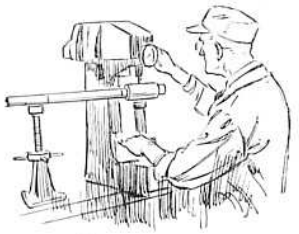
CATALOG 9-G

9" SOUTH BEND *Precision* LATHES

Checking a Fixture with Precision Gauges.

Catalog 9-G

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 38 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 31 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.

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. Either bench legs or floor legs can be furnished. 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 briefly described on pages 32 to 35 inclusive.

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

Lathe Builders for 38 Years

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. All parts are made of cast iron or steel—no lead, zinc or other soft die-cast metals are used. 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 box 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 special 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.

Three 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

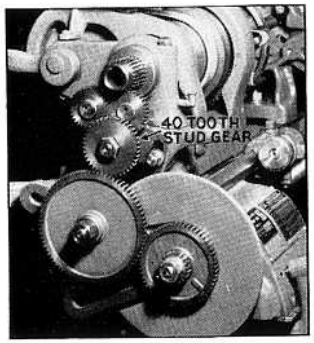


Fig. 2. Model A Lathe set up for cutting threads 4 to 7 per inch

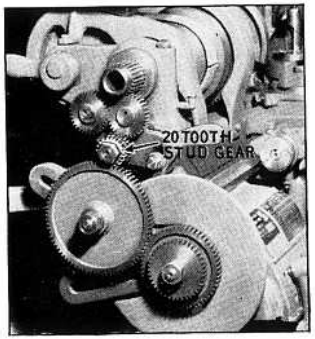


Fig. 3. Model A Lathe set up for cutting threads 8 to 224 per inch

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

9-INCH SOUTH BEND LATHE
Model A

TRADE MARK SOUTH BEND TWIN ENGINE LATHES

CATALOG NO.
BED LENGTH

PAT. APP. FOR

A B C D E — Left Hand Tumbler Positions

STUD GEAR	LEFT HAND TUMBLER	THREADS PER INCH / FEEDS IN THOUSANDTHS							
40	A	4 .0853	4½ .0758	5 .0683	5½ .0621	5¾ .0594	6 .0569	6½ .0525	7 .0488
20	A	8 .0427	9 .0379	10 .0341	11 .0310	11½ .0297	12 .0284	13 .0263	14 .0244
20	B	16 .0213	18 .0190	20 .0171	22 .0155	23 .0148	24 .0142	26 .0131	28 .0122
20	C	32 .0107	36 .0095	40 .0085	44 .0078	46 .0074	48 .0071	52 .0066	56 .0061
20	D	64 .0053	72 .0047	80 .0043	88 .0039	92 .0037	96 .0036	104 .0033	112 .0030
20	E	128 .0027	144 .0024	160 .0021	176 .0019	184 .0019	192 .0018	208 .0016	224 .0015

AUTOMATIC CROSS FEEDS .3 TIMES LONGITUDINAL FEEDS

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.

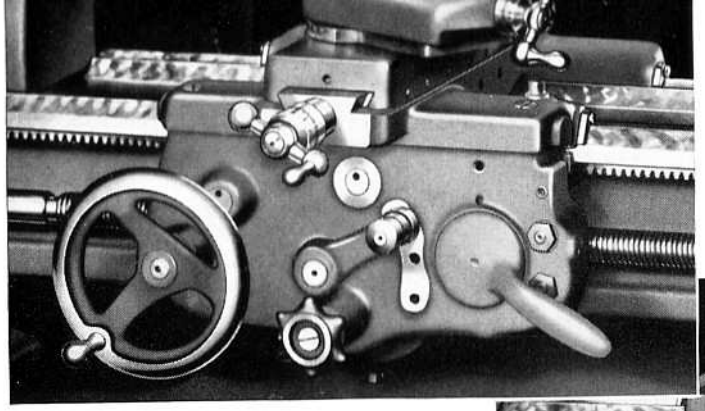


Fig. 5. Above—Automatic Apron for Model A and Model B 9-inch South Bend Lathes

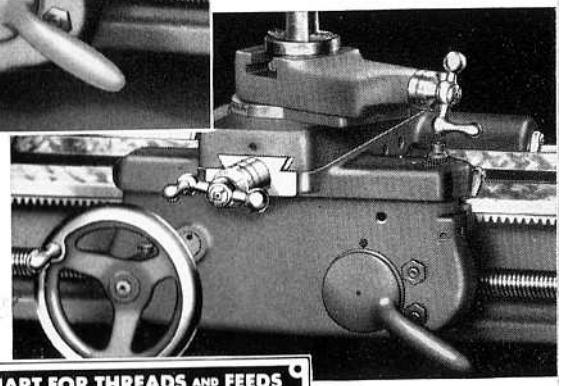


Fig. 6. Right—Plain Apron for Model C 9-inch South Bend Lathes

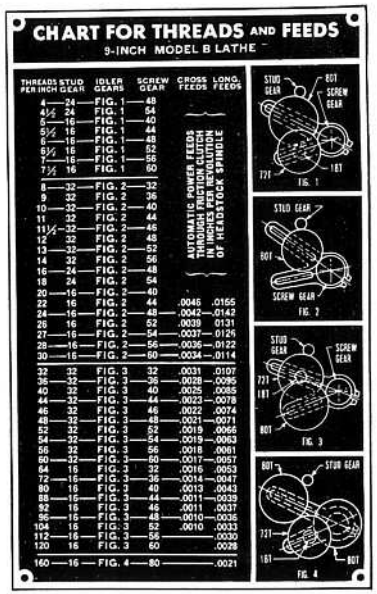


Fig. 7. Index Chart Showing Threads and Feeds on Model B 9-inch South Bend Lathes

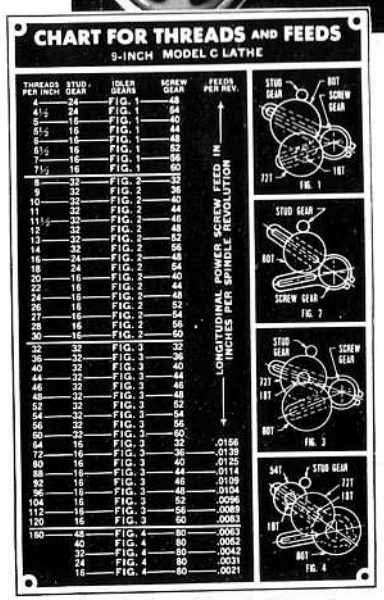
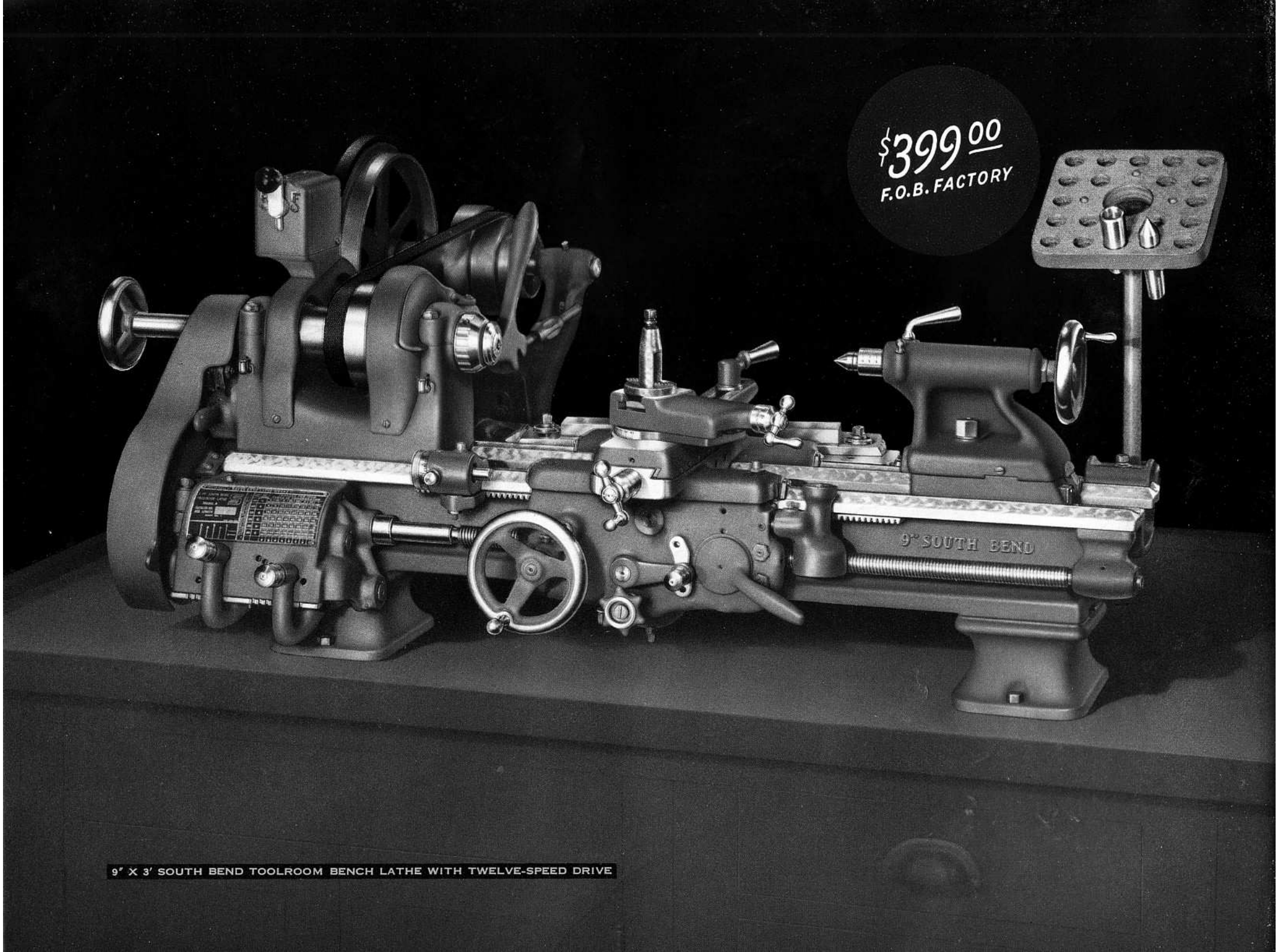


Fig. 8. Index Chart Showing Threads and Feeds on Model C 9-inch South Bend Lathes

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

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.

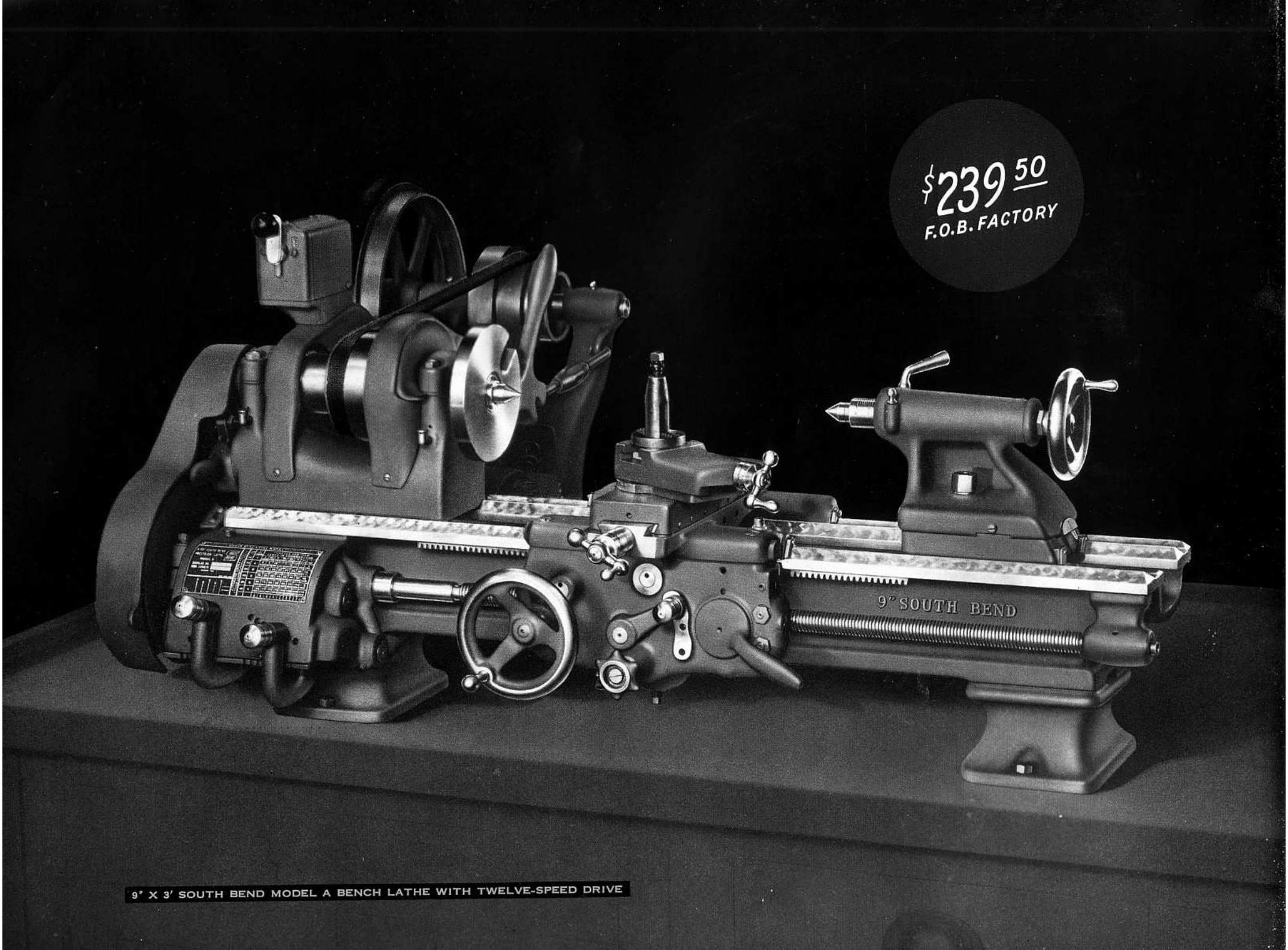
Regular Equipment included in price of lathe consists of: automatic apron; graduated compound rest; small face plate; tool post; two 60-degree centers; spindle sleeve; wrenches; quick change gear box; installation plan; and book "How to Run a Lathe". Bench is not included in price of lathe.

