

Model 5HP-09, -15, -30 Miniature pneumatic 5-hole probes

- Steady aerodynamic flow
- High spatial resolution
- High accuracy
- Cobra, sting and L-shaped
- Fully compatible with LSc's turnkey measurement system



The miniature pneumatic 5-hole probes are designed for steady 3-dimensional flowfield measurements. These probe are robust and routinely used in industrial and academic facilities.

The 5HP probe tips have diameter ranging from 3mm down to 0.9mm offering high spatial resolution. They are available with various probe tip configurations such as: cobra-shaped, L-shaped or sting-shaped. It measures flow parameters such as flow angles, total and static pressure, Mach number.

The probes are delivered fully calibrated over the intended temperature and pressure range of operation. The 5HP can be used up to a flow total temperature of 220° and has a $\pm 30^\circ$ flow angle measurement range. The aerodynamic calibration curves and coefficients are available from 15m/s up to Mach 0.8. The probe is fully compatible with LSc's turn key measurement system (see: Fast-Response Aerodynamic Probe Turn Key Measurement System product sheet)

General Specifications:

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| - Probe tip diameters: 0.9 / 1.5 / 3mm | - Temperature range: up to 220°C (500°C on request) |
| - Probe tip geometries: Cobra, sting or L-shaped | - Flow angle range: $\pm 30^\circ$ |
| - Aerodynamic calibration range: 15m/s up to Mach 0.8 | - steady flow quantities: flow angles, total and static pressures |

Model 4HP-18, -25 Miniature pneumatic 4-hole probes

- Steady aerodynamic flow
- Improved measurement accessibility
- Similar geometry as FRAP-ST & FRAP-HT
- Fully compatible with LSc's turnkey measurement system



The miniature pneumatic 4-hole probes are designed for steady 3-dimensional flowfield measurements. These probe are robust and routinely used in industrial and academic facilities.

The 4HP probe is available with two tip diameters of 1.8mm and 2.5mm, respectively. The 4HP probe tip geometry is similar to the FRAP-ST and FRAP-HT. Its stem configuration offers an improved measurement accessibility compared to the 5-hole cobra-shaped probe.

The probes are delivered fully calibrated over the intended temperature and pressure range of operation. The 4HP can be used up to a flow total temperature of 220° and has a $\pm 30^\circ$ flow angle measurement range. The aerodynamic calibration curves and coefficients are available from 15m/s up to Mach 0.8. The probe is fully compatible with LSc's turn key measurement system (see: Fast-Response Aerodynamic Probe Turn Key Measurement System product sheet).

General Specifications:

- Probe tip diameters: 1.8 / 2.5mm
- Aerodynamic calibration range: 15m/s up to Mach 0.8
- Temperature range: up to 220°C
- Flow angle range: $\pm 30^\circ$
- steady flow quantities: flow angles, total and static pressures