

Volume flow measuring system

Measuring system to measure flow rate in dry emissions with a probe using the differential pressure principle

Features

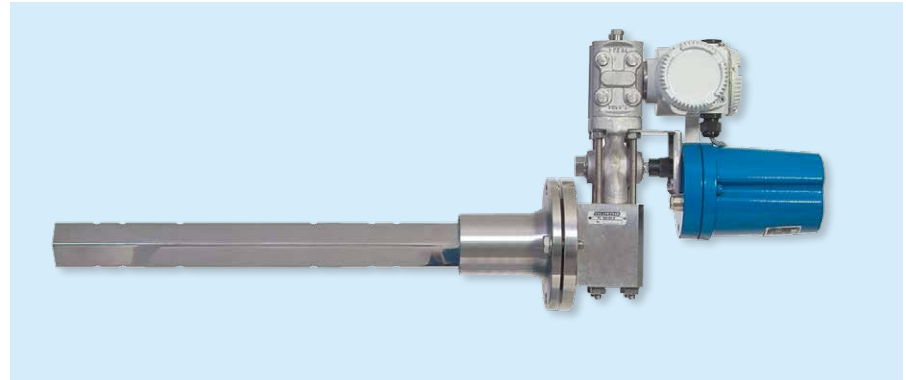
- Measurement of gas velocity
- Calculation of volume flow at standard conditions
- Adjustable parameters
- Automatic back purging device (optional)
- Versions with or without counter-support and for point measurement.
- Three month maintenance interval

Applications

- Volume flow measurement at high temperatures
- Plants with large or small flue cross-sections
- Volume flow measurement at high pressure

Approvals

- Suitability-tested by the TÜV Cologne, test report 936/21218492/A
- Approved and certified acc. to EN 15267-3
- MCERTS



Measuring principle

The D-FL 100 measuring system operates according to the differential pressure principle. The probe has two separate chambers, between which the flow builds up a differential pressure. Taking account of the other flow parameters such as, e.g. absolute pressure and temperature, the volume flow can be converted from operating to standard conditions with the evaluation unit.

System components

- Mounting flange
- Flow probe
- Counter-support
- Differential pressure transducer
- Cross-over cock
- Probe adapter
- Microprocessor evaluation unit D-FL100-20
- Absolute pressure transducer
- Temperature transducer

Models

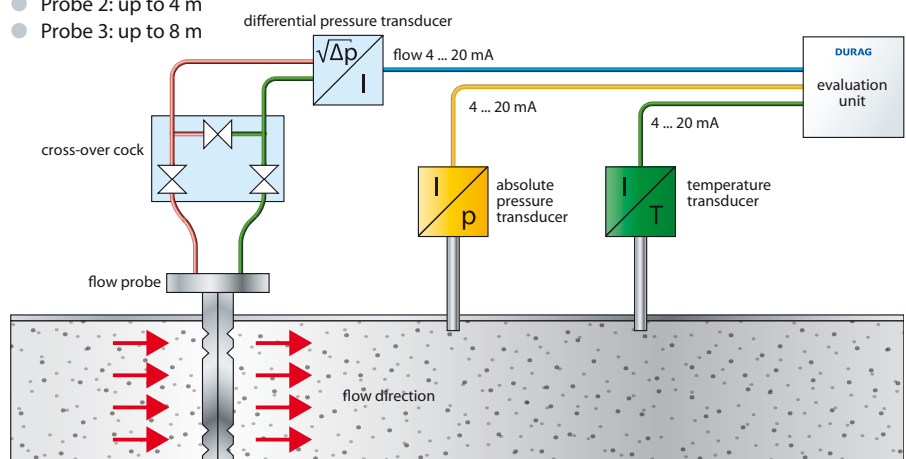
- **D-FL 100 probe assembly** with assembly of measuring transducer on the probe (not for probe 3)
- **D-FL 100 hose assembly** with the measuring transducer connection via hose line

Options

- Display and control unit D-ISC 100
- Service software D-ESI 100
- Weather protection covers
- Automatically controlled back purging device
- Special designs in other materials for applications with particularly aggressive exhaust gases or high gas temperatures
- dP-transducer in Ex-version

Probes

- Probe 1: 0.4–2 m
- Probe 2: up to 4 m
- Probe 3: up to 8 m



measurements	flue gas velocity, volume flow	digital outputs	2 relay outputs, permissible load 48 V / 0.5 A
measuring ranges	0–3000000 m ³ /h / 2–50 m/s	accuracy	<2% of measuring range
measuring principle	differential pressure	detection limit	<3 m/s
flue gas temperature	above dew point up to 450°C, optional up to 850°C	reference point drift	<0.5% of measuring range/month
flue gas pressure	±200 hPa, optional higher	zero point drift	<0.5% of measuring range
duct diameter	0.4–8 m	supply voltage	90 / 264 VAC, 50–62 Hz, 100 VA optional 18–32 VDC
ambient temperature	-20 up to +50°C	dimensions (h × w × d)	probe: 380 × 160 × (300 + probe length) mm
protection	IP65, Ex optional	weight	32 kg + 6,8 kg/m probe length
measuring outputs	0/4–20 mA / 500 Ohm, Modbus RTU, RS485, acc. to VDI 4201-3	purge air supply	6–8 bar for back purging if necessary

