



AGN4

Small Part OD Grinder

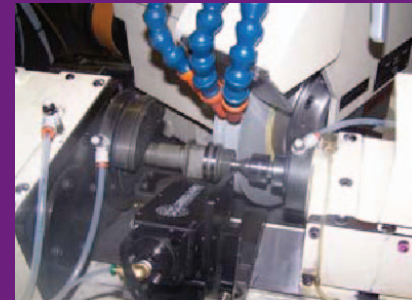
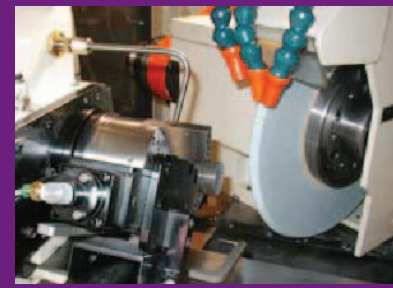
APPLICATIONS

The Weldon model AGN4 is a small part 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 wheel head (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.

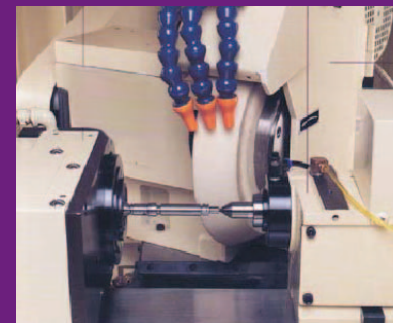


Live spindle Workhead setting is ideal for chucking applications for diameter and end-face grinding.



5C collet chuck option available for quick change over. In-process gage solutions can be supplied for automatic size control.

Multiple diameter grinding can be accomplished with CNC step grinding, or with form dressed wheels in a single plunge cycle.



Typical applications: Small bearing shafts, valve bodies, motor shafts, hydraulic spools, form tools, guide pins, bushings and collars.

FEATURES

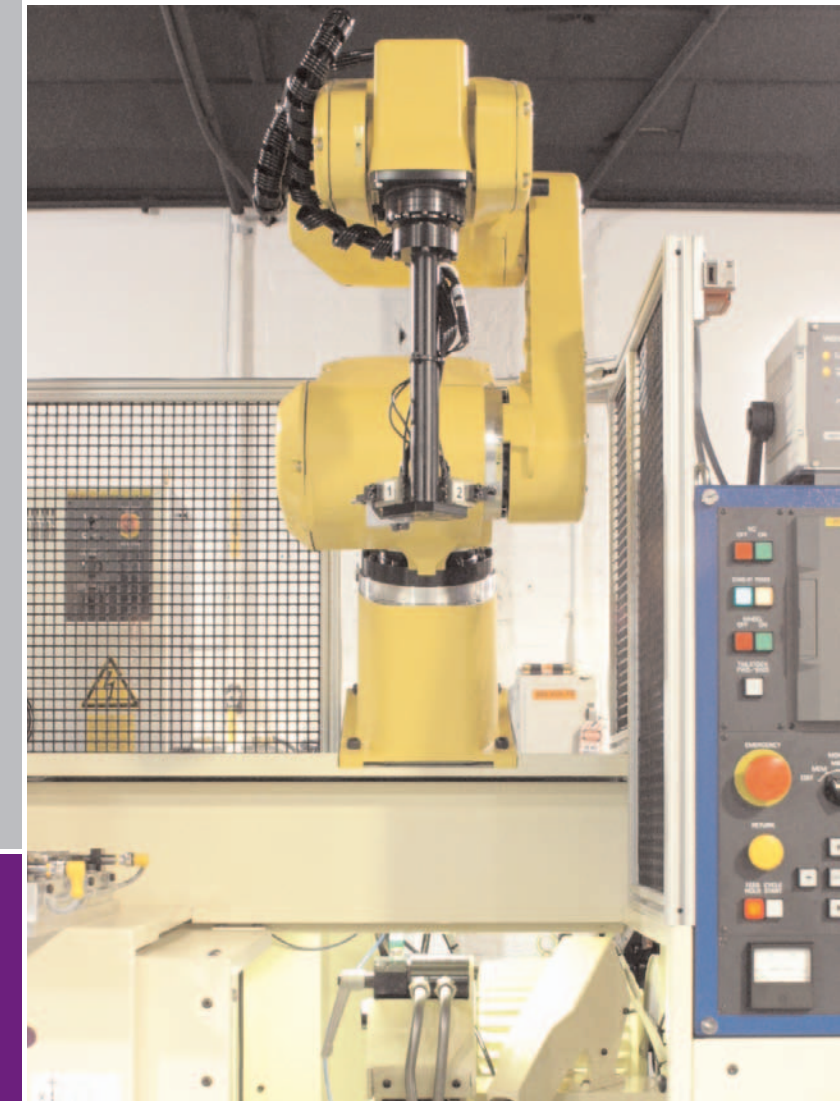
Standard:

