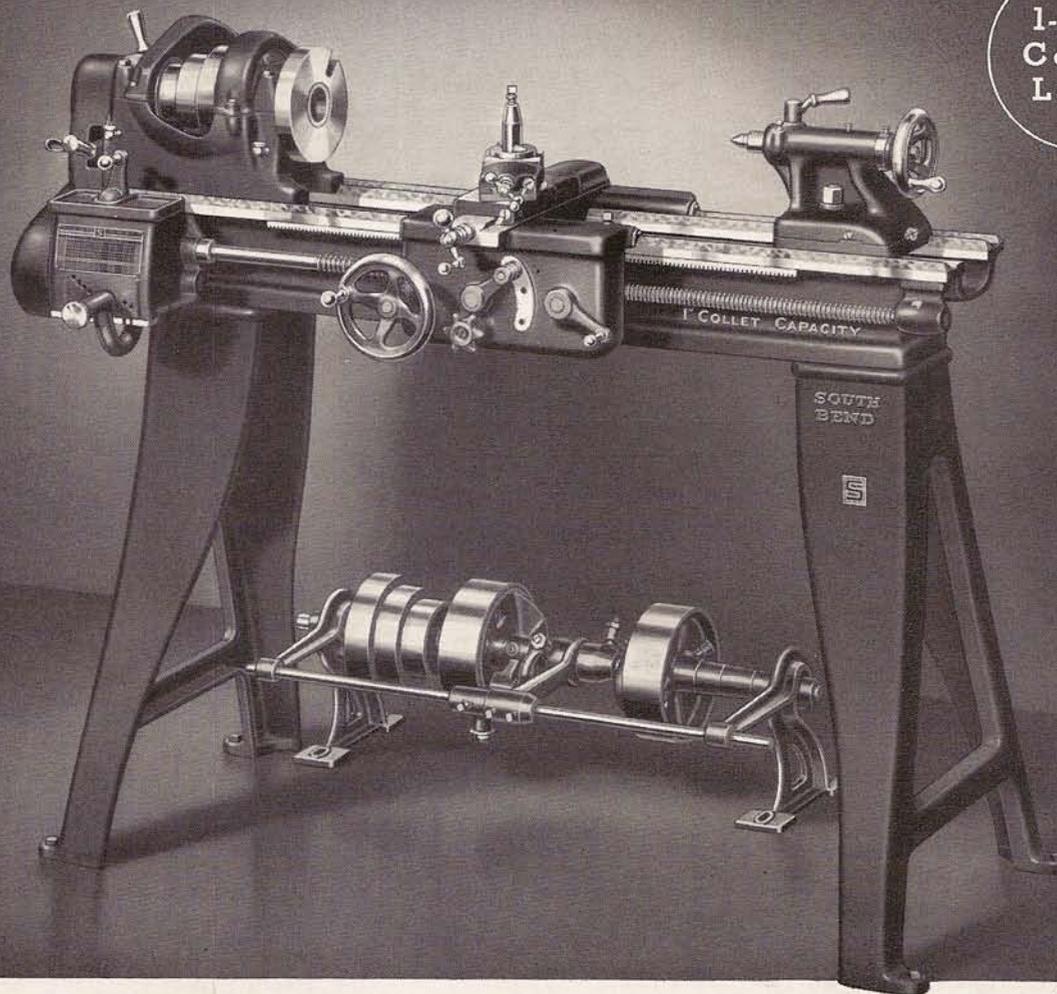


1-inch
Collet
Lathe



Circular No. 9C-6

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

The 9-inch 1" Collet Capacity Quick Change Gear 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 an appealing feature of this lathe and accounts for its popularity for use in industrial plants.

A Special Headstock, with $1\frac{3}{8}$ " hole through the spindle and 1" capacity through collet, makes this lathe practical for operations on bar stock. Spindle runs in integral cast iron bearings which are adjustable for wear and have 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, and page 44 for specifications 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, adjustable thread cutting stop, tool steel centers for headstock and tailstock spindles, spindle sleeve, wrenches, gear box, installation plan, and book "How to Run a Lathe."

9-inch 1" Collet Quick Change Gear Countershaft Driven 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-Y | 59-Z | 59-A | 59-R |
| Shipping Weight of Lathe..... | 515 lbs. | 540 lbs. | 565 lbs. | 590 lbs. |
| Code Word..... | Tobuc | Tofug | Togog | Toguh |

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..... | $\frac{3}{8}$ " x $\frac{13}{16}$ " |
| 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