



1632 GOLD CNC Grinder Case Study, November 2006

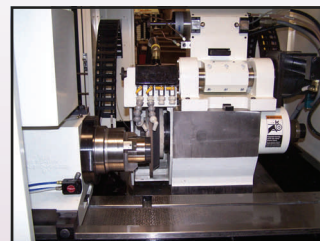


Flexible OD/ID CNC grinder arranged for diamond abrasive grinding of ceramic components.

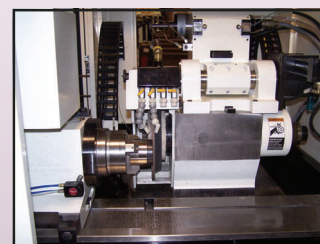
High frequency ID grinding spindle, 30,000 RPM.



OD wheelhead with angular contact bearings, 5,400 RPM (22,000 SFPM)



Swing-down ID fixture permits OD and ID grinding in a single set-up.



Customer:

Ceradyne, Irvine, CA

Application: OD/ID Ceramic Grinding

Configuration:

- 2 Axis CNC; GE Fanuc 18i TB
- 6" Manually operated pneumatic chuck
- Swing-down ID spindle housing
- 30,000 RPM ID grinding spindle

Process:

Proprietary material (Ceramic); grinding ODs, IDs, radii, and faces on a variety of components using metal bond diamond abrasives and water soluble coolant.

Notable:

This is one of two machines that will join five (5) existing Weldon Model 1632 Grinder, primarily to produce ceramic engine seals on a three (3) shift basis.

Featuring:

- Encyclon cyclonic coolant filtration system, with auxiliary canister bag filters
- GMN high frequency ID grinding spindle
- Heidenhain X and Z axis linear glass scales
- Northfield 3-jaw pneumatic chuck
- Turmoil coolant chiller
- SBS automatic OD wheel balancer
- GE Fanuc CNC control