



# UGC

Small Capacity ID Grinder

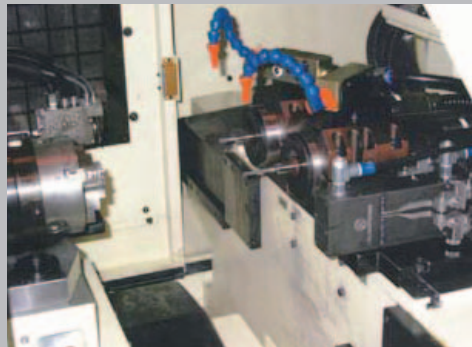


# APPLICATIONS

The Weldon model UGC is a small part CNC grinding system ideally suited for internal, external and face grinding in a chucking mode. An optional "C" axis package provides non-round (cam) grinding capability.

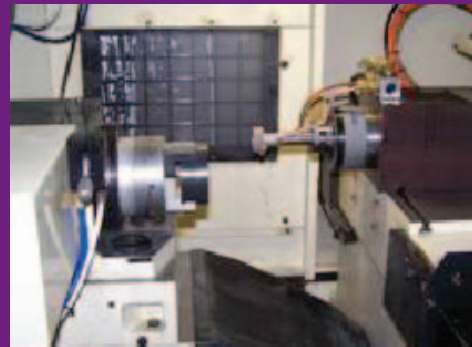
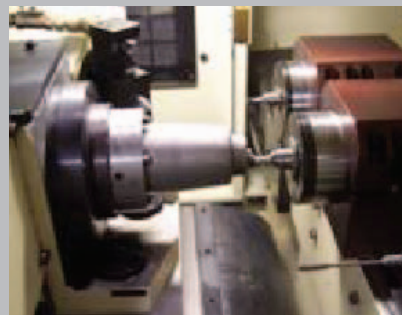
Designed for the use of conventional or super abrasives, the UGC can accommodate both diamond and CBN grinding wheels. The UGC can be equipped with up to three (3) grinding spindles for multiple feature grinding (bores, outside diameters, faces, etc, in a single set-up.

Typical applications: Small gears, rings, wear plates, bushings, valve components, and bearings.



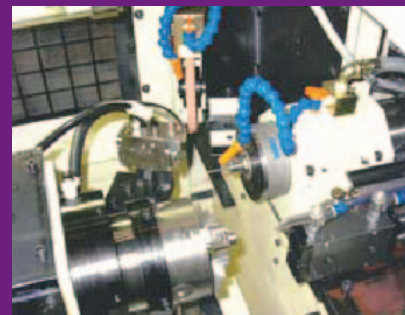
In-cycle gaging and rotary electric dresser options for increased productivity.

5C collet workholding available for quick change-over. Dual spindle configuration for multiple operations in a single cycle.



Diamonds and CBN Superabrasives available for difficult to grind materials.

OD and ID spindles for multiple surface grinding applications.



