

Cabin Air Filter Test System (Particulate Filtration)

PAF 111



PAF 111 Cabin Air Filter Test System (Particulate Filtration)

With the Cabin Air Filter Test Rig PAF 111 fractional filtration efficiency is measured while the filter is continuously loaded with dust at constant air flowrate.

The test system and the testing process comply with the requirements of the standard DIN 71460-1 and ISO/TS 11155-1.

Main Components

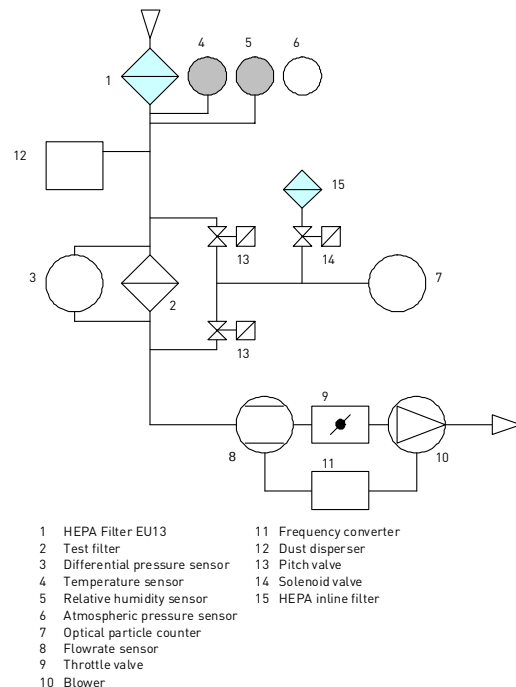
- Flow test channel according to standard including generation of volume flow
- Dust disperser SAG 410
- Aerosol neutralizer EAN 581
- Aerosol generators ATM 220/221
- Optical particle counter LAP 322
- Sensors (pressure, temperature, humidity)
- Software PAF111Win for test rig control, data acquisition and processing.

Special Advantages

- Standard-compliant testing
- High degree of automation
- Modular design
- Traceable test documentation
- Adapter for filter elements and media

Applications

- Differential pressure test
- Fractional efficiency measurements
- Dust loading test
- Combination measurements according to DIN 71460-1 (ISO/TS 11155-1)
- User-defined tests



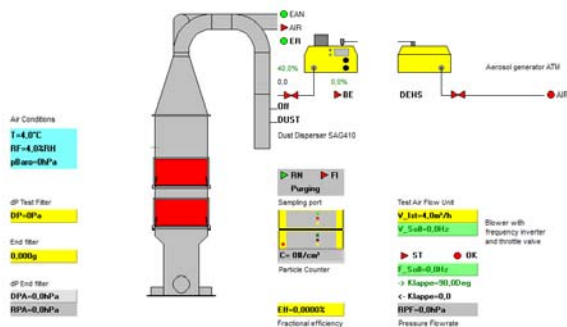
Schematic of the Particle Filter Test Rig Series PAF



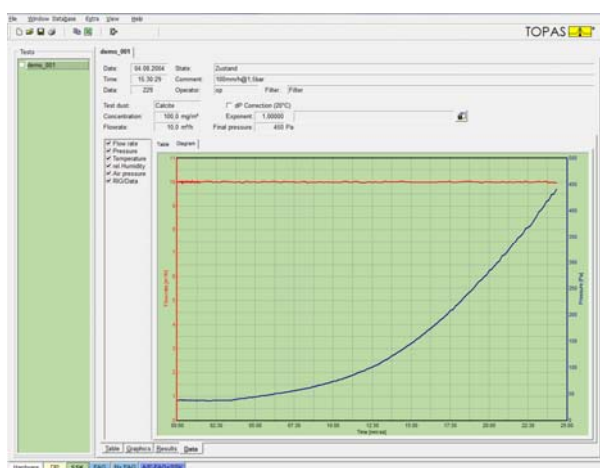
Specifications

Control and DATA Acquisition Software PAFWin

- Automatic test procedures in accordance with issued standards
- Manual control for service, calibration procedures and research
- Data monitor for long term investigations
- Sample and tests database
- Test dusts and test aerosol database
- Data presentation and statistical calculations
- Data copy & paste, dynamic data exchange DDE
- Multilingual software (German, English, French)



PAF11Win Main Window - Test Rig Visualization



Example of a Dust Holding Test

Technical Data

Air flow ¹⁾	70...700 m³/h
Differential pressure	0...1000 Pa
Filter adapter	300 × 600 mm
Media cross section	180 cm²
Sensors	Temperature, relative humidity, atmospheric pressure
Dust disperser	SAG°410/L (2...245 g/h)
Aerosol generators	ATM 220
Electrostatic aerosol neutralizer	EAN 581
Optical particle counter ²⁾	Laser Aerosol Spectrometer LAP 321, Topas
Power supply	400 V AC, 16 A
Test rig dimensions	460 x 120 x 340 cm

¹⁾ Higher volume flows on request

²⁾ Other models on request

ALC 5520 #3	
Date: 12.08.2015	State:
Time: 12:53:28	Comment: filter number 1
Data: 219	Operator: op
Test aerosol: ISO A2 FINE	Filter: ALC-5520
Concentration: 10.0 mg/m³	dP Correction (20°C)
Flowrate: 300.0 m³/h	Exponent: 1.00000
Test air conditions:	Test result:
Temperature: 31.7 °C	Efficiency: 24.6 %
Relative humidity: 43.3 % H.	
Barometric pressure: 1005 hPa	
Flow rate: 300.3 m³/h	Differential pressure: 59 Pa
Tare pressure: 001-150812 Bar	
	Efficiency at 0.400µm: 14.8 %
	Efficiency at 1.000µm: 21.5 %
	Efficiency at 5.000µm: 76.0 %

Fractional efficiency of an ISO 11155-1 Test

QMS certified to
DIN EN ISO 9001.



12 100 11908 TMS

For more information please
visit our website at
www.topas-gmbh.de

Specifications are subject to
change without notice.

© Copyright 2019 Topas GmbH.

