



P175

Small Part Non-Round OD Grinder

APPLICATIONS

The Weldon model P175 has been designed for precision grinding non-round and eccentric diameters on small parts. The P175 can also address conventional round grinding involving complex forms (tapers, radii, etc.) via form dressed wheels or X/Z profiling.

This extremely stiff, compact machine is manufactured with a 7" swing capacity and 7" distance between centers.

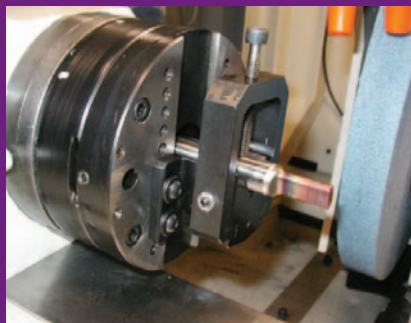
Accuracy is assured with both rotary and linear glass scales.

Simplified programming is accomplished with the Weldon EZPunch software that is PC based, making changeover simple and quick.



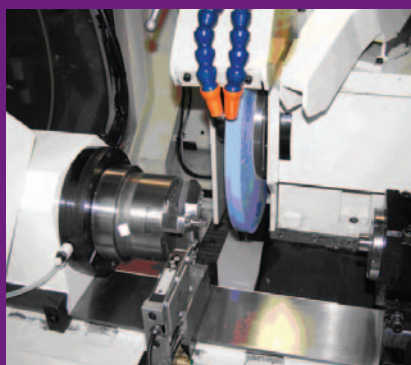
Typical applications: Sheet metal punches, pharmaceutical punches, forming punches and small camshafts.

Vee-Block workholding available for quick change-over and to establish radial position from a flat or keyway.



5C collet option and workhead mounted diamond ring dresser for production applications.

In-cycle gaging systems allow precise size control on non-round parts with post-grind checks and feed-back to CNC control.



Manual 4-Jaw and 6-Jaw chucks available for proto-typing and low volume applications.

FEATURES

Standard:

- GE/Fanuc model 21i-TB CNC control, and servo drives featuring GE Fanuc AC digital technology.
- Battery backup absolute feedback systems 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 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.
- Heavy-duty live spindle workhead with 4" A2 spindle nose and #2 MT center.
- Workhead features a tandem set of angular contact bearings.
- C axis package including rotary glass scale for workhead, linear glass scale for X axis, and EZPunch software.
- Pneumatic tailstock, 1.2" quill movement, with #2 MT center.
- Fixed position diamond holder mounted behind the workhead for CNC dress routines.
- Full enclosure with manual sliding door assembly and multiple maintenance access window panels.

Optional:

- 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.

For more information, visit our website at www.weldonsolutions.com.



QUALITY. Over and over again.

P175 SPECIFICATIONS

CAPACITY

Maximum work swing 7"
 Between centers 7"

WORKHEAD

Live spindle, preloaded precision angular contact bearings
 Work center taper#2 MT
 Spindle nose (ASME standard).....4"A2
 Work speeds variable 0-900 RPM
 Workhead through-hole625"
 C axis resolution 00150, 5 arc seconds

TAILSTOCK

Work center taper #2 MT
 Quill travel.....1.2"
 Advance/retract Pneumatic

WHEELHEAD

Motor 5 HP
 Wheel speed.....8,800 SFPM (nominal)
 Note: Actual speed and power rating calculated to suit specific application.
 Wheel slide travel..... 6.7"
 Wheel size (maximum)..... 14" x 2" x 5"
 Worn wheel size..... 10"
 Bearings..... Hydrodynamic

TABLE

Work table travel14"

AXES SLIDES

AC digital servo drives0.6 HP
 Command resolution000010"
 Position feedback resolution000001"
 Way constructionPressurized Vee & flat

LUBRICATION

Wheel spindle.....Recirculating hydraulic oil
 Workhead spindlePermanent grease-packed
 Ballscrews..... Automatic lube oil
 Ways..... Automatic lube oil
 Safety detect interlock to prevent cycling if low air pressure or low oil level is sensed

ELECTRICAL SPECIFICATIONS

Wired in accordance with IEC standards, 208/240 VAC, 3-phase, 60 Hertz

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

Air pressure80 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



MIDAS
High Production OD



AGN4
Small Part OD



1632/1612 Gold
Ultimate Versatility OD/ID



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