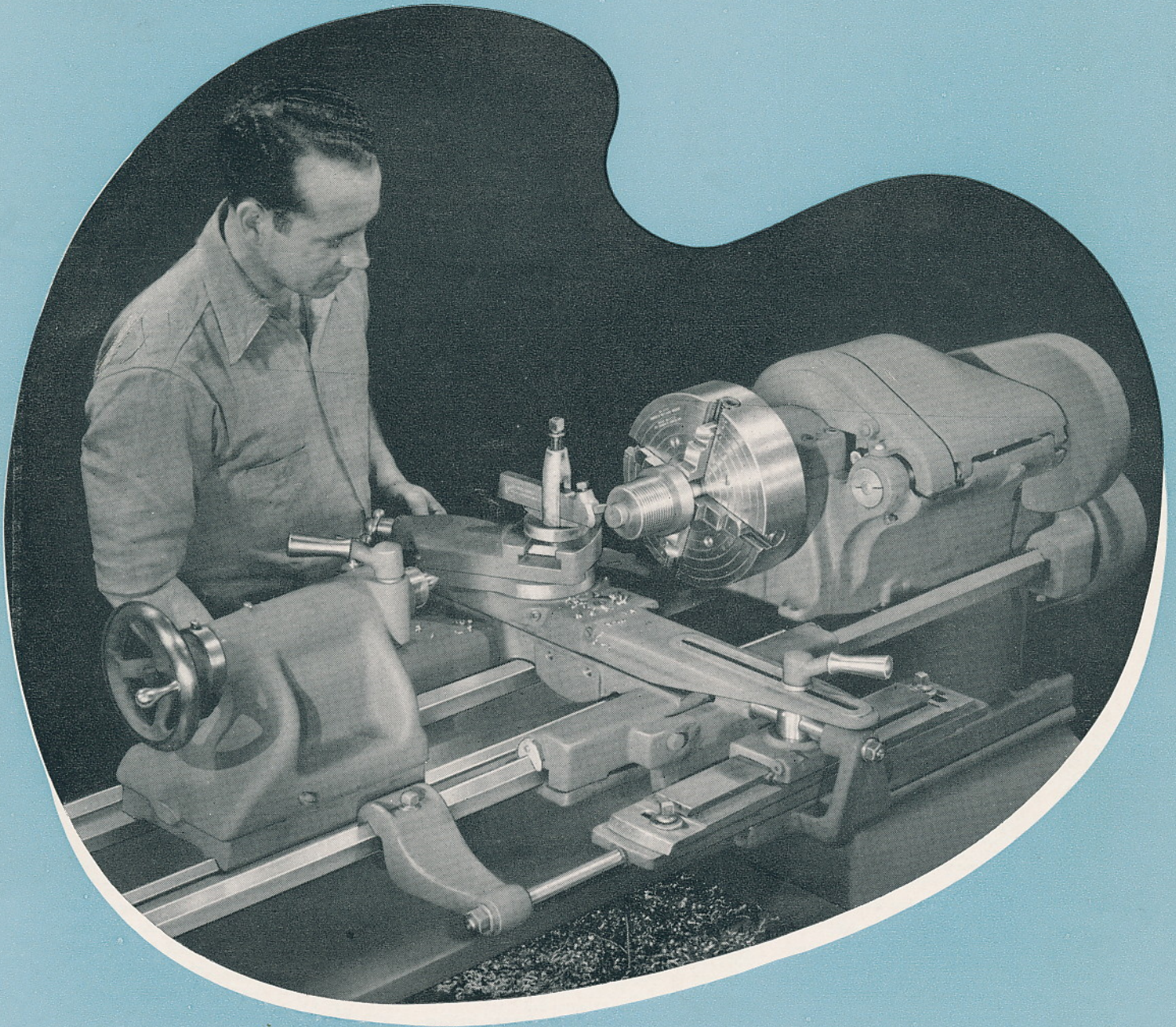


SOUTH BEND

16" *Precision* LATHES



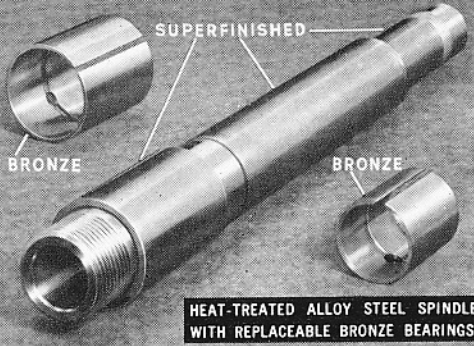
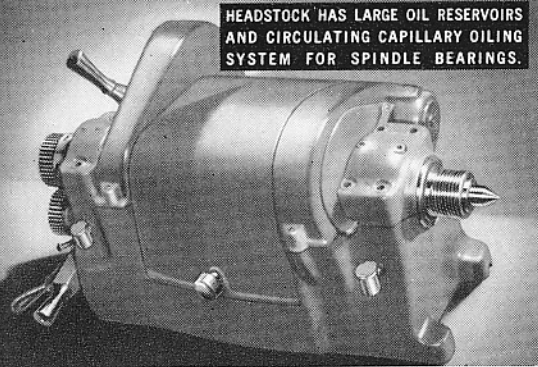
SOUTH BEND LATHE WORKS

