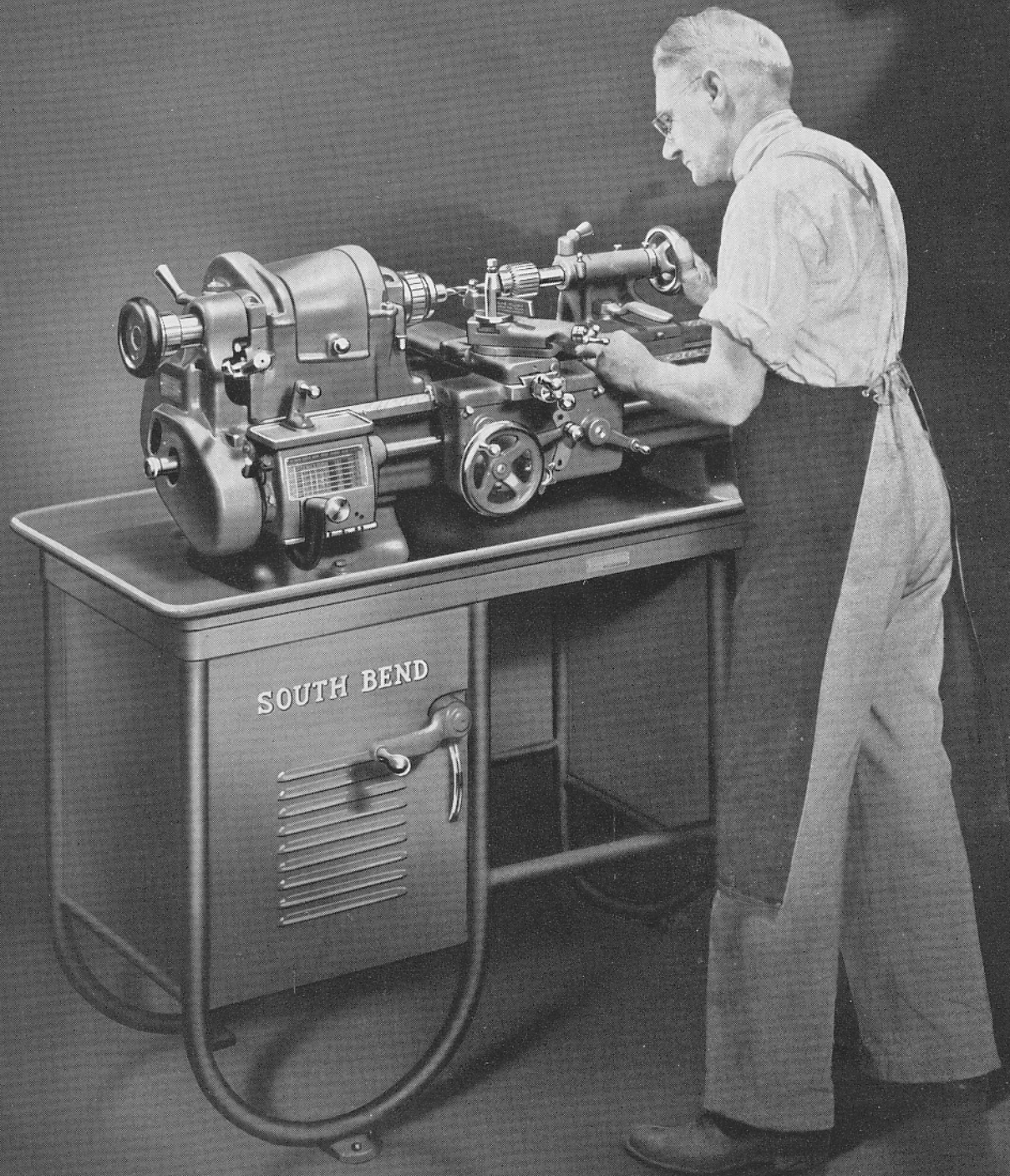


10" SOUTH BEND *Precision* LATHES

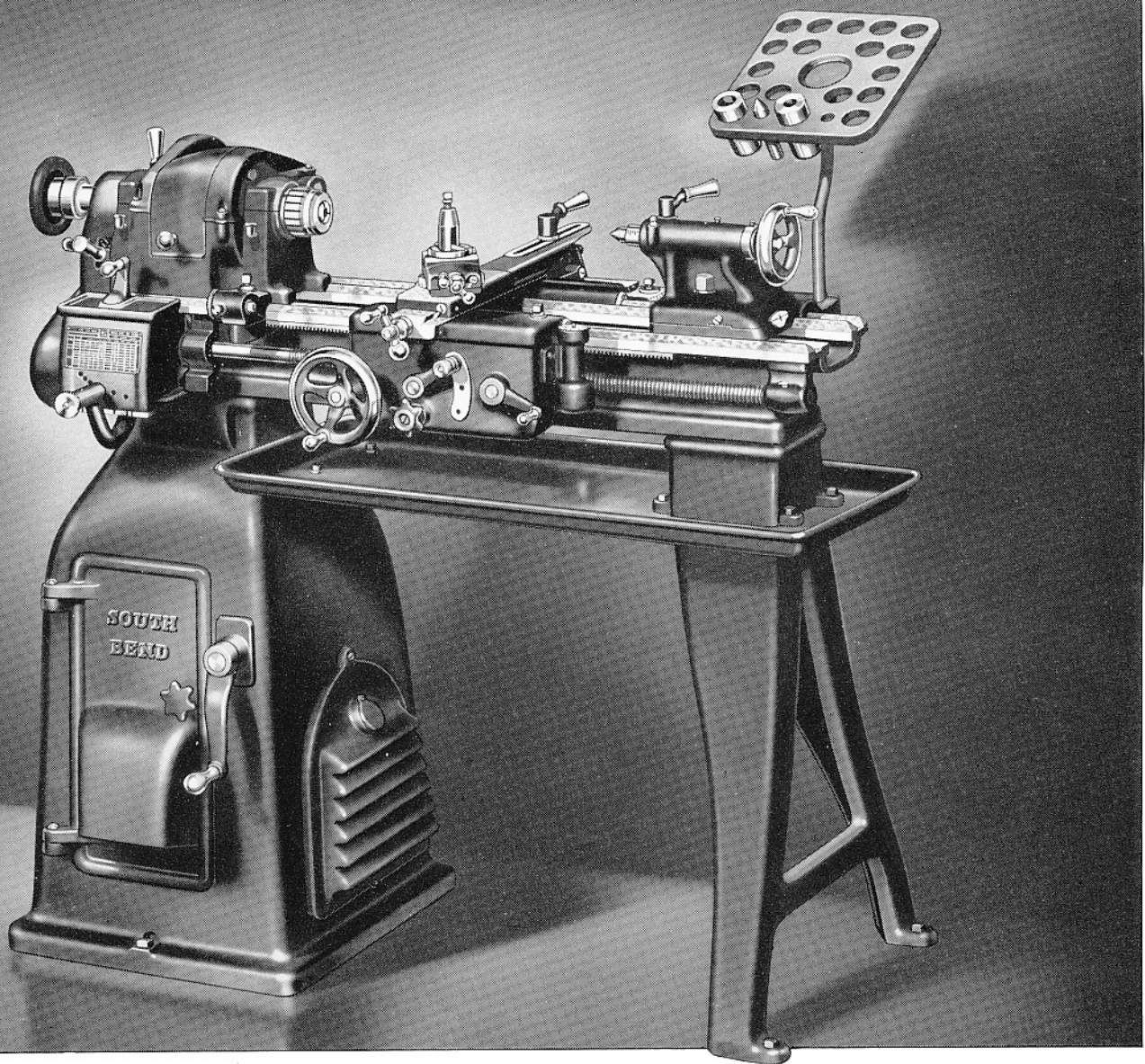


SOUTH BEND LATHE WORKS

Lathe Builders for 36 Years

SOUTH BEND, INDIANA, U.S.A.





10-inch Toolroom Precision Lathe

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

The 10-inch Toolroom Lathe is made in two types: "1" Collet" and "Regular". The 10-inch 1" Collet Toolroom Lathe has twelve spindle speeds and is equipped with a special headstock having $1\frac{3}{8}$ " spindle hole which provides 1" maximum collet capacity. The 10-inch Regular Toolroom Lathe has six spindle speeds and is equipped with a headstock having 1" spindle hole which provides $1\frac{1}{16}$ " maximum collet capacity. See page 8 for specifications.

