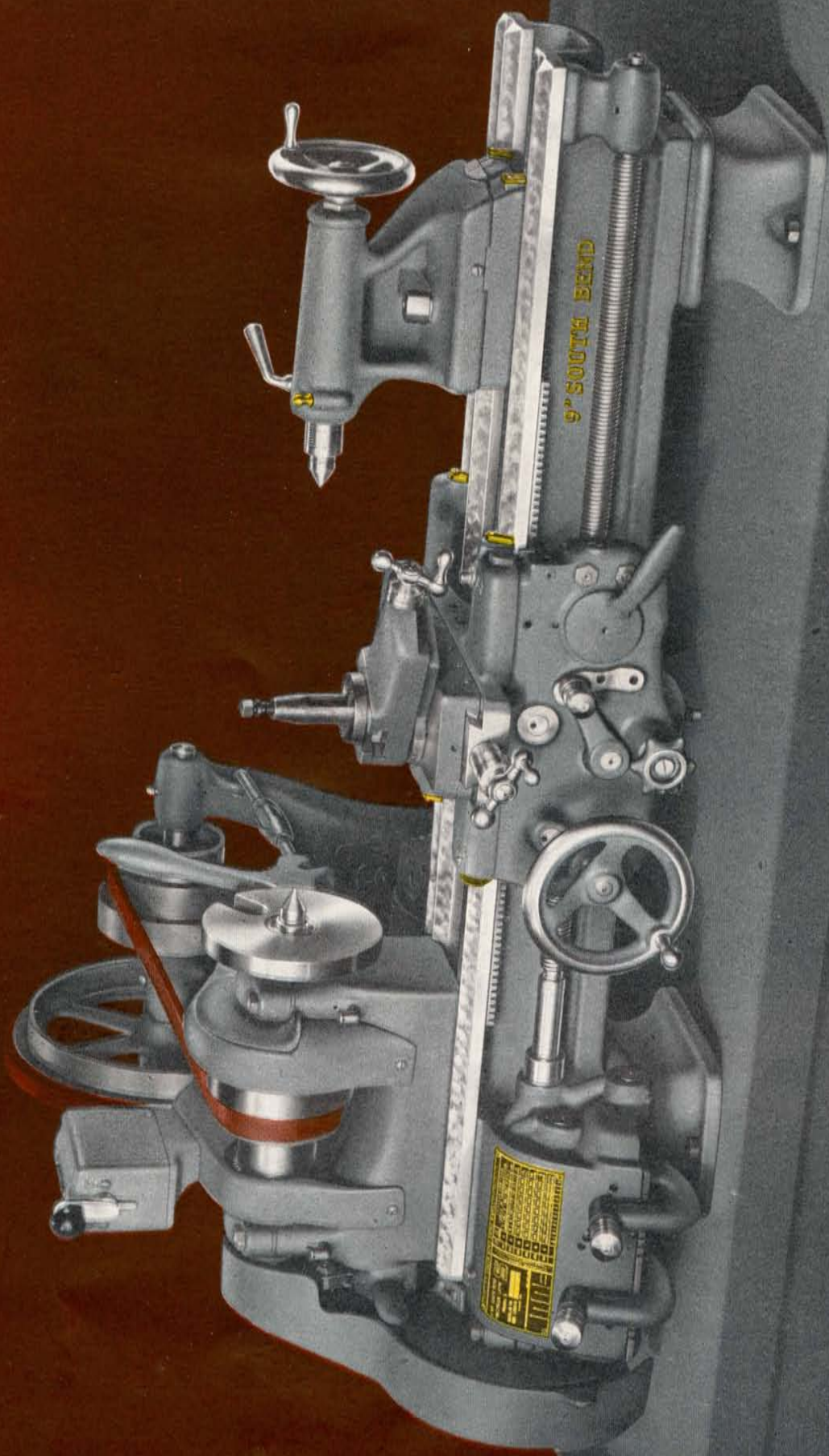
Thread cutting range—48 pitches
R.H. or L.H..... 4 to 224 per inch
Longitudinal feeds through friction clutch—48 feeds R.H. or L.H..... .0015" to .0853"
Cross-feeds through friction clutch—48 feeds R.H. or L.H..... .0004" to .0252"
Lead screw, 29° Acme thread..... ¾" Diam.—8 Threads

TOOL POST

Size of tool holder shank..... ⅜" x 1½"
Size of cutter bit for tool holder..... ¼" sq.

MOTOR

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



9' X 3' SOUTH BEND MODEL A BENCH LATHE WITH TWELVE-SPEED DRIVE

Model A 9-inch South Bend Precision Bench Lathe

Twelve-Speed Drive—Quick Change Gear—Belt Drive to Spindle Power Longitudinal Feeds and Power Cross-Feeds

The 9-inch Model A South Bend Lathes are precision tools, capable of machining work to the exacting tolerances demanded in modern industry. They are 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.

Convenience and Ease of Operation are assured by the simple, practical design of these lathes. Well placed controls, large easy reading micrometer dials, lever reverse for threads and feeds, graduated compound rest, wrenchless bull gear lock, large handwheels, and other features save time and effort.

The Quick Change Gear Box provides for cutting right- and left-hand screw threads from 4 to 224 per inch. Power longitudinal feeds .0015" to .0853" and power cross-feeds .0004" to .0252" are also obtained through the gear box. See page 32.

The Power Feed Apron has a smooth operating worm drive and friction clutch which permits engaging or disengaging the power cross-feed or the power longitudinal feed instantly. See illustration on page 33.

Drive Equipment consists of: *Twelve-Speed* horizontal motor drive unit providing a series of twelve spindle speeds ranging from 41 to 1270 r.p.m.; motor pulley with $\frac{3}{4}$ " hole; V-belt; flat leather belt and lacing. Motor and control are not included in price. This lathe is also made with Underneath Motor Drive and *Six-Speed* Drive as shown on pages 43 and 47.

Regular Equipment included in price consists of: power feed apron; quick change gear box; graduated compound rest; face plate; tool post; two 60-degree centers; spindle sleeve; wrenches; installation plan; and book "How to Run a Lathe". Bench is not included in price of lathe.

Model A 9-inch *Twelve-Speed*
Horizontal Motor Driven Bench Lathes—less Bench

Bed Length	3-ft.	3½-ft.*	4-ft.*	4½-ft.
Catalog Number.....	644-Y	644-Z	644-A	644-R
Distance Between Centers.....	16-in.	22-in.	28-in.	34-in.
Shipping Weight, Crated.....	385 lbs.	390 lbs.	405 lbs.	430 lbs.
Code Word.....	Vuxak	Vuxes	Vuxit	Vuxow

*NOTE—The 3½" and 4" bed lengths, because of the greater distance between centers, are recommended for general machine work.

SPECIFICATIONS

CAPACITY OF LATHE
Swing over bed and saddle wings..... 9¼"
Swing over saddle with chip guard..... 5½"

SPINDLE SPEEDS (subject to 5% variation)
Low spindle speeds
r.p.m. of spindle, direct belt driven..... 658, 370, 212
r.p.m. of spindle, back-gears engaged..... 127, 72, 41
High spindle speeds
r.p.m. of spindle, direct belt driven..... 1270, 716, 408
r.p.m. of spindle, back-gears engaged..... 246, 138, 79

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..... 5½"
Front spindle bearing, diameter..... 1½"

TAILSTOCK
Size of center, Morse taper..... No. 2
Spindle travel..... 2½"
Each graduation on tailstock spindle..... 1/16"
Tailstock top set over for taper turning..... 5/8"

COMPOUND REST
Cross slide travel..... 5½"
Angular hand feed of compound rest top slide..... 2¼"

THREADS AND FEEDS

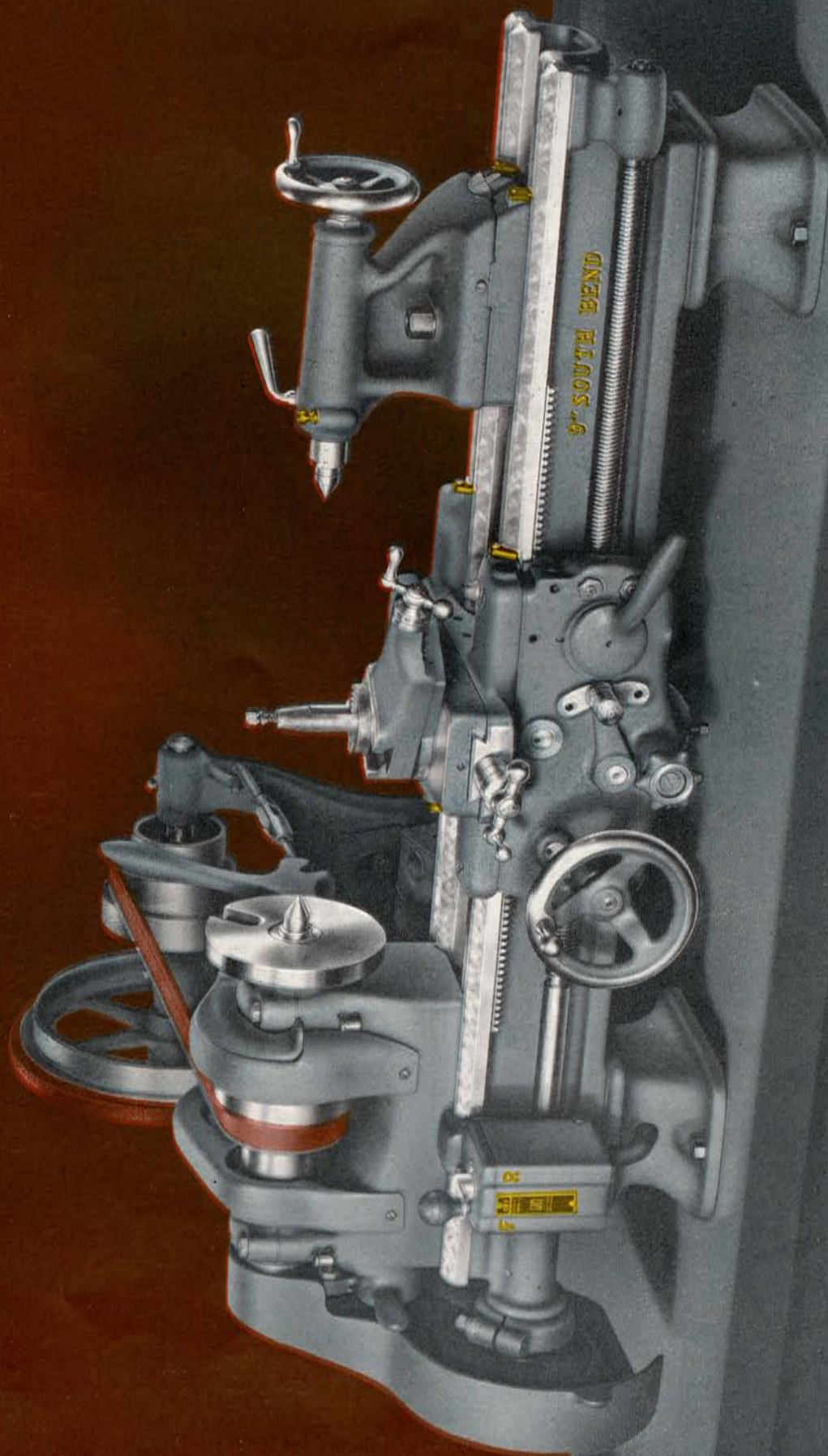
Thread cutting range—48 pitches
R.H. or L.H..... 4 to 224 per inch
Longitudinal feeds through friction clutch—48 feeds R.H. or L.H..... .0015" to .0853"
Cross-feeds through friction clutch—48 feeds R.H. or L.H..... .0004" to .0252"
Lead screw, 29° Acme thread..... ¾" Diam.—8 Threads

TOOL POST

Size of tool holder shank..... 3/32" x 1½"
Size of cutter bit for tool holder..... 1/16" sq.

MOTOR

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



9" X 3' SOUTH BEND MODEL B BENCH LATHE WITH TWELVE-SPEED DRIVE

Model B 9-inch South Bend Precision Bench Lathe

Twelve-Speed Drive—Plain Change Gear—Belt Drive to Spindle Power Longitudinal Feeds and Power Cross-Feeds

The 9-inch Model B South Bend Lathes are precision tools, capable of machining work to the exacting tolerances demanded in modern industry. They are 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.

Convenience and Ease of Operation are assured by the simple, practical design of these lathes. Well placed controls, large easy reading micrometer dials, lever reverse for threads and feeds, graduated compound rest, wrenchless bull gear lock, large handwheels, and other features save time and effort.

Change Gears provide for cutting right- and left-hand screw threads from 4 to 160 per inch. Power longitudinal feeds .0021" to .0155" and power cross-feeds .001" to .0046" are also obtained through the change gears. See page 33.

The Power Feed Apron has a smooth operating worm drive and friction clutch which permits engaging or disengaging the power cross-feed or the power longitudinal feed instantly. See illustration on page 33.

Drive Equipment consists of: Twelve-Speed horizontal motor drive unit providing a series of twelve spindle speeds ranging from 41 to 1270 r.p.m.; motor pulley with $\frac{3}{4}$ " hole; V-belt; flat leather belt and lacing. Motor and control are not included in price. This lathe is also made with Underneath Motor Drive and Six-Speed Drive as shown on pages 43 and 47.

Regular Equipment included in price consists of: power feed apron; set of change gears; graduated compound rest; face plate; tool post; two 60-degree centers; spindle sleeve; wrenches; installment plan; and book "How to Run a Lathe". Bench is not included in price of lathe.

Model B 9-inch Twelve-Speed
Horizontal Motor Driven Bench Lathes—less Bench

Catalog Number	Bed Length	3-ft.	3½-ft.*	4-ft.*	4½-ft.
677-Y	16-in.	677-Z	22-in.	677-A	34-in.
Shipping Weight, Crated	345 lbs.	370 lbs.	395 lbs.	Rn1w	420 lbs.
Code Word	Rn1k	Rznes	Rn1w	Rn1w	Rn1w

*NOTE—The 3½' and 4' bed lengths, because of the greater distance between centers, are recommended for general machine work.

SPECIFICATIONS

CAPACITY OF LATHE
Swing over bed and saddle wings..... 9¼"
Swing over saddle with chip guard..... 5½"

SPINDLE SPEEDS (subject to 5% variation)
Low spindle speeds
r.p.m. of spindle, direct belt driven..... 638, 370, 212
r.p.m. of spindle back-gears engaged..... 127, 72, 41
High spindle speeds
r.p.m. of spindle, direct belt driven..... 1270, 716, 408
r.p.m. of spindle, back-gears engaged..... 246, 138, 79

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..... 5½"
Front spindle bearing, diameter..... 1½"

TAILSTOCK
Size of center, Morse taper..... No. 2
Spindle travel..... 2½"
Each graduation on tailstock spindle..... 1/16"
Tailstock top set over for taper turning..... 5/8"

COMPOUND REST
Cross slide travel..... 5½"
Angular hand feed of compound rest top slide..... 2¼"

THREADS AND FEEDS

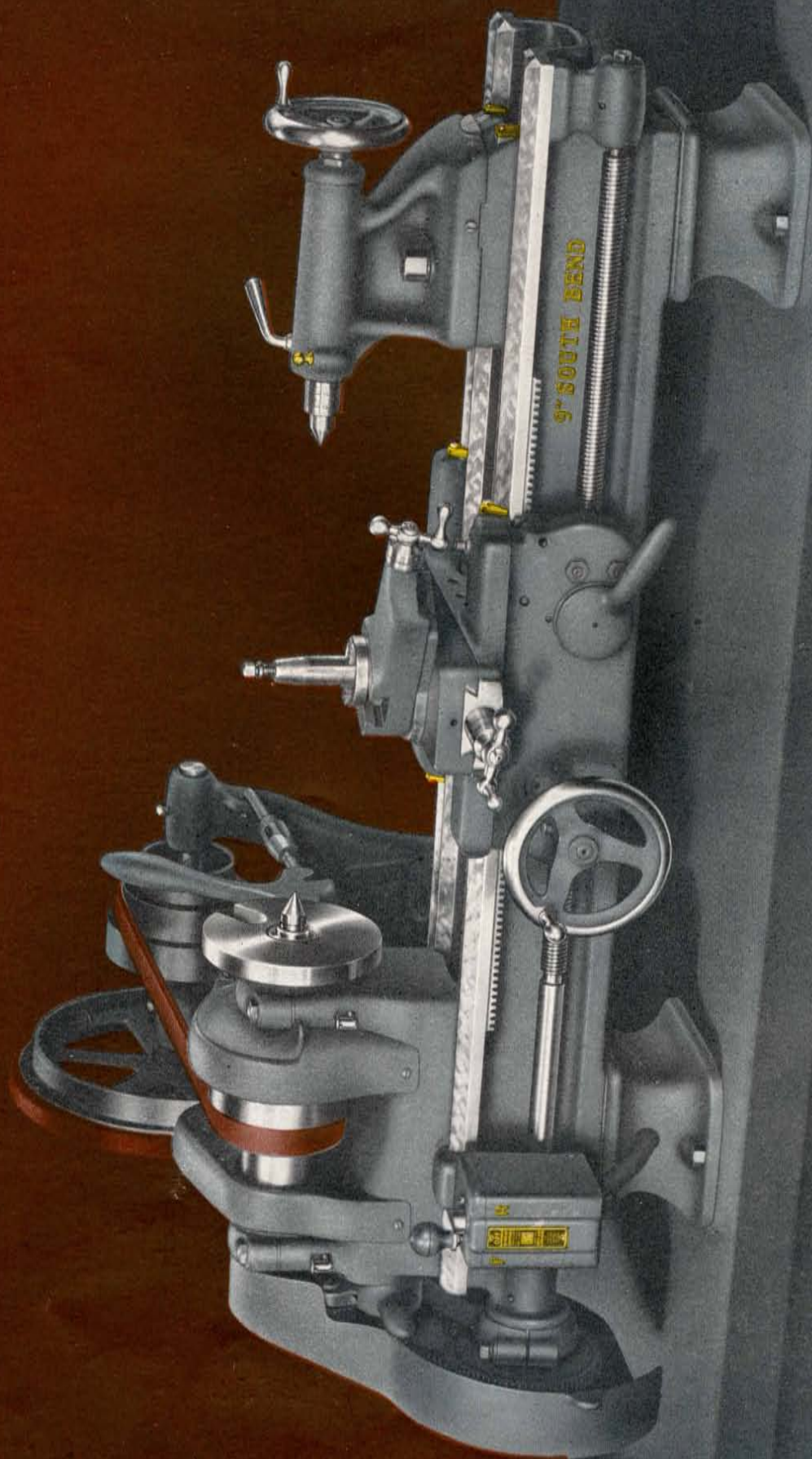
Thread cutting range—45 pitches
R.H. or L.H..... 4 to 160 per inch
Longitudinal feeds through friction clutch—26 feeds R.H. or L.H..... .0021" to .0155"
Cross-feeds through friction clutch—23 feeds..... .001" to .0046"
Lead screw, 29° Acme thread..... ¾" Diam.—8 Threads

TOOL POST

Size of tool holder shank..... 3/8" x 1½"
Size of cutter bit for tool holder..... 1/8" sq.