BUILDING BETTER TOOLS SINCE 1906

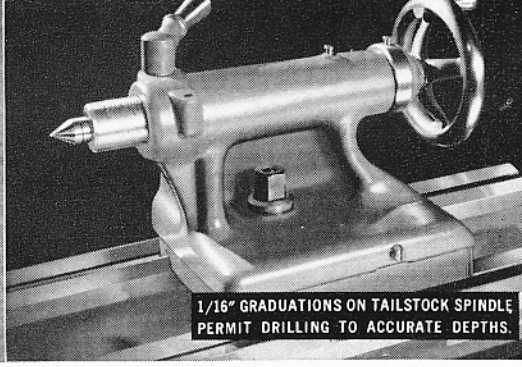
425 E. MADISON STREET, SOUTH BEND 22, INDIANA, U. S. A.



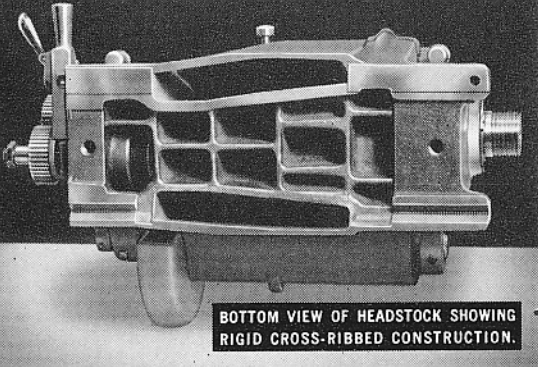
HEADSTOCK HAS LARGE OIL RESERVOIRS AND CIRCULATING CAPILLARY OILING SYSTEM FOR SPINDLE BEARINGS.



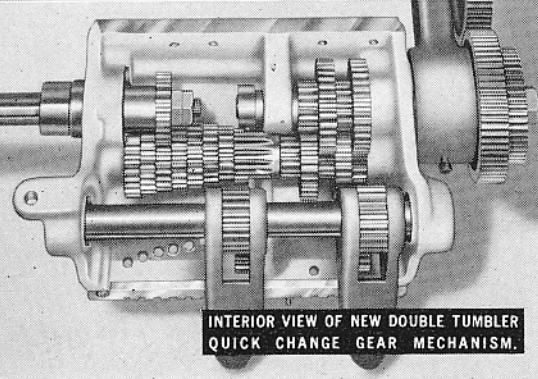
HEAT-TREATED ALLOY STEEL SPINDLE WITH REPLACEABLE BRONZE BEARINGS.



1/16" GRADUATIONS ON TAILSTOCK SPINDLE PERMIT DRILLING TO ACCURATE DEPTHS.



BOTTOM VIEW OF HEADSTOCK SHOWING RIGID CROSS-RIBBED CONSTRUCTION.



INTERIOR VIEW OF NEW DOUBLE TUMBLER QUICK CHANGE GEAR MECHANISM.

South Bend 16" Lathes

Substantial design, expert workmanship, rugged construction, and quality materials give South Bend 16" Lathes extreme accuracy for precision tool and gauge work, smooth power and speed for efficient production, and time-saving versatility for quick change-overs. Large bearing surfaces assure permanent precision and long service. Automatic safety devices reduce to a minimum the possibility of accidental damage to the lathe. From the planing of the bed to the final inspection tests, precision is built into South Bend 16" Lathes. Back of every manufacturing process are rigid inspection controls that prevent any deviation from established standards.

Some of the features responsible for the excellent performances of these lathes include an alloy steel spindle with hardened, ground, and superfinished bearing surfaces running in replaceable bronze sleeve bearings; one-piece double wall apron with steel gears running in oil; a powerful worm drive and multiple disc friction clutch for operating power carriage feeds; and improved double tumbler quick change gear mechanism.

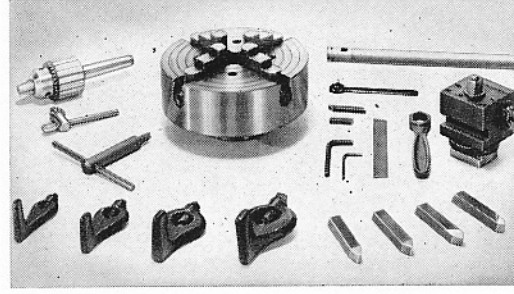
Large diameter handwheels, clear-cut easy reading micrometer graduations and conveniently arranged controls reduce operator fatigue and assure maximum production. Built to meet the demands of modern industry, these lathes have long been first choice among expert tool-makers and experienced production men everywhere.

