

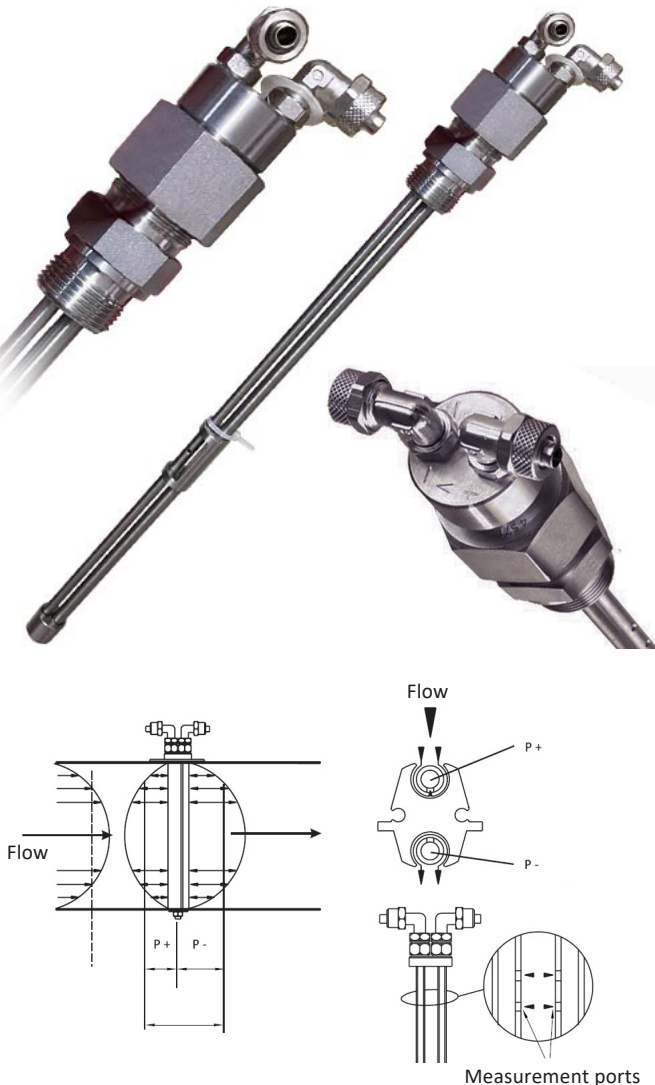
Airflow measurement probe > EMFS Series

Airflow

Features

- › for measuring air velocity and volume flow
- › approx. 1 to 80 m/s, depending on the pressure measuring device
- › for measurement across the entire cross-section
- › suitable even for turbulent flows
- › available in any length from 100 mm to 1600 mm
- › easy installation via 3/4-inch socket; counter-support generally not required
- › made of stainless steel; resistant to dust and aggressive media
- › heat-resistant up to +600 °C

The EMFS series of averaging Pitot tubes was developed to meet high standards for accurate airflow measurement in all types of air handling systems. These multi-port probes average the velocity profile across the entire duct cross-section. In situations with limited straight duct runs—particularly with larger duct dimensions—multiple EMFS units can be interconnected via tubing and T-fittings to form a measurement cross; this captures the flow profile more comprehensively and ensures maximum measurement accuracy. The EMFS series measures the differential pressure between the probe's high- and low-pressure sides; due to its design, it generates a differential pressure approximately 2.5 times higher than a standard Prandtl Pitot tube at the same velocity. This enhances overall accuracy and sensitivity, especially at low flow rates. Thanks to their round insertion profile, the measuring probes are easily installed using a sleeve with a 3/4-inch female thread; a counter-support is generally not required. While the EMFS series comes standard with an 8/6 mm tubing connection, it can be customized with Swagelok fittings, brass couplings, shut-off valves, or other connection nipples to meet specific requirements. Constructed from acid-resistant stainless steel (SS2348/AISI316L), the EMFS series is ideally suited for flow measurement in flue gas ducts, process ventilation, industrial exhaust systems, and other environments involving high temperatures and/or aggressive air. Measured dynamic pressures are converted into air velocities and volumetric flow rates using a differential pressure transmitter with a flow function, such as the CP 210-R-SQR. When selecting a transmitter, it is important to ensure that the K-factor can be individually adjusted. We would be happy to advise you!



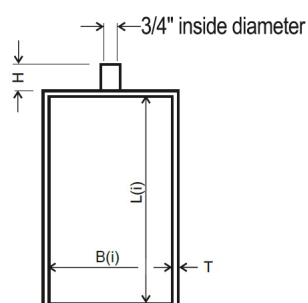
Measurement principle: EMFS averaging pitot tubes measure both the total pressure (p+) and the lower static pressure (p-) in the air duct based on the Annubar principle. The sensor's special design ensures that the p- pressure is lower than the actual static pressure; this increases the differential pressure—and thus accuracy—compared to Prandtl probes, while also facilitating the measurement of low flow velocities.

Technical Data

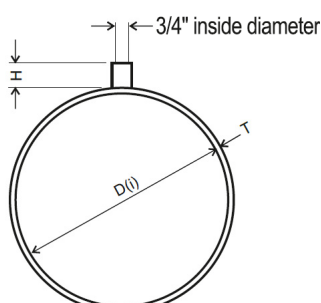
Medium:	Flue gas, process air, environments with high temperatures and/or aggressive air acid-resistant stainless steel SS2348 (equivalent to AISI 316L)
Material:	
Heat resistance:	up to +600 °C
Available usable lengths:	100 mm to 1600 mm
K-factor:	Probe-specific; see probe label

Information required for the preparation of a quote

Rectangular duct



Circular duct



To provide you with the EMFS series measuring lances, we require the information listed here. Unless otherwise requested, our quote applies to versions featuring the standard process connection shown on the right.



B(i) = mm

T = mm

L(i) = mm

H = mm

D(i) = mm