The Moore Tool Company, a leader in precision machine tool design and manufacture, produces a complete line of jig grinding machines and accessories.

The 500 Series Jig Grinder is available in three models (CPZ, CPZ-E and CPWZ) to address your specific precision grinding requirements. These CNC-controlled jig grinding machines have multiple, programmable axes (four simultaneously controlled) for complex two- and three-dimensional features.

Features
- Base assembly provides unmatched geometric accuracy and repeatability
- Fanuc multi-axis control and PC front-end with customized touchscreen user interface
- Moore ProGrind® for improved tool and labor cost savings

Moore ProGrind® Options
- State-of-the-art sensor technology (Moore AutoSize® and Moore AutoGrind)
- Automatic tool changer (up to 20 tools)
- Automatic tool changer electric spindle: 3,000 to 60,000 rpm
- Air spindles: 9,000 to 175,000 rpm (five spindles)
- Electric spindles: 15,000 to 80,000 rpm (three spindles)
- Flood coolant system with chiller
- Machine enclosure
- Single-axis or two-axis rotary tables
- Fire suppression system
- Vapor extraction system
- On-machine inspection/probing
Specifications

500 Series
CPZ, CPZ-E and CPWZ

Capacity

<table>
<thead>
<tr>
<th>Specification</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Table working surface</td>
<td>305 mm x 610 mm (12.0 x 24.0 in.)</td>
</tr>
<tr>
<td>Travel (X Axis)</td>
<td>500 mm (19.6 in.)</td>
</tr>
<tr>
<td>Travel (Y Axis)</td>
<td>300 mm (11.8 in.)</td>
</tr>
<tr>
<td>U-axis travel (programmable)</td>
<td>11 mm (0.43 inch) behind centerline of main spindle to 28.5 mm (1.125 inch) beyond center</td>
</tr>
<tr>
<td>U-axis travel (main coarse adjustment)</td>
<td>3.6 mm (0.140 in.)</td>
</tr>
<tr>
<td>Table top to U-axis mounting flange</td>
<td>280 mm to 762 mm (11.0 in. to 30.0 in.)</td>
</tr>
<tr>
<td>W-axis spindle housing vertical travel</td>
<td>350 mm (13.8 in.)</td>
</tr>
<tr>
<td>Z-axis vertical slide travel</td>
<td>140 mm (5.5 in.)</td>
</tr>
<tr>
<td>Taper adjustment range</td>
<td>0 to 1.5º from centerline (3º included angle over full vertical travel.)</td>
</tr>
<tr>
<td>Grinding hole diameter range</td>
<td>0.4 to 127 mm (0.016 to 5.0 in.); or to 343 mm (13.5 in.) with optional extension plates</td>
</tr>
<tr>
<td>Load carrying capacity</td>
<td>300 kg (660 lbs)</td>
</tr>
</tbody>
</table>

Speeds and Feeds

<table>
<thead>
<tr>
<th>Specification</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Traverse speed: X, Y, W, Z axis</td>
<td>0.0001 – 2000 mm/min. (0.0001 – 80 in./min.)</td>
</tr>
<tr>
<td>Spindle speeds (planetary mode)</td>
<td>1 to 300 rpm</td>
</tr>
<tr>
<td>Air turbine and electric grinding spindle speeds</td>
<td>6,000 to 175,000 rpm</td>
</tr>
<tr>
<td>Reciprocation stroke rate (25.4 mm / 1 in.)</td>
<td>0 – 190 cycles/min.</td>
</tr>
</tbody>
</table>

Accuracy

Positioning Accuracy: Step Gauge

Deviation in full travel: X & Y axes                   | 2.0 μm (100.0 μin.)

Positioning Accuracy: VDI/DGQ 3441

Positional uncertainty P: X axis                      | 2.0 μm (80.0 μin.)
Positional uncertainty P: Y axis                      | 2.0 μm (80.0 μin.)
Positional uncertainty P: W axis¹                     | 2.0 μm (80.0 μin.)
Positional uncertainty P: Z axis²                     | 4.0 μm (160.0 μin.)
Positional deviation Pa: X axis                       | 1.5 μm (60.0 μin.)
Positional deviation Pa: Y axis                       | 1.5 μm (60.0 μin.)
Positional deviation Pa: W axis¹                      | 1.5 μm (60.0 μin.)
Positional deviation Pa: Z axis²                      | 3.0 μm (120.0 μin.)

Contouring Accuracy

X, Y & C at 250 mm/min., measuring a 200 mm (8 in.) ring gauge | 3.0 μm (120.0 μin.)

Geometric: Squateness (Full Travel)

Spindle housing to X-Y plane                          | 2.0 μm (80.0 μin.)

Geometric: Alignment (Full Travel)

Parallelism of spindle centerline to column guideways | 2.0 μm (80.0 μin.)

(All statements concerning accuracy are based on calibration temperature of 20 ±/– 0.5 degrees C [68 ±/– 1.0 degrees F])

¹Not applicable to CPZ and CPZ-E Models
²Not applicable to CPZ Model

Moore ProGrind® Electric Grinding Spindle

With today’s electric grinding spindle technology, constant torque is maintained throughout the speed range of 3,000 to 60,000 rpm. High accuracy radial run-out and superior repeatability tool to tool, helps ensure accuracy when using the 20 tool ATC. The spindle accepts a full-range of HSK-E 25 tool holders.

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