Attachments and Accessories

Only part of the accessories and attachments for 16" South Bend Lathes are listed below. A catalog illustrating and describing all accessories and attachments will be supplied on request.

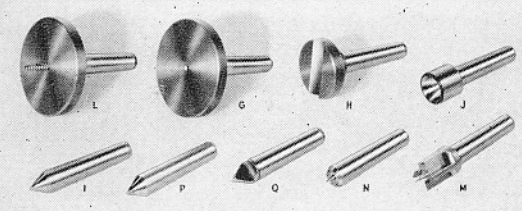
Cat. No.	Description
CE1882	Bar Feed Attachment, Pneumatic
CE3904	Center, Ball-bearing, Live 60° Hollow
CE3901	Center, Ball-bearing, Live 60° Point
CE1890	Center, Carbide Tipped
CE2423	Center, Cup, for wood turning
CE2399	Center, Crotch
CE2397	Center, Drill
CE2425	Center, Half
CE2402	Center, 60° Hard
CE1897	Center, 60° Hollow
CE2414	Center, Screw, for wood turning
CE2417	Center, Spur, for wood turning
CL1991	Chip Pan for 16" Lathe
CL4210MH	Chuck, 10" 4-Jaw Independent, fitted to lathe
CL3507MH	Chuck, 7 1/2" 3-Jaw Universal, fitted to lathe
CE2828	Collet, Brass, for round work
CE2833	Collet, Steel, for round work
CL4306H	Collet Attachment, Handwheel
CL5206H	Collet Attachment, Handlever
CL511B	Coolant Pump with 1/4 h.p., 1 ph. 60 cy., 115 v. A.C. motor fitted to 16" lathe
CE1770H	Collet Rack, holds 17 collets
CL2027H	Cross Slide, Double Tool
CE1839	Die Holder
CE2102	Dogs, Set of 11, 1/2" to 4", Standard

Cat. No.	Description
CL46MH	Fixture Plate, 11 3/4" outside diameter
CE301BH	Grinding Attachment, External, 115 v., 1 ph., 60 cy. A.C.
CL601BH	Grinding Attachment, Internal, 115 v., 1 ph., 60 cy. A.C.
CL1955H	Metric Transposing Attachment
CL2680H	Milling and Keyway Cutting Attachment
CE2545D	Motor, 1 1/2 h.p. A.C., 3 ph., 60 cy., 220 v.
CE790	Motor Control, Drum Reversing Switch
CL2024	Oil Pan for 16" Lathe
CL1353H	Rest, Follower, Regular
CL2395H	Rest, Follower, Telescoping Jaw
CL1177H	Rest, Steady, Regular
CL2400H	Rest, Steady, Telescoping Jaw
CL896H	Rest, Wood Turning
CL2185FH	Stop, Four-position Carriage
CL968FH	Stop, Micrometer Carriage
CL1545H	Taper Attachment, Telescopic Type
CL810TH	Thread Dial Indicator
CL1413H	Tool Holder, 10 in 1
CL1917H	Turret, Turnstile Bed
CL3375H	Turret Tool Block, Square, for Compound Cross Slide
CL3376H	Turret Tool Block, Square, for Double Tool Cross Slide

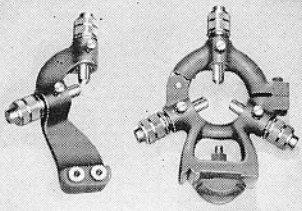


CL2820H. Chuck and Tool Assortment includes 10" 4-jaw independent chuck; 1" Jacobs drill chuck; arbor for drill chuck; set of four lathe dogs 1/2" to 1 1/2" capacity; 10 in 1 tool holder with medium diamond knurls, cut-off blade, boring bar, and four ground cutter bits. Shipping weight approximately 89 lbs.

