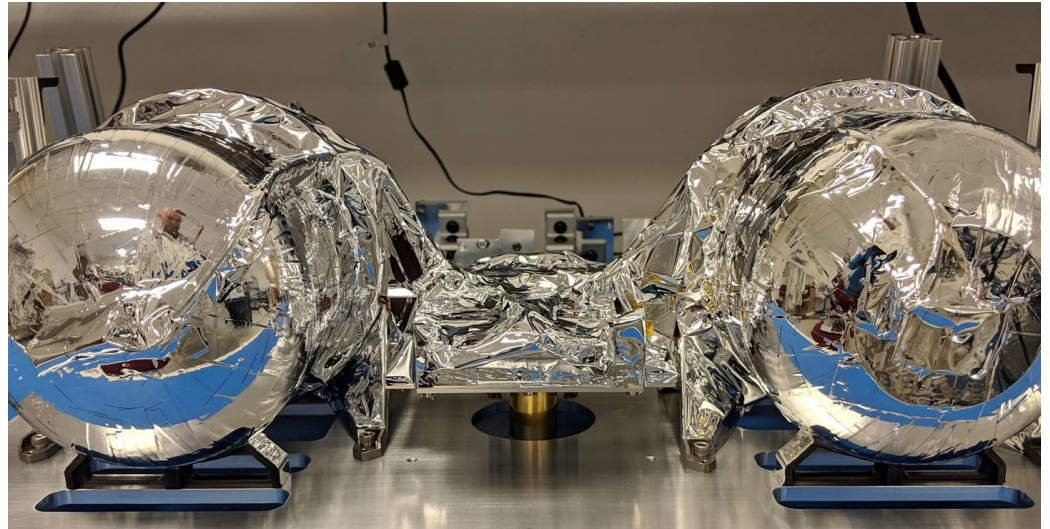


Comet

Water-based Propulsion for Small Satellites



Comet-8000

Comet is a launch-safe and cost-effective electrothermal propulsion system that offers the ideal balance of cost and performance. This high-performance propulsion unit uses water as propellant, making the system easy to work with and easy to fuel.

Its highly-flexible interface is easy to integrate into your small satellite, regardless of size and form factor, and easy to operate on orbit. Comet has also been optimized for minimal power consumption and short maneuvering times, allowing you to focus more resources on your payload.

Key Advantages

- Non-toxic; safe for humans and launch vehicles
- Approved for flight on multiple launch vehicles
- More thrust with less electrical power
- Highly-flexible interface suitable for a wide range of spacecraft sizes
- Zero failure in-orbit heritage (HawkEye 360, BlackSky Global and Capella Space)



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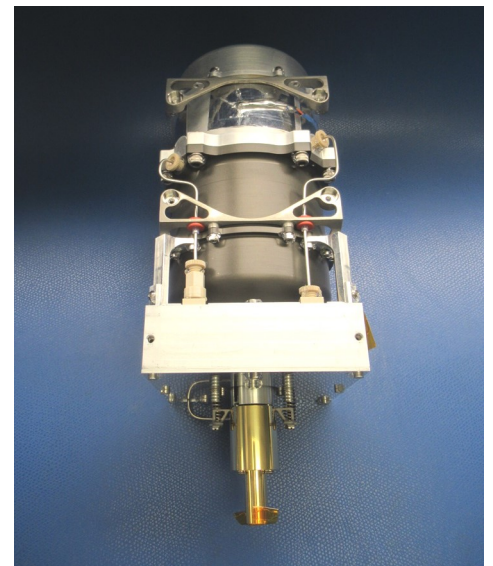
Comet

Water-based Propulsion for Small Satellites

Characteristic	Comet-1000	Comet-8000	Comet-X
Thrust	17 mN		
Specific Impulse	175 ... 185 s		
Warm-up Time	10 minutes		
Power Consumption while Thrusting	25 W for < 1 minute thrust 55 W for continuous thrust		
Power Consumption when Idle	0.25 W		
Dimensions of Thruster Enclosure	10 x 10 x 9 cm		
Input Voltage Range	8 ... 34 V		
Physical Layer Interface	RS422/485		
Protocol and Command Interface	NSPv4		
Minimum Impulse	< 50 mNs		
Operating Temperature Range	+5 °C to +60 °C		
Total Impulse	1155 Ns	8348 Ns	Tailored to Customer Spec
Full System Dimensions (Propellant Tank Dimensions)	10 x 10 x 26 cm (10 x 10 x 17 cm)	44 x 30 x 18 cm (2 tanks: 15 x 15 x 13 cm each)	
System Dry Mass	740 g	2075 g	
Propellant Mass	700 g	4600 g	

Features

- Integrated propellant management and control unit
- Digital command and telemetry interface
- Dedicated WARM, ARM and FIRE commands
- Programmable thruster power consumption
- Custom-locatable fill and drain ports
- Customizable body heaters as-needed with thermostat
- Electronics inspection to J-STD-001 (space addendum) standards
- Environmental testing per NASA GEVS specifications



Comet-1000



ABOUT

Bradford Space is a high-tech developer and manufacturer of satellite control sub-systems, components and platforms, with locations in The Netherlands, Sweden, United States of America and Luxembourg.

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