

Dust measuring device



- certified in compliance with MCERTS Performance Standards
- certificate no.: CSA MC220416/00



- QAL1 certified according to DIN EN 15267-1, DIN EN 15267-2, DIN EN 15267-3, DIN EN 14181,
- certificate no.: 0000081147_02
- approved for combustion and incineration plants

Continuous, tribo-electric monitoring of dust concentration in exhaust gas

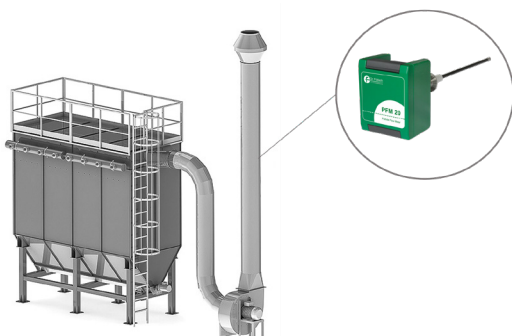
The PFM 20 is a highly sensitive device for continuous measurement of dust emissions. The device meets highest international and European standards.

It is suitable for emission control on waste incineration plants and other combustion plants.

The plug-and-measure device is simple to maintain. The clamp connection allows a quick inserting as well as taking out of the probe which simplifies any kind of service activities like checks or cleaning.

The robust design makes it long lasting (operating time > 10 - 15 years).

APPLICATION EXAMPLE



PRECONDITIONS ON SITE

- ambient temperature: -20...+50 °C
- flow velocity of min. 5 m/s
- dew-point spread: min. +5 K
- processing of measuring signals

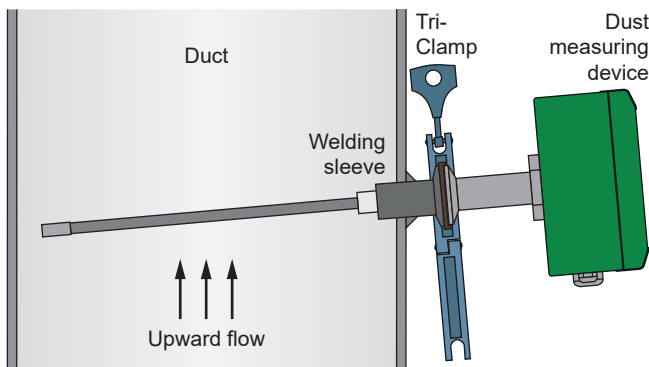
YOUR BENEFITS AT A GLANCE

- TÜV and MCERTS certified
- lowest certified range 0 - 7.5 mg/m³ dust
- compact probe head and coated probe rod
- customizable probe rod length and power supply options
- measuring value output in mV or mg/m³
- Modbus interface, analogue and digital signal output
- connectivity for external display and operation unit (DUx 20; optional)
- robust device and long-term stable measurement results
- automatic zero and reference point check

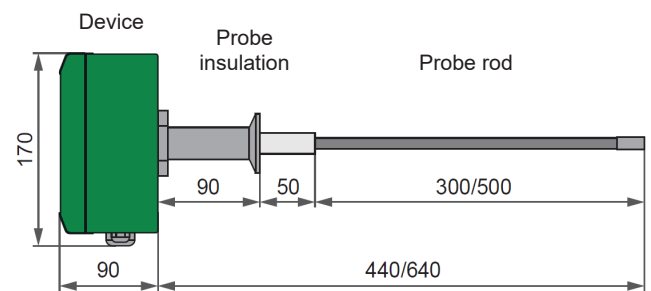
PFM 20 DEVICE VERSIONS

- PFM 20 T - suitable for use in the high-temperature range of > 280 °C up to 900 °C
- PFM 20 C - with customizable probe length
- PFM 20 D - with customizable probe length and display

PROCESS CONNECTION BY TRI-CLAMP



DIMENSIONS



TECHNICAL DATA

Housing:	compact device with aluminium housing; IP 65
Probe:	tribo-electric probe consisting of probe rod and probe head; coated probe rod, electrically isolated from housing, probe rod length: 300/500 mm
Dimensions; weight:	130 mm x 170 mm x 530/730 mm (w x h x d); ca. 2,0 kg
Operating conditions:	
Relative humidity (air):	no special sensitivity
Exhaust gas temperature:	max. 280 °C (PFM 20 T up to 900 °C)
Flow velocity:	min. 5 m/s
Operational availability:	approx. 1 min after switch-on of power supply
Measuring range of dust:	raw signal: 0...250 mV; dust concentration: 0...250 mg/m ³
Calibration:	by gravimetric comparison measurements (not required for trend and filter analysis)
Analogue outputs:	2 x 4...20 mA, galvanically isolated to device ground, burden max. 500 Ω; outputs for: <ul style="list-style-type: none"> • raw signal [mV] • dust concentration C_B [mg/m³]
Analogue input:	1 x 4...20 mA for external velocity v [m/s], galvanically isolated to device ground
Digital outputs:	4 potential-free contacts for failure, maintenance, limit value 1 and limit value 2 / optionally maintenance request; 24 V, 100 mA
Interfaces:	<ul style="list-style-type: none"> • USB interface to PC (for parameter setting) • Modbus RS 485 according to directive VDI 4201 page 3 • Modbus for optional unit (DUx 20)
Process connection:	welding sleeve with Tri-Clamp fastener
Cable gland / tightening zone:	<ul style="list-style-type: none"> • 1x M16 x 1.5; • 2x M12 x 1.5
Power supply:	<ul style="list-style-type: none"> • 110...240 V AC, 50...60 Hz, fuse 1 AT, 10 W; pre-fuse: min. 1.2 AT • 24 V DC (optional), 10 W; pre-fuse: min. 500 mA
Optional:	<ul style="list-style-type: none"> • Linearity test module (LinTest PFM 20) • Display and operation unit (DUx 20)
<i>Special models are possible on request.</i>	