

W. D. Matthews Machinery Co.

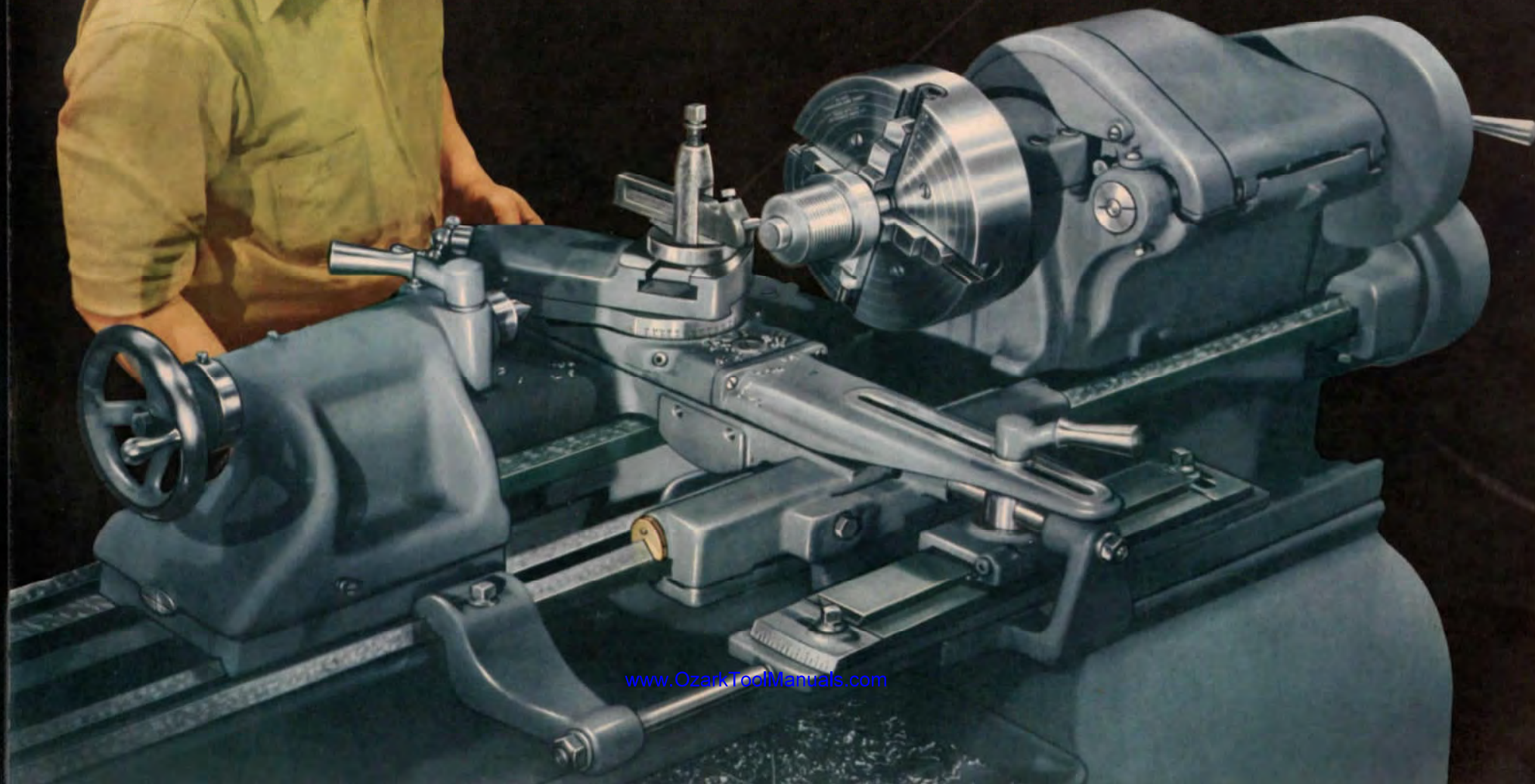
NEW & USED WOODWORKING MACHINERY

Auburn - Tel. 4-5759 - Maine

CATALOG 100-G

SOUTH BEND

*Precision* LATHES



# CONTENTS

<b>Toolroom Lathes</b>	Page	<b>Plain Change Gear Lathes</b>	Page
16-inch Toolroom Lathes . . . . .	11	9-inch <i>Twelve-Speed</i> Horizontal Motor Drive Bench Lathes, Model B . . . . .	39
14 $\frac{1}{2}$ -inch Toolroom Lathes . . . . .	15	9-inch <i>Twelve-Speed</i> Horizontal Motor Drive Bench Lathes, Model C . . . . .	41
13-inch Toolroom Lathes . . . . .	19	9-inch <i>Six-Speed</i> Horizontal Motor Drive Bench Lathes, Models B and C . . . . .	43
10-inch Toolroom Lathes . . . . .	23	9-inch Underneath Motor Drive Lathes, Models B and C . . . . .	47
10-inch Toolroom Bench Lathes . . . . .	27		
9-inch Toolroom Lathes . . . . .	45		
9-inch Toolroom Bench Lathes . . . . .	35		
<b>Quick Change Gear Lathes</b>		<b>Turret Lathes</b>	
16/24-inch Quick Change Gear Lathes . . . . .	31	1000 Series Turret Lathes . . . . .	51-53
16-inch Quick Change Gear Lathes . . . . .	13	900 Series Turret Lathes . . . . .	55
14 $\frac{1}{2}$ -inch Quick Change Gear Lathes . . . . .	17	No. 2-H Turret Lathes . . . . .	49
13-inch Quick Change Gear Lathes . . . . .	21		
10-inch Quick Change Gear Lathes . . . . .	25	<b>Attachments, Features, and Specifications</b>	
10-inch Quick Change Gear Bench Lathes . . . . .	29	Accuracy Tests on South Bend Lathes . . . . .	2-3
9-inch <i>Twelve-Speed</i> Horizontal Motor Drive Bench Lathes, Model A . . . . .	37	Attachments and Accessories . . . . .	56-63
9-inch <i>Six-Speed</i> Horizontal Motor Drive Bench Lathes, Model A . . . . .	43	Features of 9-inch South Bend Lathes . . . . .	32-33
9-inch Underneath Motor Drive Lathes, Model A . . . . .	47	Lathe Units (Headstock, Spindle, Bed, Tailstock, Saddle, Compound Rest, Gear Box, and Apron) . . . . .	5-9
		Underneath Belt Motor Drive Mechanism . . . . .	4
<b>Metric Lathes</b> . . . . .	62	<b>7-inch Precision Bench Shaper</b> . . . . .	64
<b>14-inch Precision Drill Press</b> . . . . .	64		

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

**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.

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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

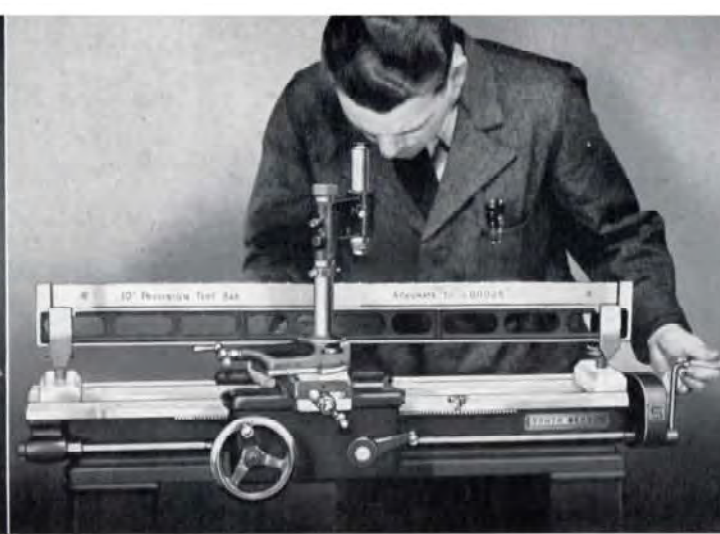


Fig. 2. Testing a Lead Screw for Accuracy of Lead with Precision Optical Measuring Equipment



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.

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.

SOUTH BEND LATHE WORKS

2

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



## 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

Fig. 6. Below—Checking a Fixture



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.

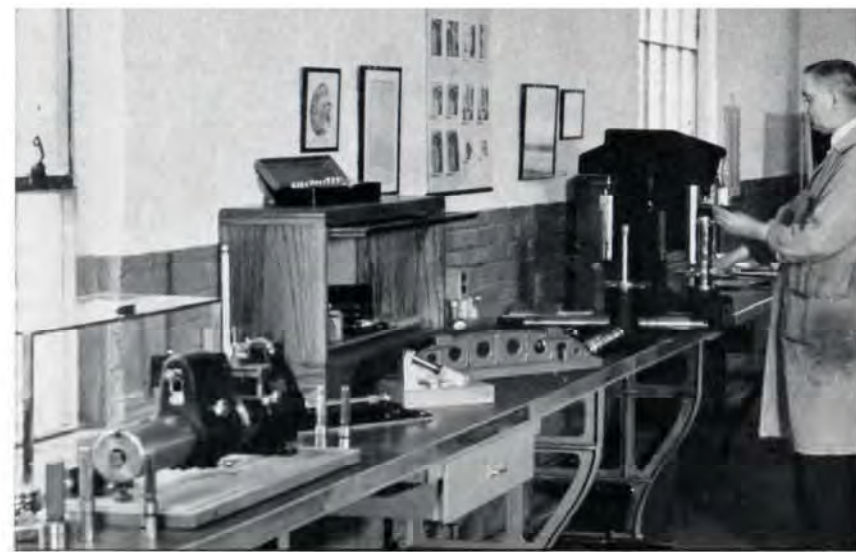


Fig. 5. Testing Laboratory and Research Department



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

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

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## 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-geared 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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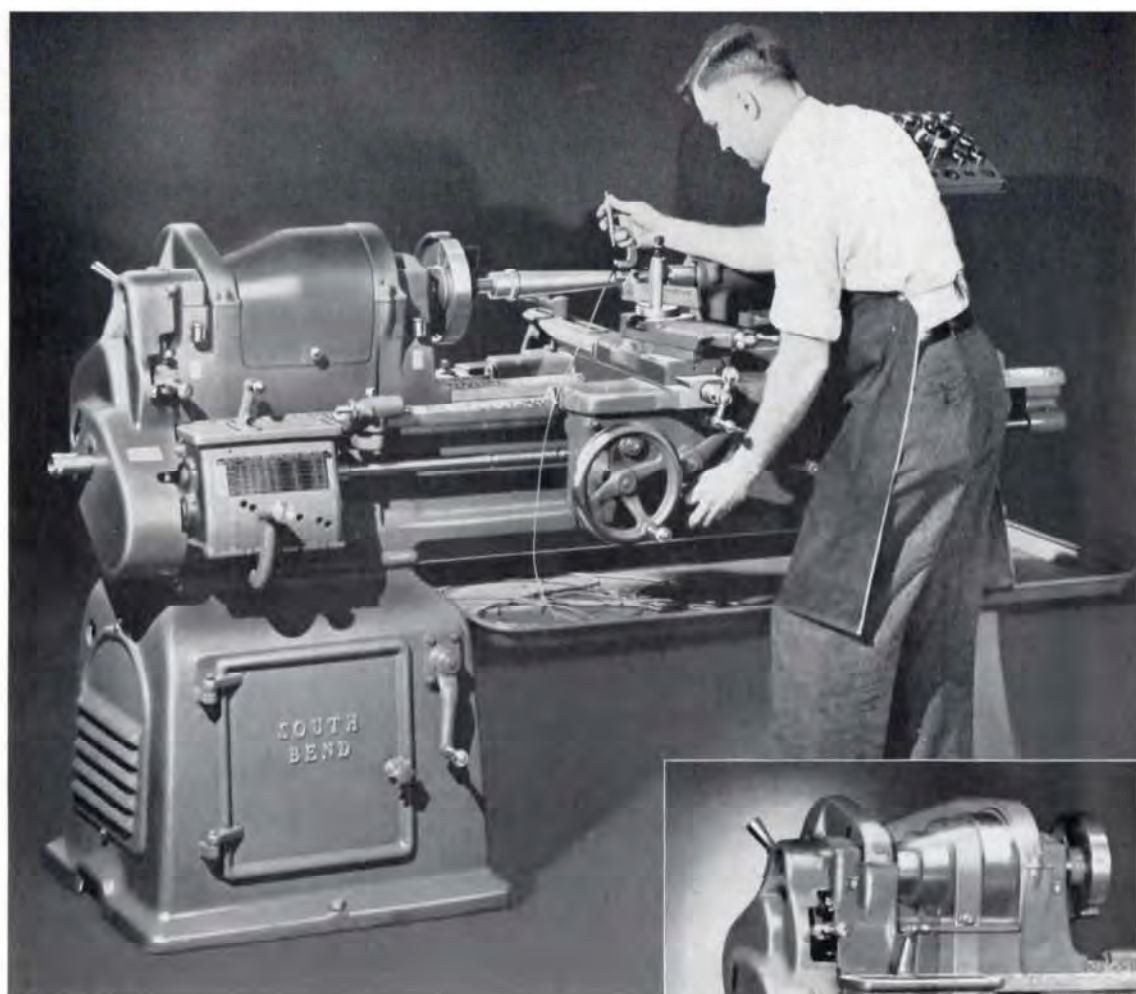


Fig. 8. Above—Underneath Belt Motor Driven Lathe (Patented)

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.

4

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# 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

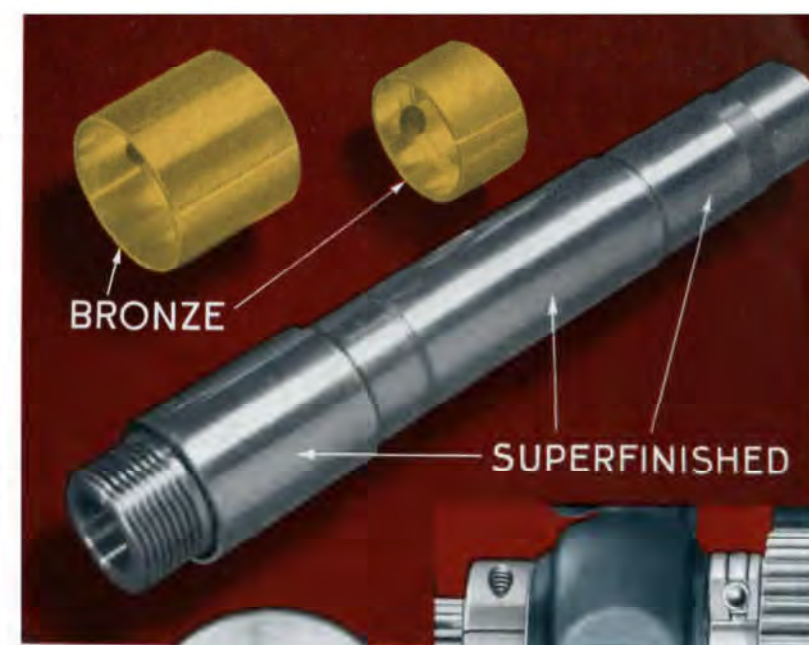


Fig. 10. Right—Headstock Spindle and Bearings

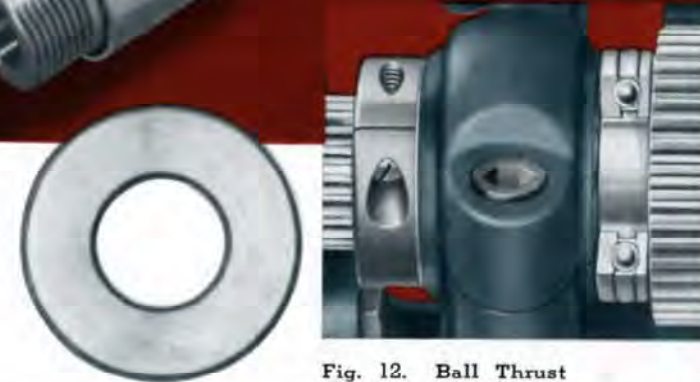


Fig. 11. Right—Cross Section of Spindle Showing Thickness ( $\frac{3}{4}$ " ) of Carburized and Hardened Bearing Surfaces

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

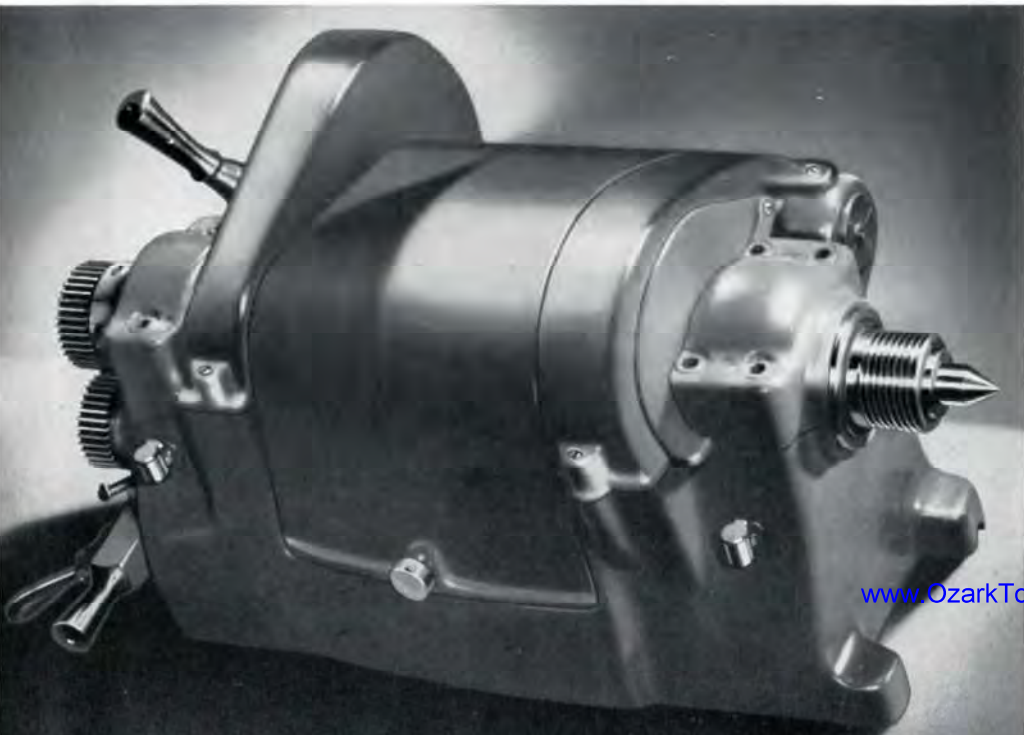
Fig. 13. Left—Headstock for 16" South Bend Lathe

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.



## 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.

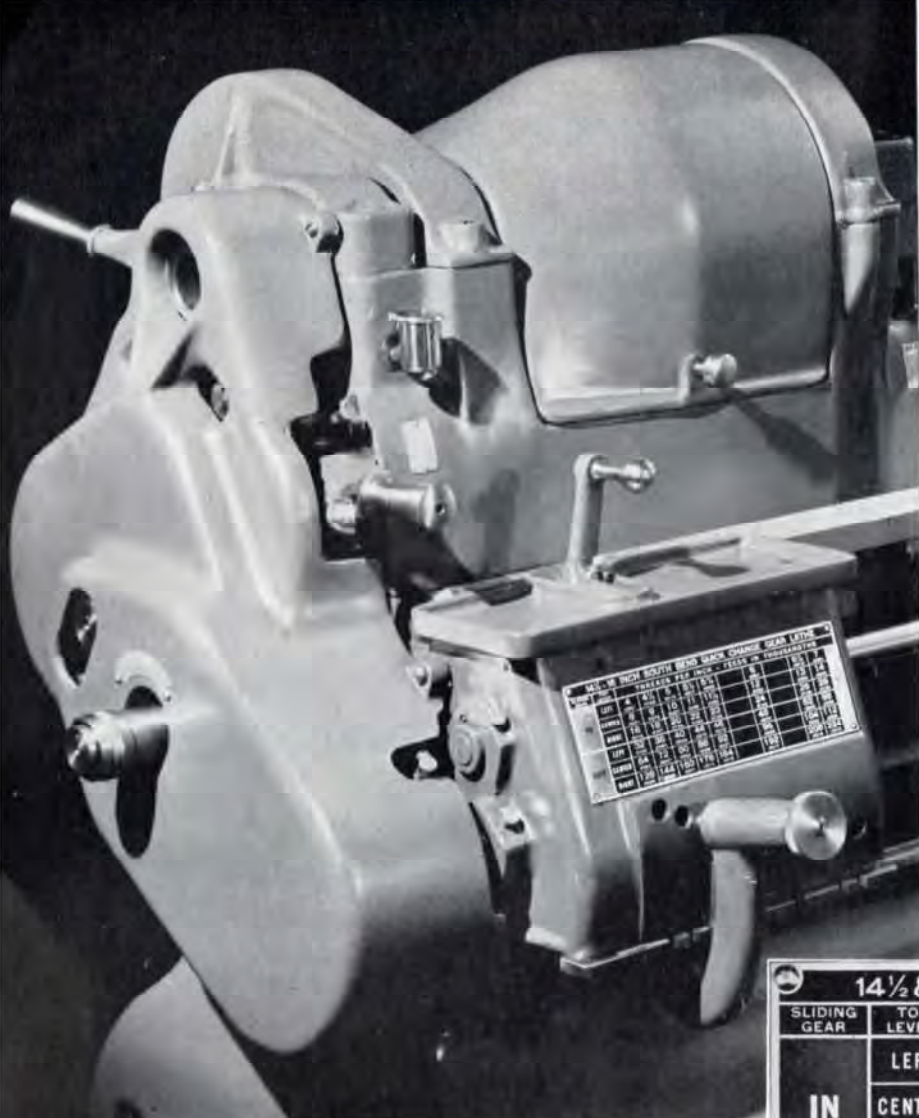


Fig. 14. Quick Change Gear Mechanism for 10-inch and Larger South Bend Lathes

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

14½ & 16 INCH SOUTH BEND QUICK CHANGE GEAR LATHES											
SLIDING GEAR	TOP LEVER	THREADS PER INCH - FEEDS IN THOUSANDTHS									
IN	LEFT	4 .0841	4½ .0748	5 .0673	5½ .0612	5¾ .0585		6 .0561		6½ .0516	7 .0481
	CENTER	8 .0421	9 .0374	10 .0337	11 .0306	11½ .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 .0105	36 .0093	40 .0084	44 .0076	46 .0073		48 .0070		52 .0065	56 .0060
	CENTER	64 .0053	72 .0047	80 .0042	88 .0038	92 .0037		96 .0035		104 .0032	112 .0030
	RIGHT	128 .0026	144 .0023	160 .0021	176 .0019	184 .0018		192 .0017		208 .0016	224 .0015

AUTOMATIC CROSS FEED EQUALS .375 TIMES LONGITUDINAL FEED



## 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.

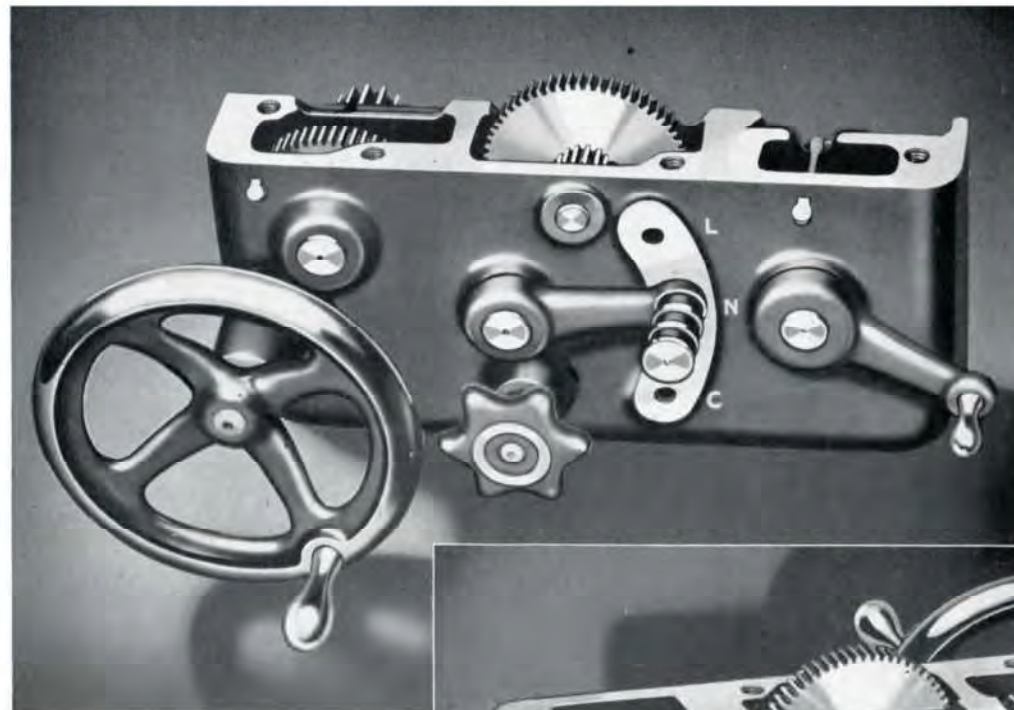


Fig. 16. Above—Front View of Double Wall Apron Showing Rigid Box Type Construction

