PRECISION ENGINE LATHES
20-4", 24-4" & 28-4" LATHES
The **Summit 20-4", 24-4" & 28-4" Lathes** combine accuracy, simplicity and affordability to bring you a proven industry leader. Tested under the most demanding work conditions, the **Summit 20-4", 24-4" & 28-4"** turn rings around other lathes in their range.

The 20-4", 24-4" & 28-4" lathes have just the right amount of engineering to afford simplicity of operation, coupled with plain and simple rugged reliability. In addition, built in safety features like the safety clutch in the apron that kicks out the feed and the feed/threading safety interlock eliminating the simultaneous engagement of the feed and threading motion, place these machines in a field of their own — unparalleled in performance.

A few of the outstanding features of the 20-4", 24-4" & 28-4" lathes are a cross ribbed headstock for added strength and stability, with anti-friction mounted shafts and dynamically balanced components; hardened and ground alloy steel gears, shafts and splines, and an oversized precision chrome alloy spindle with a big 4 1/8" thru hole that is mounted in double row angular contact thrust bearings and 2 double row roller bearings. These large spindle bearings give the 20-4", 24-4" & 28-4" greater radial and thrust capacities ensuring very precise turning capabilities.

Available in 40", 60", 80", 120", 160" and 200" center distances, the 20-4", 24-4" & 28-4" lathes feature hardened and precision ground bedways on a heavy one-piece closed grain cast bed that is fully ribbed for maximum stability and even thermal expansion. Standard on every machine is a quick-change gearbox for cutting Metric, Module and Diametral Pitch threads as well as standard American threads. The engineering excellence, fine workmanship, materials and impressive specifications of the **Summit 20-4", 24-4" & 28-4" Lathes** assure you of greater production and easy, trouble free operation for years to come.
Included Accessories

- Thread dial
- Standard steady rest with roller tips
- Extra capacity steady rest with roller tips
- Follow rest
- Coolant system
- Taper attachment
- 3-Jaw chuck with 2 piece rev. jaws
- Carriage stop
- Work light

All included accessories at no charge when ordered with lathe.

Standard Features

- Hardened and ground bedways
- Big 4 1/8" thru hole
- Removable gap
- Inch/metric threads
- Conveniently located controls
- Forced lubrication to the headstock, carriage and bedways
- Cuts most American & Metric threads without change gears
- Complete accessory package
- Crossfeed and threading safety interlock
- Feed reversing at the apron
- Hardened and ground cross slide ways
- 4-way rapid traverse
- Heavily ribbed bed
- Single lever control for feeds and rapids
- Full length chip and coolant guard
- 2 speed tailstock

OPTIONAL EQUIPMENT

- Quick change tool post
- Faceplates
- Electronic DRO
- Premium chucks
- Other workholding devices & tooling available on request
# DIMENSIONS AND SPECIFICATIONS

## 20-4", 24-4" & 28-4" PRECISION ENGINE LATHES

### SPECIFICATIONS CAPACITIES

<table>
<thead>
<tr>
<th></th>
<th>20-4&quot;</th>
<th>24-4&quot;</th>
<th>28-4&quot;</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inch</td>
<td>Metric</td>
<td>Inch</td>
<td>Metric</td>
</tr>
<tr>
<td>Swing over bed</td>
<td>20 1/4&quot;</td>
<td>25&quot;</td>
<td>28 1/2&quot;</td>
</tr>
<tr>
<td>Swing over cross slide</td>
<td>11 7/8&quot;</td>
<td>302mm</td>
<td>19 5/8&quot;</td>
</tr>
<tr>
<td>Swing over gap</td>
<td>27 5/8&quot;</td>
<td>702mm</td>
<td>36 1/2&quot;</td>
</tr>
<tr>
<td>Length of gap</td>
<td>15&quot;</td>
<td>381mm</td>
<td>23&quot;</td>
</tr>
<tr>
<td>Length of gap in front of plate</td>
<td>8 3/8&quot;</td>
<td>213mm</td>
<td></td>
</tr>
</tbody>
</table>

### WORKPIECE WEIGHTS

- At headstock: 400 lbs. 181 kgs
- Between centers: 2,000 lbs. 907 kgs
- Between centers with steady rest: 4,000 lbs. 1,814 kgs