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

Regular Equipment included in price of lathe consists of: V-belt; flat leather belt; large and small face plates; forged steel tool post; adjustable thread

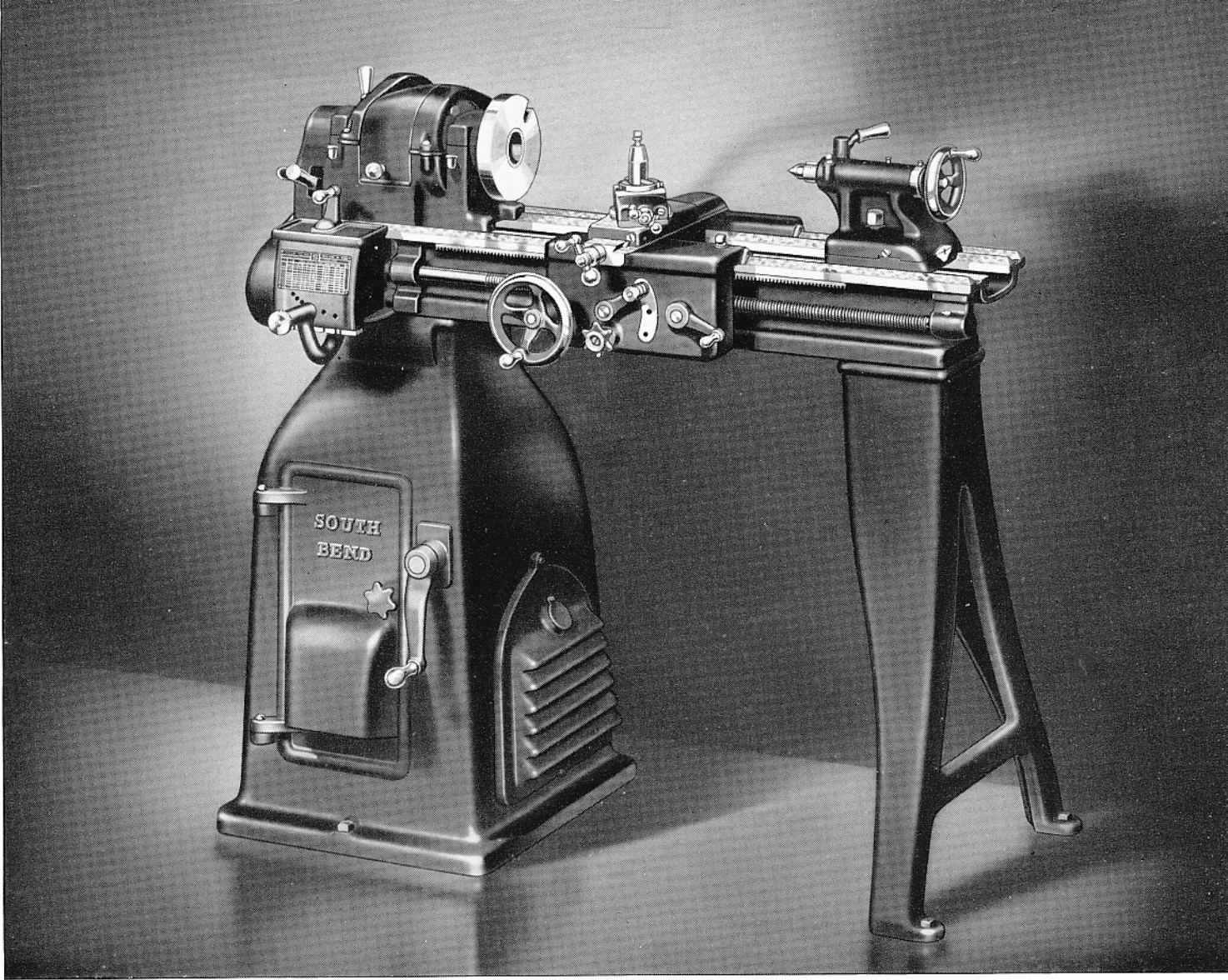
cutting stop; tool steel centers; spindle sleeve; wrenches; quick change gear box; installation plan; and book "How to Run a Lathe". Motor and control are not included in price of lathe.

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

Bed Lengths	3-ft.	3½-ft.	4-ft.
Catalog Number	8187-Y	8187-Z	8187-A
Distance Between Centers	15¾-in.	20¾-in.	26¾-in.
Size Motor Required	¾ h.p.	¾ h.p.	¾ h.p.
Shipping Weight, Crated	935 lbs.	960 lbs.	935 lbs.
Code Word	Jyrab	Jyrek	Jyric

10-inch Regular Toolroom Lathes— $1\frac{1}{16}$ " Collet Capacity
With Underneath Motor Drive and Floor Legs

