

G300

CNC CYLINDRICAL OD GRINDER



QUALITY.
Over and over again.

APPLICATIONS

The Weldon model G300 is a mid-sized, high precision, CNC cylindrical grinder designed to produce parts either between centers or in a chucking mode. Although capable of running in a high production environment, the G300 also provides the flexibility to grind a wide variety of part configurations with minimal set-up.

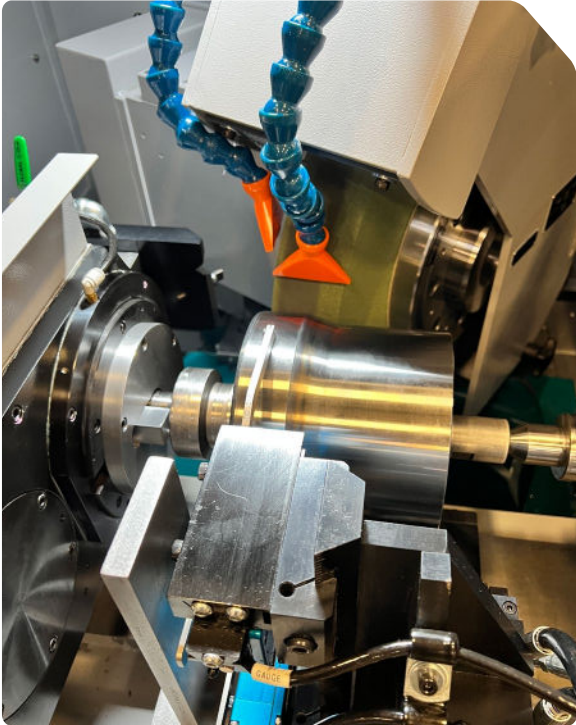
Available with either a straight or angular wheelhead (factory set) the G300 can grind outside diameters, shoulders and faces in a single set-up. The CNC control can address complex form grinding (tapers, radii, etc.) via form dressed wheels or profiling.



FEATURES: STANDARD

- **FANUC Series 0i-TD CNC control** with an 8.4" color LCD and servo drives featuring FANUC AC digital technology. Includes a battery backup absolute feedback system eliminating the need to reference at each start-up.
- **Cast iron machine base** providing stiffness, vibration control and thermal stability.
- **Pressurized Vee & Flat way system** for smooth controlled linear motion.
- **Straight (S) or angular (A) wheelhead** with hydrodynamic spindle bearings for superior surface finishes and roundness capability.
- **16" x 3" (S) or 20" x 4" (A) wheel guard** with adjustable hood and coolant nozzle plumbing.
- **10 hp AC wheel drive** with variable speed drive to maintain constant sfpm.
- **Combination live and dead spindle workhead** with straight recess spindle nose and #5 MT center.
- **Fixed position diamond holder** behind the workhead for CNC dress routines.
- **Hydraulically actuated tailstock**, 1.6" quill movement, with #4 MT center and 7.75" manual quill adjustment.
- **Full enclosure** with manual sliding door assembly and multiple maintenance access window panels. Includes safety interlock.

ROBOTIC AUTOMATION



Angle wheelhead grinder with automatic lateral locator, in-process gaging, and automatic wheel balancing.

Weldon Solutions delivers the ingenuity, expertise and commitment you need to make your next robotic system installation a success. We are an Authorized System Integrator for FANUC Robotics, North America's leading supplier of robots. FANUC high performance robots, coupled with our advanced systems engineering, project management skills and extensive industry experience have enabled us to successfully automate numerous machine tending applications.

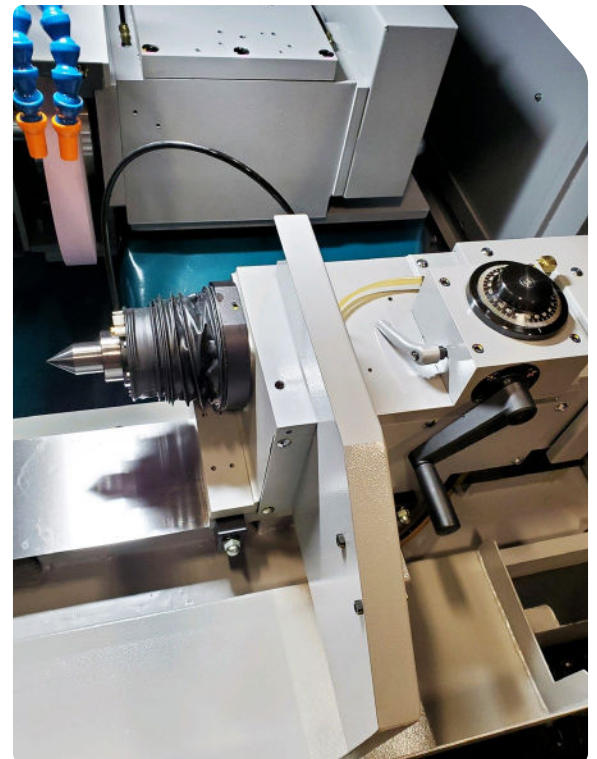


OUR ROBOTIC SOLUTIONS CAN...

