5-Axis Machining

Our 5-axis cell is set-up to manufacture precision parts, with difficult geometries, from a variety of materials. All parts are fully inspected to insure compliance with your specifications. Written certifications are available upon request.

Metrology Department

TRACEABLE TO THE NATIONAL INSTITUTE OF STANDARDS AND TECHNOLOGY

The Moore Tool Metrology Department is traceable to the National Institute of Standards and Technology (NIST). Located within the Precision Manufacturing Center, we calibrate our own inspection equipment, as well as the customer parts and gauges in-house. All production tools designed and manufactured by Moore Tool are held to the highest standards.

- Capability to measure in micro inches
- Full range of metrology services and equipment
- UCMM for 3-D scanning
- Moore manual measuring machines
- Contract gage calibration and certification

A leader in precision tool design and manufacturing, Moore Tool offers unique capabilities ranging from precision jig grinding to high performance 5-axis machining. Our contract jig grinding cell is set-up for difficult precision parts. All parts are fully inspected to insure compliance with your specifications. Written certifications are available upon request.

Contact

Moore Tool Company, Inc.
800 Union Avenue
Bridgeport, CT 06607-0088
USA
Phone 203 366 3224
Fax 203 367 0418
www.mooretool.com
sales@mooretool.com

Dale R. Gier
VICE-PRESIDENT SALES
dgier@mooretool.com

Ken Weimann
PRODUCT MANAGER
kweimann@mooretool.com

Peter Laskos
ENGINEERING MANAGER
plaskos@mooretool.com

File Transfer Protocol

- 2D files in dxf
- 3D models inigs
- Detailed prints in PDF
Precision Bearing

1200 CPW Jig Grinder
- Special Precision Bearing for a United States Government Laboratory
- Moore built hydrostatic spin table
- Moore built surface grinder attachment
- (3) 24 inch diameter ring components: 2 complete sets

Grinding Results:
- Flatness = 10 Millionths
- OD = Cylindricity 7 Millionths Total
- OD = Cylindricity 8 Millionths Total

Aerospace

450 cp Jig Grinder with A-axis Rotary Table
- Engine Component, grinding an array of holes
- Special fixturing designed and built for different size rings
- Unattended cycle runs
- Several hundred per year

Thermoforming / Food Packaging

1200 CPJ Jig Grinder
- Simultaneously grinding Punch and Die Shoe
- Tolerance Punch to Die +/- .0002”
- 48K Grinding head
- DJ Tool Steel D2 Rc and 8 RMS surface finish

Specifications

500 series specifications

- Capacity
  - Table working surface: 12.0 x 24.0 in. (305 mm x 610 mm)
  - Traverse X longitude: 19.6 in. (500 mm)
  - Traverse Y cross: 11.8 in. (300 mm)
  - Table top to wheel collet: 2.0 to 18.0 in. (50 mm to 450 mm)
  - Spindle housing travel: 13.0 in. (330 mm)
  - Spindle angular adjustment: +/- 3.5 degrees
  - Grinding hole diameter range: .016 to 5 in. (0.4 mm to 127 mm)

- Speeds and Feeds
  - Traverse speed: X & Y axes 80 in./min. (2,000 mm/min.)
  - Main spindle range: 2 to 100 rpm
  - Grinding wheel with air & electric heads: 6,000 to 175,000 rpm

- Accuracy
  - Positioning: Step Gage
    - Deviation in full travel: X & Y axes 80 μin. (2.0 μm)
  - Positioning: VDI/DQG 3441
    - Positional uncertainty P: X, Y, & Z axes
    - Positional uncertainty Pa: X, Y, & Z axes
  - Contouring
    - X, Y, & C at 250 mm/min., measuring a 200 mm (8 in.) ring gage: 120 μin. (3.0 μm)
  - Geometric: Squareness
    - Full travel: X to Y axes: 32 μin. (0.8 μm)
    - Spindle housing travel: X-Y plane: 80 μin. (2.0 μm)
  - Geometric: Alignment
    - Total spindle travel: Parallelism of spindle centerline to column guideways: 80 μin. (2.0 μm)

1200 series specifications

- Capacity
  - Table working surface: 24.0 x 48.0 in. (610 mm x 1220 mm)
  - Traverse X longitude: 48.0 in. (1220 mm)
  - Traverse Y cross: 24.0 in. (610 mm)
  - Table top to wheel collet: 6.6 to 24.5 in. (150 mm to 620 mm)
  - Spindle housing travel: 13.0 in. (330 mm)
  - Spindle angular adjustment: +/- 3.5 degrees
  - Grinding hole diameter range: .016 to 5 in. (0.4 mm to 127 mm)

- Speeds and Feeds
  - Traverse speed: X & Y axes 60 in./min. (1,500 mm/min.)
  - Main spindle range: 2 to 100 rpm
  - Grinding wheel with air and electric heads: 6,000 to 175,000 rpm

- Accuracy
  - Positioning: Step Gage
    - Deviation in full travel: X axis 80 μin. (2.0 μm)
    - Deviation in full travel: Y axis 80 μin. (2.0 μm)
  - Positioning: VDI/DQG 3441
    - Positional uncertainty P: X axis
    - Positional uncertainty P: Y axis
    - Positional uncertainty P: Z axis
    - Positional deviation Pa: X & Y axes
    - Positional deviation Pa: Z axis
  - Contouring
    - X, Y, & C at 250 mm/min., measuring a 200 mm (8 inch) ring gage: 120 μin. (3.0 μm)
  - Geometric: Squareness
    - Full travel: X to Y axes: 60 μin. (1.5 μm)
    - Spindle housing travel: X-Y plane: 120 μin. (3.0 μm)
  - Geometric: Alignment
    - Total spindle travel: Parallelism of spindle centerline to column guideways: 90 μin. (2.3 μm)

(All statements concerning accuracy are based on calibration temperature of 10 +/- 0.5 degrees C [50 +/- 1.0 degrees F])