Bed Lengths	3-ft.	3½-ft.	4-ft.
Catalog Number	8199-Y	8199-Z	8199-A
Distance Between Centers	15¾-in.	20¾-in.	26¾-in.
Size Motor Required	½ h.p.	½ h.p.	½ h.p.
Shipping Weight, Crated	915 lbs.	940 lbs.	965 lbs.
Code Word	Kwcaak	Kwces	Kwcix



10-inch Quick Change Gear Precision Lathe

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

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

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

Regular Equipment included in price of lathe consists of: V-belt; flat leather belt; large and small face plates; forged steel tool post; adjustable thread

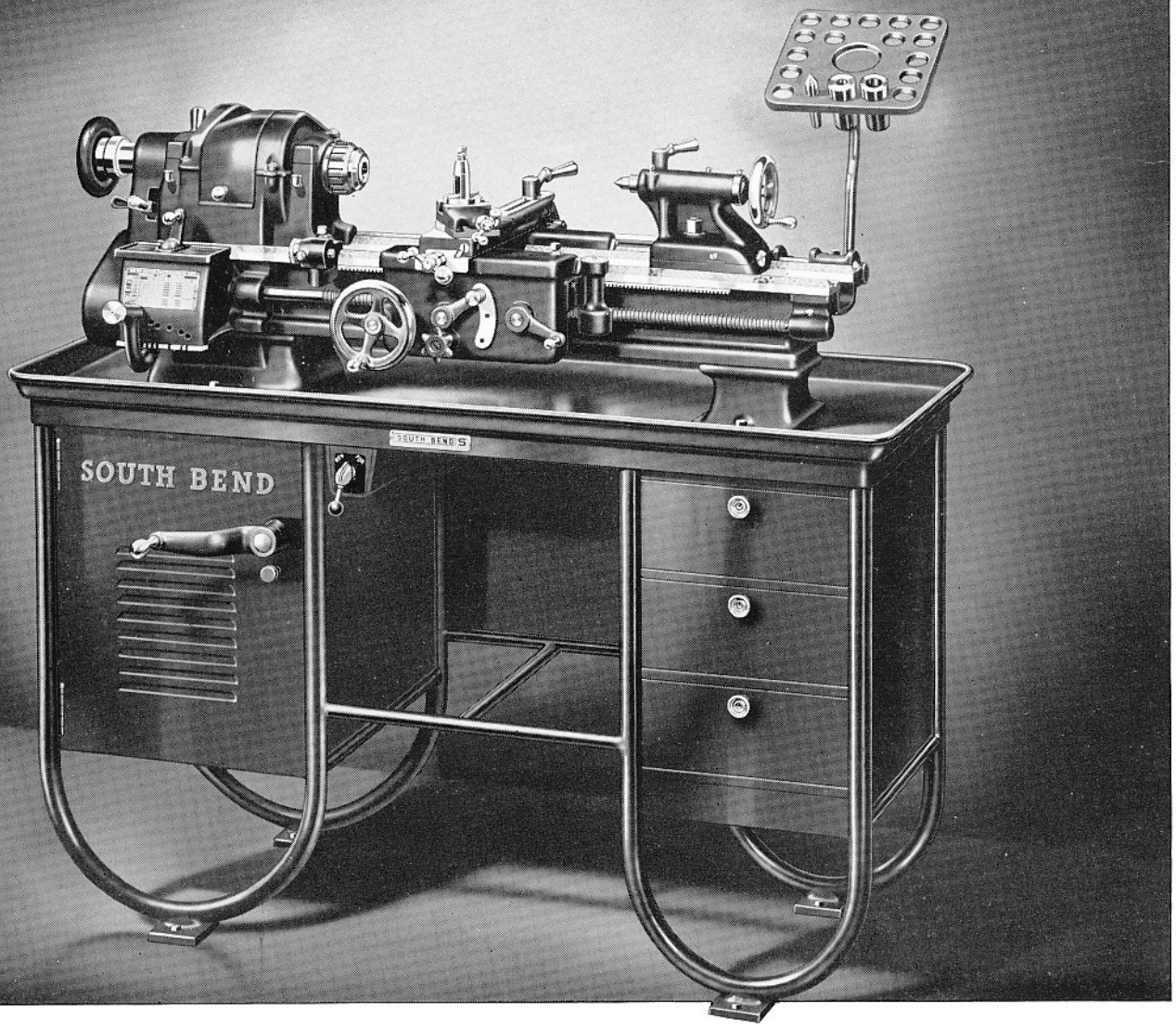
cutting stop; tool steel centers; spindle sleeve; wrenches; quick change gear box; installation plan; and book "How to Run a Lathe". Motor and control are not included in price of lathe.