MOTOR

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



9" X 3' SOUTH BEND MODEL C BENCH LATHE WITH TWELVE-SPEED DRIVE

Model C 9-inch South Bend Precision Bench Lathe

Twelve-Speed Drive—Plain Change Gear—Belt Drive to Spindle Power Longitudinal Feeds and Hand Cross-Feed

The 9-inch Model C South Bend Lathes are precision tools, capable of machining work to the exacting tolerances demanded in modern industry. They are 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.

Convenience and Ease of Operation are assured by the simple, practical design of these lathes. Well placed controls, large easy reading micrometer dials, lever reverse for threads and feeds, graduated compound rest, wrenchless bull gear lock, large handwheels, and other features save time and effort.

Change Gears provide for cutting right- and left-hand screw threads from 4 to 160 per inch. Power longitudinal feeds are obtained by engaging the half-nuts with the lead screw. The feeds range from .0021" to .0156" depending on the arrangement of the change gears. The cross-feed is operated by hand. See illustration of index chart on page 33.

Drive Equipment consists of: *Twelve-Speed* horizontal motor drive unit providing a series of twelve spindle speeds ranging from 41 to 1270 r.p.m.; motor pulley with 3/4" hole; V-belt; flat leather belt and lacing. Motor and control are not included in price. This lathe is also made with Underneath Motor Drive and *Six-Speed* Drive as shown on pages 43 and 47.

Regular Equipment included in price consists of: plain apron; set of change gears; graduated compound rest; face plate; tool post; two 60-degree centers; spindle sleeve; wrenches; installation plan; and book "How to Run a Lathe". Bench is not included in price of lathe.

Model C 9-inch *Twelve-Speed*
Horizontal Motor Driven Bench Lathes—less Bench

	Bed Length	3-ft.	3 1/2-ft.*	4-ft.*	4 1/2-ft.
Catalog Number.....	615-YC	615-ZC	615-AC	615-RC	
Distance Between Centers.....	16-in.	22-in.	28-in.	34-in.	
Shipping Weight, Crated.....	335 lbs.	360 lbs.	385 lbs.	410 lbs.	
Code Word.....	Lyxam	Lyxeb	Lyxit	Lyxog	

*NOTE—The 3 1/2' and 4' bed lengths, because of the greater distance between centers, are recommended for general machine work.

SPECIFICATIONS

CAPACITY OF LATHE

Swing over bed and saddle wings..... 9 1/4"
Swing over saddle with chip guard..... 5 1/2"

SPINDLE SPEEDS (subject to 5% variation)

Low spindle speeds
r.p.m. of spindle, direct belt driven..... 658, 370, 212
r.p.m. of spindle, back-gears engaged..... 127, 72, 41
High spindle speeds
r.p.m. of spindle, direct belt driven..... 1270, 716, 408
r.p.m. of spindle, back-gears engaged..... 246, 136, 79

HEADSTOCK

Hole through spindle..... 3/4"
Maximum collet capacity..... 1/2"

Spindle nose diameter and threads per inch..... 1 1/2"-8
Size of center, Morse taper..... No. 2
Width of cone pulley step for belt..... 1"
Small face plate diameter..... 5 1/8"
Front spindle bearing, diameter..... 1 13/16"

TAILSTOCK

Size of center, Morse taper..... No. 2
Spindle travel..... 2 1/8"
Each graduation on tailstock spindle..... 1/8"
Tailstock top set over for taper turning..... 5/8"

COMPOUND REST

Cross slide travel..... 5 7/8"
Angular hand feed of compound rest top slide..... 2 1/4"

THREADS AND FEEDS

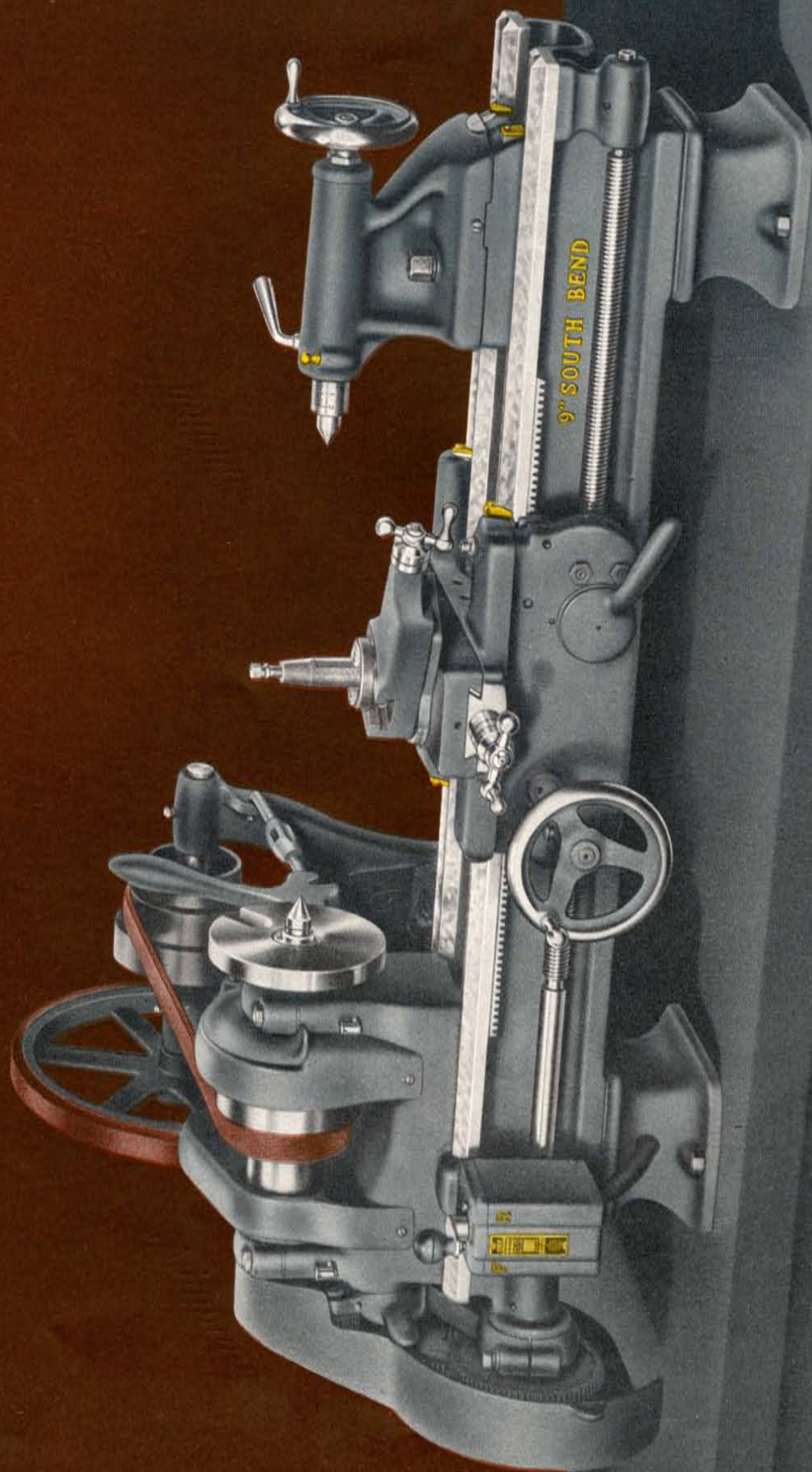
Thread cutting range—45 pitches
R.H. or L.H..... 4 to 160 per inch
Longitudinal feeds through half-nuts
and lead screw—14 feeds R.H. or L.H.0021" to .0156"
Cross-feed..... Hand operated
Lead screw, 29° Acme thread..... 3/4" Diam.—8 Threads

TOOL POST

Size of tool holder shank..... 3/8" x 1 1/2"
Size of cutter bit for tool holder..... 1/4" sq.

MOTOR

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



9" X 3' SOUTH BEND MODEL C BENCH LATHE WITH SIX-SPEED DRIVE

Six-Speed 9-inch Horizontal Motor Driven Precision Bench Lathe

Back-Geared—Belt Drive to Spindle—Made in Model A, Model B, and Model C

The 9-inch Model C Six-Speed Horizontal Motor Driven Bench Lathe is illustrated at the left. The Model A and Model B Lathes are also made with this drive. Except for the drive equipment, these lathes are the same as those described on pages 37, 39, and 41 respectively.

The Six-Speed Drive provides a series of six spindle speeds ranging from 41 to 658 r.p.m. This drive is recommended when high spindle speeds are not required. The drive unit is made in two sizes, to accommodate either a 1/4 h.p. motor or a 1/2 h.p. motor.

Drive Equipment included in the price of the lathe consists of: horizontal motor drive unit; motor pulley with 1/2" or 3/4" hole; V-belt; flat leather belt and lacing. Motor and control are not included in price of lathe, but are extra.

Regular Equipment is the same as for corresponding models listed on pages 37, 39, and 41. Bench is not included.

*NOTE—The 3 1/2' and 4' bed lengths, because of the greater distance between centers, are recommended for general machine work.

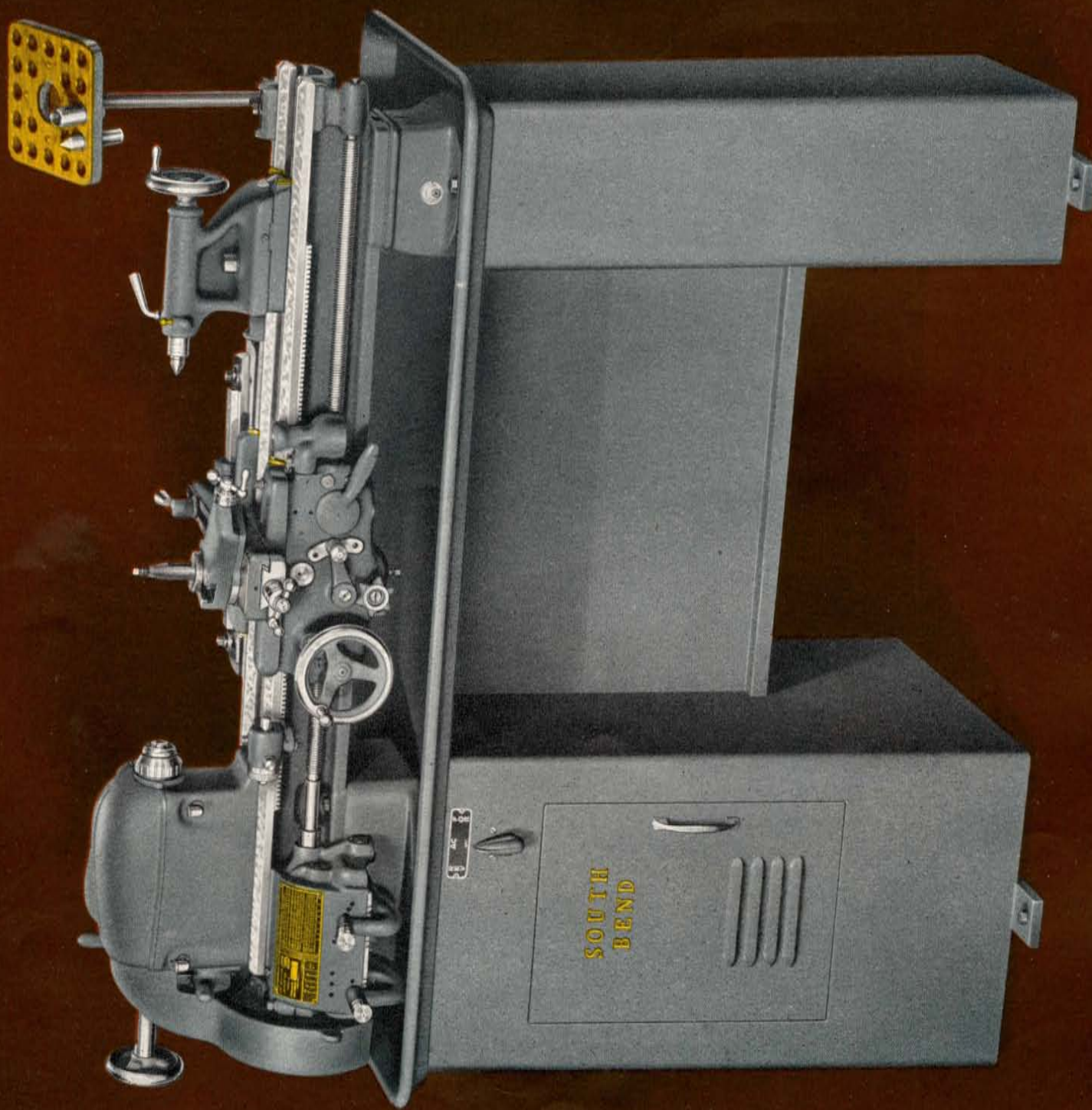
SPECIFICATIONS

CAPACITY OF LATHE	
Swing over bed and saddle wings.....	9 1/4"
Swing over saddle cross slide.....	5 1/2"
SPINDLE SPEEDS (subject to 5% variation)	
r.p.m. of spindle, direct belt driven.....	658, 370, 212
r.p.m. of spindle, back-gears engaged.....	127, 72, 41
HEADSTOCK	
Hole through spindle.....	3/8"
Maximum collar capacity.....	1 1/2"
Spindle nose diameter and threads per inch.....	1 1/2" 8
Size of center, Morse taper.....	No. 2
Width of cone pulley step for belt.....	5 1/2"
Small face plate diameter.....	5 1/2"
Front spindle bearing, diameter.....	1 1/8"
TAILSTOCK	
Size of center, Morse taper.....	No. 2
Spindle travel.....	2 1/4"
Each graduation on tailstock spindle.....	1/16"

Tailstock top set over for taper turning.....	5/8"
COMPOUND REST	
Cross slide travel.....	5 1/2"
Angular hand feed of compound rest top slide.....	2 1/4"
THREADS AND FEEDS	
Model A Lathe—Quick Change Gear and Power Feed Apron	
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 .0252"
Model B Lathe—Power Feed Apron and Independent Change Gears	
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	.001" to .0046"
Model C Lathe—Plain Apron and Independent Change Gears	
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.....	3/4" Dia.—8 Threads
TOOL POST	
Size of tool holder shank.....	3/8" x 1 1/8"
Size of cutter bit for tool holder.....	3/4" sq.
MOTOR	
Standard size of motor required.....	1/4 or 1/2 h.p.

9' X 3 1/2' SOUTH BEND
TOOLROOM UNDERNEATH
MOTOR DRIVEN LATHE



9-inch Toolroom Underneath Motor Driven Precision Lathe

Twelve Speeds—Back-Geared—Belt Drive to Spindle

The 9-inch Toolroom Lathe with underneath motor drive is illustrated at the left. This lathe is the same as the Model A Lathe shown on page 46, except for the toolroom attachments. A built-in chip pan forms the top of the welded steel column base on which the lathe is mounted.

Convenience and Ease of Operation are assured by the simple, practical design of this lathe. Well placed controls, large easy reading micrometer dials, lever reverse for threads and feeds, graduated compound rest, wrenchless bull gear lock, large handwheels, and other features save time and effort.

The Quick Change Gear Box provides for cutting right-and-left-hand screw threads from 4 to 224 per inch. Power longitudinal feeds .0015" to .0853" and power cross-feeds .0004" to .0252" are also obtained through the gear box. See page 32.

The Power Feed Apron has a smooth operating worm drive and friction clutch which permits engaging or disengaging the power cross-feed or the power longitudinal feed instantly. See illustration on page 33.

The Motor Drive Unit, enclosed in the cabinet underneath the lathe headstock, provides a wide range of twelve spindle

speeds. The cone pulley belt tension may be released and the hinged cone pulley cover on the headstock may be raised for shifting the cone pulley belt. Any desired belt tension can be obtained by adjusting a turnbuckle located inside the cabinet.

Toolroom Attachments included in the price of lathe consist of: 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 and drive equipment included in price of lathe consist of: metal column base with $\frac{3}{4}$ " hole; underneath belt motor drive unit; motor pulley with $\frac{3}{4}$ " hole; V-belt; flat leather belt and lacing; power feed apron; graduated compound rest; small face plate; tool post; two 60-degree centers; spindle sleeve; wrenches; quick change gear box; installation plan; and book "How to Run a Lathe". Motor and control are not included in price.