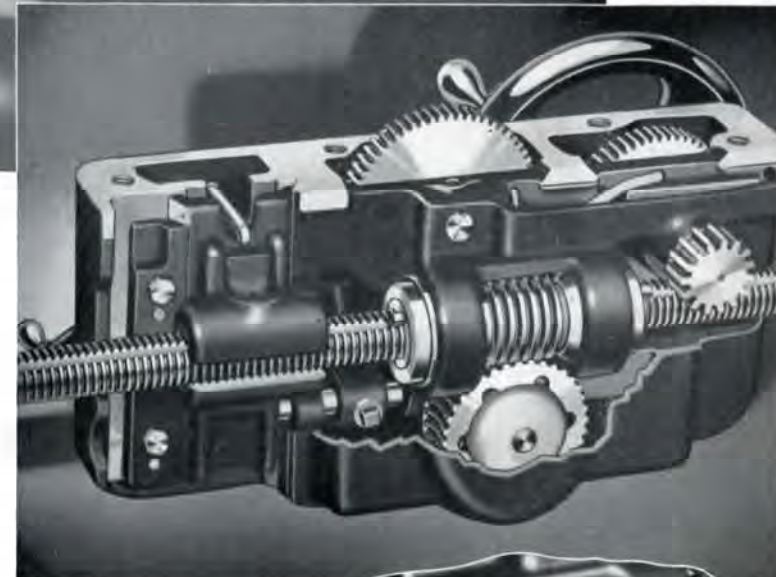


Fig. 17. Above—Back View of New Double Wall Apron

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



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# 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

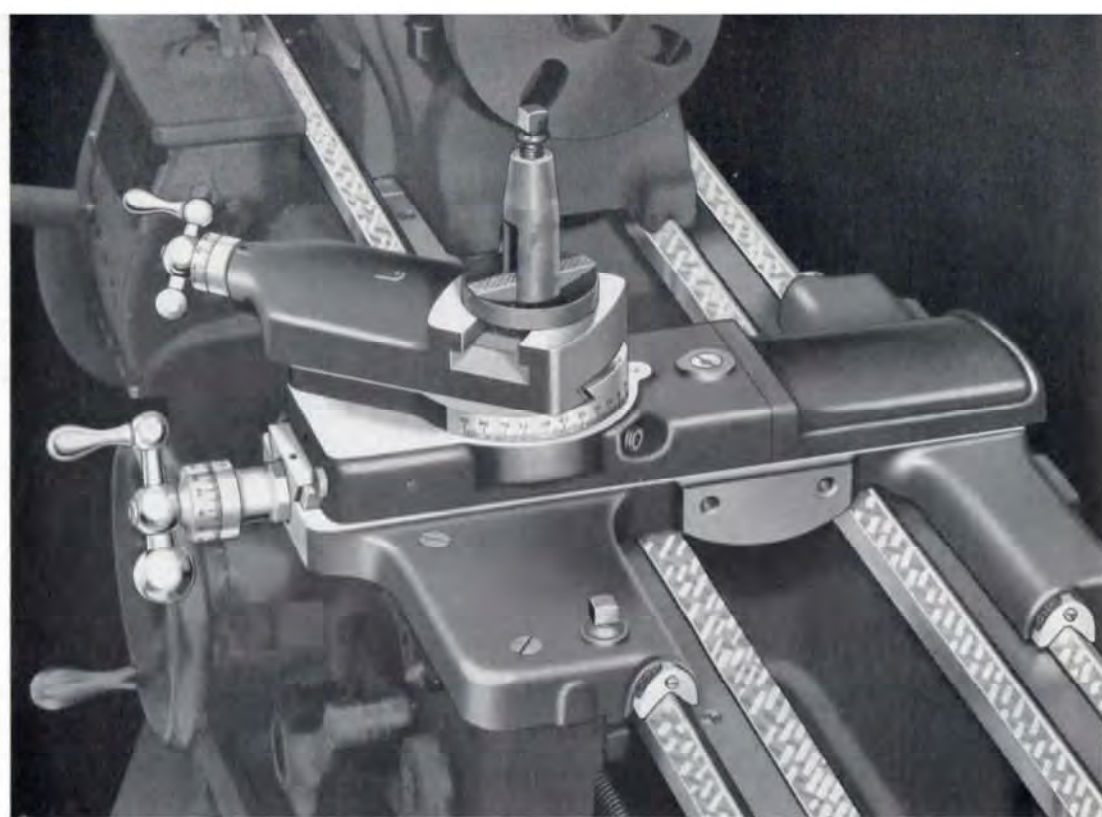


Fig. 19. Improved Saddle and Compound Rest for South Bend Lathes



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

tapered gibs. 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

9

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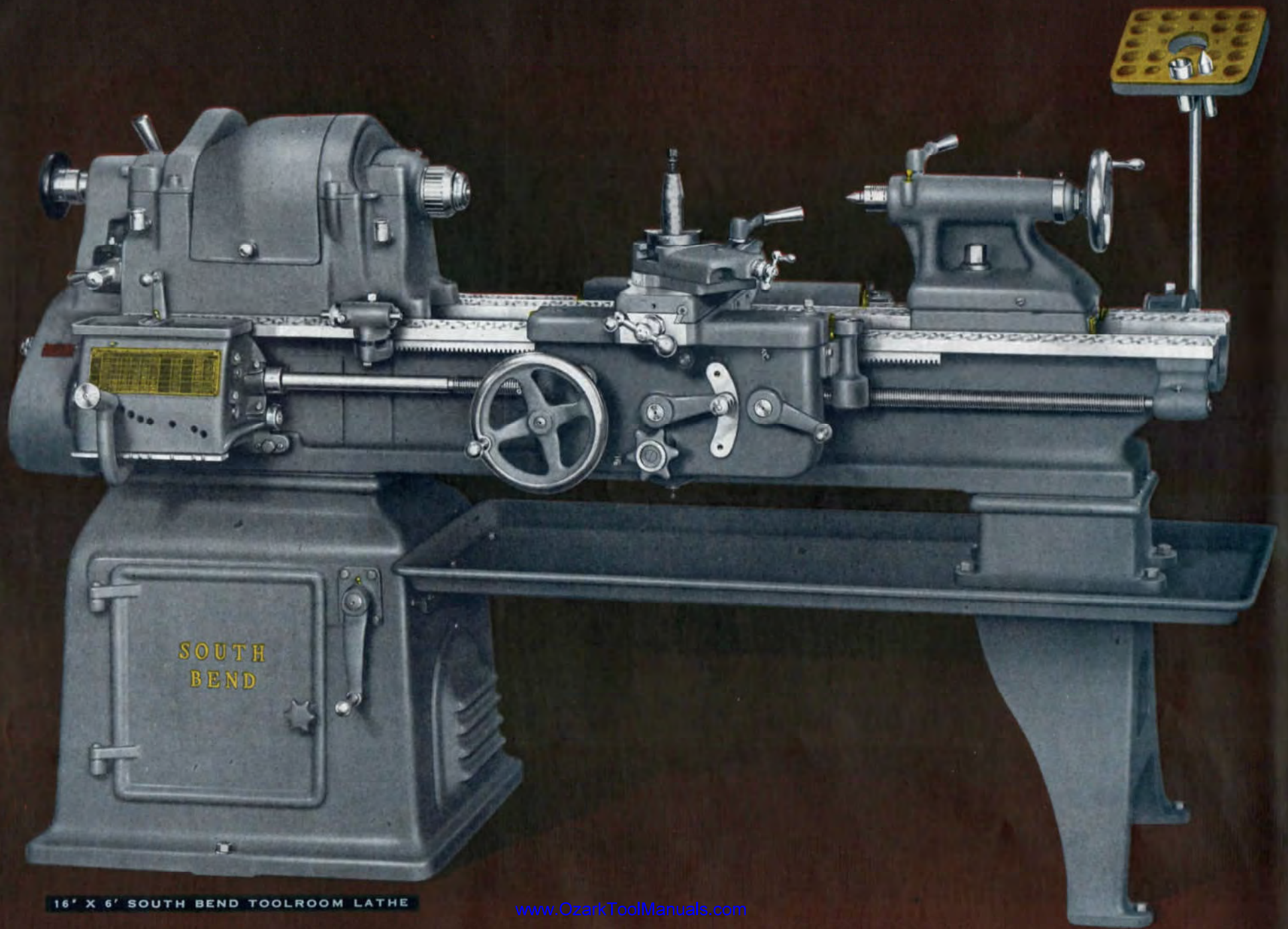
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Fig. 21 End View of Lathe Bed

Fig. 22 Tailstock Used on South Bend Lathes





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16' X 6' SOUTH BEND TOOLROOM LATHE

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## 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 $\frac{1}{2}$ "	2525
8117-D	Bzwom	8155-D	Borig	7	45 $\frac{1}{2}$ "	2605
8117-E	Bzwuh	8155-E	Borow	8	57 $\frac{1}{2}$ "	2685

### SPECIFICATIONS

#### CAPACITY OF LATHE

Swing over bed and saddle wings	16 $\frac{1}{4}$ "
Swing over saddle cross slide	9 $\frac{5}{8}$ "

#### 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 $\frac{3}{8}$ "
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, 8-speed drive	2 $\frac{1}{2}$ "
Width of cone pulley step for belt, 12-speed drive	3"
Large face plate diameter	13 $\frac{1}{4}$ "
Small face plate diameter	8 $\frac{1}{16}$ "
Front spindle bearing, diameter	2 $\frac{7}{8}$ "

#### TAILSTOCK

Size of center, Morse taper	No. 3
Spindle travel	5 $\frac{3}{4}$ "
Each graduation on tailstock spindle	1 $\frac{1}{16}$ "
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 $\frac{3}{4}$ "

#### THREADS AND FEEDS

Thread cutting range—48 pitches	
R.H. or L.H.	4 to 224 per inch
Longitudinal feeds through friction clutch—	
48 feeds R.H. or L.H.	.0015" to .0841"
Cross-feeds through friction clutch—	
48 feeds	.0006" to .0312"
Lead screw, 29° Acme thread	1 $\frac{1}{8}$ " Diam.—6 Threads

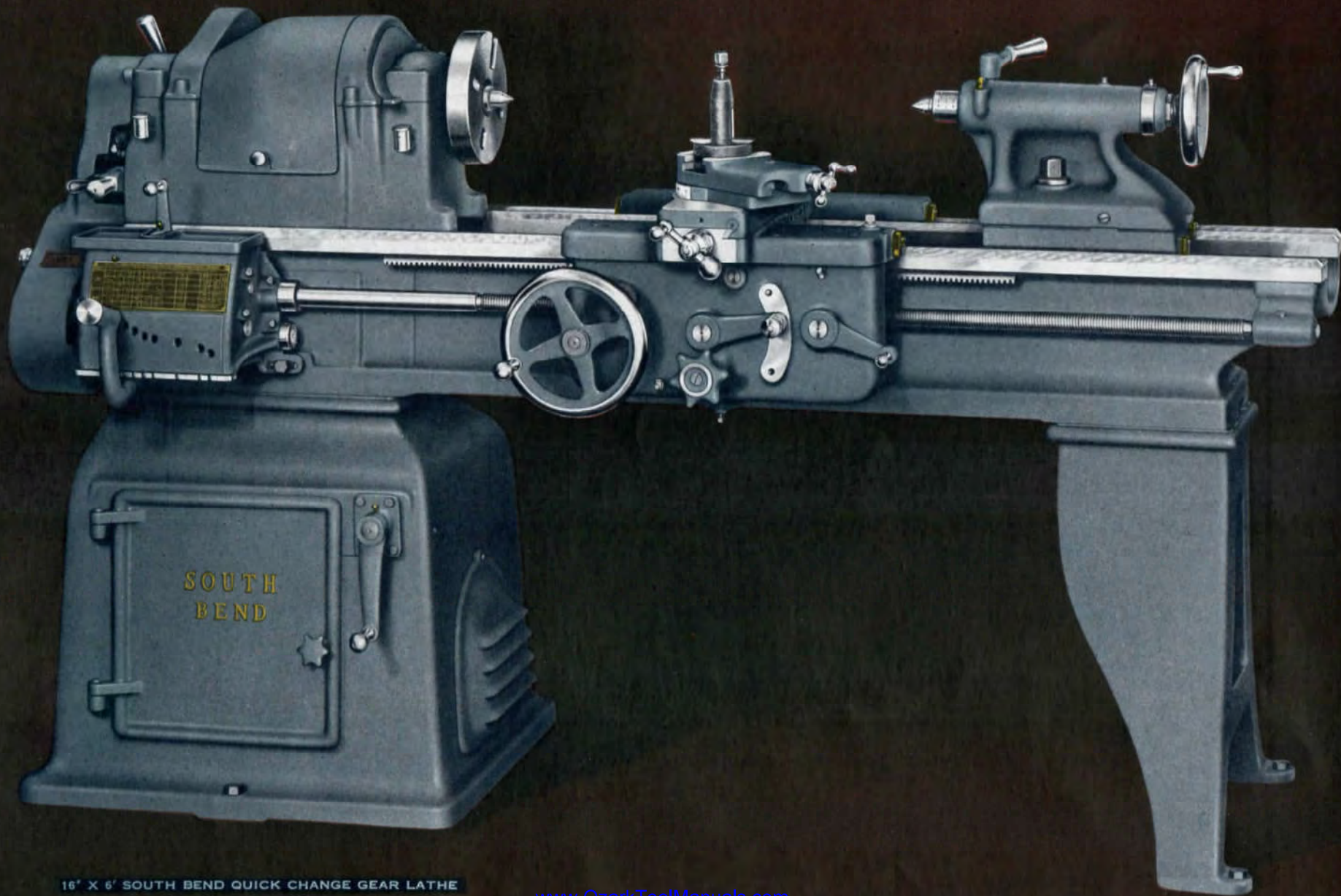
#### TOOL POST

Size of tool holder shank	5 $\frac{1}{8}$ " x 1 $\frac{3}{8}$ "
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 12-sp. dr. lathe (2-sp. motor)	2-1 h.p.

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



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	Bzwac	155-C	Bapup	6	33 $\frac{1}{2}$ "	2300
117-D	Bzwek	155-D	Bapur	7	45 $\frac{1}{2}$ "	2380
117-E	Bzwin	155-E	Batar	8	57 $\frac{1}{2}$ "	2460
117-G	Bzwor	155-G	Batek	10	81 $\frac{1}{2}$ "	2620
117-H	Bzwus	155-H	Batez	12	105 $\frac{1}{2}$ "	2850

## SPECIFICATIONS

### CAPACITY OF LATHE

Swing over bed and saddle wings	16 $\frac{1}{4}$ "
Swing over saddle with chip guard removed	11 $\frac{1}{8}$ "
Swing over saddle with chip guard	9 $\frac{5}{8}$ "

### 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, 36
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 $\frac{3}{8}$ "
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, 8-speed drive	2 $\frac{1}{4}$ "
Width of cone pulley step for belt, 12-speed drive	3"
Large face plate diameter	13 $\frac{1}{4}$ "
Small face plate diameter	8 $\frac{1}{8}$ "
Front spindle bearing, diameter	2 $\frac{7}{8}$ "

### TAILSTOCK

Size of center, Morse taper	No. 3
Spindle travel	5 $\frac{3}{4}$ "
Each graduation on tailstock spindle	$\frac{1}{16}$ "
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 $\frac{3}{4}$ "

### THREADS AND FEEDS

Thread cutting range—48 pitches	4 to 224 per inch
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 $\frac{1}{8}$ " Diam.—6 Threads

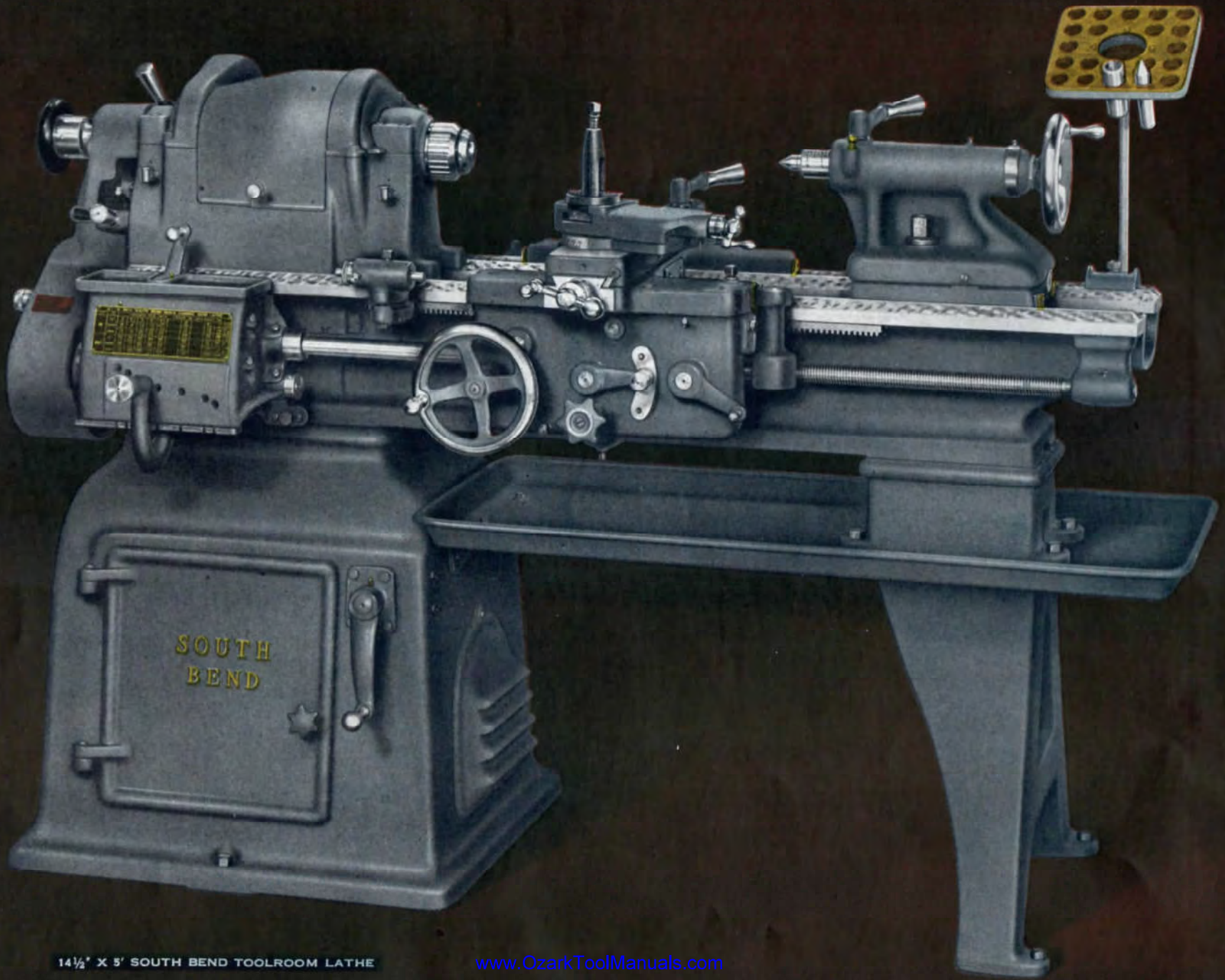
### TOOL POST

Size of tool holder shank	$\frac{5}{8}$ " x 1 $\frac{3}{8}$ "
Size of cutter bit for tool holder	$\frac{3}{8}$ " sq.

### MOTOR

Standard size motor for 8-sp. dr. lathes (1-sp. motor)	1 $\frac{1}{2}$ h.p.
Standard size motor for 12-sp. dr. lathes (2-sp. motor)	2-1 h.p.

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



14½" X 5' SOUTH BEND TOOLROOM LATHE

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**SOUTH BEND**  
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## 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.....	Cwcox	Cwcak	Cwcen	Cwcis

## SPECIFICATIONS

### CAPACITY OF LATHE

Swing over bed and saddle wings.....	14 5/8"
Swing over saddle cross slide.....	8 15/16"

### 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 1/16"
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.....	1/16"
Tailstock top set over for taper turning.....	1 5/16"

### COMPOUND REST

Cross slide travel.....	10"
Angular hand feed of compound rest top slide.....	3 1/8"

### THREADS AND FEEDS

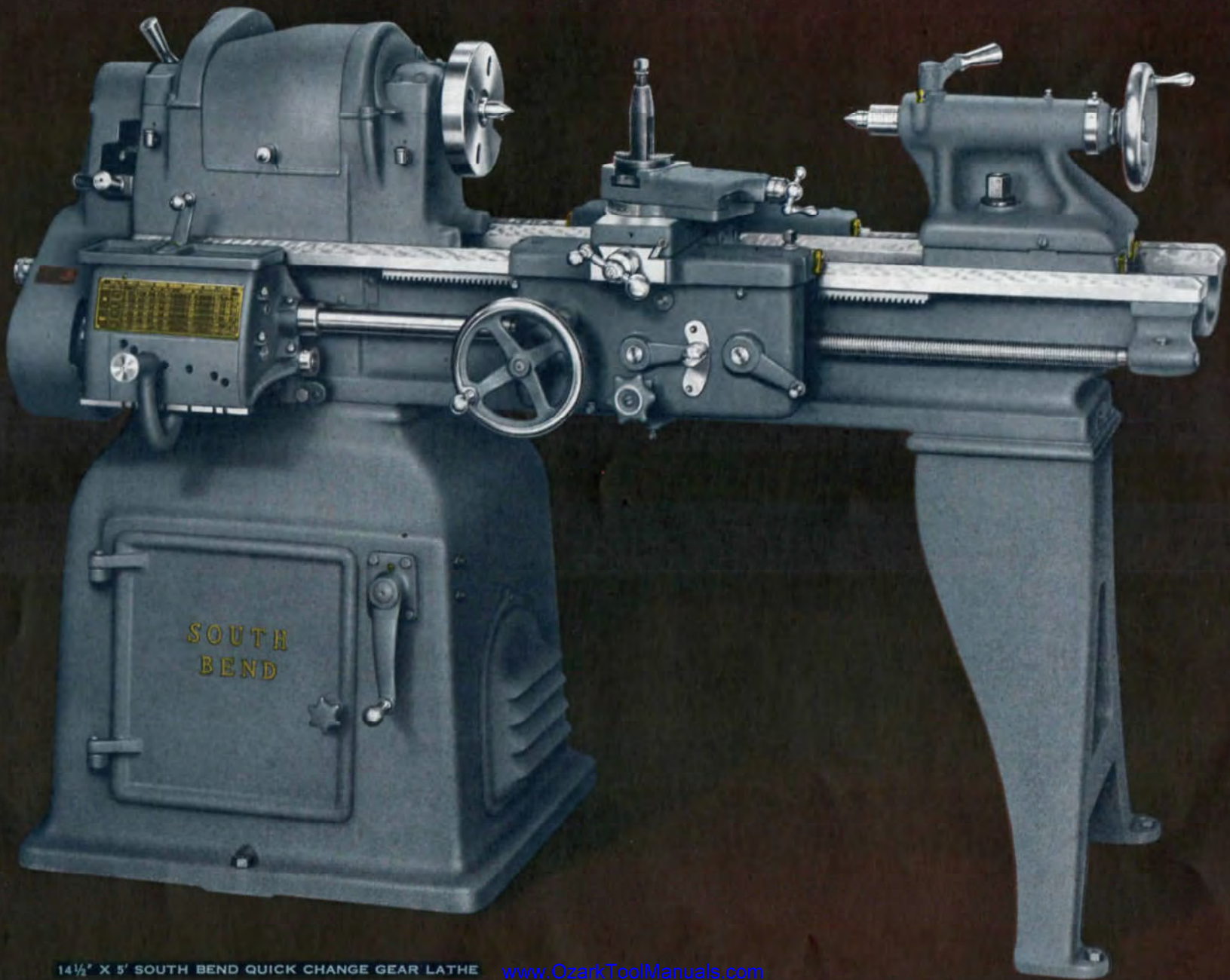
Thread cutting range—48 pitches	
R.H. or L.H.....	4 to 224 per inch
Longitudinal feeds through friction clutch—48 feeds R.H. or L.H.....	.0015" to .0841"
Cross-feeds through friction clutch—48 feeds.....	.0006" to .0312"
Lead screw, 29° Acme thread.....	1 1/8" Diam.—6 Threads

### 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.
--------------------------------------	------------



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## 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

Bed Length	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	Cwbek	Cwbim	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 1/16"
- 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 . . . . . 1 5/8"

**COMPOUND REST**

- Cross slide travel . . . . . 10"
- Angular hand feed of compound rest top slide . . . . . 3 1/8"