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

Bed Lengths	3-ft.	3½-ft.	4-ft.	4½-ft.
Catalog Number	187-Y	187-Z	187-A	187-R
Distance Between Centers	15¾-in.	20¾-in.	26¾-in.	33¾-in.
Size Motor Required	¾ h.p.	¾ h.p.	¾ h.p.	¾ h.p.
Shipping Weight, Crated	810 lbs.	835 lbs.	860 lbs.	885 lbs.
Code Word	Iysac	Iyseh	Iysim	Iysor

10" Regular Quick Change Gear Lathes— $1\frac{1}{16}$ " Collet Capacity
With Underneath Motor Drive and Floor Legs

Bed Lengths	3-ft.	3½-ft.	4-ft.	4½-ft.
Catalog Number	199-Y	199-Z	199-A	199-R
Distance Between Centers	15¾-in.	20¾-in.	26¾-in.	33¾-in.
Size Motor Required	½ h.p.	½ h.p.	½ h.p.	½ h.p.
Shipping Weight, Crated	790 lbs.	815 lbs.	840 lbs.	865 lbs.
Code Word	Kwbox	Kwbic	Kwbon	Kwbur



10-inch Toolroom Precision Bench Lathe

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

The 10-inch Toolroom Bench Lathe is made in two types: "1" Collet" and "Regular". The 10-inch 1" Collet Toolroom Lathe has twelve spindle speeds and is equipped with a special headstock having 1 3/8" spindle hole which provides 1" maximum collet capacity. The 10-inch Regular Toolroom Lathe has six spindle speeds and is equipped with a headstock having 1" spindle hole which provides 1 1/16" maximum collet capacity. See page 8 for specifications.

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

Regular Equipment included in price of lathe consists of: V-belt; flat leather belt; large and small face plates; forged steel tool post; adjustable thread cutting stop; tool steel centers; spindle sleeve; wrenches; quick change gear box; installation plan; and book "How to Run a Lathe". Steel bench, motor, and control are not included in price.

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

Bed Lengths	3-ft.	3 1/2-ft.	4-ft.
Catalog Number.....	8187-YN	8187-ZN	8187-AN
Distance Between Centers.....	15 3/4-in.	20 3/4-in.	26 3/4-in.
Size Motor Required.....	3/4 h.p.	3/4 h.p.	3/4 h.p.
Shipping Weight, (Crated with Bench)...	960 lbs.	990 lbs.	1060 lbs.
Code Word.....	Iywak	Iywec	Iywin

10-inch Regular Toolroom Bench Lathes—1 1/16" Collet Capacity
With Underneath Motor Drive and Bench Legs

Bed Lengths	3-ft.	3 1/2-ft.	4-ft.
Catalog Number.....	8199-YN	8199-ZN	8199-AN
Distance Between Centers.....	15 3/4-in.	20 3/4-in.	26 3/4-in.
Size Motor Required.....	1/2 h.p.	1/2 h.p.	1/2 h.p.
Shipping Weight, (Crated with Bench)...	940 lbs.	970 lbs.	1040 lbs.
Code Word.....	Kwgac	Kwgek	Kwgin

Steel Bench for Above Lathes

Bed Lengths	3-ft.	3 1/2-ft.	4-ft.
Catalog Number.....	1795	1795	1796
Code Word.....	Pavom	Pavom	Paveq



10-inch Quick Change Gear Precision Bench Lathe

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

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

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

Regular Equipment included in price of lathe consists of: V-belt; flat leather belt; large and small face plates; forged steel tool post; adjustable thread cutting stop; tool steel centers; spindle sleeve; wrenches; quick change gear box; installation plan; and book "How to Run a Lathe". Steel bench, motor, and control are not included in the price.

SOUTH BEND, INDIANA, U.S.A.

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

Bed Lengths	3-ft.	3½-ft.	4-ft.	4½-ft.
Catalog Number.....	187-YN	187-ZN	187-AN	187-RN
Distance Between Centers....	15¾-in.	20¾-in.	26¾-in.	33¾-in.
Size Motor Required.....	¾ h.p.	¾ h.p.	¾ h.p.	¾ h.p.
Shipping Weight, (Crated with Bench).....	850 lbs.	880 lbs.	950 lbs.	980 lbs.
Code Word.....	Jytah	Jyten	Jytis	Jytob

10-inch Regular Quick Change Gear Bench Lathes
 $1\frac{1}{16}$ " Collet Capacity

