

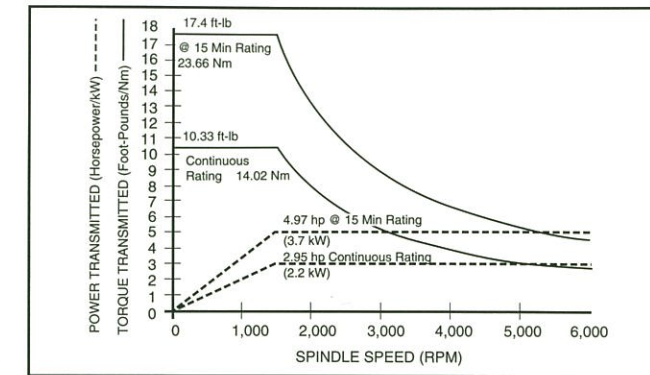
# Machine specifications

| Lathe Model   | CONQUEST® GT                | CHNC® III   | CHNC IIIISP  |
|---|-----------------------------|---|--|
| <b>Spindle</b>  |                             |   |  |
| Spindle Configuration (ANSI)  | A2-4", 5C                   | A2-5", 16C  | A2-5", 16C   |
| Round Collet (Through Capacity)   | 1.062"/27mm                 | 1.625"/42mm   | 1.625"/42mm  |
| SURE-GRIP™ Power Jaw Chucks   |                             |   |  |
| 4" Chuck (Gripping Capacity)  | 3.8"/96.5mm                 | —   | —  |
| 5" Chuck (Gripping Capacity)  | —                           | 4.5"/114mm  | 4.5"/114mm   |
| 6" Chuck (Gripping Capacity)  | —                           | 5.5"/139mm  | 5.5"/139mm   |
| Through Capacity  | 1.062"/27mm                 | 1.625"/42mm   | 1.625"/42mm  |
| Step Chuck (Gripping Capacity)  | 4"/101.6mm                  | 6"/152.4mm  | 6"/152.4mm   |
| Hang Weight w/Workholding Device (Max.)   | 75lb/34kg                   | 75lb/34kg   | 75lb/34kg  |
| Collet Closer Stroke  | 1/2" / 12.7mm               | 1/2" / 12.7mm   | 1/2" / 12.7mm  |
| Turning Diameter (Max.)   | 9.1"/231mm                  | 8"/203mm  | 8"/203mm   |
| Threading Diameter (Max.)   | 9.1"/231mm                  | 8"/203mm  | 8"/203mm   |
| Fixture Diameter (Max.)   | 6"/152.4mm                  | 9"/229mm  | 9"/229mm   |
| <b>AC Digital Drive System</b> <sup>1,2</sup>   |                             |   |  |
| Standard  | 5hp/3.7kW                   | 10hp/7.4kW  | 10hp/7.4kW   |
| Torque Rating   | 17.4 ft-lb/23.66Nm          | 42 ft-lb/56Nm   | 42 ft-lb/56Nm  |
| Speed Range (1-rpm steps)   | 60 to 6,000                 | 50 to 5,000   | 50 to 5,000  |
| <b>Top Plate and Tooling</b>  |                             |   |  |
| Number of Tool Positions (Standard)   | Part-Dependent              | 8   | 8  |
| Available   | Part-Dependent              | 4   | 4  |
| Number of Tool Positions for Live Tooling Option  | 2                           | —   | —  |
| Square Shank Tool Size (Standard)   | 1/2" / 12mm (Max.)          | 1/2" / 12mm   | 1/2" / 12mm  |
| Available   | —                           | 3/8" / 10mm   | 3/8" / 10mm  |
| Round Shank Tool Diameter (Standard)  | 3/4" / 20mm (Max.)          | Up to 3/4" / 20mm   | Up to 3/4" / 20mm  |
| Available   | —                           | Up to 5/8" / 15mm   | Up to 5/8" / 15mm  |
| X-Axis Travel (Max.)  | 11.968"/304mm               | 4.5"/114mm  | 4.5"/114mm   |
| Z-Axis Travel (Max.)  | 11.063"/281mm               | 12.0"/305mm   | 12.0"/305mm  |
| X-Axis Traverse Rate (Max.)   | 472ipm / 12m/min            | 400ipm / 10m/min  | 400ipm / 10m/min   |
| Z-Axis Traverse Rate (Max.)   | 630ipm / 16m/min            | 400ipm / 10m/min  | 400ipm / 10m/min   |
| Distance from Spindle to Top Plate Face (Max.)  | 11.259"/286mm               | 12.5"/317mm   | 12.5"/317mm  |
| Indexing Time (Station 1 to 8)  | —                           | 2 seconds   | 2 seconds  |
| Station to Station (Unlock, Index, Relock)  | —                           | 1 second  | 1 second   |
| Turret Indexing Repeatability   | —                           | .000010"  | .000010"   |
| Axis Repeatability (Overall)  | .000050"/1.25 micron        | .000050"/1.25 micron  | .000050"/1.25 micron   |