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

Bed Lengths	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	425	450
Code Word	Nybic	Nybok	Nybur
Price, f.o.b. South Bend	**$399.00**	**$411.00**	**$423.00**

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.

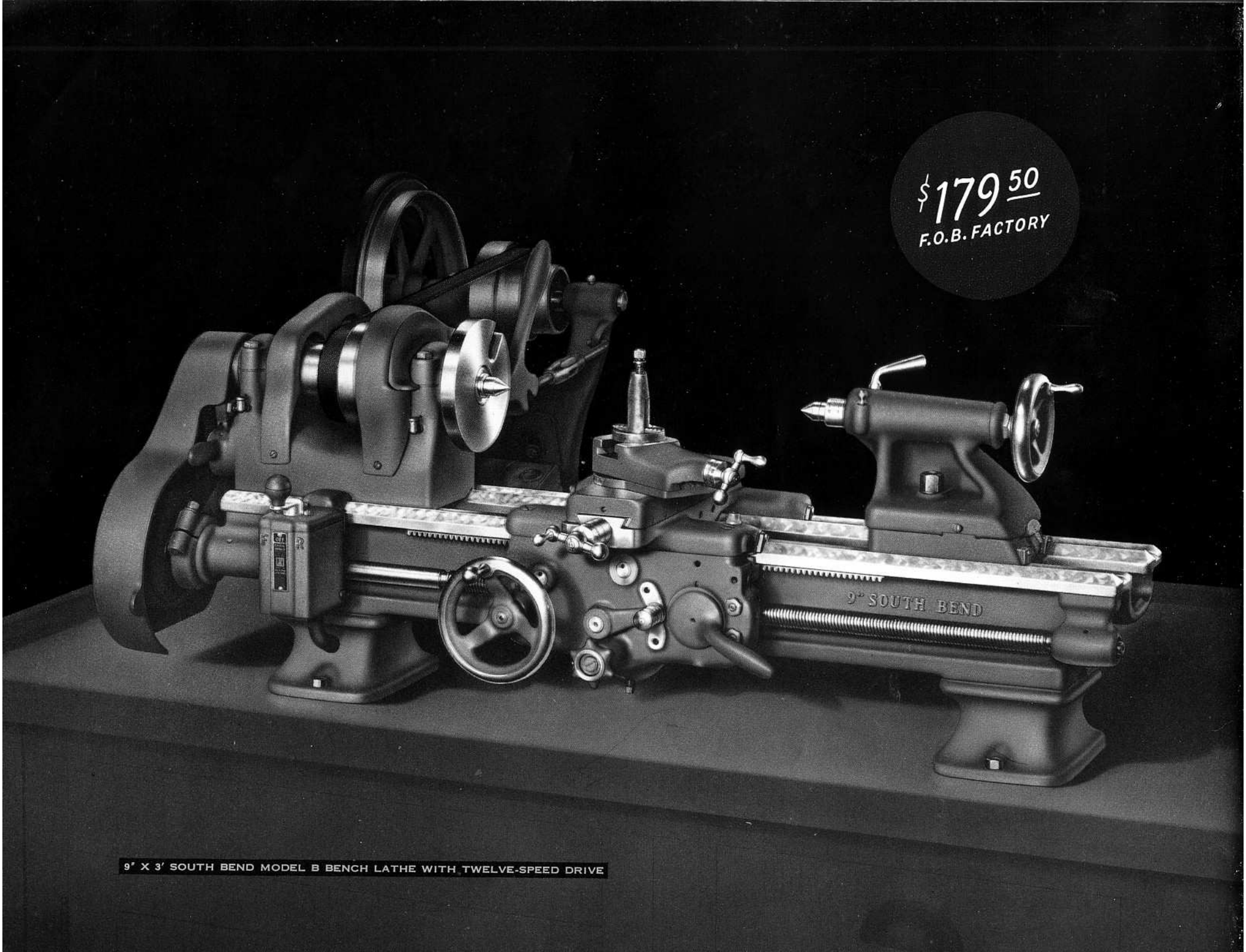
Model A 9-inch *Twelve-Speed* Horizontal Motor Driven Bench Lathes

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
Price, f.o.b. South Bend	**$239.50**	**$251.50**	**$263.50**	**$280.50**

*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	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 (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 with chip guard	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—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 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, 17, and 21.

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* Horizontal Motor Driven Bench Lathes

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
Price, f.o.b. South Bend	**$179.50**	**$191.50**	**$203.50**	**$220.50**

*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, 17, and 21.

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.

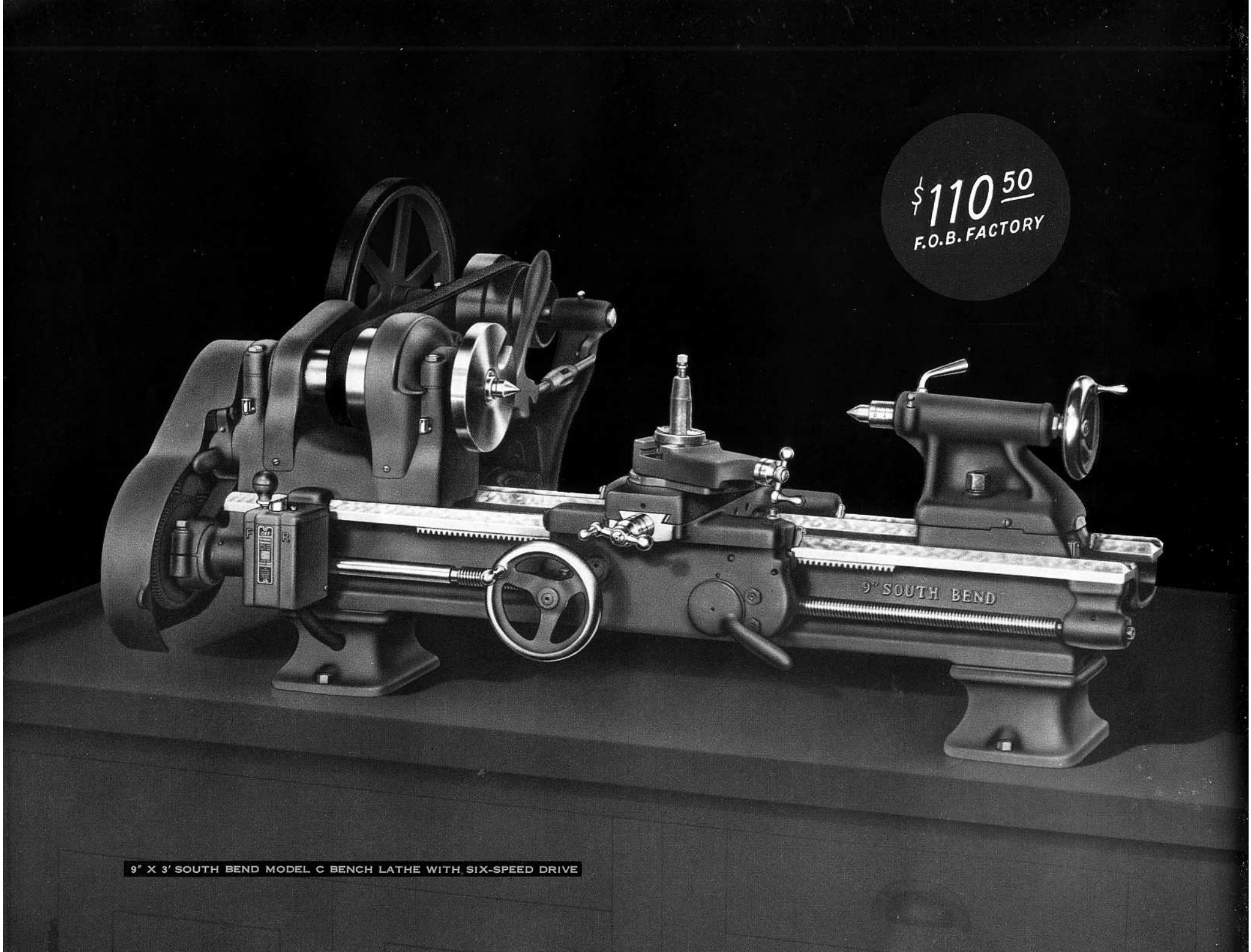
Model C 9-inch *Twelve-Speed*
Horizontal Motor Driven Bench Lathes

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
Price, f.o.b. South Bend	**$125.50**	**$137.50**	**$149.50**	**$166.50**

*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. It is less expensive than the *Twelve-Speed* Drive and permits the use of a smaller and less expensive motor.

Drive Equipment included in the price of the lathe consists of: horizontal motor drive unit; motor pulley with 1/2" 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.

Model A 9-inch *Six-Speed* Horizontal Motor Driven Bench Lathes

Bed Length	3-ft.	3 1/2-ft.*	4-ft.*	4 1/2-ft.
Catalog Number	**444-Y**	**444-Z**	**444-A**	**444-R**
Distance Between Centers	16-in.	22-in.	28-in.	34-in.
Shipping Weight, Crated	340 lbs.	365 lbs.	390 lbs.	415 lbs.
Code Word	Vuwab	Vuweh	Vuwim	Vuwos
Price, f.o.b. South Bend	**$224.50**	**$236.50**	**$248.50**	**$265.50**

Model B 9-inch *Six-Speed* Horizontal Motor Driven Bench Lathes

Bed Length	3-ft.	3 1/2-ft.*	4-ft.*	4 1/2-ft.
Catalog Number	**477-Y**	**477-Z**	**477-A**	**477-R**
Distance Between Centers	16-in.	22-in.	28-in.	34-in.
Shipping Weight, Crated	330 lbs.	355 lbs.	380 lbs.	405 lbs.
Code Word	Rzmab	Rzmeh	Rzmis	Rzmox
Price, f.o.b. South Bend	**$164.50**	**$176.50**	**$188.50**	**$205.50**

Model C 9-inch *Six-Speed* Horizontal Motor Driven Bench Lathes

Bed Length	3-ft.	3 1/2-ft.*	4-ft.*	4 1/2-ft.
Catalog Number	**415-YC**	**415-ZC**	**415-AC**	**415-RC**
Distance Between Centers	16-in.	22-in.	28-in.	34-in.
Shipping Weight, Crated	320 lbs.	345 lbs.	370 lbs.	395 lbs.
Code Word	Lywas	Lywec	Lywih	Lywon
Price, f.o.b. South Bend	**$110.50**	**$122.50**	**$134.50**	**$151.50**

*NOTE—The 3 1/2' 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		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)		1/4 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		9 1/4"
Swing over saddle with chip guard		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 and 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"

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

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. 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.

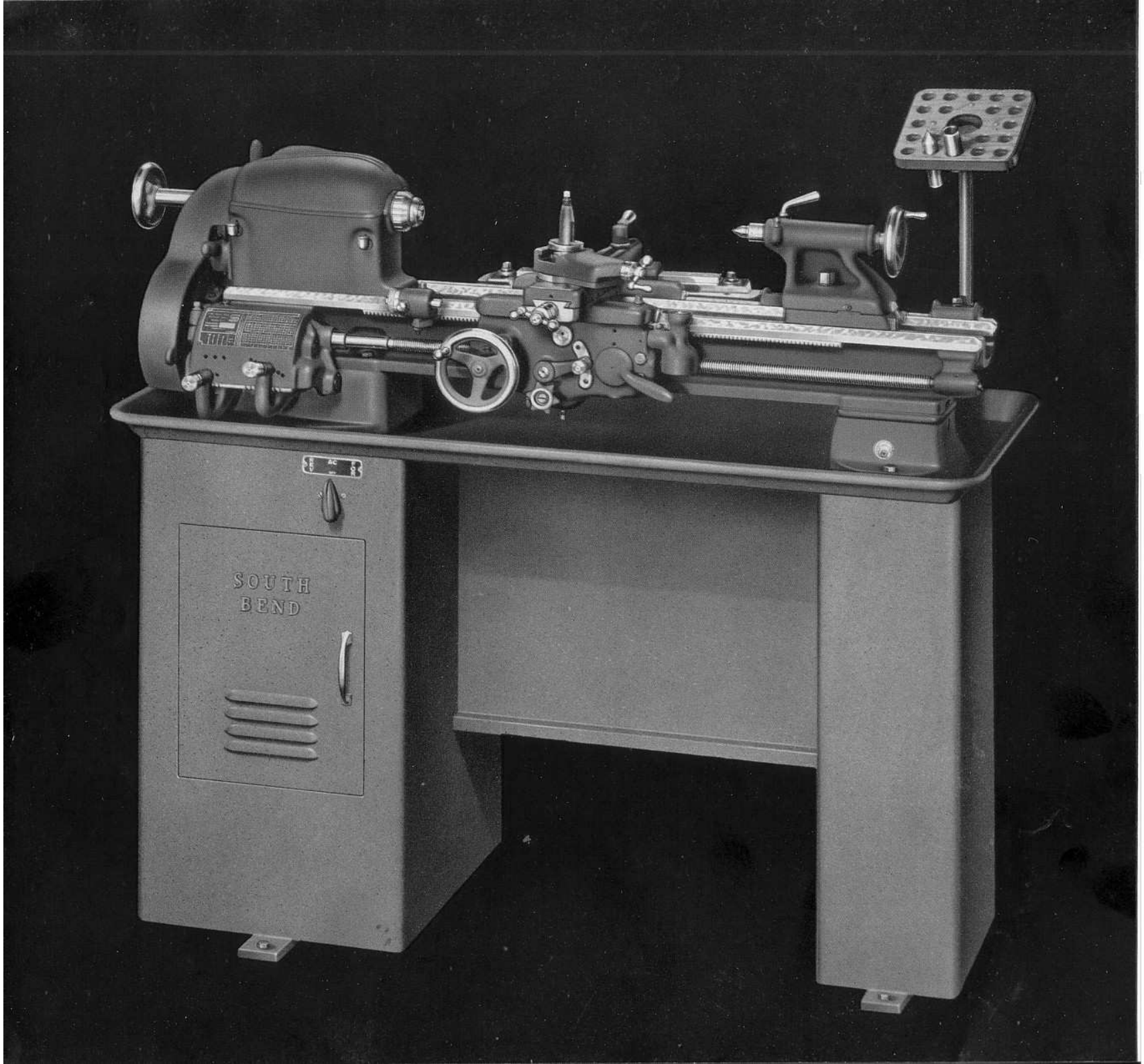
V-Belt 9-inch Horizontal Motor Driven Bench Lathes

