Filter monitoring device

Dr. Födisch
Umweltmesstechnik AG

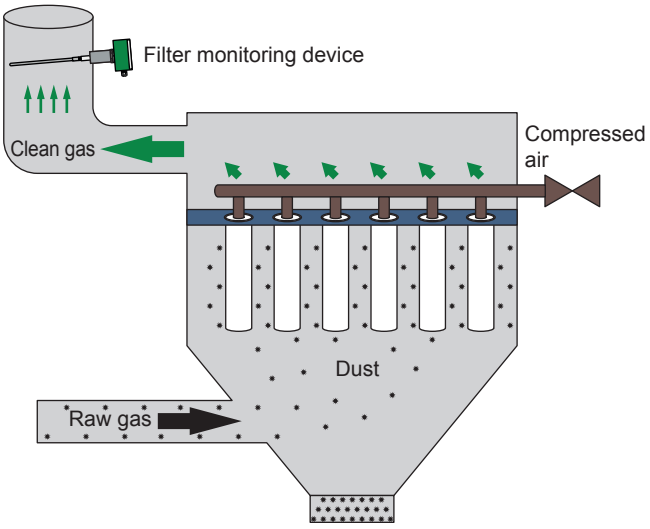
Continuous, tribo-electric in-situ measurement with real-time monitoring of dust emissions

APPLICATION

The PFM 02 serves the permanent control of dust emissions. It can be applied as a filter monitoring device as well as configured as a dust measuring device.

If the average dust content in operating state is known, target value calibration can be applied. The device determines the appropriate calibrating factors automatically and provides the quantitative dust content as output.

INSTALLATION EXAMPLE



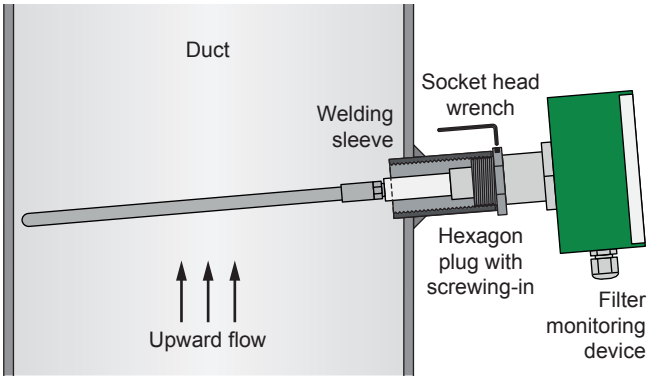
YOUR BENEFITS AT A GLANCE

- compact device → no separate operating device necessary
- variable application possibilities through probe rod modification
- rotatable probe head
- local diagnosis of system state by integrated graphic display
- real-time display with diagram or in text mode with display in % or mg/m³
- target value calibration possible
- no purge air blower required
- low operational costs
- easy mounting

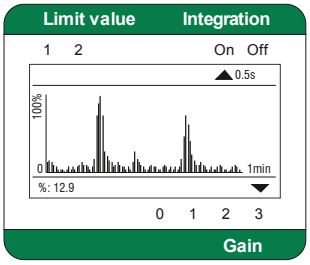
PRECONDITIONS ON SITE

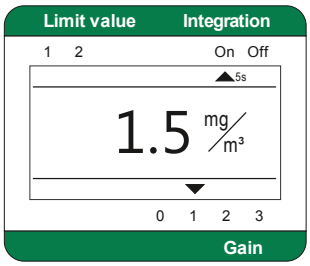
- ambient temperature: -20...+50 °C
- location free of percussion
- homogenous dust and stack gas distribution
- flow velocity of min. 3 m/s
- installation place with run-in/run-out zone of min. 5-fold/2-fold length of duct diameter
- power supply
- processing of measuring signals

PROCESS CONNECTION



DISPLAY AS GRAPHIC & TEXT MODE





TECHNICAL DATA

Housing:	compact device (integrated operating unit); IP65, protection class 1
Dimensions:	standard approx. 160 mm x 160 mm x 510 mm (w x h x d)
Weight:	approx. 2.5 kg
Probe:	tribo-electric probe consisting of probe rod and probe head; probe rod: electrically isolated from housing, standard length: 300 mm (other lengths on request); circular, rectangular or wing profile as option; immersion depth: dependent on application
Display / Operating:	graphic display (128 x 64 Pixel), 4 operating keys
Ambient temperature:	-20...+50 °C
Relative humidity:	no special sensitivity
Dew-point spread:	min. +5 K
Measuring gas temperature:	max. 280 °C (higher temperatures on request)
Flow velocity:	min. 3 m/s
Measuring range of dust:	qualitative: 0...100%; quantitative: 0...10 mg/m³ (0...1000 mg/m³)
Gain levels:	4
Operational availability:	after approx. 3 min
Calibration:	by gravimetric comparison measurements (for trend measurement and filter analysis not required)
Analogue output:	4...20 mA, galvanically isolated to device ground, burden max. 500 Ω
Digital outputs:	status signals max. 24 V DC at 0.1 A (for failure, maintenance, maintenance requirement, limit value 1 and 2); load capacity: max. 60 Vp, max. 75 mA; forward resistance: max. 10 Ω
Process connection:	1“ welding sleeve
Cable gland / tightening zone:	3x M20 x 1.5 / 9...13 mm
Power supply:	230/110 V AC, 50-60 Hz, 24 V DC, 3 VA

Special models are possible on request.

Dr. Födisch Umweltmesstechnik AG
Zwenkauer Strasse 159 • 04420 Markranstädt • Germany
Phone: +49 34205 755-0 • Fax: +49 34205 755-40
E-mail: sales@foedisch.de