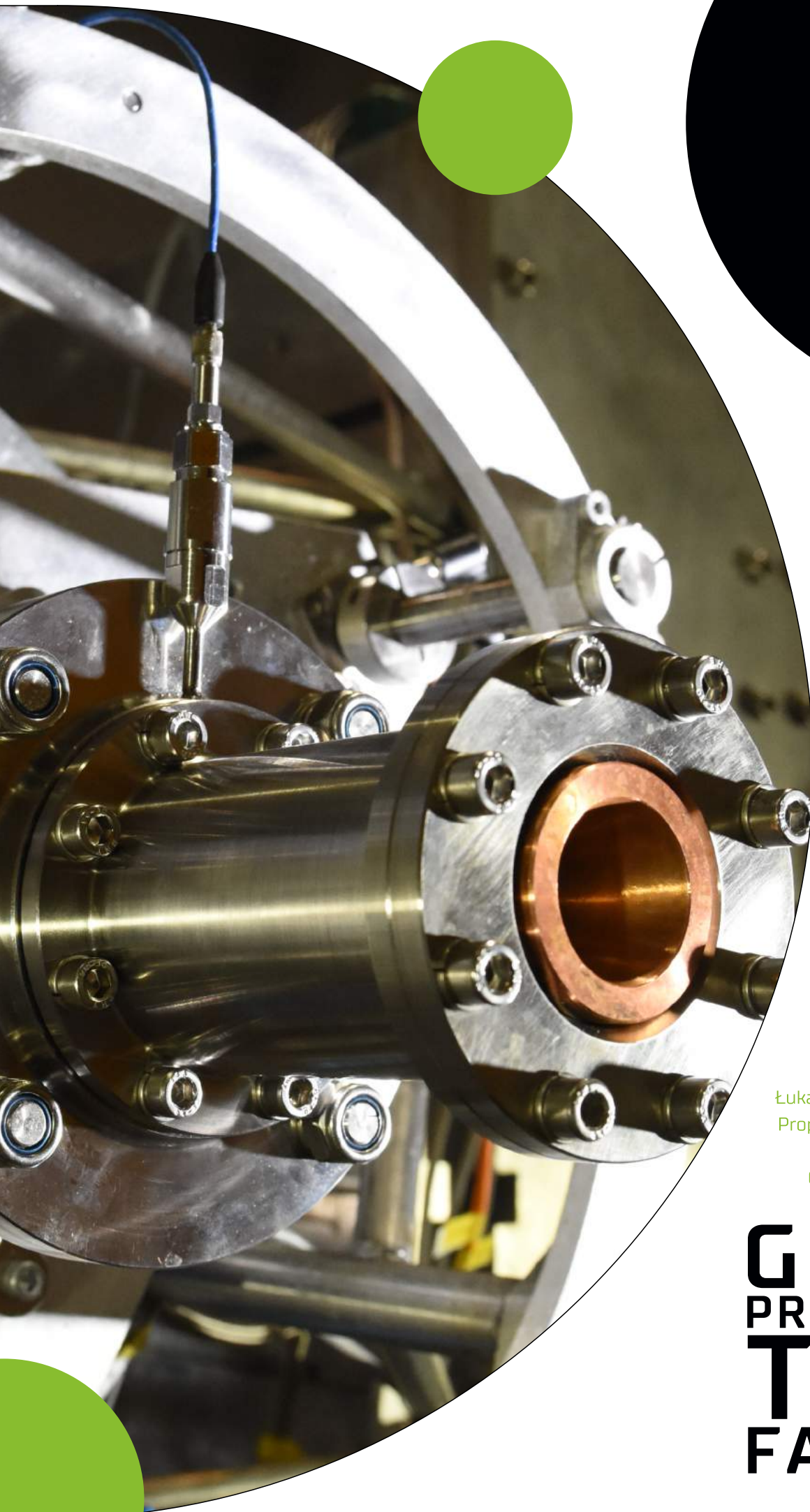




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Propulsion Test Facility provides
complex test services for
Green Liquid Rocket Engines

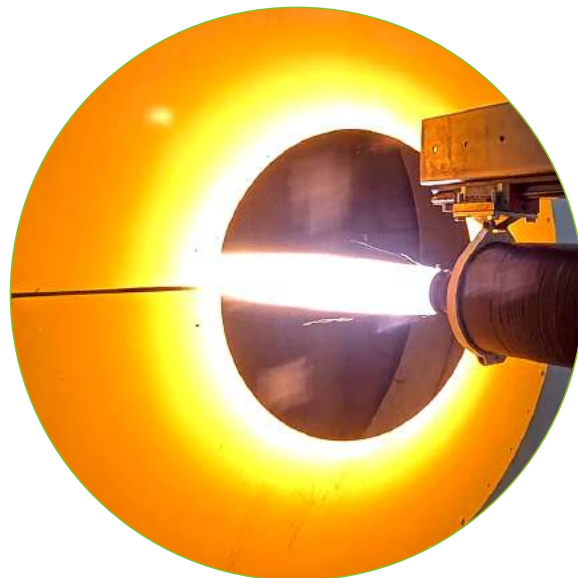
GREEN PROPULSION TEST FACILITY

A large Test Cell with a configurable test bench allows for testing engines in horizontal and vertical configurations. Facility is also capable of flow tests with the usage of propellants, hot injector testing, or other experimental development of space propulsion components.

INFRASTRUCTURE

- Feeding installations (for hydrogen peroxide and fuels, pressure feed),
- Water pumps (for engine regenerative cooling development),
- Equipped workshop for test assembly and inspections of rocket engine,
- Measurement and control hardware for dynamic and static measurements.

Each test is instrumented with pressure, temperature, force, and flow sensors. Equipment like high-speed cameras or thermal imaging systems is available for development or qualification test purposes.



TECHNICAL INFORMATION

Parameter	Value
Propulsion system types	mono-, bipropellant and hybrid
Maximum nominal thrust	5 kN
Maximum propellant delivery pressure	40 barA
Available propellants onsite	HTP 98%+ and several fuels on demand
Acquisition capability	Over 200 analog channels (0-10V) Over 20 counter channels
Control Capability	Over 100 digital control channels
Maximum Acquisition frequency	1 Mhz
Longest single hot-fire	1 200 s
Engine cooling capabilities	Water, 20 barA
Thruster/engine firing orientation	horizontal or vertical

MAIN ADVANTAGES

- Fully indoor test cell capable of temperature adjustments.
- Large portfolio of infrastructure available onsite.
- Heritage based on development different propulsion types and systems utilizing HTP.
- Experienced engineering test team available for each campaign.
- Remote test supervision option available (secured).

Our hot fire test facility is operated by experienced test engineers specializing in propulsion testing, test software development, propulsion testing hardware and electronics.



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.

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