With Underneath Motor Drive and Bench Legs

Bed Lengths	3-ft.	3½-ft.	4-ft.	4½-ft.
Catalog Number.....	199-YN	199-ZN	199-AN	199-RN
Distance Between Centers....	15¾-in.	20¾-in.	26¾-in.	33¾-in.
Size Motor Required.....	½ h.p.	½ h.p.	½ h.p.	½ h.p.
Shipping Weight, (Crated with Bench).....	830 lbs.	860 lbs.	930 lbs.	960 lbs.
Code Word.....	Kwdam	Kwdec	Kwdir	Kwdox

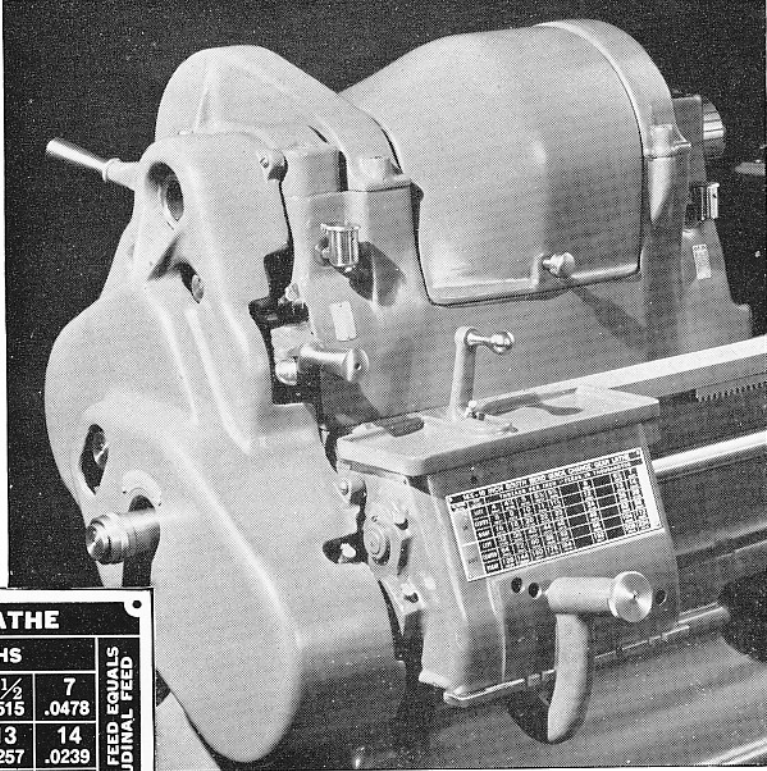
Steel Bench for Above Lathes

Bed Lengths	3-ft.	3½-ft.	4-ft.	4½-ft.
Catalog Number.....	1795	1795	1796	1796
Code Word.....	Pavom	Pavom	Paveq	Paveq

Quick Change Gear Box Provides Wide Range of Threads and Feeds

The Quick Change Gear Box shown at right provides a wide range of right and left hand threads and feeds. The threads per inch are shown in large figures on the index chart below. The smaller figures indicate the power longitudinal turning feeds in thousandths of an inch.

Changes for the various threads and feeds are made by shifting levers on the gear box and by shifting the sliding gears on the end of the lathe. No pick-off gears are required. A reverse lever permits changing instantly from right hand to left hand threads or feeds.



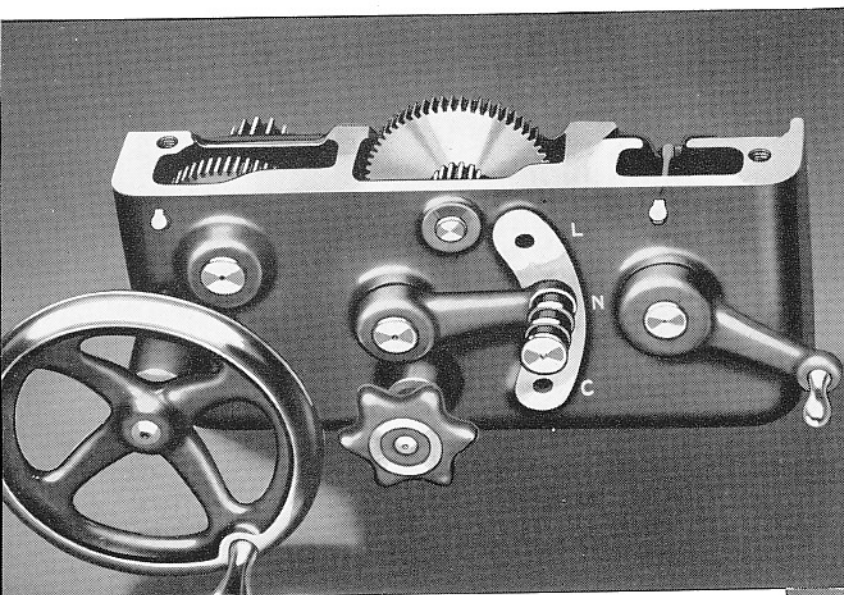
Above. Headstock End of Lathe Showing Quick Change Gear Box for Threads and Feeds

