PMFT 4000

The PMFT 4000 was specially developed for use in the quality control of masks, filter media and particulate filters. It tests particle filters for full-face masks better than the standards EN 143, ISO 16900-3 and NIOSH 42 CFR 84, with additional exact analysis of the filter mask efficiency for SARS-CoV-2 (size approx. 120 nm to 160 nm). In addition, it is possible to test face masks based on the standards EN 149/EN 13274-7 and GB 2626.

The photometric total penetration and the fractional efficiency, i.e. the efficiency over the particle size or the particle size-dependent penetration, are tested simultaneously.

Benefits

- Short test times of up to 30 s for overall efficiency up to 99.9995%
- Simultaneous measurement with Promo Sense including output of fractional efficiency and pressure drop
- 2 X Promo Sense aerosol spectrometer with long-life LED light source for highest measurement stability
- Delivered with two aerosol generators for NaCl and oil
- Integrated corona discharge with CD 2000 A
- Testing of fractional efficiency, e.g. efficiency in the entire size range from 145 nm to 5 μm
- On-site calibration possible – customer calibration of particle size possible
- Individual configuration of performance at customer request

Applications

- Testing of full face mask filters for use with standard filter fittings according to EN 148-1
- Measurement of total penetration of respirators
- Exact analysis of filter mask efficiency, e.g. coronavirus
- Media test for HEPA quality

Features

- Universal tester for nearly all mask and filter types according to international standards (e.g., EN 143, ISO 16900-3, NIOSH 42 CFR 84)
- Simultaneous measurement of total penetration and fractional efficiency
- Efficiency measurement across a particle size range from 145 nm to 5 μm
- Integrated Promo® Sense aerosol photometer for precise raw and clean gas analysis
- Standard-compliant particle size distributions for salt and oil tests per EN 143, ISO 16900-3, and 42 CFR 84

DATASHEET

Aerosols	Salts (e.g. KCl, NaCl), liquid aerosols (e.g. DEHS), latex particles (PSL)	Test area of the medium	100 cm^2
Measuring range (total penetration)	0.0005 - 100 %	Measurement range (size)	0.145 – 40 μm
Volume flow	1 – 27 m^3/h - pressurized operation	Power supply	115 – 230 V, 50/60 Hz
Installation conditions	+10 – +40 °C	Differential pressure measurement	0 – 1,200 Pa
Inflow velocity	1.5 – 70 cm/s (others on request)	Compressed air supply	6 – 8 bar
Dilution factor	1 : 27 / 1 : 700	Test conditions according to standard	+19 – +23 °C
Dimensions	Approx. 1,800 • 600 • 900 mm (H • W • D)		