

Mobile filter diagnosis device



Mobile system for temporary, tribo-electric in-situ filter monitoring of exhaust gas

APPLICATION

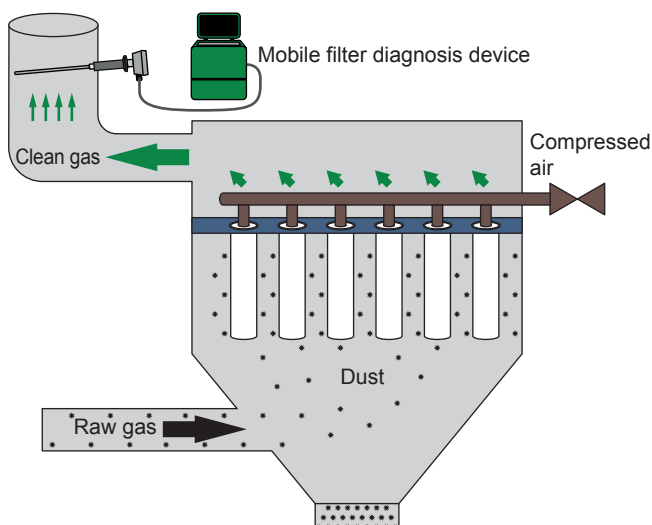
The PFM 14 K serves the temporary control of dust emissions. Applied as a filter monitoring device it is an effective implement to detect and localise damages to filtering precipitators at an early stage.

The monitoring and evaluation of the measuring results furthermore allows selective maintenance procedures.

YOUR BENEFITS AT A GLANCE

- design as portable case → easy and safe handling of the complete system
- immediate evaluation of the clean gas dust content after filter systems
- flexible use by variable length of the probe rod
- graphic presentation and storage by integrated recorder
- offline power supply by power bank
- easy mounting

INSTALLATION EXAMPLE



PRECONDITIONS ON SITE

- ambient temperature: $-20...+50\text{ }^{\circ}\text{C}$
- 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
- socket with 1" or ½" welding sleeve at the duct



DESIGN

The device is a complete measuring system which is designed as a portable case. It consists of a measuring case with an integrated operating unit and an electronic recorder for graphic presentation and storage. The embedded power bank offers the possibility of an offline power supply for up to twelve hours.

The lower segment of the case is a combined box with all necessary accessories (e.g. probe, connecting cables).

TECHNICAL DATA

Housing:	complete measuring system designed as a portable measuring case (incl. electronic recorder) and accessories box; IP54; protection class 1
Dimensions:	approx. 500 mm x 450 mm x 250 mm (w x h x d)
Weight:	approx. 12 kg
Probe:	tribo-electric probe consisting of probe head with mountable probe rods; IP65; protection class 1; probe rod: electrically isolated from housing, variable length though combinable parts; immersion depth: dependent on application; probe connection cable: 5 m (max. distance to measuring case)
Display / Operating:	operating unit: graphic display (128 x 64 Pixel), 4 operating keys; probe: switches at signal module
Registration:	electronic recorder with graphic display; internal storage, SD card slot, USB connection
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:	qualitative: 0...100%; quantitative: 0...10 mg/m ³ (0...1000 mg/m ³ , dependent on adjusted amplification, dust type and measuring gas characteristics)
Gain levels:	16 (4 via operating unit, 4 via probe)
Operational availability:	immediately after switch-on of power supply
Calibration:	by gravimetric comparison measurements (for trend measurement and filter analysis not required)
Digital outputs (only internal):	3 status signals max. 24 V DC at 0.1 A (for failure, maintenance, maintenance request, limit value 1 and 2); load capacity: max. 60 Vp, max. 75 mA; forward resistance: max. 10 Ω
Process connection:	1" welding sleeve with inside thread (standard, not part of the scope of supply), alternatively applicable for 1/2" welding sleeve or Tri-Clamp fastener
Power supply:	230 V AC, 50-60 Hz, 15 VA; offline power supply by power bank possible, operation time approx. 12 h
<i>Special models are possible on request.</i>	