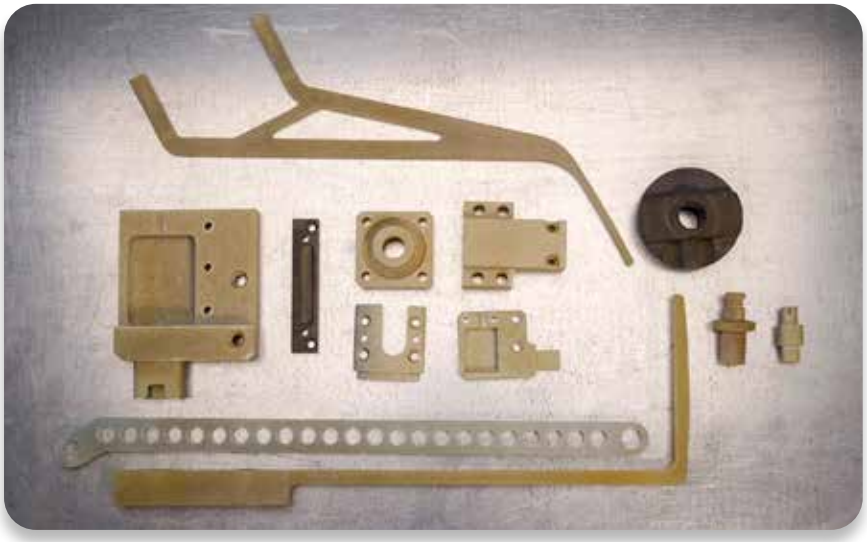
TacMach

Taconic's new range of machined composites & high-performance plastics

Taconic's TacMach range brings together precision-engineered components manufactured from advanced layered composites and high-performance plastics. Designed to replace traditional metal alloys where possible, these parts deliver outstanding benefits from weight reduction and structural strength to electrical and thermal insulation, as well as self-lubricating performance for moving elements.

TacMach supports a broad range of high-performance materials engineered for mechanical strength, electrical insulation, wear resistance, dimensional stability, and elevated temperature performance. Material options include PEEK, PTFE, PET, nylon, polypropylene, epoxy laminates, mica composites, aramid laminates, and high-temperature insulating materials.



Precision Composite & Plastic Processing

Using state-of-the-art CNC machining, we produce components from a wide variety of materials in both sheet and round formats. This allows us to deliver fully finished, assembly-ready parts built to your exact specifications, with consistently tight tolerances across every dimension.

Our deep material expertise means we don't just manufacture... we advise. We work closely with you to select the most suitable, high-performance solution for your application. Every component is rigorously inspected and delivered with a full production and inspection report, ensuring complete confidence in quality and traceability.

We also offer flexible production capabilities, including small batch sizes and single-piece manufacturing, making TacMach an ideal partner for both prototyping and specialised applications.

Product Capabilities

- **FDA Plastic Parts:** Custom or sample components manufactured from materials such as PE, POM, PTFE, and PEEK. Available in blue, white, or natural finishes, all FDA-certified and detectable for food-safe applications.
- **Blade Holder Bars:** Precision-machined insulating bars and angles, with milling capabilities starting from as fine as 0.2 mm.
- **Gears, Slides & Bushings:** Components produced with self-lubricating materials, designed to enhance motion efficiency while reducing wear and opertional noise.
- **Blades:** High-precision blades for pneumatic and vacuum systems, manufactured from composite materials and finished to exacting standards.
- **High-Performance Plastic Parts:** Custom-engineered components made from ultra-high-performance materials such as PBI, PI, PAI, and filled grades of PEEK and PTFE, reinforced with carbon, glass, or graphite.
- **Insulating Parts:** Tailor-made components offering excellent mechanical strength and reliable performance in extreme conditions, withstanding temperatures up to 932 °F / 500°C
- **Composite Parts:** Lightweight, high-strength mechanical and insulating components that provide a compelling alternative to metals without compromising performance.
- **Platic Parts:** Fully finished parts produced to your design using materials including PE, PP, POM, PET, PA, PTFE, and PEEK available in natural or filled grades, extruded or pressed.
- **FDA Composite Parts:** Custom composite components with excellent thermal and electrical insulation properties. FDA-certified, non-stick, and capable of operating in temperatures up to 662 °F /350°C.

	Product	Material	Application	Operating Temp Max °F/°C
Composites	G10 (FR4) G11	Glass fabric + epoxy resin	mechanical & electrical application	266/130 356/180
	AVF300	Glass fabric + phenolic resin	mechanical and electrical application	365/185
	FRL-G and FRL-Moly	Cotton fabric + phenolic resin	sliding elements and gears	275/135
	D220	Glass mat + High temperature epoxy resin	thermal & electrical application	428/220
	A240	Glass mat + High temperature epoxy resin	thermal & electrical application	464/240
	A350W	Glass fabric + high temperature silicone resin	thermal application	662/350
	AKF180	Aramid fabric + phenolic resin	high temperature sliding elements	356/180
	A450	Mica paper + silicone resin	thermal application	842/450
Thermoplastics	PLT 1000	Polyetilene high density (PE)	Sliding elements at room temperature	194/90
	PP grey	Polypropilene (PP)	Chemical application and cutting support	194/90 - 212/100
	Nylon 6	Polyammide (PA6)	sliding elements and mechanical application	212/100
	Nylon 6.6 Cast	Polyamide 6.6 MoS2 (PA 6.6)	Sliding elements & mechianical	223/100
	Nylon 12	Polyammide 6.6 MoS2 (PA 6.6)	sliding elements, gears and mechanical application	212/100
	Delrin	Polyoximethilene (POM)	Mechanical & some chemicals application	212/100
	Arnite	PolyethileneTerephthalate (PET)	Some chemicals and mechanical application	230/110
	E-100T	Polyethilene Terephthalate solid lubricant filled (PET)	Sliding elements, wear resistance	230/110
	PTFE	Polytetrafluoretilene (PTFE)	Sliding elements, chemical application	500/260
	T-453CG	Polytetrafluoretilene (PTFE+carbon fiber+graphite filled)	Sliding elements and electric conductive application	500/260
	PEEK	Polyetereeterketone (PEEK)	Mechanical application at temperature, high wear resistance	500/260
	E-111TC	Polyetereterketone (PTFE+carbon fiber+graphite filled)	Mechanical application at temperature, high wear resistance, lower friction than unfilled PEEK	500/260

The data herein are averages based on the authoritative testing of several lot numbers. This information is intended for comparison purposes only.