

Volume flow measuring system

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

Features

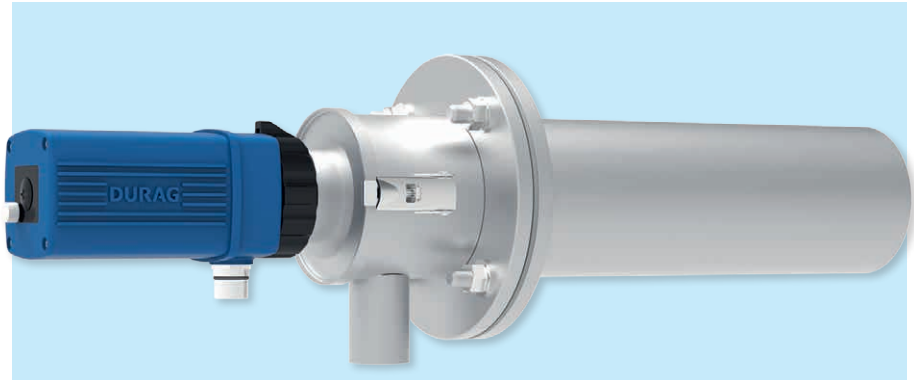
- Non-contact measuring method
- Measurement possible below dew point and for high dust concentrations
- Continuous measurement of normal volume flow and gas velocity
- Automatic zero point and reference point control
- Convenient operation via remote access with web interface
- Operation with or without 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

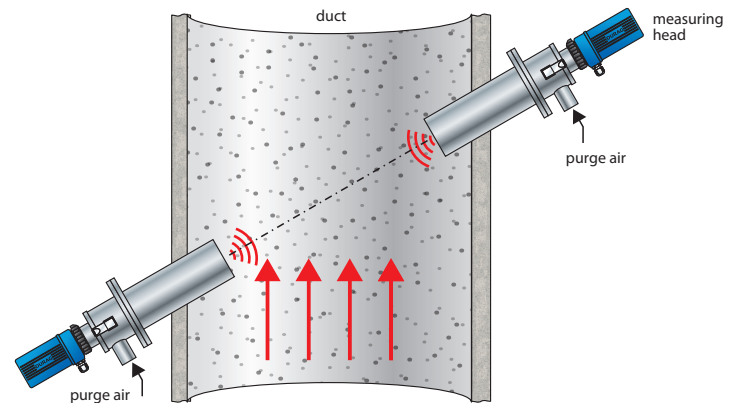
The D-FL 220 measuring system works according to the acoustic transit time differential method. Two identical transducers mutually send and receive short ultrasonic pulses. The system calculates the precise gas velocity from the direction-dependent transit time difference. The flow velocity respective 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 operating unit D-ISC 100
- D-ESI 100 Service- and Parameterisation Software

System components

- 2 Measuring heads
- 2 Purge air flanges
- 2 Mounting flanges
- Purge air unit
- Terminal Box for power supply



measurements	gas velocity and direction, volume flow in norm conditions or operational conditions	detection limit	<0.3% of measuring range
measuring ranges	0 ... 3000000 m³/h / 0 ... 40 m/s	power supply	24 VDC, 0.5 A
measuring principle	acoustic propagation delay	dimensions (h x w x d)	measuring head housing: 113 x 84 x 188 mm
flue gas temperature	0 ... 300 °C	weight	17 kg
flue gas pressure	-50 ... +20 hPa	purge air supply	
duct diameter	0.5 ... 13 m, temperature dependent	purge air quantity	40 m³/h (50 hPa) / 60 m³/h (25 hPa)
ambient temperature	-20 ... +50 °C measuring head -40 ... +70 °C	power supply	115/ 230 V, 50/ 60 Hz, 0.37/ 0.43 kW
protection	IP65	dimensions (h x w x d)	350 x 550 x 500 mm
measuring outputs	0/ 4 ... 20 mA/ 400 Ohm, Modbus RTU bi-directional	weight	12 kg
digital outputs	2 relay outputs, permissible load 48 V/ 0.5 A	protection	IP55