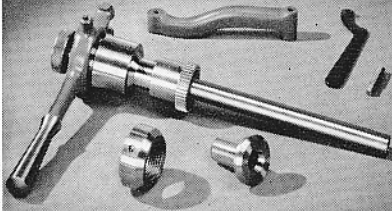
Centers and Drill Pads



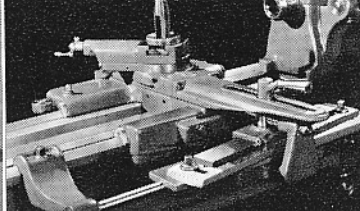
Steady and Follower Rests

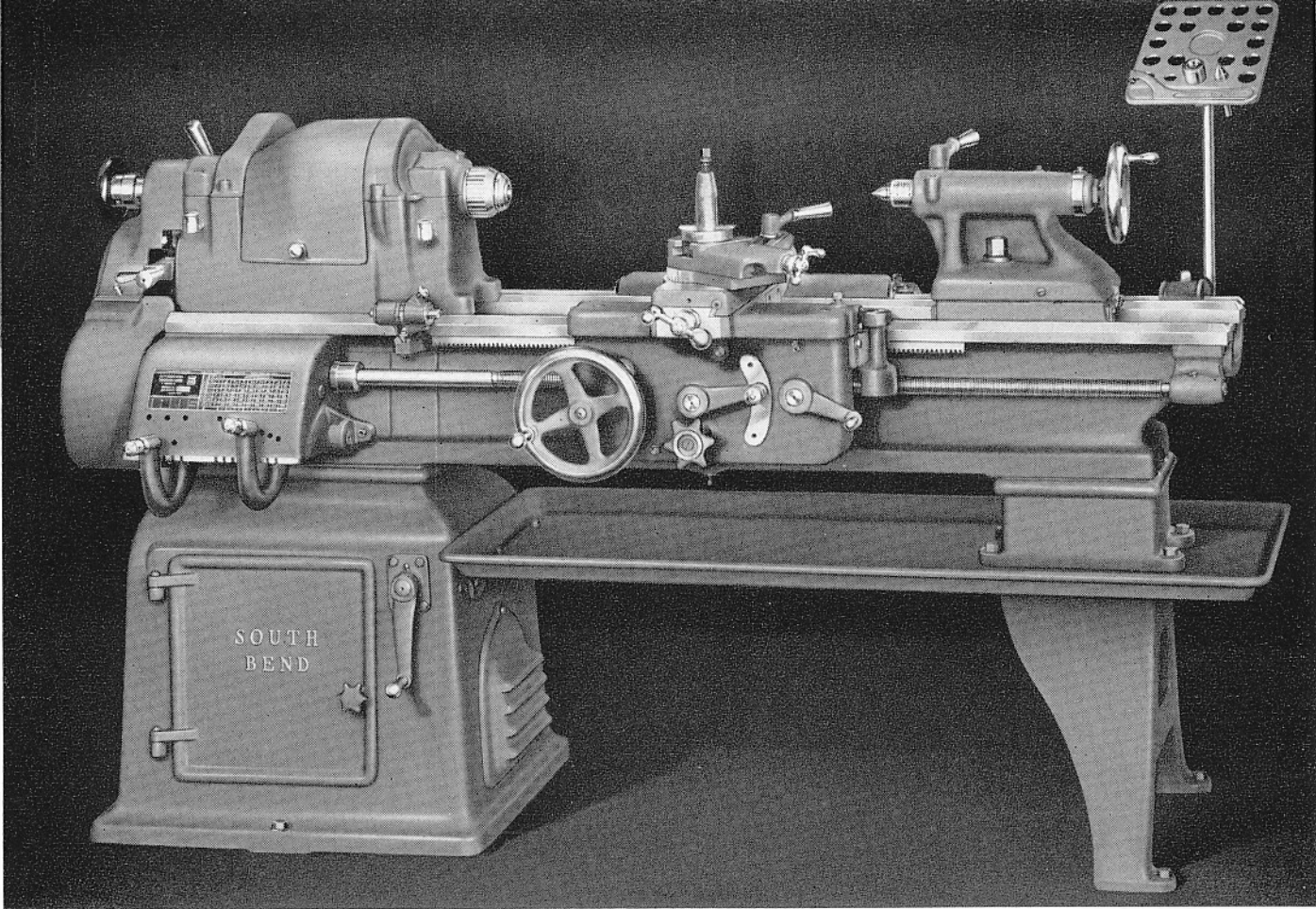


Handlever Collet Attachment



Telescopic Taper Attachment





16-inch Toolroom *Precision* Lathe

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

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

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

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

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

16-inch Toolroom Lathes with Eight-Speed Drive

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

Specifications of 16-inch Toolroom Lathes

CAPACITY OF LATHE

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

SPINDLE SPEEDS

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

HEADSTOCK

Hole through spindle.....1 3/8"
Maximum collet capacity.....1"
Spindle nose diameter and threads.....2 3/4"-6
Size of center, Morse taper.....No. 3

Width cone pulley step.....2 1/4"
Large face plate diameter.....13 3/4"
Small face plate diameter.....8 1/2"
Front spindle bearing, diameter.....2 7/8"

