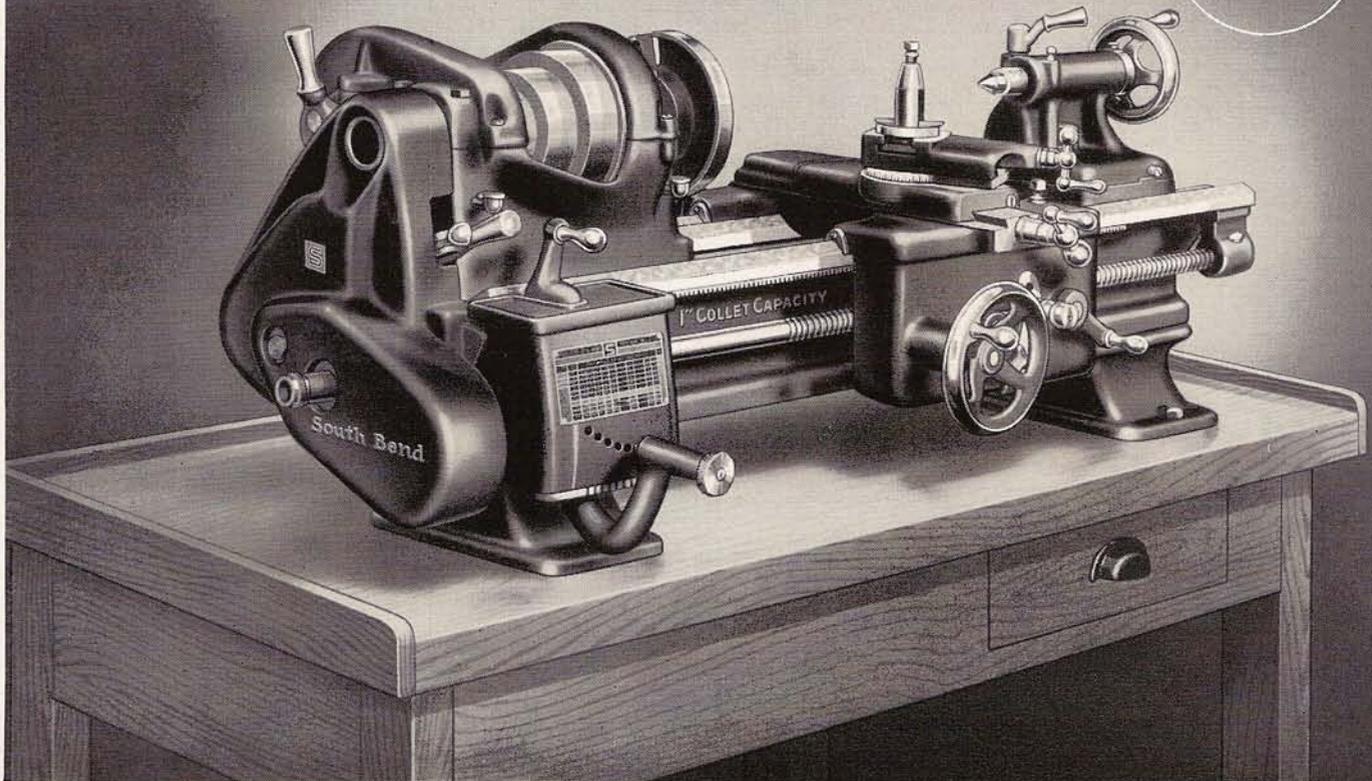


1-inch
Collet
Lathe



Circular No. 9C-11

9-inch 1" Collet Capacity Quick Change Gear Precision Bench Lathe—Overhead Countershaft Driven Type

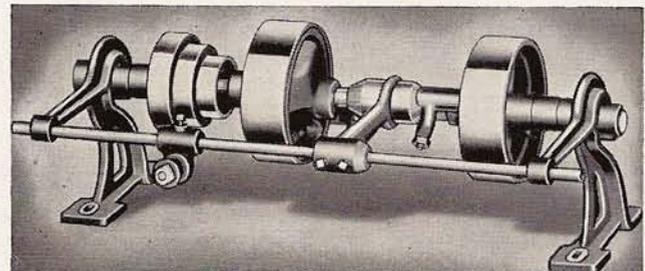
The 9-inch 1" Collet Capacity Quick Change Gear Bench Lathe with countershaft drive represents the maximum lathe value per dollar of cost for the shop that is equipped with a lineshaft for power. Economy of operation is another appealing feature of this lathe. See page 44 for specifications.

A Special Headstock, with $1\frac{3}{8}$ " hole through the spindle and 1" capacity through collet, makes this lathe especially practical for tool room and production operations on parts made of bar stock or tubing. The spindle runs in integral cast iron bearings which are adjustable for wear and are equipped with an efficient capillary oiling system.

Improved Features of lathe include: alloy steel headstock spindle, carburized, hardened and ground; ball thrust bearing; double wall apron with all gears of steel and multiple disc friction clutch for operating automatic cross feeds and automatic longitudinal feeds; easy reading micrometer graduated collars; and semi-steel lathe bed. See pages 7 to 11 for additional features of this lathe.

Attachments, Chucks and Tools for this lathe are listed on pages 90 to 111. This complete line of attachments and accessories greatly increases the usefulness of the lathe. Most of the attachments may be purchased either with the lathe or later.

Regular Equipment included in price of this lathe consists of: reversing countershaft with two friction clutch pulleys, large and small face plates, forged steel heat-treated tool post, 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." Bench not included.



Double Friction Countershaft for Lathe

9-inch 1" Collet Capacity Quick Change Gear Countershaft Driven Bench Lathes

Bed Length	3-ft.	3½-ft.	4-ft.	4½-ft.
Distance Between Centers....	16¾-in.	21¾-in.	27¾-in.	34¾-in.
Catalog Number.....	59-YB	59-ZB	59-AB	59-RB
Shipping Weight of Lathe....	440 lbs.	465 lbs	490 lbs.	515 lbs.
Code Word.....	Tikec	Tikid	Tikof	Tiluh

All Page References Apply to Catalog 100

SOUTH BEND LATHE WORKS

Lathe Builders Since 1906
425 E. MADISON ST., SOUTH BEND, IND., U.S.A.



Specifications of 9-inch 1" Collet Precision Lathes

Applying to all 9-inch 1" Collet Lathes Shown on Pages 45 to 53

All types of 9-inch 1" Collet lathes shown in this catalog are identical in workmanship, material and quality, having similar headstock, tailstock, carriage and bed. The only difference between the various models of lathes is in the type of drive and the equipment supplied.

Capacity of Lathe

Swing over bed and saddle wings.....	9 $\frac{1}{4}$ "
Swing over saddle with chip guard removed.....	6"
Swing over saddle with chip guard.....	5 $\frac{1}{4}$ "

Threads and Feeds

Thread cutting range	
Quick change gear lathe—48 threads R.H. or L.H.....	4 to 224 per inch
Longitudinal feeds through friction clutch	
Quick change gear lathe—32 feeds R.H. or L.H.....	.0015" to .0208"
Cross feeds through friction clutch	
Quick change gear lathe—32 feeds.....	.0006" to .0078"
Size of lead screw, diameter and threads per inch.....	$\frac{3}{4}$ "-8

Headstock

Hole through spindle.....	1 $\frac{3}{8}$ "
Maximum collet capacity.....	1"
Size of Center, Morse taper.....	No. 2
Spindle nose diameter and threads per inch.....	2 $\frac{1}{4}$ "-8
Width of cone pulley step for belt.....	1 $\frac{1}{4}$ "
Large face plate diameter.....	7 $\frac{5}{8}$ "
Small face plate diameter.....	5 $\frac{5}{8}$ "
Standard spindle speeds	
R.P.M. of spindle, back gears engaged.....	50, 79, 129
R.P.M. of spindle, direct belt driven.....	277, 434, 700
High spindle speeds (Included in price of lathe)	
R.P.M. of spindle, back gears engaged.....	97, 153, 248
R.P.M. of spindle, direct belt driven.....	535, 837, 1357

Compound Rest

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

Tool Post

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

Tailstock

Size of Morse taper centers.....	No. 2
Spindle travel.....	2 $\frac{1}{8}$ "
Each graduation on tailstock spindle advances spindle.....	$\frac{1}{16}$ "
Tailstock top will set over for taper turning.....	$\frac{3}{4}$ "

Motor

Horsepower of standard motor used on 9-inch 1" collet motor driven lathes.....	$\frac{1}{2}$
R.P.M. of standard motor.....	1725
Number of V-belts used.....	1

Countershaft

Speed in R.P.M. of shaft.....	300
Size of pulleys.....	6 $\frac{7}{8}$ " x 2 $\frac{3}{16}$ "

Taper Attachment (telescopic type)

Maximum length turned in one setting.....	8 $\frac{1}{2}$ "
Maximum taper per foot.....	3"

Metric Lathe Specifications

Applying only to lathes with metric lead screw and metric graduations. See pages 108 to 110.	
Quick change gear lathe cuts 46 threads R.H. or L.H.....	7.5 mm to 0.2 mm
Standard change gear lathe cuts 35 threads R.H. or L.H.....	7.0 mm to 0.2 mm
Lead screw pitch.....	3.0 mm
Cross feed screw pitch.....	2.5 mm
Compound rest feed screw pitch.....	2.5 mm
Each graduation on cross feed micrometer collar advances tool.....	0.02 mm
Each graduation on compound rest micrometer collar advances tool.....	0.02 mm
Each graduation on tailstock spindle advances spindle.....	1.0 mm

For description of lathe features see pages 7 to 11