**THREADS AND FEEDS**

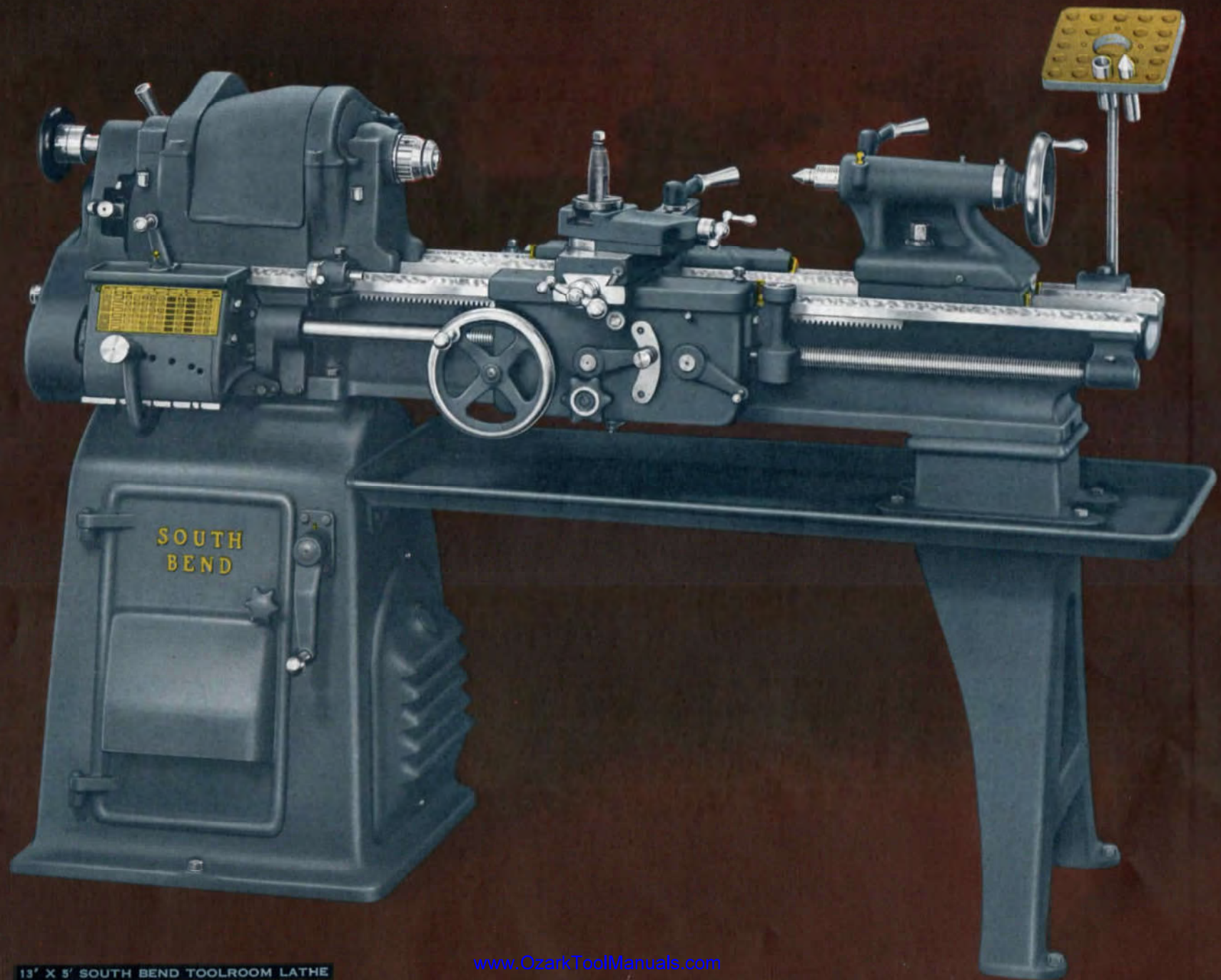
- Thread cutting range—48 pitches
- R.H. or L.H. . . . . 4 to 224 per inch
- Longitudinal feeds through friction clutch—48 feeds R.H. or L.H. . . . . .0015" to .0841"
- Cross-feeds through friction clutch—48 feeds . . . . . .0006" to .0312"
- Lead screw, 29° Acme thread . . . . . 1 1/8" Diam.—6 Threads

**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.



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SOUTH BEND

Precision

LATHES

## 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	Gykie

### SPECIFICATIONS

**CAPACITY OF LATHE**

- Swing over bed and saddle wings..... 13 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 1/8"
- Spindle nose diameter and threads per inch..... 1 7/8"-8

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

**TAILSTOCK**

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

**COMPOUND REST**

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

**THREADS AND FEEDS**

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

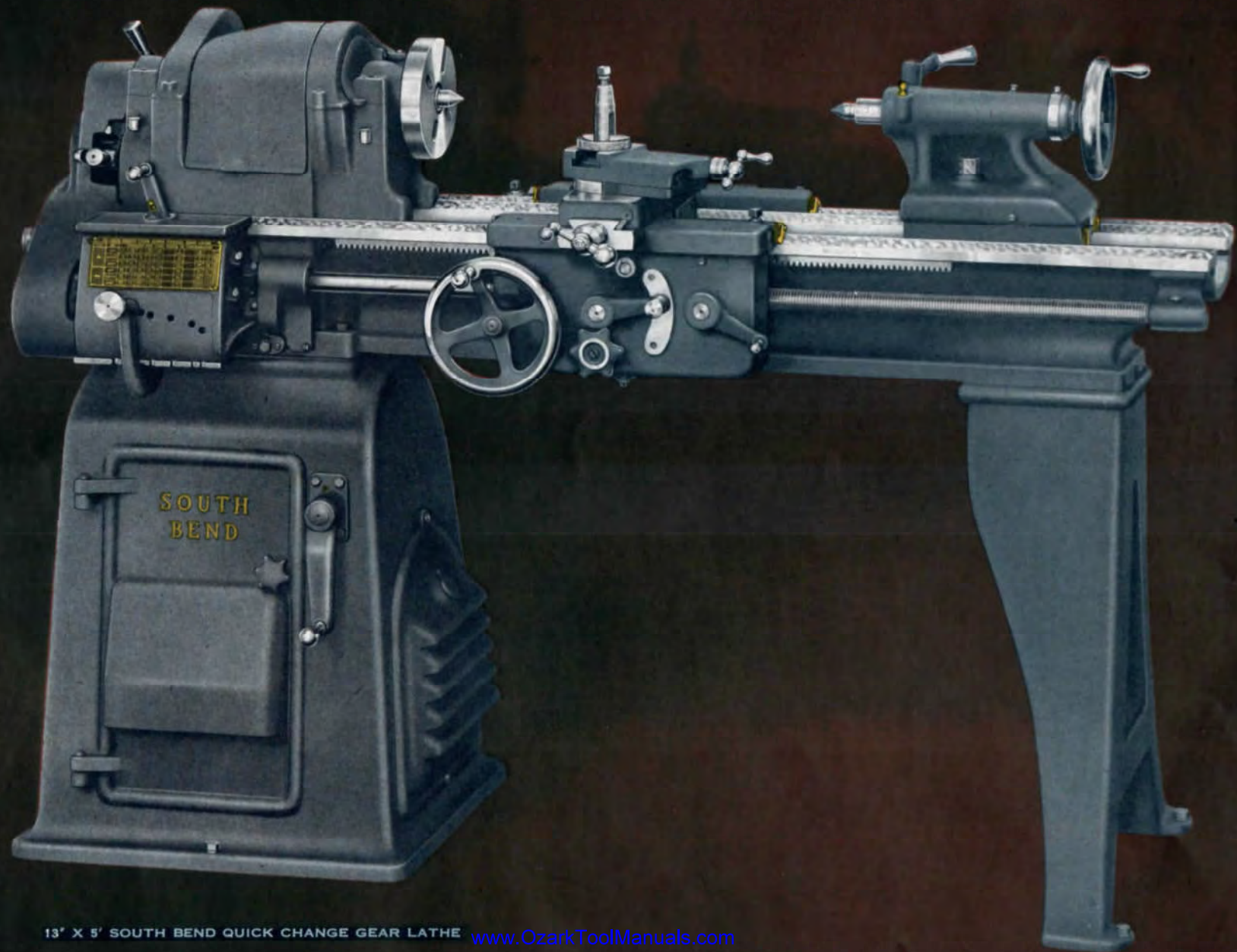
**TOOL POST**

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

**MOTOR**

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

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



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## 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 1/8"
- Swing over saddle with chip guard removed..... 8 3/4"
- Swing over saddle with chip guard..... 7 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 1/16"
- Spindle nose diameter and threads per inch..... 1 7/8"-8

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

**TAILSTOCK**

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

**COMPOUND REST**

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

**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

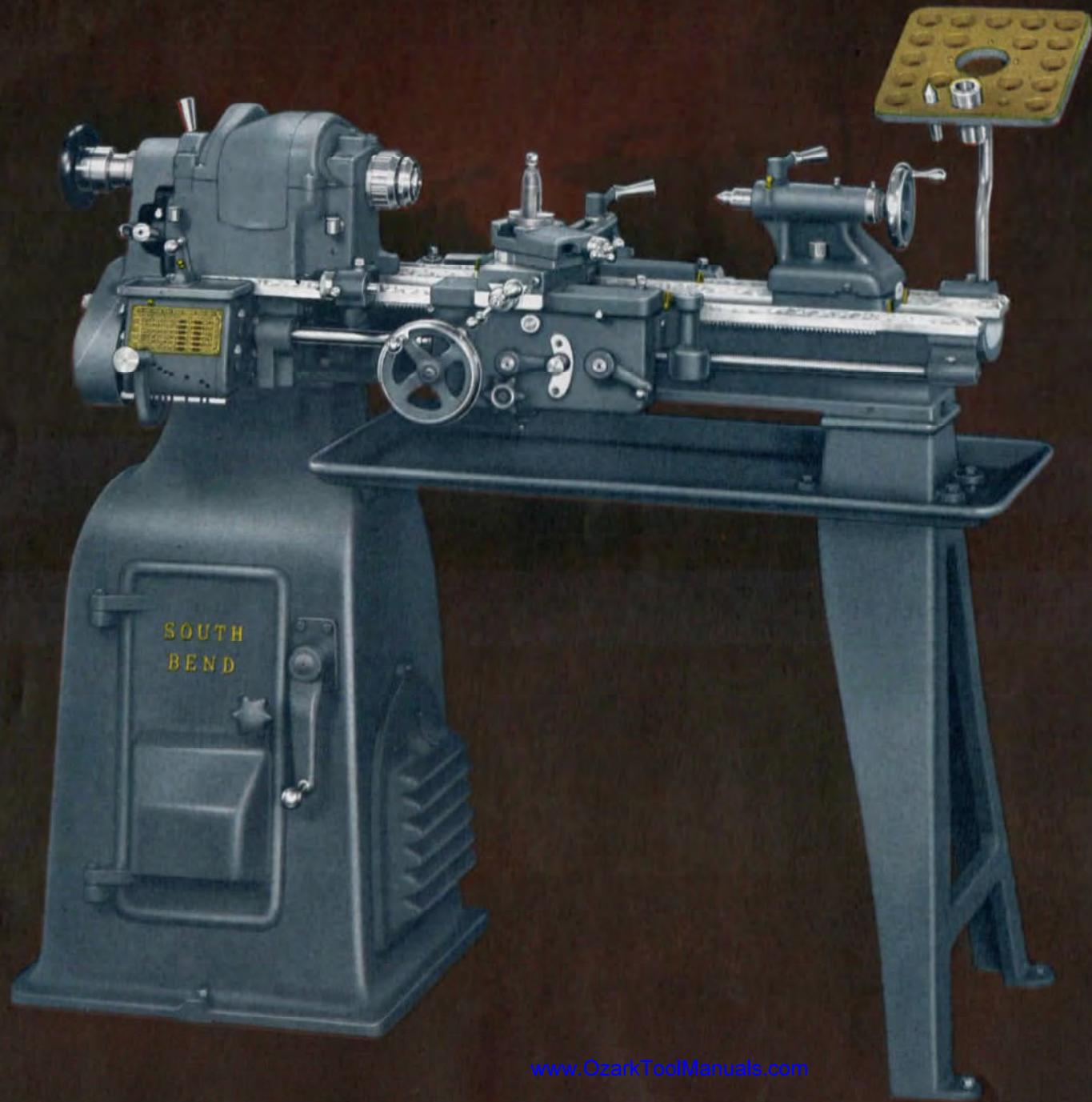
**TOOL POST**

- Size of tool holder shank..... 1/2" x 1 1/8"
- Size of cutter bit for tool holder..... 3/16" sq.

**MOTOR**

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

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



10" X 3 1/2' SOUTH BEND  
TOOLROOM LATHE



## 10-inch Toolroom Precision Lathe

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

The 10-inch Toolroom Lathe is made in two types: "1" Collet" and "1<sup>1</sup>/<sub>16</sub>" Collet". The 10-inch 1" Collet Toolroom Lathe is equipped with a special headstock having 1<sup>3</sup>/<sub>8</sub>" spindle hole which provides 1" maximum collet capacity. The 10-inch 1<sup>1</sup>/<sub>16</sub>" Collet Toolroom Lathe is equipped with a headstock having 1" spindle hole which provides 1<sup>1</sup>/<sub>16</sub>" 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 <sup>1</sup> / <sub>2</sub> -ft.	4-ft.
Catalog Number .....	8187-Y	8187-Z	8187-A
Distance Between Centers .....	14 <sup>3</sup> / <sub>4</sub> -in.	20 <sup>3</sup> / <sub>4</sub> -in.	28 <sup>3</sup> / <sub>4</sub> -in.
Shipping Weight, Crated .....	935 lbs.	960 lbs.	985 lbs.
Code Word .....	Jyrab	Jyrek	Jytic

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

Bed Length	3-ft.	3 <sup>1</sup> / <sub>2</sub> -ft.	4-ft.
Catalog Number .....	8199-YF	8199-ZF	8199-AF
Distance Between Centers .....	14 <sup>3</sup> / <sub>4</sub> -in.	20 <sup>3</sup> / <sub>4</sub> -in.	28 <sup>3</sup> / <sub>4</sub> -in.
Shipping Weight, Crated .....	935 lbs.	960 lbs.	985 lbs.
Code Word .....	Kwbec	Kwhel	Kwhen

### SPECIFICATIONS

	10-inch 1 <sup>1</sup> / <sub>16</sub> " Collet	10-inch 1" Collet
<b>CAPACITY OF LATHE</b>		
Swing over bed and saddle wings .....	10 <sup>1</sup> / <sub>8</sub> "	10 <sup>1</sup> / <sub>8</sub> "
Swing over saddle cross slide .....	5 <sup>3</sup> / <sub>4</sub> "	5 <sup>3</sup> / <sub>4</sub> "
<b>SPINDLE SPEEDS</b> (subject to 5% variation)		
Low spindle speeds		
r.p.m. of spindle, direct belt driven .....	700, 434, 277	700, 434, 277
r.p.m. of spindle, back-gears engaged .....	129, 79, 50	129, 79, 50
High spindle speeds		
r.p.m. of spindle, direct belt driven .....	1357, 837, 535	1357, 837, 535
r.p.m. of spindle, back-gears engaged .....	248, 153, 97	248, 153, 97
<b>HEADSTOCK</b>		
Hole through spindle .....	1"	1 <sup>3</sup> / <sub>8</sub> "
Maximum collet capacity* .....	1 <sup>1</sup> / <sub>16</sub> "	1"
Spindle nose diameter and threads per inch .....	17 <sup>7</sup> / <sub>8</sub> -8	2 <sup>1</sup> / <sub>4</sub> -8
Size of center, Morse taper .....	No. 2	No. 2
Width of cone pulley step for belt .....	1 <sup>1</sup> / <sub>16</sub> "	1 <sup>1</sup> / <sub>16</sub> "
Large face plate diameter .....	8 <sup>3</sup> / <sub>8</sub> "	8 <sup>3</sup> / <sub>8</sub> "
Small face plate diameter .....	5 <sup>5</sup> / <sub>8</sub> "	5 <sup>5</sup> / <sub>8</sub> "
Front spindle bearing diameter .....	2 <sup>1</sup> / <sub>4</sub> "	2 <sup>1</sup> / <sub>4</sub> "

**TAILSTOCK**

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

**COMPOUND REST**

Cross slide travel .....	5 <sup>7</sup> / <sub>8</sub> "	5 <sup>7</sup> / <sub>8</sub> "
Angular hand feed of compound rest top slide .....	2"	2"

**THREADS AND FEEDS**

Thread cutting range—48 pitches R.H. or L.H. ....	4-224 per inch	4-224 per inch
Longitudinal feeds through friction clutch—		
48 feeds R.H. or L.H. ....	.0015" to .0836"	.0015" to .0836"
Cross-feeds through friction clutch—48 feeds .....	.0006" to .0309"	.0006" to .0309"
Lead screw, 29° Acme thread .....	3 <sup>3</sup> / <sub>4</sub> " Diam.	3 <sup>3</sup> / <sub>4</sub> " Diam.
	8 Threads	8 Threads

**TOOL POST**

Size of tool holder shank .....	3 <sup>3</sup> / <sub>8</sub> " x 1 <sup>1</sup> / <sub>16</sub> "	3 <sup>3</sup> / <sub>8</sub> " x 1 <sup>1</sup> / <sub>16</sub> "
Size of cutter bit for tool holder .....	1 <sup>1</sup> / <sub>4</sub> " sq.	1 <sup>1</sup> / <sub>4</sub> " sq.

**MOTOR**

Standard size of motor required .....	3 <sup>4</sup> / <sub>8</sub> h.p.	3 <sup>4</sup> / <sub>8</sub> h.p.
---------------------------------------	------------------------------------	------------------------------------

\*Collets for 10"—1<sup>1</sup>/<sub>16</sub>" 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 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<sup>1</sup>/<sub>16</sub>" Collet". The 10-inch 1" Collet Lathe is equipped with a special headstock having 1<sup>3</sup>/<sub>8</sub>" spindle hole which provides 1" maximum collet capacity. The 10-inch 1<sup>1</sup>/<sub>16</sub>" Collet Lathe is equipped with a headstock having 1" spindle hole which provides 1<sup>1</sup>/<sub>16</sub>" 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 <sup>1</sup> / <sub>2</sub> -ft.	4-ft.	4 <sup>1</sup> / <sub>2</sub> -ft.
Catalog Number	187-Y	187-Z	187-A	187-R
Distance Between Centers	14 <sup>3</sup> / <sub>4</sub> -in.	20 <sup>3</sup> / <sub>4</sub> -in.	26 <sup>3</sup> / <sub>4</sub> -in.	32 <sup>3</sup> / <sub>4</sub> -in.
Shipping Weight, Crated	810 lbs.	835 lbs.	860 lbs.	885 lbs.
Code Word	Iysac	Iyseh	Iysim	Iysor

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

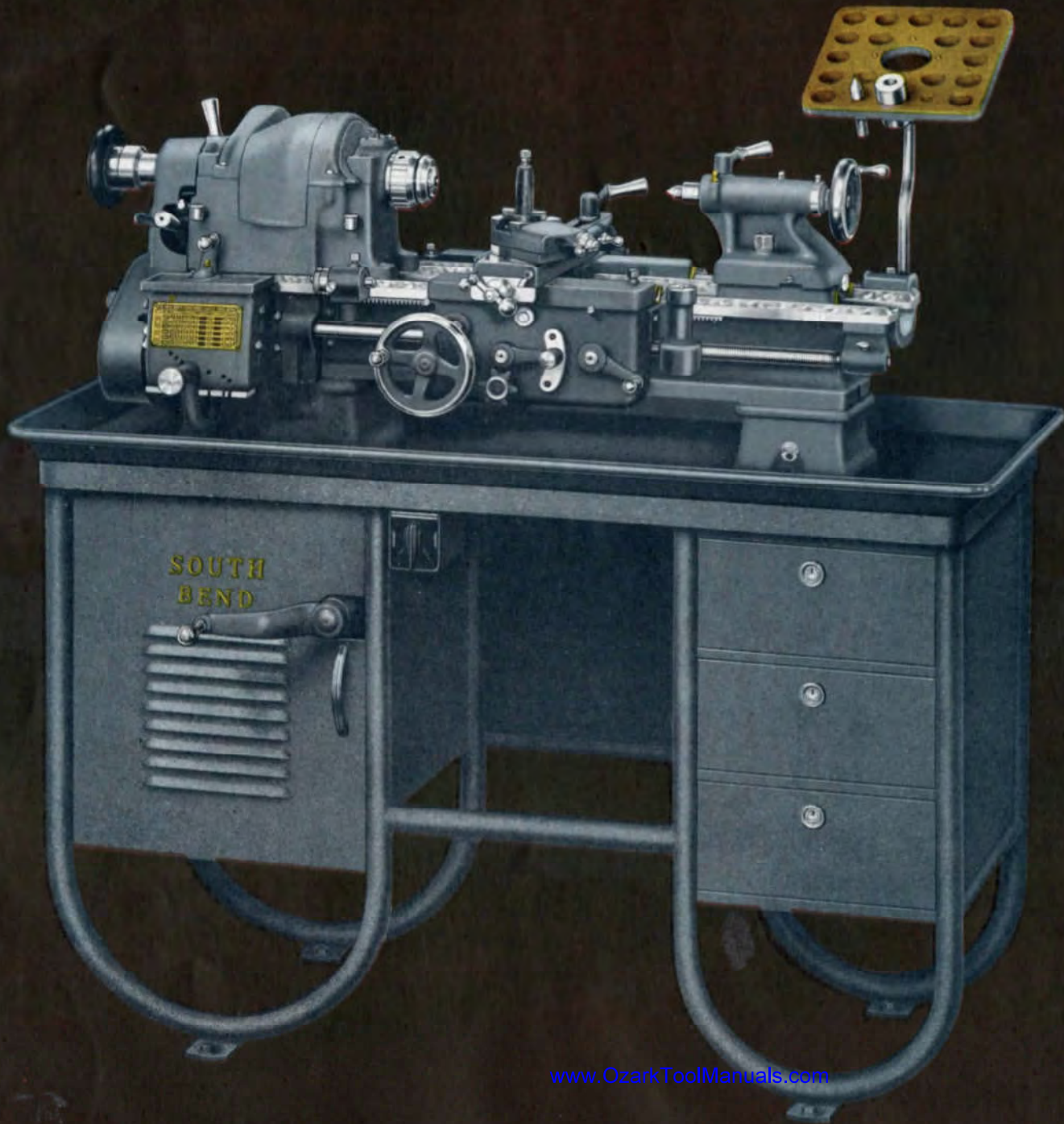
Bed Length	3-ft.	3 <sup>1</sup> / <sub>2</sub> -ft.	4-ft.	4 <sup>1</sup> / <sub>2</sub> -ft.
Catalog Number	199-YF	199-ZF	199-AF	199-RF
Distance Between Centers	14 <sup>3</sup> / <sub>4</sub> -in.	20 <sup>3</sup> / <sub>4</sub> -in.	26 <sup>3</sup> / <sub>4</sub> -in.	32 <sup>3</sup> / <sub>4</sub> -in.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

## SPECIFICATIONS

	10-inch 1 <sup>1</sup> / <sub>16</sub> " Collet	10-inch 1" Collet
<b>CAPACITY OF LATHE</b>		
Swing over bed and saddle wings	10 <sup>1</sup> / <sub>16</sub> "	10 <sup>1</sup> / <sub>16</sub> "
Swing over saddle with chip guard removed	6 <sup>3</sup> / <sub>4</sub> "	6 <sup>3</sup> / <sub>4</sub> "
Swing over saddle with chip guard	5 <sup>7</sup> / <sub>8</sub> "	5 <sup>7</sup> / <sub>8</sub> "
<b>SPINDLE SPEEDS</b> (subject to 5% variation)		
Low spindle speeds		
r.p.m. of spindle, direct belt driven	700, 434, 277	700, 434, 277
r.p.m. of spindle, back-gears engaged	129, 79, 50	129, 79, 50
High spindle speeds		
r.p.m. of spindle, direct belt driven	1357, 837, 535	1357, 837, 535
r.p.m. of spindle, back-gears engaged	248, 153, 97	248, 153, 97
<b>HEADSTOCK</b>		
Hole through spindle	1"	1 <sup>3</sup> / <sub>8</sub> "
Maximum collet capacity*	1 <sup>1</sup> / <sub>16</sub> "	1"
Spindle nose diameter and threads per inch	1 <sup>7</sup> / <sub>8</sub> "-8	2 <sup>1</sup> / <sub>4</sub> "-8
Size of center, Morse taper	No. 2	No. 2
Width of cone pulley step for belt	1 <sup>1</sup> / <sub>16</sub> "	1 <sup>1</sup> / <sub>16</sub> "
Large face plate diameter	8 <sup>3</sup> / <sub>8</sub> "	8 <sup>3</sup> / <sub>8</sub> "
Small face plate diameter	5 <sup>5</sup> / <sub>8</sub> "	5 <sup>5</sup> / <sub>8</sub> "
Front spindle bearing diameter	2 <sup>1</sup> / <sub>4</sub> "	2 <sup>1</sup> / <sub>4</sub> "

	10-inch 1 <sup>1</sup> / <sub>16</sub> " Collet	10-inch 1" Collet
<b>TAILSTOCK</b>		
Size of center, Morse taper	No. 2	No. 2
Spindle travel	2 <sup>1</sup> / <sub>8</sub> "	2 <sup>1</sup> / <sub>8</sub> "
Each graduation on tailstock spindle	1 <sup>1</sup> / <sub>16</sub> "	1 <sup>1</sup> / <sub>16</sub> "
Tailstock top set over for taper turning	1 <sup>1</sup> / <sub>16</sub> "	1 <sup>1</sup> / <sub>16</sub> "
<b>COMPOUND REST</b>		
Cross slide travel	5 <sup>7</sup> / <sub>8</sub> "	5 <sup>7</sup> / <sub>8</sub> "
Angular hand feed of compound rest top slide	2"	2"
<b>THREADS AND FEEDS</b>		
Thread cutting range—48 pitches R.H. or L.H.	4-224 per inch	4-224 per inch
Longitudinal feeds through friction clutch— 48 feeds R.H. or L.H.	.0015" to .0836"	.0015" to .0836"
Cross-feeds through friction clutch—48 feeds	.0006" to .0309"	.0006" to .0309"
Lead screw, 29° Acme thread	3/4" Diam. 8 Threads	3/4" Diam. 8 Threads
<b>TOOL POST</b>		
Size of tool holder shank	3/8" x 1 <sup>1</sup> / <sub>16</sub> "	3/8" x 1 <sup>1</sup> / <sub>16</sub> "
Size of cutter bit for tool holder	1/4" sq.	1/4" sq.
<b>MOTOR</b>		
Standard size of motor required	3/4 h.p.	3/4 h.p.

