



## THE NEED FOR PROTOTYPE SPEED

### Background

A company that pioneers in the design, development, build, and support of some of the world's most advanced military aircraft, spacecraft, and cyber security systems required a large set of parts created for testing. This company had worked with PGC for years and knew that their cutting-edge project needed additional value-added engineering input and knowledge. PGC was the right supplier to develop a solution with these, and various additional, critical requirements:

- Uncommon soft density mil spec materials that were new to PGC
- An expensive high-purity material capable of withstanding 1600°C (2912°F)
- Complex drawings with geometric dimensioning and tolerancing requiring inspection data

### Challenge

This customer had an aggressive timescale for prototype parts, in order to complete early stage concept and feasibility studies. PGC is capable of rapid prototyping thanks to an assortment of equipment and manufacturing processes capable of virtually every type of cutting. Since material was extremely expensive, PGC needed to rely on multiple partner suppliers for sample materials in order to make prototypes quickly.

### Soft Density Mil Spec Materials

**INDUSTRY:**

Aerospace, Military, Defense

**APPLICATION:**

Missile weapon components

**PRODUCT:**

Mil spec silicone, thermally insulating fiber sheets, EMI/EMC gasket tape

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## Solution

After thoroughly reviewing the set of customer drawings, PGC immediately reached out to suppliers for available material to use for the prototyping phase. Our partner relationships with vendors made it possible to get the material needed to quickly investigate best manufacturing practices for these various new materials. Once in hand, it was easy to identify the materials to be similar to others, so we quickly jumped into cutting parts.

The next stage was to use our camera based CMM inspection machines to identify the complex geometry and report inspection dimensions for each prototype part. It was through this effort that PGC's engineering team helped determined necessary corrections to each drawing for production ready use.

## Result

After customer testing proved the prototypes were a success, we were both ready to initiate production manufacturing. PGC's rapid response to produce, inspect, and deliver parts for engineering discussions and final evaluation solidified our customer-supplier partnership. PGC continues to become an extension to many customers as an external engineering branch for advanced sealing solutions. The results proved PGC's continuous engineering efforts remain an essential reason why PGC is a market leader for high quality custom gaskets, seals, and rubber products.

If you would like more technical information on this case study, or have questions you'd like to discuss with one of our engineers, contact us at: [sales@pgc-solutions.com](mailto:sales@pgc-solutions.com) or call **(952) 942-6711**.



### HEADQUARTERS

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