Checking a Fixture with Precision Gauges

Catalog 9-F

9" SOUTH BEND *Precision* LATHES

Testing the Hardness of a Carburized Headstock Spindle Bearing Surface

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

The Lathes shown in this catalog are designed and built to give years of satisfactory service. The materials and workmanship entering into their construction are the best that can be obtained. 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 9" 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 24 to 34 inclusive in this catalog and each is 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, etc.

Countershaft Drive

The Model A, Model B, and Model C 9-inch swing lathes described in this catalog can be supplied to order with countershaft drive. Prices will be quoted on request.

10" and Larger Lathes

In addition to the 9" Lathes shown in this catalog, we manufacture 10", 13", 14½", and 16" swing lathes. These are illustrated and described in a separate catalog which will be mailed on request. Please state size of lathe in which you are interested when requesting catalog.

Export Shipment

When South Bend Lathes are ordered for export shipment, they are not crated as for domestic shipment, but are securely packed in a substantial export shipping box suitable for ocean shipment.

Lathe Boxed for Export Shipment

The export boxing charges (quoted on request) include dismantling the lathe so that it can be packed in the least possible space, covering all bright parts with waterproof grease, wrapping parts in waterproof paper, and blocking all units to prevent shifting in the box.

Guarantee

The South Bend Lathe Works warrants South Bend Lathes and equipment to conform to or excel the specifications set forth in the manufacturer's catalogs in use at the time of sale and reserves the right, at its own discretion, without notice and without making similar changes in articles previously manufactured, to make changes in materials, design, finish, or specifications.

The South Bend Lathe Works warrants products of its own factory against defects of material or workmanship for a period of one year from the date of sale. The manufacturer's liability under this warranty shall be limited to replacing, free of charge, f.o.b. South Bend, Indiana, any such parts proving defective within the period of this warranty, but the manufacturer will not be responsible for transportation charges or consequential damages.

The South Bend Lathe Works makes no warranty with respect to electrical equipment or *Purchased Extras* as described in the manufacturer's catalogs.

SOUTH BEND LATHE WORKS

Building Better Tools Since 1906

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

CABLE ADDRESS "TWINS" SOUTH BEND — CODES USED: A. B. C. Fifth Edition Improved — Bentley's Complete Phrase and 2nd Editions
Western Union Five Letter Edition — Western Union Universal Edition — Acme — Lieber's — Standard — Our Own

Testing Saddle Cross Slide Dovetail for Squareness with Lathe Bed Ways

Features of 9-inch South Bend Lathes

Precision Tools for Fine Machine Work

South Bend 9-inch 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, and shops of all kinds engaged in the machining of steel, cast iron, bronze, tool steel, fibre, plastics, Bakelite, and similar materials.

Convenience and Ease of Operation are assured by the simple, practical design of the 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 improvements, save time and effort.

Accuracy and Durability are built into every 9-inch South Bend Lathe. The workmanship and materials are the best that can be obtained. The substantial design assures permanent alignment of the headstock, tailstock, and other major units. Unusually large bearing surfaces give this lathe the power and rigidity for taking heavy cuts and the precision accuracy for the most exacting tool and instrument work.

Highest Standards of inspection are maintained, from the planing of the lathe bed to the final inspection tests. All dovetails and V-ways are carefully hand-scraped and the headstock, tailstock, and other units are aligned to the most exacting specifications.

Lathe Bed is made of special quality gray iron with 50 per cent steel, which makes a hard, close grained metal having long wearing qualities. Bed is heavily constructed and reinforced by heavy cross braces its entire length. Three V-ways and one flat-way accurately planed and hand-scraped, align and support the headstock, carriage, and tailstock.

Back-Geared Headstock is hand-scraped to lathe bed, has three-step cone pulley; six or twelve changes of spindle speeds, depending on type of drive; wrenchless bull gear lock; and lever reverse for threads and feeds. Headstock is also available with V-belt drive, providing eight or sixteen spindle speeds.

Bearings for Headstock spindle are unusually large, being of the integral type, and are precision bored to fit the spindle. Bearings are adjustable for wear, and have oil reservoirs with new improved capillary oiling system.

Headstock Spindle is made of a special quality alloy spindle steel, with all bearing surfaces carburized, hardened, and ground. Journal bearing surfaces are superfinished to a smoothness of five microinches (.000005")*. Spindle has ball thrust bearing and take-up nut for eliminating end play. A 3/4-inch hole is bored the entire length of spindle, with No. 3 Morse standard taper in front end for spindle sleeve which takes No. 2 Morse taper center.

Tailstock is substantially designed with long hand-scraped bearing on bed. Tailstock top has set-over for taper turning. Tailstock spindle is graduated and is made of high quality spindle steel. Tailstock center is hardened and is self-ejecting.

Carriage has unusually long bearings (9 7/16 inches) on V-ways of lathe bed, providing a solid support for the cutting tool and reducing wear to a minimum. V-ways of saddle are hand-scraped to match V-ways of lathe bed perfectly and are fitted with felt wipers to clean and oil the bed.

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

*Profilometer reading in microinches rms

Inspecting Form and Lead of a Screw Thread with an Optical Comparator

Features of 9-inch South Bend Lathes (Continued)

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 automatic 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 automatic 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 19 and 21) 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 7 through 13) 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. 1. Quick Change Gear Box Supplied on all Model A 9-inch South Bend Lathes

Fig. 2. Model A Lathe set up for cutting threads 4 to 7 per inch

Fig. 3. Model A Lathe set up for cutting threads 8 to 224 per inch

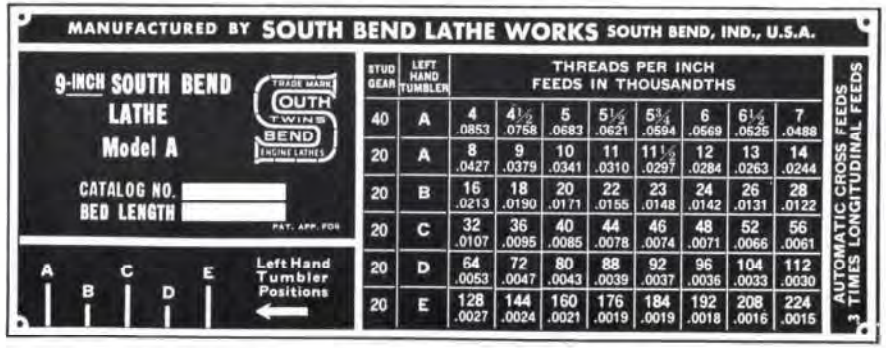


Fig. 4. Index Chart Showing Threads and Feeds Available on all Model A 9-inch South Bend Lathes

The *Six-Speed* Horizontal Motor Drive (page 15) is similar to the *Twelve-Speed* Horizontal Motor Drive.

The *V-Belt* Horizontal Motor Drive (page 17) has cone pulleys for V-belt instead of flat belt.

Gear Box for Model A Lathes

The quick change gear box supplied on all Model A 9-inch Lathes is shown in Fig. 1, page 4. 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. 4, page 4. 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. 2 and 3.

Automatic Apron for Model A and Model B Lathes

The Model A and Model B 9-inch Lathes are equipped with an automatic apron as shown in Fig. 5. This apron is equipped with a worm drive and friction clutch for operating the automatic power cross-feeds and the automatic power longitudinal feeds. The threads of the lead screw are not used for the power longitudinal turning feeds on lathes equipped with the automatic apron.

The feed change knob on the front of the apron has three positions: top for automatic power longitudinal feeds; center for a neutral position; and bottom for the automatic power cross-feeds. An automatic safety interlock prevents engaging half-nuts when the friction clutch automatic 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. 6. 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.

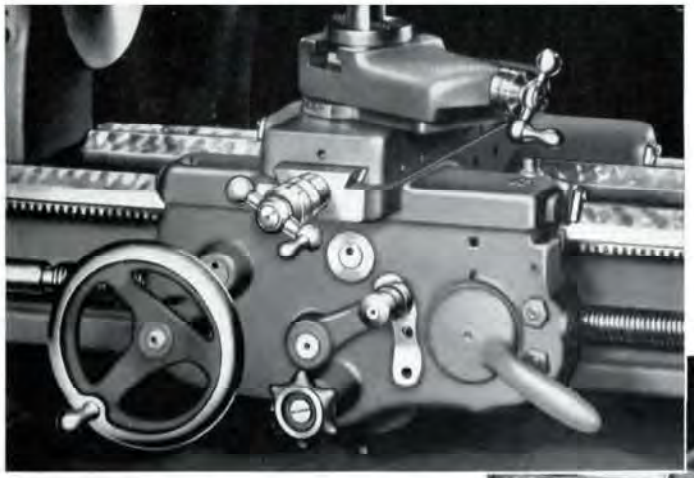


Fig. 5. Above—Automatic Apron for Model A and Model B 9-inch South Bend Lathes

Fig. 6. Right—Plain Apron for Model C 9-inch South Bend Lathes

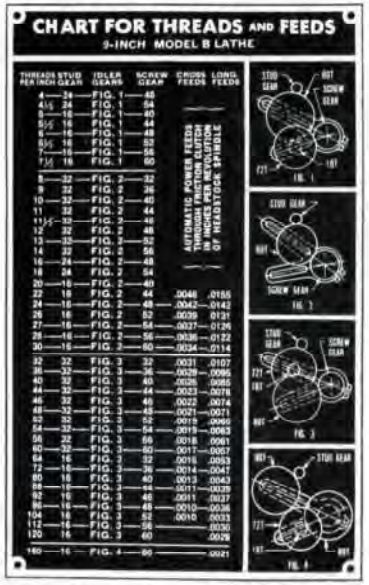


Fig. 7. Index Chart Showing Threads and Feeds on Model B 9-inch South Bend Lathes

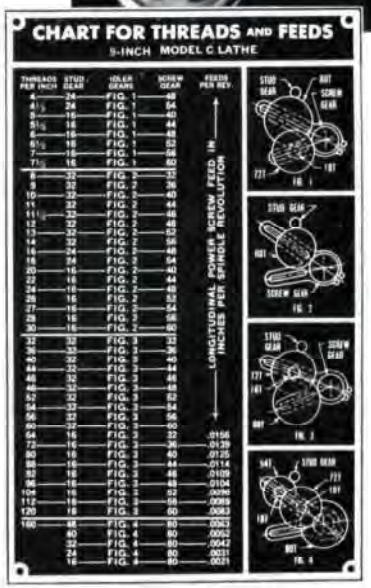
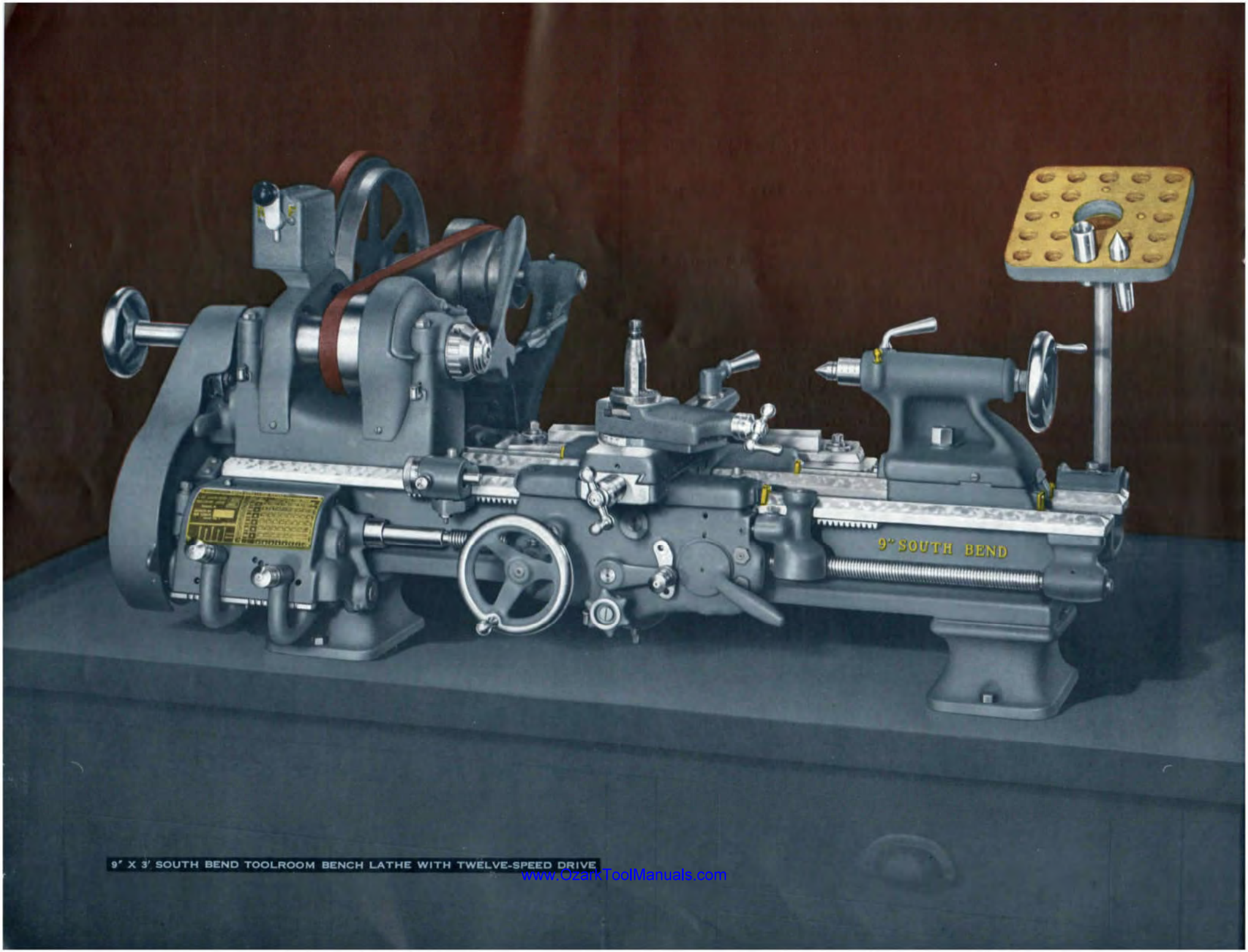


Fig. 8. Index Chart Showing Threads and Feeds on Model C 9-inch South Bend Lathes

9" SOUTH BEND

Precision LATHES



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

9-inch Toolroom Precision Bench Lathe

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

Power Longitudinal Feeds and Power Cross-Feeds

The 9-inch Toolroom Bench Lathe with *Twelve-Speed* horizontal motor drive is illustrated at the left. This is the same as the Model A lathe (page 9) 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 4.

The Automatic 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 5.