TAILSTOCK

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

COMPOUND REST

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

THREADS AND FEEDS

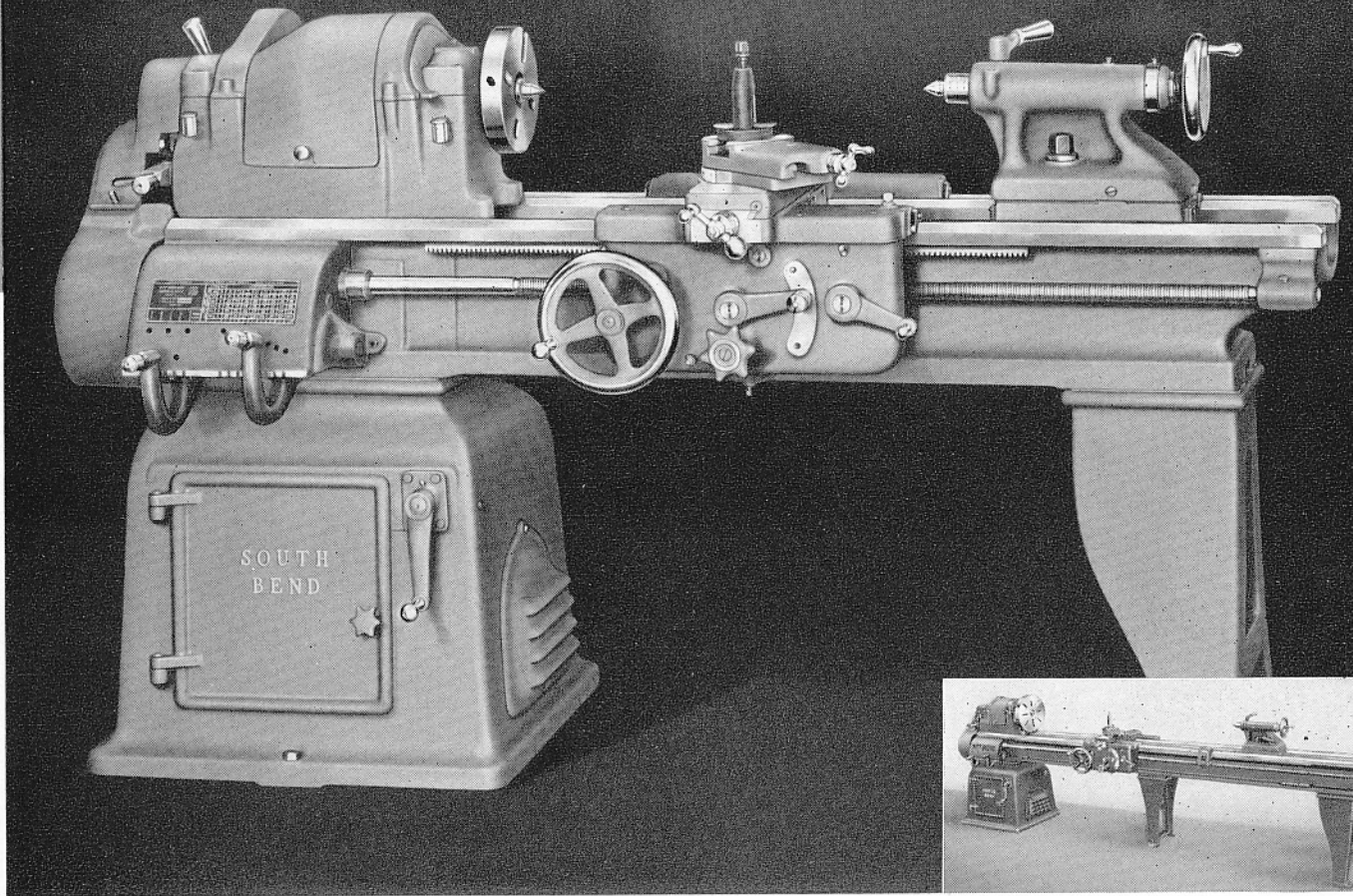
Thread cutting range—48 pitches
R.H. or L.H.....4 to 224 per inch
Longitudinal feeds through friction clutch—48 feeds R.H. or L.H......0015" to .0841"
Cross-feeds through friction clutch—48 feeds......0006" to .0315"
Lead screw, 29° Acme thread.....1 1/8" dia.-6 thrs.

TOOL POST

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

MOTOR

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



16-inch Quick Change Gear *Precision* Lathe

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

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

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

for taper turning. Tailstock center is self-ejecting.