Type of Lathe	Catalog Number	Bed Length Feet*	Distance Between Centers	Size Motor h.p.	Ship. Wt. Crated Pounds	Code Word	Price f.o.b. Factory
With Eight-Speed V-Belt Drive							
Model A	**544-Y**	3	16	1/4	340	Vuzab	**$238.50**
	544-Z	3 1/2	22	1/4	365	Vuzew	**250.50**
	544-A	4	28	1/4	390	Vuzir	**262.50**
	544-R	4 1/2	34	1/4	415	Vuzox	**279.50**
Model B	**577-Y**	3	16	1/4	330	Rzpax	**178.50**
	577-Z	3 1/2	22	1/4	355	Rzpec	**190.50**
	577-A	4	28	1/4	380	Rzpim	**202.50**
	577-R	4 1/2	34	1/4	405	Rzpow	**219.50**
Model C	**515-YC**	3	16	1/4	320	Lyzar	**124.50**
	515-ZC	3 1/2	22	1/4	345	Lyzem	**136.50**
	515-AC	4	28	1/4	370	Lyzik	**148.50**
	515-RC	4 1/2	34	1/4	395	Lyzos	**165.50**
With Sixteen-Speed V-Belt Drive							
Model A	**744-Y**	3	16	1/2	355	Vutaz	**$253.50**
	744-Z	3 1/2	22	1/2	380	Vutex	**265.50**
	744-A	4	28	1/2	405	Vutis	**277.50**
	744-R	4 1/2	34	1/2	430	Vuton	**294.50**
Model B	**777-Y**	3	16	1/2	345	Rzlac	**193.50**
	777-Z	3 1/2	22	1/2	370	Rzleh	**205.50**
	777-A	4	28	1/2	395	Rzliw	**217.50**
	777-R	4 1/2	34	1/2	420	Rzion	**234.50**
Model C	**715-YC**	3	16	1/2	335	Lysam	**139.50**
	715-ZC	3 1/2	22	1/2	360	Lysec	**151.50**
	715-AC	4	28	1/2	385	Lysiz	**163.50**
	715-RC	4 1/2	34	1/2	410	Lysut	**180.50**

*NOTE—The 3 1/2' 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 ..... 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
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 ..... 9 1/4"
Swing over saddle with chip guard ..... 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 and 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"



$69250
F. O. B. FACTORY

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.

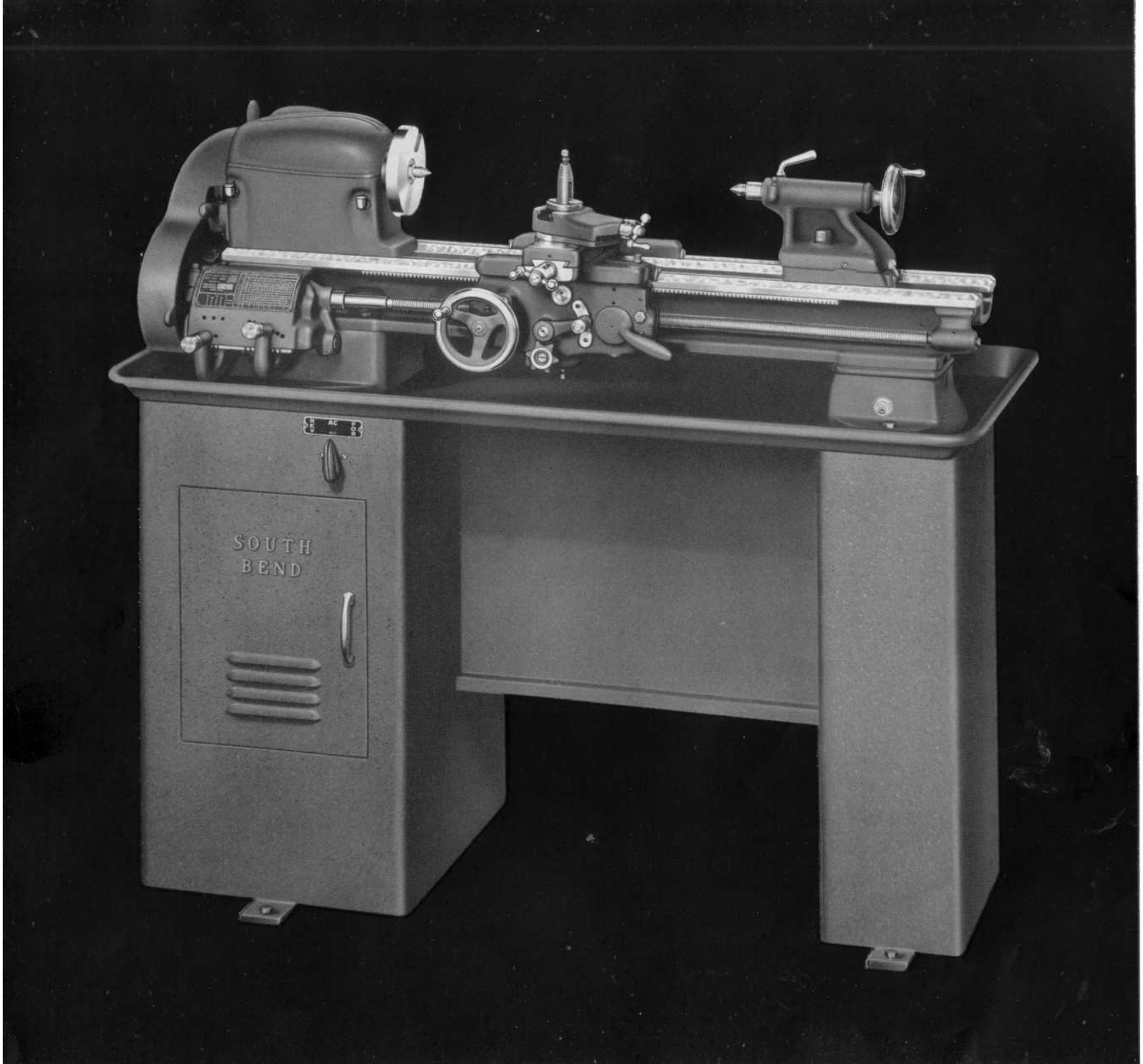
Toolroom Attachments included in the price of lathe consist of: handwheel type draw-in collet chuck attachment (without collets); collet rack; taper attachment; thread dial indicator; thread cutting stop; large face plate; and micrometer carriage stop.

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". Price, f.o.b. South Bend **$692.50**

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 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 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 13/16"



$53.00
F. O. B. FACTORY

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 Model C Lathes 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, these lathes 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 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.

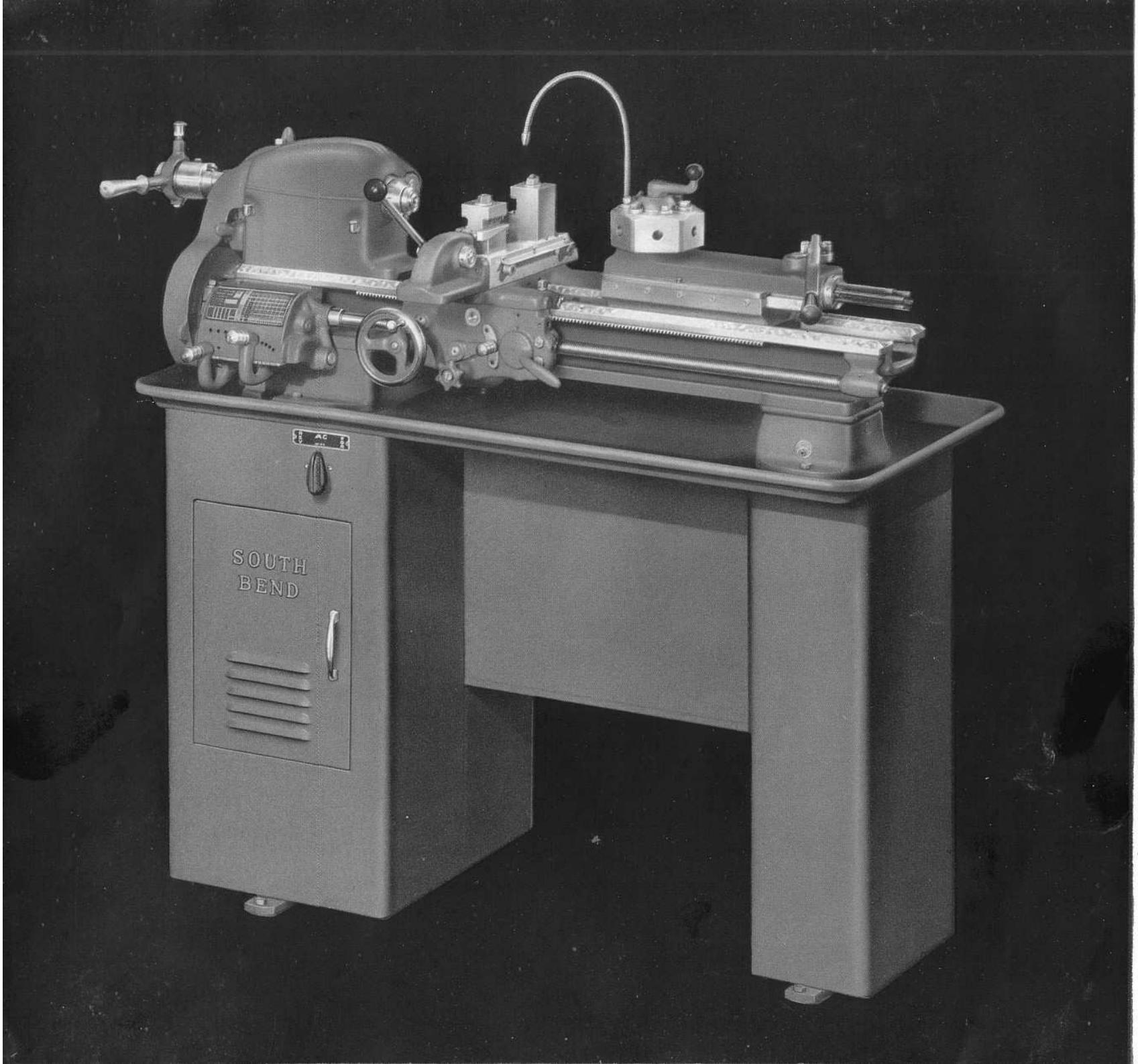
Regular Equipment and drive equipment included in price of lathe consists of: metal column base with chip pan; underneath belt motor drive unit; motor pulley with 3/4" hole; V-belt; flat leather belt and lacing; automatic apron (on Model A and Model B); graduated compound rest; face plate; tool post; 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. See page 30.

Model A—Model B—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	Price f.o.b. South Bend
344-ZN	A	3½	22-in.	570	Tyzer	**$533.00**
377-ZN	B	3½	22-in.	560	Tyxen	**473.00**
315-ZN	C	3½	22-in.	550	Tyweg	**419.00**

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"
Feeds, cross: Model B	.001" to .0046"
Feeds, cross: Model C	Hand operated
Feeds, longitudinal: Model A	.0015" to .0853"
Feeds, longitudinal: Model B	.0021" to .0155"
Feeds, longitudinal: 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
Spindle speeds, approx., high speed range: r.p.m., back-gears engaged	246, 138, 79
Spindle speeds, approx., low speed range: r.p.m., direct belt driven	658, 370, 212
Spindle speeds, approx., low speed range: r.p.m., back-gears engaged	127, 72, 41
Swing over bed and saddle wings	9 1/4"
Swing over saddle with chip guard	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 and 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"



$121300
F. O. B. FACTORY

NO. 920-Z SOUTH BEND
TURRET LATHE

Series 900 Precision Turret Lathes

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

The Series 900 South Bend Turret Lathes are made in three types: Model A, Model B, and Model C. All three models are identical, except for the change gear equipment and the apron which are the same as for the Model A, Model B, and Model C 9-inch Lathes respectively. See pages 4 and 5.

The Model A Turret Lathe has quick change gear box, full automatic apron, handlever bed turret, handlever cross slide, compound rest cross slide, metal column base with built-in oil pan, coolant pump, reservoir, piping, and coolant return assembly.

The Model B Turret Lathe is identical with the Model A Turret Lathe except that it has plain change gear equipment in place of the quick change gear box.

The Model C Turret Lathe is identical with the Model B Turret Lathe except that it has a plain apron with hand operated cross-feeds. Longitudinal feeds are obtained through the half-nuts and lead screw.

The Handlever Bed Turret has automatic indexing and individual stops for each of the six turret faces. See page 29.

The Handlever Cross Slide has front and rear tool blocks. The cross-feed is operated by the handlever, and the longitudinal feed by either the carriage handwheel or the power carriage feed. See page 29.

The Compound Rest Cross Slide, supplied in addition to the Handlever Cross Slide, has power cross-feed and power longitudinal feed on the Model A and Model B Lathes. On the Model C Lathes the cross-feed is hand operated but power longitudinal feeds are available through the lead screws and half-nuts.

Regular Equipment included in price consists of: Underneath Motor Driven Turret Lathe, power feed universal carriage, handlever bed turret, handlever cross slide, compound rest cross slide, oil pan, motor driven coolant pump with motor and switch, coolant reservoir, piping, and coolant return assembly.

