

NEWSPACE MARKET · COMPANY PROFILE



Pulsar Fusion

United Kingdom · founded 2011 · pulsarfusion.com

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PRODUCTS

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SERVICES

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as of 20 August 2026



Pulsar Fusion

Pulsar Fusion designs and manufactures clean space propulsion systems. The company offers electric propulsion systems, including plasma thrusters for extending orbital lifetime, attitude control, precision spacecraft control, and low-thrust maneuvers in small spacecraft for geosynchronous orbit applications. They also provide hybrid rocket propulsion systems, which avoid some disadvantages of solid and liquid rockets, for low Earth orbit applications. Additionally, Pulsar Fusion is pioneering advancements in fusion propulsion technology, designed to produce both thrust and electric power for interplanetary spacecraft. The company operates state-of-the-art facilities, including a clean room for precision manufacturing and assembly, and vacuum chambers to simulate space environments for testing electric propulsion systems. Their team includes individuals with experience working with agencies like the European Space Agency (ESA) and UK Space Agency (UKSA). The company's staff includes experts in nuclear fusion reactor research, aerospace engineering, electrical engineering, and Hall-Effect Thrusters.

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

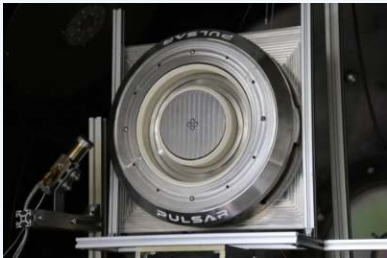
Electric Propulsion System Testing

Pulsar Fusion offers testing services for electric propulsion systems by simulating space environments in vacuum chambers.

Precision Manufacturing and Assembly

Pulsar Fusion offers precision manufacturing and assembly services in a controlled clean room environment for critical space components.

Product catalogue



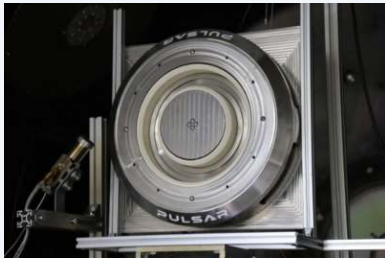
PULSAR FUSION

LeoBear — 500 W Hall-Effect Thruster

Pulsar Fusion's LeoBear is a 500 W Hall-effect thruster for LEO small satellites: 13–36 mN thrust, 1,200–2,300 s Isp on krypton or xenon, 130×130×150 mm, ESA GSTP-funded for TRL 6,

Nominal power	500 W (tested 296–832 W)
Thrust (Kr)	13–36 mN
Isp (Kr)	1,199–2,149 s
Isp (Xe)	2,058–2,300 s
Anode efficiency	Up to 44.8% (Kr); up to 49% (Xe)
Cathode type	LaB6 (lanthanum hexaboride)
Propellants	Krypton (primary), Xenon

TRL 6 price on request



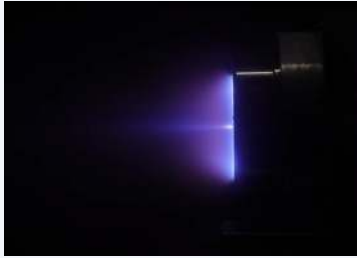
PULSAR FUSION

MarsRanger — 10 kW Hall-Effect Thruster

Pulsar Fusion's MarsRanger is a magnetically shielded 10 kW Hall-effect thruster for GEO and deep-space missions: tested at 175 mN / >1,875 s Isp at 5 kW partial power, targetin

Nominal power	10 kW
Partial-power test (5 kW)	175 mN thrust; >1,875 s Isp; 31.4% anode efficiency
Design voltage	300–500 V
Propellant	Krypton (primary)
Magnetic shielding	Yes – rated for >20,000 hour lifetime
Target applications	GEO station-keeping/inclination control, deep-space propulsion, large constellation manage

price on request



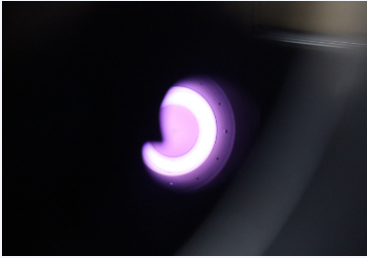
PULSAR FUSION

MoonRanger — 5 kW Hall-Effect Thruster

The MoonRanger (PF-MOONRANGER) is Pulsar Fusion’s 5–7 kW Hall-effect thruster targeting GEO-class missions, cislunar transfer, and high-power constellation applications. At t

Nominal power	5–7 kW
Thrust target at 5 kW	>280 mN
Thrust target at 7 kW	>350 mN
Isp target at 5 kW	~1,800 s
Isp target at 7 kW	~2,050 s
Partial-power test result (2 kW)	104 mN thrust; 1,891 s Isp; 38% anode efficiency
Propellants	Krypton, Xenon

price on request



PULSAR FUSION

Sunbird — Nuclear Fusion Propulsion System

Pulsar Fusion's Sunbird is a Dual Direct Fusion Drive (DDFD) using deuterium + helium-3 fusion: targeting 10,000–15,000 s Isp, up to 100 N thrust, 2 MW power generation, ~223 km/s

Fusion fuel	Deuterium + Helium-3 (DDFD – Dual Direct Fusion Drive)
Target specific impulse (Isp)	10,000–15,000 s
Target thrust	Up to ~100 N
Power co-generation	Up to 2 MW
Exhaust velocity	~223 km/s
Vehicle dimensions	~9.8 × 3.5 × 3.5 m
First plasma milestone	March 2026 (exhaust test system)

price on request

Contact Pulsar Fusion

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.

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