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

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

Catalog Number	Bed Length Feet	Between Centers Inches	Cubic Feet Boxed	Boxed Weight Pounds	Crated Weight Pounds
CL117C	6	33 1/4	85	2700	2300
CL117D	7	45 1/4	91	2950	2380
CL117E	8	57 1/4	101	3150	2460
CL117G	10*	81 1/4	117	3550	2800
CL117H	12*	105 1/4	134	3900	2975

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

Specifications of 16-inch Quick Change Gear Lathes

CAPACITY OF LATHE

Swing over bed and saddle wings.....16 1/4"
Swing over saddle cross slide.....9 5/8"
Swing over cross slide without chip guard.....11 1/8"

SPINDLE SPEEDS

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

HEADSTOCK

Hole through spindle.....1 3/8"
Maximum collet capacity.....1"
Spindle nose diameter and threads.....2 3/8"-6
Size of center, Morse taper.....No. 3

Width cone pulley step.....2 1/4"
Large face plate diameter.....13 1/4"
Small face plate diameter.....8 1/8"
Front spindle bearing, diameter.....2 7/8"

TAILSTOCK

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

COMPOUND REST

Cross slide travel.....10 1/8"
Angular hand feed of compound rest top slide.....3 3/4"

THREADS AND FEEDS

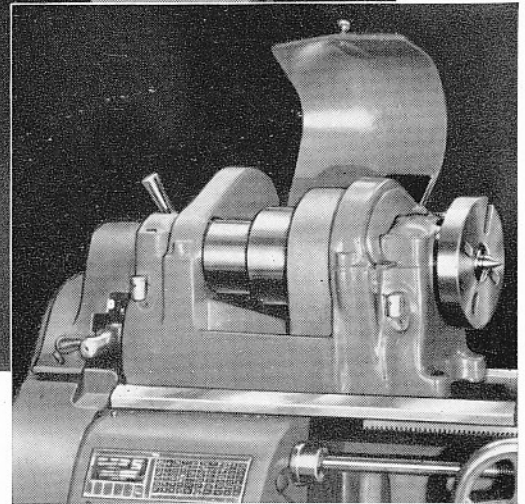
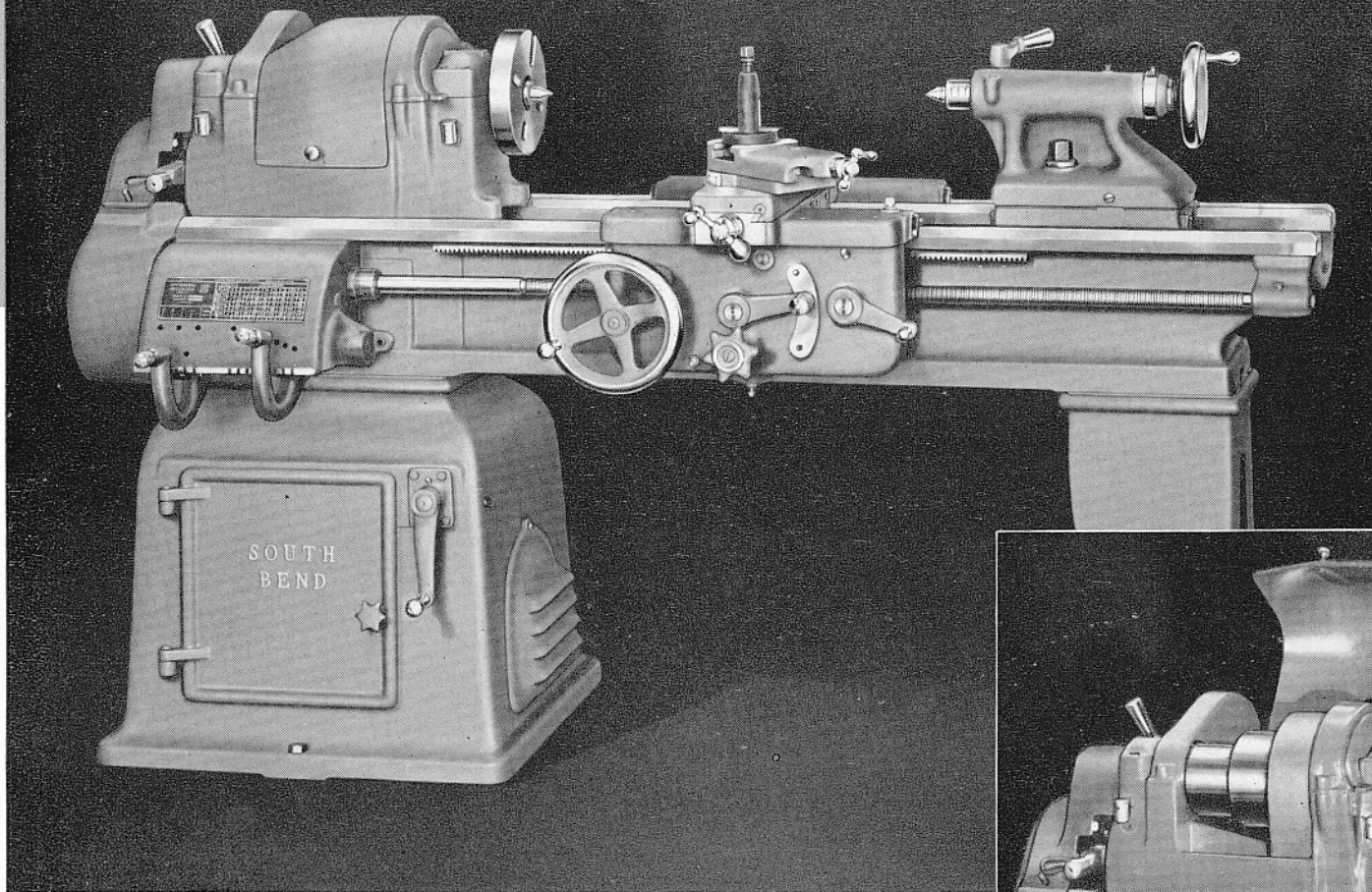
Thread cutting range—48 pitches
R.H. or L.H.....4 to 224 per inch
Longitudinal feeds through friction
clutch—48 feeds R.H. or L.H......0015" to .0841"
Cross-feeds through friction clutch—
48 feeds......0006" to .0315"
Lead screw, 29° Acme thread.....1 1/8" dia.—6 thrs.

