



Circular No. 24-1

## 16-24-inch General Purpose Lathe—Series "T" Underneath Belt Motor Driven Type

The 16-24-inch General Purpose Lathe is a practical tool for machining large diameter work that is not excessively heavy. This lathe is the same as the 16-inch shown on page 15, except that the height of the centers is increased by the use of raising blocks, making the swing of the lathe  $24\frac{1}{4}$ " in diameter over the bed and 19" in diameter over the saddle bridge. See specifications of lathe on page 80.

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 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.

Regular Equipment included in price consists of: 1 H.P. instant reversing ball bear-

ing motor; reversing switch; wiring; 3 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 or set of independent change gears; installation plan, and book "How to Run a Lathe."

### Quick Change Gear

#### 16-24-inch Underneath Motor Driven Lathes

Bed Length	6-ft.	7-ft.	8-ft.	10-ft.	12-ft.
Distance Between Centers . . .	30-in.	42-in.	54-in.	78-in.	102-in.
Catalog Number . . . . .	198-C	198-D	198-E	198-G	198-H
Shipping Weight of Lathe . . . .	2480 lbs.	2560 lbs.	2640 lbs.	2800 lbs.	3030 lbs.
Code Word . . . . .	Beluj	Bemux	Benaq	Beniy	Benuk

### Standard Change Gear

#### 16-24-inch Underneath Motor Driven Lathes

Bed Length	6-ft.	7-ft.	8-ft.	10-ft.	12-ft.
Distance Between Centers . . .	30-in.	42-in.	54-in.	78-in.	102-in.
Catalog Number . . . . .	157-C	157-D	157-E	157-G	157-H
Shipping Weight of Lathe . . . .	2445 lbs.	2525 lbs.	2605 lbs.	2765 lbs.	2995 lbs.
Code Word . . . . .	Bipan	Biper	Bisac	Biseq	Bisoc

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 16-24-inch General Purpose Lathes

Applying to all 16-24-inch Lathes Shown on Pages 81 to 83

All types of 16-24-inch swing 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.....	24 $\frac{1}{4}$ "
Swing over saddle with chip guard removed.....	19 $\frac{3}{4}$ "
Swing over saddle with chip guard.....	19"

## Threads and Feeds

Thread cutting range	
Quick change gear lathe—48 threads R.H. or L.H.....	2 to 112 per inch
Standard change gear lathe—47 threads R.H. or L.H.....	2 to 112 per inch
Longitudinal feeds through friction clutch	
Quick change gear lathe—24 feeds R.H. or L.H.....	.003" to .0208"
Standard change gear lathe—29 feeds R.H. or L.H.....	.0021" to .021"
Cross feeds through friction clutch	
Quick change gear lathe—24 feeds.....	.0011" to .0078"
Standard change gear lathe—29 feeds.....	.0008" to .0078"
Size of lead screw, diameter and threads per inch.....	1 $\frac{1}{8}$ "-6

## Headstock

Hole through spindle.....	1 $\frac{3}{8}$ "
Maximum collet capacity.....	$\frac{7}{8}$ "
Size of Center, Morse taper.....	No. 3
Spindle nose diameter and threads per inch.....	2 $\frac{3}{8}$ "-6
Width of cone pulley step for belt.....	2 $\frac{1}{4}$ "
R.P.M. of spindle, back gears engaged.....	12, 21, 35, 60
R.P.M. of spindle, direct belt driven.....	112, 185, 294, 488
Large face plate diameter.....	13 $\frac{1}{4}$ "
Small face plate diameter.....	8 $\frac{1}{16}$ "

## Compound Rest

Cross slide will travel.....	10 $\frac{1}{2}$ "
Angular hand feed of compound rest top slide.....	3 $\frac{3}{4}$ "

## Tool Post

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

## Tailstock

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

## Motor

Horsepower of standard motor used on 16-24-inch motor driven lathes.....	1
R.P.M. of standard motor for underneath motor driven lathe.....	1150
R.P.M. of standard motor for pedestal motor driven lathe.....	1725
Number of V-belts used.....	3

## Countershaft

Speed in R.P.M. of shaft.....	180
Size of pulleys.....	10" x 3 $\frac{5}{8}$ "

## Taper Attachment (telescopic type)

Maximum length turned in one setting.....	11 $\frac{1}{2}$ "
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.....	4.0 mm
Cross feed screw pitch.....	3.0 mm
Compound rest feed screw pitch.....	3.0 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 6 to 11