



Łukasiewicz
Institute
of Aviation



Comprehensive Solution
for Aerodynamic Flow Measurements

MULTI-HOLE PRESSURE PROBES

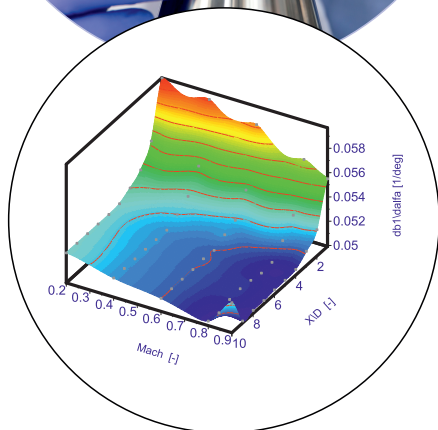
CUSTO-PROBE

CHARACTERISTICS

Łukasiewicz – Institute of Aviation provides a comprehensive portfolio of multi-hole pressure probe solutions, encompassing design, manufacturing, calibration, static and dynamic pressure measurements, and dedicated software for measurement data processing.

CUSTO PROBE features:

- Standard and custom-designed probes tailored to customer requirements, manufactured using 3D printing technology from metal or polymer materials, with optional heat treatment and surface finishing.
- Quality assurance through DT and NDT inspection methods.
- Available probe body configurations: straight, L-type, Cobra-type, multi-head probes, (measurement combs), and other geometries designed according to customer requirements.



- Standard or custom mounting bases and holders.
- Number of holes: 3 / 5 / 7.
- Minimum probe head diameter from 1.7 mm, depending on the selected manufacturing technology, enabling the development of compact probes for precise measurements in confined spaces.
- Minimum pressure channel diameter from 0.3 mm.
- Typical angular measurement uncertainty in the range of 0.2° to 0.4°, ensuring high accuracy in aerodynamic measurements.
- Maximum operating temperature up to 300°C.
- Option to integrate a temperature sensor.
- Individually calibrated probes using high-precision calibration facilities.
- Calibration service capabilities: flow velocities up to Mach 0.9, angular range up to ±45°, and temperatures from ambient conditions up to 300 degrees.
- Software for processing and correcting measurement data, enabling fast and repeatable analyses.
- Individual probe marking to ensure full traceability and quality control.

All of the above services can be ordered separately. We also provide expert support in selecting the optimal probe design and configuration for specific measurement applications.



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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