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. See page 30. This lathe is also made with Underneath Motor Drive as described on page 19.

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.

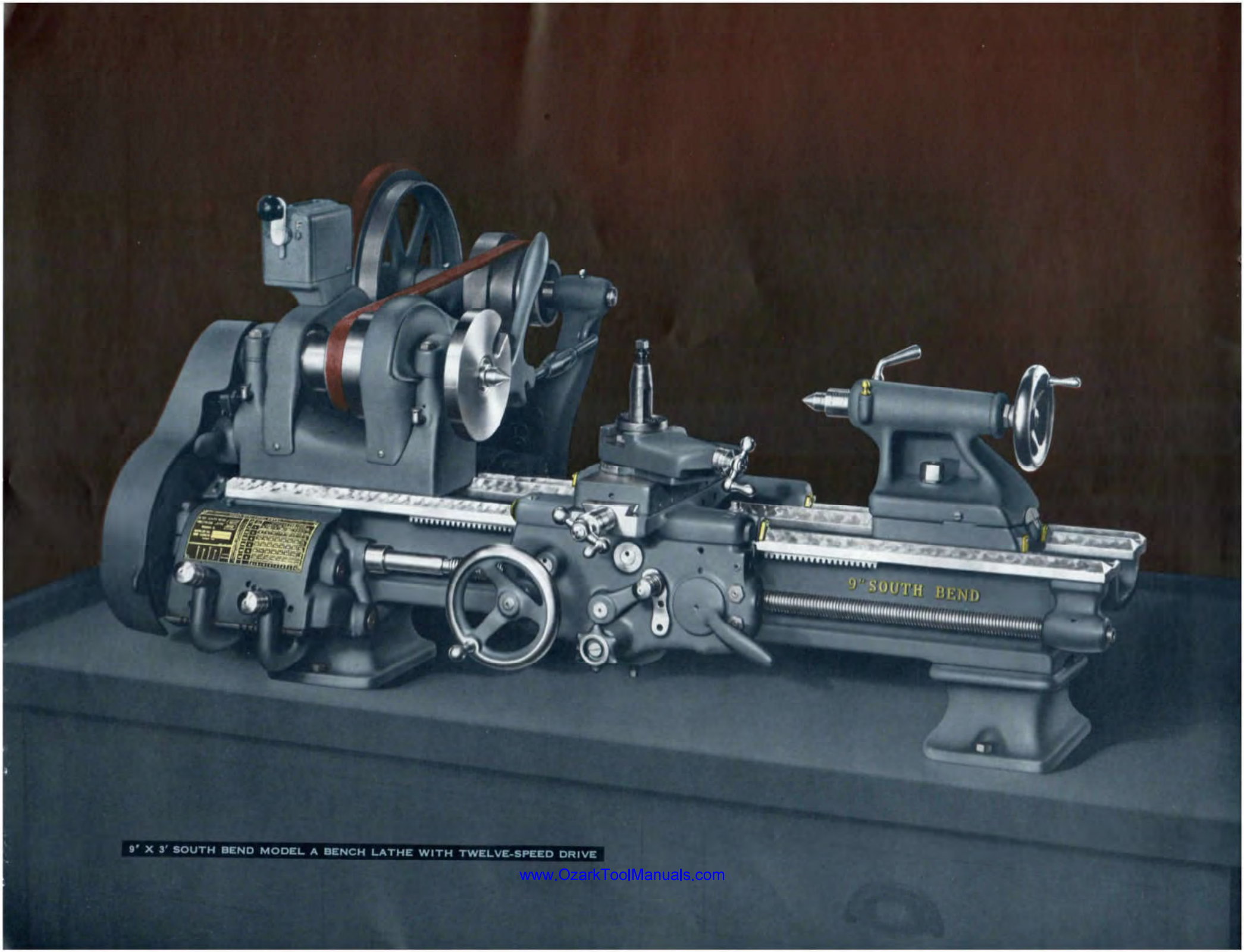
Regular Equipment included in price of lathe consists of: automatic apron; graduated compound rest; small face plate; tool post; two 60-degree centers; spindle sleeve; wrenches; quick change gear box; installation plan; and book "How to Run a Lathe". Bench is not included in price of lathe.

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

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

SPECIFICATIONS

Belt, width of cone pulley step for	1"
Centers, Morse taper	No. 2
Collet capacity, maximum	1/2"
Compound rest top, angular hand feed	2 1/4"
Cross slide travel	5 7/8"
Face plate diameter, large	7 3/8"
Face plate diameter, small	5 1/8"
Feeds, cross (48)	.0004" to .0252"
Feeds, longitudinal (48)	.0015" to .0853"
Headstock spindle front bearing, diameter	1 13/16"
Headstock spindle hole	3/4"
Headstock spindle nose threads	1 1/2"-8
Lead screw, 29° Acme Thread	3/4"-8
Motor, size required (see page 30)	1/2 h.p.
Spindle speeds, approx., high speed range:	
r.p.m., direct belt driven	1270, 716, 408
r.p.m., back-gears engaged	246, 138, 79
Spindle speeds, approx., low speed range:	
r.p.m., direct belt driven	658, 370, 212
r.p.m., back-gears engaged	127, 72, 41
Swing over bed and saddle wings	9 1/4"
Swing over saddle cross slide	5"
Tailstock spindle graduations, each	1/16"
Tailstock spindle travel	2 1/8"
Tailstock top set over for taper turning	5/8"
Thread cutting range—48 pitches R.H. or L.H.	4 to 224 per inch
Tool holder cutter bit	1/4" sq.
Tool holder shank	3/8" x 13/16"



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

Model A 9-inch South Bend Precision Bench Lathe

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

The 9-inch Model A South Bend Lathes are precision tools, capable of machining work to the exacting tolerances demanded in modern industry. They are recommended for the production of small accurate parts in the manufacturing plant, for precision work in the toolroom, for general use in the machine shop, laboratory, and shops of all kinds engaged in the machining of steel, cast iron, bronze, tool steel, fibre, plastics, and similar materials.

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

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

The Automatic 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 5.

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. See page 30. This lathe is also made with other types of drives as shown on pages 15, 17, and 21.

Regular Equipment included in price consists of: full automatic 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.

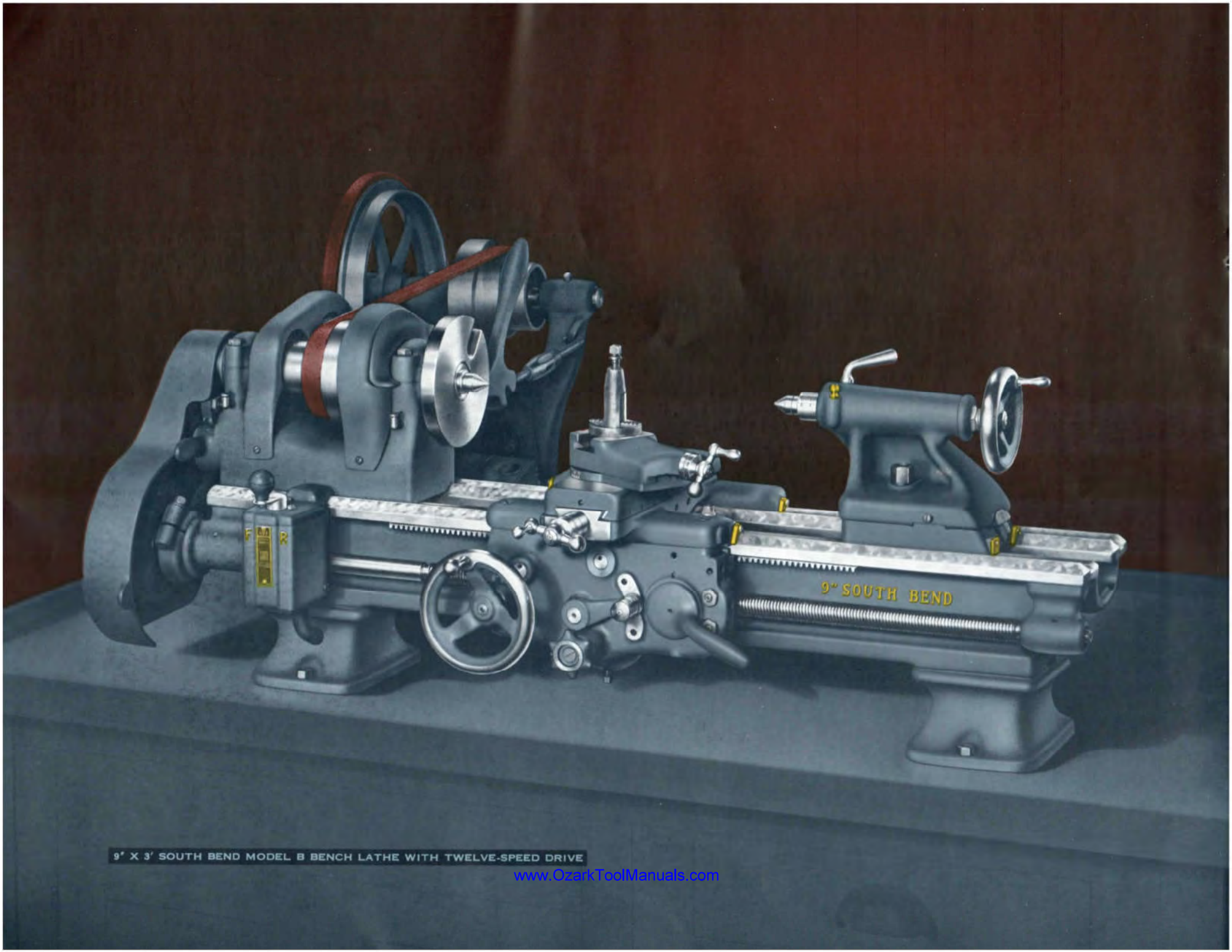
Model A 9-inch *Twelve-Speed* Bench Lathes
With Horizontal Motor Drive—Less Electrical Equipment and Bench

Bed Length	3-ft.	3½-ft.*	4-ft.*	4½-ft.
Catalog Number	**644-Y**	**644-Z**	**644-A**	**644-R**
Distance Between Centers	16-in.	22-in.	28-in.	34-in.
Shipping Weight, Crated	355 lbs.	380 lbs.	405 lbs.	430 lbs.
Code Word	Vuxak	Vuxes	Vuxit	Vuxow

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

SPECIFICATIONS

Belt, width of cone pulley step for	1"
Centers, Morse taper	No. 2
Collet capacity, maximum	½"
Compound rest top, angular hand feed	2¼"
Cross slide travel	5⅞"
Face plate diameter, small	5⅛"
Feeds, cross (48)	.0004" to .0252"
Feeds, longitudinal (48)	.0015" to .0853"
Headstock spindle front bearing, diameter	1 13/16"
Headstock spindle hole	¾"
Headstock spindle nose threads	1½"-8
Lead screw, 29° Acme Thread	¾"-8
Motor, size required (see page 30)	½ h.p.
Spindle speeds, approx., high speed range:	
r.p.m., direct belt driven	1270, 716, 408
r.p.m., back-gears engaged	246, 138, 79
Spindle speeds, approx., low speed range:	
r.p.m., direct belt driven	658, 370, 212
r.p.m., back-gears engaged	127, 72, 41
Swing over bed and saddle wings	9¼"
Swing over saddle with chip guard	5½"
Tailstock spindle graduations, each	1/16"
Tailstock spindle travel	2⅛"
Tailstock top set over for taper turning	⅝"
Thread cutting range—48 pitches R.H. or L.H.	4 to 224 per inch
Tool holder cutter bit	¼" sq.
Tool holder shank	⅜" x 13/16"



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

Model B 9-inch South Bend Precision Bench Lathe

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

The 9-inch Model B South Bend Lathes are precision tools, capable of machining work to the exacting tolerances demanded in modern industry. They are recommended for the production of small accurate parts in the manufacturing plant, for precision work in the toolroom, for general use in the machine shop, laboratory, and shops of all kinds engaged in the machining of steel, cast iron, bronze, tool steel, fibre, plastics, and similar materials.

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

Change Gears provide for cutting right- and left-hand screw threads from 4 to 160 per inch. Power longitudinal feeds .0021" to .0155" and power cross-feeds .001" to .0046" are also obtained through the change gears. See page 5.

The Automatic 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 5.

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. See page 30. This lathe is also made with other types of drives as shown on pages 15 and 17.

Regular Equipment included in price consists of: full automatic 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.

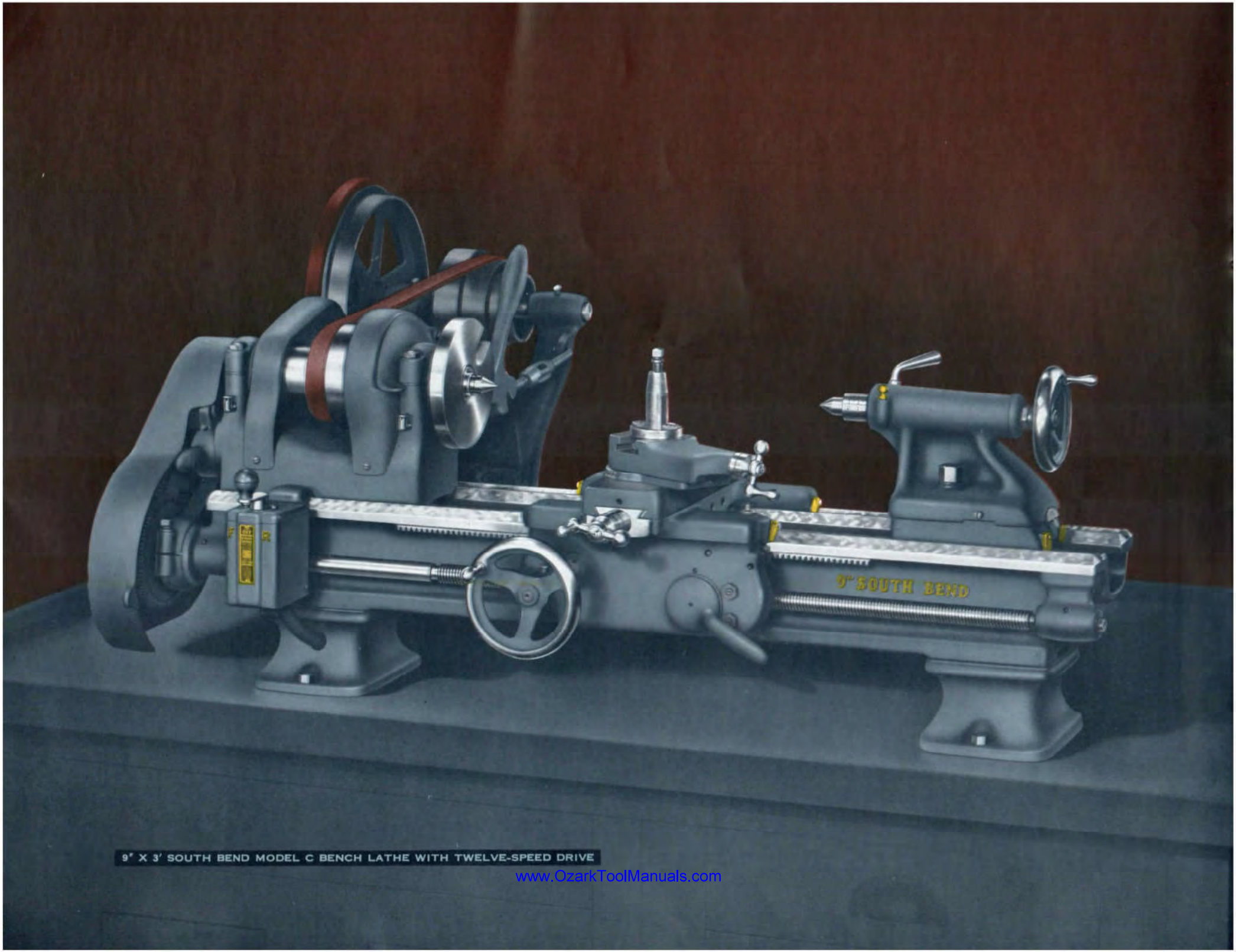
Model B 9-inch *Twelve-Speed* Bench Lathes
With Horizontal Motor Drive—Less Electrical Equipment and Bench

Bed Length	3-ft.	3½-ft.*	4-ft.*	4½-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 3½' and 4' bed lengths, because of the greater distance between centers, are recommended for general machine work.