TOOL POST

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

MOTOR

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



Twelve-Speed 16-inch Lathes

Toolroom and Quick Change Gear Types

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

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

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

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

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

Specifications of Twelve-Speed 16-inch Lathes

CAPACITY OF LATHE

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

SPINDLE SPEEDS (approximate, not exact)

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

HEADSTOCK

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

Width cone pulley step, 12-speed drive	3"
Large face plate diameter	13 $\frac{1}{4}$ "
Small face plate diameter	8 $\frac{1}{16}$ "
Front spindle bearing, diameter	2 $\frac{5}{8}$ "

TAILSTOCK

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

COMPOUND REST

Cross slide travel	10 $\frac{1}{16}$ "
Angular hand feed of compound rest top slide	3 $\frac{3}{4}$ "

THREADS AND FEEDS

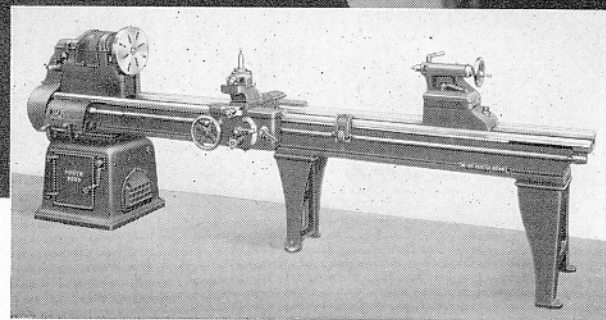
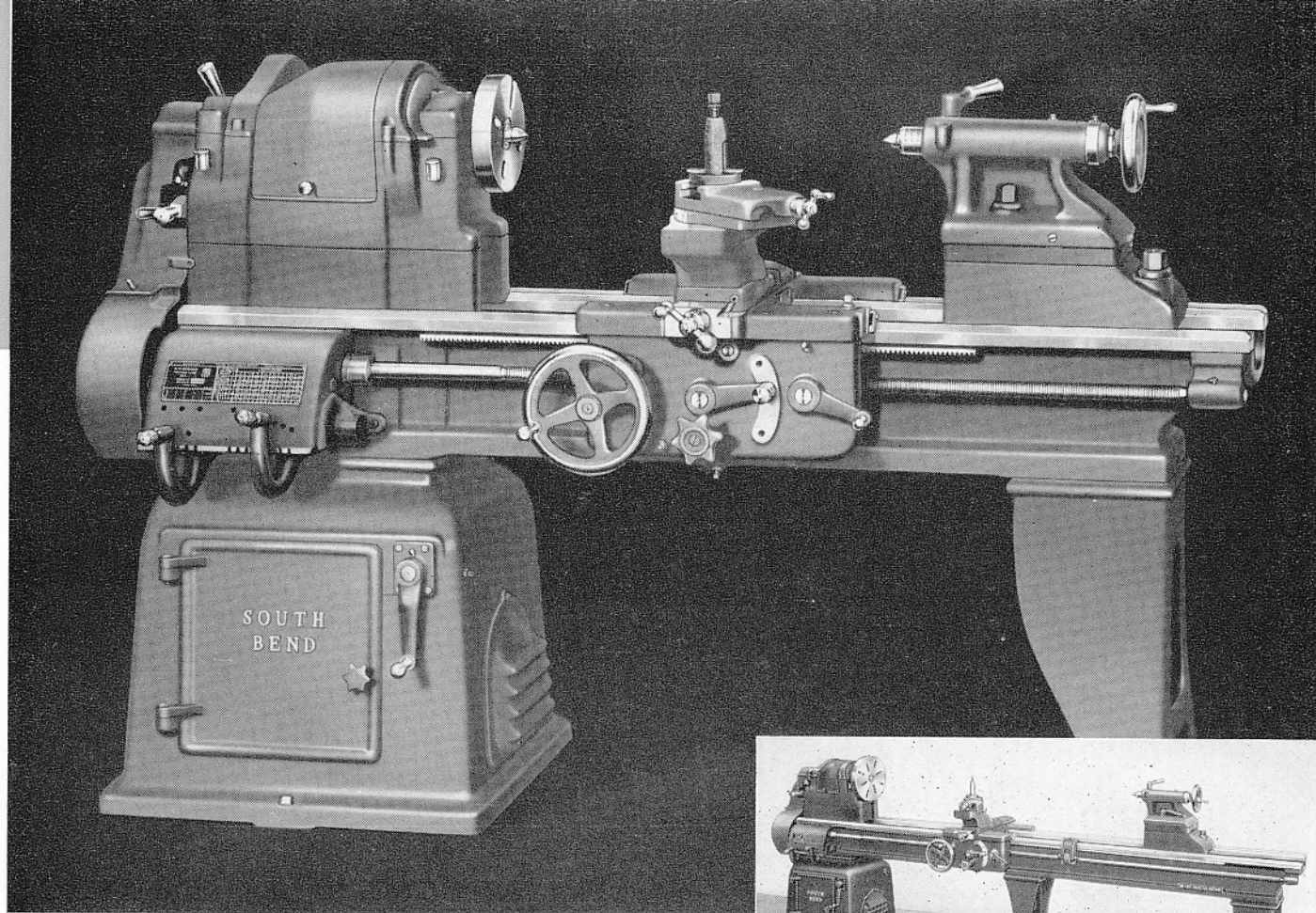
Thread cutting range—48 pitches	
R.H. or L.H.	.4 to 224 per inch
Longitudinal feeds through friction clutch—48 feeds R.H. or L.H.	.0015" to .0841"
Cross-feeds through friction clutch—48 feeds	.0006" to .0315"
Lead screw, 29° Acme thread	1 $\frac{1}{8}$ " dia.—6 threds.