| Swing Diameter Over Bed/Way Cover (Max.)  | 11.760"/298.7mm             | 14.0"/356mm   | 14.0"/356mm  |
| Swing Diameter Over Tooling Top Plate (Max.)  | 2.654"/67.41mm              | —   | —  |
| <b>Live Tooling</b> <sup>3</sup>  |                             |   |  |
| Number of Positions for Live Tooling  | 2                           | —   | —  |
| Live Tooling Holders Speed Range  | Up to 4,000 rpm             | —   | —  |
| Rating at Tool Tip  | 0.3hp/0.2kW                 | —   | —  |
| Torque Rating (Max.)  | 18in-lb/0.4Nm               | —   | —  |
| <b>Parts Removal System</b>   |                             |   |  |
| Workpiece Diameter x Length (Max.)  | 3"/76.2mm                   | 2.75"/69.85mm   | 2.75"/69.85mm  |
| <b>Miscellaneous</b>  |                             |   |  |
| Compressed Air Requirement  | 70 to 90 psi<br>5 to 6 scfm | 70 to 90 psi<br>5 to 6 scfm   | 70 to 90 psi<br>5 to 6 scfm  |
| Recommended Ambient Operating Temperature   | 32 to 104°F/0° to 40°C      | 32 to 104°F/0° to 40°C  | 32 to 104°F/0° to 40°C   |
| Coolant Tank  |                             |   |  |
| Capacity  | 20 US Gal/76 Liter          | 30 US Gal/114 Liter   | 30 US Gal/114 Liter  |
| Coolant Flow Rate   | 8 to 10 gpm/30-38 L/min     | 6 to 8 gpm/22-30 L/min  | 6 to 8 gpm/22-30 L/min   |
| Approx. Skidded Weight  | 5,700lb/2586kg              | 6,000lb/2722kg  | 6,000lb/2722kg   |
| Spindle Centerline Height   | 42.250"/1073.15mm           | 47.375"/1203.33mm   | 47.375"/1203.33mm  |
| Machine Dimensions  |                             |   |  |
| Length  | 72.50"/1842mm               | 92.75"/2356mm   | 92.75"/2356mm  |
| Length w/Chip Removal System  | 113.30/2877mm               | 128.00"/3251mm  | 128.00"/3251mm   |
| Depth   | 58.70"/1491mm               | 70.00"/1778mm   | 70.00"/1778mm  |
| Height  | 62.00"/1575mm               | 64.50"/1638mm   | 64.50"/1638mm  |
| With Guard Door Raised  | —                           | 90.00"/2286mm   | 90.00"/2286mm  |
| <b>Additional Options Offered:</b>  |                             |   |  |
| Tool Touch Probe <sup>4</sup>   |                             | 1 15-minute ratings used for power and torque specifications.                     | 4 Tool touch probe accuracy: ±.001"/±.025mm<br>Sensor repeatability ±.00040"/±.001mm |
| Air Blast System <sup>5</sup>   |                             | 2 Base speed torque ratings: CONQUEST GT @ 1,500 rpm; CHNC III/IIIISP @ 1,250 rpm | 5 CONQUEST GT Only   |
| Autoload™ Parts Handling System <sup>5</sup>  |                             | 3 One-degree spindle orient must be purchased to support this option              | 6 Available as original equipment only   |
| Auto Door <sup>5,6</sup>  |                             |   | 7 CHNC models only   |
| Vertical Cut-off Slide <sup>6,7</sup>   |                             |   |  |
| Power/Isolation Transformers  |                             |   |  |
| One-Degree Spindle Orient   |                             |   |  |
| Tramp Oil Recovery System <sup>5</sup>  |                             |   |  |
| Chip Removal System   |                             |   |  |
| Turbo Microfine® Chip Conveyor  |                             |   |  |
| NOTE: A supplementary power transformer is required for all voltages other than 230v, 60Hz. |                             |   |  |

