Propulsion Unit for CubeSats

11044000-01

SPACE

The VACCO / CU Aerospace Propulsion Unit for CubeSats (PUC) is a delta-v propulsion system specifically optimized for CubeSats. The PUC is available in a variety of sizes from 0.14U to 1U with features that include minimal payload displacement, high delta-v, low mass, low power and a simple control interface.

Development hardware has been extensively tested including 75,000+ cold gas firings in a vacuum chamber.

The self-contained PUC includes an integral controller, propellant storage, propellant feed system, sensors and a 5.4 mN warm gas thruster. Reliability is ensured through simplicity of design, welded titanium construction and frictionless valve technology.

0.25U Model

Features

- Scalable from 0.25U to 1U
- Minimal payload displacement
- High total impulse and delta-V
- 5.4 mN CU Aerospace MCD thruster
- Low power
  - 15 watts firing in warm gas mode
  - 0.055 watts in standby mode
- Simple control interface
- Reliable, frictionless valve technology

Performance Matrix

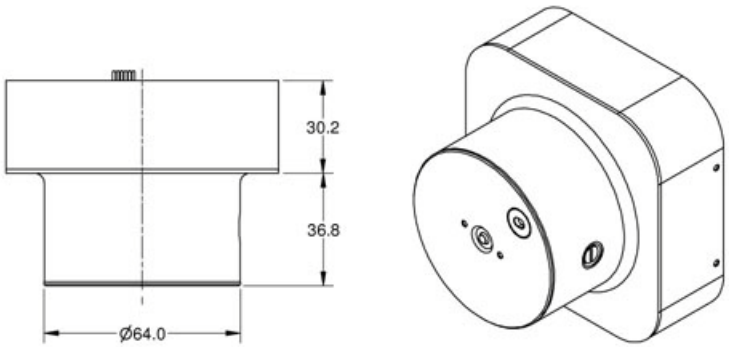
Warm Gas Mode: 5.4 mN, 70 sec Isp, 15 watts				
Unit	Total Impulse (N/sec)	Delta-V, 3 kg CubeSat (meters/sec)	Delta-V, 4 kg CubeSat (meters/sec)	Dry Mass (grams)
0.25U	183	64	47	434
0.50U	320	121	87	568
1U	595	234	167	835

Performance characteristics are based on customer requirements. As such, they are not representative of component capabilities or limitations.

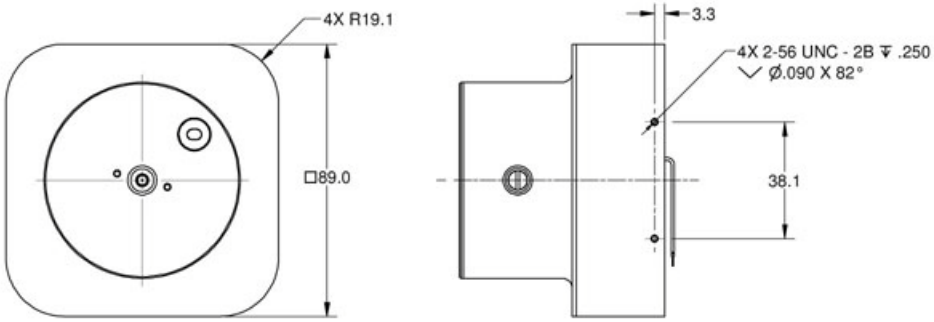
VACCO Industries | 10350 Vacco Street | South El Monte, CA 91733
T: (626) 443-7121 | F: (626) 442-6943 | E: space@vacco.com | W: www.vacco.com
A Subsidary of ESCO Technologies Inc.