TOOL POST

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

MOTOR

Standard size of motor required	2-1 h.p.
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16-24-inch Large Swing Lathe

Eight or Sixteen-Speed Drive

The 16-24-inch Large Swing Lathe is a practical tool for machining large diameter work that is not excessively heavy. It is the same as the 16-inch Quick Change Gear Lathe except that the height of the centers is increased to take work up to $25\frac{1}{8}$ " in diameter over the bed and $18\frac{3}{4}$ " in diameter over the saddle cross slide.

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

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

Regular equipment included in price of lathe is same as for 16-inch Quick Change Gear Lathe as listed on page 4.

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

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

Specifications of 16-24" Large Swing Lathes

CAPACITY OF LATHE

Swing over bed	25 $\frac{1}{8}$ "
Swing over saddle wings	24 $\frac{3}{8}$ "
Swing over saddle cross slide	18 $\frac{3}{4}$ "
Swing over cross slide without chip guard	19 $\frac{1}{4}$ "

SPINDLE SPEEDS (approximate, not exact)

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

HEADSTOCK

Hole through spindle	13 $\frac{1}{8}$ "
Maximum collet capacity	1"

Spindle nose diameter and threads	2 $\frac{3}{8}$ "-6
Size of center, Morse taper	No. 3
Width cone pulley step	2 $\frac{1}{4}$ "
Large face plate diameter	13 $\frac{1}{4}$ "
Small face plate diameter	8 $\frac{1}{16}$ "
Front spindle bearing, diameter	2 $\frac{1}{8}$ "

TAILSTOCK

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

COMPOUND REST

Cross slide travel without taper attachment	10 $\frac{1}{2}$ "
Cross slide travel with taper attachment	10 $\frac{1}{16}$ "
Angular hand feed of compound rest top slide	3 $\frac{3}{4}$ "

THREADS AND FEEDS

Thread cutting range—48 pitches	
R.H. or L.H.	4 to 224 per inch
Longitudinal feeds through friction clutch—48 feeds R.H. or L.H.	.0015" to .0841"
Cross-feeds through friction clutch—48 feeds	.0006" to .0315"
Lead screw, 29° Acme thread	1 $\frac{1}{8}$ " dia.—6 thds.

TOOL POST

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

MOTOR (Standard size)

For 8-speed lathe (1-speed motor)	1 $\frac{1}{2}$ h.p.
For 16-speed lathe (2-speed motor)	2-1 h.p.

SOUTH BEND LATHE WORKS

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