SPECIFICATIONS

Belt, width of cone pulley step for	1"
Centers, Morse taper	No. 2
Collet capacity, maximum	½"
Compound rest top, angular hand feed	2¼"
Cross slide travel	5⅞"
Face plate diameter, small	5⅛"
Feeds, cross (23)	.001" to .0046"
Feeds, longitudinal (26)	.0021" to .0155"
Headstock spindle front bearing, diameter	1 13/16"
Headstock spindle hole	¾"
Headstock spindle nose threads	1½"-8
Lead screw, 29° Acme thread	¾"-8
Motor, size required (see page 30)	½ h.p.
Spindle speeds, approx., high speed range:	
r.p.m., direct belt driven	1270, 716, 408
r.p.m., back-gears engaged	246, 138, 79
Spindle speeds, approx., low speed range:	
r.p.m., direct belt driven	658, 370, 212
r.p.m., back-gears engaged	127, 72, 41
Swing over bed and saddle wings	9¼"
Swing over saddle with chip guard	5½"
Tailstock spindle graduations, each	1/16"
Tailstock spindle travel	2⅛"
Tailstock top set over for taper turning	⅝"
Thread cutting range—45 pitches R.H. or L.H.	4 to 160 per inch
Tool holder cutter bit	¼" sq.
Tool holder shank	⅜" x 13/16"



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

Model C 9-inch South Bend Precision Bench Lathe

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

The 9-inch Model C South Bend Lathes are precision tools, capable of machining work to the exacting tolerances demanded in modern industry. They are recommended for the production of small, accurate parts in the manufacturing plant, for precision work in the toolroom, for general use in the machine shop, laboratory, and shops of all kinds engaged in the machining of steel, cast iron, bronze, tool steel, fibre, plastics, and similar materials.

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

Change Gears provide for cutting right- and left-hand screw threads from 4 to 160 per inch. Power longitudinal feeds are obtained by engaging the half-nuts with the lead screw. The feeds range from .0021" to .0156" depending on the arrangement of the change gears. The cross-feed is operated by hand. See illustration of index chart on page 5.

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. See page 30. This lathe is also made with other types of drives as shown on pages 15 and 17.

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.

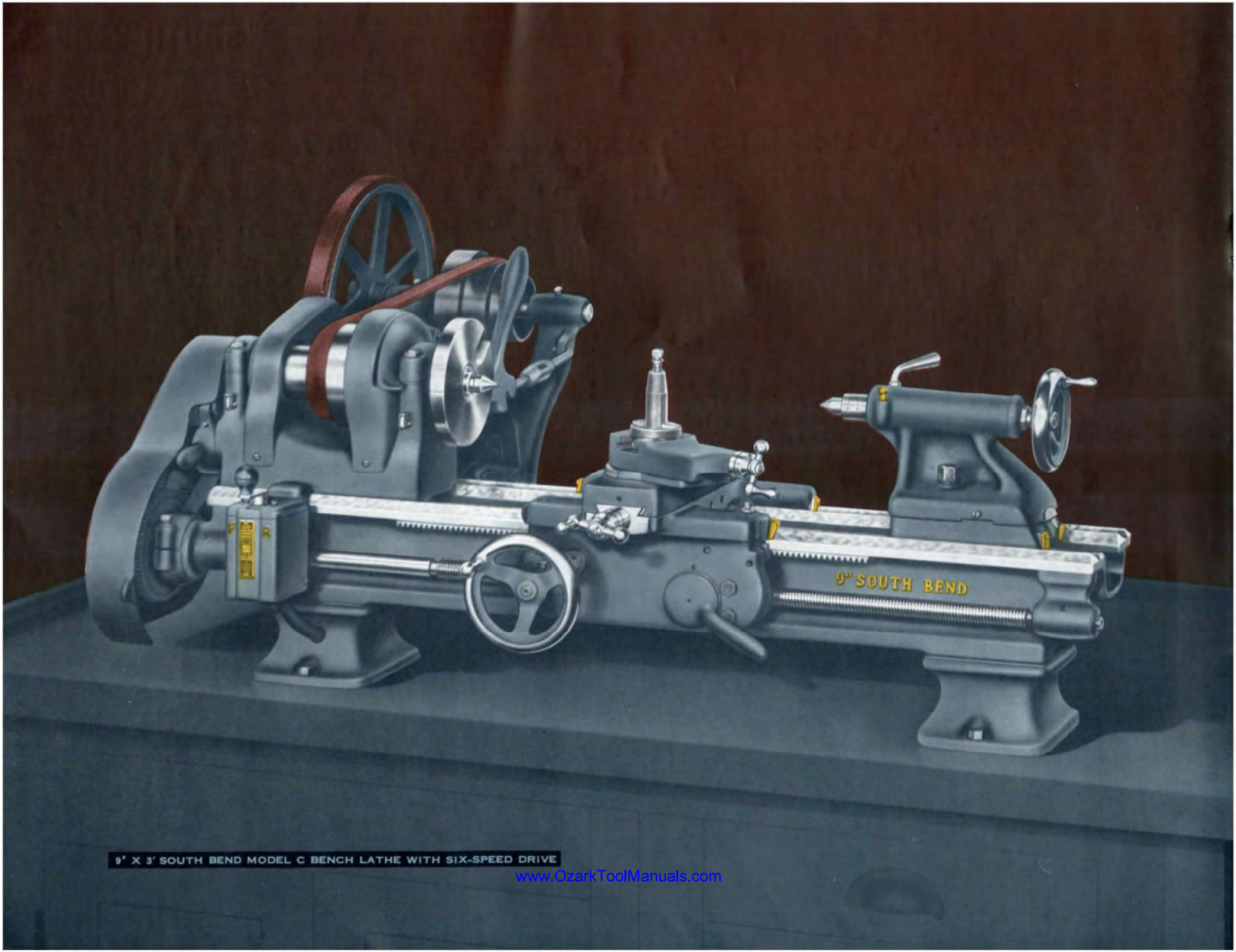
Model C 9-inch *Twelve-Speed* Bench Lathes
With Horizontal Motor Drive—Less Electrical Equipment and Bench

Bed Length	3-ft.	3½-ft.*	4-ft.*	4½-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 3½" and 4' bed lengths, because of the greater distance between centers, are recommended for general machine work.

SPECIFICATIONS

Belt, width of cone pulley step for	1"
Centers, Morse taper	No. 2
Collet capacity, maximum	½"
Compound rest top, angular hand feed	2¼"
Cross slide travel	5⅞"
Face plate diameter, small	5⅛"
Feed, cross	Hand operated
Feeds, longitudinal (14)	.0021" to .0156"
Headstock spindle front bearing, diameter	1 13/16"
Headstock spindle hole	¾"
Headstock spindle nose threads	1½"-8
Lead screw, 29° Acme Thread	¾"-8
Motor, size required (see page 30)	½ h.p.
Spindle speeds, approx., high speed range:	
r.p.m., direct belt driven	1270, 716, 408
r.p.m., back-gears engaged	246, 138, 79
Spindle speeds, approx., low speed range:	
r.p.m., direct belt driven	658, 370, 212
r.p.m., back-gears engaged	127, 72, 41
Swing over bed and saddle wings	9¼"
Swing over saddle with chip guard	5½"
Tailstock spindle graduations, each	1/16"
Tailstock spindle travel	2⅛"
Tailstock top set over for taper turning	⅝"
Thread cutting range—45 pitches R.H. or L.H.	4 to 160 per inch
Tool holder cutter bit	¼" sq.
Tool holder shank	⅜" x 13/16"



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

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

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

The 9-inch Model C *Six-Speed* Horizontal Motor Driven Bench Lathe is illustrated at the left. The Model A and Model B Lathes are also made with this drive. Except for the drive equipment, these lathes are the same as those described on pages 9, 11, and 13.

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 ¼ h. p. motor or a ½ h. p. motor.

Drive Equipment included in the price of the lathe consists of: horizontal motor drive unit; motor pulley with ½" or ¾" hole; V-belt; flat leather belt and lacing. Motor and control are not included in price of lathe, but are extra. See page 30.

Regular Equipment is the same as for corresponding models listed on pages 9, 11, and 13. Bench is not included.

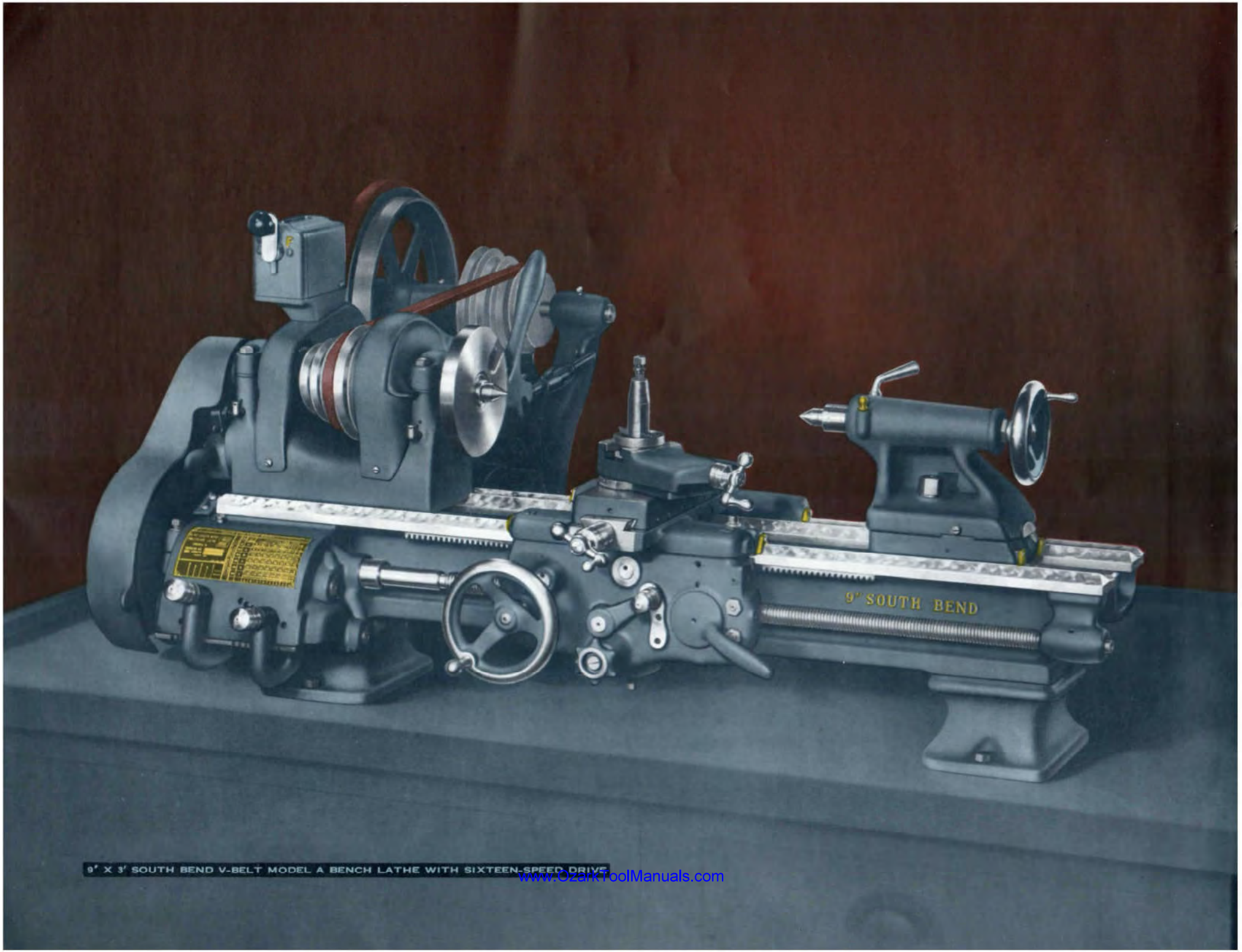
Six-Speed 9-inch Bench Lathes
With Horizontal Motor Drive—Less Electrical Equipment and Bench

Type of Lathe	Catalog Number	Bed Length Feet*	Between Centers Inches	Ship. Wt. Crated Pounds	Code Word
With Drive Unit for ¼ H.P. Motor					
Model A	**444-Y**	3	16	340	Vuwsb
	444-Z	3½	22	365	Vuweh
	444-A	4	28	390	Vuwim
	444-R	4½	34	415	Vuwos
Model B	**477-Y**	3	16	330	Rzmab
	477-Z	3½	22	355	Rzmeh
	477-A	4	28	380	Rzmis
	477-R	4½	34	405	Rzmux
Model C	**415-YC**	3	16	320	Lywas
	415-ZC	3½	22	345	Lywec
	415-AC	4	28	370	Lywih
	415-RC	4½	34	395	Lywon
With Drive Unit for ½ H.P. Motor					
Model A	**2444-Y**	3	16	340	Vuzak
	2444-Z	3½	22	365	Vuzan
	2444-A	4	28	390	Vuzas
	2444-R	4½	34	415	Vuzax
Model B	**2477-Y**	3	16	330	Rzlih
	2477-Z	3½	22	355	Rzlig
	2477-A	4	28	380	Rzlik
	2477-R	4½	34	405	Rzlin
Model C	**2415-Y**	3	16	320	Lyzob
	2415-Z	3½	22	345	Lyzoh
	2415-A	4	28	370	Lyzom
	2415-R	4½	34	395	Lyzow