\*Collets for 10"—1<sup>1</sup>/<sub>16</sub>" 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-inch Toolroom Precision Bench Lathe

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

The 10-inch Toolroom Bench Lathe is made in two types: "1" Collet" and "1 $\frac{1}{16}$ " Collet". The 10-inch 1" Collet Toolroom 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 Toolroom Lathe is equipped with a headstock having 1" spindle hole which provides 1 $\frac{1}{16}$ " 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; 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; steel bench; and book "How to Run a Lathe". Motor and control are not included in price.

10-inch 1" Collet Toolroom Bench Lathes  
With Underneath Motor Drive and Steel Bench

Bed Length	3-ft.	3 $\frac{1}{2}$ -ft.	4-ft.
Catalog Number.....	8187-YS	8187-ZS	8187-AS
Distance Between Centers.....	14 $\frac{3}{4}$ -in.	20 $\frac{3}{4}$ -in.	26 $\frac{3}{4}$ -in.
Shipping Weight, (Crated with Bench).....	960 lbs.	990 lbs.	1060 lbs.
Code Word.....	Iywak	Iywec	Iywin

10-inch 1 $\frac{1}{16}$ " Collet Toolroom Bench Lathes  
With Underneath Motor Drive and Steel Bench

Bed Length	3-ft.	3 $\frac{1}{2}$ -ft.	4-ft.
Catalog Number.....	8199-YS	8199-ZS	8199-AS
Distance Between Centers.....	14 $\frac{3}{4}$ -in.	20 $\frac{3}{4}$ -in.	26 $\frac{3}{4}$ -in.
Shipping Weight, (Crated with Bench).....	960 lbs.	990 lbs.	1060 lbs.
Code Word.....	Kwlab	Kwlam	Kwlar

## SPECIFICATIONS

	10-inch 1 $\frac{1}{16}$ " Collet	10-inch 1" Collet
<b>CAPACITY OF LATHE</b>		
Swing over bed and saddle wings.....	10 $\frac{1}{2}$ "	10 $\frac{1}{2}$ "
Swing over saddle cross slide.....	5 $\frac{3}{4}$ "	5 $\frac{3}{4}$ "
<b>SPINDLE SPEEDS</b> (subject to 5% variation)		
Low spindle speeds		
r.p.m. of spindle, direct belt driven.....	700, 434, 277	700, 434, 277
r.p.m. of spindle, back-gears engaged.....	129, 79, 50	129, 79, 50
High spindle speeds		
r.p.m. of spindle, direct belt driven.....	1357, 837, 535	1357, 837, 535
r.p.m. of spindle, back-gears engaged.....	248, 153, 97	248, 153, 97
<b>HEADSTOCK</b>		
Hole through spindle.....	1"	1 $\frac{3}{8}$ "
Maximum collet capacity*.....	1 $\frac{1}{16}$ "	1"
Spindle nose diameter and threads per inch.....	1 $\frac{7}{8}$ "-8	2 $\frac{1}{4}$ "-8
Size of center, Morse taper.....	No. 2	No. 2
Width of cone pulley step for belt.....	1 $\frac{3}{16}$ "	1 $\frac{1}{2}$ "
Large face plate diameter.....	8 $\frac{3}{8}$ "	8 $\frac{3}{8}$ "
Small face plate diameter.....	5 $\frac{7}{8}$ "	5 $\frac{7}{8}$ "
Front spindle bearing diameter.....	2 $\frac{1}{4}$ "	2 $\frac{1}{4}$ "

### TAILSTOCK

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

### COMPOUND REST

Cross slide travel.....	5 $\frac{7}{8}$ "	5 $\frac{7}{8}$ "
Angular hand feed of compound rest top slide.....	2"	2"

### THREADS AND FEEDS

Thread cutting range—48 pitches R.H. or L.H.....	4-224 per inch	4-224 per inch
Longitudinal feeds through friction clutch— 48 feeds R.H. or L.H.....	.0015" to .0836"	.0015" to .0836"
Cross-feeds through friction clutch—48 feeds.....	.0006" to .0309"	.0006" to .0309"
Lead screw, 29° Acme thread.....	3 $\frac{1}{4}$ " Diam. 8 Threads	3 $\frac{1}{4}$ " Diam. 8 Threads

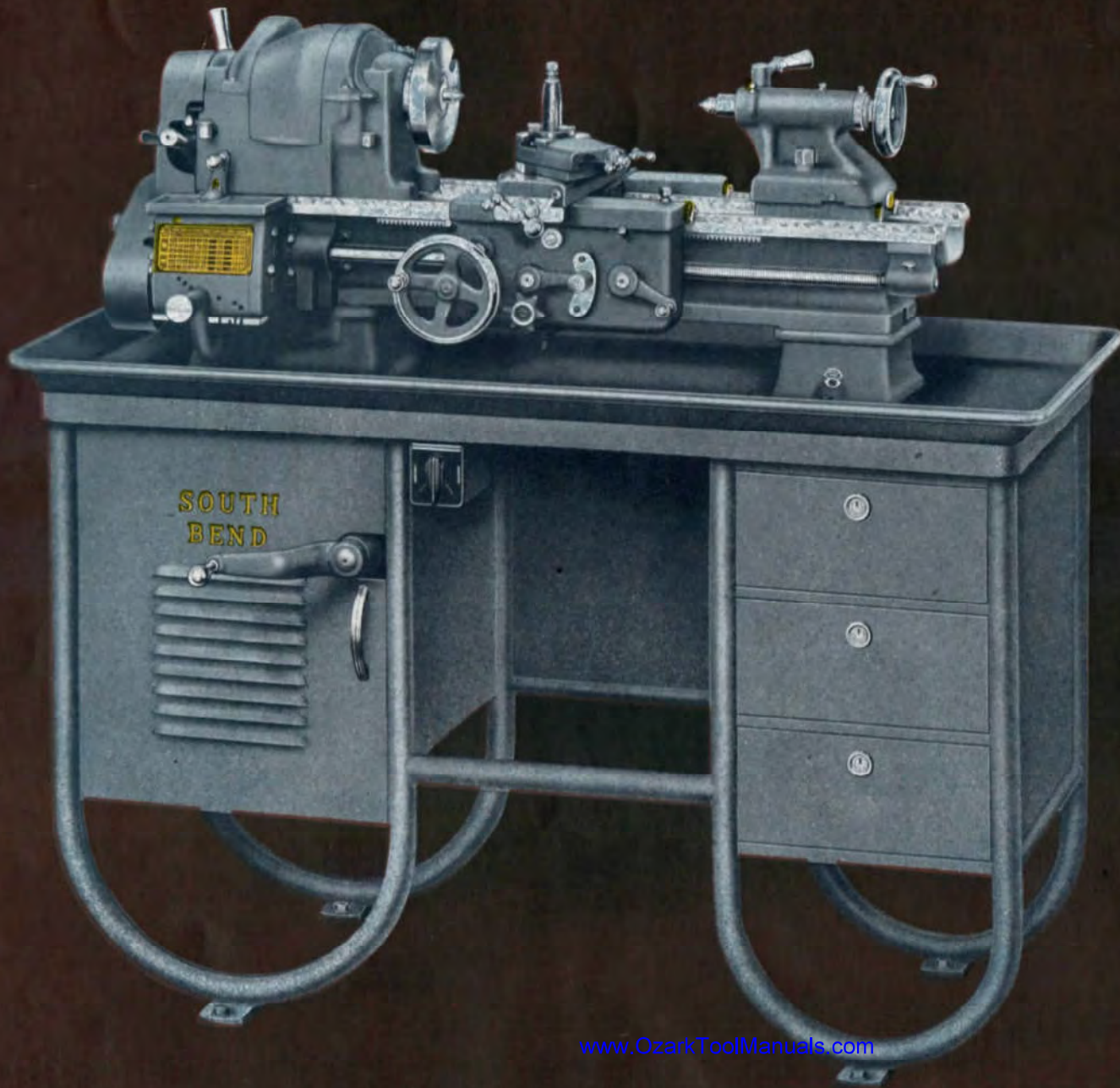
### TOOL POST

Size of tool holder shank.....	3 $\frac{1}{8}$ " x 1 $\frac{1}{16}$ "	3 $\frac{1}{8}$ " x 1 $\frac{1}{16}$ "
Size of cutter bit for tool holder.....	1 $\frac{1}{4}$ " sq.	1 $\frac{1}{4}$ " sq.

### MOTOR

Standard size of motor required.....	3 $\frac{1}{4}$ h.p.	3 $\frac{1}{4}$ h.p.
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\*Collets for 10"—1 $\frac{1}{16}$ " 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  
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<sup>1</sup>/<sub>16</sub>" Collet". The 10-inch 1" Collet Lathe is equipped with a special headstock having 1<sup>3</sup>/<sub>8</sub>" spindle hole which provides 1" maximum collet capacity. The 10-inch 1<sup>1</sup>/<sub>16</sub>" Collet Lathe is equipped with a headstock having 1" spindle hole which provides 1<sup>1</sup>/<sub>16</sub>" 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.	3 <sup>1</sup> / <sub>2</sub> -ft.	4-ft.	4 <sup>1</sup> / <sub>2</sub> -ft.
Catalog Number .....	187-YS	187-ZS	187-AS	187-RS
Distance Between Centers .....	14 <sup>3</sup> / <sub>4</sub> -in.	20 <sup>3</sup> / <sub>4</sub> -in.	26 <sup>3</sup> / <sub>4</sub> -in.	32 <sup>3</sup> / <sub>4</sub> -in.
Shipping Weight, (Crated with Bench) ..	850 lbs	880 lbs.	950 lbs.	980 lbs.
Code Word .....	Jytah	Jyten	Jytis	Jytob

10-inch 1<sup>1</sup>/<sub>16</sub>" Collet Quick Change Gear Bench Lathes  
With Underneath Motor Drive and Steel Bench

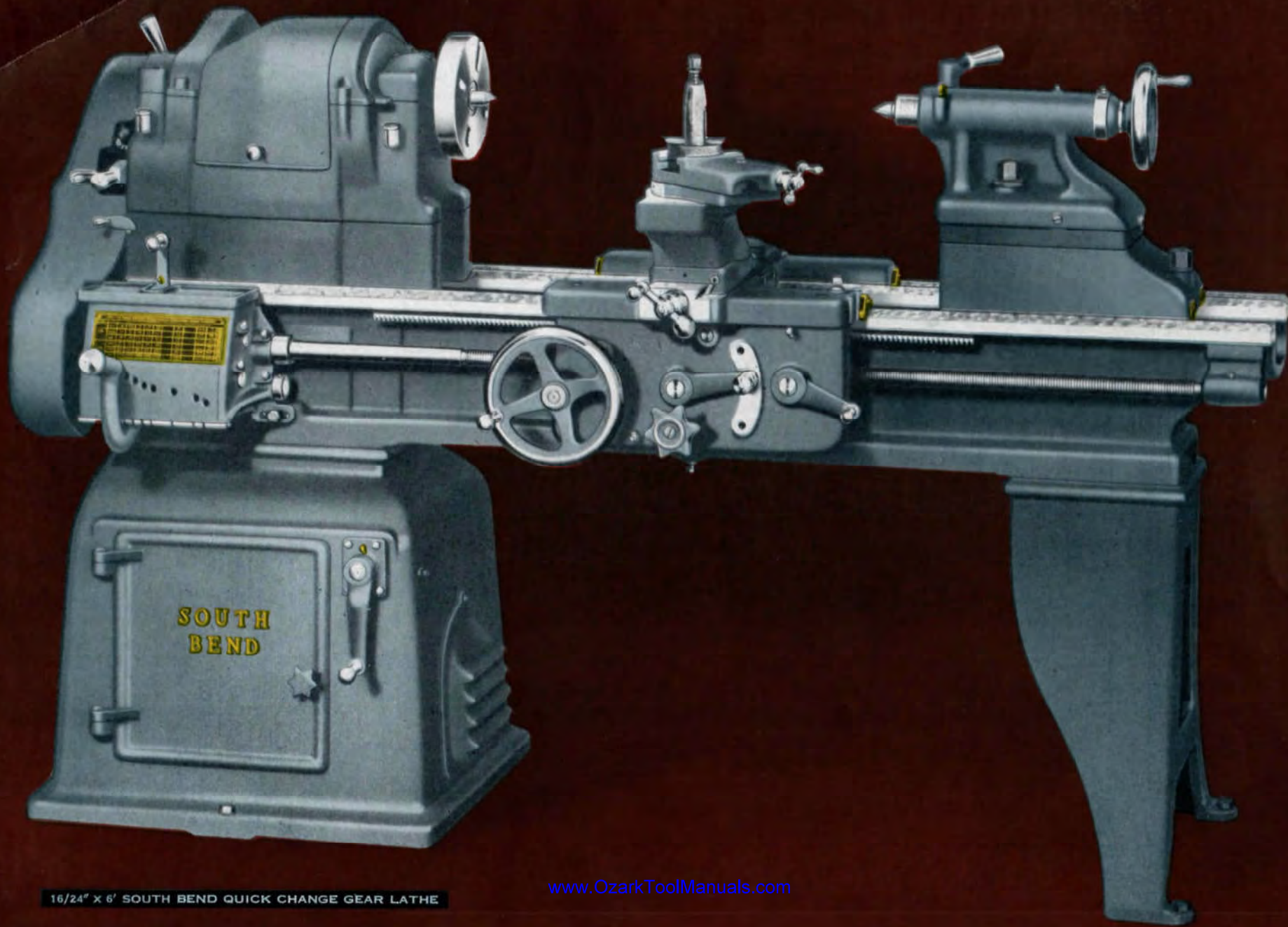
Bed Length	3-ft.	3 <sup>1</sup> / <sub>2</sub> -ft.	4-ft.	4 <sup>1</sup> / <sub>2</sub> -ft.
Catalog Number .....	199-YS	199-ZS	199-AS	199-RS
Distance Between Centers .....	14 <sup>3</sup> / <sub>4</sub> -in.	20 <sup>3</sup> / <sub>4</sub> -in.	26 <sup>3</sup> / <sub>4</sub> -in.	32 <sup>3</sup> / <sub>4</sub> -in.
Shipping Weight, (Crated with Bench) ..	850 lbs	880 lbs.	950 lbs.	980 lbs.
Code Word .....	Kwkad	Kwkan	Kwkai	Kwkax

### SPECIFICATIONS

	10-inch 1 <sup>1</sup> / <sub>16</sub> " Collet	10-inch 1" Collet
<b>CAPACITY OF LATHE</b>		
Swing over bed and saddle wings .....	10 <sup>1</sup> / <sub>8</sub> "	10 <sup>1</sup> / <sub>8</sub> "
Swing over saddle with chip guard removed .....	6 <sup>3</sup> / <sub>4</sub> "	6 <sup>3</sup> / <sub>4</sub> "
Swing over saddle with chip guard .....	5 <sup>7</sup> / <sub>8</sub> "	5 <sup>7</sup> / <sub>8</sub> "
<b>SPINDLE SPEEDS</b> (subject to 5% variation)		
Low spindle speeds		
r.p.m. of spindle, direct belt driven .....	700, 434, 277	700, 434, 277
r.p.m. of spindle, back-gears engaged .....	129, 79, 50	129, 79, 50
High spindle speeds		
r.p.m. of spindle, direct belt driven .....	1357, 837, 535	1357, 837, 535
r.p.m. of spindle, back-gears engaged .....	248, 153, 97	248, 153, 97
<b>HEADSTOCK</b>		
Hole through spindle .....	1"	1 <sup>3</sup> / <sub>8</sub> "
Maximum collet capacity* .....	1 <sup>1</sup> / <sub>16</sub> "	1"
Spindle nose diameter and threads per inch .....	1 <sup>7</sup> / <sub>8</sub> "-8	2 <sup>1</sup> / <sub>4</sub> "-8
Size of center, Morse taper .....	No. 2	No. 2
Width of cone pulley step for belt .....	1 <sup>3</sup> / <sub>8</sub> "	1 <sup>3</sup> / <sub>8</sub> "
Large face plate diameter .....	8 <sup>3</sup> / <sub>8</sub> "	8 <sup>3</sup> / <sub>8</sub> "
Small face plate diameter .....	5 <sup>3</sup> / <sub>8</sub> "	5 <sup>3</sup> / <sub>8</sub> "
Front spindle bearing diameter .....	2 <sup>1</sup> / <sub>4</sub> "	2 <sup>1</sup> / <sub>4</sub> "

	10-inch 1 <sup>1</sup> / <sub>16</sub> " Collet	10-inch 1" Collet
<b>TAILSTOCK</b>		
Size of center, Morse taper .....	No. 2	No. 2
Spindle travel .....	2 <sup>1</sup> / <sub>8</sub> "	2 <sup>1</sup> / <sub>8</sub> "
Each graduation on tailstock spindle .....	1 <sup>1</sup> / <sub>8</sub> "	1 <sup>1</sup> / <sub>8</sub> "
Tailstock top set over for taper turning .....	1 <sup>1</sup> / <sub>8</sub> "	1 <sup>1</sup> / <sub>8</sub> "
<b>COMPOUND REST</b>		
Cross slide travel .....	5 <sup>7</sup> / <sub>8</sub> "	5 <sup>7</sup> / <sub>8</sub> "
Angular hand feed of compound rest top slide .....	2"	2"
<b>THREADS AND FEEDS</b>		
Thread cutting range—48 pitches R.H. or L.H. ....	4-224 per inch	4-224 per inch
Longitudinal feeds through friction clutch—		
48 feeds R.H. or L.H. ....	.0015" to .0836"	.0015" to .0836"
Cross-feeds through friction clutch—48 feeds .....	.0006" to .0309"	.0006" to .0309"
Lead screw, 29° Acme thread .....	3/4" Diam.	3/4" Diam.
	8 Threads	8 Threads
<b>TOOL POST</b>		
Size of tool holder shank .....	3/8" x 1 <sup>1</sup> / <sub>2</sub> "	3/8" x 1 <sup>1</sup> / <sub>2</sub> "
Size of cutter bit for tool holder .....	1/4" sq.	1/4" sq.
<b>MOTOR</b>		
Standard size of motor required .....	3/4 h.p.	3/4 h.p.

\*Collets for 10"-1<sup>1</sup>/<sub>16</sub>" Collet Lathes are interchangeable with collets for 13" Lathes. Collets for 10"-1" Collet Lathes are interchangeable with collets for 16" Lathes.



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

[www.OzarkToolManuals.com](http://www.OzarkToolManuals.com)



## 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	Bzvis	179-C	Tyxob	6	30"	2480
198-D	Bzwah	179-D	Tyxog	7	42"	2560
198-E	Bzwex	179-E	Tyxom	8	54"	2640
198-G	Bzvis	179-G	Tyxor	10	78"	2800
198-H	Bzwox	179-H	Tyxow	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 $\frac{3}{8}$ "
Maximum collet capacity*	1"
Spindle nose diameter and threads per inch.....	2 $\frac{3}{4}$ "-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 $\frac{1}{16}$ "
Front spindle bearing, diameter.....	2 $\frac{7}{8}$ "

#### TAILSTOCK

Size of center, Morse taper.....	No. 3
Spindle travel.....	5 $\frac{3}{4}$ "
Each graduation on tailstock spindle.....	$\frac{1}{16}$ "
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 $\frac{3}{4}$ "

#### THREADS AND FEEDS

Thread cutting range—48 pitches	
R.H. or L.H.....	4 to 224 per inch
Longitudinal feeds through friction clutch—	
48 feeds R.H. or L.H.....	.0015" to .0841"
Cross-feeds through friction clutch—	
48 feeds.....	.0006" o .0312"
Lead Screw, 29° Acme thread.....	1 $\frac{1}{2}$ " Dia.—6 Threads

#### TOOL POST

Size of tool holder shank.....	5 $\frac{1}{8}$ " x 1 $\frac{3}{8}$ "
Size of cutter bit for tool holder.....	3 $\frac{1}{2}$ " 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.

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

## Features of 9-inch South Bend Lathes

### Made in Three Models

There are three models of South Bend 9-inch lathes: Model A, Model B, and Model C. All three models are identical, except for the thread cutting and power feed mechanism.

**Model A 9-inch Lathes** have quick change gear box and power feed apron providing a series of 48 screw threads, 48 power longitudinal feeds, and 48 power cross-feeds.

**Model B 9-inch Lathes** have independent change gear equipment and power feed apron providing a series of 45 screw threads, 23 power cross-feeds, and 26 power longitudinal feeds.

**Model C 9-inch Lathes** have independent change gear equipment and plain apron providing a series of 45 screw threads and 14 power longitudinal turning feeds.

### 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.



Fig. 34. Quick Change Gear Box Supplied on all Model A 9-inch South Bend Lathes



Fig. 35. Model A Lathe set up for cutting threads 4 to 7 per inch



Fig. 36. Model A Lathe set up for cutting threads 8 to 224 per inch

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

STUD GEAR	LEFT HAND TUMBLER	THREADS PER INCH FEEDS IN THOUSANDTHS									
		A	B	C	D	E	A	B	C	D	E
40	A	4 .0853	4½ .0758	5 .0683	5½ .0621	6 .0584	6½ .0569	7 .0525	7½ .0488	8 .0444	9 .0400
20	A	8 .0427	9 .0379	10 .0341	11 .0310	11½ .0297	12 .0284	13 .0263	14 .0244	15 .0225	16 .0208
20	B	16 .0213	18 .0190	20 .0171	22 .0155	23 .0148	24 .0142	26 .0131	28 .0122	30 .0114	32 .0107
20	C	32 .0107	36 .0095	40 .0085	44 .0078	46 .0074	48 .0071	52 .0066	56 .0061	60 .0057	64 .0053
20	D	64 .0053	72 .0047	80 .0043	88 .0039	92 .0037	96 .0036	104 .0033	112 .0030	120 .0028	128 .0027
20	E	128 .0027	144 .0024	160 .0021	176 .0019	184 .0019	192 .0018	208 .0016	224 .0015	240 .0014	256 .0013

9-INCH SOUTH BEND LATHE Model A  
CATALOG NO. \_\_\_\_\_  
BED LENGTH \_\_\_\_\_  
TRADE MARK SOUTH BEND ENGINE LINES  
PAT. APP. FOR  
Left Hand Tumbler Positions ←  
AUTOMATIC CROSS FEEDS 3 TIMES LONGITUDINAL FEEDS

