PRECISION GAS FLOW MEASUREMENT SOLUTIONS

METLAB

EMISSION MONITORING SYSTEMS

www.metlab.se

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Precision Gas Flow Monitoring Solutions

At METLAB, we combine accredited expertise with practical experience. As an **ISO 17025 accredited laboratory** for both gas flow measurements and gas flow calibrations, we know first-hand the challenges of reliable gas flow monitoring. This unique position allows us to deliver equipment and solutions that are not only precise and robust but also developed with a deep understanding of real-world measurement conditions in stacks and ducts.

"METLAB specializes in highly customizable solutions, tailored to your process. By adapting to your needs, we ensure reliable results that meet regulatory demands and practical challenges."

Edvard Månsson
CEO, METLAB

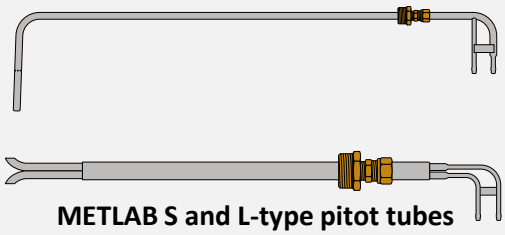
Products

Flow monitoring solutions in accordance with EN ISO 16911-1 and ISO 10780

- **Continuous gas flow monitoring**
  Complete systems for permanent installation suitable for stacks and process industries
- **Periodic measurement systems**
  Portable equipment suitable for periodic checks

METLAB FLowGuard 100
Continuous measurement
Portable or stationary use

TSI DP Calc
Handheld for spot checking
Pitot tube traversements



METLAB S and L-type pitot tubes
Standard or tailored to customer needs

Services

- **Accredited calibrations laboratory**
  METLAB is accredited for calibration of both gas flow and gas velocity, enabling precise calibration before delivery of your gas flow monitoring system. We also do external calibrations of various gas flow equipment including gas meters.

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Ackred. nr. 1288
Kalibrering
ISO/IEC 17025

- **Accredited gas flow measurements**
  METLAB is accredited for gas flow and gas velocity measurements according to ISO 16911-1:2013 and ISO 10780:1995. Our experts are available to support you with result verification when required.

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METLAB FlowGuard 100

Precision and reliability in stack gas flow

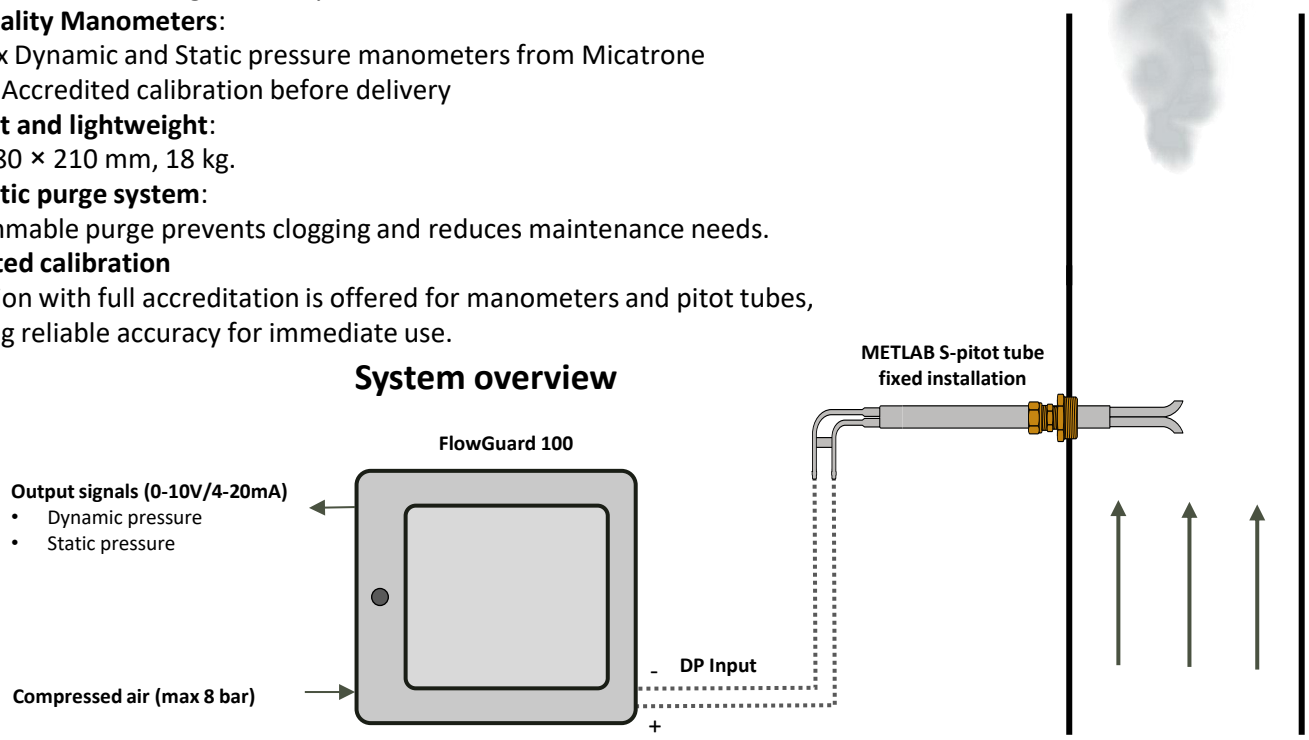
Automatic purge to prevent clogging!