Left. Direct Reading Index Chart on Quick Change Gear Box of 10-inch Swing Lathe

10-INCH SOUTH BEND QUICK CHANGE GEAR LATHE										
SLIDING GEAR	TOP LEVER	THREADS PER INCH—FEEDS IN THOUSANDTHS								
IN	LEFT	4 .0836	4½ .0743	5 .0669	5½ .0608	5¾ .0582		6 .0557	6½ .0515	7 .0478
	CENTER	8 .0418	9 .0372	10 .0334	11 .0304	11½ .0291		12 .0279	13 .0257	14 .0239
	RIGHT	16 .0209	18 .0186	20 .0167	22 .0152	23 .0145		24 .0139	26 .0129	28 .0119
OUT	LEFT	32 .0104	36 .0093	40 .0084	44 .0076	46 .0073		48 .0070	52 .0064	56 .0060
	CENTER	64 .0052	72 .0046	80 .0042	88 .0038	92 .0036		96 .0035	104 .0032	112 .0030
	RIGHT	128 .0026	144 .0023	160 .0021	176 .0019	184 .0018		192 .0017	208 .0016	224 .0015

AUTOMATIC CROSS FEED EQUALS 3/16 TIMES LONGITUDINAL FEED

Double Wall Apron Has Multiple Disc Clutch

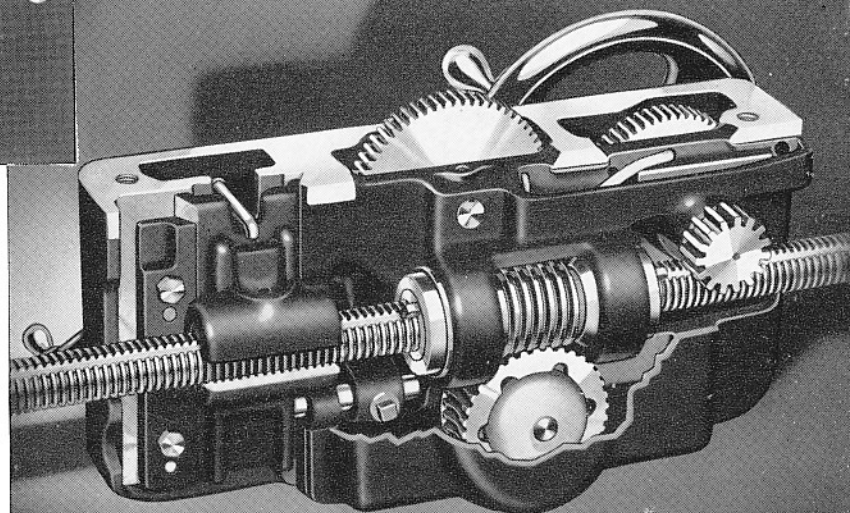


Above. Front View of Apron Showing Convenient Arrangement of Clutch Knob and Gear Shift Lever for Operating Power Carriage Feeds

Right. Back View of Apron Showing Rigid One Piece Double Wall Construction. Section Broken Away to Show Multiple Disc Clutch and Worm Drive for Power Carriage Feeds

The apron has a powerful worm drive and multiple disc friction clutch for operating the power longitudinal feeds and power cross feeds of the carriage. An automatic safety interlock prevents engaging the half nuts when either the power cross feed or power longitudinal feed is in use.

Gears in the apron are made of steel. All gear shafts are rigidly supported on both ends by the box type double wall apron which is cast in one piece. A large oil reservoir and felt wick oiling system assure ample lubrication for the gears, bearings, worm and clutch.



Extras for South Bend Lathes

Extras for South Bend Back Geared Screw Cutting Lathes 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 illustrated and described in Catalog No. 77-P in which each extra is clearly identified as either a "Standard Extra" or a "Purchased Extra".