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

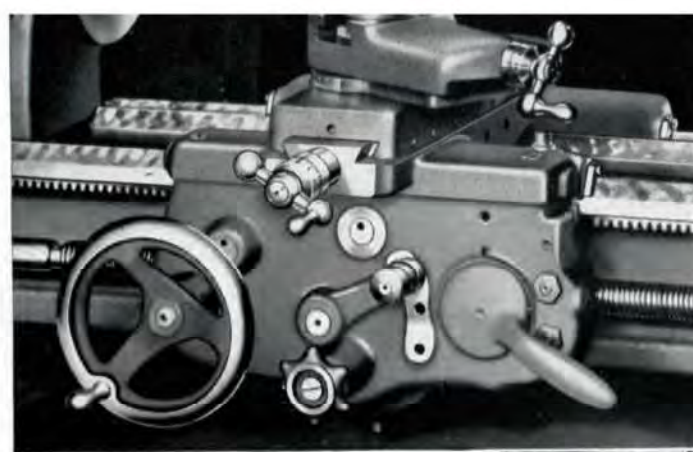


Fig. 38. Above—Power Feed Apron for Model A and Model B 9-inch South Bend Lathes



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

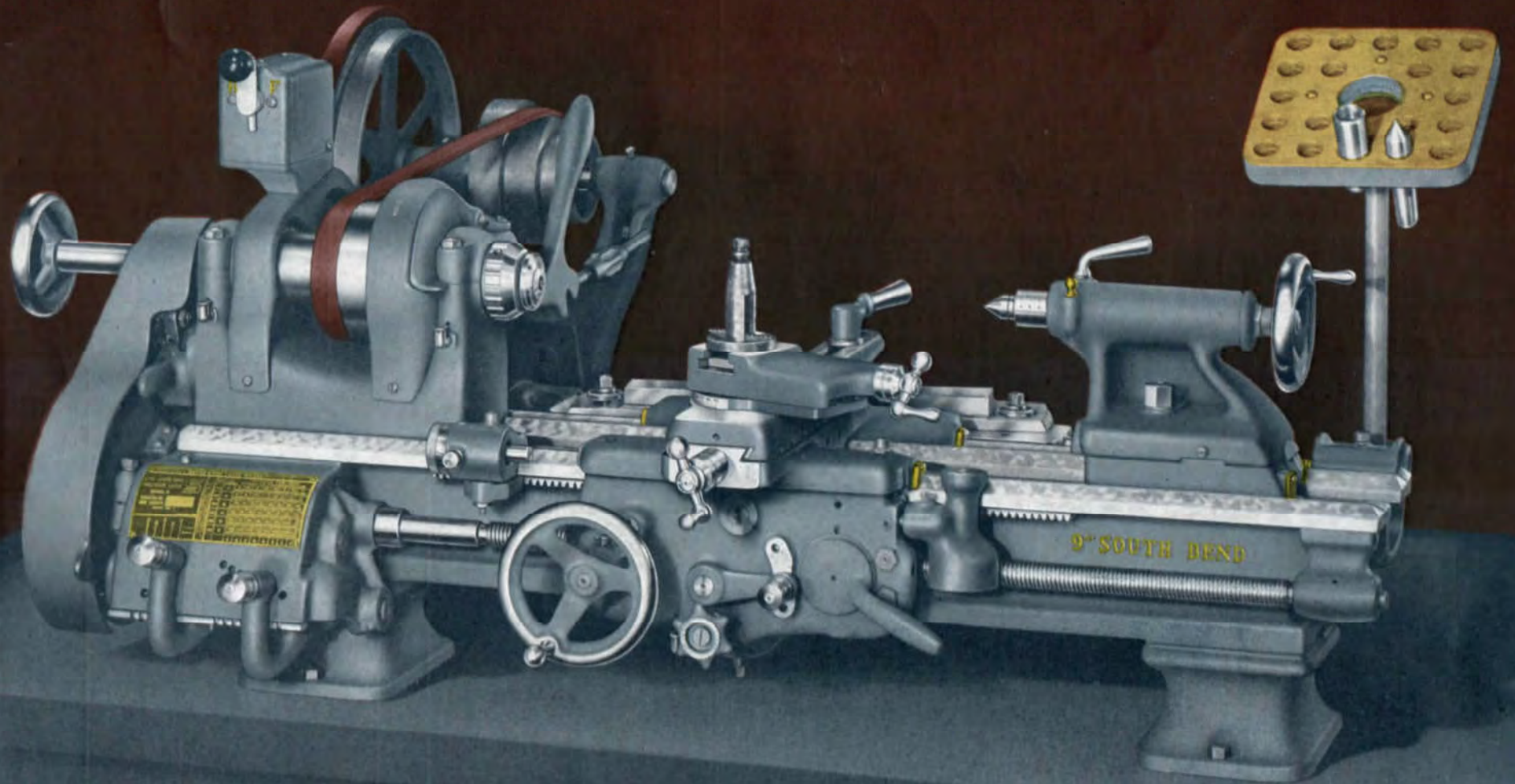
CHART FOR THREADS AND FEEDS			
9-INCH MODEL B LATHE			
4	34	FIG. 1	48
5 1/2	18	FIG. 1	40
6	18	FIG. 1	40
8	18	FIG. 1	40
10	18	FIG. 1	40
12	18	FIG. 1	40
14	18	FIG. 1	40
16	18	FIG. 1	40
20	18	FIG. 1	40
24	18	FIG. 1	40
30	18	FIG. 1	40
36	18	FIG. 1	40
40	18	FIG. 1	40
45	18	FIG. 1	40
50	18	FIG. 1	40
56	18	FIG. 1	40
60	18	FIG. 1	40
64	18	FIG. 1	40
72	18	FIG. 1	40
80	18	FIG. 1	40
90	18	FIG. 1	40
100	18	FIG. 1	40
110	18	FIG. 1	40
120	18	FIG. 1	40
144	18	FIG. 1	40
160	18	FIG. 1	40
180	18	FIG. 1	40
200	18	FIG. 1	40
224	18	FIG. 1	40
8	32	FIG. 2	32
9	32	FIG. 2	32
10	32	FIG. 2	32
11	32	FIG. 2	32
11 1/2	32	FIG. 2	32
12	32	FIG. 2	32
13	32	FIG. 2	32
14	32	FIG. 2	32
16	32	FIG. 2	32
18	32	FIG. 2	32
20	32	FIG. 2	32
24	32	FIG. 2	32
26	32	FIG. 2	32
28	32	FIG. 2	32
30	32	FIG. 2	32
32	32	FIG. 2	32
36	32	FIG. 2	32
40	32	FIG. 2	32
45	32	FIG. 2	32
50	32	FIG. 2	32
56	32	FIG. 2	32
60	32	FIG. 2	32
64	32	FIG. 2	32
72	32	FIG. 2	32
80	32	FIG. 2	32
90	32	FIG. 2	32
100	32	FIG. 2	32
110	32	FIG. 2	32
120	32	FIG. 2	32
144	32	FIG. 2	32
160	32	FIG. 2	32
180	32	FIG. 2	32
200	32	FIG. 2	32
224	32	FIG. 2	32
8	64	FIG. 3	64
9	64	FIG. 3	64
10	64	FIG. 3	64
11	64	FIG. 3	64
11 1/2	64	FIG. 3	64
12	64	FIG. 3	64
13	64	FIG. 3	64
14	64	FIG. 3	64
16	64	FIG. 3	64
18	64	FIG. 3	64
20	64	FIG. 3	64
24	64	FIG. 3	64
26	64	FIG. 3	64
28	64	FIG. 3	64
30	64	FIG. 3	64
32	64	FIG. 3	64
36	64	FIG. 3	64
40	64	FIG. 3	64
45	64	FIG. 3	64
50	64	FIG. 3	64
56	64	FIG. 3	64
60	64	FIG. 3	64
64	64	FIG. 3	64
72	64	FIG. 3	64
80	64	FIG. 3	64
90	64	FIG. 3	64
100	64	FIG. 3	64
110	64	FIG. 3	64
120	64	FIG. 3	64
144	64	FIG. 3	64
160	64	FIG. 3	64
180	64	FIG. 3	64
200	64	FIG. 3	64
224	64	FIG. 3	64
8	128	FIG. 4	128
9	128	FIG. 4	128
10	128	FIG. 4	128
11	128	FIG. 4	128
11 1/2	128	FIG. 4	128
12	128	FIG. 4	128
13	128	FIG. 4	128
14	128	FIG. 4	128
16	128	FIG. 4	128
18	128	FIG. 4	128
20	128	FIG. 4	128
24	128	FIG. 4	128
26	128	FIG. 4	128
28	128	FIG. 4	128
30	128	FIG. 4	128
32	128	FIG. 4	128
36	128	FIG. 4	128
40	128	FIG. 4	128
45	128	FIG. 4	128
50	128	FIG. 4	128
56	128	FIG. 4	128
60	128	FIG. 4	128
64	128	FIG. 4	128
72	128	FIG. 4	128
80	128	FIG. 4	128
90	128	FIG. 4	128
100	128	FIG. 4	128
110	128	FIG. 4	128
120	128	FIG. 4	128
144	128	FIG. 4	128
160	128	FIG. 4	128
180	128	FIG. 4	128
200	128	FIG. 4	128
224	128	FIG. 4	128

Fig. 40. Index Chart Showing Threads and Feeds on Model B 9-inch South Bend Lathes

CHART FOR THREADS AND FEEDS			
9-INCH MODEL C LATHE			
4	34	FIG. 1	48
5 1/2	18	FIG. 1	40
6	18	FIG. 1	40
8	18	FIG. 1	40
10	18	FIG. 1	40
12	18	FIG. 1	40
14	18	FIG. 1	40
16	18	FIG. 1	40
20	18	FIG. 1	40
24	18	FIG. 1	40
30	18	FIG. 1	40
36	18	FIG. 1	40
40	18	FIG. 1	40
45	18	FIG. 1	40
50	18	FIG. 1	40
56	18	FIG. 1	40
60	18	FIG. 1	40
64	18	FIG. 1	40
72	18	FIG. 1	40
80	18	FIG. 1	40
90	18	FIG. 1	40
100	18	FIG. 1	40
110	18	FIG. 1	40
120	18	FIG. 1	40
144	18	FIG. 1	40
160	18	FIG. 1	40
180	18	FIG. 1	40
200	18	FIG. 1	40
224	18	FIG. 1	40
8	32	FIG. 2	32
9	32	FIG. 2	32
10	32	FIG. 2	32
11	32	FIG. 2	32
11 1/2	32	FIG. 2	32
12	32	FIG. 2	32
13	32	FIG. 2	32
14	32	FIG. 2	32
16	32	FIG. 2	32
18	32	FIG. 2	32
20	32	FIG. 2	32
24	32	FIG. 2	32
26	32	FIG. 2	32
28	32	FIG. 2	32
30	32	FIG. 2	32
32	32	FIG. 2	32
36	32	FIG. 2	32
40	32	FIG. 2	32
45	32	FIG. 2	32
50	32	FIG. 2	32
56	32	FIG. 2	32
60	32	FIG. 2	32
64	32	FIG. 2	32
72	32	FIG. 2	32
80	32	FIG. 2	32
90	32	FIG. 2	32
100	32	FIG. 2	32
110	32	FIG. 2	32
120	32	FIG. 2	32
144	32	FIG. 2	32
160	32	FIG. 2	32
180	32	FIG. 2	32
200	32	FIG. 2	32
224	32	FIG. 2	32
8	64	FIG. 3	64
9	64	FIG. 3	64
10	64	FIG. 3	64
11	64	FIG. 3	64
11 1/2	64	FIG. 3	64
12	64	FIG. 3	64
13	64	FIG. 3	64
14	64	FIG. 3	64
16	64	FIG. 3	64
18	64	FIG. 3	64
20	64	FIG. 3	64
24	64	FIG. 3	64
26	64	FIG. 3	64
28	64	FIG. 3	64
30	64	FIG. 3	64
32	64	FIG. 3	64
36	64	FIG. 3	64
40	64	FIG. 3	64
45	64	FIG. 3	64
50	64	FIG. 3	64
56	64	FIG. 3	64
60	64	FIG. 3	64
64	64	FIG. 3	64
72	64	FIG. 3	64
80	64	FIG. 3	64
90	64	FIG. 3	64
100	64	FIG. 3	64
110	64	FIG. 3	64
120	64	FIG. 3	64
144	64	FIG. 3	64
160	64	FIG. 3	64
180	64	FIG. 3	64
200	64	FIG. 3	64
224	64	FIG. 3	64
8	128	FIG. 4	128
9	128	FIG. 4	128
10	128	FIG. 4	128
11	128	FIG. 4	128
11 1/2	128	FIG. 4	128
12	128	FIG. 4	128
13	128	FIG. 4	128
14	128	FIG. 4	128
16	128	FIG. 4	128
18	128	FIG. 4	128
20	128	FIG. 4	128
24	128	FIG. 4	128
26	128	FIG. 4	128
28	128	FIG. 4	128
30	128	FIG. 4	128
32	128	FIG. 4	128
36	128	FIG. 4	128
40	128	FIG. 4	128
45	128	FIG. 4	128
50	128	FIG. 4	128
56	128	FIG. 4	128
60	128	FIG. 4	128
64	128	FIG. 4	128
72	128	FIG. 4	128
80	128	FIG. 4	128
90	128	FIG. 4	128
100	128	FIG. 4	128
110	128	FIG. 4	128
120	128	FIG. 4	128
144	128	FIG. 4	128
160	128	FIG. 4	128
180	128	FIG. 4	128
200	128	FIG. 4	128
224	128	FIG. 4	128

Fig. 41. Index Chart Showing Threads and Feeds on Model C 9-inch South Bend Lathes

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



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

[www.OzarkToolManuals.com](http://www.OzarkToolManuals.com)

## 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 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 12 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 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.	490 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.....	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"
Large face plate diameter.....	7¾"
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.....	9/16"

### COMPOUND REST

Cross slide travel.....	5/8"
Angular hand feed of compound rest top slide.....	2¼"

### THREADS AND FEEDS

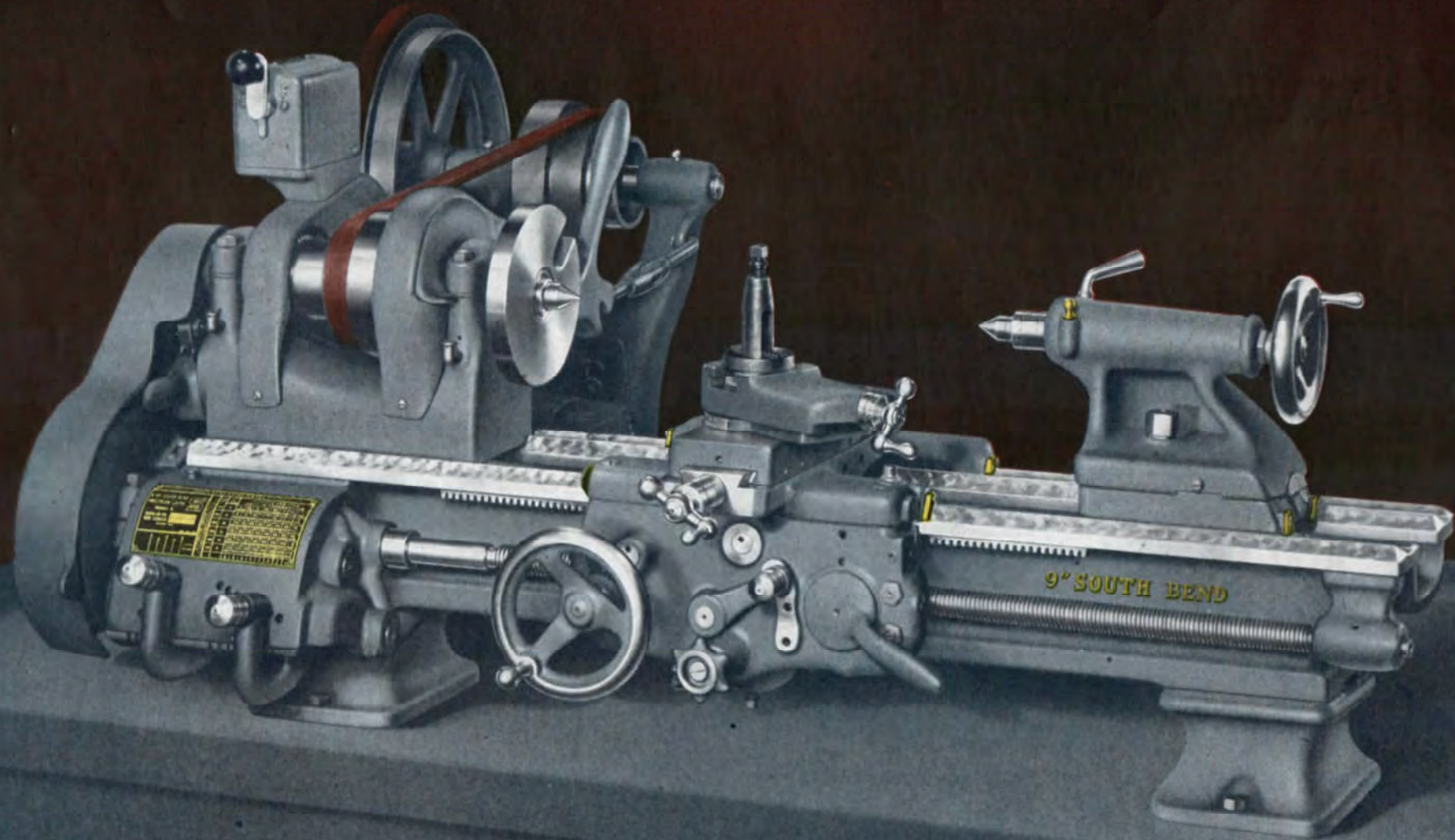
Thread cutting range—48 pitches	
R.H. or L.H.....	4 to 224 per inch
Longitudinal feeds through friction clutch—48 feeds R.H. or L.H.....	.0015" to .0853"
Cross-feeds through friction clutch—48 feeds R.H. or L.H.....	.0004" to .0252"
Lead screw, 29° Acme thread.....	¾" Diam.—8 Threads

### TOOL POST

Size of tool holder shank.....	3/8" 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

[www.CzarkToolManuals.com](http://www.CzarkToolManuals.com)

## 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 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.	3 1/2-ft.*	4-ft.*	4 1/2-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 . . . . .	355 lbs.	380 lbs.	405 lbs.	430 lbs.
Code Word . . . . .	Vuxak	Vuxes	Vuxil	Vuxow

\*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, 138, 79

### HEADSTOCK

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

SOUTH BEND LATHE WORKS

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 . . . . .	1/16"
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

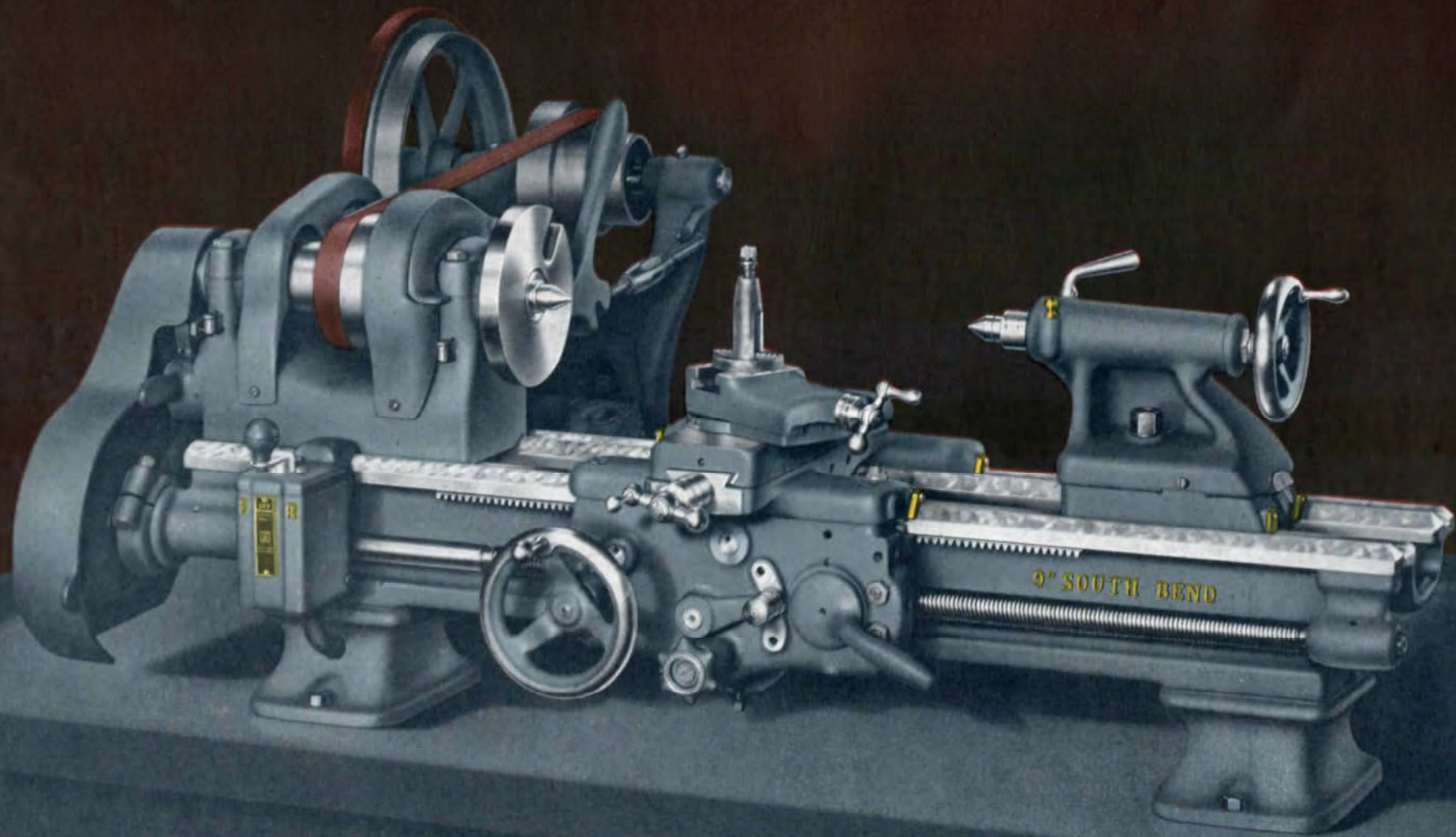
Thread cutting range—48 pitches	
R.H. or L.H. . . . .	4 to 224 per inch
Longitudinal feeds through friction clutch—48 feeds R.H. or L.H. . . . .	
	.0015" to .0853"
Cross-feeds through friction clutch—	
48 feeds R.H. or L.H. . . . .	.0004" to .0252"
Lead screw, 29° Acme thread . . . . .	3/4" Diam.—8 Threads

### TOOL POST

Size of tool holder shank . . . . .	3/8" x 1 1/16"
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 B BENCH LATHE WITH TWELVE-SPEED DRIVE

[www.OzarkToolManuals.com](http://www.OzarkToolManuals.com)



## 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 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; installation 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

Bed Length	3-ft.	3 1/2-ft.*	4-ft.*	4 1/2-ft.
Catalog Number.....	677-Y	677-Z	677-A	677-R
Distance Between Centers.....	16-in.	22-in.	28-in.	34-in.
Shipping Weight, Crated.....	345 lbs.	370 lbs.	395 lbs.	420 lbs.
Code Word.....	Rznak	Rznes	Rzniw	Rznoc

\*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, 213  
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..... 3/4"  
Maximum collet capacity..... 1/2"

SOUTH BEND LATHE WORKS

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..... 1/16"  
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 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..... 3/4" Diam.—8 Threads

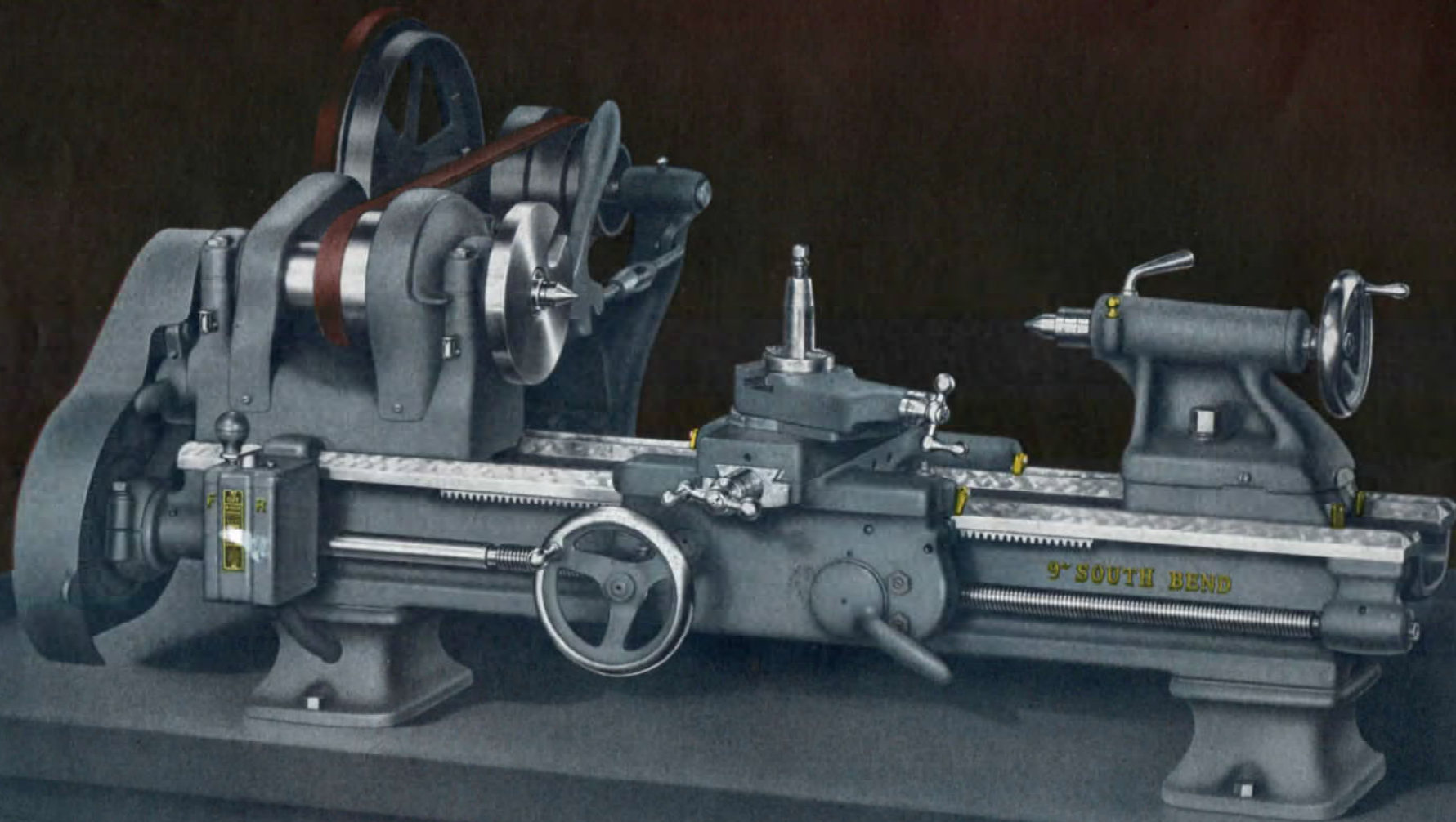
**TOOL POST**

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

**MOTOR**

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

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



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

[www.OzarkToolManuals.com](http://www.OzarkToolManuals.com)

## 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..... 8 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..... 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..... 1/16"  
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

