



# NASA Seeker Robot x Technology House, powered by Carbon

## Background

NASA wanted to rapidly and cost-effectively produce four high-performance thrusters for the cold-gas propulsion system with the new Seeker robotic free flier inspector.

## Challenge

- Time crunch of 1 year from project kickoff to integration for launch
- Uncertainty in developing an effective cold gas thruster system in a highly constrained volume that could integrate several critical components, including four separate cold gas jets, gas tubing and fittings, integrated bracketing to hold the assembly, and design accommodation for all other sensors in close proximity
- Lightweight material
- Extremely small throat dimensions
- Temperature resistance

## Solution

The Technology House iterated on design elements to improve accuracy and printability while maintaining the functionality of the part in order to hit critical tolerances of the extremely small throat dimensions (0.0026 inch) of the part. CE 221 proved to be the perfect material for the performance requirements of the mission and the parts being validated for flight.