- reduce labor costs
- eliminate lost time accident expenses
- provide real-time quality control
- allow processes to run without interruption
- offer gentle handling of payload
- minimize changeover time

FEATURES: OPTIONAL

- **In-process gage** for automatic size control.
- **Automatic lateral locator**, wheelhead mounted, featuring a Renishaw probe.
- **Automatic wheel balancer**, pulley side mounting.
- **Electric rotary dressing systems** for extended diamond life when processing with standard abrasives.
- **Work holding solutions** can be addressed with a variety of systems such as manual and powered jaw chucks, collet chucks, magnetic faceplates, vacuum chucks, expanding arbors, pitch-line chucks and custom fixtures.
- **Coolant supply and filtration systems** are available to suit any application; magnetic, fabric, cyclonic, pressure, and combination filtration units can be provided.
- **Acoustic emissions sensor** for gap elimination, crash detection and touch dressing.
- **Automation via FANUC 6 Axis robots** can be factory integrated on a turnkey basis.





WELDON G300 SPECIFICATIONS

CAPACITY

Maximum work swing 11.8" (300mm)
 Maximum distance between centers 20" (500mm) or 40" (1000mm)
 Work piece weight 330 lbs.

WORKHEAD (Live & Dead Spindle)

Motor 2 hp
 Work speeds (variable) 0 - 1000 rpm
 Center taper #5 Morse
 Through hole 1.75"

WHEELHEAD

Motor 10 hp, T.E.F.C.
 Speed (variable) 8,500 sfpm (nominal)
 Travel distance 13.75"
 Rapid travel rate 630" / minute
 Programmable feed rate000010" - 200" / minute
 Straight or angle 0° or 30° fixed
 Wheel spindle bearing Hydrodynamic

GRINDING WHEEL

Maximum OD wheel diameter 16"(S) or 20"(A)
 Maximum wheel width 3"(S) or 4"(A)
 Wheel size throw away 12"(S) or 16"(A)

TAILSTOCK

Center taper #4 Morse
 Quill travel distance 1.6"
 Quill advance / retraction Hydraulic
 Quill manual adjustment 7.75"

TABLE DRIVES

FANUC AC digital servo drives 2.1 hp
 Travel distance 27.5" (700mm) or 47.2" (1200mm)
 Rapid-traverse rate 785" / minute
 Programmable feedrate 0.000010" - 200" / minute
 Swivel taper adjust +/- 5°
 Way construction Ground Vee & Flat, pressurized
 Position feedback resolution 0.00001"

LUBRICATION

Wheel spindle Recirculating hydraulic oil
 Ways Automatic lube oil
 Ballscrews Automatic lube oil
 Workhead spindle Permanent grease packed

Note: Safety detect interlock to prevent cycling if low air pressure or low oil is sensed

ELECTRICAL SPECIFICATIONS

Standard voltage 208 VAC, 3-phase, 60 Hertz
Note: Any other voltage must be referred to factory for price and delivery.

PNEUMATICS (air moisture: 70° F. dew point maximum)

Air pressure 80 psi
 Air volume 5 scfm
Note: System requires a filtered and dry air source.

TANK CAPACITIES

Slide lubrication oil tank 0.8 gallon
 Wheel spindle lubrication tank 4 gallon

MACHINE DIMENSIONS AND CONSTRUCTION

Width 111" or 131"
 Depth 147"
 Height 76"
 Centerline workpiece, height from floor 45"
 Weight 11,000 or 14,000 lbs.
 Construction Cast Iron
 Foundation 6" concrete floor is recommended

CNC CONTROL SPECIFICATIONS - Fanuc Oi-TD

- Manual pulse generator
- Full linear and circular contouring and positioning capabilities
- FANUC AC digital servo system
- Direct rpm programming or constant surface speed
- Built-in diagnostics
- 8.4" LCD color display
- Automatic recognition of EIA or ISO coding
- Decimal point programming
- RS 232 / Ethernet / Memory Card / USB interface
- 0.000010" command resolution
- Automatic update of offset
- Program storage, 1280 meters