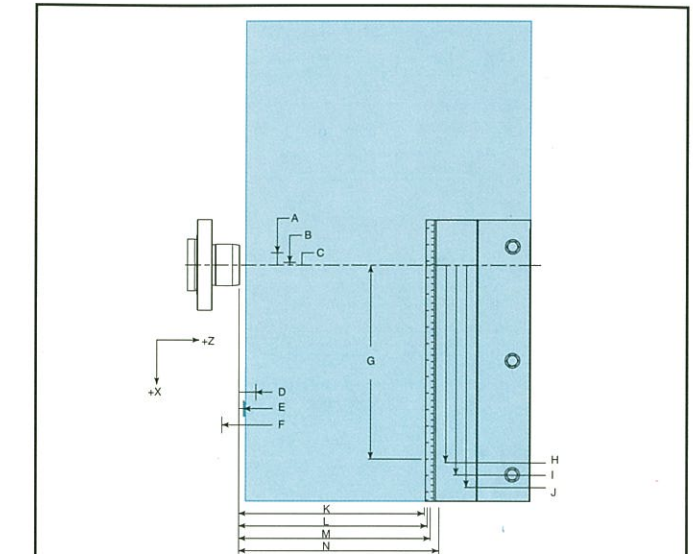
# Maximum horsepower/minimum tool interference

## CONQUEST® GT

### Spindle Drive System Power and Torque Curve

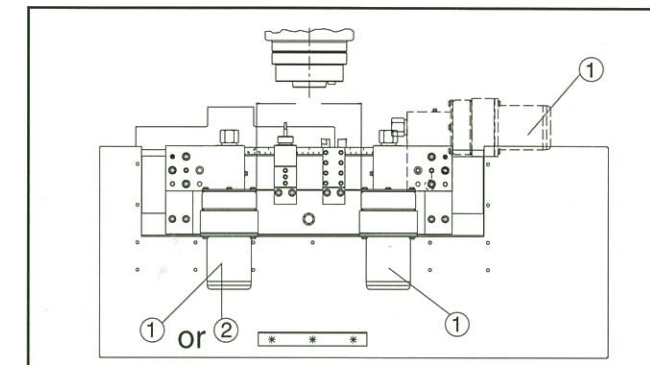


### Work Envelope/Travel Specifications



| Dimension | Description    | Value             |
|-----------|----------------|-------------------|
| A         | Solid Stop     | -1.18"/-29.972mm  |
| B         | Hardware Limit | -.0314"/-7.9756mm |
| C         | Software Limit | 0.00"/0.00mm      |
| D         | Hardware Limit | 0.197"/5.00mm     |
| E         | Software Limit | 0.039"/0.99mm     |
| F         | Solid Stop     | -0.197"/-5.00mm   |
| G         | Home Position  | 23.50"/596.00mm   |
| H         | Software Limit | 23.936"/608.00mm  |
| I         | Hardware Limit | 24.252"/616.00mm  |
| J         | Solid Stop     | 25.118"/638.00mm  |
| K         | Home Position  | 11.25"/285.00mm   |
| L         | Software Limit | 11.2598"/286.00mm |
| M         | Hardware Limit | 11.4173"/290.00mm |
| N         | Solid Stop     | 12.126"/308.00mm  |

