

FET 100



To reliably determine the quality and efficiency of filter elements, it is crucial to test energy consumption (pressure drop), loading, particle separation efficiency, and total penetration.

Accurate measurement requires adaptation of the test channel with regard to flow guidance and aerosol distribution to the size of the filter elements.

Palas has over 40 years of experience in filter testing and continuously develops test rigs of the highest quality to meet various requirements.

The FET 100 enables defined testing of filter elements of the smallest sizes up to 100 x 100 mm, such as medical filters, vacuum cleaner filters, and fan filters.

Coarse filters up to ULPA filters are tested for separation via particle size and differential pressure. The FET 100 measures better than the standards require:

- ISO 29463-5 HEPA/ULPA filter elements
- ISO 16890 room air filters
- ISO 11155-1/3 Automotive cabin air filters
- DIN 71460 Automotive cabin air filters

Thanks to individual adapters and customer-specific adaptations in the air duct, the FET system can be used for a wide variety of filter elements.

BENEFITS

- Accurate, versatile testing
 - Measurement according to ISO 29463-5 and 29463-3, as well as ISO 16890 (ISO ePM₁; ISO ePM_{2.5}) in one channel possible
 - Use of measurement technology in FET 300 and FET 600; dual channels on request
 - Extensive range of applications for separation efficiency measurement from 0.02 to 40 µm
 - Measurement of dust holding capacity possible
- Flexibility and ease of use
 - Customization of filter adapters, flow channel, and measuring ranges possible for optimal test performance
 - Modular compact design for small filter elements, low space requirement
 - Horizontal design for minimization of particle losses
 - Calibration of raw gas/pure gas is not necessary, because only one sampling and one measuring device is used
- Safety
 - Logged results based on relevant standards
 - Factory-tested and calibrated test stands

APPLICATIONS

- Quality control for
 - HEPA/ULPA clean room filters
 - Cabin air filters
 - Cabin filters
 - Engine air filters
 - Compressor supply air filters
- Development
- Measurement of MPPS according to ISO 29463-5 and ISO 29463-3
- Measurement of the fractional separation efficiency according to ISO 16890
- Determination of the pressure loss at different volume flows
- Determination of dust holding capacity

DATASHEET

Aerosols		Dusts (e.g., SAE dusts), salts (e.g., NaCl, KCl), liquid aerosols (e.g., DEHS), latex particles (PSL)	Measuring range (total penetration)	Up to 0.0005 %
Measurement (size)	range	0.02 – 100 μm	Volume flow	1 – 27 m^3/h - pressurized operation
Differential pressure measurement	pressure	0 – 1,200 Pa selectable, 0 – 2,500 Pa selectable, 0 – 5,000 Pa selectable	Size filter element	100 • 100 • 100 mm (H • W • D)