Catalog Number 8344-ZN 9" x 31½' Toolroom Underneath Motor Driven Lathe complete with Toolroom Attachments and Regular Equipment. Distance between centers 22 inches. Approximate shipping weight 630 lbs. Code word "Pzbon".

SPECIFICATIONS

CAPACITY OF LATHE

Swing over bed and saddle wings..... 9½"
Swing over saddle cross slide..... 3½"

SPINDLE SPEEDS (subject to 5% variation)

Low spindle speeds
r.p.m. of spindle, direct belt driven..... 688, 370, 212
r.p.m. of spindle, back-gears engaged..... 127, 72, 41
High spindle speeds
r.p.m. of spindle, direct belt driven..... 1270, 716, 408
r.p.m. of spindle, back-gears engaged..... 246, 138, 79

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..... 7½"
Small face plate diameter..... 5½"
Front spindle bearing, diameter..... 1½"

TAILSTOCK

Size of center, Morse taper..... No. 2
Spindle travel..... 2½"
Each graduation on tailstock spindle..... 1/16"
Tailstock top set over for taper turning..... 5/8"

COMPOUND REST

Cross slide travel..... 5½"
Angular hand feed of compound rest top slide..... 2½"

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 .0252"
Lead screw, 29° Acme thread..... ¾" Diam.—8 Threads

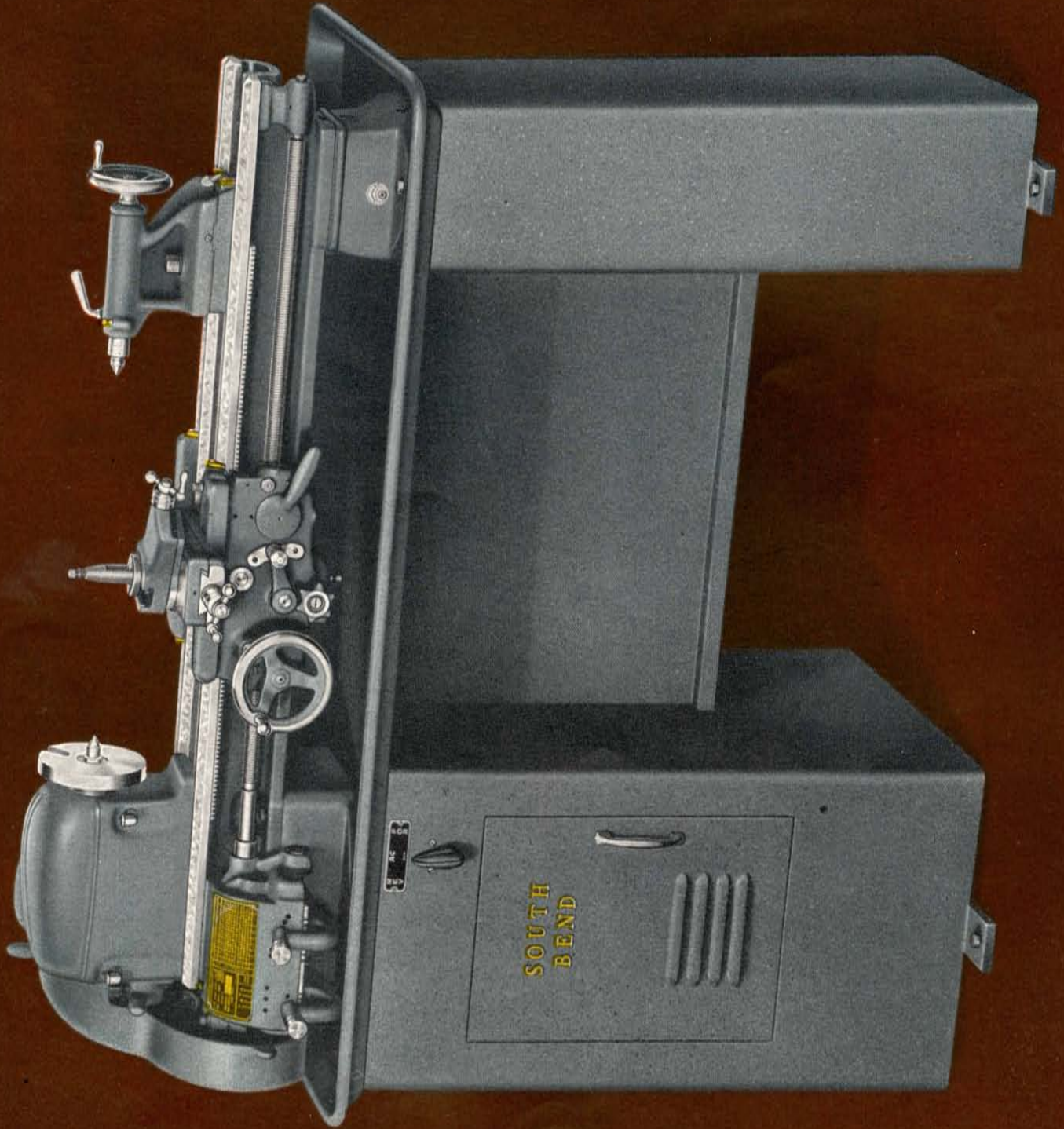
TOOL POST

Size of tool holder shank..... ¾" x 1½"
Size of cutter bit for tool holder..... 1/4" sq.

MOTOR

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

9" X 3½' SOUTH BEND
MODEL A UNDERNEATH
MOTOR DRIVEN LATHE



9-inch Underneath Motor Driven Precision Lathe

Twelve Speeds—Back-Geared—Belt Drive to Spindle

Made in Model A, Model B, and Model C

The 9-inch Model A Lathe with underneath motor drive is illustrated at the left. The 9-inch Model B and C Lathes are also made with this drive. These lathes are the same as those shown on pages 37, 39, and 41, respectively, except for the underneath motor drive and the necessary alterations in the headstock. A built-in chip pan forms the top of the welded steel column base on which the lathe is mounted.

Capable of machining work to the exacting tolerances demanded in modern industry, this lathe 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.

Convenience and Ease of Operation are assured by the simple, practical design of these lathes. Well placed controls, large easy reading micrometer dials, lever reverse for threads and feeds, graduated compound rest, wrenchless bull gear lock, large handwheels, and other features save time and effort.

The Motor Drive Unit, enclosed in the cabinet underneath

the lathe headstock, provides a wide range of twelve spindle speeds. The cone pulley belt tension may be released and the hinged cone pulley cover on the headstock may be raised for shifting the cone pulley belt. Any desired belt tension can be obtained by adjusting a turnbuckle located inside the cabinet.

Regular Equipment and drive equipment included in price of lathe consists of: metal column base with $\frac{3}{4}$ " hole; V-belt; flat belt motor drive unit; motor pulley with $\frac{3}{4}$ " hole; V-belt; leather belt and lacing; power feed apron; graduated compound rest; face plate; tool post; two 60-degree centers; spindle sleeve; wrenches; quick change gear box or set of change gears; installation plan; and book "How to Run a Lathe". Motor and control are not included in price.

Model A, Model B, and Model C
9-inch South Bend Underneath Motor Driven Lathes
with Metal Column Base

Catalog Number	Model	Length Bed Feet	Distance Between Centers	Approx. Ship. Wt. Crated Pounds	Code Word for Lathe
344-ZN	A	3 $\frac{1}{2}$	22-in.	570	Tyzer
377-ZN	B	3 $\frac{1}{2}$	22-in.	560	Tyzen
315-ZN	C	3 $\frac{1}{2}$	22-in.	550	Tyweg

SPECIFICATIONS

TAILSTOCK

Size of center, Morse taper..... No. 2
Spindle travel..... 2 $\frac{1}{2}$ "
Each graduation on tailstock spindle..... $\frac{1}{16}$ "
Tailstock top set over for taper turning..... $\frac{3}{8}$ "

COMPOUND REST

Cross slide travel..... 5 $\frac{1}{2}$ "
Angular hand feed of compound rest top slide..... 2 $\frac{1}{4}$ "

THREADS AND FEEDS

Model A Lathe—Quick Change Gear and Power Feed Apron.....
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.....
Cross feeds through friction clutch—
48 feeds R.H. or L.H..... .0015" to .0853"

Model B Lathe—Power Feed Apron and Independent Change Gears.....
Lead screw, 29° Acme thread.....
Size of tool holder shank..... $\frac{3}{8}$ " x $\frac{15}{16}$ "
Size of cutter bit for tool holder..... $\frac{3}{4}$ " sq.

Model C Lathe—Plain Apron and Independent Change Gears.....
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..... .001" to .0046"

Model A Lathe—Quick Change Gear and Power Feed Apron.....
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.....
Cross feeds through friction clutch—
48 feeds R.H. or L.H..... .0015" to .0853"

Model B Lathe—Power Feed Apron and Independent Change Gears.....
Lead screw, 29° Acme thread.....
Size of tool holder shank..... $\frac{3}{8}$ " x $\frac{15}{16}$ "
Size of cutter bit for tool holder..... $\frac{3}{4}$ " sq.

Model C Lathe—Plain Apron and Independent Change Gears.....
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..... .001" to .0046"

Model A Lathe—Quick Change Gear and Power Feed Apron.....
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.....
Cross feeds through friction clutch—
48 feeds R.H. or L.H..... .0015" to .0853"

Model B Lathe—Power Feed Apron and Independent Change Gears.....
Lead screw, 29° Acme thread.....
Size of tool holder shank..... $\frac{3}{8}$ " x $\frac{15}{16}$ "
Size of cutter bit for tool holder..... $\frac{3}{4}$ " sq.

Model C Lathe—Plain Apron and Independent Change Gears.....
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..... .001" to .0046"

Model A Lathe—Quick Change Gear and Power Feed Apron.....
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.....
Cross feeds through friction clutch—
48 feeds R.H. or L.H..... .0015" to .0853"

Model B Lathe—Power Feed Apron and Independent Change Gears.....
Lead screw, 29° Acme thread.....
Size of tool holder shank..... $\frac{3}{8}$ " x $\frac{15}{16}$ "
Size of cutter bit for tool holder..... $\frac{3}{4}$ " sq.

CAPACITY OF LATHE

Swing over bed and saddle wings..... 9 $\frac{1}{4}$ "
Swing over saddle cross slide..... 5 $\frac{1}{2}$ "

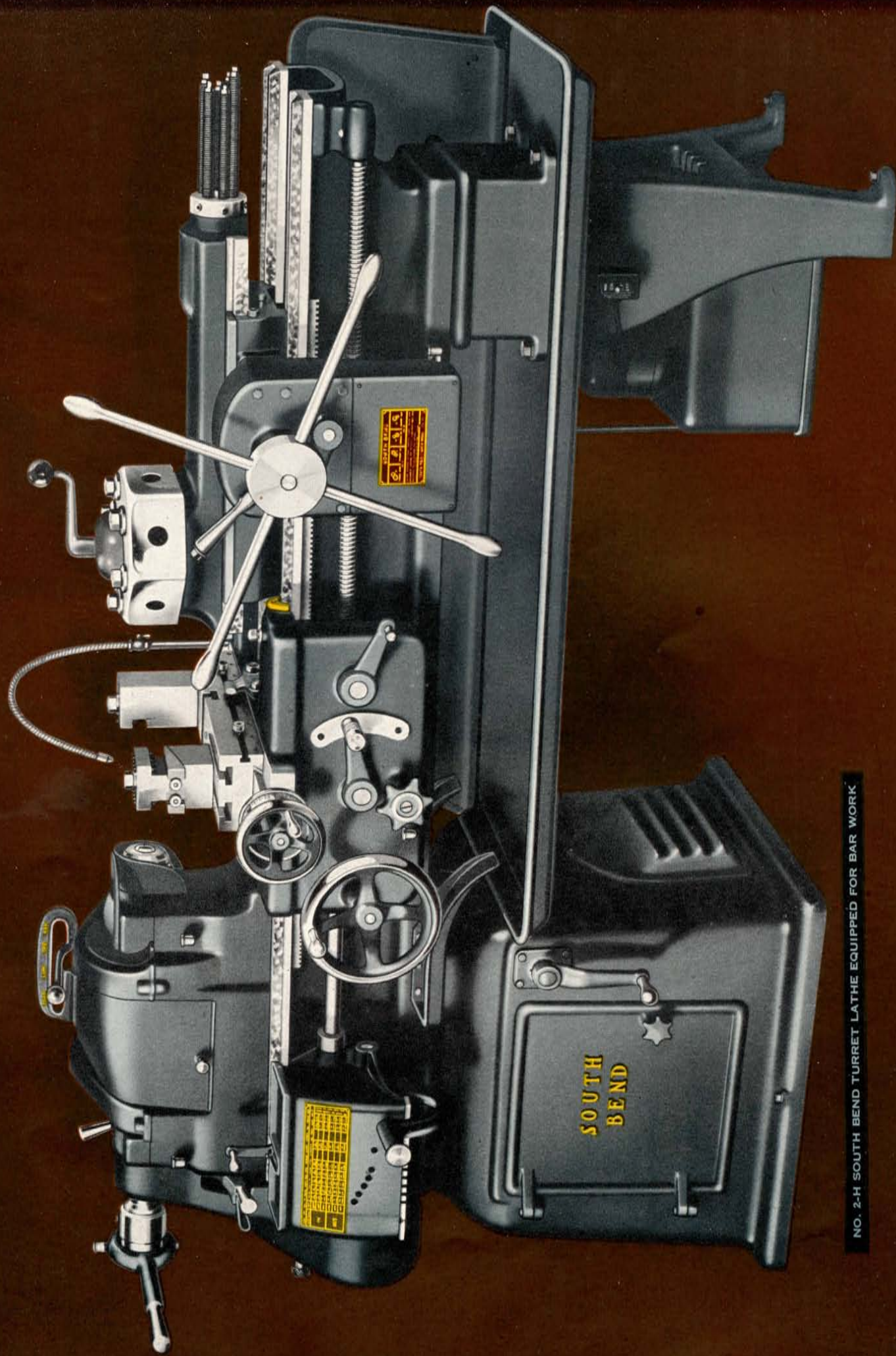
SPINDLE SPEEDS (subject to 5% variation)

Low spindle speeds
r.p.m. of spindle, direct belt driven..... 658, 370, 212
r.p.m. of spindle, back-gears engaged..... 127, 72, 41
High spindle speeds
r.p.m. of spindle, direct belt driven..... 1270, 716, 408
r.p.m. of spindle, back-gears engaged..... 246, 138, 79

HEADSTOCK

Hole through spindle.....
Maximum collet capacity.....
Spindle nose diameter and threads per inch..... 1 $\frac{1}{2}$ "-8
Size of center, Morse taper..... No. 2
Width of cone pulley step for belt..... 1"
Small face plate diameter..... 5 $\frac{1}{4}$ "
Front spindle bearing, diameter..... 1 $\frac{15}{16}$ "

SOUTH BEND LATHES WORKS



NO. 2-H SOUTH BEND TURRET LATHE EQUIPPED FOR BAR WORK

South Bend No. 2-H Turret Lathe

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

The No. 2-H South Bend Turret Lathe is recommended for the manufacture of duplicate parts from steel, cast iron, brass, plastics, or other materials. This lathe can be equipped with Universal Chuck or Independent Chuck, for machining castings, forgings, etc., or it can be equipped with Handlever Draw-in Collet Attachment for machining bar stock or tubing.

The Power Feed Ram-Type Turret has automatic indexing and individual stops for each of the six turret faces.

The Universal Carriage has friction clutch drive in the apron for power longitudinal feeds and power cross-feeds, also lead screw and split nut for cutting accurate screw threads.

The Quick Change Gear Box at the headstock end of the lathe provides 48 changes for power carriage feeds and power turret feeds, and for cutting 48 pitches of screw threads, ranging from 4 to 224 per inch.

The Underneath Motor Drive and the back-geared headstock provide a wide range of spindle speeds. Direct belt drive

to the spindle for high speeds assures smooth operation on small diameter work. Slow speeds for heavy cuts on large diameter work are driven through back gears.

Regular Equipment included in the price of this 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.

Motor, controls, handlever collet attachment, coolant reservoir, coolant pump, splash pan, and piping are not included in price of lathe, but can be supplied at extra cost.