The **FlowGuard 100** is a compact system for in-stack gas flow measurement and process monitoring. It is designed for both permanent installation and portable use with **L or S-type Pitot Tubes**, suitable for gas velocities in the range 5–35 m/s. The system is equipped with an automatic purge function that prevents clogging of the pressure lines making it a reliable solution for measurements in gas streams containing particles or water droplets (RH > 100%) that could otherwise interfere with differential pressure measurements. Together with accredited calibration of both pitot tubes and manometers, the METLAB FlowGuard 100 system provides a reliable basis for accurate and traceable flow data.

Key Features

- **Flexible installation**
  wall-mountable for permanent installation or handle option for portable use
- **Measurement principle**
  With L or S-type pitot tube, calibrated with traversements according to ISO 16911-1:2013 and ISO 10780:1995
- **Speed Range**:
  optimized for 5–35 m/s gas velocity
- **High Quality Manometers**:
  MicaFlex Dynamic and Static pressure manometers from Micatrone
  Option: Accredited calibration before delivery
- **Compact and lightweight**:
  380 × 380 × 210 mm, 18 kg.
- **Automatic purge system**:
  programmable purge prevents clogging and reduces maintenance needs.
- **Accredited calibration**
  Calibration with full accreditation is offered for manometers and pitot tubes, providing reliable accuracy for immediate use.

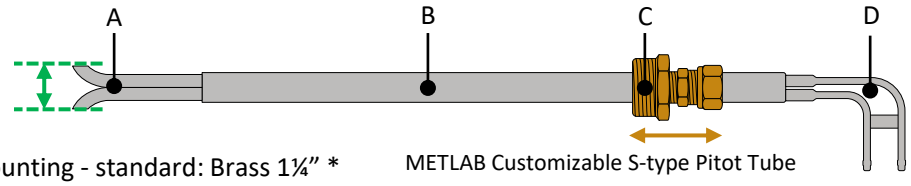
System overview



Pitot Tubes – Precision-Made. Tailored to Your Application.

METLAB manufactures standard S and L-type pitot tubes designed according to ISO 16911-1:2013 and ISO 1078:1994 as well as customer tailored solutions. Suitable for either manual traversements or fixed installation.

Customizable parameters
Material: SS or Inconel
A) Nozzle width and pipe dimension
B) Length: 300 … 4000 mm
C) Optional sliding threaded connector for mounting - standard: Brass 1¼" *
D) Barbed hose connectors or Swagelok *



METLAB Customizable S-type Pitot Tube

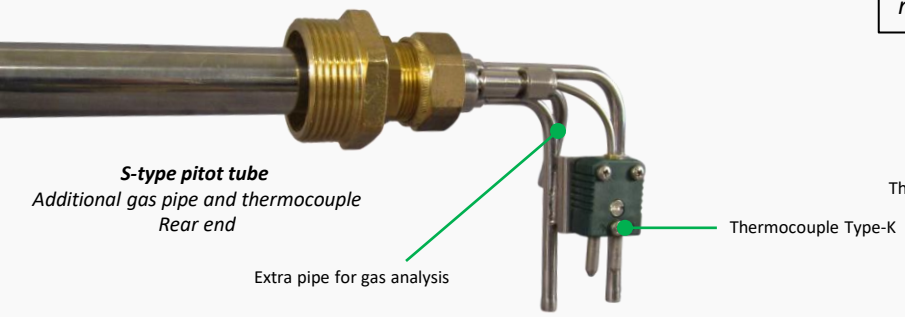
Other available add-ons:
- Accredited calibration 5-35m/s
- "Homogeneity Probe" (see below)

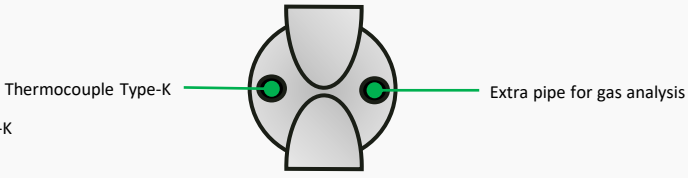
*Other options available upon request.

Optional add-on "Homogeneity Probe"

Adding pipe for gas analysis and thermocouple type-K

Commonly used for verifying homogeneity in the measurement plane by traversing defined points and simultaneously measuring velocity, oxygen concentration, and temperature. A required initial control in most emission measurement standards.

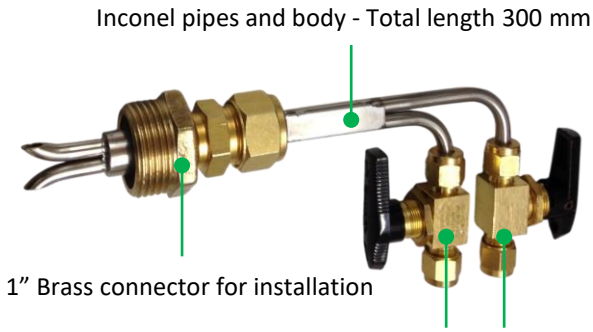




S-Type Pitot Tube
Front face illustration

Customer Case

To meet a leading chemical industry's need for precise flow monitoring across 20+ process lines in tight spaces and corrosive gas, custom S-type Pitot tubes were designed with compact geometries for confined spaces, sliding brass connectors for secure mounting, Inconel construction for chemical resistance, Swagelok valves for safe maintenance, and accredited calibration of both the tubes and manometers to ensure reliable, high-accuracy performance.



Let us help you too!
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