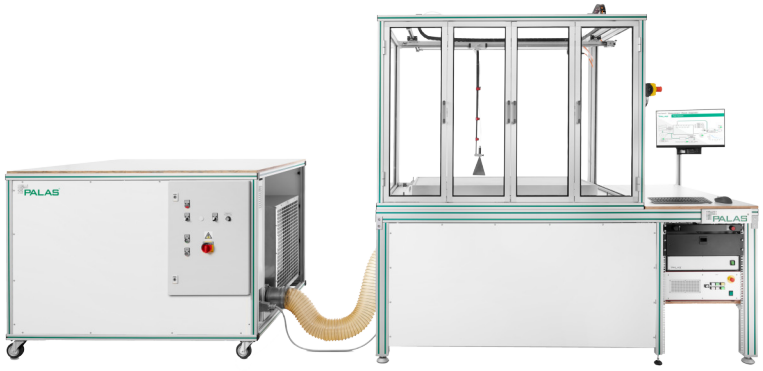
LFT 3000



To ensure filter quality, ISO 29463-1 requires that all HEPA /ULPA filters with an efficiency of 99.95% or higher (ISO 35H/H13) be tested for the following:

- local efficiency according to ISO 29463-4
- overall efficiency according to ISO 29463-5

The LFT 3000 combines the requirements from the ISO standard with simple operations and a fast test run. It operates computer-controlled with appropriate software to perform the test and to detect possible leakage points easily and quickly.

In addition to the local filter efficiency, the overall efficiency is also part of the test report.

Operation principle

Automatic leakage scantest for HEPA/ULPA Filter

The test system consists of the following components:

- Supply air duct with volume flow measurement and raw gas sampling
- Horizontal filter holder (adapter for different filter sizes)
- Aerosol generator and dilution on the raw gas side
- Scanning system with sampling and integrated particle counters
- Control and evaluation unit including software on Windows surface

First, the intake air flows through the built-in filter at a defined volume flow. During this process, the particle counter measures the particle concentration and size on the raw gas side. One advantage of the LFT system is that the test parameters for the test object are automatically calculated from the specifications of the filter class and the associated volume flow.

The settings and the sequence are stored and can be recalled at any time for repeat measurements.

Subsequently, the pressure drop is recorded by scanning over the filter surface.

The scan system, which is installed on the outlet side, uses the particle counter to measure the local emission and size of the particles in the clean gas.

From this, it then calculates the local filter efficiency. The result: leaks are detected quickly and easily.

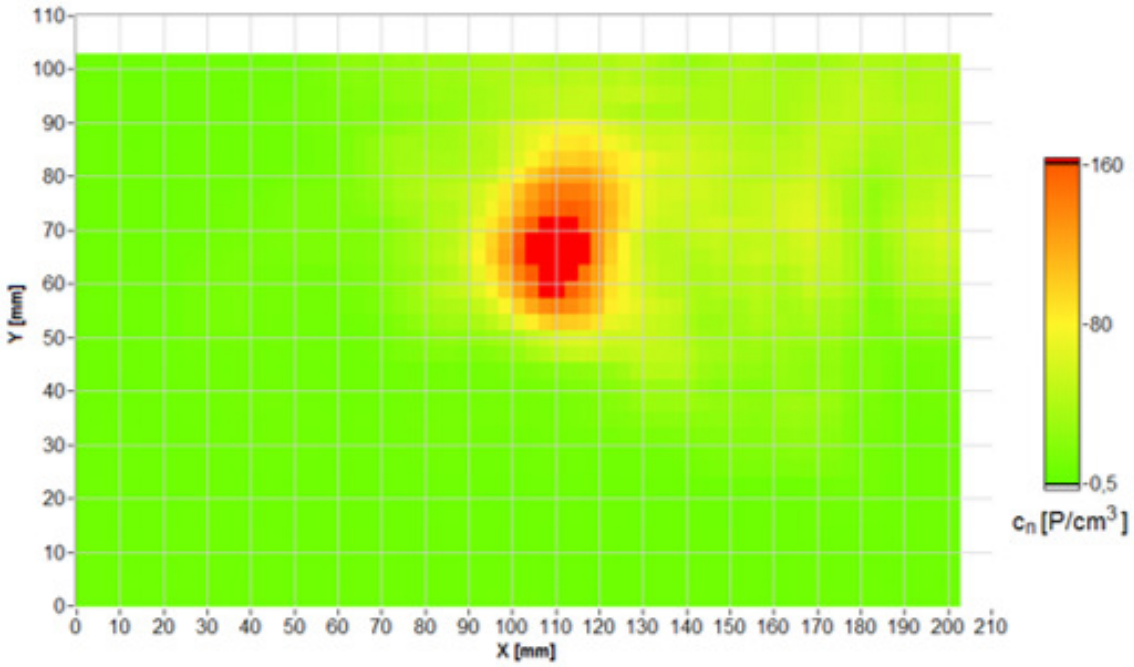


Fig. 1: Leak detection with the indication of the position of the leakageAfter successful testing of the local filter efficiency, the overall filtration efficiency is calculated from the local values, and the test report is generated.

Extensions/Accessories

Aerosol generation

We recommend the PLG 2100 H with Laskin nozzle for the greatest possible consistency in aerosol generation.

Particle counter

Optical particle counter with a flow rate of 28 l/min, measuring range selectable from 0.1 μm or 0.3 μm

Scan nozzle

Specially designed according to ISO 29463 for scanning speeds up to 10 cm/s

Scanning unit

A fast traversing system with linear drive captures the entire filter area

"Worry-free package" for delivery

Acceptance at Palas as well as delivery, installation on site, instruction, and final inspection

Benefits

- Quick and accurate scanning
- Automatic test report
- Clear leak detection
- Easy installation of filter elements
- Adapters for various filter dimensions

DATASHEET

Volume flow	100–1,200 m^3/h
Power supply	400 V, 50 Hz
Differential pressure measurement	Up to 1,200 Pa
Compressed air supply	6 bar
Size filter element	300 x 300–600 x 1,200 mm

APPLICATIONS

- Classification of HEPA/ULPA filters
- Filter test according to ISO 29463-4/5

Mehr Informationen:
https://www.palas.de/product/LFT3000