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

SPECIFICATIONS

Belt, width of cone pulley step for		1"
Centers, Morse taper		No. 2
Collet capacity, maximum		½"
Compound rest top, angular hand feed		2¼"
Cross slide travel		5⅞"
Face plate diameter, small		5⅛"
Feeds, cross	Model A	.0004" to .0252"
	Model B	.001" to .0046"
	Model C	Hand operated
Feeds, longitudinal	Model A	.0015" to .0853"
	Model B	.0021" to .0155"
	Model C	.0021" to .0156"
Headstock spindle front bearing, diameter		1 15/16"
Headstock spindle hole		¾"
Headstock spindle nose threads		1½"-8
Lead screw, 29° Acme Thread		¾"-8
Motor, size required (see page 30)		¼ or ½ h.p.
Spindle speeds, approx.:		
r.p.m., direct belt driven		658, 370, 212
r.p.m., back-gears engaged		127, 72, 41
Swing over bed and saddle wings		9¼"
Swing over saddle cross slide		5½"
Tailstock spindle graduations, each		1/10"
Tailstock spindle travel		2⅛"
Tailstock top set over for taper turning		⅝"
Thread cutting range—Model A—48 pitches R.H. or L.H.		4 to 224 per inch
Thread cutting range—Model B and Model C—45 pitches—R.H. or L.H.		4 to 160 per inch
Tool holder cutter bit		¼" sq.
Tool holder shank		⅜" x 13/16"



9" X 3' SOUTH BEND V-BELT MODEL A BENCH LATHE WITH SIXTEEN-SPEED DRIVE

V-Belt 9-inch Horizontal Motor Driven Precision Bench Lathe

Eight or Sixteen Spindle Speeds—Back-Geared—Made in Model A, Model B, and Model C

The 9-inch Model A V-Belt Horizontal Motor Driven Bench Lathe is illustrated at the left. The Model B and Model C Lathes are also made with this drive. Except for the drive equipment, these lathes are the same as those described on pages 9, 11, and 13 respectively.

The V-Belt Drive provides a series of eight or sixteen spindle speeds as listed in the specifications below. This drive is recommended to those who prefer a V-belt drive to the smoother operating and more easily replaced flat belt drive. The headstock and countershaft of this lathe must be disassembled to replace the cone pulley V-belt.

Drive Equipment included in the price of the lathe consists of: horizontal motor drive unit; motor pulley with 1/2" or 3/4" hole; and V-belts. The eight-speed drive unit is made in two sizes, to accommodate either a 1/4 h. p. motor or a 1/2 h. p. motor. Motor and control are not included in price of lathe, but are extra. See page 30.

Regular equipment is the same as for corresponding models listed on pages 9, 11, and 13. Bench is not included.

V-Belt 9-inch Horizontal Motor Driven Bench Lathes

Type of Lathe	With Drive Unit for 1/4 h.p. Motor		With Drive Unit for 1/2 h.p. Motor		Bed Length Feet*	Distance Between Centers	Ship. Wt. Crated Pounds
	Cat. No.	Code	Cat. No.	Code			
With Eight-Speed *V-Belt* Drive							
Model A	**544-Y**	Vuzab	**2544-Y**	Vuzoc	3	16"	340
	544-Z	Vuzew	**2544-Z**	Vuzoh	3½	22"	365
	544-A	Vuzir	**2544-A**	Vuzon	4	28"	390
	544-R	Vuzox	**2544-R**	Vuzos	4½	34"	415
Model B	**577-Y**	Rzpax	**2577-Y**	Rzkoc	3	16"	330
	577-Z	Rzpec	**2577-Z**	Rzkol	3½	22"	355
	577-A	Rzpim	**2577-A**	Rzkos	4	28"	380
	577-R	Rzpow	**2577-R**	Rzkow	4½	34"	405
Model C	**515-YC**	Lyzar	**2515-Y**	Lyvoc	3	16"	320
	515-ZC	Lyzem	**2515-Z**	Lyvoh	3½	22"	345
	515-AC	Lyzik	**2515-A**	Lyvom	4	28"	370
	515-RC	Lyzos	**2515-R**	Lyvot	4½	34"	395
With Sixteen-Speed *V-Belt* Drive							
Model A			**744-Y**	Vutaz	3	16"	355
			744-Z	Vutaw	3½	22"	380
			744-A	Vutis	4	28"	405
			744-R	Vuton	4½	34"	430
Model B			**777-Y**	Rzlac	3	16"	345
			777-Z	Rzleh	3½	22"	370
			777-A	Rzliw	4	28"	395
			777-R	Rzlon	4½	34"	420
Model C			**715-YC**	Lysam	3	16"	335
			715-ZC	Lysec	3½	22"	360
			715-AC	Lysiz	4	28"	385
			715-RC	Lysut	4½	34"	410

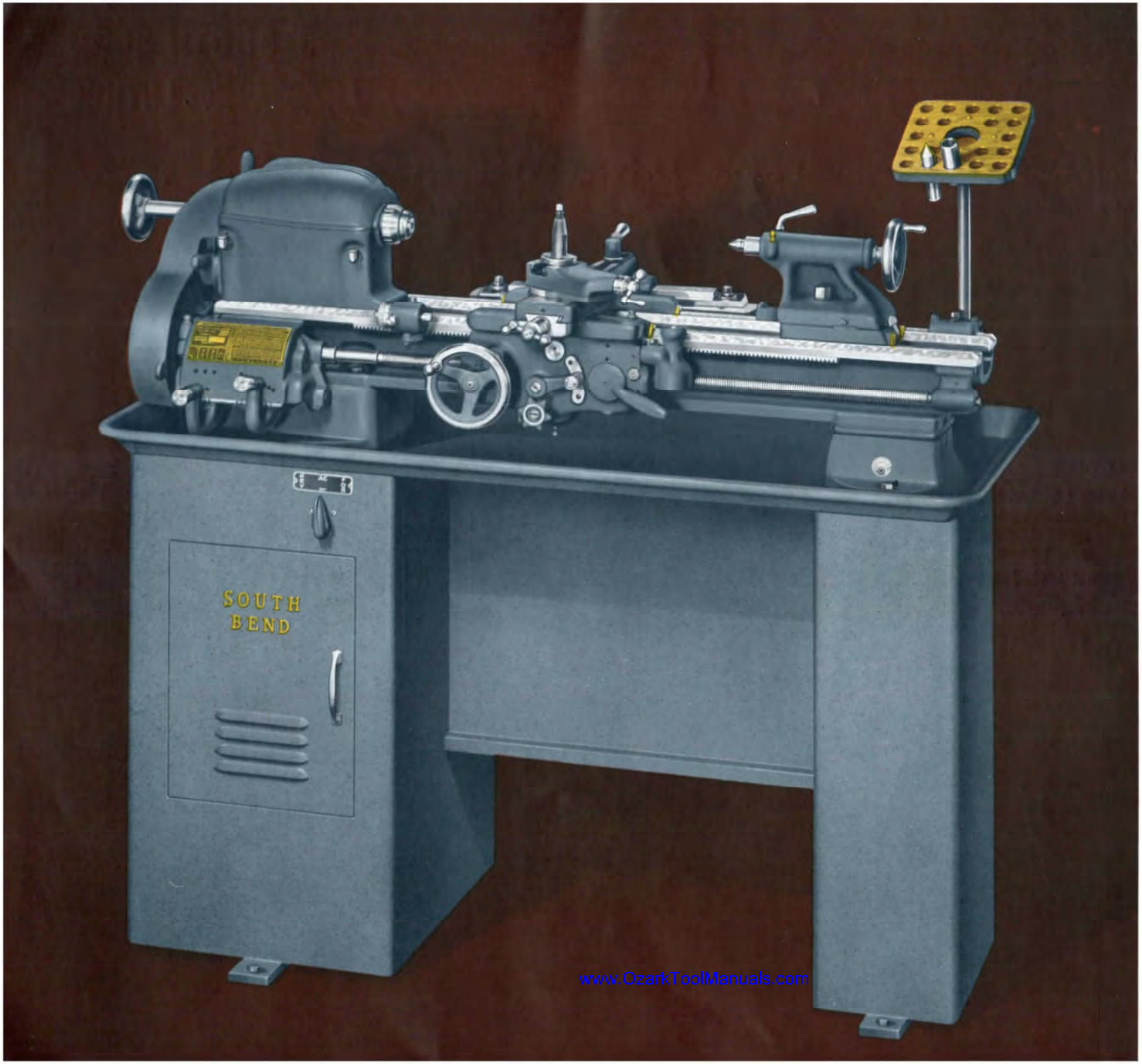
*NOTE—The 3½' and 4' bed lengths, because of the greater distance between centers, are recommended for general machine work.

SPECIFICATIONS

Centers, Morse taper		No. 2
Collet capacity, maximum		½"
Compound rest top, angular hand feed		2¼"
Cross slide travel		5⅞"
Face plate diameter, small		5⅛"
Feeds, cross	Model A	.0004" to .0252"
	Model B	.001" to .0046"
	Model C	Hand operated
Feeds, longitudinal	Model A	.0015" to .0853"
	Model B	.0021" to .0155"
	Model C	.0021" to .0156"

Headstock spindle front bearing, diameter	1 15/16"
Headstock spindle hole	¾"
Headstock spindle nose threads	1½"-8
Lead screw, 29° Acme Thread	¾"-8
Spindle speeds, approx., high speed range: (available with 16-speed drive only)	
r.p.m., direct belt driven	1176, 853, 629, 462
r.p.m., back-gears engaged	227, 165, 121, 89
Spindle speeds, approx., low speed range:	
r.p.m., direct belt driven	609, 442, 326, 239
r.p.m., back-gears engaged	117, 85, 63, 46

Swing over bed and saddle wings	9¼"
Swing over saddle cross slide	5½"
Tailstock spindle graduations, each	1/16"
Tailstock spindle travel	2⅛"
Tailstock top set over for taper turning	⅝"
Thread cutting range—Model A—48 pitches—R.H. or L.H.	4 to 224 per inch
Thread cutting range—Model B and Model C—45 pitches—R.H. or L.H.	4 to 160 per inch
Tool holder cutter bit	¼" sq.
Tool holder shank	⅜" x 15/16"



9" X 3½' 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 21, 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 4.

The Automatic 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 5.

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.

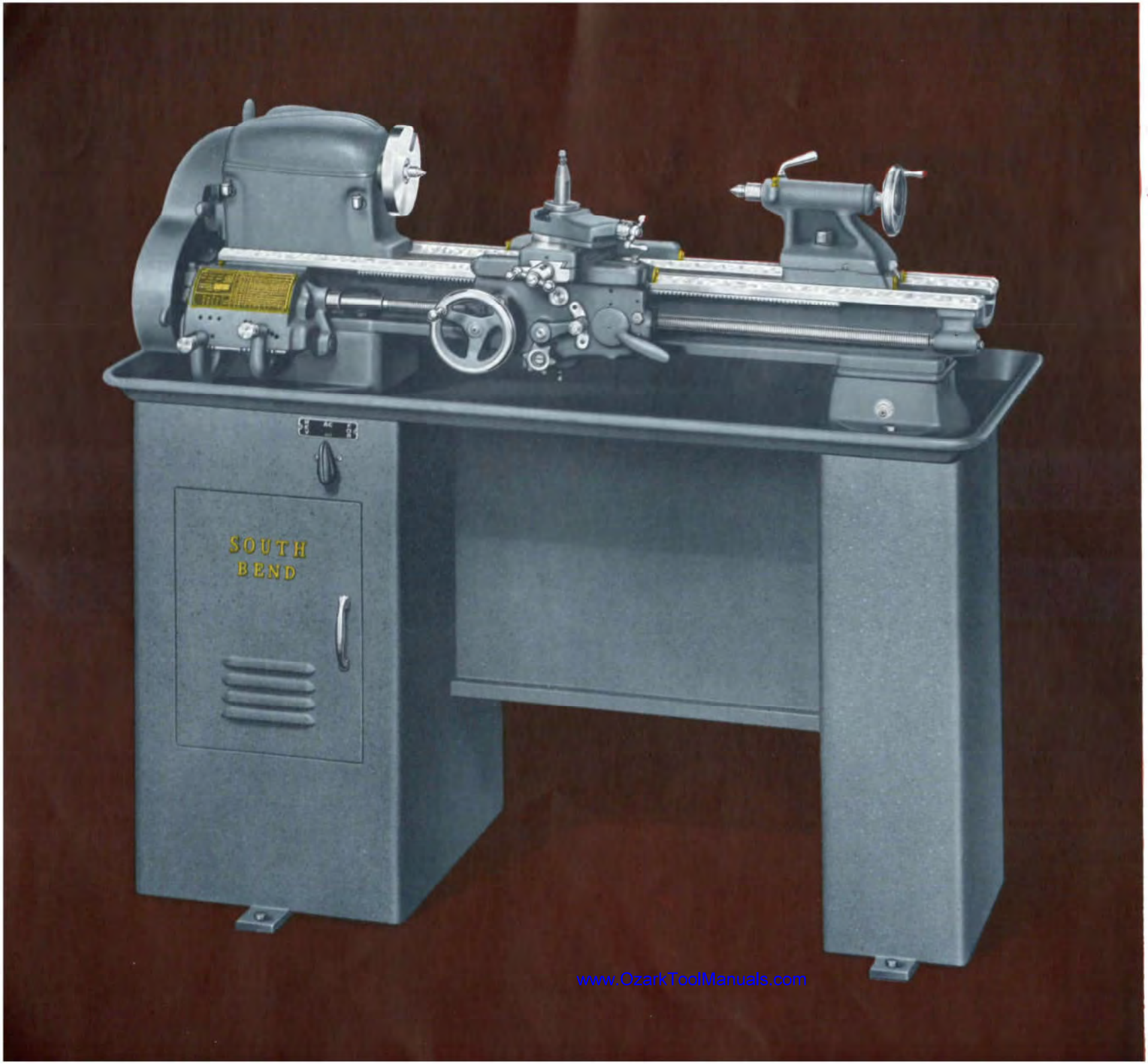
Toolroom Attachments included in the price of lathe consist of: handwheel type draw-in collet chuck attachment (without collets); collet rack; taper attachment; thread dial indicator; thread cutting stop; large face plate; and micrometer carriage stop.