No. 2-H South Bend Turret Lathes

Bed Length		6-ft.	7-ft.
Catalog Number	2-CT	2-DT	
Shipping Weight, Crated	2810	2890	
Code Word	Tyvam	Tyvax	

SPECIFICATIONS

CAPACITY OF LATHE

Hole through spindle..... 1 3/8"
 Swing over bed and saddle wings..... 16 3/4"
 Width of lathe bed..... 11 1/2"
 Spindle nose dia. and threads per inch..... 2 3/8"-6
 Maximum collet capacity through handlever collet chuck..... 1"
 Maximum capacity through universal lathe chuck..... 1 3/8"

SPINDLE SPEEDS (Standard spindle speeds with two speed motor, subject to 5% variation)

Low spindle speeds (Not available with 1-speed motor)
 r.p.m. of spindle, direct belt driven..... 440, 250, 132
 r.p.m. of spindle, back-gears engaged..... 55, 31, 16

High spindle speeds

r.p.m. of spindle, direct belt driven..... 880, 500, 265
 r.p.m. of spindle, back-gears engaged..... 111, 63, 33

TURRET

Diameter of holes in turret faces..... 1 1/2"
 Center of turret hole to top of turret slide..... 2 1/2"
 Effective feed of turret slide..... 6 1/2"
 Distance between opposite flats..... 9 3/8"
 Maximum distance between spindle nose and turret face at beginning of indexing movement..... 6 ft. bed 28 1/4", 7 ft. bed 40 1/4"

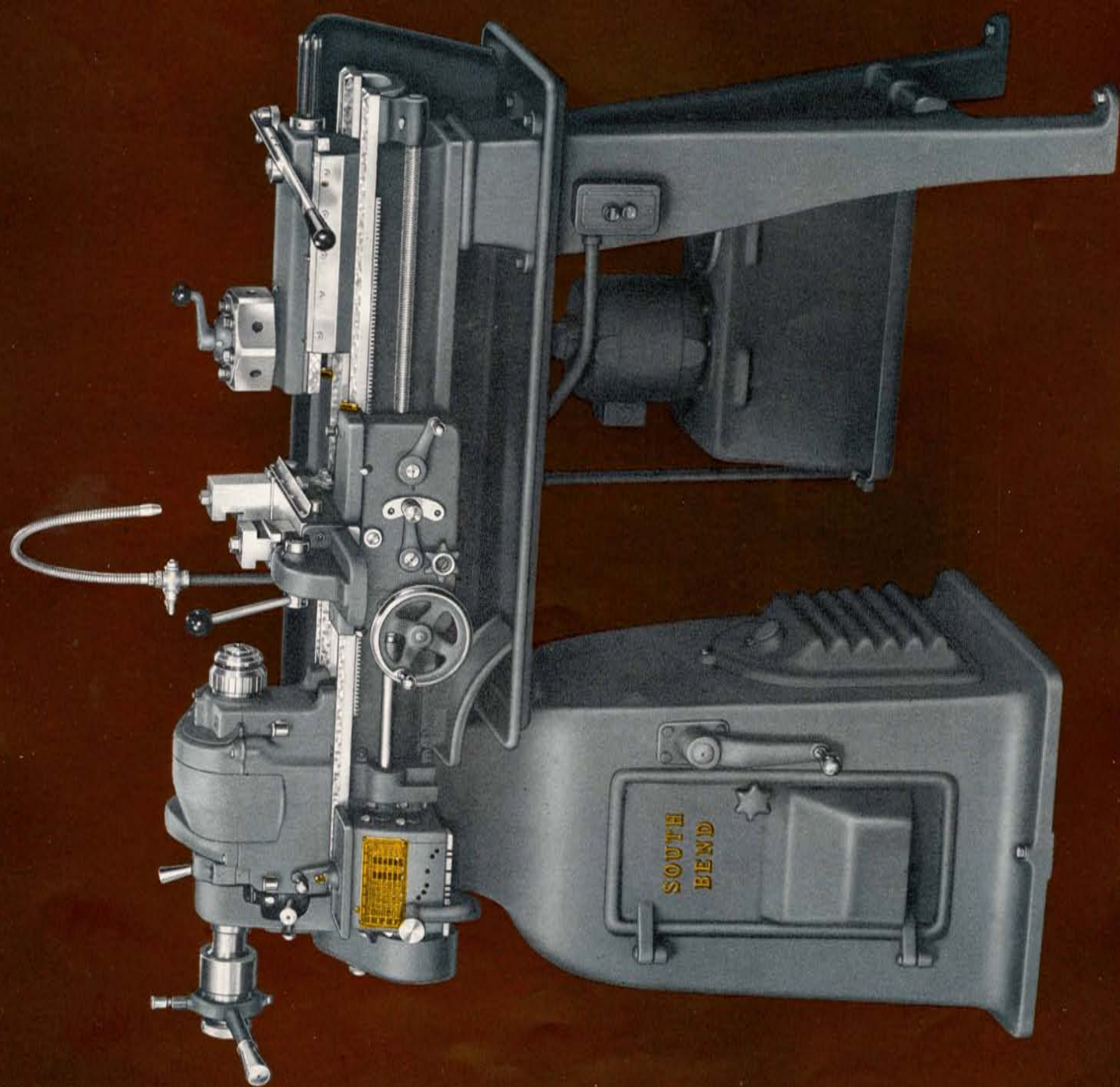
UNIVERSAL CARRIAGE

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 22 3/4", 7 ft. bed 34 1/2"

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., 1 1/2 h.p.

NO. 1006-Z SOUTH BEND
TURRET LATHE



No. 1006-Z Precision Turret Lathe

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

The No. 1006-Z South Bend Turret Lathe has handlever operated turret with automatic indexing and individual stops for each of the six turret faces. The turret head may be back-indexed or spun to skip tool positions.

The Double Tool Cross Slide has front and rear tool blocks for turning, forming, facing, and cutting-off operations. The handlever can be removed and the cross-feed screw attached, permitting use of all power carriage feeds with the double tool cross slide for turning and facing operations.

The 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.

The Quick Change Gear Box provides 48 changes for power carriage feeds and for cutting 48 different pitches of screw threads, 4 to 224 per inch.

The Underneath Motor Drive and the back-geared headstock provide a wide range of spindle speeds. Direct belt drive to the spindle for high speeds assures smooth operation on small diameter work. Slow speeds for heavy cuts on large diameter work are driven through the back gears.

Catalog Number 1006-Z Underneath Motor Driven Quick Change Gear Floor Leg Turret Lathe with 3 1/2 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, 960 lbs. Code word "Lyritz".

NOTE: Splash pan on back of lathe, tailstock, centers, spindle sleeve, face plates, draw-in collet chuck, thread cutting stop, coolant equipment, and electrical equipment for driving lathe are not included with the lathe but can be supplied at extra cost. See pages 56 to 63.

SPECIFICATIONS

CAPACITY OF LATHE

Hole through spindle.....	1 3/8"
Swing over bed and saddle wings.....	10 1/8"
Width of lathe bed.....	7 1/8"
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 (Standard spindle speeds subject to 5% variation)

Low spindle speeds	
r.p.m. of spindle, direct belt driven.....	700, 434, 277
r.p.m. of spindle, back-gears engaged.....	129, 79, 50

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

High spindle speeds	
r.p.m. of spindle, direct belt driven.....	1357, 837, 535
r.p.m. of spindle, back-gears engaged.....	248, 153, 97

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 .0036"
Maximum longitudinal travel of universal carriage, hand or power feed.....	16"

DOUBLE TOOL CROSS SLIDE

Swing over double tool cross slide.....	3 5/8"
Cross travel of cross slide.....	3 3/8"
Maximum size cutter bit tool block opening will take.....	1/8" x 1/8"

COMPOUND REST CROSS SLIDE

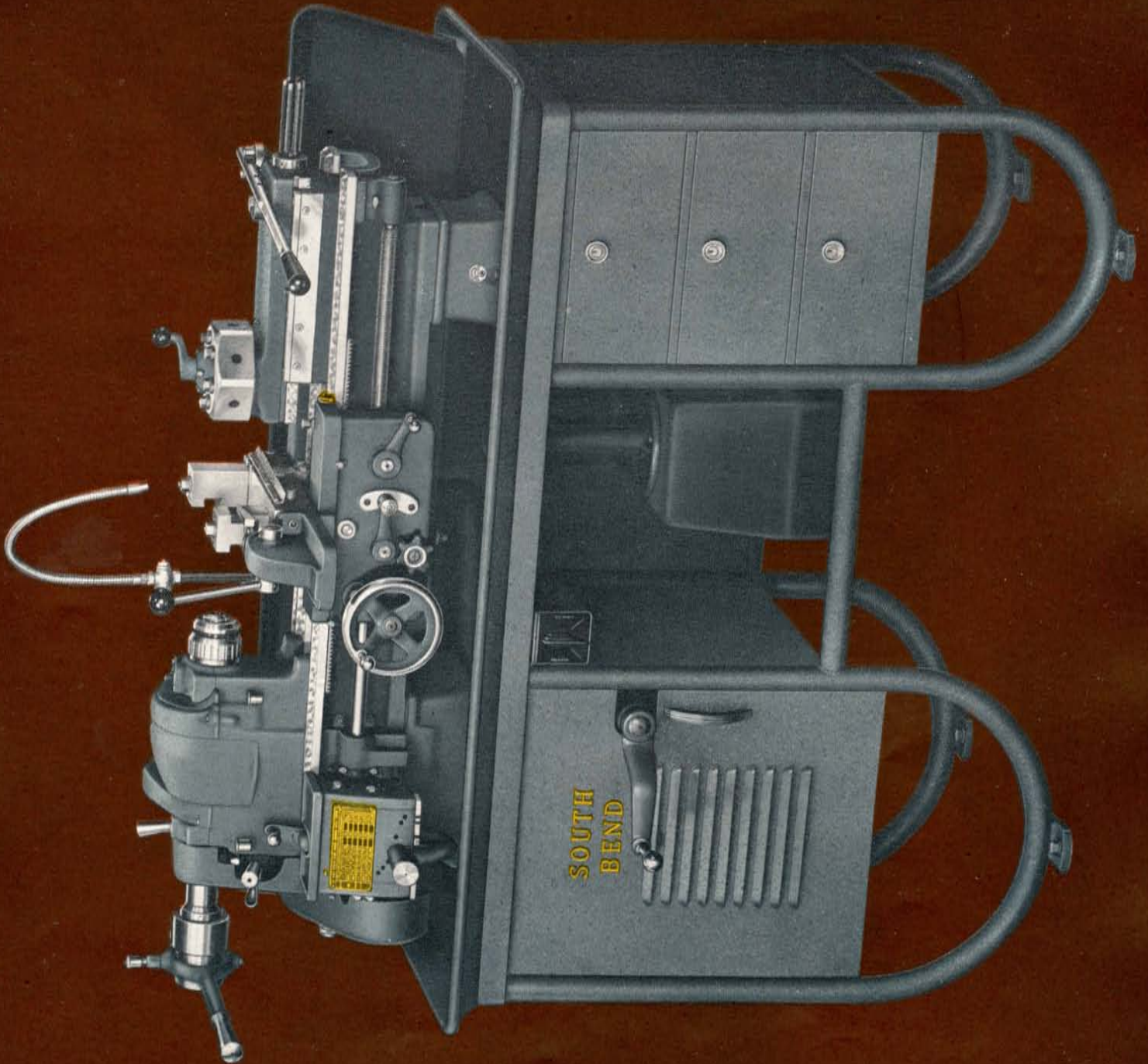
Swing over compound cross slide.....	5 7/8"
Cross slide will travel.....	8 1/8"
Angular hand feed of top slide.....	2"
Size of tool holder shank for tool post.....	3/8" x 1 1/8"
Size cutter bits tool holder takes.....	1/4" x 1/4"
Power cross-feeds.....	.0006" to .0309"

MOTOR

Standard size of motor required.....	3/4 h.p.
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SOUTH BEND LATHE WORKS

NO. 1005-Z SOUTH BEND
BENCH TURRET LATHE



No. 1005-Z Precision Bench Turret Lathe

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

The No. 1005-Z South Bend Turret Lathe has handlever operated turret with automatic indexing and individual stops for each of the six turret faces. The turret head may be back-indexed or spun to skip tool positions.

The Double Tool Cross Slide has front and rear tool blocks for turning, forming, facing, and cutting-off operations. The handlever can be removed and the cross-feed screw attached, permitting use of all power carriage feeds with the double tool cross slide for turning and facing operations.

The 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 levels and short tapers.

The Quick Change Gear Box provides 48 changes for power carriage feeds, and for cutting 48 different pitches of screw threads, 4 to 224 per inch.

The Underneath Motor Drive and the back-geared headstock provide a wide range of spindle speeds. Direct belt drive to the spindle for high speeds assures smooth operation on small diameter work. Slow speeds for heavy cuts on large diameter work are driven through the back gears.

Catalog Number 1005-Z 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) 1000 lbs. Code word "Jytom".

NOTE: Splash pan, tailstock, centers, spindle sleeve, face plates, draw-in collet chuck attachment, thread cutting stop, coolant equipment, and electrical equipment for driving lathe are not included in the price of the lathe but can be supplied at extra cost. See pages 56 to 63.

SPECIFICATIONS

CAPACITY OF LATHE

Hole through spindle.....	13"
Swing over bed and saddle wings.....	10½"
Width of lathe bed.....	7½"
Spindle nose diameter and threads per inch.....	2¼"-8
Maximum collet capacity through handlever collet chuck.....	1"
Maximum capacity through universal lathe chuck.....	1¾"

SPINDLE SPEEDS (Standard spindle

speeds subject to 5% variation)

Low spindle speeds	
r.p.m. of spindle, direct belt driven.....	700, 434, 277
r.p.m. of spindle, back-gears engaged.....	129, 79, 50

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

High spindle speeds	
r.p.m. of spindle, direct belt driven.....	1357, 837, 535
r.p.m. of spindle, back-gears engaged.....	248, 153, 97

TURRET

Diameter of holes in turret faces*	5/8"
Center of turret hole to top of turret slide.....	1½"
Effective feed of turret slide.....	1/4"
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 7/8"
Cross travel of cross slide.....	3 5/8"
Maximum size cutter bit tool block opening will take.....	1 1/8" x 1 1/8"

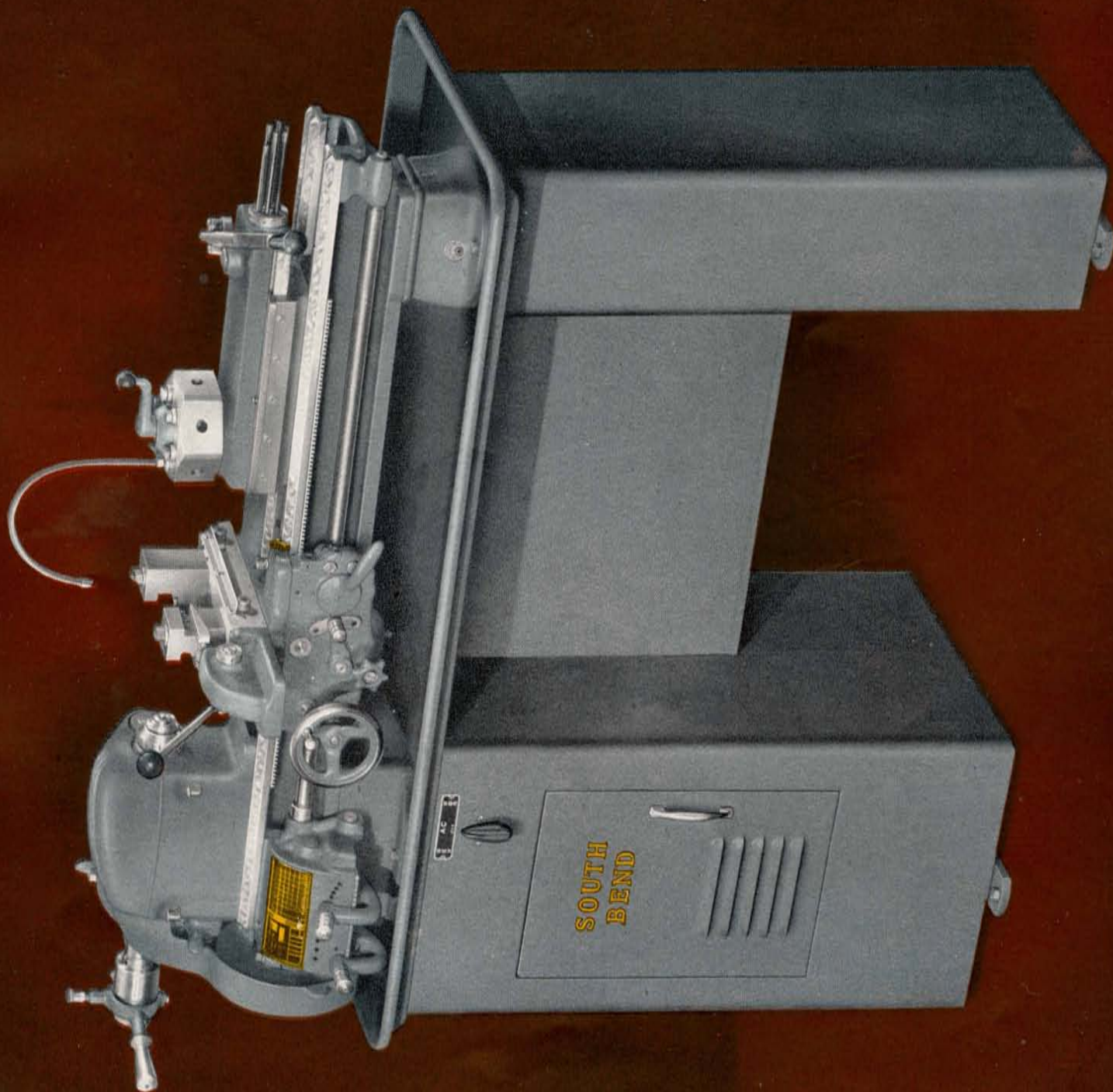
COMPOUND REST CROSS SLIDE

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

MOTOR

Standard size of motor required.....	¾ h.p.
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NO. 930-Z SOUTH BEND
TURRET LATHE



No. 930-Z Precision Turret Lathe

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

The No. 930-Z South Bend Turret Lathe is practical for manufacturing small precision parts. It meets the demand for fast, efficient production, yet it is easily adaptable to many classes of work. It 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, this lathe is especially suitable for second operation work.

The **Handlever Bed Turret** has automatic indexing and individual stops for each of the six turret faces. Turret head may be back-indexed or spun to skip tool positions.

The **Double Tool Cross Slide** has front and rear tool blocks for 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 all power carriage feeds with the double tool cross slide.

The **Compound Rest Cross Slide**, supplied in addition to the

double tool cross slide, has power cross-feed and power longitudinal feed. Compound rest swivel is graduated 180° and may be set at any angle for machining bevels and short tapers.

The **Underneath Motor Drive** and the back-geared headstock provide a wide range of spindle speeds. Direct belt drive to the spindle for high speeds assures smooth operation on small diameter work. Slow speeds for heavy cuts on large diameter work are driven through the back gears.

Catalog Number 930-Z Underneath Motor Driven Quick Change Gear Turret Lathe with 3½ ft. bed, welded steel column base, 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, 720 lbs. Code word . . . "Syvut".

