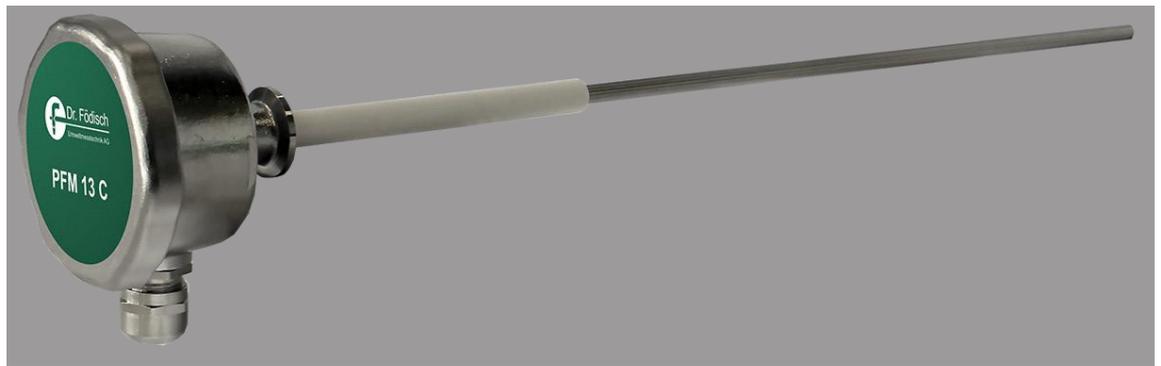


## Dust monitoring device PFM 13 C

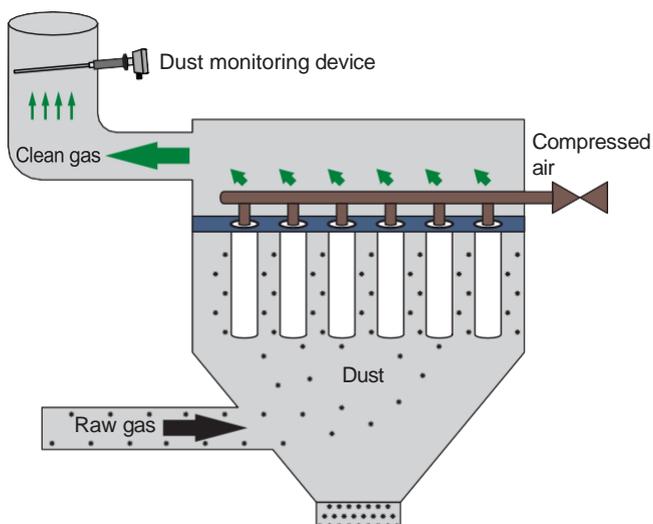
Continuous, tribo-electric in-situ measurement for qualitative monitoring of exhaust gas



### APPLICATION

The PFM 13 C serves the permanent control of dust emissions. Applied as a filter monitoring device it is an effective implement to detect and localize damage to filtering precipitators at an early stage. Configured as a dust measuring device, it can be used for continuous monitoring of clean gas contents and dust contents of filtering precipitators.

### INSTALLATION EXAMPLE



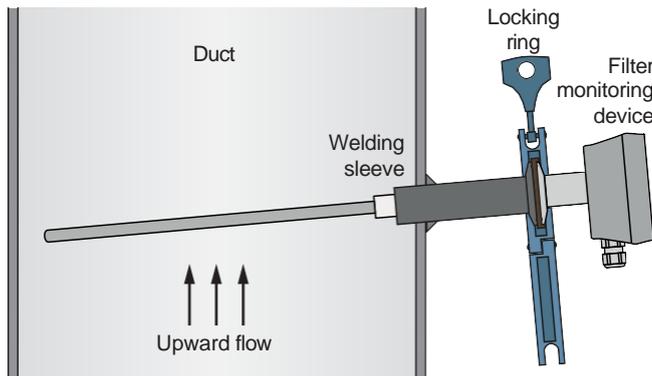
### YOUR BENEFITS AT A GLANCE

- dust measurement and filter monitoring with one compact device
- no separate power supply necessary (2-wire transmitter)
- no purge air blower required
- low operational costs
- easy mounting

