

DF 252

FLOW MONITORING SYSTEMS



since 1984 ®

AIR fair

EMISSION MONITORING SYSTEMS

Over 30 years of innovative gas analysis!

- Gas flow velocity and flow rate measurement
- Continuous measurement of flue gas flow velocity (m/sec) using dynamic pressure measurement principle with averaging Pitot tubes

FLOW RATE MEASUREMENT US DYNAMIC PRESSURE MEASURE

Continuous measurement of flow velocity of flue gas and air streamings

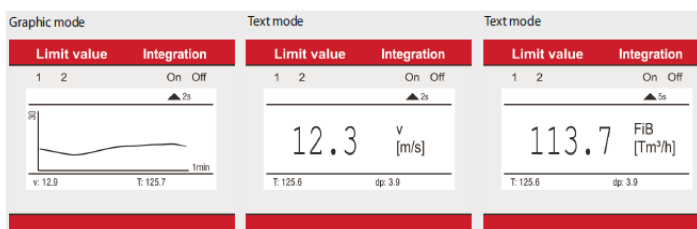
For the operation of a facility with streaming gases (e.g. flue gas, air, etc.) the continuous registration of the exhaust gas velocity respectively the flow as well as the temperature are often of substantial importance.

In case of continuous emission measurements the mass of pollutants has to be disclosed additionally (mass flow [kg/h]).

The flow measuring device DF 252 is a measuring system for the continuous registration of gas-, air velocity and temperature of gas flows in pipelines.

Moreover it is possible to display the flow in operational or norm state. The use of the back-pressure and Pt100-measuring principle guarantees a device simply to install and handle with the smallest possible influence of the velocity profile.

- Compact system of probe and control device, therefore easy installation
- On-site diagnosis of the facility's state due to a graphical display with high resolution showing on-line diagram
- Display of flow in norm state (i.n.) or operating state (i.o.) possible
- Display options in mbar, m/s, m³/h i.o. or m³/h i.n. as well as °C
- Display of absolute pressure in mbar optionally possible
- Simple installation with DN80PN6 flange for welding
- Low maintenance, handball valves for probe back-purging



ING THE MENT PRINCIPLE

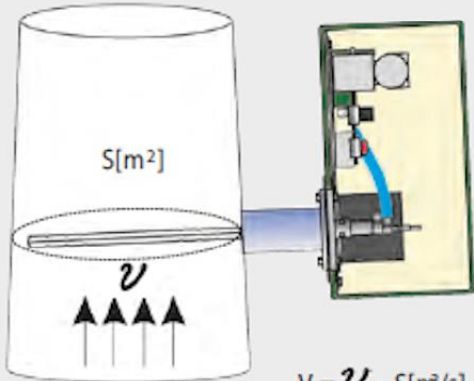
Differential pressure transducer

Control unit DF 250

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Examples for display (see below)

4 x handball valve switch-over
measurement ← - - → purging

Application



$V = v \cdot S \text{ [m}^3\text{/s]}$

Dynamic pressure probe

Mounting flange DN80PN6

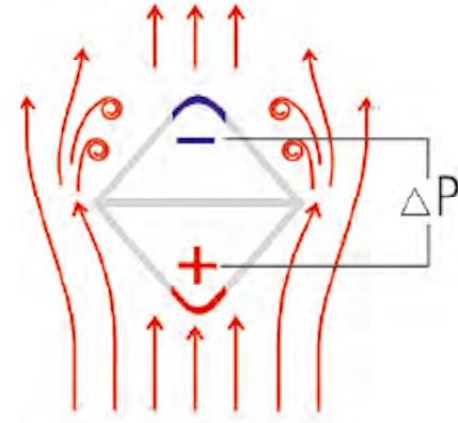
Anti-freeze heater (option)

Weather protective enclosure IP 65

Pressurized air inlet port for probe purging

Temperature pressure transmitter (option)

Measuring principle



velocity $v = A \sqrt{\alpha \cdot \Delta P + D} \text{ [m/s]}$

TECHNICAL SPECIFICATIONS

ENCLOSURE	Compact device, control unit is integrated with the probe head (no extra control panel necessary, Anti-freeze heater (option))		
Protection class	IP 65 (fibre glass enclosure)		
Dimensions	(H x W x D) 17.32" x 25.19" x 40.93" (440 x 640 x 1.040 mm) (incl. probe 19.68" (500 mm))		
Weight	approx. 55 lbs. (25 kg)		
Probe	Dynamic pressure probe with integrated Pt100 temperature sensor 11.81" (300 mm) up to 6.56' (2,000 mm) length, stainless steel		
Flange	DN80PN6		
Control unit	4 keys for parameterisation and operation Dot-Matrix-display with graphic diagram		
Measuring ranges	Velocity:	3 ... 30 m/s	
	Flow i.o.:	0 ... 1.000 Tm /h	
	Flow i.n.:	0 ... 1.000 Tm /h	
		(1 Tm /h = 1.000 m /h, 1.000 Tm /h = 1.000.000 m /h)	
	Differential pressure:	0 ... 5 hPa (mbar)	0 ... 2 inH2O
	Temperature:	0 ... 300/600 °C	32 ... 572/1,112 °F
	Abs. pressure (optional)	800 ... 1.200 hPa (mbar)	231 ... 481 inH2O
Media temperature	max. 536°F (280 °C) (higher temperatures on request) min. +5 °K above dewpoint		
Ambient temperature	-4°F ... 122 °F (-20 ... +50 °C) (heater required for temperature below freezing)		
Flow velocity	from approx. 3 ... 30 m/s		
Analogue signals	3 x 4 ... 20 mA (can be chosen between: velocity, flow rate, differential pressure, temperature optionally absolute pressure)		
Digital signals	failure, limit value 1 and 2, potential free relay contacts		
Power supply	110 VAC, 230 VAC / 50 ... 60 Hz, 15 W, 500 W with anti-freeze heater		

Data subject to change without notice