- GE/Fanuc model 21i-TB CNC control, and servo drives featuring GE Fanuc AC digital technology.
- 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.

Optional:

- In-process gage for automatic part sizing.
- Automatic lateral locator, wheelhead mounted, with Renishaw probe.
- Automatic wheel balancer, pulley side mounting.
- Electric rotary dressing systems for super abrasive dressing or 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, floating work drivers, expanding arbors, pitch-line chucks, and custom fixtures.
- Automation involving gantry systems, Fanuc 6 axis robots, or custom alternatives can be factory integrated on a turnkey basis.
- Coolant supply and filtration systems are available to suit any application; magnetic, fabric, cyclonic, pressure, and combination filtration units can be provided.



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AGN4 SPECIFICATIONS

CAPACITY

Max. Work Swing	7"
Max. Distance Between centers	10"
Max. Supportable Weight	44 lbs.

WORKHEAD

Work Speeds, variable.....	0 - 1400 RPM
Center taper	#2 Morse
Workhead Spindle	Live/dead spindle
Workhead thru hole	0.625"

WHEELHEAD

Travel Distance	6.7"
Rapid Traverse Rate	320 inch/min
Programmable Feed Rate	0.00001 - 200 inch/min
Straight or Angle	0 or 30 degrees fixed
Wheel spindle bearings	Hydrodynamic

TAILSTOCK

Work center taper	#2 Morse
Quill travel distance	1.2"
Quill advance/retraction	Pneumatic

GRINDING WHEEL

Size (OD x width x ID)	14" x 2" x 5"
Standard surface speed	8800 SFPM

TABLE

Travel Distance	14"
Rapid-Traverse Rate640 inch/min
Programmable Feed Rate	0.0001-200 inch/min
Swivel of Taper Adjust	+/- 1 Degree
Way Construction	Ground, vee and flat pressurized

MOTOR

Work Spindle	1.9 HP AC servo
Wheel Spindle	5 hp T.E.F.C.
Wheel Spindle Lube	1/10 HP
Hydraulic Oil	1 HP
X and Z axis AC servo	0.6 HP

MACHINE DIMENSIONS AND CONSTRUCTION

Dimensions	58"W x 76"D x 74"H
Centerline of workpiece, height from floor	41"
Weight	4,600lbs.
Construction	Cast Iron
Foundation	6" Reinforced concrete floor recommended

TANK CAPACITIES

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

LUBRICATION

Wheel Spindle	Recirculating Hydraulic Oil
Ways	Automatic Lube Oil
Ballscrews	Automatic Lube Oil
Workhead Spindle	Permanent grease packed
Footstock	Recirculating Hydraulic Oil

ELECTRICAL SPECIFICATIONS

Standard Voltage	208/240 volts, 3-phase, 60 Hertz, AC
(any other voltage must be referred to the factory for price and delivery)	

PNEUMATICS

Air Pressure	80 PSI
Air Volume	5 SCFM

Note: System requires a filtered and dry air source

CNC CONTROL SPECIFICATIONS - GE Fanuc 21i-TB

- Manual pulse generator
- Full linear and circular contouring and positioning
- GE Fanuc digital and AC servo systems
- Direct RPM programming or constant surface feet per minute
- Built-in diagnostics
- 7.2" LCD display, monochrome
- Automatic recognition of EIA or ISO coding
- Decimal point programming
- Absolute/Incremental programming
- RS 232 interface
- .000010" command resolution
- Automatic update of offsets
- Program storage, 160 meters

OTHER GRINDER PRODUCTS



Phoenix
Large Capacity CNC ID

NEW!
Solaris
Large Capacity OD



NEW!
UGC
Small Capacity ID



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High Production OD



P175
Small Part Non-Round OD



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