

# moore tool company

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

The 1280 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

- Large travels for large work or multiple part setups
- 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

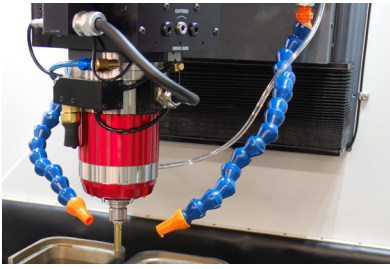
- State-of-the-art sensor technology (Moore AutoSize® and Moore AutoGrind)
- Automatic tool changer (up to 20 tools)
- Automatic tool changer electric spindle: 10,000 to 60,000 rpm
- Air spindles: 9,000 to 175,000 rpm (five spindles)
- Electric spindles: 15,000 to 80,000 rpm (three spindles)
- Flood coolant system with chiller
- Machine enclosure
- Single-axis or two-axis rotary tables
- Fire suppression system
- Vapor extraction system
- On-machine inspection/probing



# Jig Grinder

1280 Series

# specifications



## Moore ProGrind® Electric Grinding Spindle

With today's electric grinding spindle technology, constant torque is maintained throughout the speed range of 10,000 to 60,000 rpm. Superior spindle taper and high accuracy radial run-out, and repeatability tool to tool, helps ensure accuracy when using the 20 tool ATC. The hybrid ceramic ball bearings provide long life and less downtime.

### Capacity

Table working surface	812 mm x 1219 mm (32.0 x 48.0 in.)
Inside distance between risers	965 mm (38.0 in.)
Tabletop to bottom of bridge	520 mm (20.5 in.)
Travel (X axis)	1320 mm (51.97 in.)
Travel (Y axis)	820 mm (32.3 in.)
U-axis travel (programmable)	3,5 mm (0.140 in.)
U-axis travel (main coarse adjustment)	11 mm (0.43 in.) behind centerline of main spindle to 28,5 mm (1.125 in.) beyond center
Table top to U-axis mounting flange	431,8 mm to 924 mm (17.0 in. to 36.39 in.)
Table top to bottom of ATC electric grinding spindle	264 mm to 757 mm (10.4 in. to 29.8 in.)
W-axis spindle housing vertical travel	350 mm (13.8 in.)
Z-axis vertical slide travel	140 mm (5.5 in.)
Taper adjustment range	0 to 1.5° from centerline (3° included angle over full vertical travel.)
Grinding hole diameter range	0,4 to 127 mm (0.016 to 5.0 in.); or to 343 mm (13.5 in.) with optional extension plates
Load carrying capacity	1360 kg (3000 lbs)

### Speeds and Feeds

Traverse speed: X, Y, W, Z axis	0,0001 – 2000 mm/min. (0.00001 – 80.0 in./min.)
Spindle speeds (planetary mode)	2 to 300 rpm
Air turbine and electric grinding spindle speeds	6,000 to 175,000 rpm
Reciprocation stroke rate (25,4 mm / 1 in.)	0 – 190 cycles/min.

### Accuracy

#### Positioning: Step Gauge

Deviation in full travel: X axis	2,5 µm (100.0 µin.)
Deviation in full travel: Y axis	2,0 µm (80.0 µin.)

#### Positioning Accuracy: VDI/DGQ 3441

Positional uncertainty P: X axis	2,5 µm (100.0 µin.)
Positional uncertainty P: Y axis	2,0 µm (80.0 µin.)
Positional uncertainty P: W axis <sup>1</sup>	2,0 µm (80.0 µin.)
Positional uncertainty P: Z axis <sup>2</sup>	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 axis <sup>1</sup>	1,5 µm (60.0 µin.)
Positional deviation Pa: Z axis <sup>2</sup>	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.)
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#### Geometric: Squareness (Full Travel)

X-axis table to Y-axis carriage	1,5 µm (60.0 µin.)
Spindle housing travel: X-Y plane	3,0 µm (120.0 µin.)

#### Geometric: Alignment

Total spindle travel: Parallelism of spindle centerline to column guideways	3,0 µm (120.0 µin.)
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(All statements concerning accuracy are based on calibration temperature of 20 +/- 0.5 degrees C [68 +/- 1.0 degrees F])

<sup>1</sup>Not applicable to CPZ and CPZ-E Models

<sup>2</sup>Not applicable to CPZ Model



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