

AEROSPACE, DEFENSE, AUTOMOTIVE AND MOTORSPORT TESTING

Radiator Probes

Total pressure and mass flow distribution through a radiator, with low blockage.

KEY SPECIFICATIONS

Measurement	Total pressure and mass flow
Pressure ports	Total and static
Head type	Kiel head, for incident flow angles up to $\pm 30^\circ$
Geometry	Radiator-specific design for minimal blockage; two standard designs, customizable
Material	Stainless steel, one-piece construction
Temperature range	Up to 230°C (450°F)
Manufacturing	Additive manufacturing, allowing flexibility in design, size and material
Data acquisition	Pressure scanner supplied separately
Calibration	Exact mass flow measurement requires calibrating the probes against mass flow on the mounted radiator

NOTES

A Kiel-head probe with total and static pressure ports measures total pressure at angles up to $\pm 30^\circ$. Several probes across a radiator give the partial mass flow through each section.

The probe mounts onto the radiator in front of the cooling tubes and can be removed and reused. Exact mass flow measurement requires calibration against mass flow on the mounted radiator.

TYPICAL APPLICATIONS

Flow uniformity testing. Mapping how evenly air passes through a radiator face.

Cooling package development. Comparing radiator and ducting designs by measured mass flow.

Heat exchanger validation. Checking airflow through a heat exchanger against design assumptions.

INTEGRATED SENSING AND SUPPORT FROM K-TEC SYSTEMS

K-Tec Systems manufactures custom thermocouples, RTDs, wire harnesses and test stands in Ferndale, Michigan. Thermocouples and RTDs can be incorporated into compatible probe designs for simultaneous flow and temperature measurement. Contact us for a quotation or an application review.

K-Tec Systems

2615 Wolcott St, Ferndale, MI 48220 | 248-414-4100 | k-tecsystems.com
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Specifications are manufacturer values and may change. Confirm configuration, material and lead time at quotation.