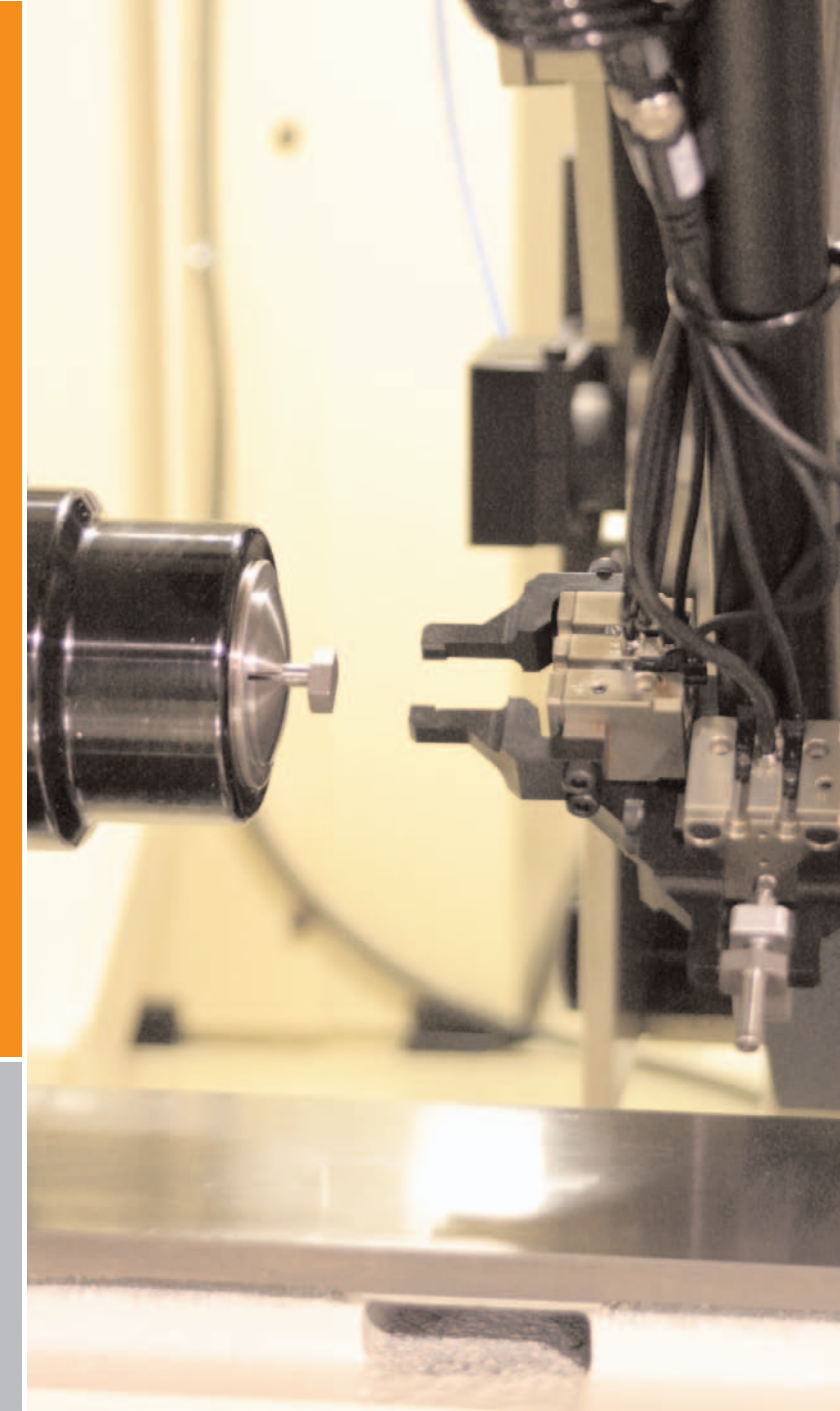
# FEATURES

## 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.
- Dressing diamond holder pneumatically positioned for tooling clearance.
- Live spindle workhead with straight recess spindle nose. Features a tandem set of angular contact bearings.
- 80 mm spindle housing and spindle lubrication system.
- Full enclosure with manual sliding door assembly and multiple maintenance access window panels.

