



PRODUCT ABSTRACT

Engineering Flow-Measurement Solutions

Unique challenges. Quality solutions.

Conventional 5- and 7-hole probes are limited to flow incidence angles of 70° or below. For measurement applications involving higher angularity, unknown angularity, or reversed flows, Aeroprobe has developed the Omniprobe.

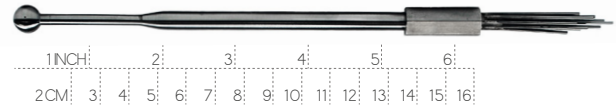
Capable of measuring flow vectors at $\pm 150^\circ$ incidence angle from the probe's tip axis, the Omniprobe is ideal for high-angularity measurements. The spherical-head probe is primarily designed for wake measurements in subsonic Mach regions, up to Mach 0.5.



INNOVATIVE TECHNOLOGY

Omniprobes are frequently used for high-angularity wake measurements around automobile wheels on rolling-road wind tunnels, wake measurements behind automobiles, and other high-angularity measurements. Each Omniprobe is subjected to a rigorous calibration process consisting of more than 7000 individual points per calibration speed, to ensure maximum accuracy.

Omniprobes are an ideal choice for applications with highly variable flow conditions, or when general flowfield characteristics are unknown. Omniprobes are capable of the same measurements as 5- and 7-hole probes, and can supplement or replace these probes in many circumstances.



CAPABILITIES

Tip diameters as small as 6.35mm

Temperature Ratings to 900C

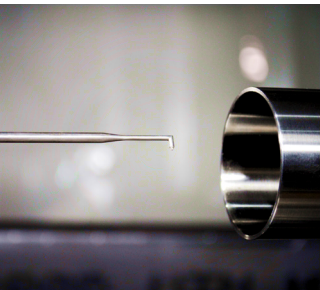
Average Measured Angular Deviation of $<1^\circ$

Time Average Measurement of Flows

Average Measured Velocity Deviation of $\pm 3\%$ or ± 1 m/s (whichever is larger)**

Probe Calibrations from 5 m/s to Mach 1.0

** Reported probe calibration accuracies are based on the measured error values for a comprehensive set of test points collected in Aeroprobe's wind tunnel facilities. Flow environments exist where expected errors could be larger. Contact Aeroprobe for more information.



ABOUT AEROPROBE



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Aeroprobe provides air data measurement systems to aerospace, automotive, turbomachinery, wind turbine, and wind tunnel testing industries around the world. Aeroprobe's air data systems for unmanned aircraft provide real time air speed, angle of attack and angle of sideslip for improved flight performance. Turnkey systems include instrumentation for measurement, hardware for data collection, and software for data reduction, analysis and visualization. High temperature probes operate in flows up to 1200°C. Omniprobes, featuring a 300° flow angle range, are capable of measuring reversed flow. Fast response probes provide a frequency response exceeding 4 KHz. Rake configurations allow for simultaneous multi-point, unsteady measurements. The company conducts international business through a network of over 20 distributors.