

# Altaira Straight Wheelhead R&D Grinder



Research & Development are still a priority for a major US heavy equipment builder. The Weldon **Altaira** was selected for a test lab application to fully develop both conventional & superabrasive grinding processes. The primary reason for selection was Weldon's experience with, and the Altaira's capability for, high-speed **Peel Grinding**.

The Altaira can handle work parts up to 16" in diameter, 40" in overall length, & up to 600 pounds in total weight. All this capacity in a relatively small footprint is possible due to the compound slide design where the infeed (X) axis is mounted above the Z axis cross slide. The project turnkey also included an **Ebbco** coolant control system with magnetic separator, cartridge style fine filtration, mist collection, high-pressure wheel scrubber, & temperature control.

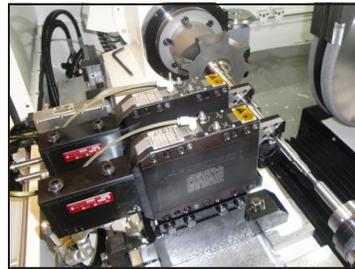
The machine is controlled by the latest **FANUC** model 32iAT CNC. **FANUC** also provides the linear motor for Z axis positioning.



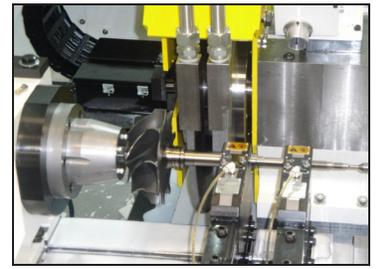
A **Renishaw** probe, presented via a pneumatic cylinder, is utilized for precise automatic lateral positioning. A table mounted in-process sizing gage from **CGI** monitors diameter size & controls the grinder in-feed until final size is achieved.



The vitrified CBN grinding wheel is dressed with a **GII** cross axis electric rotary diamond dresser aided by a **Dittel** acoustic emissions sensor to minimize wheel reduction. A custom wrap-around coolant nozzle design effectively presents coolant to the grind zone.



Parts with an unfavorable length-to-diameter ratio are supported automatically during the grind cycle by multiple **Arobotech** hydraulic follow-down steadyrests. This keeps the part from deflecting under grind pressure assuring the best possible roundness.



A dual vitrified CBN grinding wheel set-up was specifically designed for peel grinding a turbo-charger shaft & impeller as an assembly in a single operation. This dramatically increases productivity & improves TIR between part features.

System features:

**SBS** automatic wheel balancer, **GII** electric rotary dresser & CBN abrasives, **Dittel** acoustic emissions sensor, **Heidenhain** linear glass scales, **CGI** in-process sizing gage, **Renishaw** probe/locator, **Arobotech** steadyrests.



**Weldon Solutions offers a full line of CNC OD, ID, & combination grinders. As a FANUC Robotics integrator, Weldon can also address your machine tending, material removal, material handling, & packaging/palletizing needs.**

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