Series 900 Precision Turret Lathes

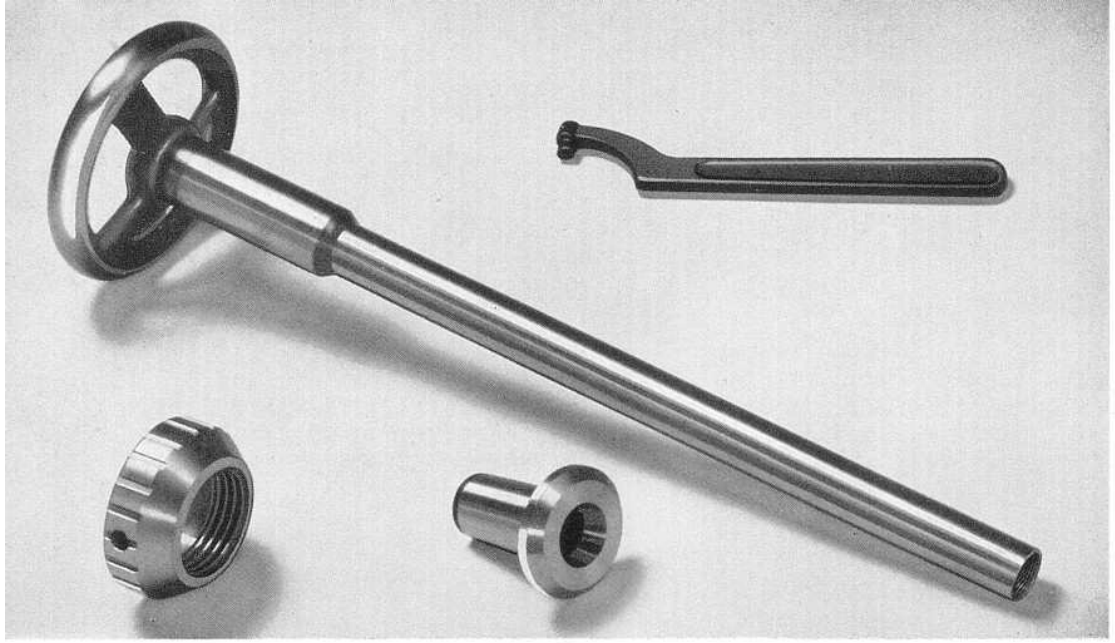
Catalog Number	Model	Length Bed Feet	Approx. Ship. Wt. Crated Pounds	Code Word for Lathe	Price f.o.b. South Bend
920-Z	A	3½	720	Sywok	**$1213.00**
935-Z	B	3½	720	Cwcun	**1153.00**
903-Z	C	3½	720	Pyzot	**1099.00**

NOTE: Tailstock, centers, spindle sleeve, collet chuck, lathe chuck, face plates, thread cutting stop, splash pan, and electrical equipment are not included in price of lathe. See pages 24 to 31.

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"; Model B .001" to .0046"
Feeds, power long. . . . . Model A .0015" to .0853"; Model B .0021" to .0155"; Model C .0021" to .0156"
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; Model B 4 to 160 per inch; Model C 4 to 160 per inch
Tool holder cutter bit for compound rest . 1/4" x 1/4"
Tool holder shank for compound rest . . . 3/8" x 13/16"
Turret face to spindle nose, maximum distance at beginning of indexing movement 20⅝"
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.



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

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. **$25.00**

Handlever Collet Attachment

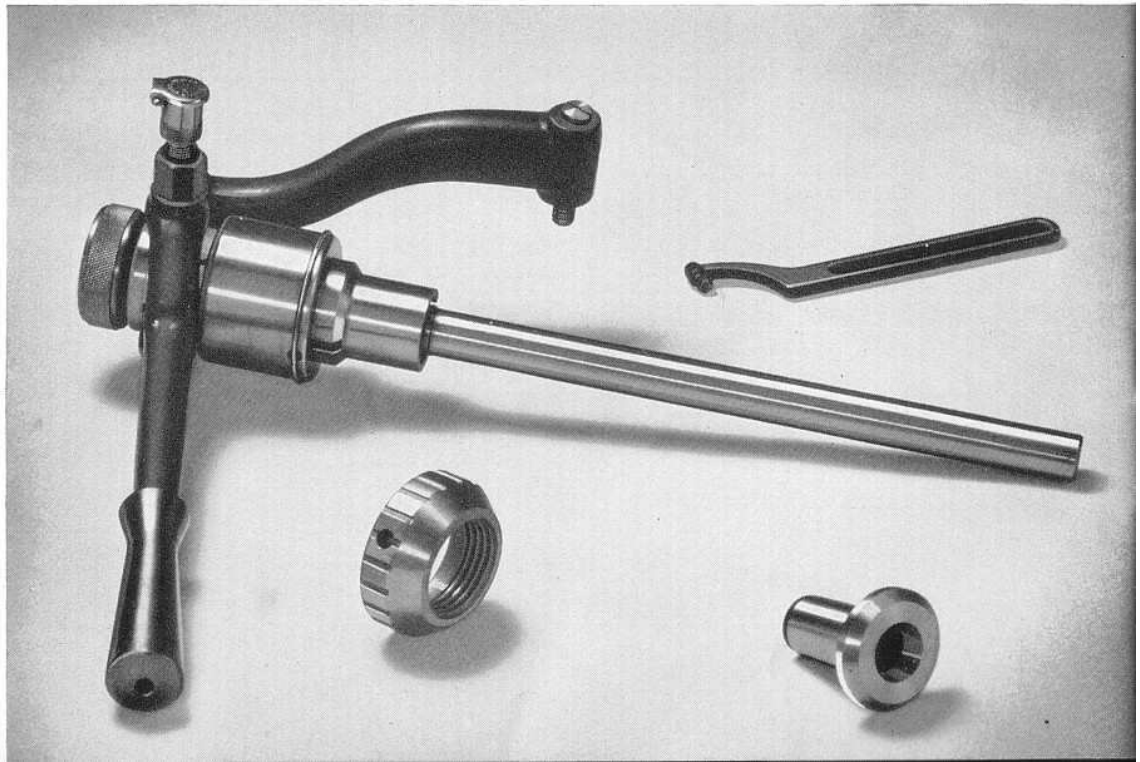
Standard Extra

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. . . . **$85.00**



Collets and Collet Sets

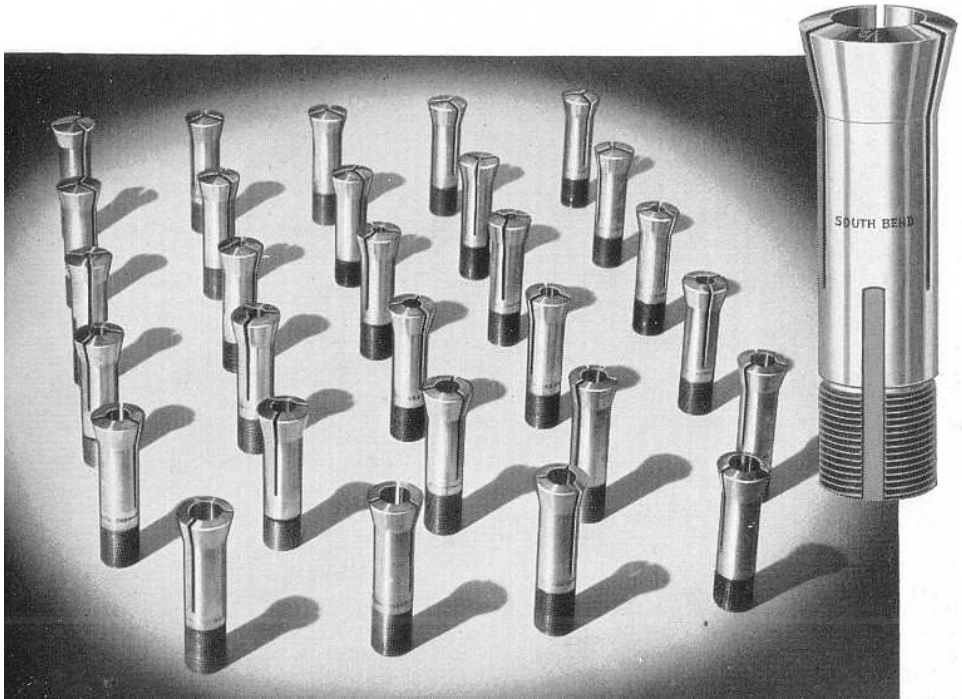
Standard Extras

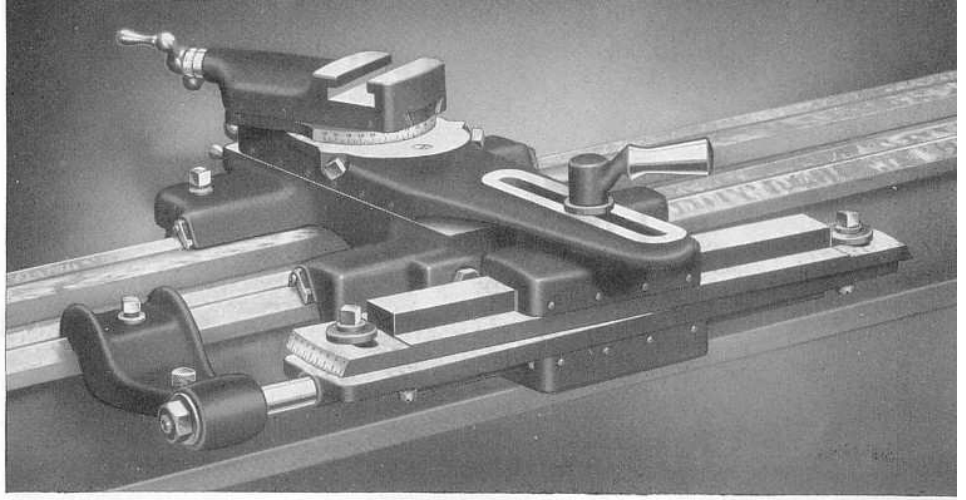
Collets for use with either handwheel or handlever collet attachments can be supplied individually or in sets as listed in the tabulation below. A complete set of collets is especially helpful for toolroom and maintenance work. Often the time saved in getting out a single rush job without having to wait 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	Price f.o.b. South Bend
609-W	1 collet, any size, 1/16" to 1/2" in sixty-fourths	6 ozs.	Catra	**$ 3.75**
2047	Set of 8 collets in 16ths, 1/16" to 1/2" inclusive	4 lbs.	Hzpam	**27.00**
2048	Set of 15 collets in 32nds, 1/16" to 1/2" inclusive	8 lbs.	Hzpeh	**50.00**
2049	Set of 29 collets in 64ths, 1/16" to 1/2" inclusive	12 lbs.	Hzpin	**97.00**
769-W	Decimal collets (.0625" to .500") each	6 ozs.	Dymez	**4.00**
773-W	Metric collets (1.5 mm to 12.5 mm in increments of 1/2 mm) each	6 ozs.	Cwgac	**4.00**





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.

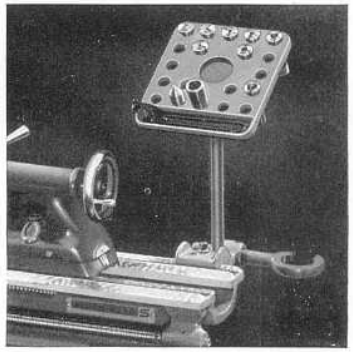
428-W. Code "Hapwo". Ship. wt. 35 lbs. **$75.00**

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. **$12.00**



Electric Grinding Attachment

Electric Grinding Attachment

Standard Extra

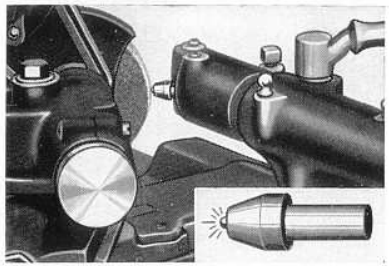
This powerful and efficient Grinding Attachment is recommended for external grinding. The grinding spindle revolves on pre-lubricated, precision ball bearings which are sealed to protect them from damage by dust and grit from the grinding wheel.

Price includes: 1/4 h.p. 1725 r.p.m. motor, ball-bearing grinding spindle, V-belt, belt guard, one 4" x 1/2" 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" **$57.00**

30-W. Grinding Attachment with 1-phase, 60 cycle A.C. 115 V. motor. Code "Sunar" **$45.00**

30-WD. Grinding Attachment with D.C. 110-120 V., or 230-250 V. motor. Code "Kusaz" . . . **$66.00**



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-W. Diamond Dresser. Purchased extra. Code "Kirwe". Shipping weight 1/2 lb. **$6.00**

91-W. Tailstock type holding fixture for diamond dresser. Standard extra. Code "Kibaf". Shipping weight 1 1/2 lbs. **$4.00**

High Speed Grinder

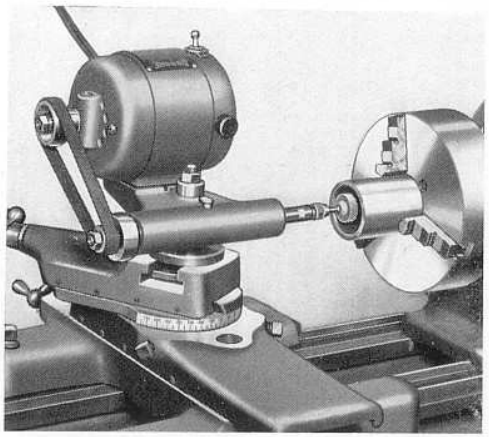
For Internal and External Grinding

Purchased Extra

This is a small grinding attachment for either internal grinding or light external grinding. Internal capacity down to 1/8" in diameter, and depth to 2 1/4". 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 1/4"); balanced chuck for mounting internal grinding wheels; and three mounted wheels for internal grinding (1/4" x 1/4", 1/2" x 1/4", and 3/4" x 1/4"). Shipping weight 10 lbs.



