

NEWSPACE MARKET · COMPANY PROFILE



Benchmark Space Systems

United States · benchmarkspacesystems.com

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as of 26 August 2026



Benchmark Space Systems

Benchmark Space Systems is a Burlington, Vermont-based commercial space propulsion company specializing in chemical, electric, and hybrid propulsion systems for small satellites and CubeSats. The company has achieved significant flight heritage with over 39 chemical and 19 electric propulsion systems launched to orbit, demonstrating strong product maturity and production capability. Benchmark offers a portfolio spanning monopropellant and bipropellant chemical thrusters, Hall-effect electric thrusters, and hybrid propulsion modules, covering a wide range of delta-v and power requirements for small satellite missions. The company provides full mission assurance services including integration support, testing, and on-orbit performance analysis. Benchmark's modular propulsion architecture is designed for rapid integration and compatibility with standard small satellite buses, enabling fast-track mission development for commercial and government satellite operators.

This profile is generated from the live NewSpace Market catalogue. Specifications are as published by the manufacturer; every product links to a page where a request for quotation reaches the company directly.

SERVICES

Services

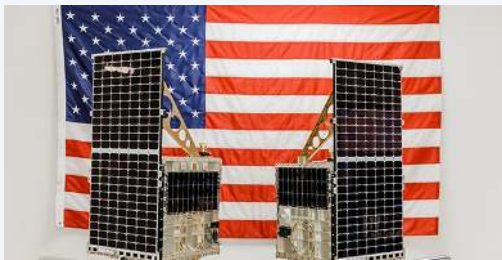
Ground Support Equipment (GSE) Operation and Propellant Loading

Benchmark designs, builds, and operates state-of-the-art ground support equipment for loading various liquid propellants at launch sites worldwide, ensuring compliance with international safety regula

Mobility-As-A-Service (MaaS)

A breakthrough in-space mobility service that eliminates upfront propulsion system costs, allowing customers to pay as they go for in-space transport.

Product catalogue



BENCHMARK SPACE SYSTEMS

Halcyon

Halcyon is Benchmark Space Systems' flagship non-toxic ('green') chemical propulsion product line, offering catalytic monopropellant and dual-mode bipropellant thrusters built around

Thrust (Monopropellant HTP)	250 mN, 1 N, 5 N, 10 N
Thrust (Dual-Mode Bipropellant)	2 N, 10 N, 22 N
Specific impulse (Monopropellant)	150-170 s
Specific impulse (Bipropellant)	290-310 s
Propellant	High-Test Peroxide monopropellant; HTP + fuel injection bipropellant
Total impulse (system range)	1,000 - 500,000+ N·s
Thruster quantity configurations	1, 4, 5, 8, or custom

price on request [datasheet](#)



BENCHMARK SPACE SYSTEMS

High-Test Peroxide Systems – Halcyon

Benchmark Space Systems offers High-Test Peroxide (HTP) propulsion systems, including the Halcyon monopropellant and Halcyon Avant bipropellant thrusters, designed for high-thrust

Halcyon Monopropellant Thrust Per Thruster	1 - 10 N
Halcyon Monopropellant Specific Impulse	155 - 160 s
Halcyon Avant Bipropellant Thrust Per Thruster	20 N
Halcyon Avant Bipropellant Specific Impulse	270 - 280 s
Missions Enabled	14
Thrusters Built	150 +
Seconds of Hotfire	160 k

price on request [datasheet](#)



BENCHMARK SPACE SYSTEMS

Peregrine Bipropellant Thruster System

Green bipropellant propulsion system for 6U to ESPA-class satellites. HTP + Alcohol, >270 s Isp, 100 mN–22 N thrust, ODPS pressurization.

Propellant	HTP (High-Test Peroxide) + Alcohol
Specific impulse	> 270 s
Thrust range	100 mN – 22 N
Minimum impulse bit	< 0.5 mN·s
Dry mass	4.0 kg
Power (thrust valve)	< 3 W
Power (pressurization)	5 W

price on request



BENCHMARK SPACE SYSTEMS

Starling Ardent

The Starling Ardent system is a resistojet thruster designed to maximize efficiency and double the specific impulse of typical gas systems.

Thrust range	10 mN – 1 N
Specific impulse	70 s (cold gas); 105–150 s (resistojet)
Minimum impulse bit	< 0.05 mN·s
Max total impulse	2 kN·s
Propellant	Non-toxic inert gas (ODPS™)
Thruster count	1–4 (configurable)
Power (ODPS)	10–15 W

price on request

Contact Benchmark Space Systems

Open the company profile on NewSpace Market to see full specifications and datasheets, and to send a request for quotation that reaches the manufacturer directly.

<https://newspacemarket.com/companies/benchmark-space-systems/>

<https://www.benchmarkspacesystems.com>

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