MFP 3000 HF







With the MFP 3000 HF, it is possible to set the relative humidity from 10 to 80 % or the temperature from -10 to 50°C. The inflow velocity has been extended compared to standard models to a range of 4 cm/s – 2 m/s.

The MFP 3000 HF serves to determinefilter parameters under realistic air conditions, such as

- · the differential pressure of the filter medium at different inflow velocities
- the fractional efficiency and the differential pressure at a defined air volume flow
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- the dust holding capacity and the associated gravimetric efficiency at a prescribed air volume flow and increase in differential pressure.

BENEFITS

- Settable relative humidity: 10-80~%
- Temperature regulation of the air volume flow: 20 to 35 °C (-10 to 50 °C on request)
- Expansion of the inflow velocity to 4 cm/s 2 m/s
- Integration of an U-SMPS into the MFP 3000 HF expands the size range for the measurement of filter efficiency at the MFP 3000 to 10 nm - 40 μ m
- Quasi-simultaneous particle measurement in raw gas and pure gas
- Measurement of $C_{n \text{ max}} = 10^6 \text{ particles/cm}^3 \text{ without}$ dilution
- · Internationally comparable measuring results, high distribution of the test system
- Top reproducibility of the test procedure
- Easy use of various test aerosols, such as SAE Fine and Coarse, NaCl/KCl, DEHS
- Top raw gas concentrations up to $> 1000 \text{ mg/m}^3 \text{ ISO}$ Fine or $> 5000 \text{ mg/m}^3 \text{ ISO Coarse with fraction}$ separation efficiency measurement for load testing
- · Flexible filter test software FTControl
- Sequential programs for pressure loss measurement, fraction separation efficiency measurement and load measurement
- · Easy to operate
- Short set-up times

APPLICATIONS

- · Testing of filter media and of small filter elements in product development and during production monitoring with variable rel. humidity and temperature.
- Simulation for testing
 - car interior air intake filters or engine air filters at high temperatures, under dusty and dry or extremely humid conditions
 - turbine air filters from power plants
 - performance of room air filters in summer (warm and humid / dry) and winter (cold / humid / dry)
 - performance of ice formation in the filter medium



DATASHEET

Aerosols	Dusts (e.g., SAE dusts), salts (e.g., NaCl, KCl), liquid aerosols (e.g., DEHS)	Test area of the medium	100 cm ²
Measurement range (size)	$0.2-40~\mu m$ (Promo [®] system), $5~nm-1~\mu m$ (U-SMPS system)	Measurement range (mass)	For SAE-Fine without additional dilution to 1,000 mg/m ³ (ISO A2 Fine)
Volume flow	$1.2 - 72 \mathrm{m}^3/\mathrm{h}$ - suction mode	Power supply	400 V, 50 Hz
Differential pressure measurement	0 – 20,000 Pa	Inflow velocity	4 – 200 cm/s
Compressed air supply	6 – 8 bar	Temperature regulation	+20 - +35 °C (-10 - 50 °C on request)
Luftfeuchteregelung	10 – 80 %	Dimensions	2,300 • 800 • 2,000 mm (H • W • D)

NORMS AND CERTIFICATES

ISO 5011, ISO/TS 19713, DIN 71460, ISO 11155-1, EN 779, ASHARE 52.2, ISO 16890