AGN4

SMALL PART OD GRINDER

weldon SOLUTIONS

QUALITY.
Over and over again.

AGN4 SPECIFICATIONS

CAPACITY

Maximum work swing.....7.08"(180mm)
Maximum distance between centers .....9.84"(250mm)
Work Piece weight.....44 lbs. (20kg)

WORKHEAD

Motor .....1 HP
Work Speeds, variable.....0 - 1400 RPM
Center taper ..... #2 Morse
Thru hole.....0.625

WHEELHEAD

Motor .....5 HP T.E.F.C.
Speed (variable) ..... 8,500 SFPM (nominal)
Travel Distance.....6.7"(170mm)
Rapid Travel rate.....320 inch / min
Programmable Feed Rate.....000010" - 200 inch / min
Straight or Angle .....0 or 30° fixed
Wheel spindle bearing.....Hydrodynamic

GRINDING WHEEL

Maximum OD wheel diameter .....14"(355mm)
Maximum wheel width (non-relieved) .....1.97"(50mm)
Wheel Size throw away.....10"

TAILSTOCK

Center Taper ..... #2 Morse
Quill travel distance.....1.2"(30mm)
Quill advance / retraction .....Pneumatic

TABLE DRIVES

Fanuc AC digital servo drives.....1.9 HP
Travel Distance.....14" (356mm)
Rapid-Traverse Rate.....640 inch / min
Programmable Feed Rate.....000010" - 200 inch / min
Swivel Taper Adjust ..... + / - 1 degree
Way Construction .....Ground Vee & Flat, pressurized
Position Feedback Resolution .....000001"

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 level 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.

PNUEMATICS (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

Wheel lubrication oil tank.....1 gallon
Wheel spindle lubrication tank.....4 gallon

MACHINE DIMENSIONS AND CONSTRUCTION

Width .....58"
Depth .....79"
Height .....74"
Centerline workpiece, height from floor.....41"
Weight.....4,600 lbs(2000kg)
Construction .....Cast Iron
Foundation.....6" concrete floor is recommended

CNC CONTROL SPECIFICATIONS - Fanuc 0i-TD

- Manual pulse generator
- Full linear and circular contouring and positioning capabilities
- Fanuc digital and AC servo system
- Direct rpm programming or constant surface feet
- Built-in diagnostics
- 8.4" LCD display, color
- Automatic recognition of EIA or ISO coding
- Decimal point programming
- RS 232 / Ethernet
- Memory card / USB Interface
- .000010" command resolution
- Automatic update of offsets
- Program storage, 1280m

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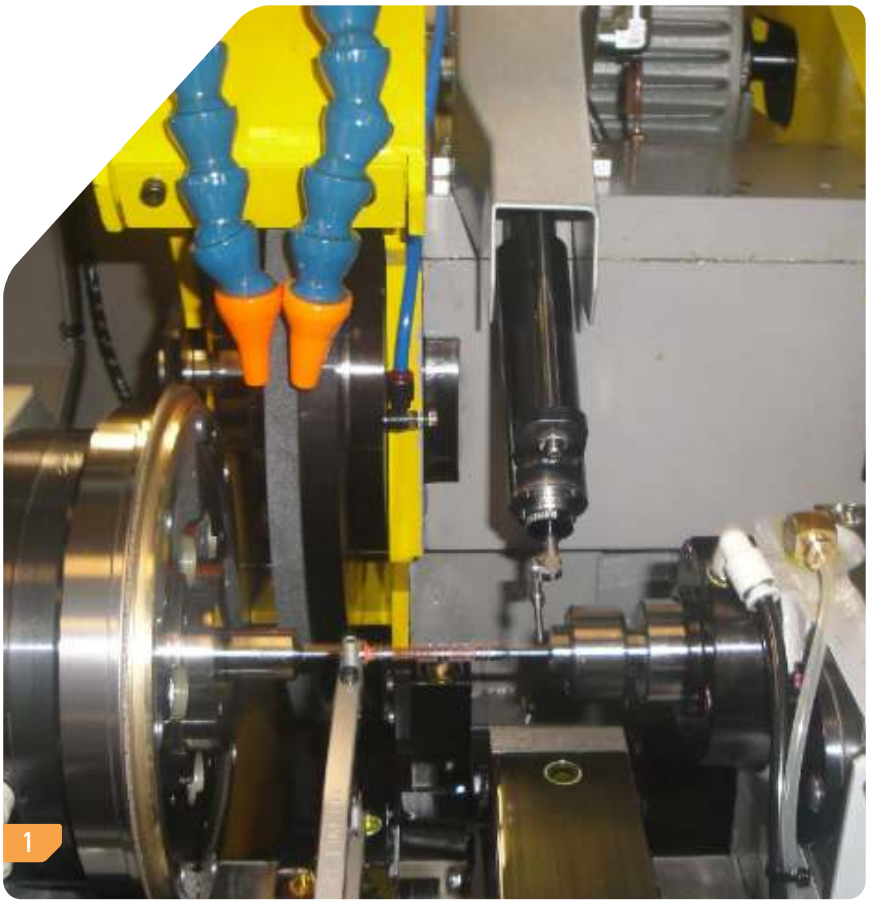
APPLICATIONS