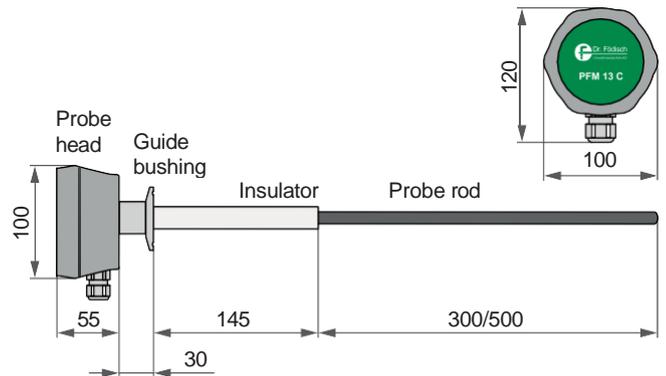
### PRECONDITIONS ON SITE

- ambient temperature: -20...+50 °C
- location free of percussion
- homogenous dust and stack gas distribution
- flow velocity of min. 3 m/s
- installation place with run-in/run-out zone of min. 5-fold/2-fold length of duct diameter
- power supply for 2-wire transmitter
- processing of measuring signals

PROCESS CONNECTION BY TRI-CLAMP



DESIGN & DIMENSIONS



Filter monitoring

TECHNICAL DATA

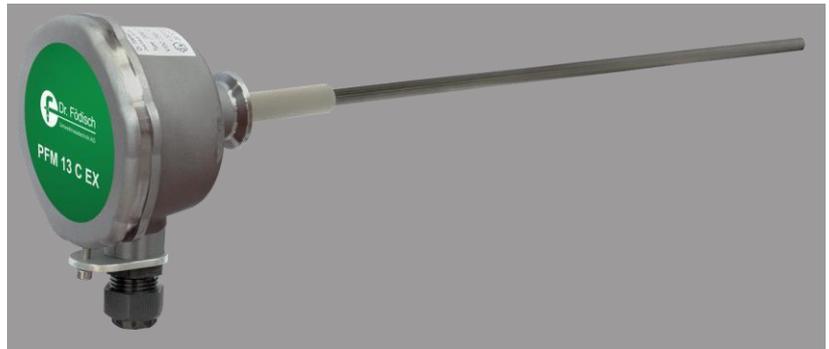
Housing:	compact device; IP65; protection class 1
Dimensions:	approx. 100 mm x 120 mm x 530/730 mm (w x h x d)
Weight:	approx. 0.9 kg
Probe:	tribo-electric probe consisting of probe rod and probe head; probe rod: electrically isolated from housing, length: 300/500 mm (possible to shorten mechanically). immersion depth: approx. 410/610 mm (dependent on application)
Operating:	switches at signal module
Ambient temperature:	-20...+50 °C
Relative humidity:	no special sensitivity
Dew-point spread:	min. +5 K
Measuring gas temperature:	max. 280 °C
Flow velocity:	min. 3 m/s
Measuring range of dust:	0...100% (qualitative) or 0 ... 1000 mg/m <sup>3</sup>
Gain levels:	4
Operational availability:	immediately after switch-on of power supply
Calibration:	by gravimetric comparison measurements (for trend measurement and filter analysis not required)
Analogue output:	4...20 mA, 2-wire transmitter, galvanically isolated to device ground, burden max. 480 Ω
Process connection:	welding sleeve with Tri-Clamp fastener
Cable gland / tightening zone:	M20 x 1.5 / 9...13 mm
Power supply:	2-wire transmitter (4...20 mA); min. 15 V DC / max. 30 V DC
<i>Special models are possible on request.</i>	

## Dust monitoring device PFM 13 C EX

Highly sensitive system for continuous, tribo-electric in-situ measurement in potentially explosive atmospheres



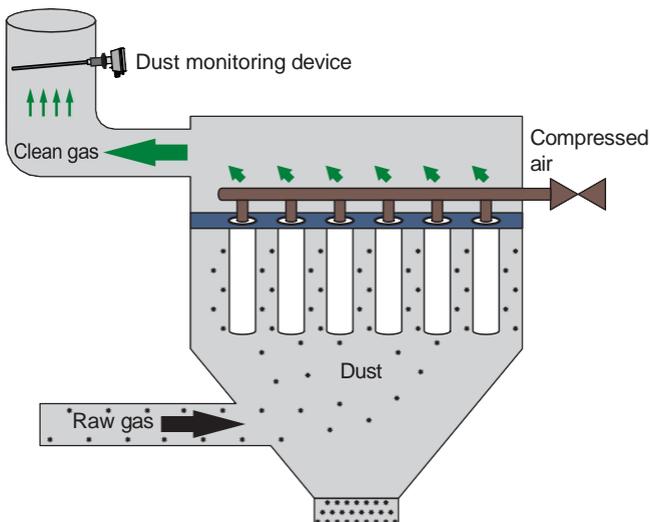
- EC-type examination certificate according to EN 60079, ATEX directive (IBExU19ATEXB008X)
- approved for Ex II 3D Ex ic tc IIIC T80°C Dc X



