

Volume flow measuring system

Measuring system for ultra-sonic measurement of flow and volume flow, especially for wet and aggressive smoke emissions (waste incineration)

Features

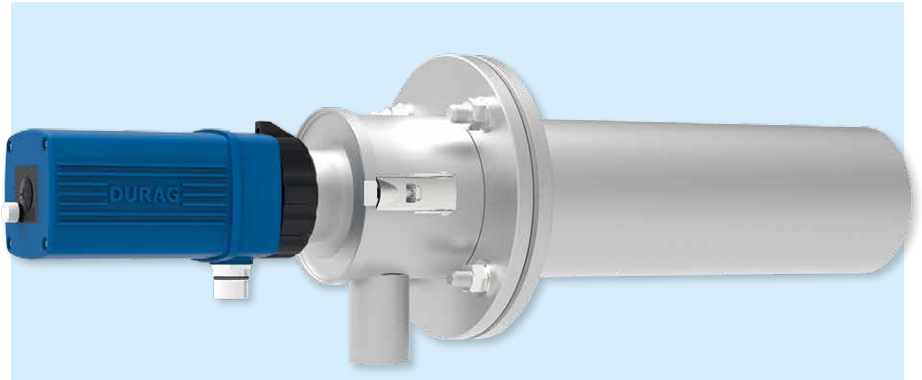
- In-situ measuring method
- Measurement possible below dew point and for high dust concentrations
- Continuous measurement of normal volume flow and gas velocity
- Automatic zero point and reference point control
- New design, digital signal processing
- D-FL 200 compatible follow-up model
- Remote access possible, digital interface according to VDI 4201-3
- Operation with or without control unit
- Very low maintenance

Applications

- Volume flow measuring at low speeds
- Plants with damp and/or aggressive exhaust gas, e.g. in waste incineration plants.
- Volume flow measurement at high dust content

Approvals

- Suitability-tested by the TÜV Cologne, test report 936/21218490/A
- Approved and certified acc. to EN 15267-3
- MCERTS



Measuring principle

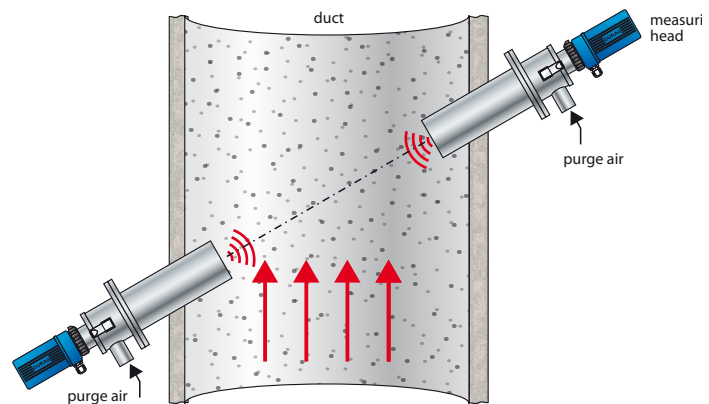
The D-FL 220 measuring system works according to the acoustic transit time differential method as well. The flow velocity resp. volume flow of the waste gas is precisely calculated from the transit time difference dependent on the direction.

Options

- Temperature transducer
- Absolute pressure transducer
- Universal display and control unit D-ISC 100
- D-ESI 100 Service- and Parameterization Software

System components

- 2 Measuring heads
- 2 Purge flanges (material 1.4571)
- 2 Mounting flanges (Mat. 1.4571, FRP)
- Purge air unit for cleaning and cooling the sensors
- Terminal Box for power supply of the sensors



measurements	flue gas velocity, volume flow ¹⁾ , temperature	detection limit	<0.3% of measuring range
measuring ranges	0–3,000,000 m ³ /h / 0–40 m/s 0–400°C	reference point drift	<0.3% of measuring range/month
measuring principle	acoustic propagation delay	zero point drift	<0.2% of measuring range/month
flue gas temperature	0–300°C, optional higher	supply voltage	24 VDC, 0.5 A
flue gas pressure	-50 up to +20 hPa, optional higher	dimensions (h x w x d)	standard measuring head: 190 Ø x 570 mm
duct diameter	0.5–13 m, temperature dependent	weight	17 kg
ambient temperature	-20 up to +50°C measuring head -40 up to 70°C	remarks	¹⁾ optional pressure and temperature correction
protection	IP65	purge air supply	
measuring outputs	0/4–20 mA / 400 Ohm, Modbus RTU bi-directional	purge air quantity	approx. 80 m ³ /h
digital outputs	2 relay outputs, permissible load 48 V / 0.5 A	supply voltage	115 / 230 V, 50 / 60 Hz, 0.37 / 0.43 kW
digital inputs	none	dimensions weight	350 x 550 x 500 mm 12 kg
accuracy	<2%	protection	IP55