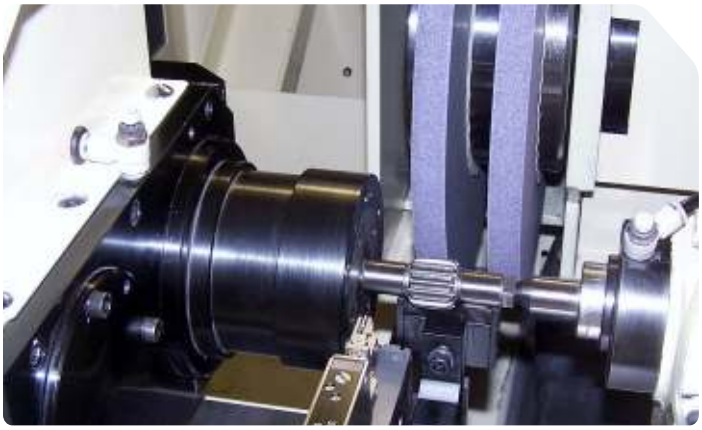
The Weldon model AGN4 is a compact CNC cylindrical grinder designed specifically to produce high precision small parts either between centers or in a chucking mode. Although capable of running in a high production environment, the AGN4 also provides the flexibility to grind a wide variety of part configurations with minimal set-up.

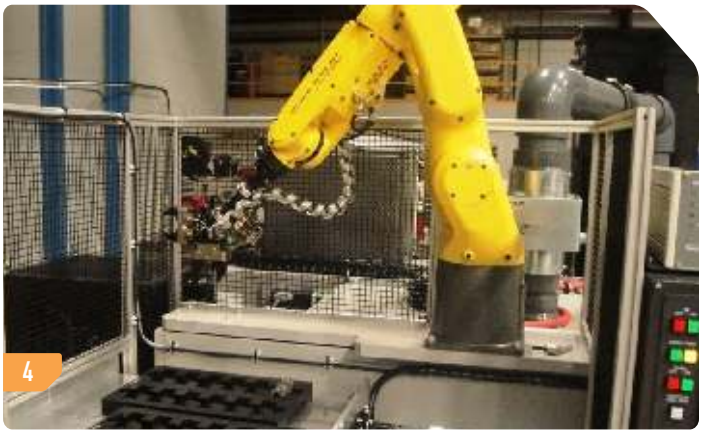
Available with either a straight or angular wheelhead (factory set) the AGN4 can grind outside diameters, shoulders, and faces in a single set-up. The CNC control can address complex form grinding (tapers, radii, etc.) via form dressed wheels or profiling.

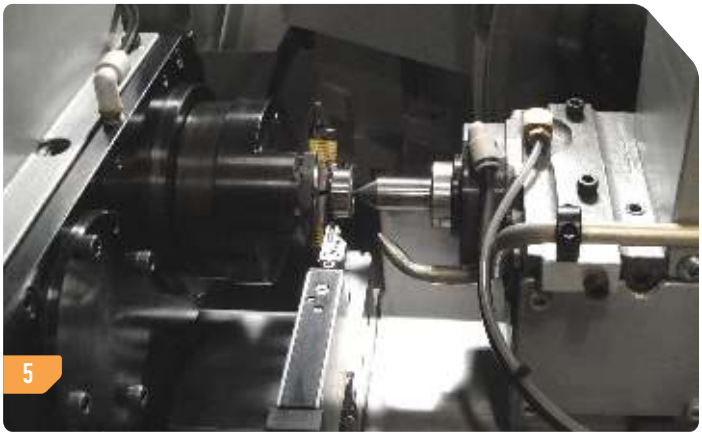


STANDARD FEATURES

- Fanuc Series 0i-TD CNC control with 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 or angular wheelhead with hydrodynamic spindle bearings for superior surface finishes and roundness capability.
- 14" x 2" wheel guard with adjustable hood and coolant nozzle plumbing.
- 5 HP AC wheel drive with variable speed drive to maintain constant SFPM.
- Combination live and dead spindle workhead with straight recess spindle nose and #2 MT center.
- Fixed position diamond holder behind the workhead for CNC dress routines.
- Pneumatic tailstock, 1.2" quill movement, with #2 MT center.
- Full enclosure with manual sliding door assembly and multiple maintenance access window panels. Includes safety interlock.







OPTIONAL FEATURES

- Programmable wokhead with rotary scale for non-round applications.
- In-process or post-process gaging for automatic size control.
- Automatic lateral locator, wheelhead mounted, featuring a Renishaw probe.
- Automatic wheel balancer, pulley side mounting.
- Electric rotary dressing systems for superabrasive wheels or extended diamond life when processing with standard abrasives.
- Acoustic emissions sensor for gap elimination, crash detection, and touch dressing.
- Workholding 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.
- Automation via gantry systems, Fanuc 6 Axis robots, or custom alternatives can be factory integrated on a turnkey basis.

1. Straight wheelhead grinder with CBN, automatic lateral locator, in-process gaging and workhead ring dresser.
2. Dual OD wheel arrangement with automatic driver.
3. Angular wheelhead grinder with in-process gaging, electric rotary dresser and pneumatic sliding jaw chuck.
4. Automation involving gantry systems, Fanuc 6 axis robots, or custom alternatives can be factory integrated on a turnkey basis.
5. Floating auto-driver used for between centers grinding with CBN abrasives.