### APPLICATION

The PFM 13 C EX serves the permanent control of dust emissions. Applied as filter monitoring device it is an effective implement to detect and localize damages at filtering precipitators at early stage. Configured as dust measuring device it can be used for continuous monitoring of clean gas contents and dust contents of filtering precipitators.

### INSTALLATION EXAMPLE



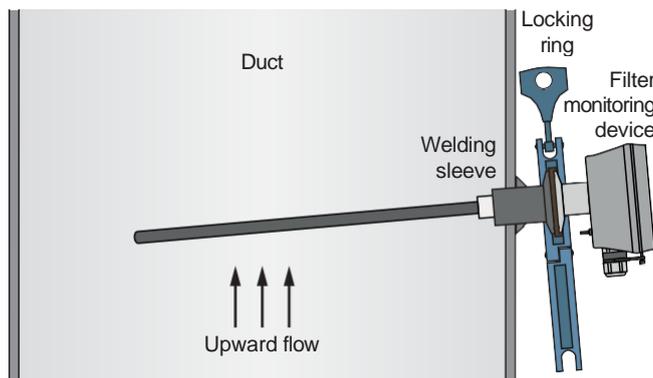
### YOUR BENEFITS AT A GLANCE

- dust measurement and filter monitoring with one compact device
- no separate power supply necessary (2-wire transmitter)
- no purge air blower required
- low operational costs
- easy mounting

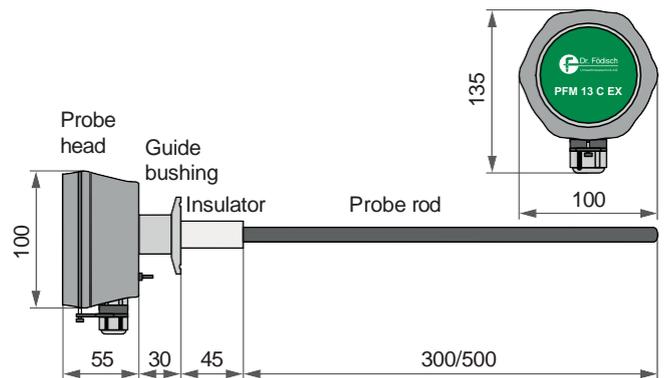
### PRECONDITIONS ON SITE

- ambient temperature: -20...+50 °C
- location free of percussion
- homogenous dust and stack gas distribution
- flow velocity of min. 3 m/s
- installation place with run-in/run-out zone of min. 5-fold/2-fold length of duct diameter
- power supply for 2-wire transmitter
- processing of measuring signals

PROCESS CONNECTION BY TRI-CLAMP



DESIGN & DIMENSIONS



Filter monitoring

TECHNICAL DATA

Housing:	compact device; IP 65; protection class 1
Dimensions:	approx. 100 mm x 135 mm x 430/630 mm (w x h x d)
Weight:	approx. 0.9 kg
Probe:	tribo-electric probe consisting of probe rod and probe head; probe rod: electrically isolated from housing, length: 300/500 mm (possible to shorten mechanically). immersion depth: approx. 310/510 mm (dependent on application)
Operating:	switches at signal module
Ambient temperature:	-20...+50 °C
Relative humidity:	no special sensitivity
Dew-point spread:	min. +5 K
Measuring gas temperature:	max. 260 °C
Flow velocity:	min. 3 m/s
Measuring range of dust:	0...100% (qualitative) or 0 ... 1000 mg/m <sup>3</sup>
Gain levels:	4
Operational availability:	immediately after switch-on of power supply
Calibration:	by gravimetric comparison measurements (for trend measurement and filter analyses not required)
Analogue output:	4...20 mA, 2-wire transmitter, galvanically isolated to device ground, burden max. 480 Ω
Process connection:	welding sleeve with Tri-Clamp fastener
Cable gland / tightening zone:	M20 x 1.5 / 9...13 mm
Power supply:	2-wire transmitter (4...20 mA); min. 15 V DC / max. 30 V DC
<i>Special models are possible on request.</i>	