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UVIRESO Space

Lithuania · uvireso.space

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as of 20 August 2026

ABOUT

UVIRESO Space

Uvireso, UAB is a Vilnius-based electric propulsion startup and a member of the ESA Business Incubation Centre (ESA BIC) Lithuania. The company is developing a Hall-effect thruster (HET) that replaces the industry-standard xenon or krypton propellant with bismuth, a dense, abundant, low-cost metal that is solid at room temperature and melts for feeding into the thruster. By switching to bismuth, Uvireso aims to cut propellant tank volume by up to 3.5 times or extend mission duration accordingly, while also improving safety: solid bismuth cannot leak or explode under launch loads, can be shaped to fit any tank geometry, and is easier to handle during satellite integration and in-orbit servicing than pressurized noble-gas systems. The thruster is being designed for an operating range of roughly 100-500 W with a specific impulse near 1400 s, targeting micro- and small-satellite missions in Earth navigation, telecommunications and exploration, including collision avoidance, phasing, station-keeping and end-of-life disposal maneuvers. Uvireso's current work spans plasma and magnetic-topology simulation, electron gun and electron-transport testing, bismuth wettability and ionization experiments, and thermal/flow modelling of the thruster channel and anode. The company operates its own vacuum test facility in Vilnius (a 2.5 x 0.9 m stainless-steel vacuum chamber reaching 1x10-6 mBar) and offers R&D services - modelling, simulation and vacuum testing support - to outside partners in EMC, thermal and structural domains. The company is partnered with Vilnius University, Vilnius Tech and the Sunrise Tech Park EU StartUp Hub, participates in ESA's FLPP programme, and is targeting space qualification of its bismuth Hall thruster by 2028. Uvireso is actively seeking consortia

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SERVICES

Services

Co-development of HET sub-systems

UVIRESO seeks partners for the co-development of Hall Effect Thruster (HET) sub-systems.

Modelling and simulation

UVIRESO provides expert modelling and simulation services in EMC, thermal, flow, and structural analysis domains.

R&D services with vacuum facilities

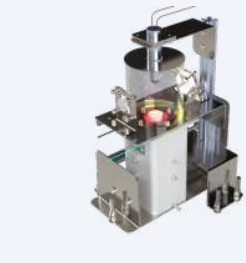
UVIRESO offers end-to-end R&D services, providing access to their advanced vacuum facilities for testing and experimentation.

Support with specialized tasks via partner network

UVIRESO can assist customers with specialized tasks, from laser micromachining to chemical processes, through its established partner network.

PRODUCTS

Product catalogue



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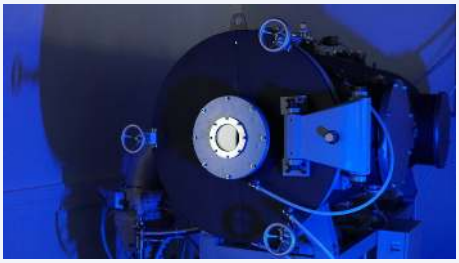
Uvireso Bismuth Hall-Effect Thruster

Hall-effect thruster under development that replaces xenon with solid bismuth propellant, targeting up to 3.5x longer missions or extra payload capacity for micro- and small-satell

Propellant	Bismuth (replaces xenon/krypton)
Operating power range	100-500 W
Specific impulse	~1400 s
Mission life extension vs. xenon	Up to 3.5x
Target satellite class	Micro- and small-satellites
Typical use cases	Collision avoidance, phasing, station-keeping, EOL disposal
Development status	In development; targeting space qualification by 2028

price on request



UVIRESO SPACE

Uvireso Vacuum Test Facility & R&D Services

In-house vacuum chamber and modelling/simulation services in Vilnius, offered to external partners for EMC, thermal, flow and structural testing of space hardware.

Chamber dimensions	2.5 x 0.9 m (length x diameter)
Maximum vacuum	1 x 10-6 mBar
Pumping system	2 diffusion pumps + Vane and Roots pumps
Combined pumping speed	4000 L/s (H2)
Chamber wall construction	2-layer stainless steel with thermal jacket (heating/cooling)
Flange sizes available	100-500 mm
Services offered	EMC, thermal, flow and structural modelling and simulation

price on request

Contact UVIRESO Space

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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