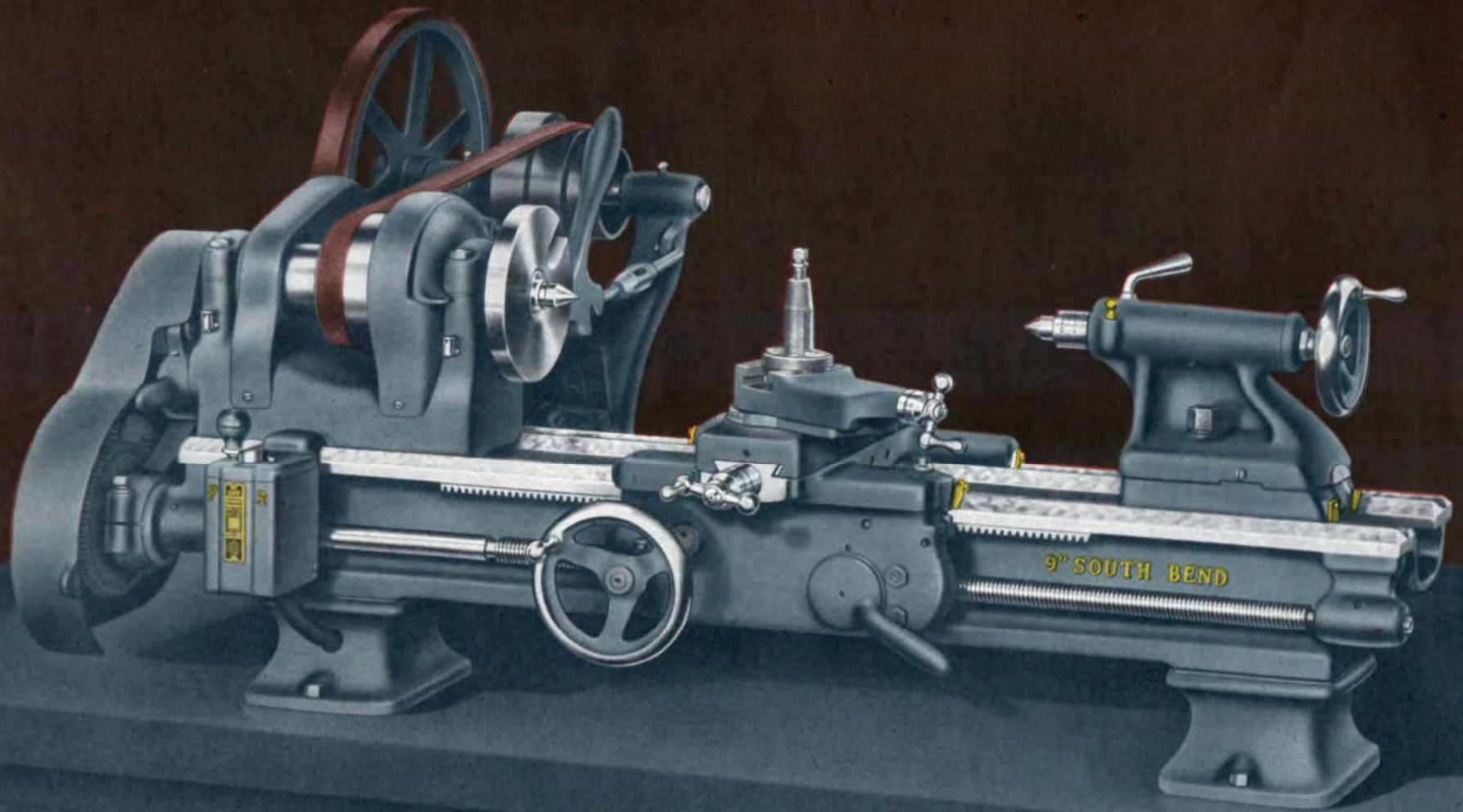
Lead screw, 29° Acme thread..... 3/4" Diam.—8 Threads

**TOOL POST**

Size of tool holder shank..... 3/8" x 1 1/8"  
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 [www.CzarkToolManuals.com](http://www.CzarkToolManuals.com)

## 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.

*Six-Speed 9-inch Bench Lathes*  
With Horizontal Motor Drive—Less Electrical Equipment and Bench

Type of Lathe	Catalog Number	Bed Length Feet*	Between Centers Inches	Ship. Wt. Crated Pounds	Code Word
<b>With Drive Unit for 1/4 H.P. Motor</b>					
Model A	444-Y	3	16	340	Vuwab
	444-Z	3 1/2	22	365	Vuweh
	444-A	4	28	390	Vuwim
	444-R	4 1/2	34	415	Vuwos
Model B	477-Y	3	16	330	Rzmab
	477-Z	3 1/2	22	355	Rzameh
	477-A	4	28	380	Rzamis
	477-R	4 1/2	34	405	RzamoX
Model C	415-YC	3	16	320	Lywas
	415-ZC	3 1/2	22	345	Lywec
	415-AC	4	28	370	Lywih
	415-RC	4 1/2	34	395	Lywon
<b>With Drive Unit for 1/2 H.P. Motor</b>					
Model A	2444-Y	3	16	340	Vuzak
	2444-Z	3 1/2	22	365	Vuzan
	2444-A	4	28	390	Vuzas
	2444-R	4 1/2	34	415	Vuzax
Model B	2477-Y	3	16	330	Rzlib
	2477-Z	3 1/2	22	355	Rzlig
	2477-A	4	28	380	Rzlik
	2477-R	4 1/2	34	405	Rzlis
Model C	2415-Y	3	16	320	Lyzob
	2415-Z	3 1/2	22	345	Lyzoh
	2415-A	4	28	370	Lyzom
	2415-R	4 1/2	34	395	Lyzow

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

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

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**  
**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"

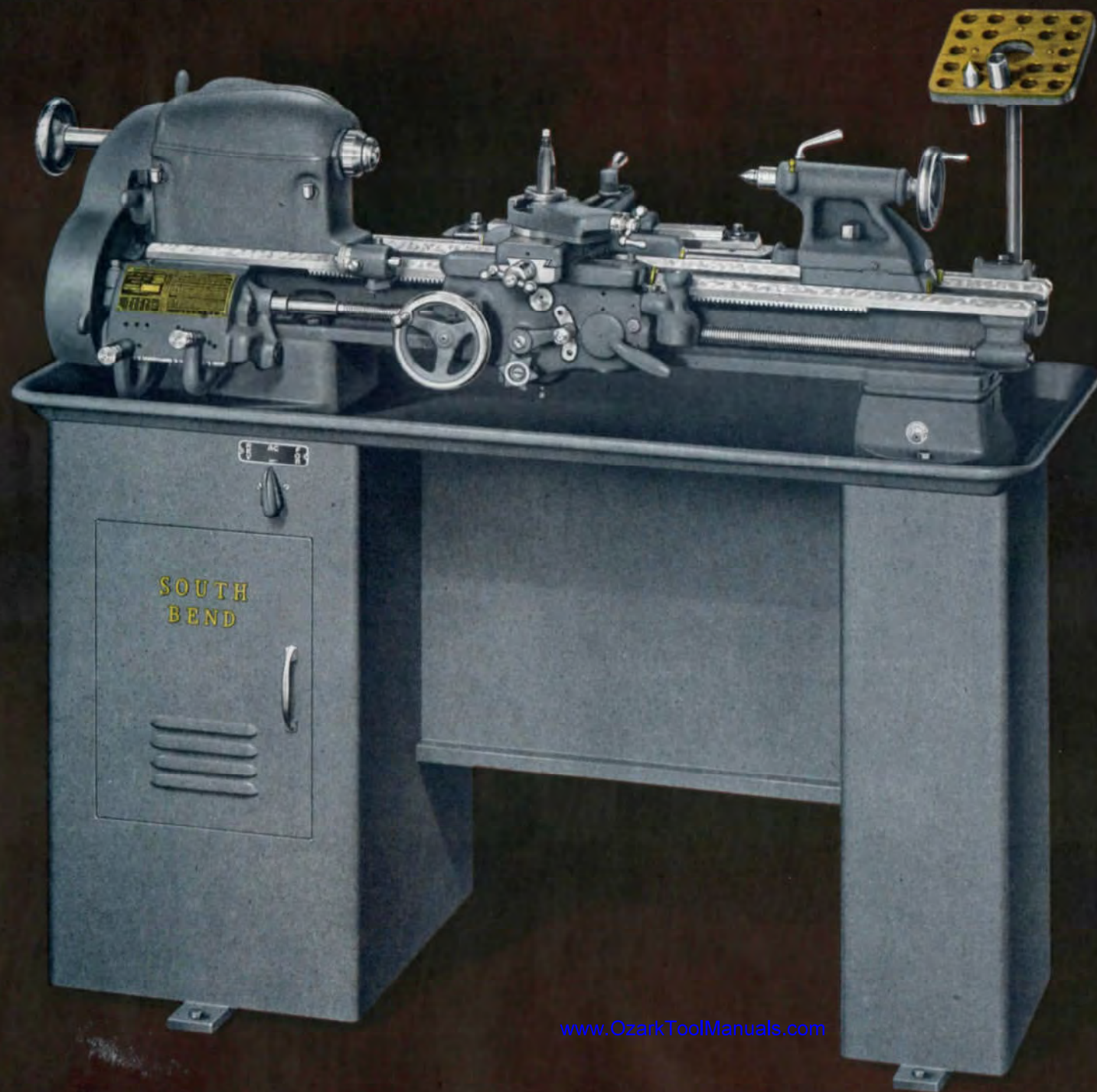
**Model B Lathe—Power Feed Apron and Independent Change Gears**  
Thread cutting range—45 pitches  
R.H. or L.H. . . . . 4 to 160 per inch

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 chip pan; underneath belt motor drive unit; motor pulley with 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 3 1/2'** 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 . . . . .	9 1/4"
Swing over saddle cross slide . . . . .	5"

**SPINDLE SPEEDS** (subject to 5% variation)

<b>Low spindle speeds</b>	
r.p.m. of spindle, direct belt driven . . . . .	658, 370, 212
r.p.m. of spindle, back-gears engaged . . . . .	127, 72, 41
<b>High spindle speeds</b>	
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 . . . . .	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"
Large face plate diameter . . . . .	7 3/8"
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 . . . . .	1/16"
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**

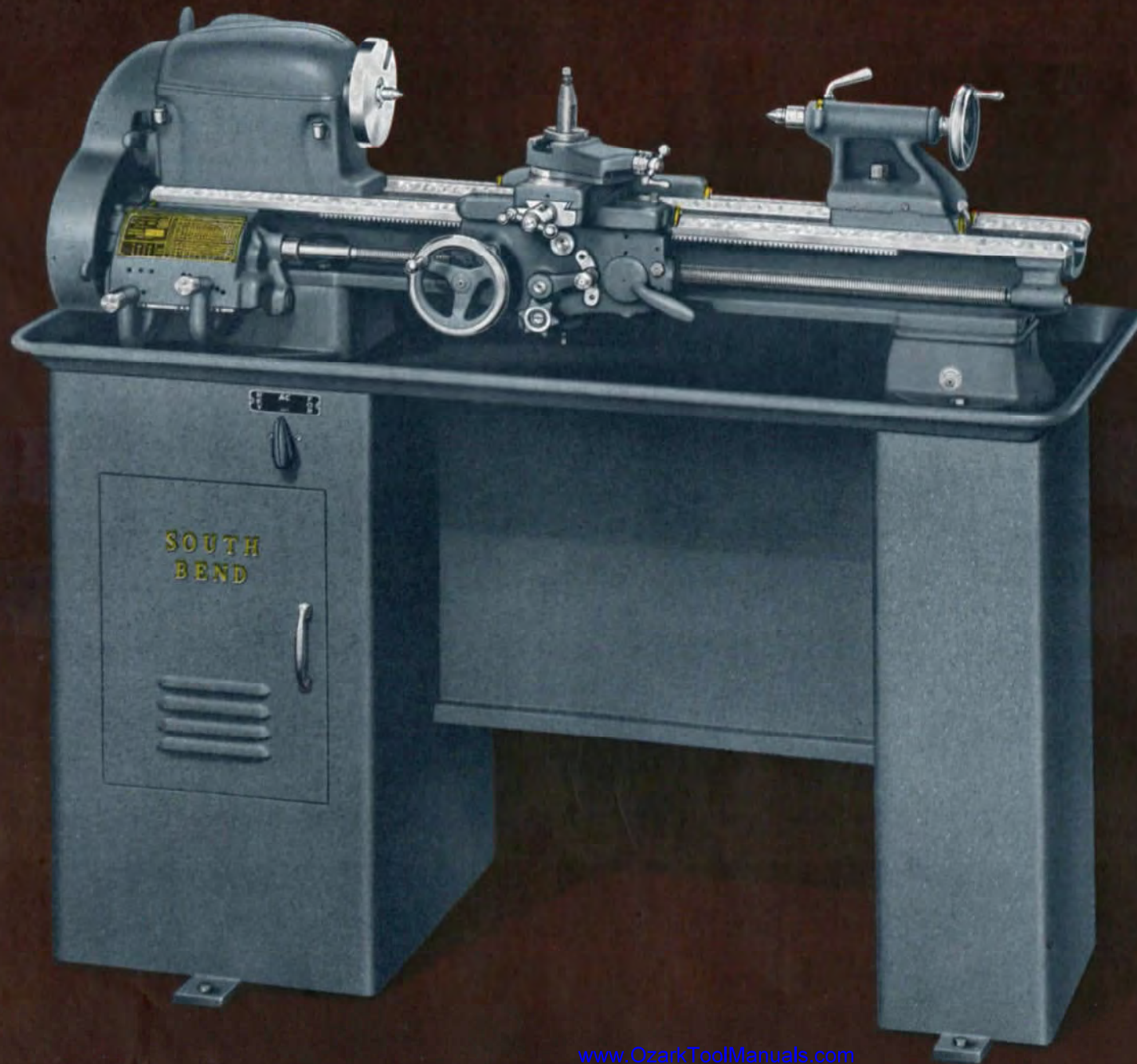
Thread cutting range—48 pitches R.H. or L.H. . . . .	4 to 224 per inch
Longitudinal feeds through friction clutch—48 feeds R.H. or L.H. . . . .	.0015" to .0853"
Cross-feeds through friction clutch— 48 feeds R.H. or L.H. . . . .	.0004" to .0252"
Lead screw, 29° Acme thread . . . . .	3/4" Diam.—8 Threads

**TOOL POST**

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

**MOTOR**

Standard size of motor required . . . . .	1/2 h.p.
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9" X 3 1/2' 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 chip pan; underneath belt motor drive unit; motor pulley with 3/4" hole; V-belt; flat 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 1/2	22-in.	570	Tyzer
377-ZN	B	3 1/2	22-in.	560	Tyzen
315-ZN	C	3 1/2	22-in.	550	Tyweg

### SPECIFICATIONS

**CAPACITY OF LATHE**

Swing over bed and saddle wings	9 1/2"
Swing over saddle cross slide	5 1/2"

**SPINDLE SPEEDS (subject to 5% variation)**

<b>Low spindle speeds</b>	
r.p.m. of spindle, direct belt driven	658, 370, 212
r.p.m. of spindle, back-gears engaged	127, 72, 41
<b>High spindle speeds</b>	
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	3/4"
Maximum collet 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	1"
Small face plate diameter	5 1/2"
Front spindle bearing, diameter	1 1/2"

**TAILSTOCK**

Size of center, Morse taper	No. 2
Spindle travel	2 1/2"
Each graduation on tailstock spindle	1/64"
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**

<b>Model A Lathe—Quick Change Gear and Power Feed Apron</b>	
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"
<b>Model B Lathe—Power Feed Apron and Independent Change Gears</b>	

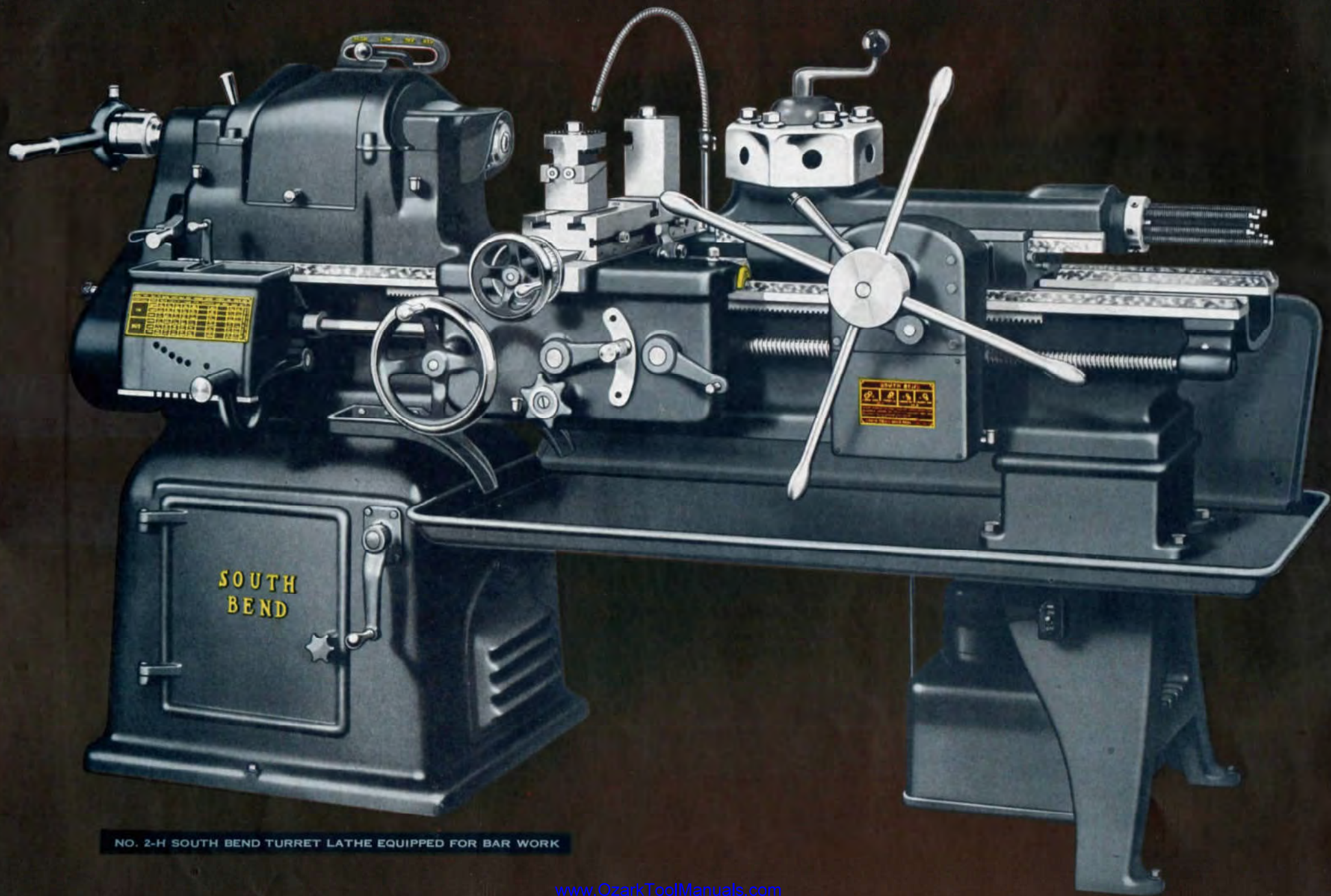
<b>Thread cutting range—45 pitches</b>	
R.H. or L.H.	4 to 160 per inch
Longitudinal feeds through friction clutch—26 feeds R.H. or L.H.	.0021" to .0155"
Cross-feeds through friction clutch—23 feeds	.001" to .0046"
<b>Model C Lathe—Plain Apron and Independent Change Gears</b>	
Thread cutting range—45 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 1/2"
Size of cutter bit for tool holder	1/4" sq.

**MOTOR**

Standard size of motor required	1/2 h.p.
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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 1/2"
Width of lathe bed . . . . .	11 3/8"
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**

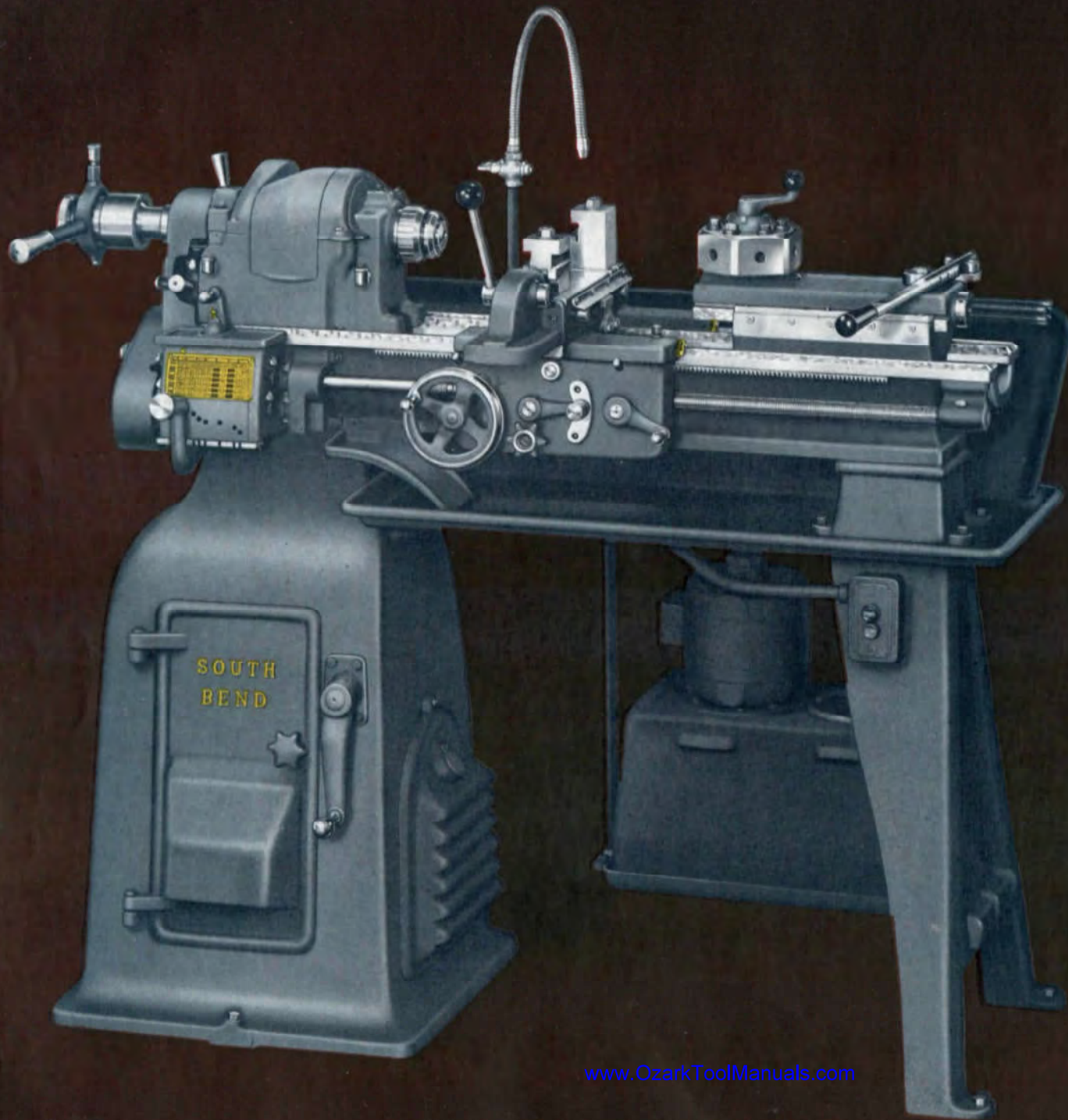
Diameter of holes in turret faces . . . . .	1 1/2"
Center of turret hole to top of turret slide . . . . .	2 1/2"
Effective feed of turret slide . . . . .	6 1/8"
Distance between opposite flats . . . . .	9 3/8"
Maximum distance between spindle nose and turret face at beginning of indexing movement . . . . .	6 ft. bed 28 1/8", 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 1/2" 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 3½ ft. bed, power feed universal carriage, handlever bed turret, double tool cross slide, compound rest cross slide, oil pan, and coolant return assembly. Approximate shipping weight crated, 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 . . . . .	71 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)**

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

**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 .0836"
Maximum longitudinal travel of universal carriage, hand or power feed . . . . .	16"

**DOUBLE TOOL CROSS SLIDE**

Swing over double tool cross slide . . . . .	3 1/8"
Cross travel of cross slide . . . . .	3 3/8"
Maximum size cutter bit tool block opening will take . . . . .	7/16" x 7/16"

