

*from blueprint
to finished part...*

Hygrade
does it all!

- + CNC machining
- + ID/OD grinding
- + flat grinding
- + Blanchard grinding
- + double-disc grinding
- + flat lapping

AS9100 REV C
certified

Upload your
blueprints and specs
for an estimate:
www.hygrade.com

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Hygrade

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single source
precision machining,
grinding and lapping
specialists

Flat Grinding

Hygrade is the largest and most experienced flat grinding resource in the Northeast.

Double-Disc Grinders

Simultaneously grind both sides of your part to precise dimensions for thickness, flatness, parallelism and microfinish. Thin parts are a natural application for double-disc grinding.

Blanchard Grinders to 60"

Our large-diameter flatness capability is tooled to grind various magnetic and non-magnetic materials such as aluminum and exotic stainless steels.

Gardner Disc Grinders

Our double-sided, high-volume production grinding machines have a capacity for parts as small as .5" and as large as 12.5". The cornerstone of this department is a twin spindle horizontal paddle grinder. Rapid stock removal rates on the toughest materials are routine.

Flat Lapping

Whether you need parts sized to millionths, mirror finished or simply a smoother, flatter surface...count on HYGRADE to get the job done right!

Single-Sided Lapping to 17"

Helium light band tolerances of 11.6 millionths (.0000116") are routinely achieved on various materials, including solid carbide and chrome plate.

Double-Sided Lapping to 14"

When both sides of a part can be processed simultaneously, our electronically controlled, double-sided lapping machines can achieve flatness, parallelism and microfinish much faster than single-face lapping systems.

Hygrade combines state-of-the-art machinery and highly skilled craftsmen to give you superior products delivered on time at competitive prices.



CNC Multi-Axis Machining

Whether you require precision machined parts or aerospace components, our full compliment of CNC equipment can service your needs. Key components to our extensive CNC department are a 5-axis **Okuma vertical machining** center with 60" x 25" travel and CNC lathes with 27" swing x 39" length enable full-service precision machining, complete to print.

Hygrade has developed a manufacturing cell allowing One-Piece Flow for "Families of Parts" requiring a similar sequence of operations. This reduces lead-time, resulting in improved delivery.

Cylindrical Grinding

Our horizontal and vertical equipment

grinds parts as small as .236" diameter or as large as 48.000" diameter (60.000" swing) to your exact requirements on the most difficult materials, including specialized coatings and chrome plate.

CNC Grinding

Hygrade offers a wide range of CNC ID/OD capabilities. To compliment our CNC cylindrical grind operations we added an Okuma GI-10 ID grinder. This precision grinding center features a 16" swing x 6" stroke and travel rates up to 800in/min with hydrostatic way repeatability and rigidity. Computer-controlled, high-frequency spindles and in-process dressing compensation allow seemingly impossible tolerances, including corner radii, to be held with ease.

Hygrade is an approved source for the grinding of plasma and HVOF coatings for aerospace & defense contractors.

Non-Destructive Testing & Inspection

Contract Inspection on CMM

- ⊕ Mitutoyo CMM with the latest MCOSMOS software
- ⊕ Capacity X-28", Y-28", Z-28"

NADCAP Certified for Surface Temper Etch

- ⊕ For the detection of grind burn per HP 30-4 (Boeing) and SS8705 (Sikorsky), and MIL-STD-867
- ⊕ Etching facility that can handle parts 18" x 18" x 24"

Stress/Embrittlement Relief Bake

- ⊕ Embrittlement Chamber 24" x 24" x 48", Maximum Temperature of 450°F

We are pleased to provide our customers with the experience and resources to meet even the most challenging requirements. Contact us today:

www.Hygrade.com