

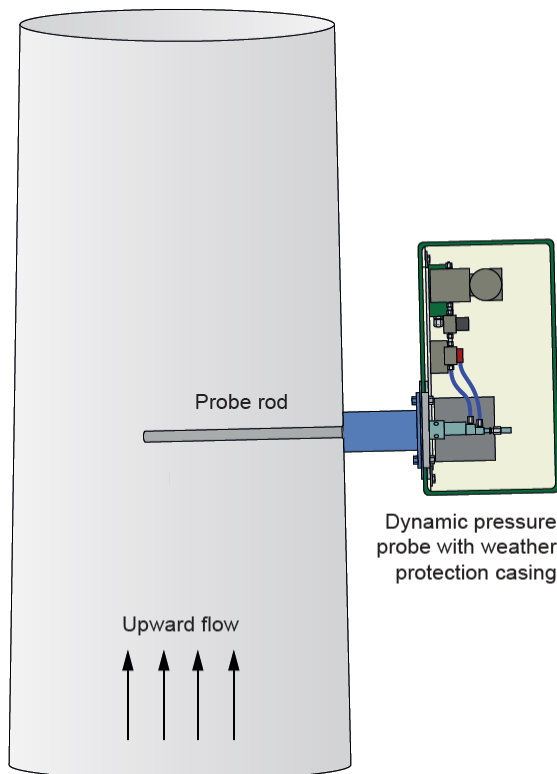
FMD 09 Product Information

The flow measuring device FMD 09 is a highly sensitive system for continuous in-situ measurement of the velocity and temperature of gas flows in pipelines.

FEATURES

The use of the measuring principle of dynamic pressure and PT100 assures a device which is easy in design and operating as well as the real-time monitoring of the measuring parameters.

The operating and display unit is integrated in the weather protection casing. On the high-quality display all measuring values, status information and parameters are displayed. Furthermore, a real-time display as line diagram is possible.

INSTALLATION EXAMPLE**FUNCTION**

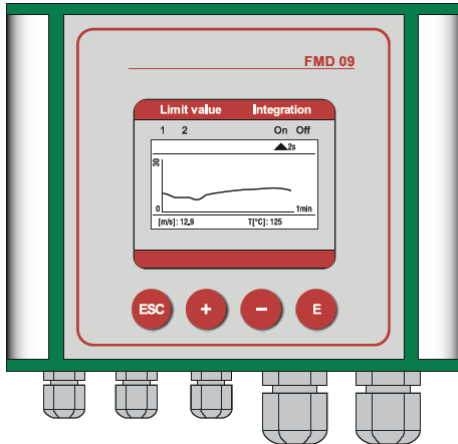
The continuous measurement of velocity and temperature of gas flows is much important at operation of a system with flowing gases (e.g. hall outlet air, exhaust etc.).

At emission measurements the current concentrations are determined. For the translation to absolute emitted masses the volume is necessary; this is calculated through the gas velocity.

In the FMD 09 the measuring gas is measured in the exhaust flow by the dynamic pressure probe. Thereby the differential pressure is continuously measured by the dynamic pressure probe. The signal which results from the differential pressure is a degree for the velocity of the exhaust. The microcontroller integrated in the operating unit generates a proportional signal and evaluates the volume flow.

Optionally, the absolute pressure at the measuring point can be measured continuously by an absolute pressure transmitter.

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OPERATING UNIT

HIGHLIGHTS OF THE DEVICE

- compact device consisting of probe and operating unit
→ no separate operating device necessary
- local diagnosis of system state by integrated graphic display
- real-time display with line diagram
- readout of volume flow at standard reference conditions possible
- easy mounting
- very low maintenance requirement
- first-class price-performance ratio

Technical data

Housing:	compact device (integrated operating unit); IP 65 ; protection class 1
Dimensions:	standard approx. 440 mm x 640 mm x 1200 mm (w x h x d)
Weight:	approx. 9.5 kg
Probe:	dynamic pressure probe with integrated PT100; immersion depth: 500 mm (standard); flange: DN 80 PN 6
Display/operating:	graphic display, 4 operating buttons
Ambient temperature:	-20...+50 °C
Atmospheric humidity:	no special sensitivity
Dew-point spread:	min. +5 K
Media temperature:	Max. 280 °C (higher temperatures on request)
Flow velocity:	from approx. 3 m/s
Measuring ranges:	<ul style="list-style-type: none"> ▪ velocity: (0)3...100 m/s ▪ volume flow (in operation / in standard condition dry): 0...3.200.000 m³/h ▪ differential pressure: 0...100 mbar ▪ temperature: 0...300/(800) °C
Operational availability:	after approx. 5-15 min
Analog outputs:	3 x 4...20 mA; selection of the following measured: velocity, volume flow (in operation / in standard condition dry), differential pressure, temperature and optionally absolute pressure
Burden:	Max. 500 Ω
Digital outputs:	Status signals: max. 24 V DC at 0.1 A; failure, maintenance, limit value 1 and 2
Cable screw connection/ tightening zone:	3x M20 x 1,5 / 9...13 mm
Power supply:	110/230 V AC, 50-60 Hz, 24 V DC, 5W
Special models are possible on request.	