



**Łukasiewicz**  
Institute  
of Aviation



# 1 N MONOPROPELLANT HTP THRUSTER

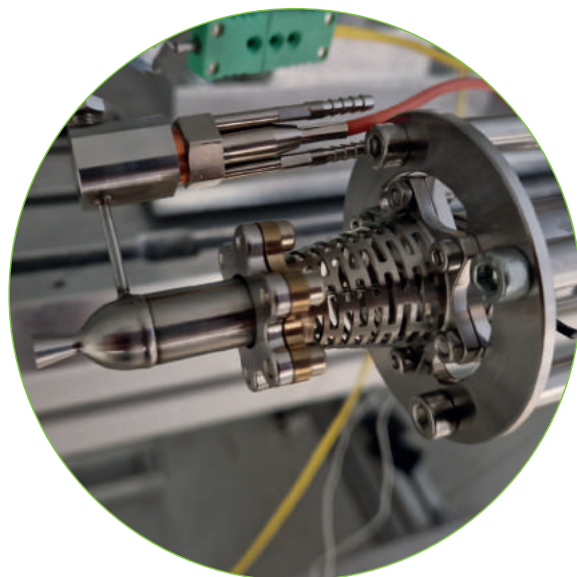
Delivery of larger thrusters for rocket ACS is also possible

# CHARACTERISTICS

ILT-1 thruster is designed for spacecraft propulsion systems, to operate as AOCs or as main propulsion of micro-satellite for station-keeping, manoeuvres and deorbitation. The thruster operates with the highest-class hydrogen peroxide 98%+, providing higher density impulse than hydrazine. Delivery of larger thrusters for AOCs is also possible.

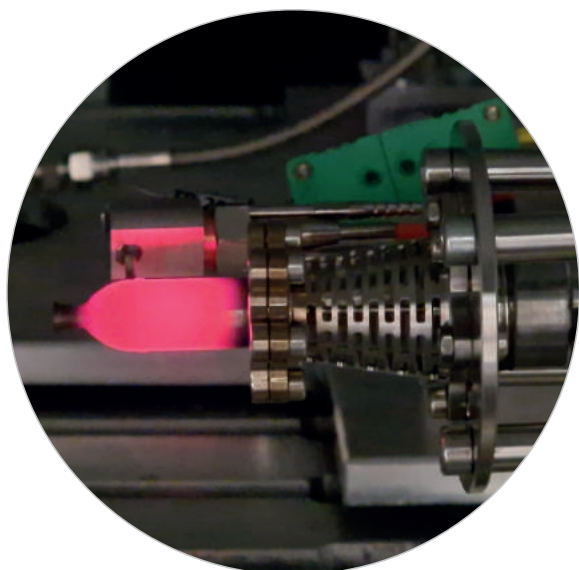
# KEY FEATURES

- High performance and long lifetime.
- Easily scalable.
- AOCs monopropellant thruster.

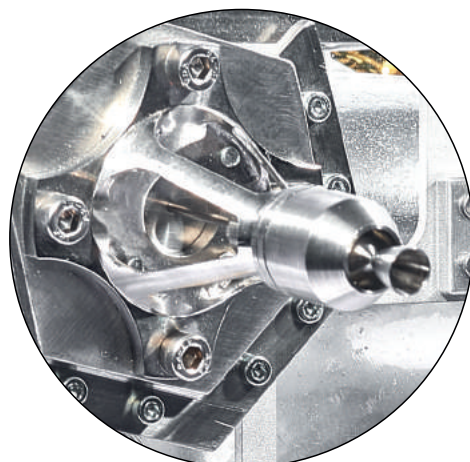


# TECHNICAL INFORMATION

Parameter	Value
Thruster Name	ILT-1
Nominal thrust	1 N
Propellant	Hydrogen Peroxide > 98% HTP
Nominal specific impulse	172 s
Propellant throughput	> 5,5 kg
Shortest on time	20 ms
Longest burn	2700 s
Pulse capability	> 30 000
Impulse bit error	< 5%
Mass (with suggested dual seat valve)	350 g
Technology Readiness Level	TRL7
Technology Readiness Level (planned in 2025)	TRL 9



Green high-performance monopropellant thrusters have been developed by Lukaszewicz Research Network – Institute of Aviation. Development co-financed by the European Space Agency (ESA) and National Centre for Research and Development.



The Lukaszewicz Research Network – Institute of Aviation offers a wide range of specialized research, engineering services and products. We provide comprehensive solutions, ranging from dedicated analyzes, simulations, engineering design, through the selection, testing and certification of materials and structures, to rapid prototyping and additive manufacturing.

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