### HEADSTOCK

- Spindle speeds - number: 15 21
- Spindle speeds - range (RPM): 11.5 to 1400 20 to 1250 20 to 1250
- Hole thru spindle: 4 1/8" 105mm
- Spindle nose type: D1-8 Camlock
- Number of bearings on spindle: 3
- Headstock length on bed: 24 1/2" 622mm
- Type of bearings on spindle: Angular Contact Thrust Bearings
- Main spindle bearing outside diameter: 8 1/2" 220mm
- inside diameter: 5" 130mm
- Overall length of spindle: 34" 864mm

### QUICK CHANGE GEARBOX

- Threads per inch - (number) range: (64) 1/4 to 60
- Metric threads - (number) range: (64) 5 to 120
- Module threads - (number) range: (64) 125 to 30
- Diametral pitch - (number) range: (64) 1 to 240
- Long. feeds - (number) range: (124) .00145 to .44474
- Cross feeds - (number) range: (124) .0007 to .22237
- Lead screw - diameter/range: 2" / 2 T.P.I.
- Feed rod diameter: 1" 25mm
- Lubrication system: Oil bath

### CARRIAGE & APRON

- Cross slide travel: 12 1/2" 315mm 12 1/2" 315mm 15 1/4" 390mm
- Cross slide depth of bridge: 4 3/4" 120mm
- Cross slide width of bridge: 8 1/4" 210mm
- Compound rest travel: 5 3/8" 136mm
- Compound rest width: 5 7/8" 150mm
- Length of carriage bearing on ways: 23" 584mm
- Graduation of apron handwheel: .002" 0.05mm
- Travel of carriage per revolution of handwheel: .875" 22mm

### TAILSTOCK

- Travel of spindle barrel: 9 1/2" 241mm
- Diameter of spindle barrel: 3 1/2" 74mm
- Taper of center: #5 MT
- Tailstock body length on bed: 13 3/4" 350mm
- Length of barrel graduations on spindle: 10" 152mm
- Type of clamping on bed: Bolts and Lever Clamp
- Type of lubrication system: Reciprocating Pump
- Headstock drive & motors:
  - Type of input drive: vee belt
  - Number of vee belts: 4
  - Main drive motor: 10 H.P. 7.5 KW 15 H.P. 11 KW
  - Helical pump motor: 1/4 H.P. .18 KW

### TAPER ATTACHMENT

- Maximum turning length per setting: 15 3/4" 400mm
- Degrees of taper: ±10°

### MISCELLANEOUS

- 20-4" Standard steady rest w/rollers: 1/2" to 6 1/8" 12.5 to 155mm
- 24-4" & 28-4" Standard steady rest w/rollers: 3/4" to 7 3/4" 20 to 200mm
- 20-4" Extra cap. steady rest w/rollers: 5" to 11" 125 to 250mm
- 24-4" Extra cap. steady rest w/rollers: 5 1/2" to 13 1/2" 140 to 343mm
- 28-4" Extra cap. steady rest w/rollers: 7 3/4" to 16 3/4" 200 to 425mm

### SHIPPING DATA

- Overall weight: 48" 1,220mm
- Overall height: 60" 1,524mm 62" 1,574mm 70" 1,778mm
- Overall length/weight: (Inch/lbs - mm/kgs)
  - 40" Centers: 141'6,800 - 2.900/0,391
  - 60" Centers: 141'7,200 - 2.950/0,373
  - 80" Centers: 141'7,600 - 3.450/0,455
  - 100" Centers: 141'8,000 - 3.960/0,537
  - 120" Centers: 141'8,400 - 4.480/0,619
  - 160" Centers: 141'9,500 - 6.000/0,431
  - 200" Centers: 141'10,600 - 7.000/0,500

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**WARRANTY:** A copy of Summit Machine Tool LLC’s standard written warranty is attached to each Summit Machine. Call or write to Summit for a copy or for further information concerning Summit’s standard warranty. All purchases are subject to Summit’s standard written warranty. Specifications are subject to change without notice.

**POINT OF OPERATION GUARDING** is the responsibility of the end user. For information contact your local OSHA office.

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SUMMIT MACHINE TOOL LLC
518 N Indiana Ave • Oklahoma City, OK 73106
MAIN 405.235.2075
FAX 405.232.5169
WWW.SUMMITMACHINETOOL.COM

**FOR MORE INFORMATION CALL 1-800-654-3262**