# Machining Capabilities

Sapphire Engineering™ offers a comprehensive array of machining services, specializing in complex, burr-free, high-precision turning, milling and processing of high-performance engineering thermoplastics and corrosion-resistant metals.

## Materials

- Thermoplastics: PEEK™, PTFE (Teflon®), ETFE (Tefzel®), Acetal (Delrin®), PCTFE (Kel-F®), polyimide (Vespel®),Radel®, Ultem™, PPS (Ryton™) and others
- Stainless Steel: 303, 304, 316,17-4PH, Vim Var and others
- Titanium
- Aluminum
- Brass
- Hastelloy C
- Other Plastics: acrylic, polypropylene

## Capabilities

- Holes as small as 0.004" (102µm) in plastics and 0.007"(178µm) in metals
- Tolerances down to less than 0.0001" (2.54µm)
- State of the art CNC turning and CNC milling equipment, including Swiss and high speed screw machines, with an average machine age of less than five years.
- Surface finishes of 16 microinch (Ra) or better available on all materials
- Strategic subcontract partnerships with key machine and secondary operation houses for processes such as metal coatings (including gold electroplating and anodizing), electropolishing, investment welding and precision TIG welding

## Services

Beyond machining products to your specifications, we'll work with you every step of the way and provide any complementary services you need to ensure the successful integration of your component.

- Design/concurrent engineering with CAD/CAM data transfer, including Solidworks®, Autocad® and all popular file formats
- Materials selection assistance
- Quick turnaround on production and R&D parts
- Prototype runs available for preproduction validation
- Low volume production available
- Parts hand cleaned and deburred under a microscope
- Ultrasonic cleaning
- Passivation of stainless steel parts and tubing
- Custom packaging and labeling

For more information please contact Sapphire Engineering™ or your local OEM Representative.

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