

Halo Propulsion Kit

Halo





Qualification
Test Unit



Hot Fire Test

Product Overview

ExoTerra's Halo Propulsion Kit provides microsatellite developers with a complete propulsion system, ready for installation. The unit includes a Halo Thruster, Propellant Distribution System, Power Processing Unit, and Propellant Tanks. Tanks can be scaled as needed to meet mission design.

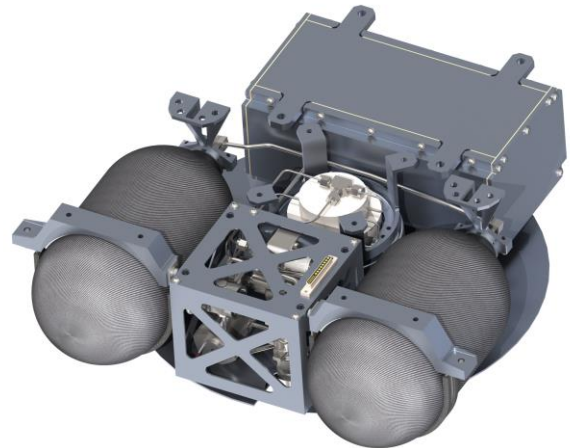
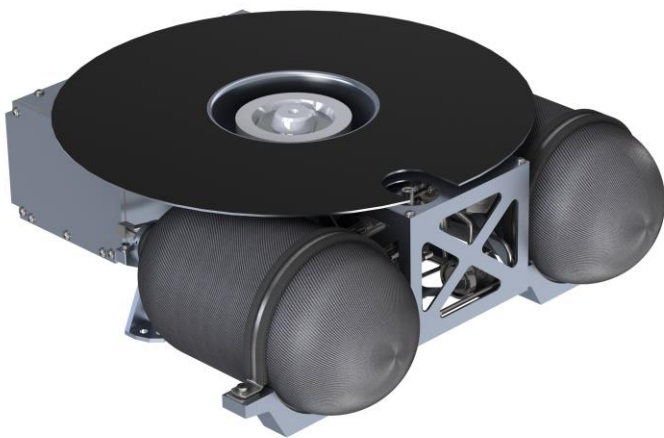
Simplified Propulsion for Microsatellites

ExoTerra's Halo Propulsion Kit provides a bolt-on propulsion unit for CubeSats and Microsatellites. The kit enables microsatellites to escape their rideshare drop-off orbits to reach optimal orbits, maintain them, and deorbit on command. The modular kit can be reconfigured as needed to fit within the spacecraft, and can insert larger tanks as needed for more impulse. The as shown configuration provides up to 45 kNs of impulse, with larger tank options offering over 200 kNs capability.

The system consists of a 1/4U Halo Thruster, 2.1U Power Processing Unit, 1.1U Propellant Distribution System, Radiator and Tanks. Volume as shown is ~32x32x10 cm. It can be provided as an integrated welded system, or as individual components that are installed by either the satellite maker or ExoTerra as desired.

- Mass:** 6 kg, excluding tank
- Volume:** ~4U, excluding tank
- Input Power Range:** 125-450 W
- I_{SP} Range:** 750-1500 s
- Thrust Range:** 4-33 mN
- Impulse:** Up to 200 kNs
- Flexible Propellants:** Xenon or Krypton

Big Propulsion for Small Satellites



For more information contact:

About ExoTerra

ExoTerra was founded in 2011 with a vision of reducing the cost of space exploration. We pursue this goal by developing affordable technologies that minimize spacecraft mass and volume while enhancing their performance and offering unique capabilities.

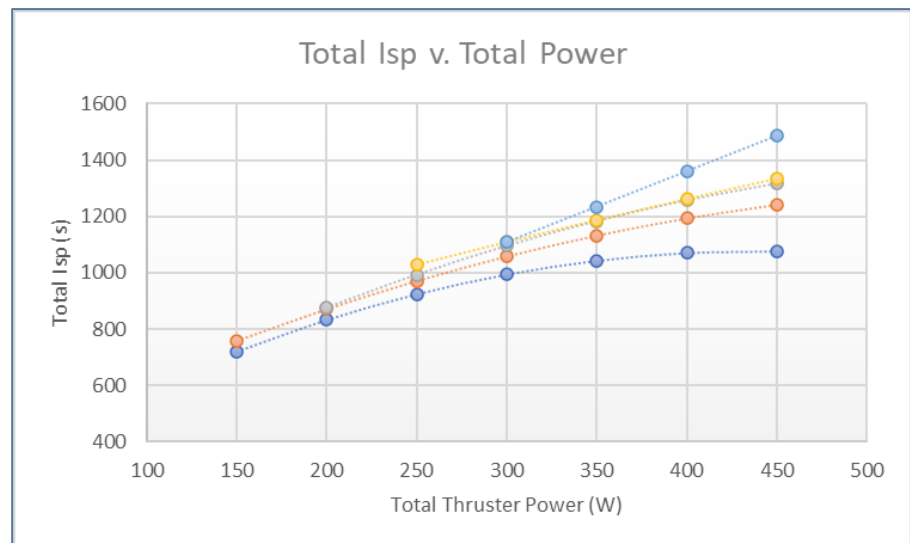
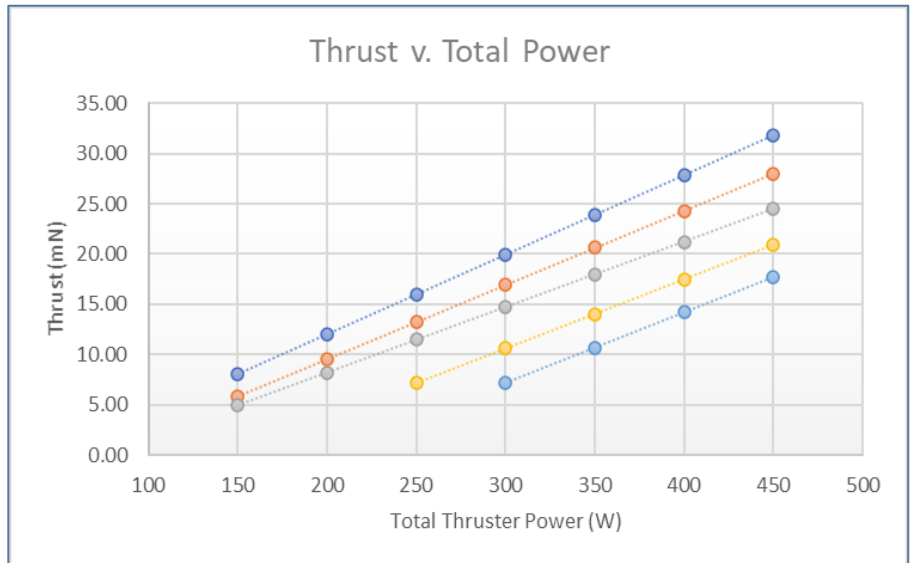
Halo Development

The Halo Thruster has completed environmental testing to NASA GEVS load profiles. Life Testing is ongoing with a projected lifetime of 4000 hrs. First flight is scheduled for 2Q21 with follow-on flights in 4Q21 & 2Q22.

Custom Services

ExoTerra offers customized propulsion solutions. We can perform the design work to integrate the system into the customer's satellite, optimizing the layout and system mass. This service includes, component, tube & harness mounting and routing, thermomechanical analysis, tooling, assembly onto the customer's satellite, weld, and testing prior to delivery.

Demonstrated Thrust and Total Specific Impulse



For more information contact: