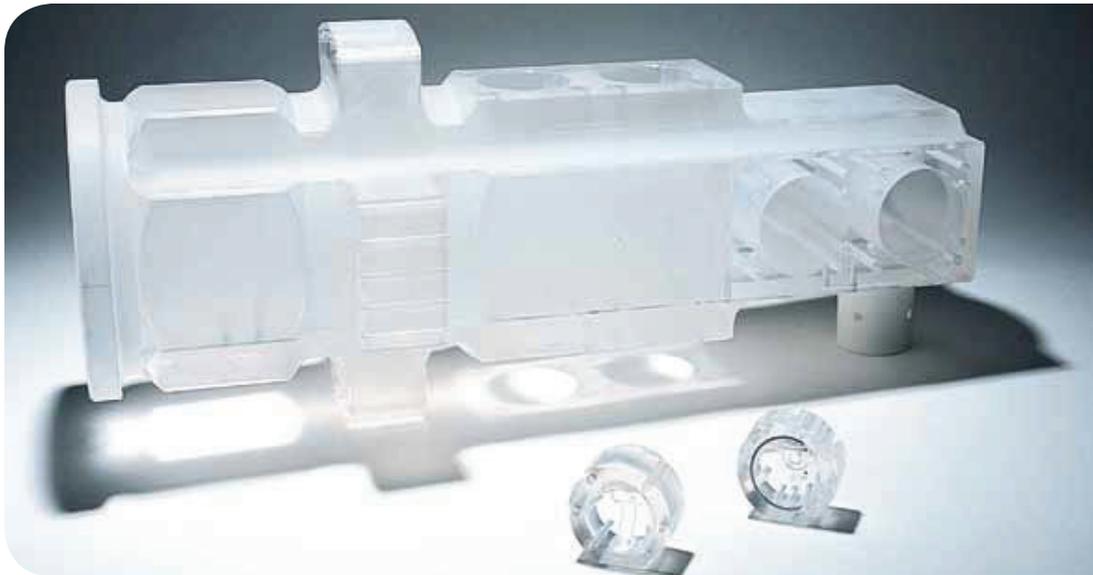


Lapping and Grinding Capabilities



Inertial Navigation Systems

Momentum/Reaction Wheels

Rotary and Linear Air Bearings

Optics

Scientific Experiments

Space Instrumentation

General Dynamics provides lapping and grinding capabilities for high-performance materials including Beryllium and its alloys, Titanium, Aluminum, Quartz, Sapphire, machineable glass and ceramics. With more than 50 years of expertise and state-of-the-art turning equipment, we are able to achieve virtually unmatched tolerances.

General Dynamics Mission Systems designs and manufactures a full portfolio of high-performance electrooptical/infrared (EO/IR) systems and components that provide our customers the clarity, accuracy and reliability to successfully complete their mission.

Lapping and Grinding Capabilities

Ultra-Precision Tolerances

10" beryllium gimbals with bore alignment tolerances of .0001"

Angularity and profile callouts of less than .000020" on hard anodize coated aluminum components

2" diameter optically polished quartz gyro components with flatness of .0000020"

Aluminum and beryllium gas and air bearing components with tolerances of .0000010"

Surface Finishes

Metal surface finishes of 1 micro-inch

Aluminum oxide coated ground, lapped finished to within .1 micro-inch

Ground finishes of 5–6 micro-inches on lenses, mirror substrates and similar components

Etched quartz surfaces, lapped and/or ground to achieve customer's requirement within a 20 micro-inch tolerance

Matched Tolerances

1/4" diameter matched diametrical gap of .000020" and standardized within .000005", between 2-1/4" diameters

10" mating surfaces are matched lapped and thermally assembled while maintaining the finish diameter and faces with a runout of less than .0004"

Matched lapped components of same and different materials for both diametrical and axial fits

Manufacturer reserves the right to change specifications to reflect latest changes in technology and improvements at any time without notice. Export is subject to U.S. Government regulations.



GENERAL DYNAMICS

Mission Systems

6717 Alabama Highway 157 • Cullman, AL 35057 • +1 256.737.5200

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