



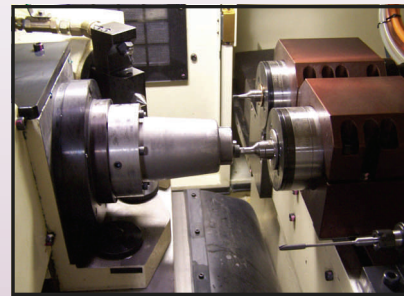
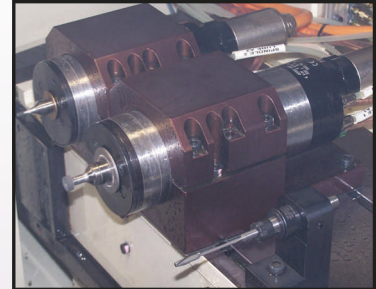
UGC Multi Spindle CNC ID Grinder

Case Study, November, 2006



Multi-purpose chucking grinder for OD, face and ID grinding in a single set-up.

60,000 RPM spindle for OD and face grind, 90,000 RPM spindle for ID grind, diamond hone for ID finishing.



5C collet chuck with drawbar and pneumatic actuator.

Customer: Hydraulic Component Manufacturer **Application:** Precision bushings (11L17, heat treated)

- Configuration:**
- Dual grinding spindle
 - Honing station
 - 2-axis CNC; Fanuc 21iTB
 - 5C collet chuck
 - X and Z axis linear scales
 - Machine tending robot
 - Single pallet station

Notable: Blended CBN/ALOX wheels were dressed with a stationary single point diamond. OD size maintained to .00015" tolerance. ID size to .0005" tolerance then honed to .0001" and 4 RA finish.

Featuring: Hardinge 5C collet chuck, GMN high frequency grinding spindles, Fanuc CNC control, Heidenhain linear glass scales, EPSON robot, Schunk end-of-arm tooling, Meister grinding wheels.