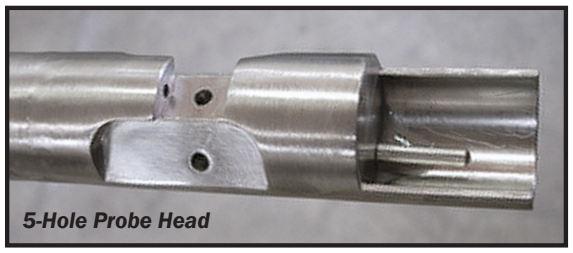
5-Hole Velocity Probe

from Innovative Combustion Technologies, Inc.



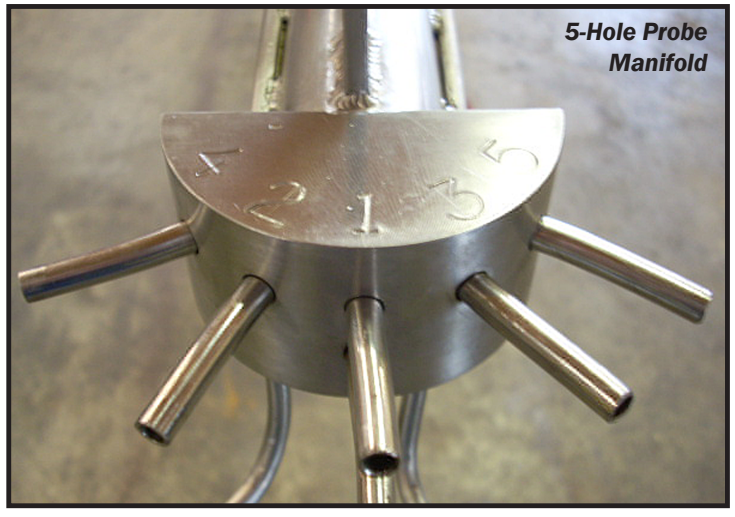
5-Hole Probe Head

The 5-Hole Velocity Probe is a proven device capable of measuring and correcting angular flow vectors

The 5-Hole Velocity Probe is usually named a three-dimensional or “3D” probe. This probe, capable of measuring yaw and pitch, is ideal when making measurements with turbulent or non-uniform flows. This condition is sometimes encountered at fan inlets, in short runs of ducting upstream or downstream of bends or other flow disruptions, and/or in close proximity to flow control dampers.

The 5-hole probes do require a more skilled and experienced user than an S-Type, Pitot or Fecheimer Probe. It is, however, proven to be a device capable of determining and correcting angular flow vectors. In some instances, angular corrections are needed for precise flow, and/or specified by certain test codes or contractual guarantees.

The probe is commonly required for stack measurements to determine axial velocity. Data collected using a 5-hole probe provides the resultant velocity pressure in addition to pitch and angles of the velocity vector. Knowing these parameters, the axial velocity can be calculated. The yaw angle is determined directly by rotating the Pitot to null the pressure across a pair of symmetrically placed ports on the Pitot head. The yaw angle is measured with an inclinometer attached to the probe extension. The pitch angle is calculated using probe specific calibration curves. The average gas volumetric flow rate in the stack or duct is then determined from the average axial velocity.



5-Hole Probe Manifold

Custom probe lengths available. Please call for more information.

10 Commerce Drive • Pelham, AL 35124

Phone: (205) 453-0236 • Fax: (205) 453-0239 • innovativecombustion.com