NOTE: Tailstock, centers, spindle sleeve, face plates, draw-in collet chuck, lathe chuck, splash pan, thread cutting stop, coolant equipment, and electrical equipment for driving lathe are not included in the price of the lathe.

SPECIFICATIONS

CAPACITY OF LATHE

Hole through spindle	¾"
Swing over bed and saddle wings	9¼"
Width of lathe bed	5½"
Spindle nose diameter and threads per inch	1½" 8
Maximum capacity through collet chuck	½"
Maximum capacity through universal lathe chuck	¾"

SPINDLE SPEEDS (Standard spindle speeds subject to 5% variation)

Low spindle speeds	
r.p.m. of spindle, direct belt driven	658, 370, 212
r.p.m. of spindle, back-gears engaged	127, 72, 41
High spindle speeds	
r.p.m. of spindle, direct belt driven	1270, 716, 408
r.p.m. of spindle, back-gears engaged	246, 138, 79

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

TURRET

Diameter of holes in turret face*	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	20⅝"

UNIVERSAL CARRIAGE

Thread cutting range	4 to 224 per inch
Power longitudinal feeds	.0015" to .0353"
Maximum longitudinal travel of universal carriage, hand or power feed	18"

DOUBLE TOOL CROSS SLIDE

Swing over double tool cross slide	3½"
Cross travel of cross slide	3⅝"
Maximum size cutter bit tool block opening will take	⅞" x ⅞"

COMPOUND REST CROSS SLIDE

Swing over compound cross slide	5½"
Cross slide will travel	5⅞"
Angular hand feed to top slide	2¼"
Size of tool holder shank for tool post	⅝" x ⅞"
Size cutter bits tool holder takes	⅞" x ⅞"
Power cross-feeds	.0004" to .0252"

MOTOR

Standard size of motor required	½ h.p.
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Handlever Collet Attachment

Standard Extra

The Handlever Type Draw-in Collet Attachment permits releasing and feeding bar stock through the collet without stopping the lathe. The gripping action of the collet can be set to any desired tension by adjusting the cylinder of the adjustable chuck closer. The price of the Handlever Draw-in Collet Attachment includes adjustable chuck closing mechanism and hollow draw-bar, spindle nose cap, spanner wrench for nose cap, and tapered steel closing sleeve. Collets are not included in the price of the draw-in collet attachment but are extra, as listed on page 57.

Handlever Draw-in Collet Attachment

Catalog Number	Size of Lathe	Collet Required	Collet Capacity in Sixty-fourths (for Round Work)	Code Word
5206-W	9" and Series 900	No. 3	$\frac{1}{8}$ in. up to $\frac{1}{2}$ in.	Alpat
5210	10" $\frac{10}{16}$ " Collet	No. 2	$\frac{1}{8}$ in. up to $\frac{11}{16}$ in.	Calah
5219	10" $\frac{10}{16}$ " Collet	No. 5	$\frac{1}{8}$ in. up to 1 in.	Cahum
5213	13" $\frac{13}{16}$ " Collet	No. 2	$\frac{1}{8}$ in. up to $\frac{11}{16}$ in.	Andes
5214	14 $\frac{1}{2}$ "	No. 4	$\frac{1}{8}$ in. up to $\frac{3}{4}$ in.	Ciked
5216	16", 16 $\frac{1}{4}$ " and No. 2-H	No. 5	$\frac{1}{8}$ in. up to 1 in.	Aster

SOUTH BEND LATHE WORKS

SOUTH BEND
Precision LATHES

Handwheel Collet Attachment

Standard Extra

The draw-in collet chuck is the most accurate of all types of chucks and is used for precision work, such as making small tools and manufacturing small parts for watches, typewriters, radios, etc.

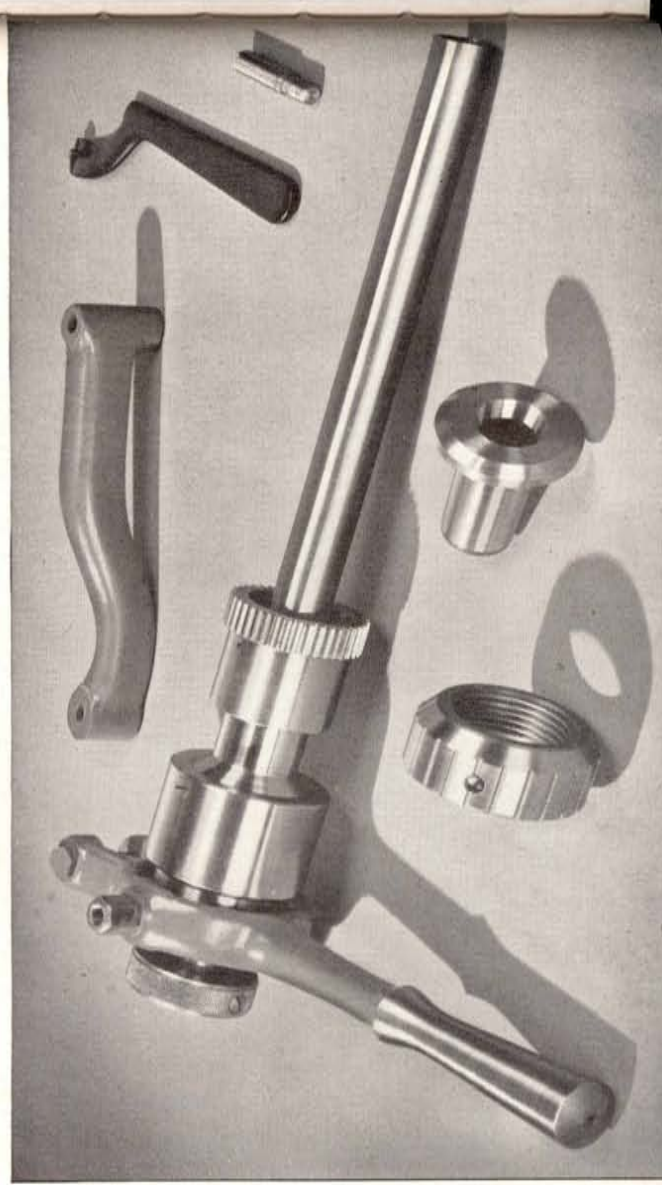
The price of the Handwheel Draw-in Collet Attachment includes handwheel and hollow draw-bar, spindle nose cap, spanner wrenches for draw-bar and nose cap, and tapered steel closing sleeve. Collets are not included in price of draw-in collet attachment, but are extra as listed on page 57.

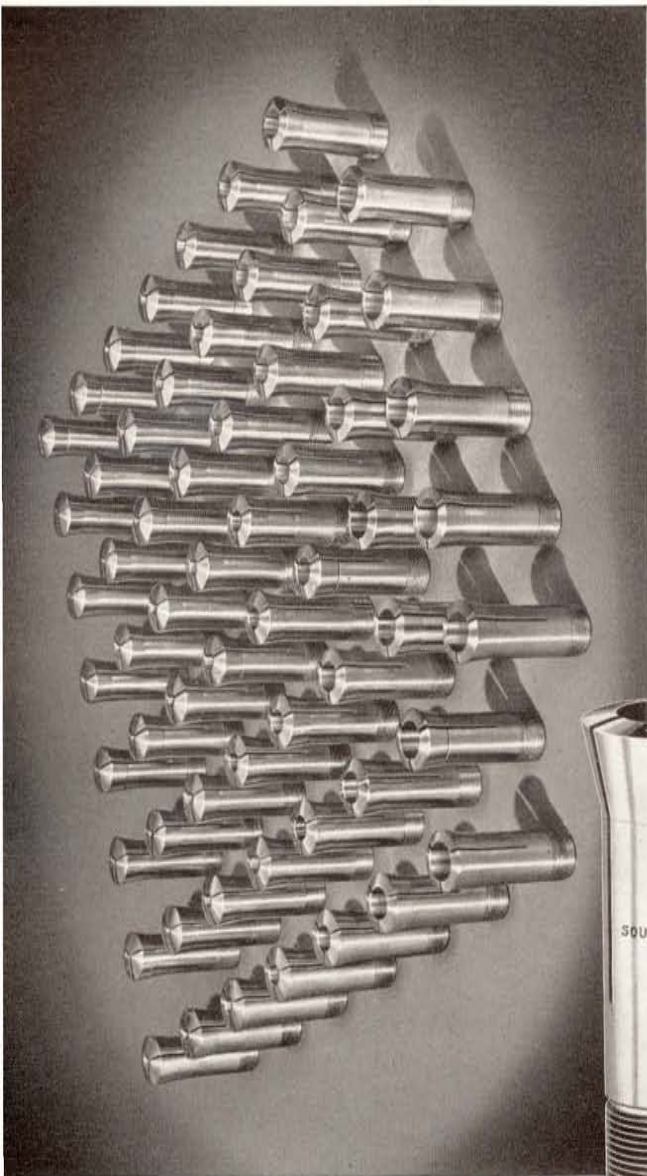
Handwheel Draw-in Collet Attachment

Catalog Number	Size of Lathe	Collet Required	Collet Capacity in Sixty-fourths (for Round Work)	Code Word
4306-W	9" and Series 900	No. 3	$\frac{1}{8}$ in. up to $\frac{1}{2}$ in.	Acrot
4310	10" $\frac{10}{16}$ " Collet	No. 2	$\frac{1}{8}$ in. up to $\frac{11}{16}$ in.	Cibah
4312	10" $\frac{10}{16}$ " Collet	No. 5	$\frac{1}{8}$ in. up to 1 in.	Cihak
4313	13" $\frac{13}{16}$ " Collet	No. 2	$\frac{1}{8}$ in. up to $\frac{11}{16}$ in.	About
4314	14 $\frac{1}{2}$ "	No. 4	$\frac{1}{8}$ in. up to $\frac{3}{4}$ in.	Cilam
4316	16", 16 $\frac{1}{4}$ " and No. 2-H	No. 5	$\frac{1}{8}$ in. up to 1 in.	Adore

Fig. 54. Above—Handwheel Draw-in Collet Attachment

Fig. 55. Below—Handlever Draw-in Collet Attachment





Collets for South Bend Lathes

Used With Handwheel and Handlever Collet Attachments
Standard Extras

Collets for South Bend Lathes are available in either brass or steel. Choice of material will depend on the class of work for which the collet is to be used. Standard collets are supplied only for round work in fractional sizes. Special collets with decimal hole sizes are supplied to order, any size between .0625" and the maximum collet capacity of the lathe. Special collets with metric hole sizes are supplied in increments of 1/2 mm, any size between 1.5 mm and the maximum metric collet capacity of the lathe. Each collet is carefully inspected and tested before it is packed for shipment.

STEEL COLLETS

Collets made of steel are carefully heat-treated for long service, and are precision ground. They are recommended for long run production jobs, and other applications where maximum service is required.

BRASS COLLETS

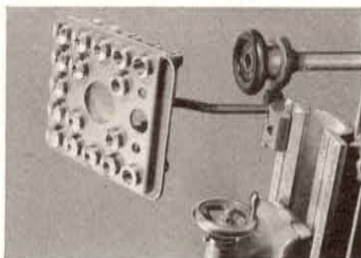
Collets made of brass are not intended to replace the more expensive steel collets, but they do not mar polished surfaces, and are practical for many appli-

tions. Their low cost makes them especially desirable for odd sizes that are used only occasionally. Brass collets are not made for square, hexagon, or other special shapes.

Collet Rack for South Bend Lathes

Standard Extra

This collet rack provides a suitable place for keeping collets, centers, spindle sleeve, and draw-bar. Tray along lower edge of collet rack is provided for holding spanner for holding 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	Code Word
1770-W	9" and 900	19 Collets	Rahah
1752	10" Regular	17 Collets	Rawik
1753	10"-1" Col and 1000	17 Collets	Bazuk
1772	13" 14 1/2"	17 Collets	Rajem
1791	14 1/2"	17 Collets	Rakaw
1774	16", 16 1/4", and 2-H	17 Collets	Rajuc

Collets and Collet Sets for South Bend Lathes

Collet	Size of Lathe	Description	BRASS COLLETS		STEEL COLLETS	
			Cat. No.	Code	Cat. No.	Code
No. 3	9" and Series 900	1 Collet, any standard size 1/16" to 1/2" in sixty-fourths	1696	Svva	609-W	Catra
		Set of 8 Collets in 16ths, 1/16" to 1/2" capacity inclusive	2235	Cvka	2047	Hzapm
		Set of 7 Collets in odd 32nds, 1/32" to 1 1/2" cap. inclusive	2534	Cvnb	2476	Cvrob
		Set of 14 Collets in odd 64ths, 1/64" to 1 1/4" cap. inclusive	2535	Cvni	2477	Cvroq
No. 2	10"-1 1/4" Collet and 13"	1 Collet, any standard size 1/16" to 1 1/4" in sixty-fourths	1697	Svva	1721	Cagin
		Set of 11 Collets in 16ths, 1/16" to 1 1/4" capacity inclusive	2238	Cvka	2432	Hrac
		Set of 10 Collets in odd 32nds, 1/32" to 1 1/2" cap. inclusive	2536	Cvnb	2478	Cvrom
		Set of 20 Collets in odd 64ths, 1/64" to 1 1/4" cap. inclusive	2537	Cvni	2479	Cvrot
No. 5	10"-1" Collet, Series 1000, 16", 16 1/4", and No. 2-H	1 Collet, any standard size 1/16" to 1" in sixty-fourths	1698	Svva	1722	Cagot
		Set of 16 Collets in 16ths, 1/16" to 1" capacity inclusive	2241	Cvka	2435	Hsak
		Set of 15 Collets in odd 32nds, 1/32" to 1 1/2" cap. inclusive	2540	Cvnb	2482	Cvruu
		Set of 30 Collets in odd 64ths, 1/64" to 1 1/4" cap. inclusive	2541	Cvni	2483	Cvruw
No. 4	14 1/2"	1 Collet, any standard size 1/16" to 3/4" in sixty-fourths	1699	Svva	1713	Cepas
		Set of 12 Collets in 16ths, 1/16" to 3/4" capacity inclusive	2244	Cvka	2438	Hstab
		Set of 11 Collets in odd 32nds, 1/32" to 1 1/2" cap. inclusive	2538	Cvnb	2480	Cvrob
		Set of 22 Collets in odd 64ths, 1/64" to 1 1/4" cap. inclusive	2539	Cvni	2481	Cvruh

SOUTH BEND LATHE WORKS

57

SOUTH BEND 22, INDIANA, U.S.A.

SOUTH BEND

Precision LATHES

Telescopic Taper Attachment

For 10-inch and Larger South Bend Lathes

Standard Extra

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 in inches per foot of taper on the other end.* 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 to 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.

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 telescopic taper attachment must be fitted to lathe at factory.

*Metric graduations can be supplied to order.

Telescopic Taper Attachment

(Can be Used only on Lathe with Graduated Compound Rest)

Cat. No.	Size of Lathe	Swing Over Cross Slide	Maximum Taper At One Setting	Per Foot	In Degrees	Approx. Shop. Wgt.	Code Word
1545	10" and Ser. 1000	5 3/4" in.	8 1/2" in.	3 1/2" in.	16 1/2	40 lbs.	Mekoe
379	13"	8" in.	9 1/2" in.	3 1/2" in.	16 1/2	65 lbs.	Mokil
399	14 1/2"	8 3/4" in.	9 3/4" in.	3 1/2" in.	16 1/2	80 lbs.	Mokux
381	16"	9 1/2" in.	11 1/2" in.	3 1/2" in.	16 1/2	100 lbs.	Munar
383	16 3/4"	19" in.	11 1/2" in.	3 1/2" in.	16 1/2	100 lbs.	Mayix

SOUTH BEND LATHE WORKS

SOUTH BEND

Precision LATHES

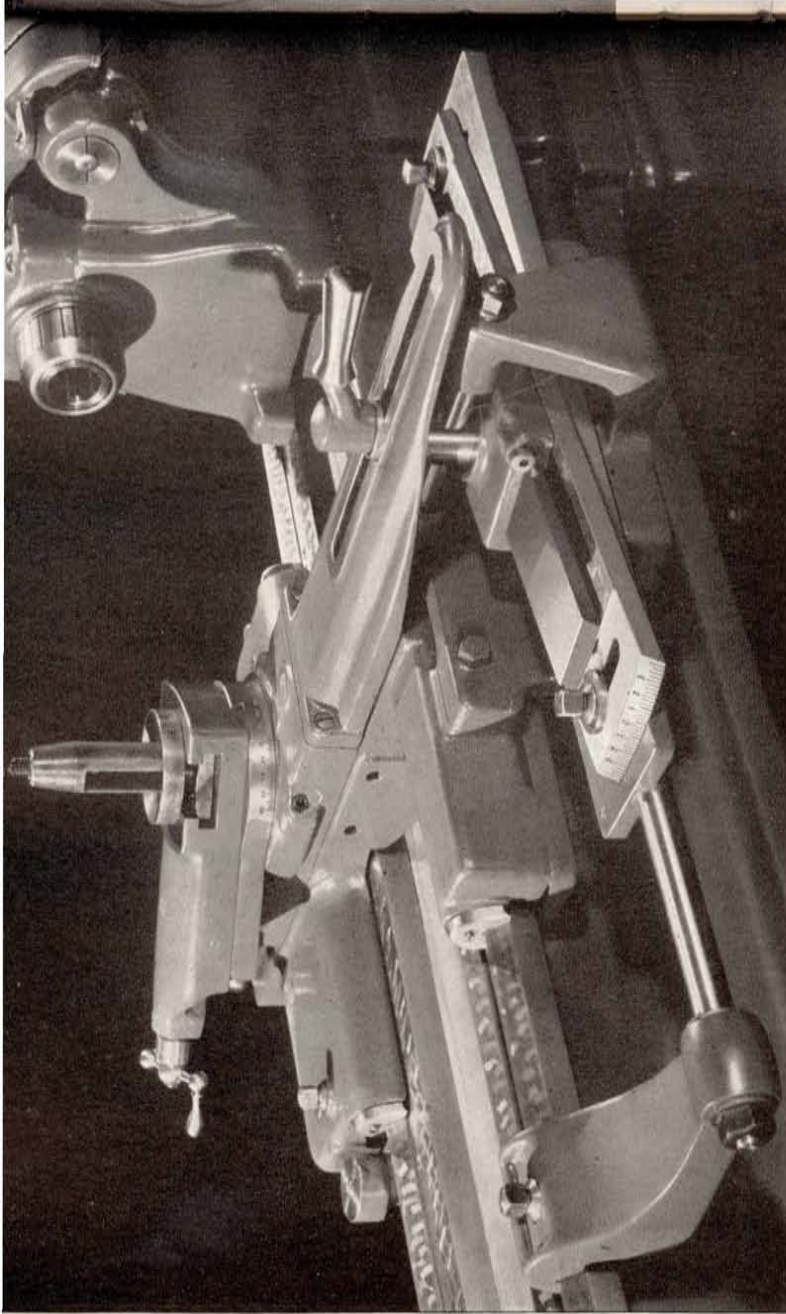


Fig. 59. Telescopic Taper Attachment for 10-inch and Larger South Bend Lathes

Plain Taper Attachment for 9" Lathes

Standard Extra

The plain taper attachment shown at right is supplied for the 9-inch and Series 900 Lathes. This taper attachment has plain cross-feed screw and straight gibbs. The cross-feed screw and nut must be disconnected before the taper attachment can be engaged for taper turning and boring.