## Optional:

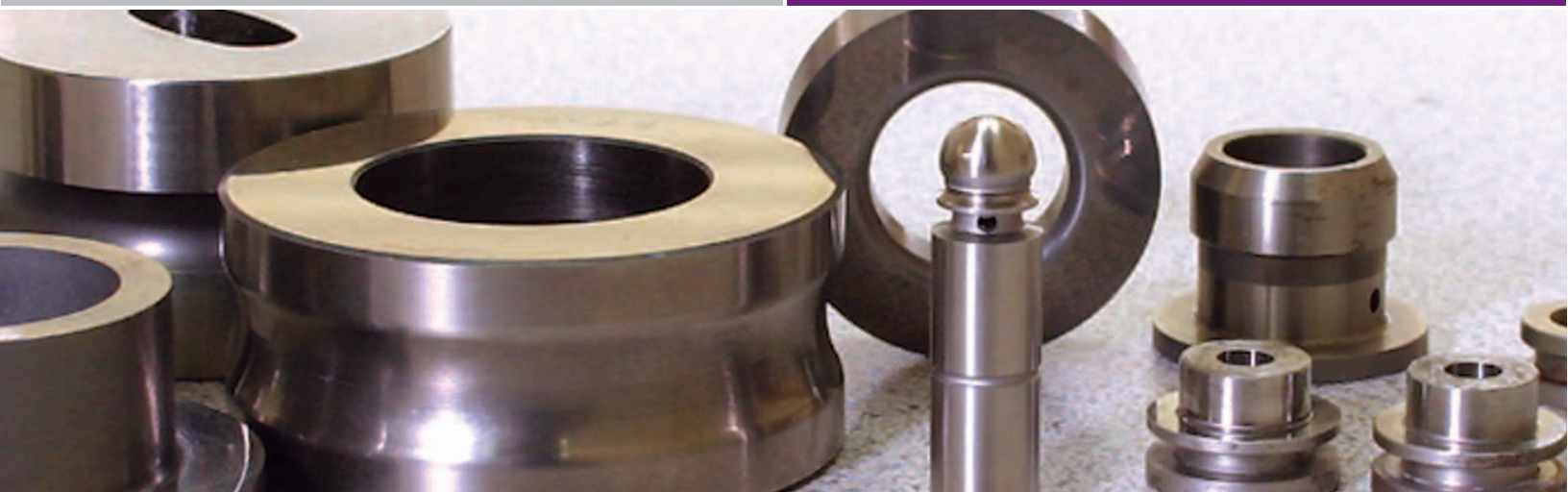
- Programmable workhead with Heidenhain rotary scale for non-round applications.
- GMN high frequency grinding spindles with threaded or HSK quill arrangements. Spindles sized to suit the application.
- OD grinding spindle, straight or angular, with variable speed drive.
- Multiple grinding spindle configurations providing the opportunity for mounting two ID spindles, or one OD and one ID spindle to perform multiple grinds in a single set-up.
- 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, vacuum chucks, 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.

For more information, visit our website at [www.weldonsolutions.com](http://www.weldonsolutions.com).

**QUALITY.** Over and over again.





# UGC SPECIFICATIONS

## CAPACITY

Chuck Diameter ..... 4"  
Swing ..... 7"

## WORKHEAD (LIVE SPINDLE)

Spindle speed (Variable) ..... 100 to 2000 RPM  
Swivel Angle ..... 0° to 30°  
Thru Hole ..... .625"

## SPINDLE TABLE (X AXIS)

ID spindle housing bore ..... 80MM  
ID grinding spindle speed .....  
..... 30,000 to 120,000 RPM (by application)  
Rapid Speed ..... 400"/Min.  
Least input increment ..... .000010"  
Max. travel ..... 13.75"

## WORKHEAD TABLE (Z AXIS)

Rapid speed ..... 400"/Min.  
Least input increment ..... .000010"  
Max. travel ..... 9.0"

## 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  
Distributed microprocessor-based  
Built-in diagnostics  
7.2" LCD display, monochrome  
Macro subroutines  
Automatic recognition of EIA or ISO coding  
Decimal point programming  
Absolute/Incremental programming  
Background part program editing  
Program number search/display  
Single block/dry run operational modes  
Software overtravel checking  
Versatile interface, allowing for easy addition of gag-  
ing, machine monitoring, robotics, etc.  
RS 232 interface  
.000010" command resolution  
Automatic update of offsets  
Program storage, 160 meters

## MACHINE DIMENSIONS AND CONSTRUCTION

Floor space ..... 65" x 70"  
Weight ..... 3,400 lbs.  
Construction ..... Cast Iron  
Foundation .. 6" Reinforced concrete recommended

## OTHER GRINDER PRODUCTS

**NEW!**

**Solaris**  
Large Capacity OD



**Midas**  
High Production OD



**Phoenix**  
Large Capacity CNC ID



**1632/1612 Gold**  
Ultimate Versatility OD/ID



**AGN4**  
Small Part OD



**P175**  
Small Part Non-Round OD

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