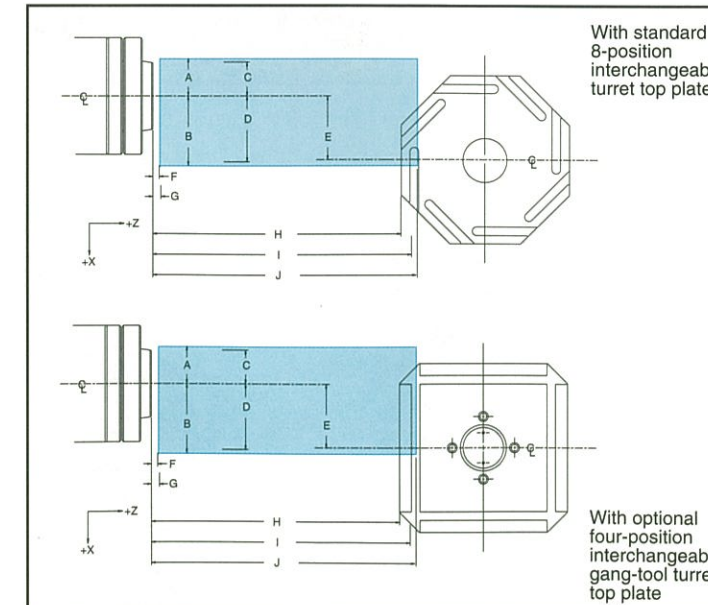
### Live Tooling Option Layout



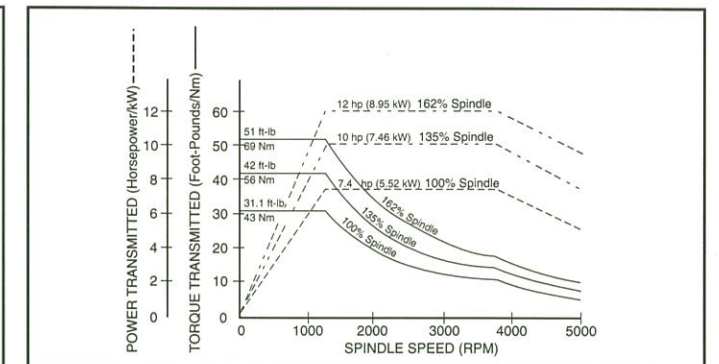
| Item No. | Position      | Model No. | Description                               |
|----------|---------------|-----------|---|
| 1        | Front or Rear | HG-50     | Cross/End-Milling and Drilling Attachment |
| 2        | Front Only    | HG-52     | End-Tapping Attachment                    |

## CHNC® III/CHNC IIIISP

### Work Envelope/Travel Specifications



### Spindle Drive System Power and Torque Curve



| Dimension | Description       | Value           |
|-----------|-------------------|-----------------|
| A         | -X Limit Switch   | 1.65"/69.15mm   |
| B         | +X Limit Switch   | 3.15"/80.01mm   |
| C         | -X Software Limit | 1.60"/40.64mm   |
| D         | +X Software Limit | .10"/78.74mm    |
| E         | X Reference Zero  | 3.00"/76.20mm   |
| F         | -Z Limit Switch   | .370"/9.398mm   |
| G         | +Z Software Limit | .450"/11.43mm   |
| H         | Z Reference Zero  | 12.00"/304.8mm  |
| I         | +Z Software Limit | 12.50"/317.5mm  |
| J         | +Z Limit Switch   | 12.60"/320.04mm |