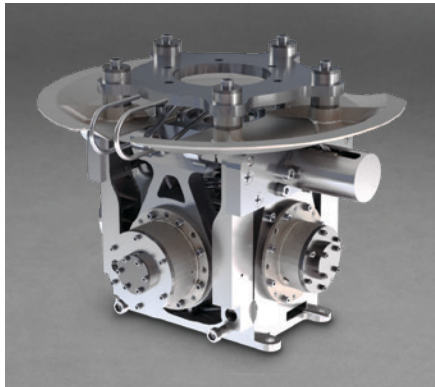


SMALL THRUSTER GIMBAL ASSEMBLY (S-TGA)



The Small Thruster Gimbal Assembly is a two-axis gimbal designed to support and articulate small electric propulsion engines used in space applications. The S-TGA is equipped with an integrated launch lock designed to support the electric propulsion engine during its launch environment. The launch locks are deployed by applying power to its Frangibolts. With the launch locks deployed, the gimbal is free to articulate through its two independent axes of rotation. Integrated propellant lines are used to feed the electric propulsion engine. These lines are nested at the center of the gimbal. Similarly, electrical power lines are located at the center of the gimbal and are used to facilitate

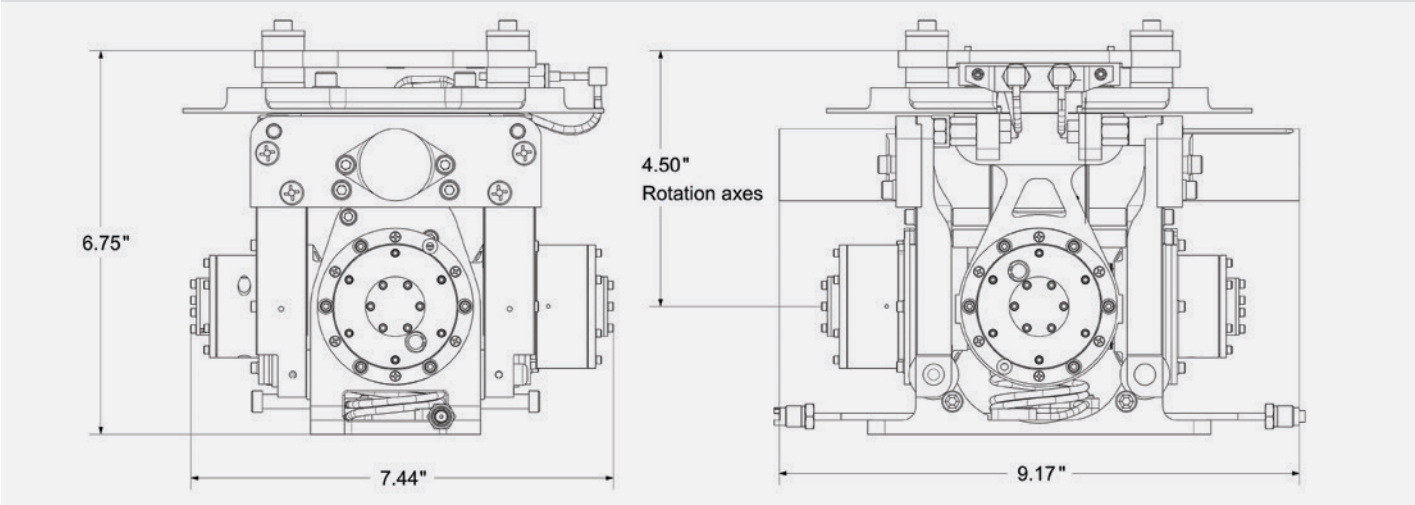
the power, and telemetry needs of the propulsion engine. Customizable engine plate is used to adapt to various engine mounting configurations. This interface mounting plate is suspended on snubbers to attenuate the dynamic loads and provide reduced resonance at the engine.

SMALL THRUSTER GIMBAL ASSEMBLY (S-TGA)

SPECIFICATIONS

Features	Performance
Unit Weight	10.6 lbs (Mass includes Radiator Plate and Interconnecting Thruster Plate)
Dimension (L W H)	9.9 in x 9.9 in x 6.9 in
Operating Voltage	28 VDC
Motor Configuration	3-phase, stepper
Operating Current	0.269 (current limited)
Current Draw	4.5 watts per axis
Pointing Resolution	0.0375 degree
Pointing Accuracy	0.025 degree
Total Range of Travel	±18 degrees
Angular Velocity	3.75 deg/sec
Position Holding Capability	25 in-lb
Torque Capability	70 in-lbs
Operating Temperature	-30 to +80 deg C
Position Knowledge	Potentiometers- absolute position sensor
Position Telemetry Accuracy	1 degree
Propellant Lines	Two integrated 1/8-inch propellant lines
Launch Lock Mechanism Actuator Type	Frangibolt
Thermal Management	Heaters on the Actuators
Power Cable Management	Internally Routed through the Gimbal
Payload Capability	8.27 lbs
Customizable Engine Mounting Plate	Yes

DIMENSIONS



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