

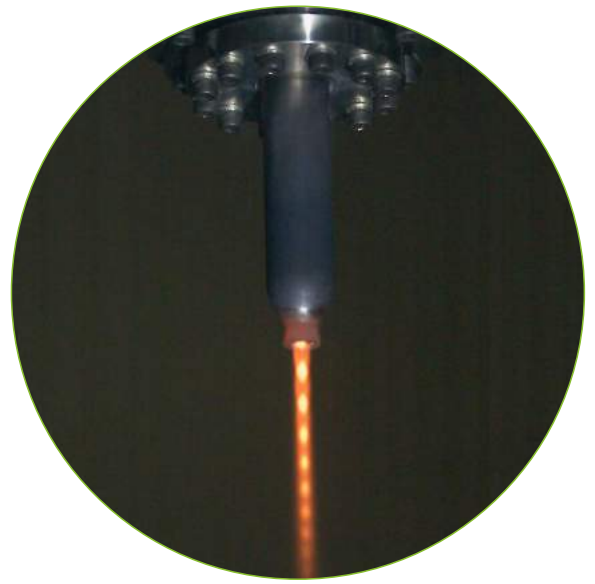


Łukasiewicz  
Institute  
of Aviation

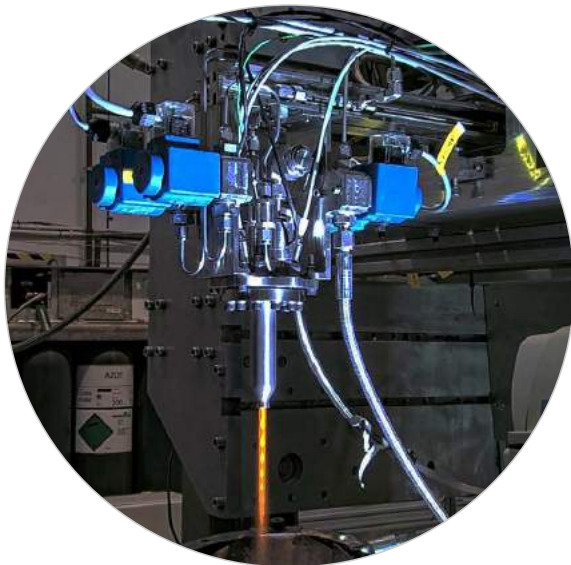
# 20N GREEN BIPROPELLANT THRUSTER

# CHARACTERISTICS

Roll and attitude control thruster with a nominal thrust of 20N, utilizing green (environmentally friendly and nontoxic) propellants – hydrogen peroxide 98%+ and proprietary fuel. Thanks to the unique hypergolic propellant combination (developed internally by Łukasiewicz – Institute of Aviation), it is characterized by exceptionally low response time and high repeatability of thrust pulses – key parameters in satellite control applications. Extensive experience gained by Łukasiewicz – Institute of Aviation in the field of hypergolic injectors as well as material sciences, allow the thruster to operate not only in pulsed but also steady state mode.



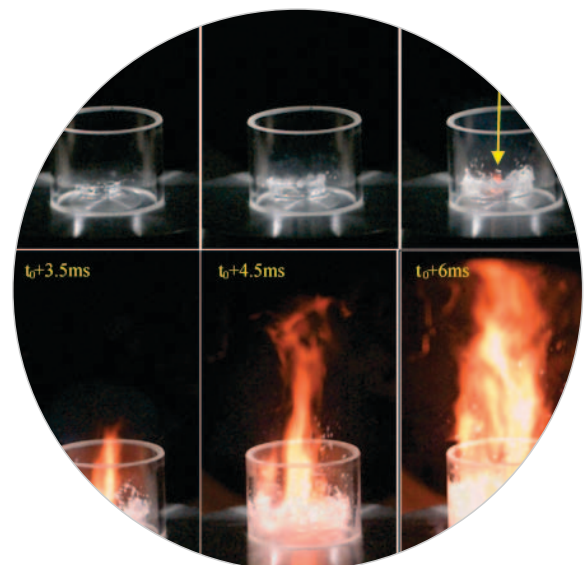
# TECHNICAL INFORMATION



Parameter	Value
Application	Roll and Attitude Control
Operation mode	Steady State and Pulsed Mode Firing
Propellants	Proprietary fuel, 98% Hydrogen Peroxide
Combustion pressure	10 bar
Supply pressure	13 bar
Nominal thrust	20 N
Vacuum specific impulse	290 s
Engine mass	0.8 kg
Envelope	ø 120 mm x 210 mm
Structural interface	Bolted Flange
Fluidic interface	¼" Tubing
Technology readiness level	TRL4

# KEY FEATURES

- Eco-Friendly Propulsion: Environmentally conscious, it uses "green" propellants, 98% hydrogen peroxide and pyridine, offering safety and performance improvements.
- Swift & Precise Control: Ideal for satellite roll and attitude control with low response time, high thrust repeatability, and operation in both steady state and pulsed modes.



**The Łukasiewicz 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.

al. Krakowska 110/114, 02-256 Warsaw, Poland

e-mail: [info@ilot.lukasiewicz.gov.pl](mailto:info@ilot.lukasiewicz.gov.pl) / [www.ilot.lukasiewicz.gov.pl](http://www.ilot.lukasiewicz.gov.pl)