Envelope Drawing

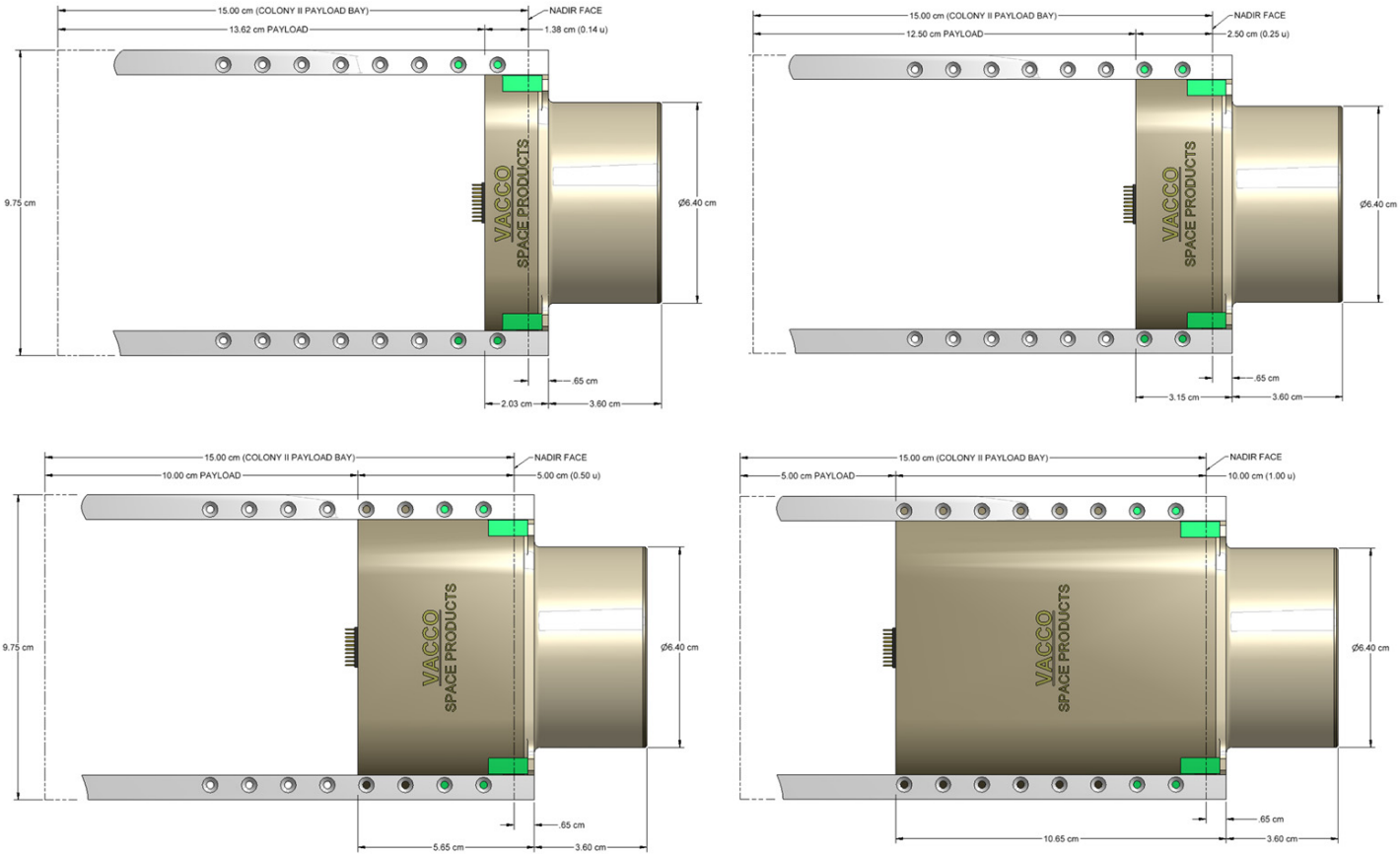
11044000-01



Electrical Schematic



Sizes 0.14U to 1U Available



VACCO Industries | 10350 Vacco Street | South El Monte, CA 91733
T: (626) 443-7121 | F: (626) 442-6943 | E: space@vacco.com | W: www.vacco.com
A Subsidary of ESCO Technologies Inc.