1204-W. Grinder for 115-volt A.C. or D.C. Code "Giboz" **$32.00**

1207-W. Grinder for 230-volt A.C. or D.C. Code "Gesep" **$32.00**

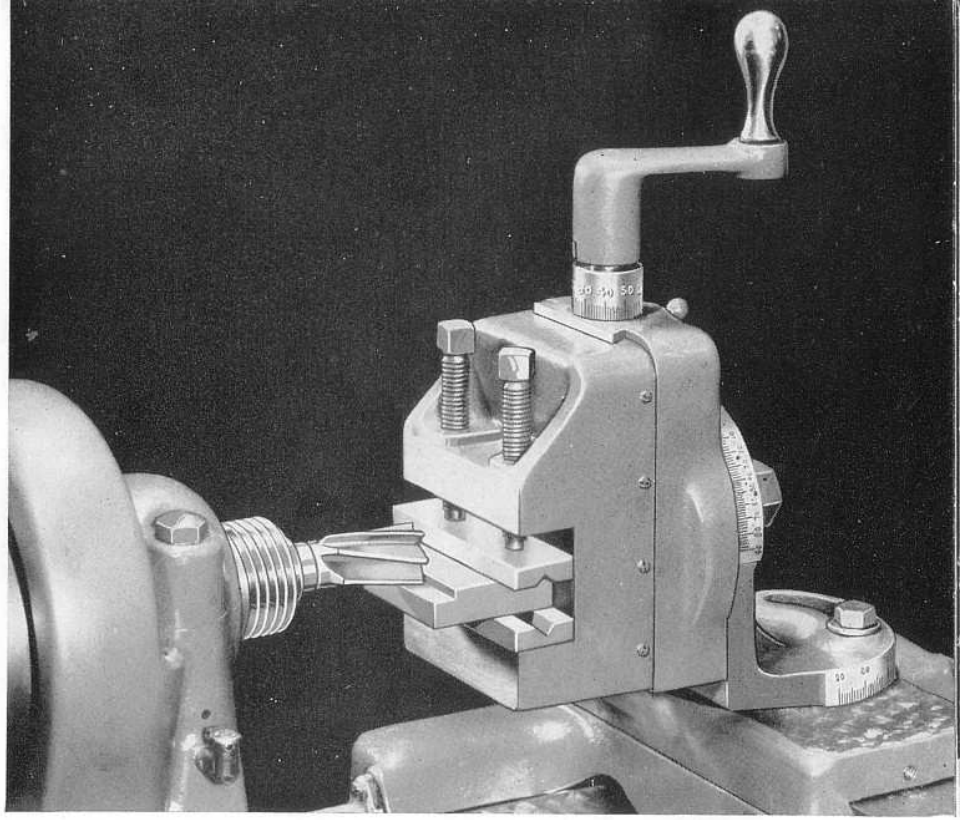
Milling and Keyway Cutting Attachment

Standard Extras

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, 1 3/16" 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.

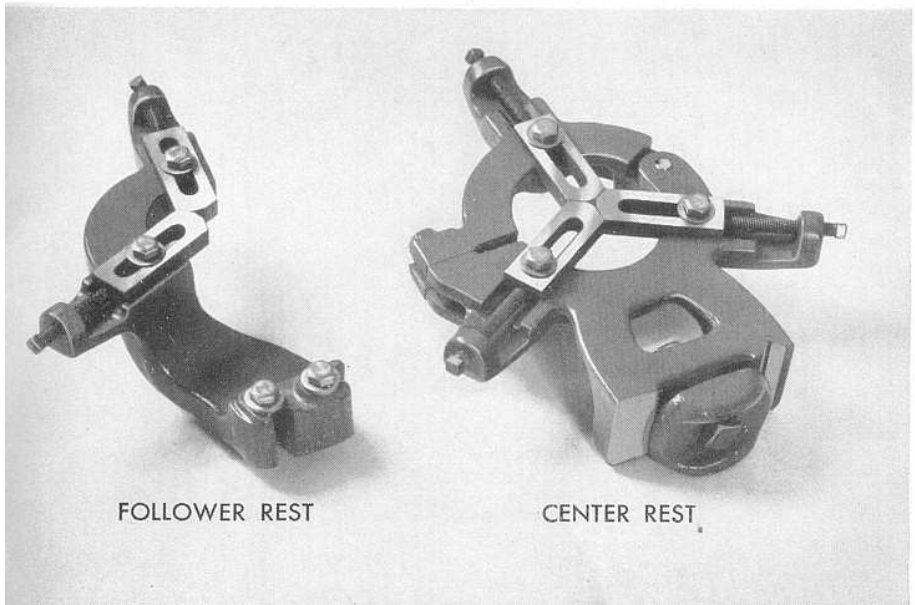
9-W. Code "Vabif". Shipping weight 13 lbs. **$35.00**



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 5 lbs. **$6.00**



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. **$6.00**

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. **$4.00**

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. **$6.00**

Ⓑ **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. . . . **$3.00**

2935. Chuck plate threaded to fit spindle nose of lathe and fitted to back of chuck. Code "Sywub" **$5.00**

Ⓒ **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. **$3.00**

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

67-W. Code "Cegpy". Shipping weight ½ lb. **$2.50**

Ⓔ **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. **$6.00**

Ⓕ **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. **$13.00**

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

727-W. Code "Donav". Ship. wt. 1¼ lbs. **$2.50**

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

728-W. Code "Fanid". Ship. wt. 10 ozs. **$2.50**

Ⓘ 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. **$2.25**

Ⓙ **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. **$2.00**

Ⓚ **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. **$7.50**

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

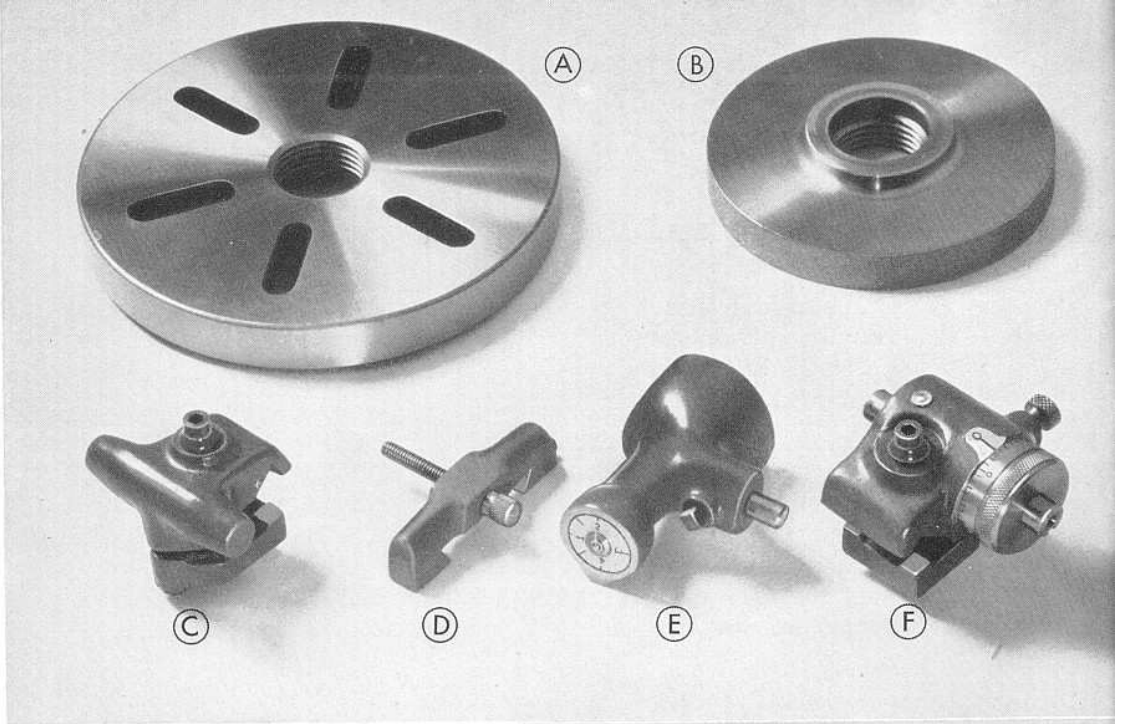
731-W. Code "Kalaf". Ship. wt. 1¼ lbs. **$3.00**

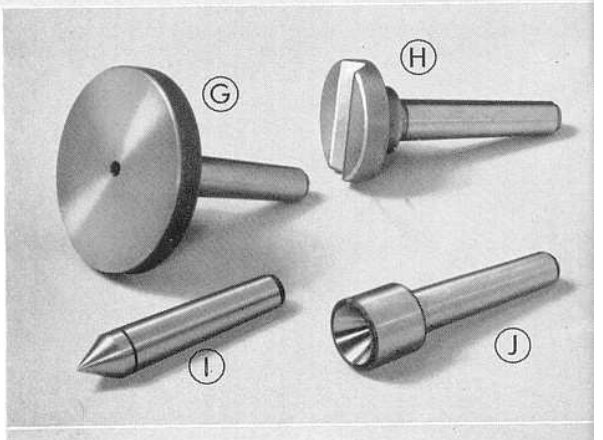
Ⓜ **SPUR CENTER**—For use in headstock spindle of lathe.

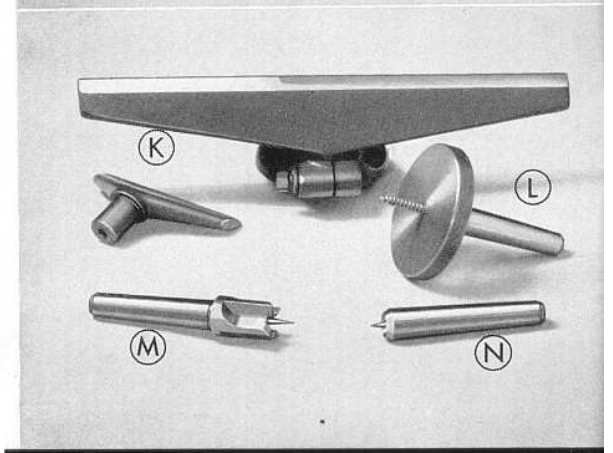
732-W. Code "Ikdol". Ship. wt. ½ lb. **$3.00**

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

733-W. Code "Jalak". Ship. wt. ½ lb. **$2.00**







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. . . **$450.00**

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. . . **$95.00**

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. **$85.00**

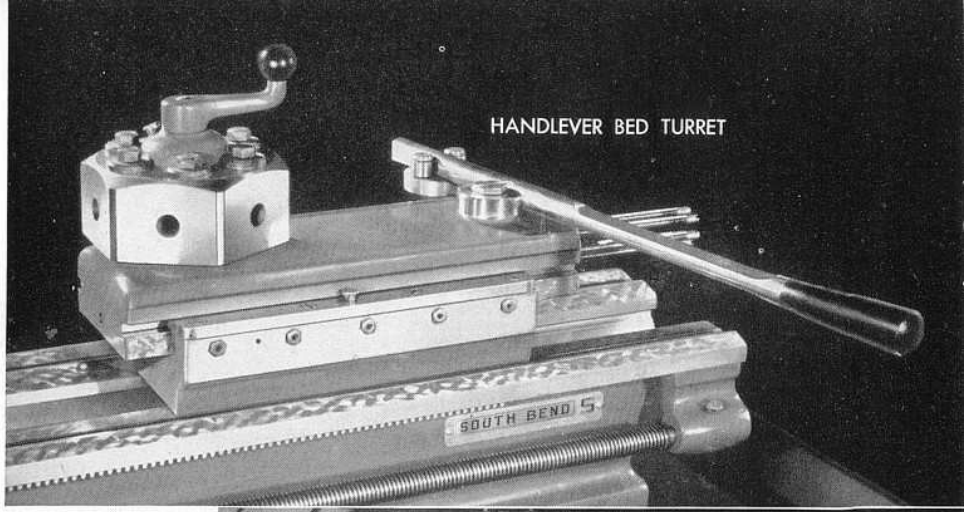
40-NC SQUARE TURRET—For use on the base of the compound rest cross slide. It cannot be used on the double tool cross slide.

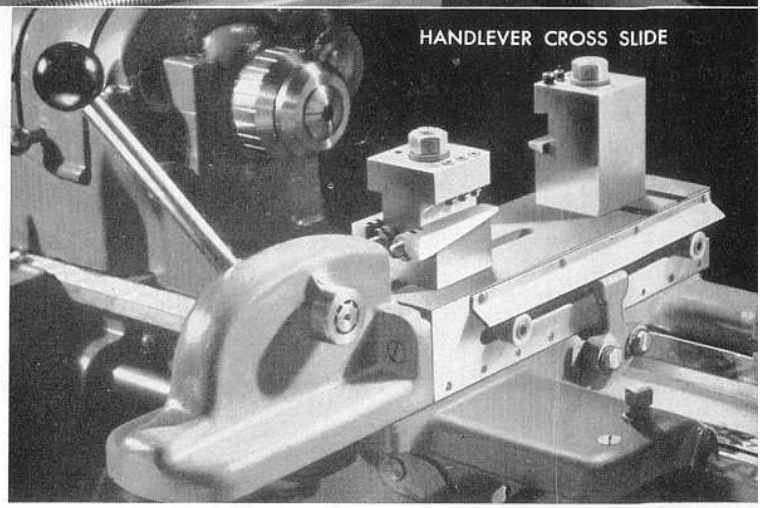
Four cutting tools ⅜" square can be mounted in the turret tool block which is 3" square. The turret indexes accurately, permitting each tool to be used in sequence for rough turning, finish turning, facing, boring, cutting-off, or other operations as required. A quick acting cam operated binder locks 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. **$85.00**

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.

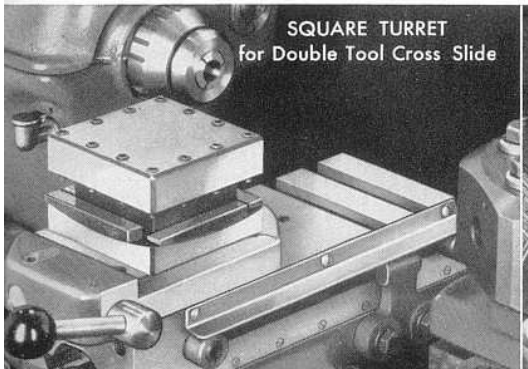
This tailstock is similar to the regular tailstock, except for the spindle construction. The tailstock top may be set over for taper turning. The spindle may be operated by either the handlever or by turning the tailstock handwheel, and can be locked in position for turning operations.

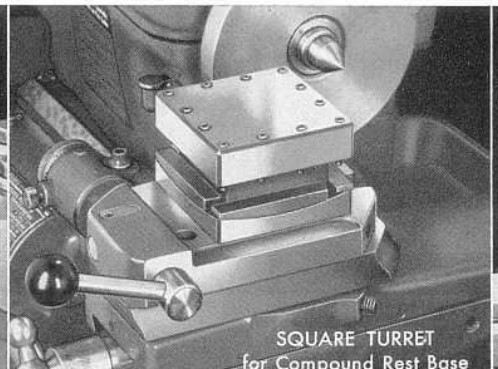


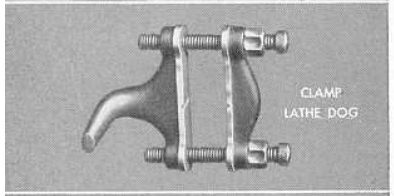


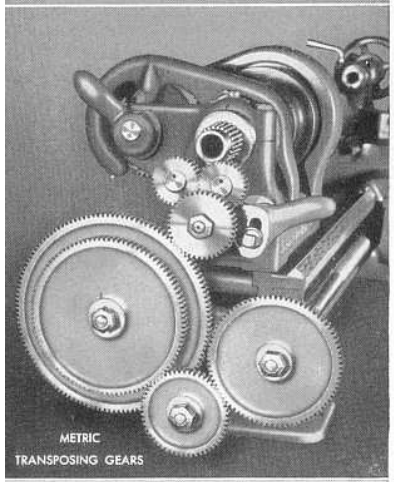
519-W. Handlever Tailstock, when ordered with lathe, in lieu of regular tailstock. Code word "Jibet" **$60.00**

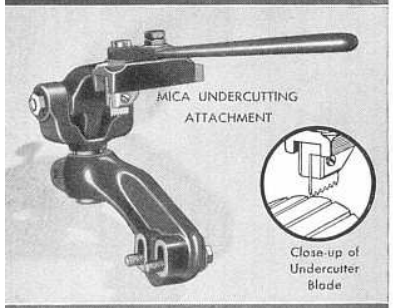
1197-W. Handlever Tailstock, in addition to regular tailstock. Code "Hitid". Ship. wt. 23 lbs. . . . **$80.00**

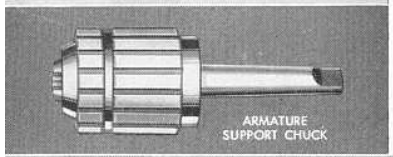


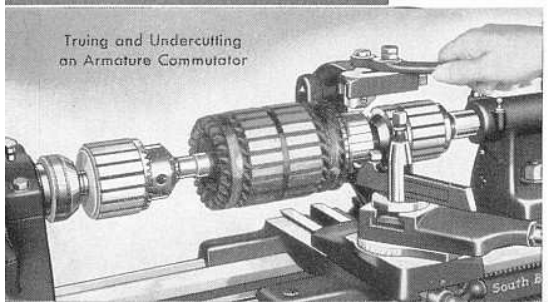












Accessories

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 and wrench. Shipping weights range from ½ lb. to 2¾ lbs. each, depending on size.

Cap. In.	Standard Lathe Dog			Safety Lathe Dog		
	Cat. No.	Code	Price	Cat. No.	Code	Price
⅜	**1-MJ**	Kamuk	**$0.50**	**1-JH**	Tacey	**$0.60**
½	**2-MJ**	Kanad	**.55**	**2-JH**	Tacic	**.65**
¾	**4-MJ**	Kaneh	**.65**	**4-JH**	Tadah	**.75**
1	**6-MJ**	Kanil	**.75**	**6-JH**	Tadip	**.85**
1¼	**8-MJ**	Kanar	**.85**	**8-JH**	Tebac	**.95**
1½	**10-MJ**	Kanux	**1.00**	**10-JH**	Tebeg	**1.15**

CLAMP LATHE DOG—*Purchased Extra*—Made of heavy drop-forged steel, carefully machined and hardened. Practical for holding round, hexagonal or rectangular work. Maximum capacity 1⅝″ x 1¾″.

160. Code "Laqat". Ship. wt. 1¼ lbs. **$2.10**

METRIC TRANSPOSING GEARS—*Standard Extras*—For cutting metric screw threads ranging from 6 mm pitch to 0.20 mm pitch. Must be ordered with lathe. Shipping weight 8 lbs.

1759-W. Code "Kazaj". For Model B or Model C 9-inch Lathe **$5.00**

1955-W. Code "Lupal". For Model A 9-inch Lathe only **$10.00**

MICA UNDERCUTTING ATTACHMENT—*Standard Extra*—Attaches to saddle of lathe as shown below for undercutting armature commutators. Price includes one cutter blade .020″ thick.

673-W. Code "Meboj". Ship. wt. 9 lbs. **$15.00**

693-N. Code "Ceniz". Extra cutter blade .020″, or .015″ thick. Ship. wt. ½ lb. State size **$0.15**

ARMATURE SUPPORT CHUCK—*Purchased Extra*—Has three brass jaws in which armature shaft revolves. Takes shafts ⅜″ to ¾″ diameter. Price includes arbor.

340-W. Code "Katek". Shipping weight 4 lbs. **$10.00**

Motors and Controls

Purchased Extras

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.

Motors and controls will be fitted at the factory without additional charge when ordered with the lathe. When customers or distributors ship motors or controls to the factory to be fitted to the lathe, no extra charge is made unless special mounting brackets, special wiring or other special work is required.

We recommend that all motors and controls be ordered with the lathe or shipped to the factory where we have facilities for installing and are prepared to test the completed job.

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	Price
3225	½	1500 or 1800	A.C.	3	50/60	550	55	Zwrec	**$25.00**
3226	½	1500 or 1800	A.C.	3	50/60	440	55	Zwsek	**25.00**
3227	½	1500 or 1800	A.C.	3	50/60	220	55	Zwteb	**25.00**
3228	½	1800	A.C.	1	60	115	59	Zwtus	**29.00***
3229	½	1800	A.C.	1	60	230	60	Zxhos	**29.00**
3230	½	1500	A.C.	1	50	230	60	Zxsuh	**29.00**
3231	½	1800	D.C.	...	...	115	73	Zxsow	**33.00**
3232	½	1800	D.C.	...	...	230	73	Zxtoh	**33.00**
3250	¼	1500 or 1800	A.C.	3	50/60	220	30	Zysic	**16.00**
3251	¼	1800	A.C.	1	60	115	37	Zymoh	**12.00*†**
3252	¼	1800	A.C.	1	60	115	40	Zysom	**16.00***
3253	¼	1800	A.C.	1	60	230	41	Zytam	**16.00**
3254	¼	1800	D.C.	...	...	110/120	36	Zytoc	**18.00**

*Equipped with 6-ft. extension cord and plug.
†This is a start-stop reversing motor. All other motors listed are instant reversing.

CONTROLS FOR OPERATING ABOVE MOTORS

789. Code "Atwig". Drum type reversing control switch for 115 volt A.C. single-phase motors with Horizontal Motor Drive. Shipping weight 2 lbs. **$2.00**

790. Code "Zahsa". Drum type reversing control switch for use with any of the motors listed above. Ship. wt. 2¼ lbs. **$6.00**

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. **$30.00**

4206. Regular Duty 6" Independent Lathe Chuck. Code "Padkn". Shipping weight 18 lbs. **51.00**

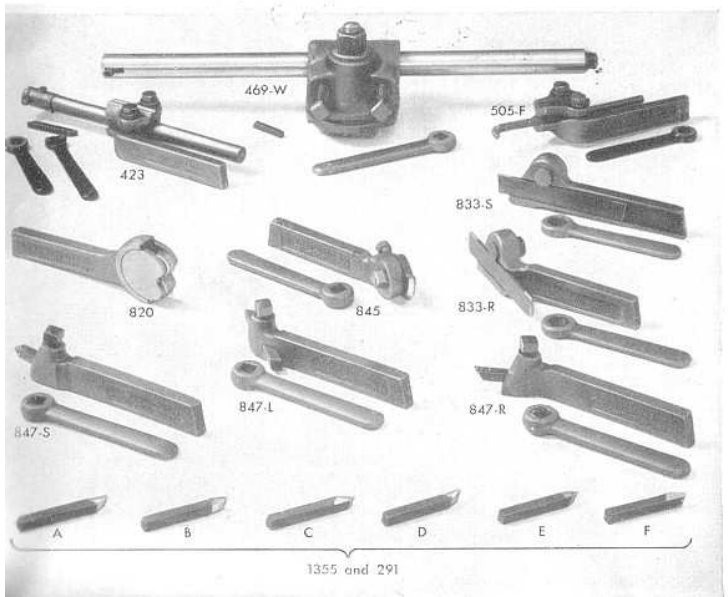
UNIVERSAL LATHE CHUCKS—*Purchased Extras*—Two sets of jaws are furnished with each Universal Chuck, one set for chucking internally and the other for chucking externally. Chuck body is ground and jaws are hardened. Chuck jaws are moved simultaneously by a scroll, and work is automatically centered. Prices 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. **$41.00**

3505. Regular Duty 5" Universal Lathe Chuck. Code "Cauco". Shipping weight 16 lbs. **57.00**

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

Capacity Inches	Ship. Wt. Lbs.	Almond Chucks			Jacobs Chucks		
		Cat. No.	Code	Price Each	Cat. No.	Code	Price Each
0 to 3/8	1 7/8	**219**	Acpen	**$4.00**	**1200**	Cleve	**$4.40**
0 to 1/2	2 1/2	**220**	Acpip	**5.50**	**1201**	Wauko	**6.00**
3/16 to 3/4	3 3/4	**327**	Rulid	**7.25**	**1202**	Faloa	**9.60**



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. **$0.75**

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	Price Each
907-W	1/8 to 5/8	3 1/8	3¾	Robal	**$12.75**
925-W	3/16 to ¾	3¾	4¼	Rodna	**15.30**

TURNING TOOL HOLDERS—*Purchased Extras*—Made of drop-forged steel, heat-treated. Shank is ⅜" x 15/16" 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" **$1.25**
847-R. Right-Hand Tool Holder. Code "Acurt" **1.25**
847-L. Left-Hand Tool Holder. Code "Acvet" **1.25**

CUTTING-OFF TOOL HOLDERS—*Purchased Extras*—Made of drop-forged steel, heat-treated. Shank is ⅜" x 15/16" and takes 3/32" x 19/32" 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" **$1.50**
876-WS. Extra cutter blade for above. Code "Nufuc". Shipping weight 3 ozs. Each **0.60**
833-R. Right-Hand Cutting-off Tool. Code "Cemso" . . . **1.50**
876-WR. Extra cutter blade for above. Code "Nudov". Shipping weight 3 ozs. Each **0.60**

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.

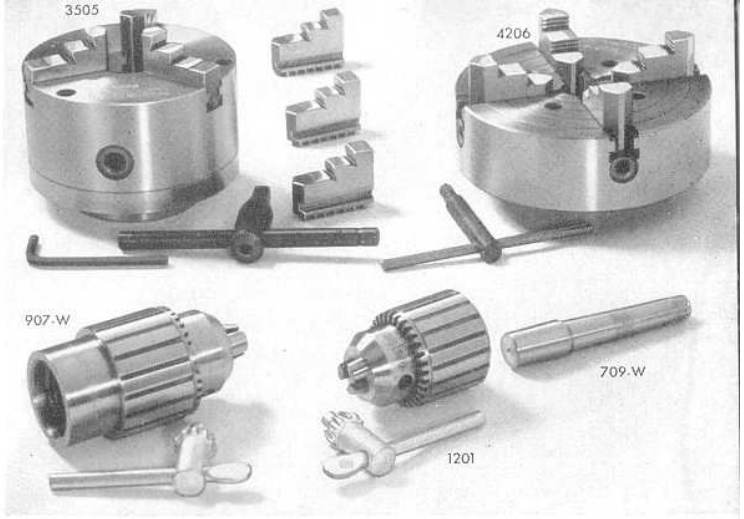
820. Code "Domta". Shipping weight 1¼ lbs. **$3.00**
817. Extra knurls, straight or diamond, fine, medium, or coarse. Code "Digmo". Pair, shipping weight ¼ lb. **1.00**

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. **$2.50**
814. Extra cutter, any style. Code "Adurp". Shipping weight ¼ lb. **1.50**

BORING TOOL HOLDER STYLE "B"—*Purchased Extra*—Made of drop-forged steel, heat-treated. Shank is 5/16" 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 3/16" square cutter bits.

423. Code "Hayun". Shipping weight 1½ lbs. **$4.90**



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. **$3.00**

SLEEVE BORING BAR—*Purchased Extra*—Same as supplied with Style "B" boring tool holder. Size: ½" x 7⅝". Price includes two 3/16" square cutter bits.

344-W. Code "Cerib". Shipping weight 2 lbs. **$3.00**

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, 3/16" square cutter bit, and wrench.