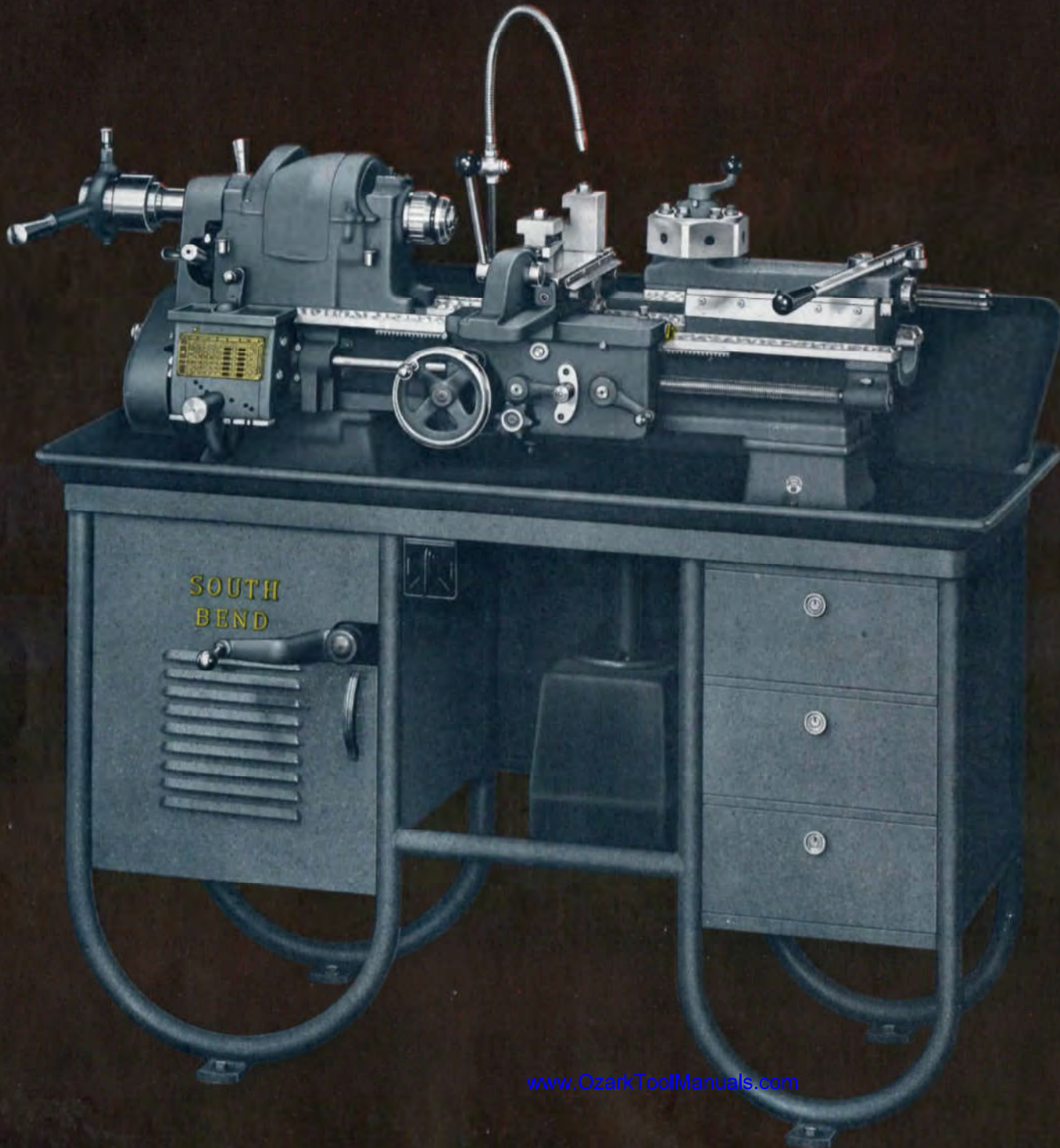
**COMPOUND REST CROSS SLIDE**

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



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 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 head-stock 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 . . . . .	1 3/8"
Swing over bed and saddle wings . . . . .	10 1/8"
Width of lathe bed . . . . .	21 1/2"
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 .0836"
Maximum longitudinal travel of universal carriage, hand or power feed . . . . .	16"

### DOUBLE TOOL CROSS SLIDE

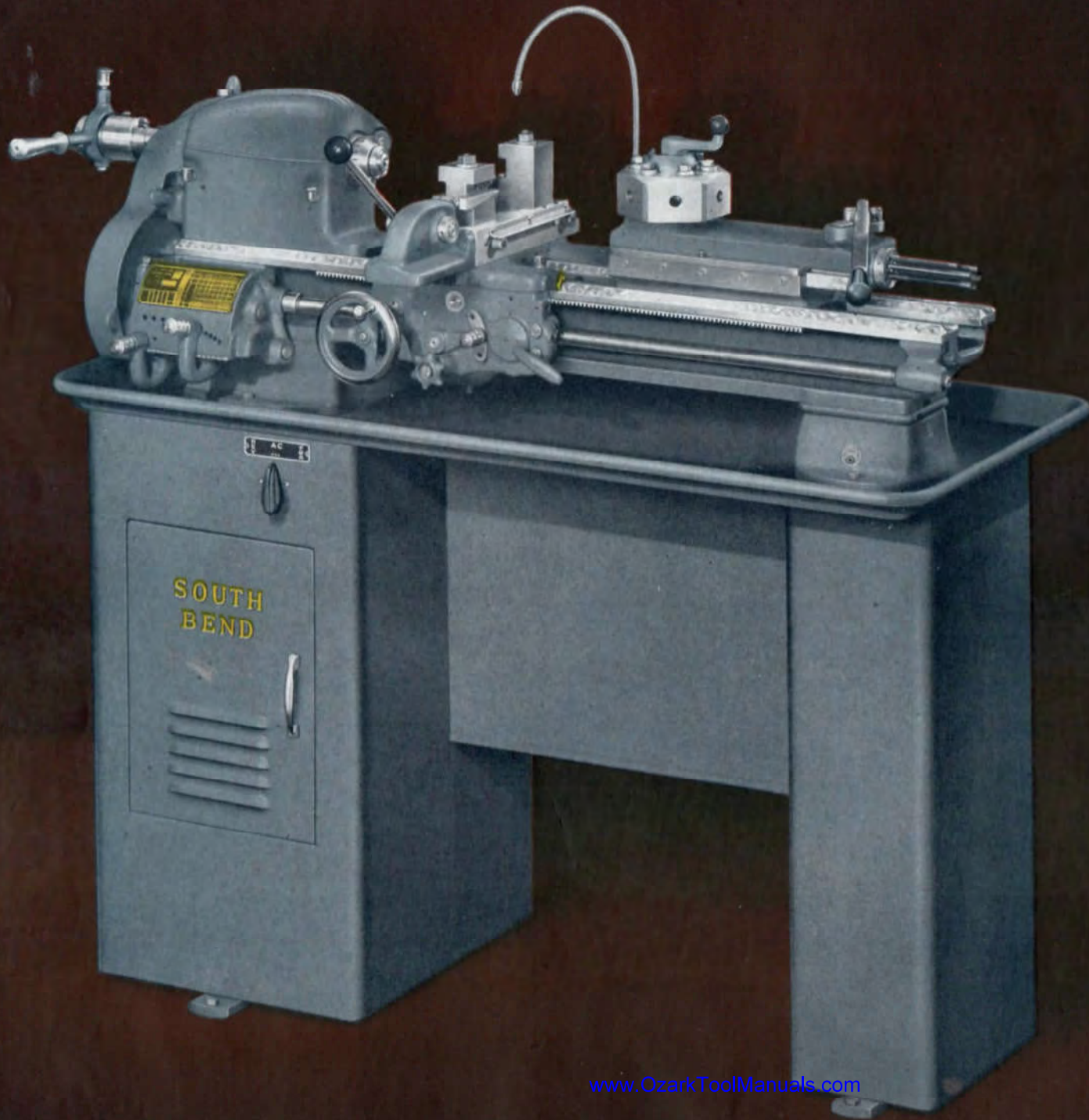
Swing over double tool cross slide . . . . .	3 1/8"
Cross travel of cross slide . . . . .	3 5/8"
Maximum size cutter bit tool block opening will take . . . . .	1 1/2" x 1 1/2"

### 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 1/2"
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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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	3/4"
Swing over bed and saddle wings	9 1/4"
Width of lathe bed	5 11/16"
Spindle nose diameter and threads per inch	1 1/2"-8
Maximum capacity through collet chuck	1 1/2"
Maximum capacity through universal lathe chuck	3/4"

### 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 3/4" holes in turret head. No extra charge.

### TURRET

Diameter of holes in turret face*	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 3/8"
Maximum distance between spindle nose and turret face at beginning of indexing movement	20 3/8"

### UNIVERSAL CARRIAGE

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

### DOUBLE TOOL CROSS SLIDE

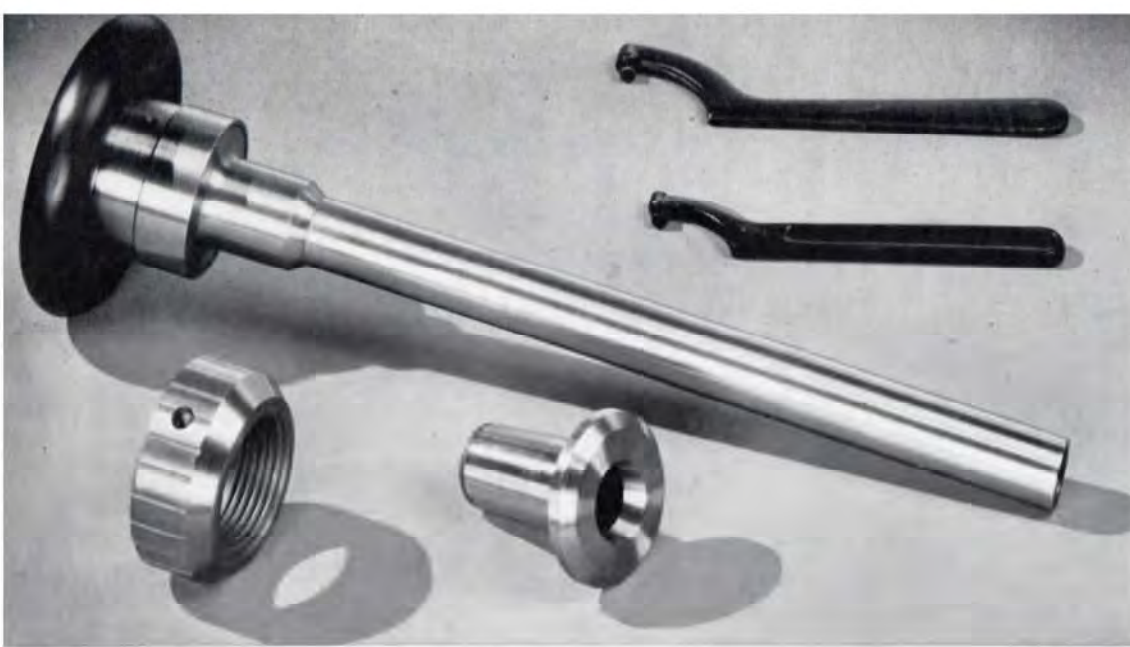
Swing over double tool cross slide	3 3/8"
Cross travel of cross slide	3 5/8"
Maximum size cutter bit tool block opening will take	7/16" x 1/16"

### COMPOUND REST CROSS SLIDE

Swing over compound cross slide	5 1/2"
Cross slide will travel	5 3/4"
Angular hand feed to top slide	2 1/4"
Size of tool holder shank for tool post	9/16" x 1 1/16"
Size cutter bits tool holder takes	1/2" x 1/4"
Power cross-feeds	.0004" to .0252"

### MOTOR

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

## 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	$\frac{1}{16}$ in. up to $\frac{1}{2}$ in.	Abpat
5210	10" — $\frac{1}{16}$ " Collet	No. 2	$\frac{1}{16}$ in. up to $\frac{11}{16}$ in.	Cahem
5219	10" — 1" Col. and Series 1000	No. 5	$\frac{1}{16}$ in. up to 1 in.	Cahum
5213	13"	No. 2	$\frac{1}{16}$ in. up to $\frac{11}{16}$ in.	Andes
5214	14 $\frac{1}{2}$ "	No. 4	$\frac{1}{16}$ in. up to $\frac{3}{4}$ in.	Ciked
5216	16", 16 $\frac{1}{4}$ " and No. 2-H	No. 5	$\frac{1}{16}$ in. up to 1 in.	Aster

SOUTH BEND LATHE WORKS

**SOUTH BEND**  
*Precision* LATHES

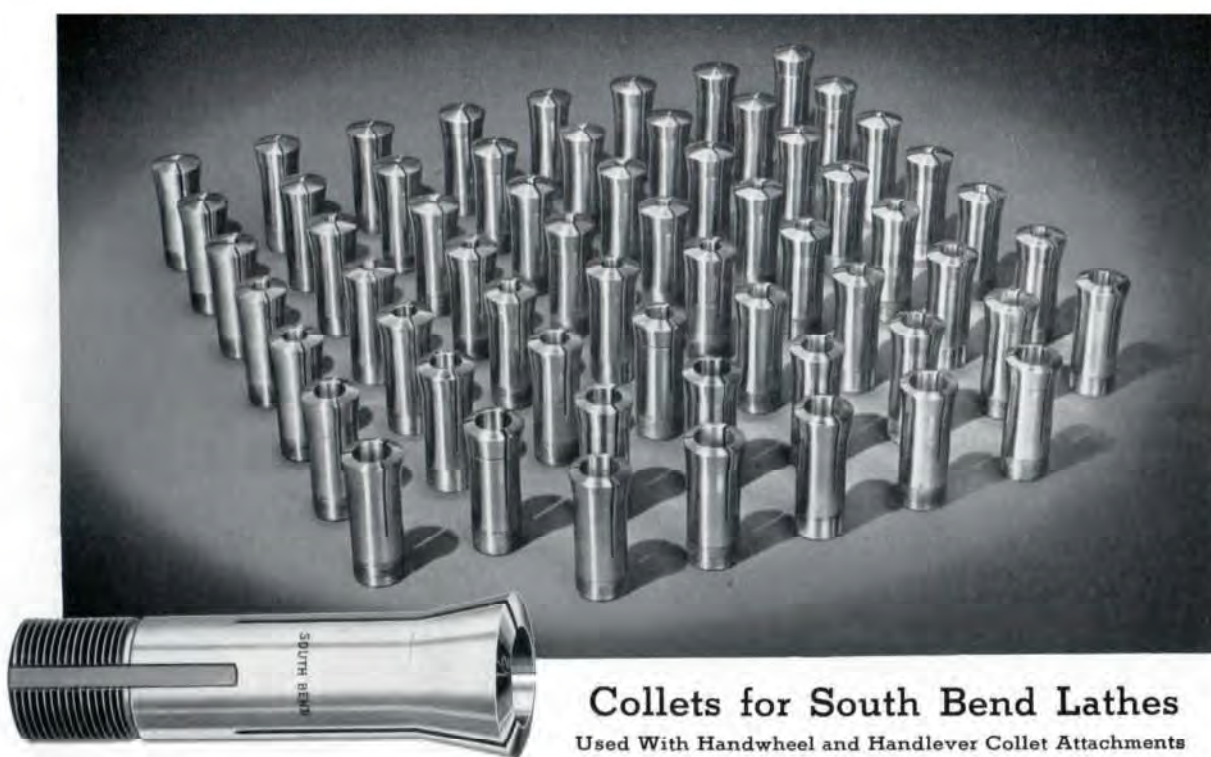
Fig. 54. Above—Handwheel Draw-in Collet Attachment

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

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	$\frac{1}{16}$ in. up to $\frac{1}{2}$ in.	Acruet
4310	10" — $\frac{1}{16}$ " Collet	No. 2	$\frac{1}{16}$ in. up to $\frac{11}{16}$ in.	Cibah
4312	10" — 1" Col. and Series 1000	No. 5	$\frac{1}{16}$ in. up to 1 in.	Cihak
4313	13"	No. 2	$\frac{1}{16}$ in. up to $\frac{11}{16}$ in.	About
4314	14 $\frac{1}{2}$ "	No. 4	$\frac{1}{16}$ in. up to $\frac{3}{4}$ in.	Cilam
4316	16", 16 $\frac{1}{4}$ " and No. 2-H	No. 5	$\frac{1}{16}$ in. up to 1 in.	Adore





## 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-

cations. 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 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	Rabah
1752	10" Regular	17 Collets	Rawik
1753	10"-1" Col. and 1000	17 Collets	Razuk
1772	13"	17 Collets	Rajem
1791	14 1/2"	17 Collets	Rakaw
1774	16", 16 24", 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	Syvac	609-W	Catra
		Set of 8 Collets in 16ths, 1/16" to 1/2" capacity inclusive	2235	Cvtab	2047	Hxpam
		Set of 7 Collets in odd 32nds, 3/32" to 1 5/16" cap. inclusive	2534	Cvnr	2476	Cvrb
		Set of 14 Collets in odd 64ths, 3/64" to 21/64" cap. inclusive	2535	Cvnr	2477	Cvroq
No. 2	10"-11 1/2" Collet and 13"	1 Collet, any standard size 1/16" to 1 1/16" in sixty-fourths	1697	Syvam	1721	Cagin
		Set of 11 Collets in 16ths, 1/16" to 1 1/16" capacity inclusive	2238	Cvtab	2432	Hxrac
		Set of 10 Collets in odd 32nds, 3/32" to 21/32" cap. inclusive	2536	Cvnr	2478	Cvrom
		Set of 20 Collets in odd 64ths, 3/64" to 21/64" cap. inclusive	2537	Cvnr	2479	Cvrof
No. 5	10"-1" Collet, Series 1000, 16", 16 24", and No. 2-H	1 Collet, any standard size 1/16" to 1" in sixty-fourths	1698	Syvaf	1722	Cagot
		Set of 16 Collets in 16ths, 1/16" to 1" capacity inclusive	2241	Cvmac	2435	Hxsek
		Set of 15 Collets in odd 32nds, 3/32" to 11/32" cap. inclusive	2540	Cvno	2482	Cvrun
		Set of 30 Collets in odd 64ths, 3/64" to 21/64" cap. inclusive	2541	Cvno	2483	Cvruw
No. 4	14 1/2"	1 Collet, any standard size 1/16" to 1 1/16" in sixty-fourths	1699	Syvax	1713	Cepas
		Set of 12 Collets in 16ths, 1/16" to 1" capacity inclusive	2244	Cvnac	2438	Hztab
		Set of 11 Collets in odd 32nds, 1/32" to 27/32" cap. inclusive	2538	Cvnob	2480	Cvruc
		Set of 22 Collets in odd 64ths, 3/64" to 21/64" cap. inclusive	2539	Cvnoh	2481	Cvrub

## 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 for the required diameter. When the binding lever is tightened, the cross slide base is rigidly locked to the taper attachment swivel slide, and the thrust is removed from the cross-feed screw.

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			Approx. Ship. Wgt.	Code Word
			At One Setting	Per Foot	In Degrees		
1545	10" and Ser. 1000	5 $\frac{3}{4}$ in.	8 $\frac{1}{2}$ in.	3 $\frac{1}{2}$ in.	10 $\frac{1}{2}$	40 lbs.	Mekoe
379	13"	8 in.	9 $\frac{1}{2}$ in.	3 $\frac{1}{2}$ in.	10 $\frac{1}{2}$	65 lbs.	Mokil
360	14 $\frac{1}{2}$ "	9 $\frac{1}{8}$ in.	9 $\frac{1}{2}$ in.	3 $\frac{1}{2}$ in.	10 $\frac{1}{2}$	80 lbs.	Mokux
381	16"	9 $\frac{5}{8}$ in.	11 $\frac{1}{2}$ in.	3 $\frac{1}{2}$ in.	10 $\frac{1}{2}$	100 lbs.	Munar
383	16/24"	19 in.	11 $\frac{1}{2}$ in.	3 $\frac{1}{2}$ in.	10 $\frac{1}{2}$	100 lbs.	Moyix

SOUTH BEND LATHE WORKS

**SOUTH BEND**  
*Precision* **LATHES**

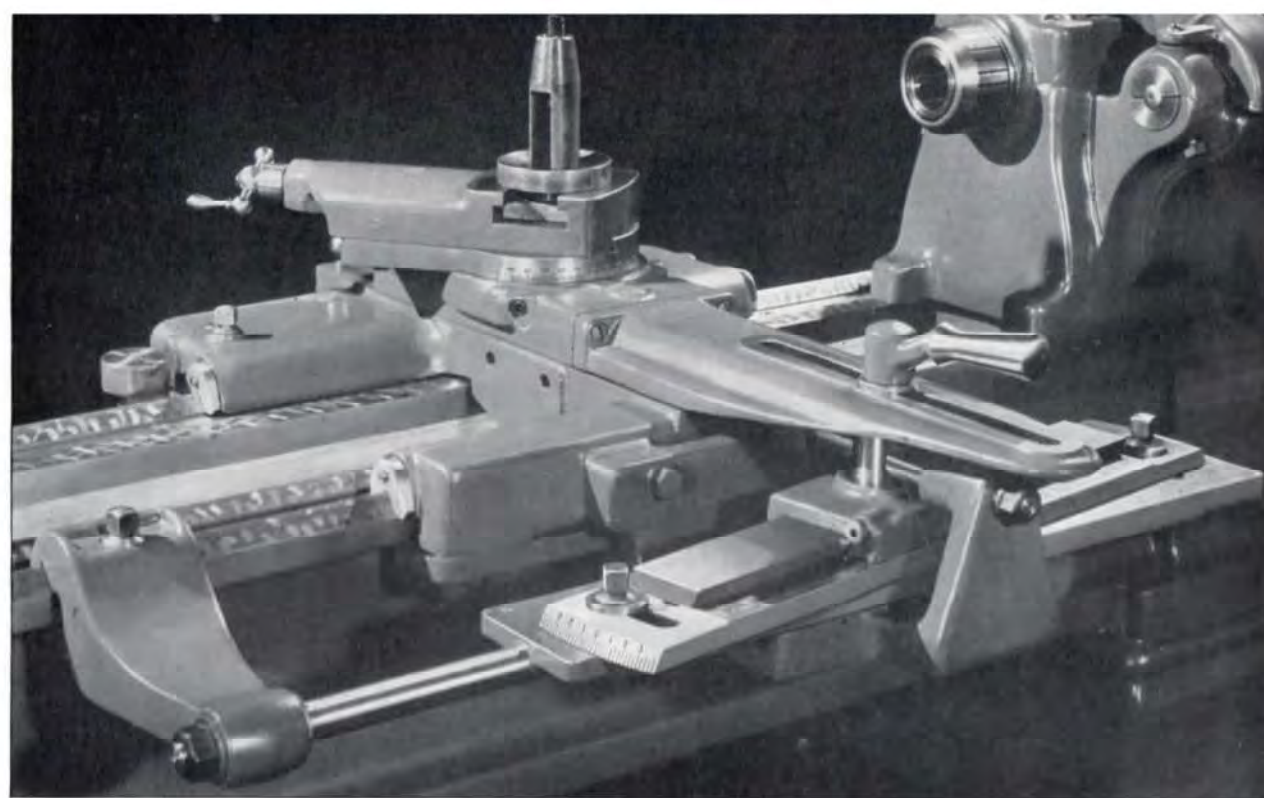


Fig. 59. Telescopic Taper Attachment for 10-inch and Larger South Bend Lathes

## 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 gibs. 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 $\frac{1}{2}$ " per foot and up to 7" in length at one setting. Swing 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

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

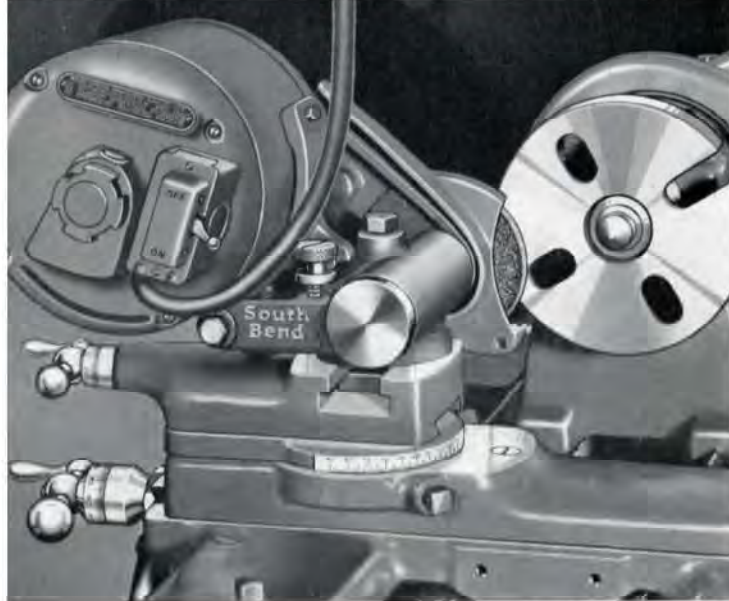


Fig. 61. Electric Grinding Attachment

## 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 1/4 h.p. motor, 1725 r.p.m., ball-bearing grinding spindle, V-belt, belt guard, one 4" x 1/2" Alundum 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. 220 V. Motor*		1-Phase 60-cycle A.C. 115 V. Motor*		Direct Current 115 V. Motor*	
		No.	Code	No.	Code	No.	Code
9" & 900	5 1/4 -in.	303-DN	Szbed	301-BN	Sunar	300-KN	Szber
10" & 1000	5 7/16 -in.	303-DR	Szbek	301-BR	Suney	300-KR	Szbev
13"	8 -in.	303-DT	Szben	301-BT	Suniz	300-KT	Szbic
14 1/2"	9 -in.	303-DF	Szbet	301-BF	Surat	300-KF	Szbih
16"	9 1/2 -in.	303-DH	Szbez	301-BH	Surex	300-KH	Szbin
16 1/4"	18 3/4 -in.	303-DH	Szbez	301-BH	Surex	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 plane

and vertical plane, permitting the vise to be swiveled in any direction. The vertical slide screw collar is graduated in thousandths of an inch.\*

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

\*Metric graduations can be supplied to order.



