

XPress Compression Molded Chopped Fiber Thermoplastic Parts

PRODUCT HIGHLIGHTS

Affordable, Complex Shaped, High Performance Composites

- › Replaces machined metals
- › Provides efficient alternative to hand lay up of composites
- › Significantly higher performance option over injection molded parts

Compression molded demonstration part highlighting net molded complex shapes, and boss areas for fastener attach points.



FEATURES

- › High mechanical properties with carbon and glass fibers
- › Matches the tensile load carrying capability of 6061 aluminum at only 60% the weight
- › High toughness and durability of advanced thermoplastics
 - PEEK, PEI (Ultem), PPS, PEKK
- › Machineable and paintable
- › High temperature performance and solvent resistance
- › FST & low heat release versions for interior applications
- › Aerospace approved material design allowable
- › XPress Process - World class speed, quality, and consistency
 - Parts net molded in minutes
 - High degree of in-process control and monitoring, at levels not possible with other compression molding processes
 - Highly repeatable matched die process

Compression molding allows fabrication of highly complex shapes using advanced composite materials which would not be cost effective or practical with continuous fibers/fabrics. Compression molding minimizes part count; integrating several parts into one assembly. It also allows opportunities for design optimization with lower costs, for example: integral ribs and stiffeners, molded in metal inserts, reinforced areas.

IDEAL FOR

- › Aircraft interiors
- › Aircraft engines (bracket/parts)
- › Metal replacement for weight reduction
- › Complex metal or composite parts needed in high volume
- › Integrating multiple assemblies into single parts

Property	Aluminum Baseline	MC1200 PEEK
Tensile Strength	303 MPa/44 ksi	289 MPa/42 ksi
Modulus	69 GPa/10 Msi	41 GPa/6 Msi
Density	2.7 g/cc/169 pcf	1.5 g/cc/94 pcf



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TC275-1_QISO_ProductHighlights_v3.0_2018-04-25 Page 1/1

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