469-W. Code "Hamon". Shipping weight 5 lbs. **$12.50**

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:

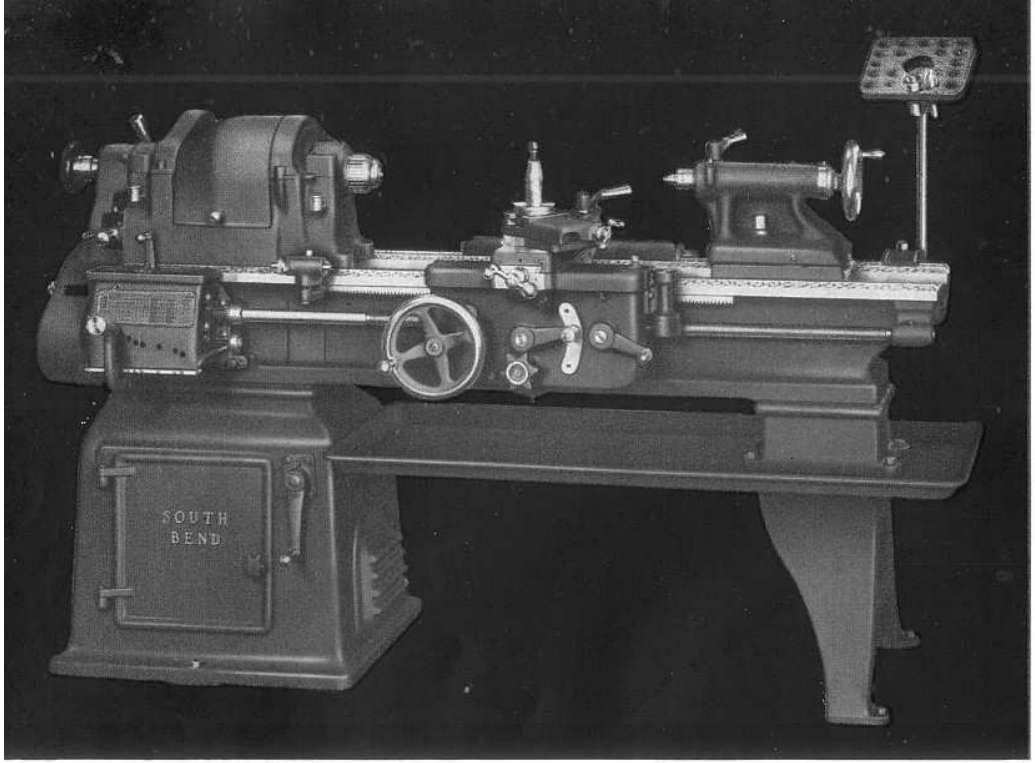
A L. H. Turning	B Round Nose	C R. H. Turning	D L. H. Side	E Threading	F R. H. Side

1355. Code "Adwap". Ship. wt. 2 ozs. Each **$0.25**
291. Code "Adwos". Set of six, shapes A to F as shown. Shipping weight 10 ozs. **1.40**

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	Price Each
1460	¼ x ¼ x 2	2 ozs.	Adwir	**$0.15**
1067-W	3/16 x 5/16 x 1	2 ozs.	Komac	**.10**
454-W	3/16 x 5/16 x 1½	2 ozs.	Hopoc	**.12**

1629. Code "Cixas". Set of 6 unground cutter bits, size ¼ x ¼ x 2". Ship. wt. 10 ozs. Price per set. **$0.80**



South Bend 16-inch Toolroom Underneath Motor Driven Lathe

Specifications of Toolroom Lathes

Size of Lathe	16-inch	14½-inch	13-inch
Centers, Morse taper	No. 3	No. 3	No. 3
Collet capacity, maximum	1″	¾″	11/16″
Compound rest top, angular hand feed	3¾″	3⅛″	3⅛″
Cross slide travel	10½″	10″	8⅛″
Feeds, cross (forty-eight)	.0006″ to .0312″	.0006″ to .0312″	.0006″ to .0312″
Feeds, longitudinal (forty-eight)	.0015″ to .0841″	.0015″ to .0841″	.0015″ to .0841″
Headstock spindle hole	1⅜″	1⅛″	1″
Motor, size required	1½ h.p.	1½ h.p.	1 h.p.
Spindle speeds (eight)	21 to 725 r.p.m.	27 to 800 r.p.m.	34 to 875 r.p.m.
Swing over bed and saddle wings	16¼″	14⅝″	13⅛″
Swing over saddle cross slide	9⅝″	8 15/16″	8″
Tailstock spindle travel	5¾″	5¼″	4¼″
Tailstock top set over for taper turning	1″	15/16″	15/16″
Thread cutting range—48 pitches R.H. or L.H.	4 to 224 per inch	4 to 224 per inch	4 to 224 per inch
Tool holder shank	⅝″ x 1⅜″	⅝″ x 1⅜″	½″ x 1⅛″

Complete catalog on request—See page 35

SOUTH BEND
Precision LATHES

16″, 14½″, and 13″ Toolroom Precision Lathes

Underneath Motor Drive—Back-Geared

The South Bend Toolroom Lathe with underneath belt motor drive and full quick change gear equipment is the result of thirty-eight years of experience in building fine lathes. The workmanship and materials entering into its construction are the best that can be obtained, and the highest standards of accuracy are maintained throughout its manufacture.

The Underneath Motor Drive is fully enclosed and 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.

Toolroom Attachments included in price of 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: V-belts; flat leather belt; large and small face plates; forged steel heat-treated 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 price of lathe.

Toolroom Underneath Motor Driven Lathes

Catalog Number	Swing Over Bed Inches	Length of Bed Feet	Distance Between Centers Inches	Approx. Ship. Wt. Crated Pounds	Code Word	Price f.o.b. Factory
16-inch Toolroom Underneath Belt Motor Driven Lathes						
8117-C	16¼	6	33½	2525	Bzwit	**$1603**
8117-D	16¼	7	45½	2605	Bzwom	**1638**
8117-E	16¼	8	57½	2685	Bzwuh	**1673**
14½-inch Toolroom Underneath Belt Motor Driven Lathes						
8183-B	14⅝	5	24½	2180	Cwcox	**$1410**
8183-C	14⅝	6	36½	2255	Cwcak	**1444**
8183-D	14⅝	7	48½	2330	Cwcen	**1478**
8183-E	14⅝	8	60½	2405	Cwcis	**1512**
13-inch Toolroom Underneath Belt Motor Driven Lathes						
8113-B	13⅛	5	28	1665	Gykab	**$1202**
8113-C	13⅛	6	40	1715	Gyken	**1232**
8113-D	13⅛	7	52	1770	Gykic	**1263**

16", 14½", and 13" Quick Change Gear Lathes

Underneath Motor Drive—Back-Geared

The South Bend Quick Change Gear Underneath Motor Driven Lathe is popular for both production operations and toolroom work. The full quick change gear mechanism provides a wide range of screw threads, power cross-feeds, and power turning feeds.

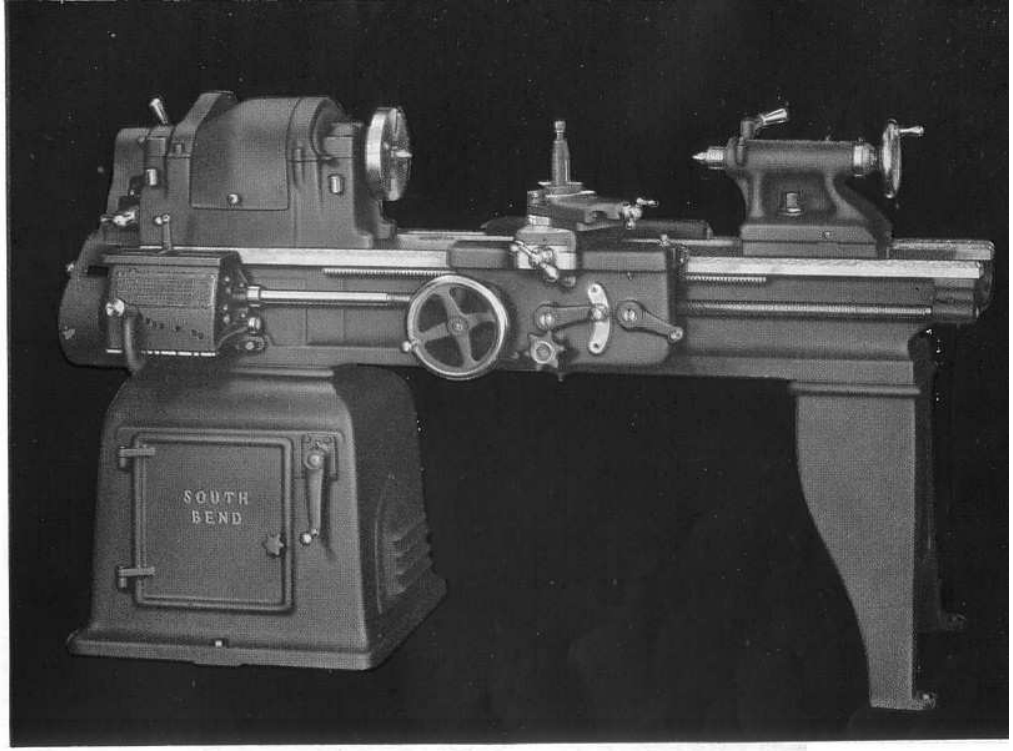
The Underneath Motor Drive is entirely self-contained and fully enclosed. It provides an unusually wide range of spindle speeds. A precision belt tension adjustment is provided. The belt drive to the spindle is silent in operation and develops smooth, steady power entirely free from gear vibration.

Standard Extras and Purchased Extras for these lathes are shown in the catalog described on page 35. 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: V-belts; flat leather belt; large and small face plates; forged steel heat-treated tool post; adjustable thread cutting stop; 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 the lathe.

Quick Change Gear Underneath Motor Driven Lathes

Catalog Number	Swing Over Bed Inches	Length of Bed Feet	Distance Between Centers Inches	Approx. Ship. Wt. Crated Pounds	Code Word	Price f.o.b. Factory
16-inch Quick Change Gear Lathes						
117-C	16¼	6	33½	2300	Bzwac	**$1251**
117-D	16¼	7	45½	2380	Bzwek	**1281**
117-E	16¼	8	57½	2460	Bzwin	**1311**
117-G	16¼	10	81½	2620	Bzwor	**1381**
117-H	16¼	12	105½	2850	Bzwus	**1471**
14½-inch Quick Change Gear Lathes						
183-B	14⅝	5	24½	1995	Cwbas	**$1095**
183-C	14⅝	6	36½	2070	Cwbek	**1125**
183-D	14⅝	7	48½	2145	Cwbim	**1155**
183-E	14⅝	8	60½	2225	Cwbox	**1185**
183-G	14⅝	10	84½	2390	Cwbug	**1255**
13-inch Quick Change Gear Lathes						
113-A	13⅛	4	16	1460	Gygac	**$881**
113-B	13⅛	5	28	1510	Gygem	**909**
113-C	13⅛	6	40	1560	Gygis	**937**
113-D	13⅛	7	52	1615	Gygot	**965**



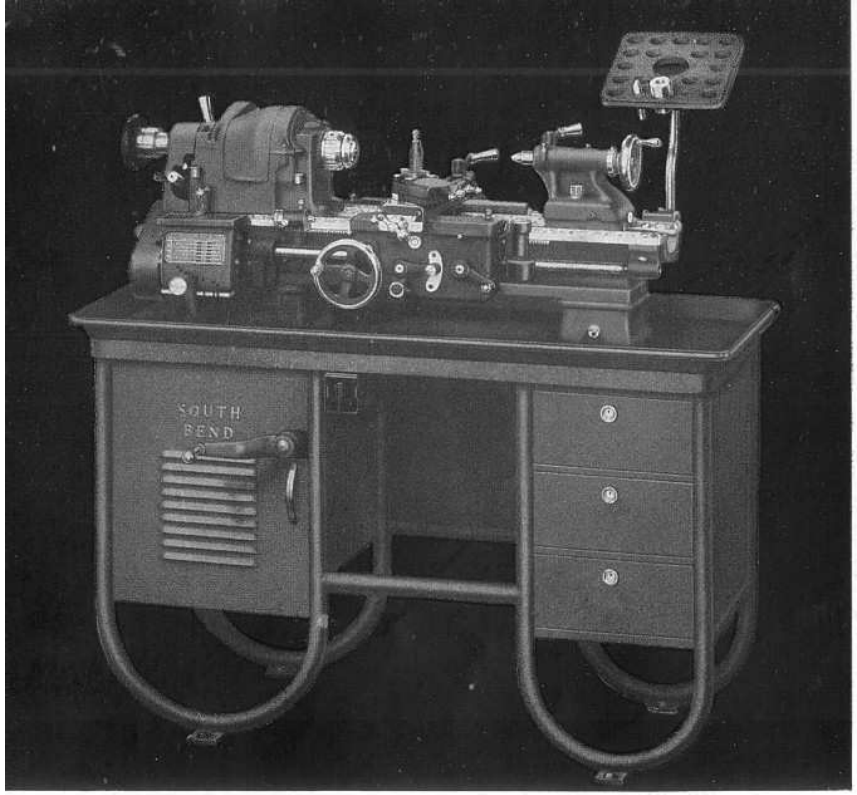
South Bend 16-inch Quick Change Gear Underneath Motor Driven Lathe

Specifications of Quick Change Gear Lathes

Size of Lathe	16-inch	14½-inch	13-inch
Centers, Morse taper	No. 3	No. 3	No. 3
Collet capacity, maximum	1"	¾"	11/16"
Compound rest top, angular hand feed	3¾"	3⅛"	3⅛"
Cross slide travel	10½"	10"	8⅛"
Feeds, cross (forty-eight)	.0006" to .0312"	.0006" to .0312"	.0006" to .0312"
Feeds, longitudinal (forty-eight)	.0015" to .0841"	.0015" to .0841"	.0015" to .0841"
Headstock spindle hole	1⅜"	1⅛"	1"
Motor, size required	1½ h.p.	1½ h.p.	1 h.p.
Spindle speeds (eight)	21 to 725 r.p.m.	27 to 800 r.p.m.	34 to 875 r.p.m.
Swing over bed and saddle wings	16¼"	14⅝"	13⅛"
Swing over saddle, chip guard removed	11⅛"	10¼"	8¾"
Swing over saddle with chip guard	9⅝"	8¾"	7¾"
Tailstock spindle travel	5¾"	5¼"	4¼"
Tailstock top set over for taper turning	1"	15/16"	15/16"
Thread cutting range—48 pitches			
R.H. or L.H.	4 to 224 per inch	4 to 224 per inch	4 to 224 per inch
Tool holder shank	⅝" x 1⅜"	⅝" x 1⅜"	½" x 1⅛"