Standard Extras

Standard Extras, with the exception of motors and controls, are items manufactured by us for use on South Bend Lathes and include:

Handwheel Type Draw-in Collet Attachment	Chip Pan
Handlever Draw-in Collet Attachment	Coolant Pump, Reservoir and Piping
Collet Rack	Milling and Keyway Cutting Attachment
4-Way Turret Tool Block	Metric Transposing Gears
Electric Grinding Attachment	Center Rest
Telescopic Taper Attachment	Follower Rest
Oil Pan	Micrometer Carriage Stop
Splash Pan—Required when coolant equipment is ordered for lathe with taper attachment	Thread Dial Indicator
	Ground Cutter Bits
	Motors and Controls <small>(Westinghouse, G. E. or equal furnished)</small>

Purchased Extras

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:

Independent Lathe Chucks	Lathe Dogs, Clamp Type
Universal Lathe Chucks	Tool Holders
Drill Chucks	Threading Tool Holder
Arbors for Drill Chucks	Knurling Tool Holder
Collets	Boring Tool Holders
Electric Grinders	

S P E C I F I C A T I O N S

10-inch South Bend Precision Lathes

	10-INCH REGULAR	10-INCH 1" COLLET
Capacity of Lathe		
Swing over bed and saddle wings	10 $\frac{1}{8}$ "	10 $\frac{1}{8}$ "
Swing over saddle with chip guard removed	6 $\frac{3}{4}$ "	6 $\frac{3}{4}$ "
Swing over saddle with chip guard	5 $\frac{7}{8}$ "	5 $\frac{7}{8}$ "
Spindle Speeds		
Standard spindle speeds (subject to 5% variation)		
R.P.M. of spindle, direct belt driven	700, 434, 277	700, 434, 277
R.P.M. of spindle, back gears engaged	129, 79, 50	129, 79, 50
High spindle speeds		
Regular equipment on all 10"—1" Collet Lathes. Supplied at extra cost on 10" Regular Lathes.		
R.P.M. of spindle, direct belt driven	1357, 837, 535	1357, 837, 535
R.P.M. of spindle, back gears engaged	248, 153, 97	248, 153, 97
Threads and Feeds		
Thread cutting range—48 threads R.H. or L.H.	4-224 per inch	4-224 per inch
Longitudinal feeds through friction clutch— 48 feeds R.H. or L.H.0015" to .0836"	.0015" to .0836"
Cross feeds through friction clutch—48 feeds0006" to .0309"	.0006" to .0309"
Lead screw, 29° Acme thread	$\frac{3}{4}$ " Diam. 8 Threads	$\frac{3}{4}$ " Diam. 8 Threads
Headstock		
Hole through spindle	1"	1 $\frac{3}{8}$ "
Maximum collet capacity	1 $\frac{1}{16}$ "	1"
Spindle nose diameter and threads per inch	1 $\frac{7}{8}$ "-8	2 $\frac{1}{4}$ "-8
Size of Center, Morse taper	No. 2	No. 2
Width of cone pulley step for belt	1 $\frac{5}{16}$ "	1 $\frac{5}{16}$ "
Large face plate diameter	8 $\frac{3}{8}$ "	8 $\frac{3}{8}$ "
Small face plate diameter	5 $\frac{5}{8}$ "	5 $\frac{5}{8}$ "
Front spindle bearing, diameter	2 $\frac{1}{4}$ "	2 $\frac{1}{4}$ "
Compound Rest		
Cross slide will travel	5 $\frac{7}{8}$ "	5 $\frac{7}{8}$ "
Angular hand feed of compound rest top slide	2"	2"
Tool Post		
Size of tool holder shank	$\frac{3}{8}$ " x $\frac{13}{16}$ "	$\frac{3}{8}$ " x $\frac{13}{16}$ "
Size of cutter bits tool holder takes	$\frac{1}{4}$ " sq.	$\frac{1}{4}$ " sq.
Tailstock		
Size of Morse taper centers	No. 2	No. 2
Spindle travel	2 $\frac{1}{8}$ "	2 $\frac{1}{8}$ "
Each graduation on tailstock spindle advances spindle	$\frac{1}{16}$ "	$\frac{1}{16}$ "
Tailstock will set over for taper turning	$\frac{3}{4}$ "	$\frac{3}{4}$ "
Motor		
Standard size of motor required for 10-inch motor driven lathe	$\frac{1}{2}$ H.P.	$\frac{3}{4}$ H.P.

The South Bend Lathe Works, whose policy is one of continuous improvement, reserves the right to change specifications, design, or component materials without incurring obligation.