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; automatic 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. See page 30.

Catalog Number 8344-ZN 9" x 3½' Toolroom Underneath Motor Driven Lathe complete with Toolroom Attachments and Regular Equipment. Distance between centers 22 inches. Approximate shipping weight 630 pounds. Code word "Pzbon".

SPECIFICATIONS

Belt, width of cone pulley step for	1"
Centers, Morse taper	No. 2
Collet capacity, maximum	½"
Compound rest top, angular hand feed	2¼"
Cross slide travel	5⅞"
Face plate diameter, large	7⅜"
Face plate diameter, small	5⅛"
Feeds, cross (48)	.0004" to .0252"
Feeds, longitudinal (48)	.0015" to .0853"
Headstock spindle front bearing, diameter	1 15/16"
Headstock spindle hole	¾"
Headstock spindle nose threads	1½"-8
Lead screw, 29° Acme Thread	¾"-8
Motor, size required (see page 30)	½ h.p.
Spindle speeds, approx., high speed range:	
r.p.m., direct belt driven	1270, 716, 408
r.p.m., back-gears engaged	246, 138, 79
Spindle speeds, approx., low speed range:	
r.p.m., direct belt driven	658, 370, 212
r.p.m., back-gears engaged	127, 72, 41
Swing over bed and saddle wings	9¼"
Swing over saddle cross slide	5"
Tailstock spindle graduations, each	1/16"
Tailstock spindle travel	2⅛"
Tailstock top set over for taper turning	⅝"
Thread cutting range—48 pitches R.H. or L.H.	4 to 224 per inch
Tool holder cutter bit	¼" sq.
Tool holder shank	⅜" x 15/16"



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

9-inch Underneath Motor Driven Precision Lathe

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

The 9-inch Model A Lathe with underneath motor drive is illustrated at the left. The 9-inch Model B and C Lathe are also made with this drive. These lathes are the same as those shown on pages 9, 11, and 13, 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; automatic apron; graduated compound rest; 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. See page 30.

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	3½	22-in.	570	Tyzer
377-ZN	B	3½	22-in.	560	Tyxen
315-ZN	C	3½	22-in.	550	Tyweg

SPECIFICATIONS

Belt, width of cone pulley step for		1"
Centers, Morse taper		No. 2
Collet capacity, maximum		1/2"
Compound rest top, angular hand feed		2 1/4"
Cross slide travel		5 7/8"
Face plate diameter, small		5 1/8"
Feeds, cross	Model A	.0004" to .0252"
	Model B	.001" to .0046"
	Model C	Hand operated
Feeds, longitudinal	Model A	.0015" to .0853"
	Model B	.0021" to .0155"
	Model C	.0021" to .0156"

Headstock spindle front bearing, diameter	1 13/16"
Headstock spindle hole	3/4"
Headstock spindle nose threads	1 1/2"-8
Lead screw, 29° Acme Thread	3/4"-8
Motor, size required (see page 30)	1/2 h.p.
Spindle speeds, approx., high speed range:	
r.p.m., direct belt driven	1270, 716, 408
r.p.m., back-gears engaged	246, 138, 79
Spindle speeds, approx., low speed range:	
r.p.m., direct belt driven	658, 370, 212
r.p.m., back-gears engaged	127, 72, 41
Swing over bed and saddle wings	9 1/4"

Swing over saddle cross slide	5 1/2"
Tailstock spindle graduations, each	1/16"
Tailstock spindle travel	2 1/8"
Tailstock top set over for taper turning	5/8"
Thread cutting range—Model A—48 pitches R.H. or L.H.	4 to 224 per inch
Thread cutting range—Model B—45 pitches R.H. or L.H.	4 to 160 per inch
Thread cutting range—Model C—45 pitches R.H. or L.H.	4 to 160 per inch
Tool holder cutter bit	1/4" sq.
Tool holder shank	3/8" x 13/16"

NO. 920-Z SOUTH BEND

TURRET LATHE

Series 900 Precision Turret Lathe

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

The Series 900 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. See page 29.

The Handlever 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. See page 29.

The Compound Rest Cross Slide, supplied in addition to the handlever cross slide, has power cross-feed and power longitudinal feed. Compound rest swivel is graduated 180° and may be set at any angle for machining bevels and short tapers. See pages 3 and 5.

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, coolant return assembly, underneath motor drive unit, power feed universal carriage, handlever bed turret, handlever cross slide, and compound rest cross slide. 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 are not included in the price of the lathe. See pages 24 to 35.

SPECIFICATIONS

Bed, width	5 15/16"
Collet capacity, maximum	½"
Compound rest top, angular hand feed	2¼"
Cross slide travel, compound rest type	5⅞"
Cross slide travel, handlever type	3⅝"
Cutter bit, maximum size tool block for handlever cross slide will take	7/16" x 7/16"
Feeds, power cross	Model A .0004" to .0252"
Feeds, power long.	Model A .0015" to .0853"
Motor, size required (see page 30)	½ h.p.
Spindle hole	¾"
Spindle nose threads	1½"-8
Spindle speeds, approx., high speed range:	
r.p.m., direct belt driven	1270, 716, 408
r.p.m., back-gears engaged	246, 138, 79
Spindle speeds, approx., low speed range:	
r.p.m., direct belt driven	658, 370, 212
r.p.m., back-gears engaged	127, 72, 41
Swing over bed and saddle wings	9¼"
Swing over compound cross slide	5½"
Swing over handlever cross slide	3 9/16"
Thread cutting range	Model A 4 to 224 per inch
Tool holder cutter bit for compound rest	¼" x ¼"
Tool holder shank for compound rest	⅜" x 13/16"
Turret face to spindle nose, maximum distance at beginning of indexing movement	2 5/8"
Turret head, distance between opposite faces	4⅞"
Turret hole, diameter*	⅝"
Turret hole to top of turret slide	1½"
Turret slide feed	4"
Universal carriage maximum longitudinal travel, hand or power feed	18"

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

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. Bar and tube stock may be passed through the hollow draw-bar which operates the collet.

The price of the Handwheel Draw-in Collet Attachment includes handwheel and hollow draw-bar, spindle nose cap, spanner wrench for 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 25.

4306-W. Code "Acrut". Ship. wt. 4 lbs. . . . .

Above—Handwheel Draw-in Collet Attachment
Below—Handlever Draw-in Collet Attachment

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 rapid production and accuracy of this attachment makes it an economical tool for manufacturing small parts to close tolerances.

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 but are extra, as listed on page 25.

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

5206-W. Code "Abpat". Ship. wt. 10 lbs. . . .

SOUTH BEND LATHE WORKS

9" SOUTH BEND *Precision* LATHES

Collets and Collet Sets

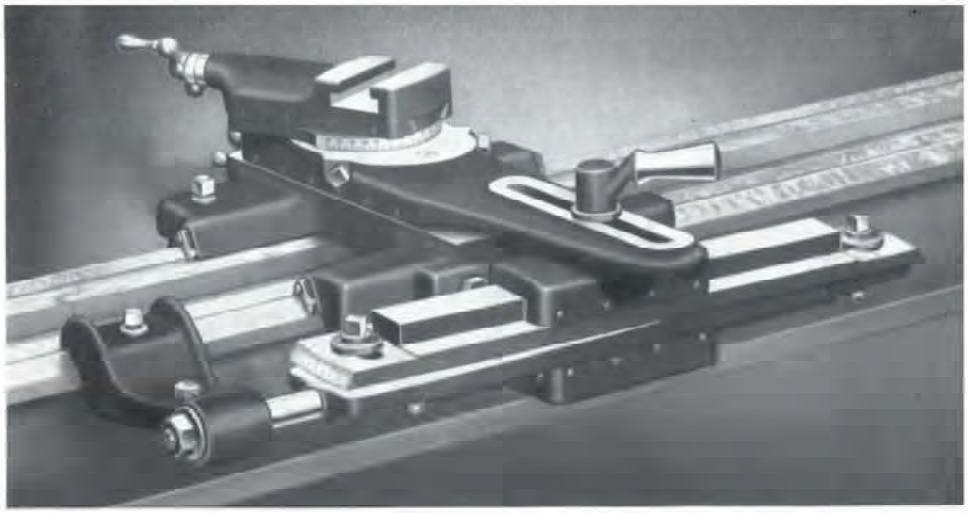
Standard Extras

Collets for use with either handwheel or handlever collet attachments can be supplied individually or in sets as listed in the tabulation below. A complete set of collets is especially helpful for toolroom and maintenance work. Often the time saved in getting out a single rush job without having to wait for a collet to come from the factory will more than compensate for the cost of a full set of collets.

These collets are made of steel, properly heat-treated for long service, and are precision ground. Each collet is carefully inspected and tested before it is packed for shipment.

No. 3 Collets and Collet Sets

Catalog Number	Description	Shipping Weight	Code
609-W	1 collet, any size, 1/16" to 1/2" in sixty-fourths	6 ozs.	Catra
2047	Set of 8 collets in 16ths, 1/16" to 1/2" inclusive	4 lbs.	Hzpam
2048	Set of 15 collets in 32nds, 1/16" to 1/2" inclusive	8 lbs.	Hzpeh
2049	Set of 29 collets in 64ths, 1/16" to 1/2" inclusive	12 lbs.	Hzpin
769-W	Decimal collets (.0625" to .500") each	6 ozs.	Dymez
773-W	Metric collets (1.5 mm to 12.5 mm in increments of 1/2 mm) each	6 ozs.	Cwgac



Taper Attachment

Standard Extra

Taper turning and boring are as easily accomplished as straight turning on lathes equipped with the South Bend Taper Attachment. The cross-feed screw nut is disconnected when the taper attachment is engaged for taper turning and boring. Can be set for cutting any taper up to 3 1/2" per foot and up to 7" in length at one setting. Swing over lathe cross slide with taper attachment is 5". Must be fitted to lathe at factory. Cannot be used with handlever cross slide.

428-W. Code "Hapwo". Ship. wt. 35 lbs.

Collet Rack

Standard Extra

This collet rack holds nineteen collets and also provides a suitable place for keeping centers, spindle sleeve, and draw-bar. Clamp for attaching collet rack to back V-way of lathe bed is supplied. Price does not include collets.

1770-W. Code "Rahah". Shipping wt. 9 lbs.

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 from the grinding wheel.

Price includes: ¼ h.p. 1725 r.p.m. motor, ball-bearing grinding spindle, V-belt, belt guard, one 4" x ½" Alundum grinding wheel (grain A46-N5BE), 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. Shipping weight 55 lbs.

30-WT. Grinding Attachment with 3-phase, 50/60 cycle A.C. 220 or 440 V. motor. Code word "Raton" . . . . . .

30-W. Grinding Attachment with 1-phase, 60 cycle A.C. 115 V. motor. Code "Sunar" . . . . . .

30-WD. Grinding Attachment with D.C. 110-120 V., or 230-250 V. motor. Code "Kusaz" . . . . . .

Diamond Dresser and Holder

For satisfactory operation the grinding wheel should be trued frequently by dressing with a diamond. A holding fixture is clamped onto the tailstock spindle to support the diamond dresser.

406. Diamond Dresser. Purchased extra. Code "Kirwe". Shipping weight ½ lb. . . . . .

91-W. Tailstock type holding fixture for diamond dresser. Standard extra. Code "Kibal". Shipping weight 1½ lbs. . . . . .

High Speed Grinder

For Internal and External Grinding

Purchased Extra

This is a small grinding attachment for either internal grinding or light external grinding. Internal capacity down to ⅛" in diameter, and depth to 2¼". The grinder clamps on the compound rest of the lathe in place of tool post, as shown.

A double pulley drive provides two spindle speeds, one for internal grinding, and the other for external grinding. The spindle is mounted on high speed precision ball bearings and operates smoothly at the maximum speed, which is 19,000 r.p.m.

Equipment consists of: 1/14 h.p. high speed universal motor, designed for operation on either alternating or direct current; switch; extension cord; wrenches; precision ball-bearing grinding spindle; two belts; one wheel for external grinding (2" x ¼"); balanced chuck for mounting internal grinding wheels; and three mounted wheels for internal grinding (¼" x ¼", ½" x ¼", and ¾" x ¼"). Shipping weight 10 lbs.

1204. Grinder for 115-volt A.C. or D.C. Code "Giboz" . . . . . .

1207. Grinder for 230-volt A.C. or D.C. Code "Gesep" . . . . . .

9" SOUTH BEND *Precision* LATHES

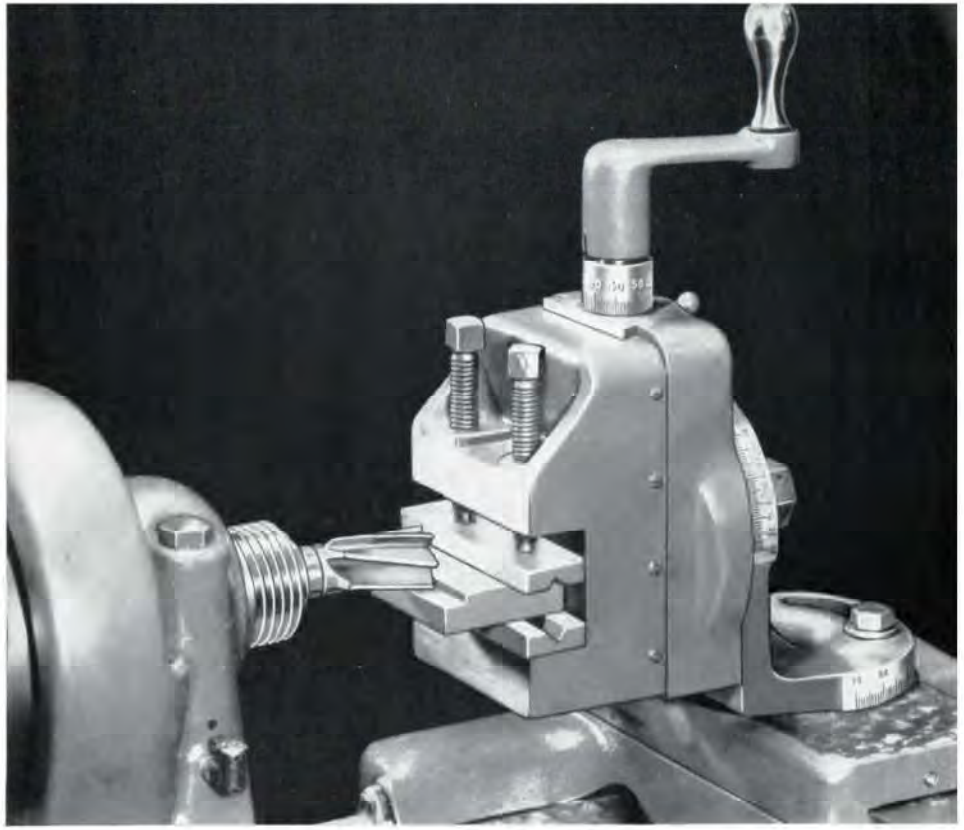
Milling and Keyway Cutting Attachment

Standard Extra

The milling and keyway cutting attachment is mounted on the compound rest base of the lathe, permitting either hand feeds or power feeds to be employed for milling and boring operations on work held in the milling attachment vise.