Complete catalog on request—See page 35

SOUTH BEND
Precision **LATHES**



10-inch Toolroom Underneath Motor Driven Bench Lathe

Specifications of 10-inch Swing Lathes

Type of Lathe	10″—1″ Collet Lathe	10-inch Regular Lathe
Centers, Morse taper	No. 2	No. 2
Collet capacity, maximum	1″	11/16″
Compound rest top, angular hand feed	2″	2″
Cross slide travel	5 7/8″	5 7/8″
Feeds, cross (forty-eight)	.0006″ to .0309″	.0006″ to .0309″
Feeds, longitudinal (forty-eight)	.0015″ to .0836″	.0015″ to .0836″
Headstock spindle hole	1 3/8″	1″
Motor, size required	3/4 h.p.	1/2 h.p.
Spindle speeds, r.p.m.	50 to 1357 r.p.m.	50 to 700 r.p.m.
Swing over bed and saddle wings	10 1/8″	10 1/8″
Swing over saddle cross slide	5 3/4″	5 3/4″
Tailstock spindle travel	2 1/8″	2 1/8″
Tailstock top set over for taper turning	11/16″	11/16″
Thread cutting range—48 pitches R.H. or L.H.	4 to 224 per inch	4 to 224 per inch
Tool holder shank	3/8″ x 13/16″	3/8″ x 13/16″

Complete catalog on request—See page 35

SOUTH BEND LATHE WORKS

SOUTH BEND
Precision **LATHES**

10-inch Swing Precision Lathes

10-inch—1″ Collet Capacity and 10-inch Regular

10-inch Swing South Bend Precision Lathes are capable of the most exacting operations on both tool and production work. Two types of headstock are supplied: "Regular", which provides a maximum collet capacity of 11/16-inch, and "1″ Collet", which provides a maximum collet capacity of 1-inch.

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.

Attachments, Chucks, and Tools for these lathes are shown in catalog described on page 35. These attachments and accessories greatly increase the usefulness of the lathes. Most of the attachments may be purchased either with the lathe or later.

Lathe Equipment included in price consists of: V-belt; flat leather belt; large and small face plates; tool post; thread cutting stop; spindle centers; spindle sleeve; wrenches; gear box; installation plan; and book "How to Run a Lathe". Toolroom Lathes also include: handwheel type draw-in collet chuck attachment (without collets); collet rack; telescopic taper attachment; thread dial indicator; and micrometer carriage stop. Motor and control are not included in price of lathe. Bench is not included in price of bench lathe.

10-inch Swing South Bend Precision Lathes

Swing Over Bed Inches	Length of Bed Feet	Distance Between Centers Inches	Approx. Ship. Wt. Crated Pounds	10″-1″ Collet Lathes			10″ Regular Lathes 11/16″ Max. Collet Capacity		
				Catalog Number	Code Word	Price f.o.b. Factory	Catalog Number	Code Word	Price f.o.b. Factory
Quick Change Gear Bench Lathes									
10 1/8	3	15 3/4	850	**187-YN**	Jytah	**$684**	**199-YN**	Kwdam	**$558**
10 1/8	3 1/2	20 3/4	880	**187-ZN**	Jyten	**696**	**199-ZN**	Kwdec	**570**
10 1/8	4	26 3/4	950	**187-AN**	Jytis	**708**	**199-AN**	Kwdir	**582**
10 1/8	4 1/2	33 3/4	980	**187-RN**	Jytob	**725**	**199-RN**	Kwdox	**599**
Quick Change Gear Lathes With Floor Legs									
10 1/8	3	15 3/4	810	**187-Y**	Jysac	**$694**	**199-Y**	Kwbex	**$568**
10 1/8	3 1/2	20 3/4	835	**187-Z**	Jyseh	**706**	**199-Z**	Kwbic	**580**
10 1/8	4	26 3/4	860	**187-A**	Jysim	**718**	**199-A**	Kwbon	**592**
10 1/8	4 1/2	33 3/4	885	**187-R**	Jysor	**735**	**199-R**	Kwbur	**609**
Toolroom Bench Lathes									
10 1/8	3	15 3/4	960	**8187-YN**	Jywak	**$923**	**8199-YN**	Kwgac	**$787**
10 1/8	3 1/2	20 3/4	990	**8187-ZN**	Jywec	**935**	**8199-ZN**	Kwgek	**799**
10 1/8	4	26 3/4	1060	**8187-AN**	Jywin	**947**	**8199-AN**	Kwgin	**811**
Toolroom Lathes With Floor Legs									
10 1/8	3	15 3/4	935	**8187-Y**	Jyrab	**$954**	**8199-Y**	Kwcak	**$818**
10 1/8	3 1/2	20 3/4	960	**8187-Z**	Jyrek	**967**	**8199-Z**	Kwces	**831**
10 1/8	4	26 3/4	985	**8187-A**	Jyric	**980**	**8199-A**	Kwcix	**844**

Series 1000 Precision Turret Lathe

10-inch Swing Over Bed—1-inch Maximum Collet Capacity

The No. 1001-Z South Bend Precision Turret Lathe has underneath motor drive and back-geared headstock which provide a series of twelve spindle speeds ranging from 50 to 1357 r.p.m. The handlever operated turret has 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.

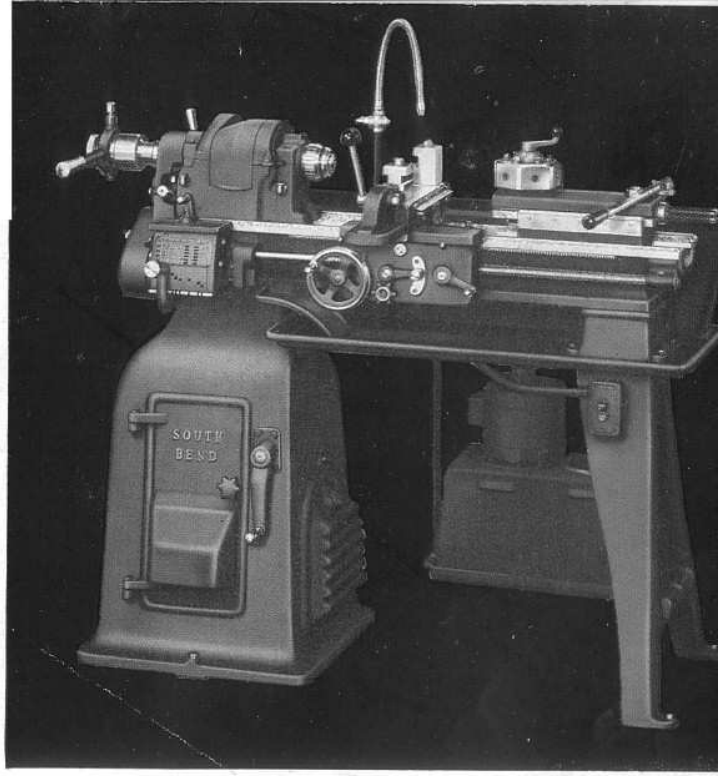
The Handlever Cross Slide has front and rear tool blocks for turning, forming, facing, and cutting-off operations. The cross-feed is operated by a handlever, and the longitudinal feed by either the carriage handwheel or the power carriage feed.

The Compound Rest Cross Slide (not illustrated but supplied in addition to the Handlever Cross Slide) has power cross-feed and power longitudinal feed.

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.

Catalog Number 1001-Z Underneath Motor Driven Quick Change Gear Floor Leg Turret Lathe with 3½ ft. bed, power feed universal carriage, handlever bed turret, handlever cross slide, compound rest cross slide, oil pan, motor driven coolant pump with motor and switch, coolant reservoir, piping, and coolant return assembly. Approximate shipping weight crated, 960 lbs. Code word "Lytek". Price f.o.b. factory..... **$1448**

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

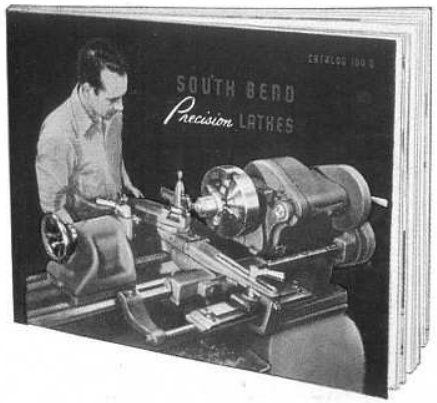


No. 1001-Z Underneath Motor Drive Turret Lathe

General Catalog 100-D

All sizes and types of South Bend Lathes are clearly illustrated in color and described in General Catalog No. 100-D. Engine Lathes and Toolroom Lathes range in size from 9″ to 16″ swing, with 3′ to 12′ bed lengths. Precision Turret Lathes are made in two sizes, having ½″ and 1″ collet capacities respectively.

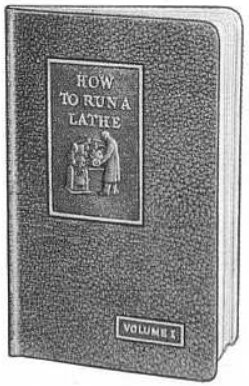
Complete specifications are printed opposite the illustration of each lathe. Attachments and accessories are also shown. This catalog contains 64 pages, 11″ x 8½″ for standard file. If you are interested in the larger sizes of South Bend Lathes, write for your copy of catalog 100-D.



How to Run a Lathe

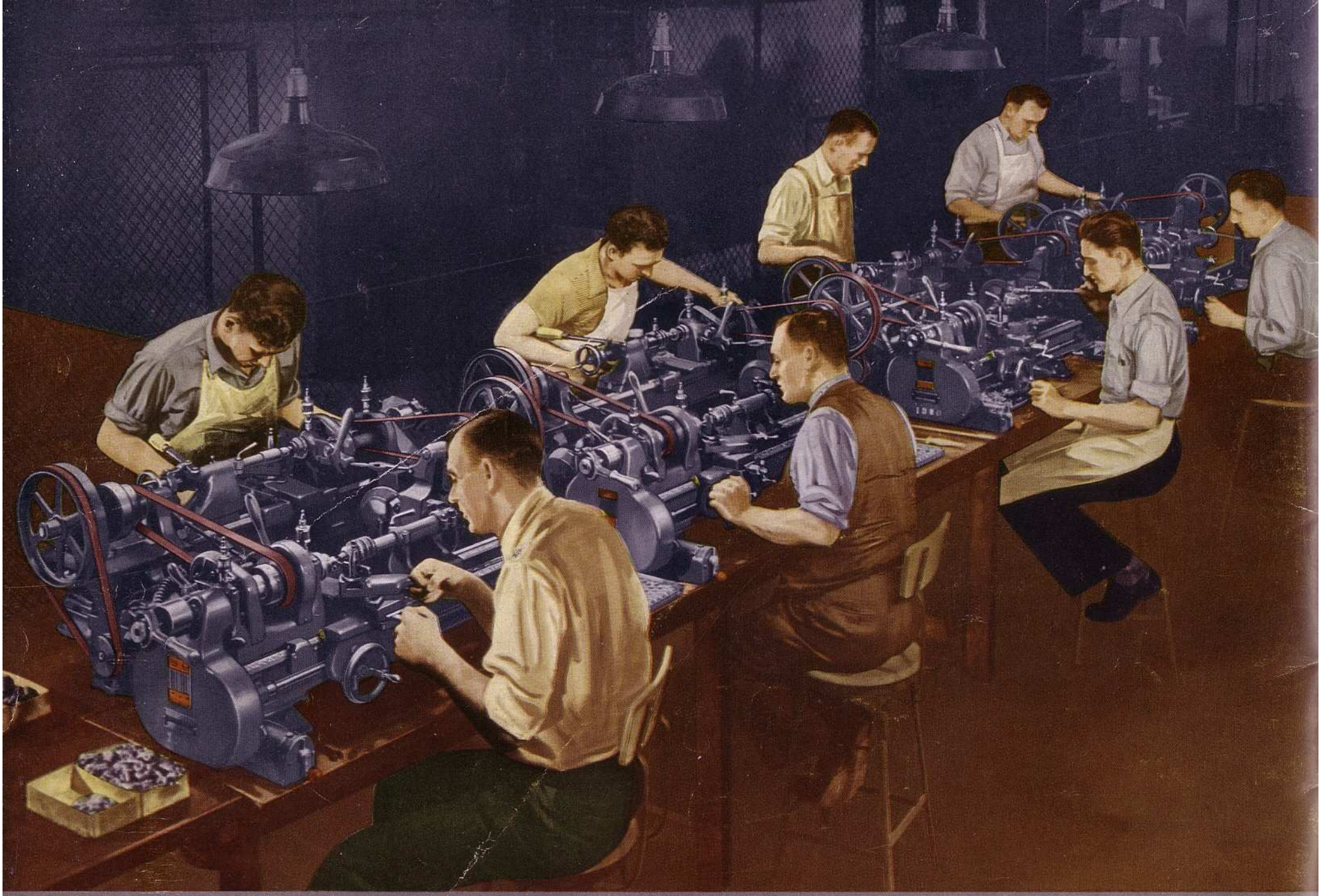
This is a complete reference book and manual on the care and operation of the back-geared screw-cutting lathe. Clearly written in simple non-technical language. Illustrated with more than 360 photographs, diagrams, and sketches. Printed in the English, Spanish, Portuguese, and French languages. State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

Revised edition No. 43, "How to Run a Lathe", in the English language, 128 pages 5⅛″ x 7⅞″, price postpaid 25c in paper binding, 75c in leatherette binding as illustrated. U. S. stamps accepted for single copies.



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

SOUTH BEND
Precision **LATHES**



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