The swivel bar can be set for cutting any taper up to 3 1/2" per foot and up to 7" in length at one setting. Swinging over lathe cross slide with taper attachment is 5". Attachment must be fitted to lathe at factory. (Can be used only on lathe with graduated compound rest.)

Cat. No. 428-W. Plain Taper Attachment for 9-inch and Series 900 South Bend Lathes. Weight 35 lbs. Code word "Hapwo".

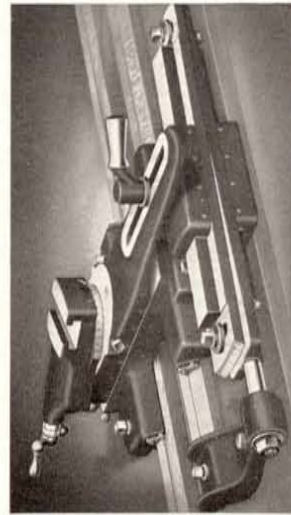


Fig. 60. Plain Taper Attachment for 9-inch Lathes

Electric Grinding Attachment

Standard Extra

This powerful and efficient Grinding Attachment is recommended for external grinding. The grinding spindle revolves on pre-lubricated, precision ball bearings which are sealed to protect them from damage by dust and grit.

Price includes $\frac{1}{4}$ h.p. motor, 1725 r.p.m., ball-bearing grinding spindle, V-belt, belt guard, one $4" \times \frac{1}{2}"$ Aluminum grinding wheel (Catalog No. 2759), and mounting clamp. 3-phase motor is

supplied with extension cord but not switch or plug. 1-phase, and D.C. motors are supplied with extension cord, switch, and plug. When ordering Grinder specify exact voltage, phase, and cycle.

Electric Grinding Attachment

Size of Lathe	Diameter Will Grind	3-Phase 60-cycle A.C. Motor*		1-Phase 60-cycle A.C. 115 V. Motor*		Direct Current 115 V. Motor*	
		No.	Code	No.	Code	No.	Code
9" & 900	5 $\frac{1}{4}$ -in.	303-DN	Szbed	301-BN	Sunar	300-KN	Szber
10" & 1000	5 $\frac{1}{2}$ -in.	303-DR	Szbed	301-BR	Sunar	300-KR	Szber
13"	8 -in.	303-DT	Szben	301-BT	Suniz	300-KT	Szbio
14 $\frac{1}{2}"$	9 -in.	303-DF	Szbed	301-BF	Surat	300-KF	Szbio
16"	9 $\frac{1}{2}$ -in.	303-DH	Szbez	301-BH	Surez	300-KH	Szbin
16 $\frac{1}{4}"$	18 $\frac{3}{4}$ -in.	303-DH	Szbez	301-BH	Surez	300-KH	Szbin

*Motors for other current characteristics can also be supplied.

Milling and Keyway Cutting Attachment

Standard Extra

The milling and keyway cutting attachment 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 and vertical plane.



Arbor for Milling Cutters

Standard Extra

For holding cutters with standard 1-inch hole. Capacity between nut and shoulder is $1\frac{1}{2}$ inches. Three spacing collars and hardened nut are furnished with each arbor.

109-NH. No. 3 M.T. Code... "Myvec"

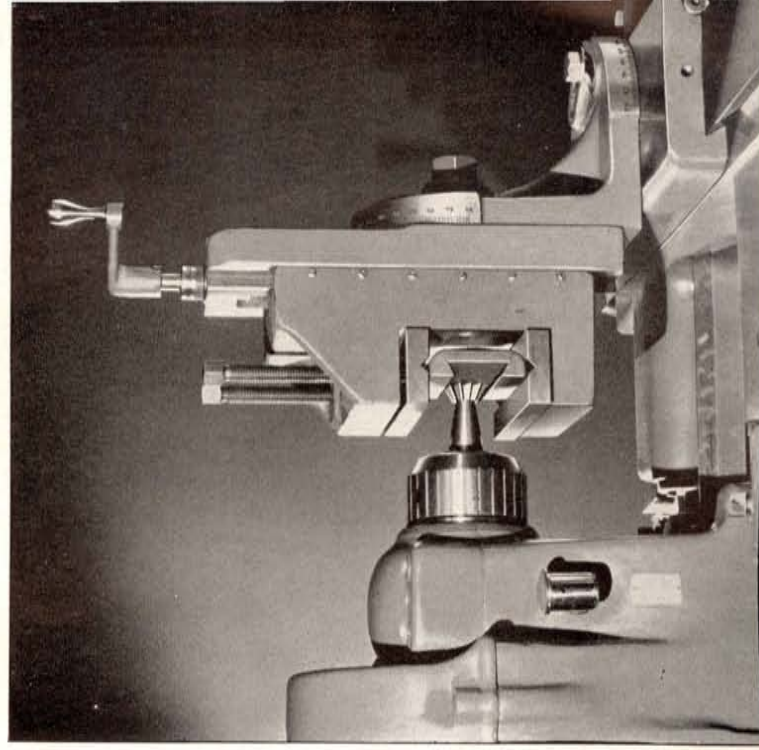
*Metric graduations can be supplied to order.

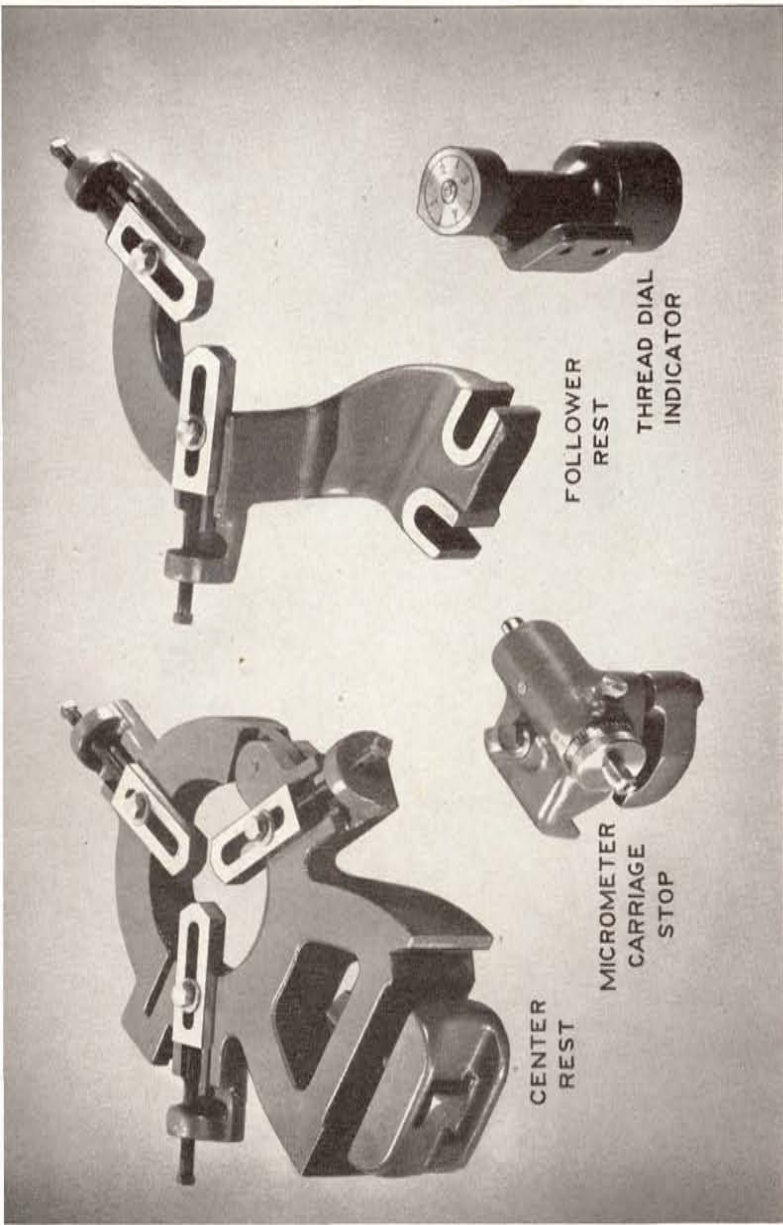
Milling and Keyway Cutting Attachment

Cat. No.	Size of Lathe	Vertical Feed	Cross-Feed	Vise Will Hold	Depth of Jaws	Width of Jaws	Weight Each	Code Word
9-W	9 in.	2 $\frac{1}{2}$ in.	5 $\frac{7}{8}$ in.	1 $\frac{1}{2}$ in.	13 $\frac{1}{8}$ in.	3 in.	13 lbs.	Vabif
1-N	10 in.	3 in.	5 $\frac{7}{8}$ in.	1 $\frac{3}{4}$ in.	15 $\frac{1}{8}$ in.	3 $\frac{1}{2}$ in.	25 lbs.	Vahok
3	13 in.	4 $\frac{1}{4}$ in.	8 in.	2 $\frac{1}{4}$ in.	1 $\frac{1}{2}$ in.	4 in.	40 lbs.	Victo
4-K	14 $\frac{1}{2}$ in.	6 in.	10 in.	4 in.	2 in.	5 $\frac{1}{4}$ in.	50 lbs.	Vulat
5	16 in.	6 in.	10 $\frac{1}{2}$ in.	4 in.	2 in.	5 $\frac{1}{4}$ in.	65 lbs.	Varen
S	16 $\frac{1}{4}$ in.	6 in.	10 $\frac{1}{2}$ in.	4 in.	2 in.	5 $\frac{1}{4}$ in.	65 lbs.	Varen

SOUTH BEND LATHE WORKS

Fig. 62. Milling and Keyway Cutting Attachment





Center Rest

Standard Extra

The center rest clamps onto the inside ways of the lathe bed and is used for supporting long shafts, boring spindles, etc. The three jaws are adjustable to accommodate various sizes of work, and the top of the center rest is hinged to facilitate inserting and removing shafts.

The jaws are made of cast iron, and if properly lubricated will wear very little. The jaws are machined all over and have adjusting screws and lock screws for setting them in the desired position.

Center Rest

Catalog Number	Size of Lathe	Maximum Capacity	Minimum Capacity	Code Word
125-W	9" and Series 900	3 in.	1 1/4 in.	Cegke
1177	10" and Series 1000	3 in.	1 1/4 in.	Nuzk
341	13"	3 3/4 in.	1 3/4 in.	Nygas
1174	14 1/2"	4 1/4 in.	2 1/4 in.	Nuzas
720	16"	4 3/4 in.	2 3/4 in.	Nyjou
1175	16 2/4"	4 3/4 in.	2 3/4 in.	Nuzum

Follower Rest

Standard Extra

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. Adjusting screws and lock screws are provided for setting the jaws in position.

Slots in bottom of follower rest are used for attaching follower rest to carriage, and permit attaching or removing quickly as it is not necessary to remove the screws from the saddle.

Follower Rest

Catalog Number	Size of Lathe	Maximum Capacity	Minimum Capacity	Code Word
34-W	9" and Series 900	2 in.	1/2 in.	Cegmo
1353	10" and Series 1000	2 1/2 in.	3/4 in.	Fanus
376	13"	3 1/4 in.	1 in.	Fenba
1351	14 1/2"	4 1/4 in.	1 1/4 in.	Felat
730	16"	4 3/4 in.	1 3/4 in.	Famuf
1352	16 2/4"	4 3/4 in.	1 3/4 in.	Felix

Thread Indicator

Standard Extra

This attachment eliminates the necessity of reversing the lathe spindle when cutting screw threads. The half-nuts may be opened to return the carriage to the starting point of each successive cut. The dial is numbered and graduated to show when to close the half-nuts on the lead screw to catch the thread for the next cut. A special thread dial can be supplied for 9" Metric Lathes.

Thread Dial Indicator

Cat. No.	Size of Lathe	Code
810-W	9" and Series 900	Adnok
1588	10" and Series 1000	Dahn
813	13", 14 1/2", 16", 16 2/4" & No. 2H	Advis
226S-N	Special Thread Dial for 9" Metric Lathes with metric lead screw. Code word . . . "Nywel"	

Micrometer Stop

Standard Extra

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 micrometer collar reading in thousandths of an inch.* The stop is hardened on both ends and may be locked for duplicate work.

*Metric graduations can be supplied to order.

Micrometer Carriage Stop

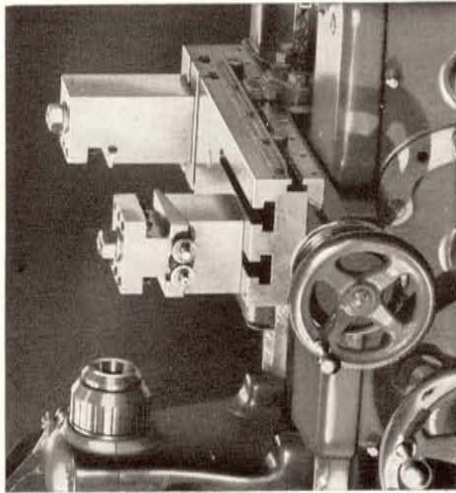
Cat. No.	Size of Lathe	Code
968-W	9" and Series 900	Capys
1518	10" and Series 1000	Cegab
973	13"	Chain
1502	14 1/2"	Ciwot
975	16", 16 2/4", and No. 2H	Climb

SOUTH BEND LATHE WORKS

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Precision LATHES

SOUTH BEND 22, INDIANA, U.S.A.



Double Tool Cross Slide For 16" South Bend Lathe

Standard Extra

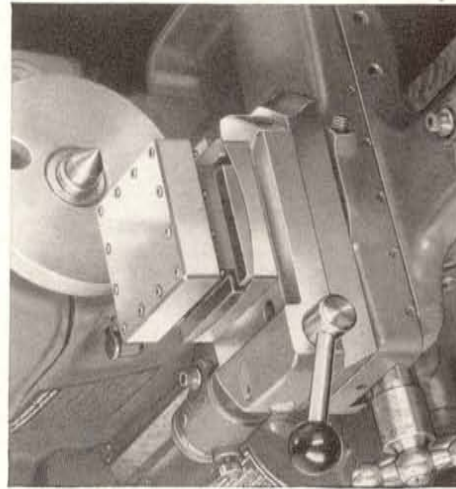
This cross slide fits on the saddle dovetail in place of the compound rest assembly. The cross-feed may be operated by power through the friction clutch in the apron, as well as by the cross-feed handwheel. A large diameter micrometer graduated collar permits adjusting the cutting tools with extreme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

Adjustable stops are provided for locating the position of the front and rear tools for repetitive operations. The front tool block takes two $\frac{5}{8}$ " square cutter bits and the back tool block takes one $\frac{5}{8}$ " 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.

This attachment should be ordered with the lathe and fitted at the factory.

Cat. No. 2027. Screw Feed Double Tool Cross Slide for 16" Lathe. Shipping weight 95 pounds. Code word....."Sywox".

SOUTH BEND LATHE WORKS



Square Turret Tool Block For Compound Cross Slide

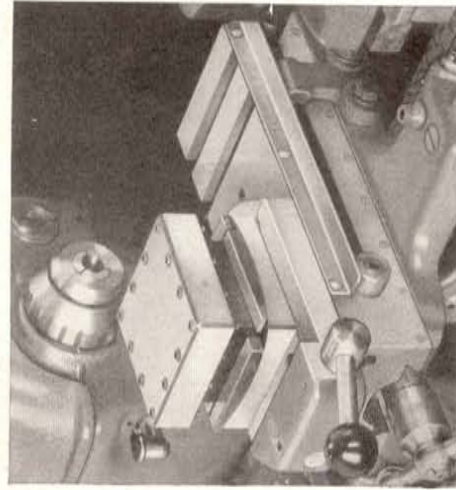
Standard Extra

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	Code Word
40-NC	9" and Series 900	3"	$\frac{3}{8}$ " x $\frac{3}{8}$ "	Cwmah
41-NC	10" and Series 1000	3"	$\frac{3}{8}$ " x $\frac{3}{8}$ "	Cwmeh
43-NC	12"	3"	$\frac{3}{8}$ " x $\frac{3}{8}$ "	Cwmak
44-NC	14 $\frac{1}{2}$ "	4"	$\frac{3}{8}$ " x $\frac{3}{8}$ "	Cwmik
42-NC	16" and 16 $\frac{1}{4}$ "	4"	$\frac{3}{8}$ " x $\frac{3}{8}$ "	Cwmob



Square Turret Tool Block For Double Tool Cross Slide

Standard Extra

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 or with double tool cross slide having handlever feed only. (Double tool cross slides for 9" and 10" lathes made after July, 1945 are arranged for both hand-lever feed and screw feed.)

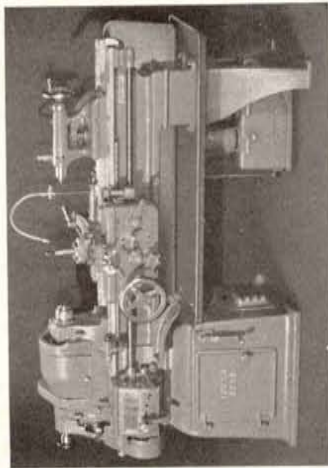
Four cutting tools can be mounted in the turret tool block. The turret indexes accurately, permitting each tool to be used in sequence for rough turning, finish turning, facing, boring, cutting-off, or other operations as required. A quick acting lever locks the turret securely in each of the four positions. 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	Code Word
40-ND	9" and Series 900	3"	$\frac{3}{8}$ " x $\frac{3}{8}$ "	Cvban
41-ND	10" and Series 1000	3"	$\frac{3}{8}$ " x $\frac{3}{8}$ "	Cvbeh
42-ND	15" and No. 2-H	4"	$\frac{3}{8}$ " x $\frac{3}{8}$ "	Cvbik

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SOUTH BEND
Precision LATHES



Oil Pans and Chip Pans

Standard Extras

Oil Pans, Splash Pans, and Chip Pans can be supplied for all sizes of South Bend Lathes. Also coolant pump and reservoir. Oil pans should be specified at the time the lathe is ordered so that they can be properly fitted at the factory. Complete information and prices on request.



9-inch Lathe Accessories

Standard Extras

Cat. No. 2180-N. Large Face Plate for 9" and Series 900 lathes. Outside diameter 7 $\frac{3}{8}$ ". Code word..... "Tyveb".
Cat. No. 2250-N. Thread Cutting Stop for 9" and Series 900 lathes. Code word..... "Cegpy".
Cat. No. 758-N. Plain Carriage Stop for 9" and Series 900 lathes. Code word..... "Tahro".

SOUTH BEND LATHE WORKS

SOUTH BEND

Precision **LATHES**



Metric Lathes

All sizes of South Bend Lathes can be supplied in Standard Change Gear Type as illustrated above with metric lead screw and with either metric or English graduations. Metric lathes will cut the following screw threads: 7, 6.5, 6, 5.5, 5, 4.5, 4, 3.5, 3, 2.75, 2.5, 2.25, 2, 1.75, 1.5, 1.4, 1.3, 1.25, 1.2, 1.1, 1, .9, .8, .75, .7, .65, .6, .55, .5, .45, .4, .35, .3, .25, and .2 mm pitch. 9-inch Swing Lathes can also be furnished with metric quick change gear box. Complete information and prices on request.

Metric Transposing Gears

Standard Extras

Right-hand and left-hand metric screw threads ranging from 6 mm pitch to 0.20 mm pitch can be cut (in addition to the regular English pitches) on any size or type of South Bend Lathe when equipped with a set of metric transposing gears. Graduated collars on lathe can be supplied with either English or metric graduations. When transposing gears are ordered separate from the lathe a special gear guard is required. The price of the special gear guard will be quoted on request.

Metric Transposing Gears

Size of Lathe	Metric Graduations	English Graduations
	Cat. No.	Code
9" Model A	1941-W	Lupep
9" Model B	2263	Lyzec
9" Model C	2264	Lyzec
10"	1941-N	Luram
13"	1943	Ludin
14 $\frac{1}{2}$ "	1949	Lukok
16"	1945	Luduz
16" & 24"	1948	Lufag
	1955-W	Lupal
	2261	Lyzes
	2262	Lyzem
	1963	Lucem
	1957	Luhov
	1961	Lukaw
	1959	Lujem
	1960	Lujow

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Handlever Tailstock

Standard Extra

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.

Handlever Tailstock for South Bend Lathes

Size of Lathe	Length of Feed Inches	In Lieu of Regular Tailstock	In Addition to Regular Tailstock
		Cat. No.	Code
9"	2 $\frac{5}{8}$	519-W	1197-W
10"	2 $\frac{3}{4}$	1636	1194
			Hlitd
			Hokec

"How to Run a Lathe"

"How to Run a Lathe" is a practical reference book on the operation and care of metal working lathes. Contains 128 pages size 5 $\frac{1}{8}$ " x 8" and 360 illustrations. Detailed information is given on grinding lathe tool cutters, tapping screw threads, taper turning, feeds and speeds, boring, etc.

Price postpaid 25c. U.S. stamps accepted for single copies.



SOUTH BEND 22, INDIANA U.S.A.



Standard and Safety Lathe Dogs

Standard Extras

These lathe dogs are made of heavy malleable iron and are properly designed for strength and service. The Standard Lathe Dog has square head alloy steel set screw. The Safety Lathe Dog has a headless alloy steel set screw.

Lathe Dogs for 13", 14 1/2", 16", and 16 24" Lathes

Standard Lathe Dogs				Safety Lathe Dogs			
Cat. No.	Capacity	Code Word	Cat. No.	Capacity	Code Word	Cat. No.	Capacity
3843	1 1/2 in.	Rzqab	3826	1 1/2 in.	Rzpub	3843	1 1/2 in.
3844	1 1/4 in.	Rzqah	3827	1 1/4 in.	Rzpuh	3844	1 1/4 in.
3845	1 1/4 in.	Rzqan	3828	1 1/4 in.	Rzpuh	3845	1 1/4 in.
3846	1 1/4 in.	Rzqas	3829	1 1/4 in.	Rzpuh	3846	1 1/4 in.
3847	1 1/4 in.	Rzqax	3830	1 1/4 in.	Rzpuh	3847	1 1/4 in.
3848	1 1/4 in.	Rzqec	3831	1 1/4 in.	Rzpuh	3848	1 1/4 in.
3849	2 in.	Rzqeg	3832	2 in.	Rzpuh	3849	2 in.
3850	2 1/2 in.	Rzqem	3833	2 1/2 in.	Rzpuh	3850	2 1/2 in.
3851	3 in.	Rzqet	3834	3 in.	Rzpuh	3851	3 in.
3852	3 1/2 in.	Rzqew	3835	3 1/2 in.	Rzpuh	3852	3 1/2 in.
3853	4 in.	Rzqez	3836	4 in.	Rzpuh	3853	4 in.

Lathe Dogs for 9" and 10" Lathes

Standard Lathe Dogs				Safety Lathe Dogs			
Cat. No.	Capacity	Code Word	Cat. No.	Capacity	Code Word	Cat. No.	Capacity
3837	3/4 in.	Rznib	3820	3/4 in.	Rzpub	3837	3/4 in.
3838	1/2 in.	Rznif	3821	1/2 in.	Rzpeg	3838	1/2 in.
3839	1/2 in.	Rznif	3822	1/2 in.	Rzpan	3839	1/2 in.
3840	1 in.	Rznin	3823	1 in.	Rzpan	3840	1 in.
3841	1 1/4 in.	Rznir	3824	1 1/4 in.	Rzpan	3841	1 1/4 in.
3842	1 1/2 in.	Rznit	3825	1 1/2 in.	Rzpan	3842	1 1/2 in.

60° Lathe Centers

Standard Extras

For use in headstock or tailstock of lathe. Made of tool steel, hardened, and accurately ground all over.

726-NR. No. 2 Morse taper for 9" and 10" lathes. Shipping weight 1/2 lb. Code..... "Gylot"
726-TH. No. 3 Morse taper for 13" and larger lathes. Shipping weight 1 lb. Code..... "Gylot"



SOUTH BEND LATHE WORKS

C6393-ROXM-4-48. Printed in U.S.A.

Chucks for South Bend Lathes

Purchased Extras

Three-Jaw Universal Chucks have two sets of jaws, one set for chucking internally and the other for chucking externally. Chuck body is ground and jaws are hardened. Chuck jaws are moved simultaneously by a scroll, and work is automatically centered. Prices include chuck with two sets of jaws, wrench, and threaded chuck plate fitted to lathe spindle. Made in the United States.

Four-Jaw Independent Chucks have four independent solid jaws with individual screw adjustment. The jaws may be reversed for chucking work either inside or outside. Chuck body is ground and chuck jaws are hardened and ground.

Lathe Chucks Fitted with Chuck Plates Threaded for Lathe Spindles

Size of Chuck	Approx. Ship. Weight Pounds	9" and Series 900 Lathes		10"-11 1/8" Col. Lathes		10"-1" Col. & Ser. 1000 Lathes		13" Lathes		14 1/2" Lathes		16", 16 24", & No. 2-H Lathes	
		Cat. No.	Code Word	Cat. No.	Code Word	Cat. No.	Code Word	Cat. No.	Code Word	Cat. No.	Code Word	Cat. No.	Code Word
5"	13	3005-W	Faput	3005-N	Focaa	3005-R	Cayba	3505-C	Fomol	3505-D	Cawbo	3505-E	Catay
6"	19	3505-W	Catco	3505-N	Focaa	3505-R	Cukax	3506-C	Bafuk	3506-D	Bosaw	3506-E	Catay
7 1/2"	28			3506-N	Caulx	3506-R		3507-C	Baguy	3507-D	Bosok	3507-E	Balot
9"	59											3509-E	Bapoi
3-Jaw Universal Lathe Chucks													
5"	13	4006-W	Fabur	4006-N	Fazim	4006-R	Pabmo	4206-C	Fajub	4206-D	Pamez	4207-E	Pamla
6"	18	4206-W	Padkn	4206-N	Padlo	4207-R	Padka	4209-C	Cayes	4209-D	Celly	4209-E	Cocet
7 1/2"	38							4210-D	Celluk	4210-E	Cocuj	4212-E	Codik
9"	46												
10"	57												
12"	96												
4-Jaw Independent Lathe Chucks													

Recommended sizes are shown in Bold Face Type.

Three-Jaw Drill Chucks and Arbors

Each drill chuck listed below must have either a taper shank arbor for fitting chuck to taper of lathe headstock spindle or tailstock spindle, or a straight shank arbor for fitting chuck to

Three-Jaw Drill Chucks—Purchased Extras

Make of Drill Chuck	Cat. No.	Capacity of Drill Chuck	Net Wt. Lbs.	Ship. Wt. Lbs.	Code Word
Jacobs	1200	0 to 3/8 in.	1 1/4	1 1/4	Cleve
Jacobs	1201	0 to 1/2 in.	1 3/4	2 1/4	Wauko
Jacobs	1202	3/8 to 1 in.	3 1/4	3 1/4	Falox
Jacobs	1206	3/8 to 1 in.	6 5/8	7 1/2	Faped
Almond	219	0 to 3/8 in.	1 3/4	1 3/4	Acpen
Almond	220	0 to 1/2 in.	1 3/4	2 1/4	Acpiu
Almond	327	1/2 to 3/4 in.	3 1/4	3 1/4	Rulid
Almond	328	3/8 to 1 in.	5 5/8	6 5/8	Rulof

