ALTAIRA SPECIFICATIONS

CAPACITY
- Maximum work swing: 16"
- Maximum distance between centers: 40"
- Worktable travel: 52"
- Wheel spindle slide travel: 13.5"

WORKHEAD
- Heavy duty, preloaded precision antifriction bearings
- Spindle nose (ASME standard): #5 Morse
- Through hole diameter in spindle for draw bars and knock-out: 0.0625"
- Spindle speed range: infinitely variable and programmed by percentage with manual speed override located on operator control station
- Motor: GE Fanuc AC servo drive
  - 5.0 HP

Wheel spindle: Permanent grease-packed bearings, preloaded
- Cross-roller way construction: Hardened and ground cross rails
- GE Fanuc linear motor on Z-axis

Tailstock
- Center taper: #5 Morse
- Quill retraction (hydraulic): 3"

TABLE DRIVES
- GE Fanuc AC digital servo drives
- Command resolution, least programmable increment: 0.000010"
- Position feedback resolution: 0.000010"
- Precision ground preloaded ballscrew on X-axis
- GE Fanuc linear motor on Z-axis
- Way construction: Hardened and ground cross rails
- Cross-roller bearings

LUBRICATION
- Cooling system: Automatic lube oil
- Ways: Automatic lube oil
- Safety detect interlock to prevent cycling of operation if low oil pressure or low oil level is sensed
- Automatic programmed cycle to lubricate machine at start-up
- Safety detect interlock to prevent cycling of operation if low oil pressure or low oil level is sensed
- Automatic programmed cycle to lubricate machine at start-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
- Air volume: 5 SCFM
- Air pressure: 80 PSI
- Note: System requires a filtered and dry air source.

COOLANT SYSTEM
- Machine is set up to pump coolant out to an optional coolant filter or tank system from a sump tank. All necessary piping and solenoids for coolant control from the machine control are provided.
- Automatic programmed cycle to lubricate machine at start-up
- Safety detect interlock to prevent cycling of operation if low oil pressure or low oil level is sensed
- Automatic programmed cycle to lubricate machine at start-up

MACHINE DIMENSIONS AND CONSTRUCTION
- Width: 144"
- Depth: 136"
- Height: 94"
- Weight: 22,000 lbs.
- Foundation: 6" concrete floor is recommended

PNEUMATICS (air moisture: 70° F. dew point maximum)
- Air volume: 5 SCFM
- Air pressure: 80 PSI
- Note: System requires a filtered and dry air source.

CNC CONTROL SPECIFICATIONS - GE Fanuc i-18iTB
- 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
- Mains subroutines
- Automatic recognition of EIA or ISO coding
- Absolute/incremental programming
- RS 232 interface

OTHER WELDON GRINDER PRODUCTS

WELDON SOLUTIONS
1800 WEST KING STREET
YORK, PA 17404
VOICE 717.846.4000
FAX 717.846.3624
info@weldonsolutions.com
www.weldonsolutions.com

ALTAIRA
1 Meter Capacity OD Grinder
APPLICATIONS
The Weldon Altaira CNC cylindrical grinder is designed to satisfy processing of large, work parts up to 1 meter (40") in length. Rotary and linear axes are sealed from airborne contaminates providing unmatched longevity in carbide and ceramic grinding applications.

Available with either a straight or angular wheel head (factory set) the Altaira 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. Properly equipped, an Altaira is ideally suited for high speed “Peel” grinding with CBN abrasives. Additionally, a programmable “C” axis package can be provided to accommodate non-round grinding applications.

FEATURES
Standard:
- GE/Fanuc model 18-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.
- Compound linear slide design to keep floor space requirements to a minimum.
- Z axis linear motor, GE Fanuc. X axis precision ballscREW assembly or GE Fanuc linear motor determined by application.
- 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.
- Automatic Trabon lubrication system, monitored by the control, with lube fault protection.
- Heavy-duty tailstock, hydraulically operated, with #5 MT center. Includes manual taper adjustments with eccentric quill design.
- Variable speed wheel drive, CNC controlled with dynamic braking. Normally arranged for constant surface speed as the grinding wheel wears.
- Stainless steel telescoping way covers.
- Full enclosure with manually operated dual sliding door assembly and both side and rear maintenance access panels.

Optional:
- 22” swing capacity for faceplates and fixturing to accommodate larger workparts.
- In-process gage for automatic size control.
- Automatic lateral locator, wheelhead mounted, featuring a Renishaw probe.
- Acoustic emissions sensor for gap elimination, crash detection, and touch dressing.
- Programmable workhead with Heidenhain rotary scale, for non-round applications.
- 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.

CBN abrasive packages available for multi-plunge and peel grind processing. Packages include acoustic sensor, high-pressure coolant and electric rotary dressing.

Heavy-duty live spindle workhead available with rotary glass scale feedback for non-round applications.

3” stroke hydraulic tailstock with live spindle option for friction drive and heavy work part set-ups.

Compound slide design features GE Fanuc Z-axis linear motor with precision glass scale feedback.

For more information, visit www.weldonsolutions.com.
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  - Center taper: #5 Morse
  - Through-hole diameter in spindle for draw bars: 0.0625”
  - Max. speed range: Infinitely variable and programmable 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
- Wheel spindle: Permanent grease-packed bearings, preloaded.
  - GE Fanuc linear motor on Z-axis: Cross-roller
  - GE Fanuc AC digital servo drives: 1.9 HP
  - Quill retraction (hydraulic): 3”

TAILSTOCK
- Center taper: #5 Morse
- Quick retraction (hydraulic): 3”

TABLE DRIVES
- GE Fanuc AC digital servo drives: 1.9 HP
  - Command resolution, least programmable increment: 0.000010”
  - Position feedback resolution: 0.000010”
  - Precision ground preloaded ballscrew on X-axis: Cross-roller

LUBRICATION
- Wheel spindles: Permanent grease-packed
- Workhead spindle: Permanent grease-packed

OTHER WELDON GRINDER PRODUCTS
- Solaris - Large Capacity OD
- UGC - Small Capacity ID
- Midas - High Production OD
- AG44 - Small Part OD
- 1632 Gold - Ultimate Versatility OD/ID
- 1612 Gold - Ultimate Versatility OD/ID
- Pulsar - Job Shop Series OD/ID
- Phoenix - Large Capacity CNC ID
- P175 - Small Part Non-Round OD

ALTAIRA
1 Meter Capacity OD Grinder

Ballscrews: 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 cycles to lubricate machine at start-up

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