Arbor for Milling Cutters  
*Standard Extra*

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

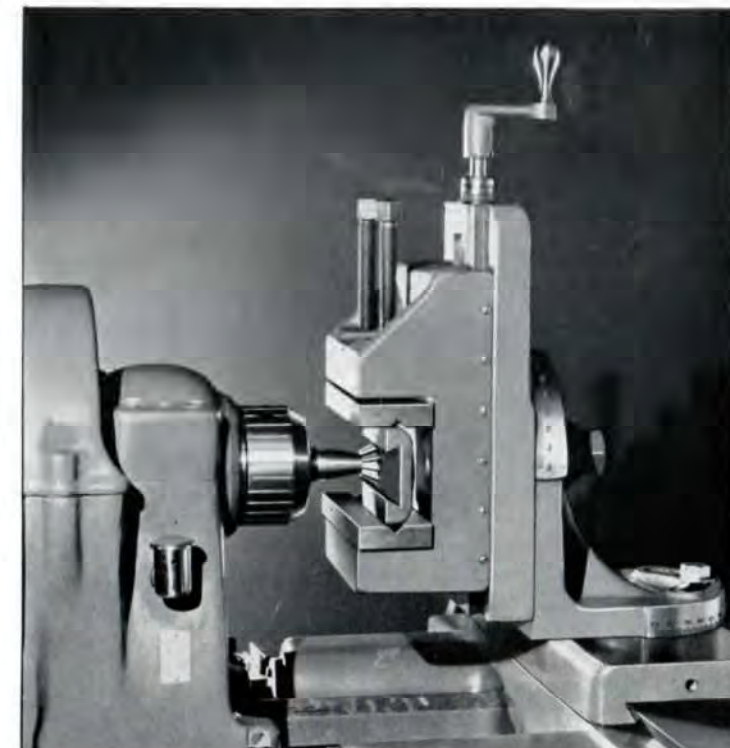
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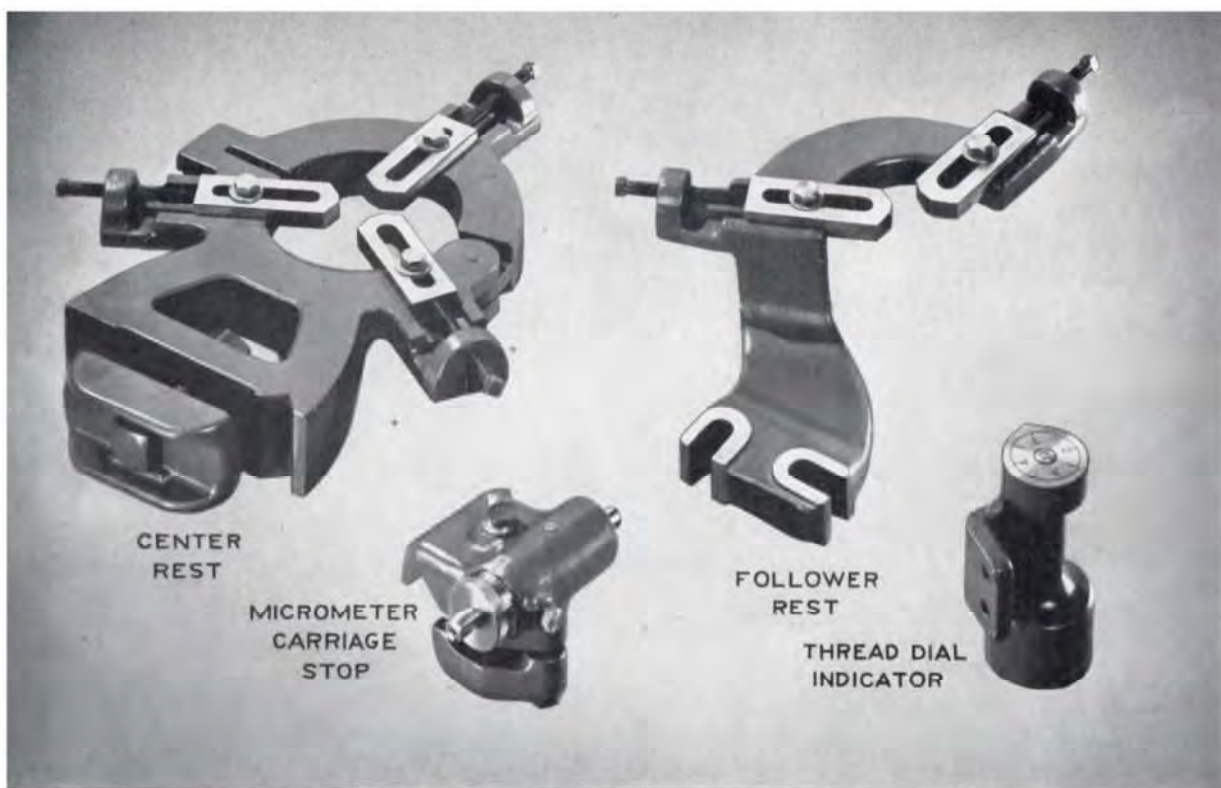
Milling and Keyway Cutting Attachment

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 1/2 in.	5 7/8 in.	1 1/2 in.	1 5/16 in.	3 in.	13 lbs.	Vabif
1-N	10 in.	3 in.	5 7/8 in.	1 3/4 in.	1 5/16 in.	3 1/2 in.	25 lbs.	Vahek
3	13 in.	4 1/4 in.	8 1/8 in.	2 7/8 in.	1 11/16 in.	4 7/8 in.	40 lbs.	Victo
4-K	14 1/2 in.	6 in.	10 in.	4 in.	2 in.	5 3/4 in.	50 lbs.	Vulat
5	16 in.	6 in.	10 1/2 in.	4 in.	2 in.	5 3/4 in.	65 lbs.	Varen
5	16 1/4 in.	6 in.	10 1/2 in.	4 in.	2 in.	5 3/4 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.	1/4 in.	Cegke
1177	10" and Series 1000	3 in.	1/4 in.	Nuzic
341	13"	3 3/4 in.	3/8 in.	Nygas
1174	14 1/2"	4 3/4 in.	5/8 in.	Nuzas
720	16"	4 3/4 in.	5/8 in.	Nyjou
1175	16/24"	4 3/4 in.	5/8 in.	Nuzum

## 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	Capyx
1518	10" and Series 1000	Cegab
973	13"	Chain
1502	14 1/2"	Ciwot
975	16", 16/24", and No. 2-H	Climb

## 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
1988	10" and Series 1000	Dahun
813	13", 14 1/2", 16", 16/24" & No. 2H	Advis
2265-N.	Special Thread Dial for 9" Metric Lathes with metric lead screw. Code word . . . "Mywet"	

## 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.	3/16 in.	Cegmo
1353	10" and Series 1000	2 1/2 in.	1/16 in.	Fanus
376	13"	3 1/2 in.	3/16 in.	Fanba
1351	14 1/2"	4 1/4 in.	3/16 in.	Felat
730	16"	4 1/4 in.	3/16 in.	Famuf
1352	16/24"	4 1/4 in.	3/16 in.	Felix

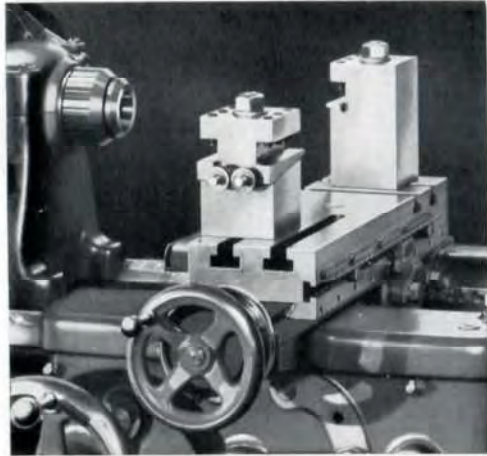
SOUTH BEND LATHE WORKS

60

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

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**Double Tool Cross Slide**  
For 16" South Bend Lathe  
*Standard Extra*

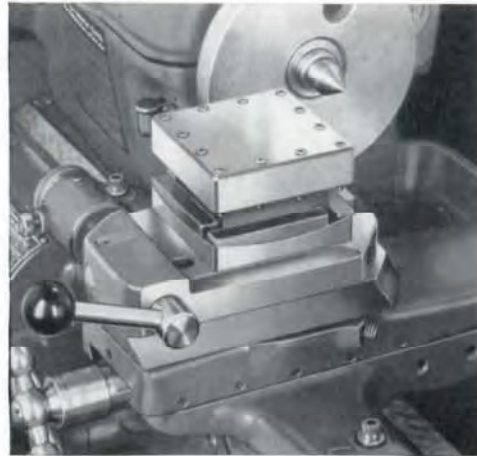
This cross slide fits on the saddle dovetail in place of the compound rest assembly. The cross-feed may be operated by power through the friction clutch in the apron, as well as by the cross-feed handwheel. A large diameter micrometer graduated collar permits adjusting the cutting tools with extreme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

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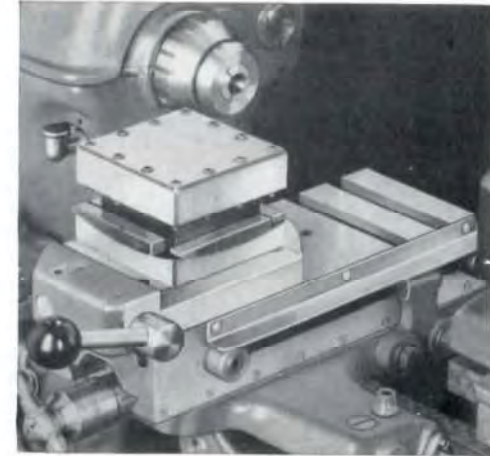
**Square Turret Tool Block**  
For Compound Cross Slide  
*Standard Extra*

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 $\frac{3}{8}$ "	Cwmeb
43-NC	13"	3"	$\frac{3}{8}$ " x $\frac{3}{8}$ "	Cwmas
44-NC	14 $\frac{1}{2}$ "	4"	$\frac{5}{8}$ " x $\frac{5}{8}$ "	Cwmik
42-NC	16" and 16 $\frac{1}{4}$ "	4"	$\frac{5}{8}$ " x $\frac{5}{8}$ "	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.)

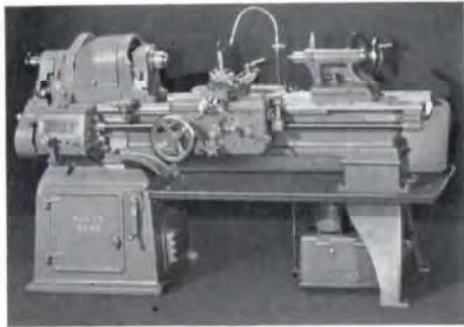
Four cutting tools can be mounted in the turret tool block. The turret indexes accurately, permitting each tool to be used in sequence for rough turning, finish turning, facing, boring, cutting-off, or other operations as required. A quick acting lever locks the turret securely in each of the four positions. 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	16" and No. 2-H	4"	$\frac{5}{8}$ " x $\frac{5}{8}$ "	Cvbik

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### 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 "Fyveb".

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".



### 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, .60, .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	Cat. No.	Code
9" Model A	1941-W	Lupap	1955-W	Lupal
9" Model B	2263	Lyzec	2261	Lyzes
9" Model C	2264	Lyzeg	2262	Lyzex
10"	1941-N	Luram	1963	Lucem
13"	1943	Ludin	1957	Luhov
14 $\frac{1}{2}$ "	1949	Lukok	1961	Lukaw
16" & 2-H	1945	Luduz	1959	Lujem
16/24"	1948	Lufag	1960	Lujow



### 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	Cat. No.	Code
9"	2 $\frac{3}{8}$ "	519-W	Jibet	1197-W	Hitid
10"	2 $\frac{1}{2}$ "	1656	Jibuh	1194	Hocek

### "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 cutter bits, cutting screw threads, taper turning, feeds and speeds, boring, etc.

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



SOUTH BEND LATHE WORKS

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*Precision* LATHES





### 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 2/4" Lathes

Standard Lathe Dogs			Safety Lathe Dogs		
Cat. No.	Capacity	Code Word	Cat. No.	Capacity	Code Word
3843	1/2 in.	Rzqab	3826	1/2 in.	Rzpub
3844	3/8 in.	Rzqah	3827	3/8 in.	Rzpad
3845	1 in.	Rzqan	3828	1 in.	Rzpug
3846	1 1/8 in.	Rzqas	3829	1 1/8 in.	Rzpak
3847	1 1/2 in.	Rzqax	3830	1 1/2 in.	Rzpun
3848	1 3/4 in.	Rzqec	3831	1 3/4 in.	Rzpur
3849	2 in.	Rzqeg	3832	2 in.	Rzpus
3850	2 1/2 in.	Rzqem	3833	2 1/2 in.	Rzput
3851	3 in.	Rzqet	3834	3 in.	Rzpuw
3852	3 1/2 in.	Rzqew	3835	3 1/2 in.	Rzpuz
3853	4 in.	Rzqez	3836	4 in.	Rzpuz

#### Lathe Dogs for 9" and 10" Lathes

Standard Lathe Dogs			Safety Lathe Dogs		
Cat. No.	Capacity	Code Word	Cat. No.	Capacity	Code Word
3837	3/8 in.	Rznib	3820	3/8 in.	Rzpb
3838	1/2 in.	Rznif	3821	1/2 in.	Rzpag
3839	3/4 in.	Rznik	3822	3/4 in.	Rzpal
3840	1 in.	Rznin	3823	1 in.	Rzpan
3841	1 1/4 in.	Rznir	3824	1 1/4 in.	Rzpar
3842	1 1/2 in.	Rznit	3825	1 1/2 in.	Rzpat

### 60° Lathe Centers

*Standard Extras*



For use in headstock or tailstock of lathes. 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"

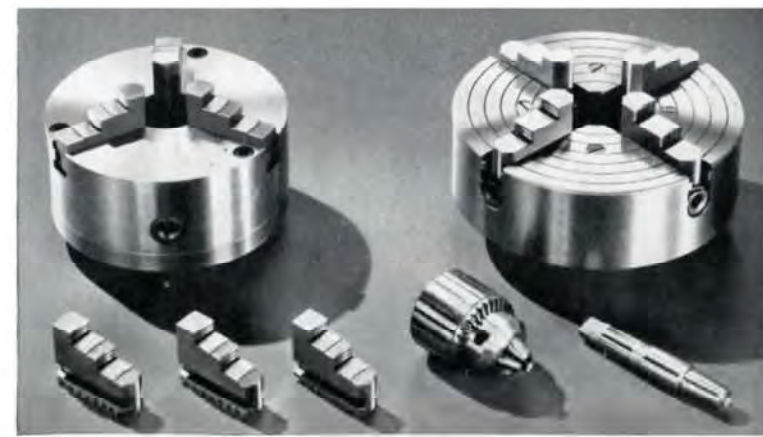
726-TH. No. 3 Morse taper for 13" and larger lathes. Shipping weight 1 lb. Code. "Gyloz"

### 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.

Prices include chuck, wrench, and threaded chuck plate fitted to lathe spindle and to chuck. Manufactured in the United States.

#### Lathe Chucks Fitted with Chuck Plates Threaded for Lathe Spindles

Size of Chuck	Approx. Ship. Weight Pounds	9" and Series 900 Lathes		10"-11 1/16" Col. Lathes		10"-1" Col. & Ser. 1000 Lathes		13" Lathes		14 1/2" Lathes		16", 16 2/4", & 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
<b>3-Jaw Universal Lathe Chucks</b>													
5"	13	<b>3005-W</b>	<b>Faput</b>	3005-N	Focas	3005-R	Cavba	3505-C	Fomol	3505-D	Cawbo	3505-E	Catya
5"	19	3505-W	Cauco	<b>3505-N</b>	<b>Focew</b>	<b>3505-R</b>	Cukan	<b>3506-C</b>	Bafuk	3506-D	Bosaw	3506-E	Catca
6"	28			3506-N	Caulx	3506-R	Cosax	3507-C	Baquy	<b>3507-D</b>	<b>Bosok</b>	<b>3507-E</b>	Balat
7 1/2"	47												<b>3509-E</b>
9"	59												
<b>4-Jaw Independent Lathe Chucks</b>													
6"	13	<b>4006-W</b>	<b>Fabaw</b>	4006-N	Fazim	4006-R	Pabmo	4206-C	Fajub	4206-D	Pamez		
6"	18	4206-W	Padkn	<b>4206-N</b>	<b>Fazos</b>	<b>4206-R</b>	Fecik	4207-C	Cawoc	4207-D	Celaq	4207-E	Painla
7 1/2"	38			4207-N	Padlo	4207-R	Padxa	<b>4207-C</b>	<b>Cawoc</b>	<b>4209-D</b>	<b>Cayes</b>	<b>4209-E</b>	Cocet
9"	46							4209-C		4210-D	Celuk	<b>4210-E</b>	Cocik
10"	57												
12"	96												

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

turret. Arbors are listed on same line with chuck they fit. Be sure to specify correct arbor when ordering.

##### 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	1201	0 to 1/2 in.	1 3/4	2 3/8	Wauko
Jacobs	1202	3/8 to 3/4 in.	3 1/4	3 1/2	Falos
Jacobs	1206	3/8 to 1 in.	6 5/8	7 1/2	Faped
Almond	219	0 to 3/8 in.	1 3/8	1 1/8	Acpem
Almond	220	0 to 1/2 in.	1 3/4	2 1/2	Acpip
Almond	327	1/4 to 3/4 in.	3 1/4	3 3/4	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		3/8" Diameter		3/4" Diameter	
Cat. No.	Code Word	Cat. No.	Code Word	Cat. No.	Code Word	Cat. No.	Code Word
2300	Tywah	2301	Tywas	2360	Nyeab	2361	Nyeam
2302	Tywee	2303	Tywen	2362	Nyech	2363	Nyeer
2304	Tywey	2305	Tywok	2364	Nyeib	2365	Nyek
2306	Tywox	2307	Tywav	2366	Nyem	2367	Nyda
2300	Tywah	2301	Tywas	2360	Nyeab	2361	Nyeam
2302	Tywee	2303	Tywen	2362	Nyech	2363	Nyeer
2308	Tyzeh	2309	Tyzez	2368	Nydam	2369	Nyda
2308	Tyzeh	2309	Tyzez	2368	Nydam	2369	Nyda

SOUTH BEND LATHE WORKS

C6393-ROXM—4-48. Printed in U.S.A.

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

# 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 into its design. This has resulted in a superior tool unsurpassed for accuracy, ease of operation, versatility and dependable performance.

### FEATURES and SPECIFICATIONS

#### 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 of spindle . . . . . 4"

**BALL BEARINGS**  
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 3/8"

**SPEEDS**  
Four—700 to 4300 r. p. m.

**TWO MODELS**  
Cat. No. 400-B bench type.  
Cat. No. 400-F floor type.

#### CAPACITY

Maximum drill size in iron or steel . . . . . 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 1/2" diameter. Accurately ground.

**HEIGHT**  
Bench Model . . . . . 35 1/2"  
Floor Model . . . . . 65 1/2"

**SHIPPING WEIGHT**  
Bench Model . . . . . 125 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.

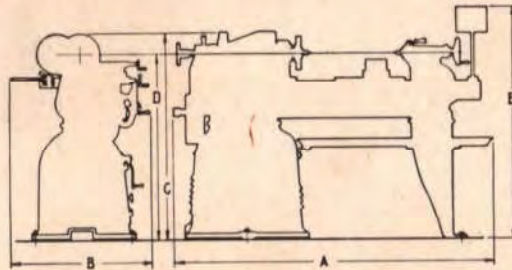


### NEW SOUTH BEND 7" Precision BENCH SHAPER

The new South Bend 7" Precision Bench Shaper is designed for the most exacting precision small toolroom and production operations. It has 7" maximum stroke, resilient contained motor drive. For additional information, write for circular and prices.

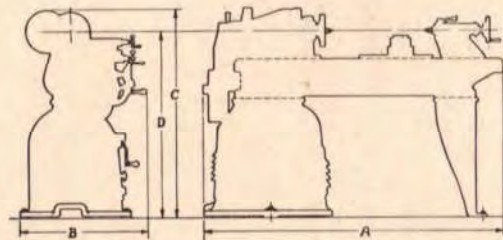
## Floor Space Required for South Bend Lathes

Dimensions A to J given in tables below are in inches



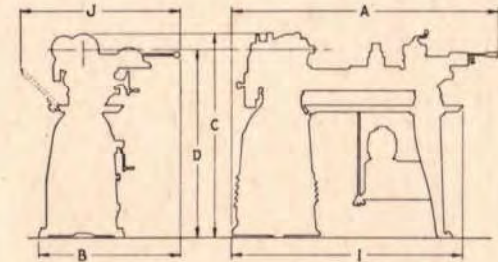
**Floor Leg Toolroom Lathes**

Size Lathe	Bed Length	A	B	C	D	E
10"	3'	46	20 $\frac{5}{8}$	44 $\frac{23}{32}$	41 $\frac{13}{32}$	49 $\frac{3}{8}$
13"	5'	70	26 $\frac{1}{16}$	45 $\frac{1}{2}$	41 $\frac{1}{2}$	50 $\frac{1}{2}$
14 $\frac{1}{2}$ "	6'	84	27 $\frac{1}{2}$	46 $\frac{1}{2}$	41 $\frac{1}{2}$	50
16"	8'	108	28 $\frac{3}{8}$	46 $\frac{3}{4}$	42 $\frac{1}{32}$	52 $\frac{1}{4}$



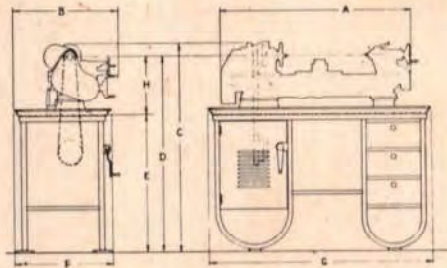
**Underneath Motor Driven Floor Leg Lathes**

Size Lathe	Bed Length	A	B	C	D
10"	3'	46	20 $\frac{5}{8}$	44 $\frac{23}{32}$	41 $\frac{13}{32}$
13"	5'	70	26 $\frac{1}{16}$	45 $\frac{1}{2}$	41 $\frac{1}{2}$
14 $\frac{1}{2}$ "	6'	84	27 $\frac{1}{2}$	46 $\frac{1}{2}$	41 $\frac{1}{2}$
16"	8'	108	28 $\frac{3}{8}$	46 $\frac{3}{4}$	42 $\frac{1}{32}$



**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 $\frac{23}{32}$	41 $\frac{13}{32}$	51	34 $\frac{1}{4}$

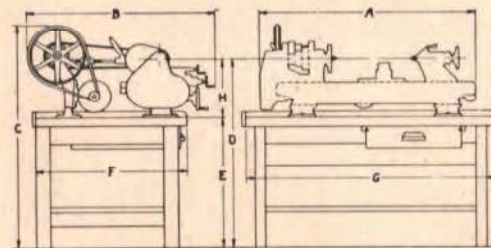


**Underneath Motor Driven Bench Lathes**

Size Lathe	Bed Length	A	B	C	D
9"	3'	39 $\frac{1}{2}$	22 $\frac{7}{8}$	44 $\frac{23}{32}$	41 $\frac{23}{32}$
10"	3'	42 $\frac{3}{8}$	24 $\frac{11}{16}$	47 $\frac{13}{32}$	44 $\frac{5}{32}$

Size Lathe	Bed Length	E	F	G	H
9"	3'	29 $\frac{3}{8}$	21 $\frac{1}{2}$	42 $\frac{1}{4}$	12 $\frac{11}{32}$
10"	3'	30 $\frac{5}{8}$	22	51 $\frac{1}{2}$	13 $\frac{23}{32}$

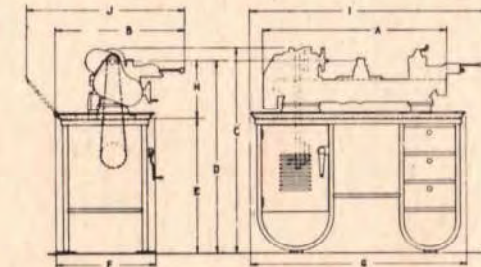


**Horizontal Motor Driven Bench Lathes**

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 $\frac{13}{32}$
9"—12 Speed	3'	39 $\frac{3}{8}$	32 $\frac{1}{8}$	48 $\frac{7}{8}$	42 $\frac{13}{32}$

Size Lathe	Bed Length	E	F	G	H
9"— 6 Speed	3'	30 $\frac{1}{2}$	28	54	12 $\frac{3}{32}$
9"—12 Speed	3'	30 $\frac{1}{2}$	28	54	12 $\frac{3}{32}$



**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 $\frac{23}{32}$	41 $\frac{23}{32}$	29 $\frac{3}{8}$
Series 1000	3 $\frac{1}{2}$ '	47 $\frac{3}{8}$	30 $\frac{13}{16}$	47 $\frac{13}{32}$	44 $\frac{3}{32}$	30 $\frac{3}{8}$

Size Lathe	Bed Length	F	G	H	I	J
Series 900	3 $\frac{1}{2}$ '	21 $\frac{1}{2}$	48 $\frac{1}{4}$	12 $\frac{11}{32}$	60	36 $\frac{1}{4}$
Series 1000	3 $\frac{1}{2}$ '	22	51 $\frac{1}{2}$	13 $\frac{23}{32}$	63 $\frac{1}{4}$	40 $\frac{1}{2}$



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