Busek Micro Resistojet

Micro Resistojet module provides integrated primary & ACS propulsion for 6 DOF CubeSat control

The Busek Micro-Resistojet (MRJ) is an integrated primary and attitude control system (ACS) and leverages flight and SBIR design efforts for miniature low power valves and power management electronics.

The 9 cm x 9 cm x 10 cm system is capable of throttling performance based on available power, ranging from 3 to 15W, delivering up to 10 mN along the primary axis and 0.5 mN from each of the eight ACS thrusters. Specific impulse is 150 seconds for the primary thruster, and 80 seconds for each ACS thruster.

The MRJ features safe, non-toxic propellant and lifetime is constrained only by propellant storage.

- 280 mL propellant reservoir or custom volumes are available
- Micro-valve features ST7 design heritage

Busek Co. Inc specializes in providing complete electric space propulsion systems including but not limited to a wide range of thrusters, propellant management systems, power processing units and digital control interface units. Busek provides analytical, computational, experimental and product services to government and industry.
# Micro Resistojet Technical Specifications

**Electrical**
- System Power: 3 - 15 W
- Input Voltage: +5 VDC

**Mechanical**
- System Mass: < 1.25 kg
- System Volume: < 1.0 U
- System Dimensions: < 9 cm x 9 cm x 10 cm

**Performance**
- Total Impulse: 404 N·s, primary
  23 N·s, ACS
- Nominal Thrust: 2-10 mN, primary
  0.5 mN, ACS
- Nominal ISP: 150 s, primary
  80 s, ACS
- Delta-V: 60 m/s (assuming 4 kg CubeSat), primary
  6 m/s, ACS
- TRL: 5

Micro Resistojet features miniature normally closed PFCV