The angle plate to which the vertical slide is attached is graduated 180° in both the horizontal and vertical planes, permitting the vise to be swiveled in any direction. The vertical adjusting screw has a micrometer graduated collar. Vertical feed is 2½", cross-feed 5⅞". Opening in vise jaw is 1½" high, $\frac{13}{16}$" deep, and 3" wide. Equipment includes two V-blocks for holding round work, crank for feed screw, and wrench. Milling cutters and arbors are not included.

9-W. Code "Vabif". Shipping weight 13 lbs. . . . . .



Arbor for Milling Cutter — *Standard Extra*

For holding cutters with standard 1-inch hole. Taper shank fits into headstock spindle of lathe. Capacity between nut and shoulder is 1½". Three spacing collars furnished.

109-W. Code "Kacel". Shipping weight 3 lbs.

FOLLOWER REST

CENTER REST

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 or other work.

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.

125-W. Code "Cegke". Shipping weight 10 lbs. . . . . .

Follower Rest — *Standard Extra*

The follower rest is attached to the lathe carriage and travels with it. The follower rest is used to support long, slender shafts while being machined between the lathe centers. Jaws are adjustable for shafts ¼" to 2" diameter.

Slots in bottom of follower rest permit attaching or removing quickly as it is not necessary to remove the screws from the saddle.

34-W. Code "Cegmo". Shipping weight 4 lbs. . . . . .

Attachments and Accessories

Standard Extras

Ⓐ **LARGE FACE PLATE**—Threaded to fit the spindle nose of lathe. Has slots for clamping work or special face plate fixtures. Heavily constructed and ribbed on the back. Outside diameter 7⅜".

40-W. Code "Cehak". Shipping weight 6 lbs.

Ⓑ **CHUCK PLATE**—When ordering specify serial number of lathe and diameter of recess in back of chuck. Not required for lathe chucks listed in this catalog.

126-W. Chuck plate threaded to fit spindle nose of lathe, but not fitted to back of chuck. Code "Somak". Ship. wt. 5 lbs.

2935. Chuck plate threaded to fit spindle nose of lathe and fitted to back of chuck. Code "Sywub"

Ⓒ **PLAIN CARRIAGE STOP**—A practical stop for facing, turning, boring, etc. Can be used on either side of the carriage.

758-W. Code "Tahro". Shipping weight 1¼ lbs.

Ⓓ **THREAD CUTTING STOP**—Used for regulating the depth of each chip when cutting screw threads.

67-W. Code "Cegpy". Shipping weight ½ lb.

Ⓔ **THREAD DIAL INDICATOR**—When cutting screw threads this attachment permits returning carriage by hand to the starting point for each successive cut. A graduated dial shows when to engage the half-nuts with the lead screw.

810-W. Code "Adnok". Ship. wt. 2 lbs.

Ⓕ **MICROMETER CARRIAGE STOP**—A precision stop with micrometer adjustment for accurate facing, turning, boring, etc. Does not stop carriage automatically. Has hardened stop which may be locked for doing duplicate work.

968-W. Code "Capys". Ship. wt. 2 lbs.

Ⓖ **DRILL PAD**—Used in tail spindle to support flat work for drilling.

727-W. Code "Donav". Ship. wt. 1¼ lbs.

Ⓗ **CROTCH CENTER**—Used in tail spindle to center round work for cross drilling.

728-W. Code "Fanid". Ship. wt. 10 ozs.

Ⓘ 60° **CENTER**—For use in headstock or tailstock of lathe. Made of tool steel, hardened and ground all over.

726-W. Code "Cenre". Ship. wt. ½ lb.

Ⓙ **HOLLOW CENTER**—Has 60° conical hollow center for supporting centerless shafts up to ⅞" in diameter. Made of tool steel, hardened and ground.

1896-W. Code "Cvdeh". Ship. wt. ½ lb.

Ⓚ **HAND REST**—For wood turning. Consists of a base and two T rests, 4" and 12" long respectively. Made of cast iron. Fits on compound rest base of lathe.

896-W. Code "Adows". Ship. wt. 6 lbs.

Ⓛ **SCREW CENTER**—For use in headstock spindle of lathe for wood turning operations.

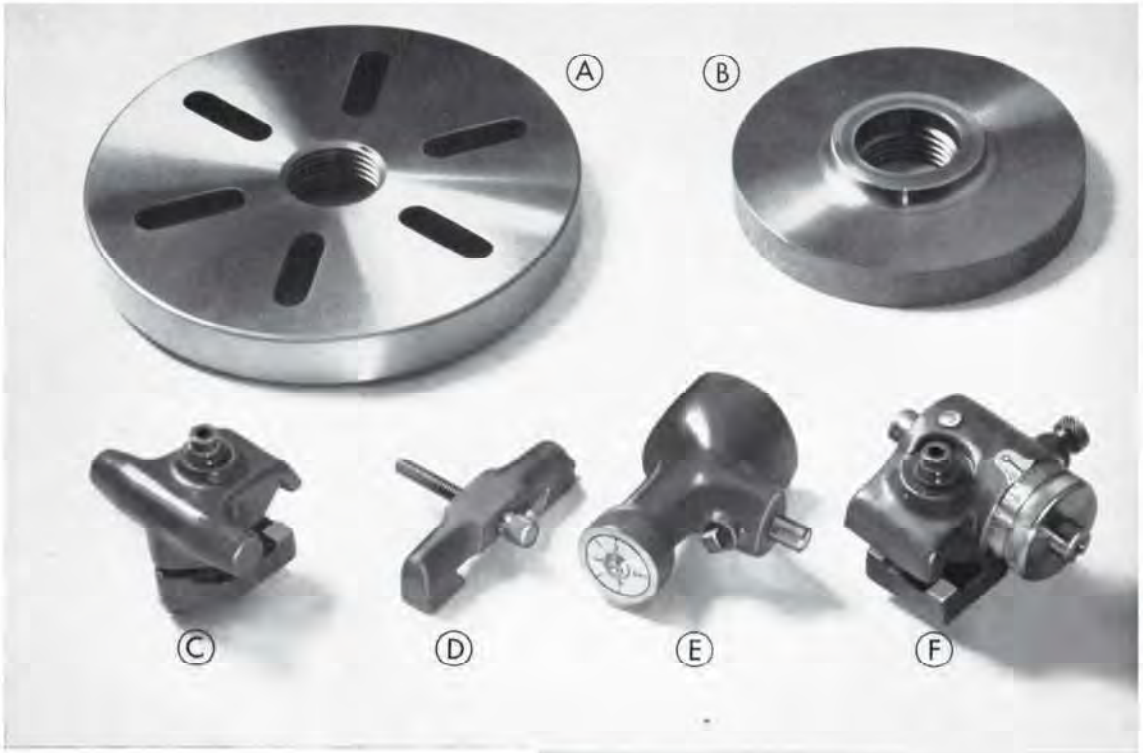
731-W. Code "Kalaf". Ship. wt. 1¼ lbs.

Ⓜ **SPUR CENTER**—For use in headstock spindle of lathe.

732-W. Code "Ikdol". Ship. wt. ½ lb.

Ⓝ **CUP CENTER**—For use in tailstock spindle of lathe.

733-W. Code "Jalak". Ship. wt. ½ lb.



9" SOUTH BEND

Precision LATHES

9" SOUTH BEND *Precision* LATHES

Attachments for Manufacturing

Standard Extras

HANDLEVER BED TURRET—Mounts on the inside bed ways in place of the tailstock. The turret head indexes automatically each time the lever is moved to the extreme right. Each face of the turret has an independently adjustable feed stop screw which accurately regulates the length of the cut.

Effective feed of turret slide 4". Center of turret hole to top of turret slide 1½". Takes standard turret tools with ⅝" diameter shank. Can be supplied to order with ¾" holes, no extra charge. When turret is ordered separate from lathe, the purchaser must assume the responsibility of fitting and boring.

1611-W. Code "Fywam". Ship. wt. 76 lbs. . .

DOUBLE TOOL CROSS SLIDE—Mounted on the saddle cross slide dovetail in place of the compound rest assembly. Adjustable stops limit the movement of the cross slide in either direction, in or out. The cross slide has front and back square tool blocks in which 7/16" square cutter bits can be mounted. Tapered wedges and thumb screws provide precision adjustment for the height of the cutter bits.

Handlever double tool cross slides made after July, 1945 are arranged so that the handlever may be removed and screw feed used instead. This permits using the square turret listed below.

2030-W. Code "Sywic". Ship. wt. 36 lbs. . .

40-ND SQUARE TURRET—For use on double tool cross slide with screw feed. Cannot be used on double tool slide with handlever feed, or with compound rest.

Four ⅜" square cutting tools can be mounted in the turret tool block which is 3" square. 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 cam operated binder 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.

40-ND. Code "Cvban". Ship. wt. 10 lbs. . . . . .

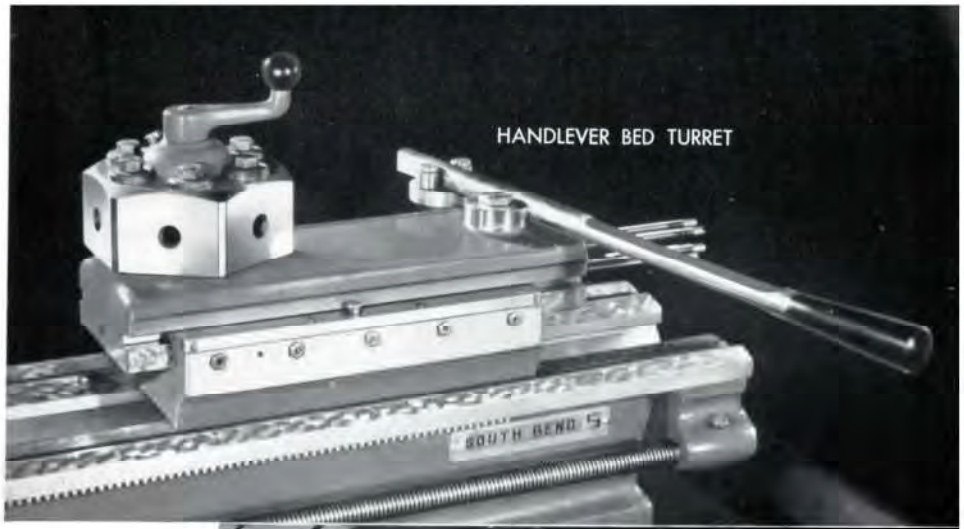
40-NC SQUARE TURRET—For use on the base of the compound rest cross slide. It cannot be used on the double tool cross slide.

Four cutting tools ⅜" square can be mounted in the turret tool block which is 3" square. 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 cam operated binder 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.

40-NC. Code "Cwmah". Ship. wt. 8 lbs. . . . .

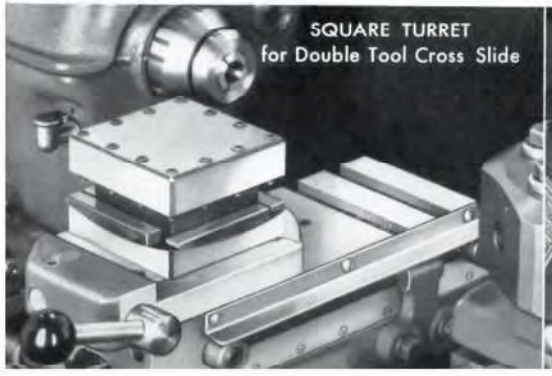
HANDLEVER TAILSTOCK—A practical attachment for quantity drilling, reaming, tapping, counterboring, and centering operations. Length of feed 2⅝". The convenient lever operation of the spindle saves much time on production work. The spindle may be set for drilling to any depth up to maximum length of feed.

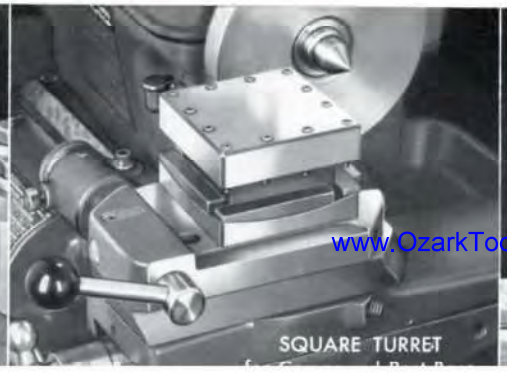
This tailstock is similar to the regular tailstock, except for the spindle construction. The tailstock top may be set over for taper turning. The spindle may be operated by either the handlever or by turning the tailstock handwheel, and can be locked in position for turning operations.



519-W. Handlever Tailstock, when ordered with lathe, in lieu of regular tailstock. Code word "Iibet" . . . . . .

1197-W. Handlever Tailstock, in addition to regular tailstock. Code "Hitid". Ship. wt. 23 lbs. . . .





9" SOUTH BEND *Precision* LATHES

How to Run a Lathe

This is a complete reference book and manual on the care and operation of the back-geared screw-cutting lathe. Clearly written in simple non-technical language. Illustrated with more than 360 photographs, diagrams, and sketches. Printed in the English, Spanish, Portuguese, and French languages. State language wanted if other than English.

Revised edition No. 45, "How to Run a Lathe", in the English language, 128 pages 5 1/8" x 7 7/8", price postpaid 25c in paper binding, $1.00 in leatherette binding. U. S. stamps accepted for single copies.

SOUTH BEND LATHE WORKS

Motors and Controls

Purchased Extras

Motors for South Bend Lathes are listed in the large tabulation below. The control required for each motor is listed in the smaller tabulation on the right of the motor tabulation.

Motors and controls are not manufactured by us but can be supplied with South Bend Lathes at extra cost. All motors and controls supplied by us are made by reliable manufacturers of electrical equipment. Prices are f.o.b. South Bend, Indiana.

All motors listed below are of the instant reversing type, except for motor No. 3251 which is a start-stop reversing motor.