Drill Chuck Arbors—Standard Extras

Taper Shank Arbors				Straight Shank Arbors			
No. 2 Morse		No. 3 Morse		%g Diameter		3/4" Diameter	
Cat. No.	Code Word	Cat. No.	Code Word	Cat. No.	Code Word	Cat. No.	Code Word
2300	Tywas	2301	Tywas	2360	Nyvac	2361	Nyvac
2302	Tywas	2303	Tywas	2362	Nyvac	2363	Nyvac
2304	Tywas	2305	Tywas	2364	Nyvac	2365	Nyvac
2306	Tywas	2307	Tywas	2366	Nyvac	2367	Nyvac
2308	Tywas	2309	Tywas	2368	Nyvac	2369	Nyvac
2310	Tywas	2311	Tywas	2370	Nyvac	2371	Nyvac
2312	Tywas	2313	Tywas	2372	Nyvac	2373	Nyvac
2314	Tywas	2315	Tywas	2374	Nyvac	2375	Nyvac
2316	Tywas	2317	Tywas	2376	Nyvac	2377	Nyvac
2318	Tywas	2319	Tywas	2378	Nyvac	2379	Nyvac
2320	Tywas	2321	Tywas	2380	Nyvac	2381	Nyvac
2322	Tywas	2323	Tywas	2382	Nyvac	2383	Nyvac
2324	Tywas	2325	Tywas	2384	Nyvac	2385	Nyvac
2326	Tywas	2327	Tywas	2386	Nyvac	2387	Nyvac
2328	Tywas	2329	Tywas	2388	Nyvac	2389	Nyvac
2330	Tywas	2331	Tywas	2390	Nyvac	2391	Nyvac
2332	Tywas	2333	Tywas	2392	Nyvac	2393	Nyvac
2334	Tywas	2335	Tywas	2394	Nyvac	2395	Nyvac
2336	Tywas	2337	Tywas	2396	Nyvac	2397	Nyvac
2338	Tywas	2339	Tywas	2398	Nyvac	2399	Nyvac
2340	Tywas	2341	Tywas	2400	Nyvac	2401	Nyvac
2342	Tywas	2343	Tywas	2402	Nyvac	2403	Nyvac
2344	Tywas	2345	Tywas	2404	Nyvac	2405	Nyvac
2346	Tywas	2347	Tywas	2406	Nyvac	2407	Nyvac
2348	Tywas	2349	Tywas	2408	Nyvac	2409	Nyvac
2350	Tywas	2351	Tywas	2410	Nyvac	2411	Nyvac
2352	Tywas	2353	Tywas	2412	Nyvac	2413	Nyvac
2354	Tywas	2355	Tywas	2414	Nyvac	2415	Nyvac
2356	Tywas	2357	Tywas	2416	Nyvac	2417	Nyvac
2358	Tywas	2359	Tywas	2418	Nyvac	2419	Nyvac
2360	Tywas	2361	Tywas	2420	Nyvac	2421	Nyvac
2362	Tywas	2363	Tywas	2422	Nyvac	2423	Nyvac
2364	Tywas	2365	Tywas	2424	Nyvac	2425	Nyvac
2366	Tywas	2367	Tywas	2426	Nyvac	2427	Nyvac
2368	Tywas	2369	Tywas	2428	Nyvac	2429	Nyvac
2370	Tywas	2371	Tywas	2430	Nyvac	2431	Nyvac
2372	Tywas	2373	Tywas	2432	Nyvac	2433	Nyvac
2374	Tywas	2375	Tywas	2434	Nyvac	2435	Nyvac
2376	Tywas	2377	Tywas	2436	Nyvac	2437	Nyvac
2378	Tywas	2379	Tywas	2438	Nyvac	2439	Nyvac
2380	Tywas	2381	Tywas	2440	Nyvac	2441	Nyvac
2382	Tywas	2383	Tywas	2442	Nyvac	2443	Nyvac
2384	Tywas	2385	Tywas	2444	Nyvac	2445	Nyvac
2386	Tywas	2387	Tywas	2446	Nyvac	2447	Nyvac
2388	Tywas	2389	Tywas	2448	Nyvac	2449	Nyvac
2390	Tywas	2391	Tywas	2450	Nyvac	2451	Nyvac
2392	Tywas	2393	Tywas	2452	Nyvac	2453	Nyvac
2394	Tywas	2395	Tywas	2454	Nyvac	2455	Nyvac
2396	Tywas	2397	Tywas	2456	Nyvac	2457	Nyvac
2398	Tywas	2399	Tywas	2458	Nyvac	2459	Nyvac
2400	Tywas	2401	Tywas	2460	Nyvac	2461	Nyvac
2402	Tywas	2403	Tywas	2462	Nyvac	2463	Nyvac
2404	Tywas	2405	Tywas	2464	Nyvac	2465	Nyvac
2406	Tywas	2407	Tywas	2466	Nyvac	2467	Nyvac
2408	Tywas	2409	Tywas	2468	Nyvac	2469	Nyvac
2410	Tywas	2411	Tywas	2470	Nyvac	2471	Nyvac
2412	Tywas	2413	Tywas	2472	Nyvac	2473	Nyvac
2414	Tywas	2415	Tywas	2474	Nyvac	2475	Nyvac
2416	Tywas	2417	Tywas	2476	Nyvac	2477	Nyvac
2418	Tywas	2419	Tywas	2478	Nyvac	2479	Nyvac
2420	Tywas	2421	Tywas	2480	Nyvac	2481	Nyvac
2422	Tywas	2423	Tywas	2482	Nyvac	2483	Nyvac
2424	Tywas	2425	Tywas	2484	Nyvac	2485	Nyvac
2426	Tywas	2427	Tywas	2486	Nyvac	2487	Nyvac
2428	Tywas	2429	Tywas	2488	Nyvac	2489	Nyvac
2430	Tywas	2431	Tywas	2490	Nyvac	2491	Nyvac
2432	Tywas	2433	Tywas	2492	Nyvac	2493	Nyvac
2434	Tywas	2435	Tywas	2494	Nyvac	2495	Nyvac
2436	Tywas	2437	Tywas	2496	Nyvac	2497	Nyvac
2438	Tywas	2439	Tywas	2498	Nyvac	2499	Nyvac
2440	Tywas	2441	Tywas	2500	Nyvac	2501	Nyvac
2442	Tywas	2443	Tywas	2502	Nyvac	2503	Nyvac
2444	Tywas	2445	Tywas	2504	Nyvac	2505	Nyvac
2446	Tywas	2447	Tywas	2506	Nyvac	2507	Nyvac
2448	Tywas	2449	Tywas	2508	Nyvac	2509	Nyvac
2450	Tywas	2451	Tywas	2510	Nyvac	2511	Nyvac
2452	Tywas	2453	Tywas	2512	Nyvac	2513	Nyvac
2454	Tywas	2455	Tywas	2514	Nyvac	2515	Nyvac
2456	Tywas	2457	Tywas	2516	Nyvac	2517	Nyvac
2458	Tywas	2459	Tywas	2518	Nyvac	2519	Nyvac
2460	Tywas	2461	Tywas	2520	Nyvac	2521	Nyvac
2462	Tywas	2463	Tywas	2522	Nyvac	2523	Nyvac
2464	Tywas	2465	Tywas	2524	Nyvac	2525	Nyvac
2466	Tywas	2467	Tywas	2526	Nyvac	2527	Nyvac
2468	Tywas	2469	Tywas	2528	Nyvac	2529	Nyvac
2470	Tywas	2471	Tywas	2530	Nyvac	2531	Nyvac
2472	Tywas	2473	Tywas	2532	Nyvac	2533	Nyvac
2474	Tywas	2475	Tywas	2534	Nyvac	2535	Nyvac
2476	Tywas	2477	Tywas	2536	Nyvac	2537	Nyvac
2478	Tywas	2479	Tywas	2538	Nyvac	2539	Nyvac
2480	Tywas	2481	Tywas	2540	Nyvac	2541	Nyvac
2482	Tywas	2483	Tywas	2542	Nyvac	2543	Nyvac
2484	Tywas	2485	Tywas	2544	Nyvac	2545	Nyvac
2486	Tywas	2487	Tywas	2546	Nyvac	2547	Nyvac
2488	Tywas	2489	Tywas	2548	Nyvac	2549	Nyvac
2490	Tywas	2491	Tywas	2550	Nyvac	2551	Nyvac
2492	Tywas	2493	Tywas	2552	Nyvac	2553	Nyvac
2494	Tywas	2495	Tywas	2554	Nyvac	2555	Nyvac
2496	Tywas	2497	Tywas	2556	Nyvac	2557	Nyvac
2498	Tywas	2499	Tywas	2558	Nyvac	2559	Nyvac
2500	Tywas	2501	Tywas	2560	Nyvac	2561	Nyvac
2502	Tywas	2503	Tywas	2562	Nyvac	2563	Nyvac
2504	Tywas	2505	Tywas	2564	Nyvac	2565	Nyvac
2506	Tywas	2507	Tywas	2566	Nyvac	2567	Nyvac
2508	Tywas	2509	Tywas	2568	Nyvac	2569	Nyvac
2510	Tywas	2511	Tywas	2570	Nyvac	2571	Nyvac
2512	Tywas	2513	Tywas	2572	Nyvac	2573	Nyvac
2514	Tywas	2515	Tywas	2574	Nyvac	2575	Nyvac
2516	Tywas	2517	Tywas	2576	Nyvac	2577	Nyvac
2518	Tywas	2519	Tywas	2578	Nyvac	2579	Nyvac
2520	Tywas	2521	Tywas	2580	Nyvac	2581	Nyvac
2522	Tywas	2523	Tywas	2582	Nyvac	2583	Nyvac
2524	Tywas	2525	Tywas	2584	Nyvac	2585	Nyvac
2526	Tywas	2527	Tywas	2586	Nyvac	2587	Nyvac
2528	Tywas	2529	Tywas	2588	Nyvac	2589	Nyvac
2530	Tywas	2531	Tywas	2590	Nyvac	2591	Nyvac
2532	Tywas	2533	Tywas	2592	Nyvac	2593	Nyvac
2534	Tywas	2535	Tywas	2594	Nyvac	2595	Nyvac
2536	Tywas	2537	Tywas	2596	Nyvac	2597	Nyvac
2538	Tywas	2539	Tywas	2598	Nyvac	2599	Nyvac
2540	Tywas	2541	Tywas	2600	Nyvac	2601	Nyvac
2542	Tywas	2543	Tywas	2602	Nyvac	2603	Nyvac
2544	Tywas	2545	Tywas	2604	Nyvac	2605	Nyvac
2546	Tywas	2547	Tywas	2606	Nyvac	2607	Nyvac
2548	Tywas	2549	Tywas	2608	Nyvac	2609	Nyvac
2550	Tywas	2551	Tywas	2610	Nyvac	2611	Nyvac
2552	Tywas	2553	Tywas	2612	Nyvac	2613	Nyvac
2554	Tywas	2555	Tywas	2614	Nyvac	2615	Nyvac
2556	Tywas	2557	Tywas	2616	Nyvac	2617	Nyvac
2558	Tywas	2559	Tywas	2618	Nyvac	2619	Nyvac
2560	Tywas	2561	Tywas	2620	Nyvac	2621	Nyvac
2562	Tywas	2563	Tywas	2622	Nyvac	2623	Nyvac
2564	Tywas	2565	Tywas	2624	Nyvac	2625	Nyvac
2566	Tywas	2567	Tywas	2626	Nyvac	2627	Nyvac
2568	Tywas	2569	Tywas	2628	Nyvac	2629	Nyvac
2570	Tywas	2571	Tywas	2630	Nyvac	2631	Nyvac
2572	Tywas	2573	Tywas	2632	Nyvac	2633	Nyvac
2574	Tywas	2575	Tywas	2634	Nyvac	2635	Nyvac
2576	Tywas	2577	Tywas	2636	Nyvac	2637	Nyvac
2578	Tywas	2579	Tywas	2638	Nyvac	2639	Nyvac
2580	Tywas	2581	Tywas	2640	Nyvac	2641	Nyvac
2582	Tywas	2583	Tywas	2642	Nyvac	2643	Nyvac
2584	Tywas	2585	Tywas	2644	Nyvac	2645	Nyvac
2586	Tywas	2587	Tywas	2646	Nyvac	2647	Nyvac
2588	Tywas	2589	Tywas	2648	Nyvac	2649	Nyvac
2590	Tywas	2591	Tywas	2650	Nyvac	2651	Nyvac
2592	Tywas	2593	Tywas	2652	Nyvac	2653	Nyvac
2594	Tywas	2595	Tywas	2654	Nyvac	2655	Nyvac
2596	Tywas	2597	Tywas	2656	Nyvac	2657	Nyvac
2598	Tywas	2599	Tywas	2658	Nyvac	2659	Nyvac
2600	Tywas	2601	Tywas	2660	Nyvac	2661	Nyvac
2602	Tywas	2603	Tywas	2662	Nyvac	2663	Nyvac
2604	Tywas	2605	Tywas	2664	Nyvac	2665	Nyvac
2606	Tywas	2607	Tywas	2666	Nyvac	2667	Nyvac
2608	Tywas	2609	Tywas	2668	Nyvac	2669	Nyvac
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2612	Tywas	2613	Tywas	2672	Nyvac	2673	Nyvac
2614	Tywas	2615	Tywas	2674	Nyvac	2675	Nyvac
2616	Tywas	2617	Tywas	2676	Nyvac	2677	Nyvac
2618	Tywas	2619	Tywas	2678	Nyvac	2679	Nyvac
2620	Tywas	2621	Tywas	2680	Nyvac	2681	Nyvac
2622	Tywas	2623	Tywas	2682	Nyvac	2683	Nyvac
2624	Tywas	2625	Tywas	2684	Nyvac	2685	Nyvac
2626	Tywas	2627	Tywas	2686	Nyvac	2687	Nyvac
2628	Tywas	2629	Tywas	2688	Nyvac	2689	Nyvac
2630	Tywas	2631	Tywas	2690	Nyvac	2691	Nyvac
2632	Tywas	2633	Tywas	2692	Nyvac	2693	Nyvac
2634	Tywas	2635	Tywas	2694	Nyvac	2695	Nyvac
2636	Tywas	2637	Tywas	2696	Nyvac	2697	Nyvac
2638	Tywas	2639	Tywas	2698	Nyvac	2699	Nyvac
2640	Tywas	2641	Tywas	2700	Nyvac	2701	Nyvac
2642	Tywas	2643	Tywas	2702	Nyvac	2703	Nyvac
2644	Tywas	2645	Tywas	2704	Nyvac	2705	Nyvac
2646	Tywas	2647	Tywas	2706	Nyvac	2707	Nyvac
2648	Tywas	2649	Tywas	2708	Nyvac	2709	Nyvac
2650	Tywas	2651	Tywas	2710	Nyvac	2711	Nyvac
2652	Tywas	2653	Tywas	2712	Nyvac	2713	Nyvac
2654	Tywas	2655	Tywas	2714	Nyvac	2715	Nyvac
2656	Tywas	2657	Tywas	2716	Nyvac	2717	Nyvac
2658	Tywas	2659	Tywas	2718	Nyvac	2719	Nyvac</

NEW! SOUTH BEND 14" Drill Press

South Bend presents this new 14" Drill Press as a companion to the South Bend Precision Lathe. It is built with the same high standards of accuracy and skilled workmanship. Years of painstaking research and experimentation have gone in to its design. This has resulted in a superior tool unsurpassed for accuracy, ease of operation, versatility and dependable performance.

FEATURES and SPECIFICATIONS

CAPACITY

Maximum drill size in iron or steel 1 1/2"

Drills to center of 14" circle.

CHUCK TO BASE DISTANCE

Bench Model 17"

Floor Model 46 1/2"

TABLE SIZE

10" x 10" Tilt Type

Ground and aligned with spindle. Slotted and under-ribbed for clamping.

COLUMN

2 3/4" diameter. Accurately ground.

HEIGHT

Bench Model 35 1/2"

Floor Model 65 1/2"

SHIPPING WEIGHT

Bench Model 195 lbs.

Floor Model 235 lbs.

MOTOR REQUIRED

1/2 h.p., 1725 r.p.m. Vertical mounting. Capacitor type recommended. On-off switch provided.

RUGGEDLY CONSTRUCTED

Designed and built for rugged service with high-speed steel drills.

BELT TENSION RELEASE

Quick-acting belt tension release lever simplifies speed changes. Keeps tension correct.

BUILT-IN LIGHT

Shadowless illumination on work area. Built-in switch.

SPINDLE

Free-floating design prevents misalignment, side thrust, and whip. Travel 4"

Sealed, precision type. No oiling. 2 on spindle drive unit. 2 on spindle.

QUILL BEARING ADJUSTMENT

Provides feather-touch tension and locking.

DEPTH GAUGE

Graduated in inches. Adjustable collars control feed and return.

CHUCK

Capacity 0 to 1 1/2"

SPEEDS

Four — 700 to 4300 r.p.m.

TWO MODELS

Cat. No. 400-B bench type.

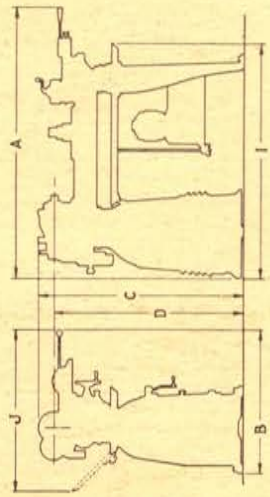
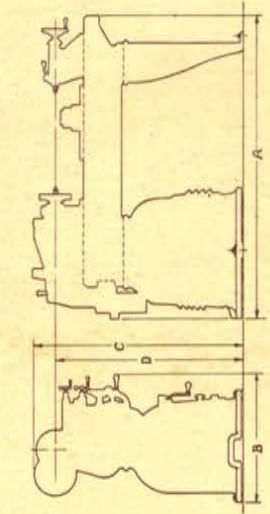
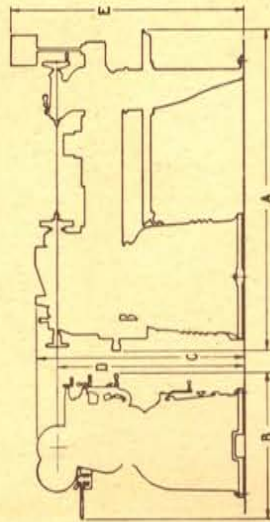
Cat. No. 400-F floor type.

NEW SOUTH BEND 7" Precision BENCH SHAPER
The new South Bend 7" Precision Bench Shaper is designed for the most exacting classes of small toolroom and production operations. It has 7" maximum stroke, reversible power feed, and self-contained motor drive. For additional information, write for circular and prices.



Floor Space Required for South Bend Lathes

Dimensions A to J given in tables below are in inches



Floor Leg Toolroom Lathes

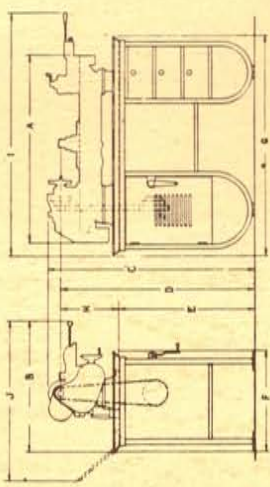
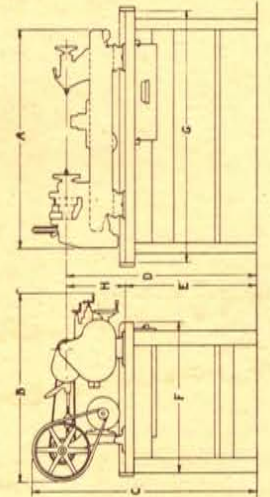
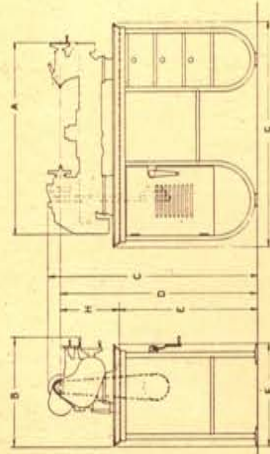
Size Lathe	Bed Length	A	B	C	D	E
10"	3'	46	20 $\frac{3}{8}$	44 $\frac{13}{16}$	41 $\frac{13}{16}$	49 $\frac{1}{2}$
13"	5'	70	26 $\frac{5}{8}$	45 $\frac{1}{2}$	41 $\frac{1}{2}$	50 $\frac{1}{2}$
14 $\frac{1}{2}$ "	6'	84	27 $\frac{1}{2}$	41 $\frac{5}{8}$	41 $\frac{5}{8}$	50
16"	8'	108	28 $\frac{3}{8}$	46 $\frac{1}{4}$	42 $\frac{1}{8}$	52 $\frac{3}{4}$

Underneath Motor Driven Floor Leg Lathes

Size Lathe	Bed Length	A	B	C	D
10"	3'	46	20 $\frac{3}{8}$	44 $\frac{13}{16}$	41 $\frac{13}{16}$
13"	5'	70	26 $\frac{5}{8}$	45 $\frac{1}{2}$	41 $\frac{1}{2}$
14 $\frac{1}{2}$ "	6'	84	27 $\frac{1}{2}$	46 $\frac{1}{2}$	41 $\frac{5}{8}$
16"	8'	108	28 $\frac{3}{8}$	46 $\frac{3}{4}$	42 $\frac{1}{2}$

Floor Leg Turret Lathes

Size Lathe	Bed Length	A	B	C	D	I	J
Series 1000	3 $\frac{1}{2}$ '	62 $\frac{1}{4}$	29 $\frac{1}{4}$	44 $\frac{25}{32}$	41 $\frac{13}{32}$	51	34 $\frac{1}{4}$



Underneath Motor Driven Bench Lathes

Size Lathe	Bed Length	A	B	C	D
9"	3'	39 $\frac{1}{2}$	22 $\frac{1}{2}$	44 $\frac{25}{32}$	41 $\frac{25}{32}$
10"	3'	42 $\frac{3}{8}$	24 $\frac{1}{16}$	47 $\frac{15}{32}$	44 $\frac{5}{16}$
Size Lathe	Bed Length	E	F	G	H
9"	3'	29 $\frac{3}{8}$	21 $\frac{1}{2}$	42 $\frac{1}{4}$	12 $\frac{11}{16}$
10"	3'	30 $\frac{3}{8}$	22	51 $\frac{1}{2}$	13 $\frac{25}{32}$

Horizontal Motor Driven Bench Lathes

Size Lathe	Bed Length	A	B	C	D
9"-6 Speed	3'	39 $\frac{3}{8}$	28 $\frac{1}{2}$	48 $\frac{7}{8}$	42 $\frac{19}{32}$
9"-12 Speed	3'	39 $\frac{3}{8}$	32 $\frac{1}{2}$	46 $\frac{1}{8}$	42 $\frac{19}{32}$
Size Lathe	Bed Length	E	F	G	H
9"-6 Speed	3'	30 $\frac{1}{4}$	28	54	12 $\frac{3}{4}$
9"-12 Speed	3'	30 $\frac{1}{2}$	28	54	12 $\frac{3}{4}$

Bench Turret Lathes

Size Lathe	Bed Length	A	B	C	D	E
Series 900	3 $\frac{1}{2}$ '	45 $\frac{1}{2}$	26 $\frac{3}{4}$	44 $\frac{25}{32}$	41 $\frac{25}{32}$	29 $\frac{3}{4}$
Series 1000	3 $\frac{1}{2}$ '	47 $\frac{3}{8}$	30 $\frac{15}{16}$	47 $\frac{15}{32}$	44 $\frac{1}{2}$	30 $\frac{3}{4}$
Size Lathe	Bed Length	F	G	H	I	J
Series 900	3 $\frac{1}{2}$ '	21 $\frac{1}{2}$	48 $\frac{3}{4}$	12 $\frac{11}{16}$	60	36 $\frac{3}{4}$
Series 1000	3 $\frac{1}{2}$ '	22	51 $\frac{1}{2}$	13 $\frac{25}{32}$	63 $\frac{3}{4}$	40 $\frac{1}{2}$



SOUTH BEND
Precision LATHES