



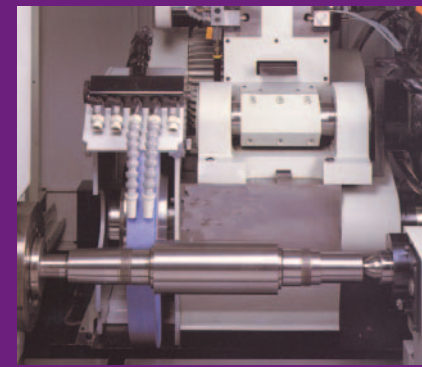
1612/1632 GOLD

Ultimate Versatility OD/ID Grinder

APPLICATIONS

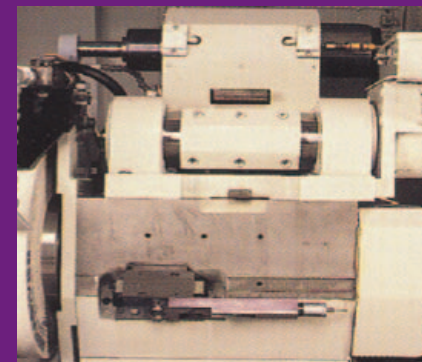
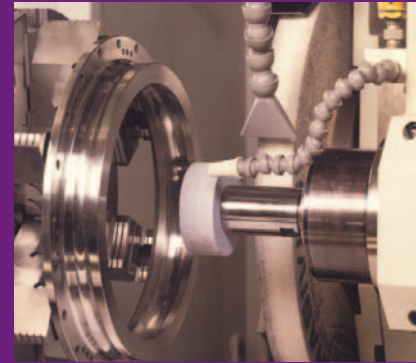
The Weldon 1612 GOLD and 1632 GOLD CNC cylindrical grinders are designed to satisfy a wide variety of medium-low production applications either between centers or in a chucking mode. Rotary and linear axes are sealed from airborne contaminants providing unmatched longevity in carbide and ceramic grinding applications.

When furnished with the optional swing-down ID grinding fixture, the GOLD machines can grind outside diameters, internal 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. Properly equipped, a 1612/1632 GOLD is ideally suited for high speed "Peel" grinding with CBN abrasives. Additionally, a programmable "C" axis package can be provided to accommodate eccentric and non-round grinding applications (OD and ID).



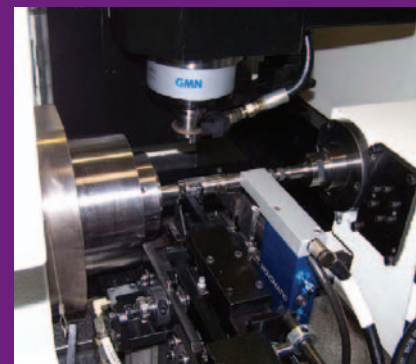
32" Z-Axis stroke for multiple diameter grinding on parts up to 26" in over-all length.

Live spindle Workhead allows for chucking parts to perform OD and ID grinding in a single set-up.



Automatic swing-arm with Renishaw probe can be used for precise lateral positioning or probing radial surfaces.

Vertical spindle option permits grinding external diameters and horizontal slots in the same set-up.



Weldon is known for its problem solving capability. Whether your grinding application is basic or difficult, our team of application engineers will work to develop a solution that will satisfy your needs.

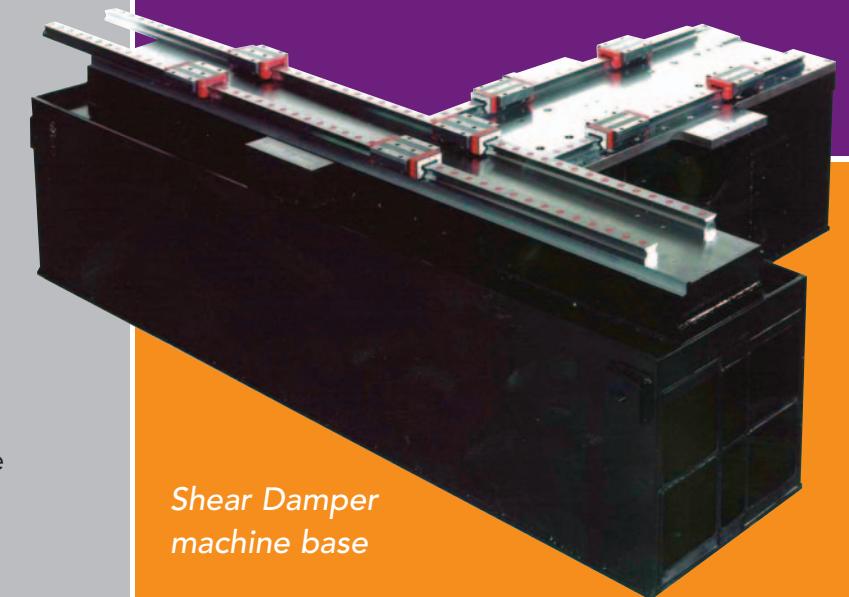
FEATURES

Standard:

- GE/Fanuc model 18i-TB CNC control with color LCD, and servo drives featuring GE Fanuc AC digital technology.
- Battery backup absolute feedback system eliminating the need to reference at each start-up.
- Shear Damper design machine base providing stiffness, vibration control, and thermal stability through the use of steel shear tubes covered with a viscous material and encapsulated with a special replicating resin.
- Cross-roller linear way system with recirculating bearings and precision ground rails.
- Includes integral way bearing seals and an external wiper system.
- Low inertia break-away coupling, X axis, for ballscrew protection.
- Heavy-duty live spindle workhead with 6" A2 spindle nose and #5 MT center.
- Features a 4.7" spindle diameter and a quad set of angular contact bearings.
- Preloaded, precision ground, double-nutted ballscrew assembly for X and Z axes.
- Automatic Trabon lubrication system, monitored by the control, with lube fault protection.
- Tailstock, lever operated, spring loaded, with #5 MT center.
- Includes manual taper adjustment with eccentric quill design.
- Variable speed wheel drive, CNC controlled with dynamic braking.
- Normally arranged for constant surface speed as the grinding wheel wears.
- Full enclosure with manual sliding door assembly and front and rear maintenance access window panels.

Optional:

- 22" swing capacity for faceplates and fixturing to accommodate larger workparts.
- Programmable workhead with Heidenhain rotary scale for non-round applications.
- GE Fanuc X-axis linear motor for non-round applications
- ID grinding fixture, (swing-down) hydraulically operated.
- GMN high frequency grinding spindles with threaded or HSK quill arrangements.
- Spindles sized to suit the application.
- In-process gage for automatic size control.
- Electric rotary dressing systems for super abrasive dressing or extended diamond life when processing with standard abrasives.
- Automatic lateral locator, wheelhead mounted, featuring a Renishaw probe.
- Acoustic emissions sensor for gap elimination, crash detection, and touch dressing.
- 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.



Shear Damper machine base

QUALITY. Over and over again.

1612/1632 SPECIFICATIONS

CAPACITY

Maximum work swing	16"
Maximum distance between centers (1612)	12"
Maximum distance between centers (1632)	26"
Worktable travel (1612)	26"
Worktable travel (1632)	32"

WORKHEAD

Heavy-duty, preloaded precision antifriction bearings	
Spindle nose (ASME standard)	6" A2
Center taper	#5 Morse
Through-hole diameter in spindle for draw bars and knock-out	1.0625"
Spindle speed range is infinitely variable and programmed by percentage with manual speed override located on operator control station	0 - 900 RPM
Maximum runout	0.000050"
Motor, GE Fanuc AC servo drive	5.0 HP

WHEELHEAD

Angular contact ball bearings which allow lateral loading while contouring with wheel edge	
Motor	15 hp, T.E.F.C.
Wheel speed variable RPM	8,500 SFPM (nominal)
Maximum OD wheel diameter	16"
Maximum wheel width	3.0"

TAILSTOCK

Center taper	#5 Morse
Quill retraction (manual lever)	1.5"

TABLE DRIVES

GE Fanuc AC digital servo drives	1.9 HP
Command resolution, least programmable increment	0.000010"
Position feedback resolution	0.0000010"
Precision ground preloaded ballscrews on Z-axis	
Way construction	Hardened and ground cross rails
Bearings, preloaded	Cross-roller

LUBRICATION

Wheel spindle	Permanent grease-packed
Workhead spindle	Permanent grease-packed
Ballscrews and rollerscrew	Automatic lube oil

Ways..... Automatic lube oil
 Safety detect interlock to prevent cycling of operation if low air pressure or low oil level is sensed
 Automatic programmed cycle to lubricate machine when started up

ELECTRICAL SPECIFICATIONS

Complete electrical equipment wired in accordance with IEC electrical standards for metalworking machine tools
 Standard voltage 460 volts, 3-phase, 60 Hertz, AC
 (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

COOLANT SYSTEM

Machine is set up to funnel coolant out to an optional coolant filter or tank system via a sheet metal trough. All necessary piping and solenoids for coolant control from the machine control are provided.

CNC CONTROL SPECIFICATIONS - GE Fanuc 18i-TB

Manual pulse generator
 Full linear and circular contouring and positioning capabilities
 GE Fanuc AC digital servo systems
 Direct rpm programming or constant surface feet per minute
 10" high-resolution color LCD
 Macro subroutines
 Automatic recognition of EIA or ISO coding
 Absolute/incremental programming
 RS 232 interface

MACHINE DIMENSIONS AND CONSTRUCTION

Width, (1612)	103"
Width, (1632)	131"
Depth,	127"
Depth for shipping, pendulum swung in	93"
Height	85"
Weight	15,500 lbs.
Construction	Welded steel Shear Damper™
Foundation	6" concrete floor is recommended
Three-point anti-vibration suspension system requiring no floor attachment	

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



P175
Small Part Non-Round OD

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Authorized Weldon Distributor