Specify Electric Current When Ordering Electrical Equipment

When ordering motors and controls for South Bend Lathes be sure to give complete information relative to the electric current on which the motor is to operate.

1. State whether alternating current or direct current, and give exact voltage.
2. If A. C., also specify phase and cycle.
3. Do not order double rated motors.
4. Designate make of motor preferred, also second choice and third choice.
5. If single phase A.C. motor is required, state whether non-reversing or reversing type is wanted.

MOTORS FOR 9-INCH SWING SOUTH BEND LATHES

Catalog Number	Size of Motor h.p.	Rated Speed r.p.m.	Type of Current	Phase	Cycle	Voltage	Ship. Wt., Lbs.	Code		Control Catalog Number
3225	1/2	1500 or 1800	A.C.	3	50/60	550	55	Zwrec		790
3226	1/2	1500 or 1800	A.C.	3	50/60	440	55	Zwsek		790
3227	1/2	1500 or 1800	A.C.	3	50/60	220	55	Zwteb		790
										789
3228	1/2	1800	A.C.	1	60	115	59	Zwtus	*	790
3229	1/2	1800	A.C.	1	60	230	60	Zxhos		790
3230	1/2	1500	A.C.	1	50	230	60	Zxsuh		790
3240	1/2	1500	A.C.	1	50	115	44	Zxwic	*	789 or 790
3231	1/2	1800	D.C.	.....	.....	115	73	Zxsow		790
3232	1/2	1800	D.C.	.....	.....	230	73	Zxtoh		790
3250	1/4	1500 or 1800	A.C.	3	50/60	220	30	Zysic		790
3251	1/4	1800	A.C.	1	60	115	37	Zymoh	*†	789
3252	1/4	1800	A.C.	1	60	115	40	Zysom	*	789
3253	1/4	1800	A.C.	1	60	230	41	Zytam		790
3242	1/4	1500	A.C.	1	50	115	44	Zxwon	*	789
3243	1/4	1500	A.C.	1	50	230	41	Zxwos		790
3254	1/4	1800	D.C.	.....	.....	110/120	36	Zytoc		790

*Equipped with 6-ft. extension cord and plug.

†This is a start-stop reversing motor. All other motors listed are instant reversing.

Code word for No. 790 Control is "Zahsa".
Code word for No. 789 Control is "Atwig."

SOUTH BEND 22, INDIANA, U.S.A

Chucks and Tools

INDEPENDENT LATHE CHUCKS—*Purchased Extras*
These 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 back of chuck.

4006. Medium Duty 6" Independent Lathe Chuck. Code "Fabew". Shipping weight 13 lbs.

4206. Regular Duty 6" Independent Lathe Chuck. Code "Fadkn". Shipping weight 18 lbs.

UNIVERSAL LATHE CHUCKS—*Purchased Extras*
Two sets of jaws are furnished with each Universal Chuck, 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.

3005. Medium Duty 5" Universal Lathe Chuck. Code "Faput". Shipping weight 12½ lbs.

3505. Regular Duty 5" Universal Lathe Chuck. Code "Cauco". Shipping weight 16 lbs.

3-JAW DRILL CHUCKS—*Purchased Extras*—Prices and weights include pinion key, but not shank.

Capacity Inches	Ship. Wt. Lbs.	Almond Chucks Cat. No.	Code	Jacobs Chucks Cat. No.	Code
0 to 3/8	1⅞	**219**	Acpen	**1200**	Cleve
0 to ½	2½	**220**	Acpip	**1201**	Wauko
1/16 to ¾	3¾	**327**	Rulid	**1202**	Faloa

TAPERED SHANK FOR DRILL CHUCKS—*Purchased Extra*—Required for fitting each drill chuck to the lathe spindle. When not ordered with chuck, specify size and make of drill chuck to be used. No. 2 Morse taper.

709-W. Code "Achuk". Shipping weight ¾ lb.

JACOBS HOLLOW THREADED CHUCKS—*Purchased Extras*—Chuck screws onto spindle nose of lathe. Has hollow body for holding rod and bar work.

Cat. No.	Capacity Inches	Net Wt. Lbs.	Ship. Wt. Lbs.	Code
907-W	1/16 to 5/8	3⅛	3¾	Robal
525-W	1/16 to ¾	3¾	4¼	Rodna

TURNING TOOL HOLDERS—*Purchased Extras*—Made of drop-forged steel, heat-treated. Shank is ⅜" x 13/16" and takes ¼" square high speed steel cutter bit. Price includes wrench and one unground cutter bit. Ship. weight each 1 lb.

847-S. Straight Tool Holder. Code "Acump".
847-R. Right-Hand Tool Holder. Code "Acurf".
847-L. Left-Hand Tool Holder. Code "Acvet".

CUTTING-OFF TOOL HOLDERS—*Purchased Extras*—Made of drop-forged steel, heat-treated. Shank is ⅜" x 13/16" and takes 3/32" x 1 1/32" blade. Price includes wrench and one ground high speed steel cutter blade. Ship. weight each 1 lb.

833-S. Straight Cutting-off Tool. Code "Adcat".
833-R. Right-Hand Cutting-off Tool. Code "Cemso".
876. Extra cutter blade for above cutting-off tools. Code "Nybam". Shipping weight 3 ozs. Each

KNURLING TOOL HOLDER—*Purchased Extra*—Made of drop-forged steel, heat-treated. Shank is ⅜" x ¾". Price includes one set of medium diamond knurls.

820. Code "Domta". Shipping weight 1¼ lbs.
817. Extra knurls, straight or diamond, fine, medium, or coarse. Code "Digmo". Pair, shipping weight ¼ lb.

THREADING TOOL HOLDER—*Purchased Extra*—Made of drop-forged steel, heat-treated. Shank is ⅜" x ¾". Price includes wrench and formed high speed steel single point cutter (V, U.S.S., or Whitworth). Specify style and threads per inch to be cut.

845. Code "Adfob". Shipping weight 1 lb.
814. Extra cutter, any style. Code "Adurp". Shipping weight ¼ lb.

BORING TOOL HOLDER STYLE "B"—*Purchased Extra*—Made of drop-forged steel, heat-treated. Shank is 13/16" x ¾". Has ½" x 7⅝" sleeve bar. Cutter bit may be set straight or at a 45° angle. Price includes two wrenches and two 13/16" square cutter bits.

423. Code "Hayun". Shipping weight 1½ lbs.

BORING TOOL HOLDER STYLE "D"—*Purchased Extra*—Same as Style "B", but with ¼" x 5" solid bar only. Will take bars ⅛" to ½" in diameter.

505-F. Code "Adyot". Shipping weight 1¼ lbs.

SLEEVE BORING BAR—*Purchased Extra*—Same as supplied with Style "B" boring tool holder. Size: ½" x 7⅝". Price includes two 13/16" square cutter bits.

344-W. Code "Cerib". Shipping weight 2 lbs.

HEAVY DUTY BORING AND TURNING TOOL—*Standard Extra*—A very rigid combination tool for heavy boring, turning, and facing operations. Holder takes any bar ⅜" to ¾" in diameter. Price includes: ¾" x 14" boring bar, 1/16" square cutter bit, and wrench.

469-W. Code "Hamon". Shipping weight 5 lbs.

GROUND CUTTER BITS—*Standard Extras*—Made of high speed steel, ground to shape, ready to use. Size ¼" x ¼" x 2" for use with turning tool holders only. Specify shapes wanted:

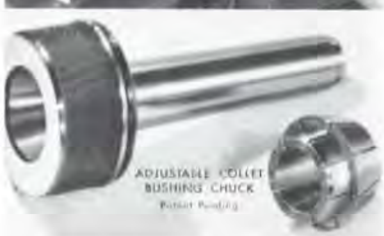
A L. H. Turning	B Round Nose	C R. H. Turning	D L. H. Side	E Threading	F R. H. Side

1305. Code "Fiher". Ship. wt. 2 ozs. Each
1779. Code "Cimuz". Set of six, shapes A to F as shown. Shipping weight 10 ozs.

UNGROUND CUTTER BITS—*Purchased Extras*—For use in turning tool holders and boring bars. Made of good quality high speed steel, properly heat-treated and hardened, but not ground.

Cat. No.	Size Bit Inches	Shipping Weight	Code
1460	¼ x ¼ x 2	2 ozs.	Adwir
1067-W	5/16 x 5/16 x 1	2 ozs.	Komac
454-W	5/16 x 5/16 x 1½	2 ozs.	Hopoc

1629. Code "Cixas". Set of 6 unground cutter bits, size ¼" x ¼" x 2". Ship. wt. 10 ozs.

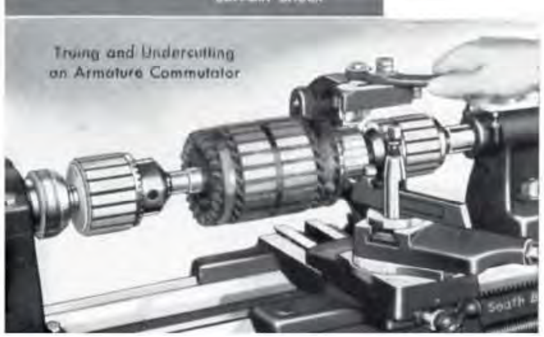


ADJUSTABLE COLLET BUSHING CHUCK

MICA UNDERCUTTING ATTACHMENT

CLOSE-UP OF UNDERCUTTING BLADE

ARMATURE SUPPORT CHUCK



Truing and Undercutting on Armature Commutator

Accessories

ADJUSTABLE COLLET BUSHING CHUCK—*Standard Extra*—Provides an extremely accurate but inexpensive equipment for mounting centerless armature shafts, and similar parts, in the lathe. Can be used in either head or tail spindle of lathe. Collets are made of brass, and may be adjusted for either running fit or driving fit on shaft.

1615-NR. Adjustable Collet Bushing Chuck only, with No. 2 Morse taper shank. Code "Cvgab". Shipping weight 2 lbs.

1608-NR. Adjustable Collet Bushing Chuck with set of 3 collets, 9/16", 5/8", and .637" capacity for popular armatures. Code "Cvgew". Shipping weight 4 lbs.

1659. Extra Collet for round work, any capacity 1/4" to 1" round by 16ths. Code "Cwlob". Shipping weight 6 1/2 ozs.

MICA UNDERCUTTING ATTACHMENT—*Standard Extra*—Attaches to saddle of lathe as shown in illustration below for undercutting armature commutators. Hand operated, easy to use, and efficient. Cutter blade can be aligned with commutator segments, even though they are not parallel with the armature shaft. This prevents cutting into copper and throwing up burrs. A screw adjustment is provided for regulating the depth of the cut. When not in use, the undercutter may be tilted back out of the way. Price includes one cutter blade .020" thick.

675-N. Code "Cwrub". Mica undercutting attachment. Shipping weight 9 lbs.

2028. Code "Cvlob". Extra cutter blade .015" thick. Shipping weight 1/2 lb.

2029. Code "Cvlom". Extra cutter blade .020" thick. Shipping weight 1/2 lb.

ARMATURE SUPPORT CHUCK—*Purchased Extra*—Has three brass jaws in which armature shaft revolves. Takes shaft 3/8" to 3/4" diameter. Price includes arbor with No. 2 Morse taper shank.

340-NR. Code "Bzvob". Shipping weight 4 lbs.

Metric Transposing Gears

Standard Extras

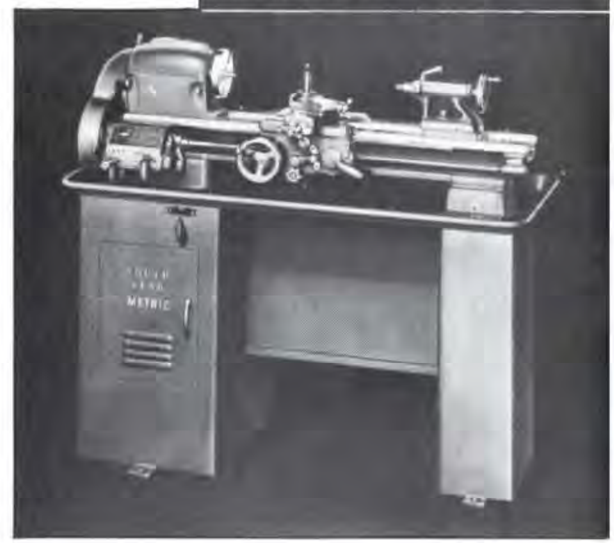
METRIC TRANSPOSING GEARS

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 model of South Bend 9-inch lathe when equipped with a set of metric transposing gears.

Gear guards designed to enclose the metric gears are supplied at no extra cost when the transposing gears are ordered with the lathe. When ordered separate from the lathe a special gear guard is required.

1759-W. Metric Transposing gears for Model B or Model C 9-inch Lathe. Code "Kazaj". Shipping weight 8 lbs.

1955-W. Metric Transposing gears for Model A 9-inch Lathe only. Code "Lupal". Shipping weight 8 lbs.



METRIC LATHES

All models of South Bend 9-inch Lathes can be supplied with metric lead screw and metric graduations.

The Model A and Model B Metric Lathes will cut the following screw threads: 7, 6.5, 6, 5.5, 5, 4.5, 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. The Model A Lathes with metric quick change gear box cut metric threads from 7.5 mm pitch inclusive, as listed on the index chart illustrated below.

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

9-Inch—235 mm SOUTH BEND LATHE MODEL A

CATALOG NO.

BED LENGTH

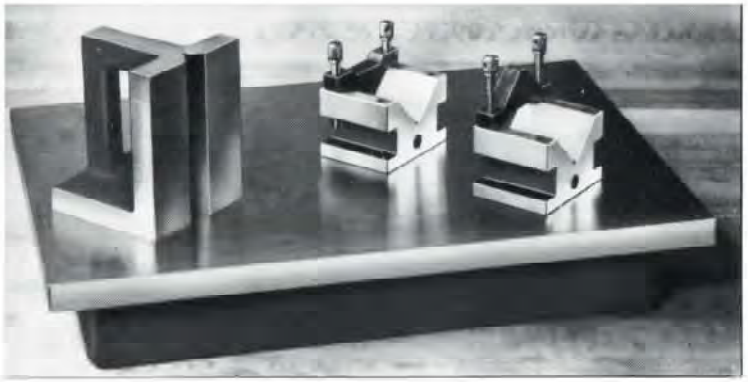
PAT. APP. FOR

PITCHES IN mm—PASOS EN mm—PAS EN mm								POSITION POSICION	STUD ARBOL ARBRE
7.500	7.000	6.500	6.000	5.500	5.000	4.500	4.000	D	50
3.750	3.500	3.250	3.000	2.750	2.500	2.250	2.000	C	"
1.875	1.750	1.625	1.500	1.375	1.250	1.125	1.000	B	"
1.500	1.400	1.300	1.200	1.100	1.000	0.900	0.800	C	20
0.750	0.700	0.650	0.600	0.550	0.500	0.450	0.400	B	"
0.375	0.350	0.325	0.300	0.275	0.250	0.225	0.200	A	"
FEEDS IN mm—AVANCES EN mm									
0.512	0.478	0.444	0.410	0.375	0.341	0.307	0.273	C	20
0.256	0.239	0.222	0.205	0.188	0.171	0.154	0.137	B	"
0.128	0.119	0.111	0.102	0.094	0.085	0.077	0.068	A	"

Positions / Posiciones → A B C D

CROSS FEEDS 11/18 OF PITCHES / AVANCES TRANSVERSALES 11/18 DE LOS PASOS / AVANCES TRANSVERSALES 11/18 DES PAS

Index Chart Showing Metric Threads and Feeds on a 9-inch Model A Metric Quick Change Gear Lathe.



Surface Plate

Standard Extra

A heavy cast iron surface plate for laying out work, surfacing, checking flat surfaces, and general toolroom and shop use. Top surface is precision ground and has wooden cover. Edges are machined and under side of edge is finished all around. Size 12" x 17" x 3", with top ¾" thick. Approximate net weight 64 lbs.

2215. Code "Sywux". Shipping weight 75 lbs.

V-Blocks

Standard Extras

These toolmaker's V-Blocks provide a rigid support for holding cylindrical parts and shafts for laying out and machining. Made of hardened steel with all surfaces precision ground. Each block is 2 5/16" wide, 1 15/16" high, 2¼" long. Holds round work ¼" to 2" in diameter. Sold only in numbered sets.

2216. Code "Vutuk". Shipping weight 8 lbs.

Angle Plate

Standard Extra

Precision ground on six sides, this rigidly constructed cast iron angle plate has many uses. It serves as a square for laying out and setting up work. Size 3¼" x 3¼" x 4¼" with ⅝" V-groove.

2214. Code "Rzpoz". Shipping weight 7 lbs

Touch-Up Enamel

Purchased Extra

For touching up and re-finishing South Bend Lathes and other machine tools. This is our standard machine tool gray enamel which we use for finishing lathes at the factory.

Cat. No.	Size Container	Ship. Wt.	Code
2455	1 Pint	2 lbs.	Jyrob
2456	1 Quart	4 lbs.	Jyroh
2457	1 Gallon	12 lbs.	Jyron

V-Belts

Purchased Extras

Rubber V-Belts for use with South Bend Lathes and other power driven machinery. Specify catalog number, maximum width, and outside circumference when ordering.

Catalog Number	Maximum Width	Outside Circumference	Shipping Weight	Code Word
4522-A	3/16"	32"	8 oz.	Gygeb
4523-A	3/16"	33"	8 oz.	Gygeh
4527-A	3/16"	27"	8 oz.	Gygen
4535-C	5/16"	35"	8 oz.	Gyhez
4537-C	5/16"	37"	8 oz.	Gyhil
4540-D	11/32"	40"	8 oz.	Gyhon
4541-D	11/32"	41"	8 oz.	Gyhos
4542-D	11/32"	42"	8 oz.	Gyhow
4543-D	11/32"	43"	8 oz.	Gyhug
4544-B	1/4"	44"	8 oz.	Gygsr
4544-D	11/32"	44"	8 oz.	Gyhum
4545-B	1/4"	45"	8 oz.	Gygic
4545-D	11/32"	45"	8 oz.	Gyhuw
4546-B	1/4"	46"	8 oz.	Gygik
4546-D	11/32"	46"	8 oz.	Gykac
4547-B	1/4"	47"	8 oz.	Gygim
4547-D	11/32"	47"	8 oz.	Gykak
4548-B	1/4"	48"	8 oz.	Gygiw
4549-B	1/4"	49"	8 oz.	Gygob
4549-D	11/32"	49"	8 oz.	Gykan
4550-C	5/16"	50"	8 oz.	Gyhip
4551-C	5/16"	51"	8 oz.	Gyhir
4552-C	5/16"	52"	8 oz.	Gyhiv
4553-B	1/4"	53"	8 oz.	Gygom
4554-B	1/4"	54"	8 oz.	Gygos
4554-C	5/16"	54"	8 oz.	Gyhiz
4555-C	5/16"	55"	10 oz.	Gyhod
4556-B	1/4"	56"	10 oz.	Gygue
4558-B	1/4"	58"	10 oz.	Gyguk
4559-C	5/16"	59"	10 oz.	Gyhok
4560-B	1/4"	60"	10 oz.	Gygum
4564-B	1/4"	64"	10 oz.	Gyguz
4568-B	1/4"	68"	10 oz.	Gyham
4570-B	1/4"	70"	10 oz.	Gyhar
4571-B	1/4"	71"	10 oz.	Gyhax
4578-B	1/4"	78"	10 oz.	Gyhel
4580-B	1/4"	80"	10 oz.	Gyhen
4598-B	1/4"	98"	10 oz.	Gyhet

Lubricating Oil

Purchased Extra

Recommended for 9-inch South Bend Lathes and other machinery requiring a high quality lubricant.

Cat. No.	Quantity	Ship. Wt.	Code
Oil For Spindle Bearings and Apron Clutch Mechanism			
1602	1 quart	3 lbs.	Kwdic
1904	12 quarts	31 lbs.	Kwdih
Oil for General Lubrication of Lathe and Other Machinery			
1603	1 quart	3 lbs.	Kwdoc
1906	12 quarts	31 lbs.	Kwdor

Flat Leather Belts

Standard Extras

Price includes belt lace and lacing instructions. Ship. wt. each, approx. ½ lb.

Cat. No.	For Use On	Size and Kind of Belting	Code
2311	9" Horiz. M. D. Lathes —¼ or ⅓ h.p. motor	Single Ply—Oak Tan 11/16" x 50"	Fytoh
2310	9" Horiz. M. D. Lathes with metric transposing gears—¼ or ⅓ h. p. motor	Single Ply—Oak Tan 11/16" x 55"	Fytob
2321	9" Horiz. M. D. Lathes with taper attachment, ¼ or ⅓ h. p. motor	Single Ply—Oak Tan 11/16" x 53"	Fytul
2323	9" Horiz. M. D. Lathes with ½ h. p. motor	Single Ply—Oak Tan 11/16" x 58"	Fytus
2312	9" Horiz. M. D. Lathes with ½ h. p. motor	Double Ply—Vim Oak 11/16" x 58"	Fytun
2313	9" UMD Lathes	Double Ply—Vim Oak 1 1/16" x 66¼"	Fytox

Belt Splicing Cement

Purchased Extra

Waterproof belt splicing cement for gluing endless leather belts with lapped joint. Four ounce can.

1433. Code "Cvdax". Ship. wt. 6 ozs.

SOUTH BEND *Precision* LATHES

SOUTH BEND LATHE ACCESSORIES

Standard and Safety Lathe Dogs

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

Lathe Dogs for 13" and Larger Lathes

Cap. In.	STANDARD Cat. No.	SAFETY Cat. No.	Wrenches for Safety Dogs Cat. No.
½	3843	3826	2385
¾	3844	3827	2386
1	3845	3828	2387
1¼	3846	3829	2388
1½	3847	3830	2389
1¾	3848	3831	2389
2	3849	3832	2389
2½	3850	3833	2390
3	3851	3834	2390
3½	3852	3835	2390
4	3853	3836	2390

Lathe Dogs for 9" and 10" Lathes

Cap. In.	STANDARD Cat. No.	SAFETY Cat. No.	Wrenches for Safety Dogs Cat. No.
½	3837	3820	2385
⅝	3838	3821	2385
¾	3839	3822	2386
1	3840	3823	2387
1¼	3841	3824	2388
1½	3842	3825	2388

Die Holder

Cat. No.	Size
1838	No. 2
1839	No. 3

For holding standard 1½" diameter button dies in tailstock of lathe. Made of a single piece of steel with ground shank. Has ½" hole, 3" deep for stock clearance.

Lathe Centers and Drill Pads

L—Screw Center for wood turning. G—Drill Pad to support flat work for Drilling. H—Crotch Center to support round work for cross drilling. J—Hollow Center for supporting centerless shafts up to ⅞" dia. I—60° Hard Center for headstock or tailstock spindles. P—Carbide Tipped Center. Q—Half Center. N—Cup Center for wood turning. M—Spur Center, for wood turning.

Description	No. 2 Taper for 9" and 10" Lathes Cat. No.	No. 3 Taper for 13", 14½", and 16" Cat. No.
L—Screw Center	731-NR	731-TH
G—Drill Pad	727-NR	727-TH
H—Crotch Center	728-NR	728-TH
J—Hollow Center	1896-NR	1896-TH
I—60° Hard Center	726-NR	726-TH
P—Carbide Tipped Center	1889	1890
Q—Half Center	926-NR	926-TH
N—Cup Center	733-NR	733-TH
M—Spur Center	732-NR	732-TH

Pipe Centers

Cat. No.	Takes Pipe	Requires Shank
2160	½" to 3"	2172-NR or 2172-TH
2161	3" to 5"	
2162	5" to 8"	2173-TH

Pipe Center Shanks

Cat. No.	Taper
2172-NR	No. 2
2172-TH	No. 3
2173-TH	No. 3

Patent Pending

Ball Bearing Live Center

Designed for maximum strength and rigidity, the Ball Bearing Live Center is recommended for high speeds, heavy roughing cuts, etc. 60° point runs in substantial precision ball bearing which is easily replaceable.

Cat. No.	Shank Taper
3900	No. 2
3901	No. 3

Center Drill Holder

Cat. No.	Taper Shank	Diameter Will Hold
2340	No. 2	13/64"
2341	No. 2	3/10"
2342	No. 2	7/16"
2343	No. 3	13/64"
2344	No. 3	3/10"
2345	No. 3	7/16"

The new Center Drill Holder is designed for greater accuracy in center drilling operations. Holds drill rigidly.

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 ½"

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 . . . . . ½"
Drills to center of 14" circle.

CHUCK TO BASE DISTANCE
Bench Model . . . . 17"
Floor Model . . . . 46½"

TABLE SIZE
10" x 10" . . . . Tilt Type. Ground and aligned with spindle. Slotted and underribbed for clamping.

COLUMN
2½" diameter. Accurately ground.

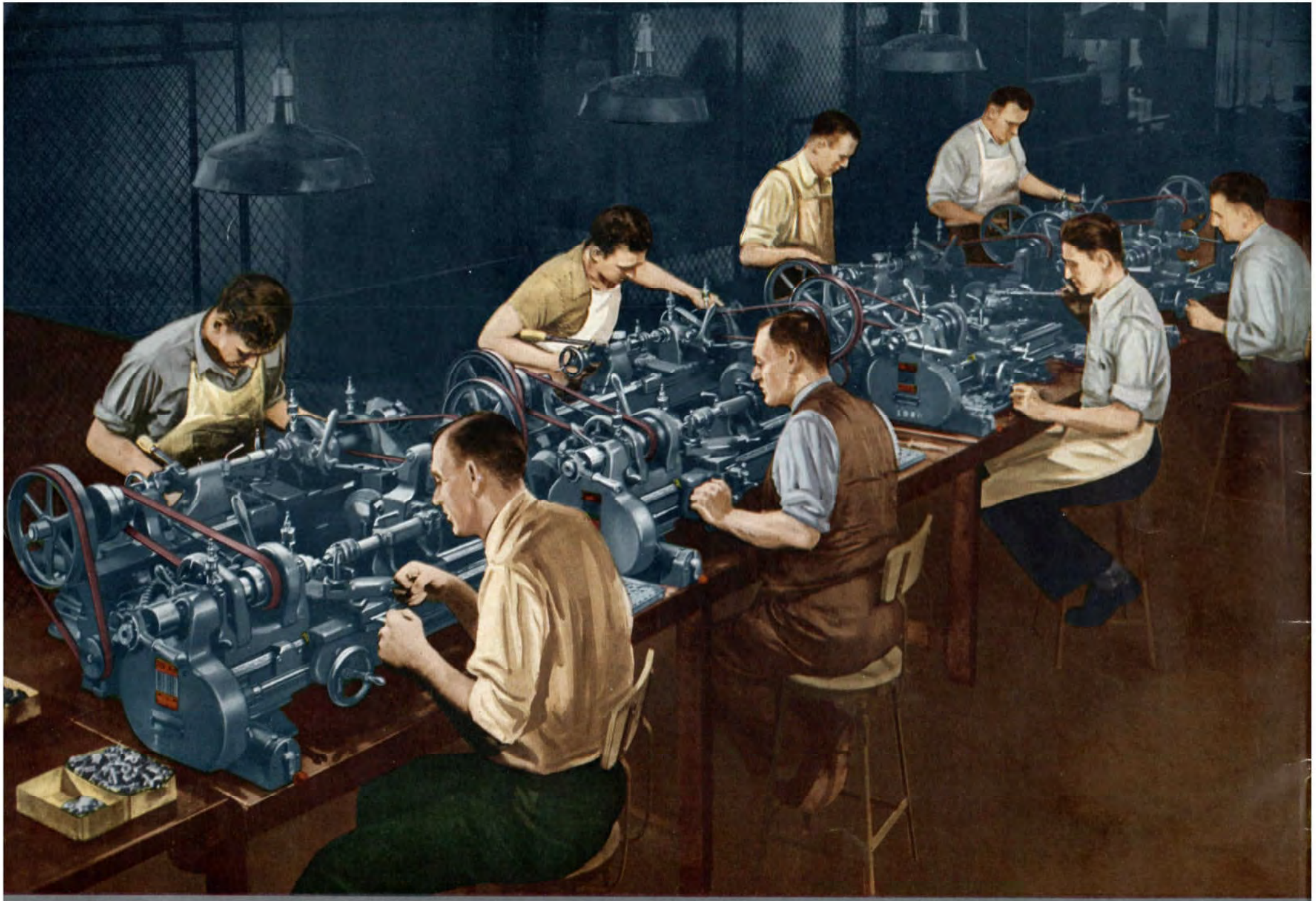
HEIGHT
Bench Model . . . . 35½"
Floor Model . . . . 65½"

SHIPPING WEIGHT
Bench Model . . 195 lbs.
Floor Model . . . 235 lbs.

MOTOR REQUIRED
½ 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.

TIME PAYMENT TERMS AVAILABLE



A GROUP OF 9 INCH SOUTH BEND PRECISION LATHES IN OPERATION
IN A MANUFACTURING PLANT