

## Main Topics

### Aerosols & Particles

- environmental relevance
- occupational safety
- particle synthesis

### Air Quality & Gas Treatment

- filtration and sorption
- process development
- CFD simulations

### Circular Economy & Water Technology

- mechanical & thermal processes
- reactive & oxidative processes
- process development

### Analysis & Measurement Techniques

- trace analysis
- development of instruments
- process digitalisation



# Cabin Air Filters

## Tests

According to  
DIN 71460 or  
ISO 11155



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# Cabin Air Filters - Test According to DIN 71460 or ISO 11155

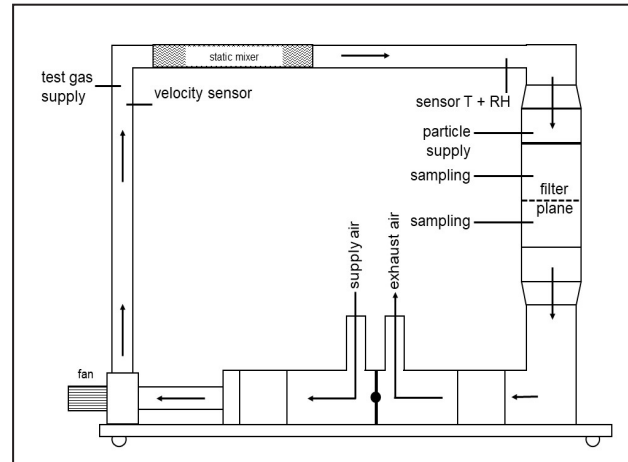
## Test Rig

- Measurement of
  - particle collection efficiency
  - breakthrough curve
  - differential pressure
- Loading e.g. with Arizona Road Dust



Test facility for DIN 71460 and ISO 11155

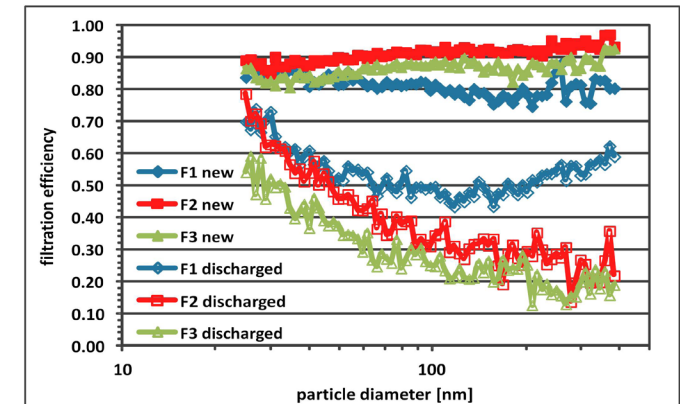
## Technical Specifications



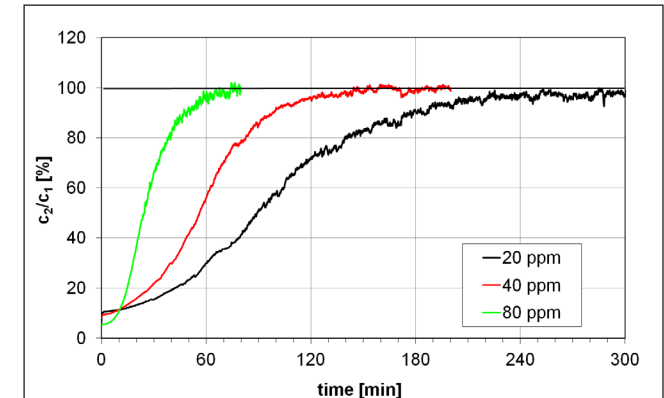
Schematic of the test rig

- Temperature: (10 - 85)°C
- Humidity: (10 - 95) % RH
- Test flow rate: (50 - 800) m<sup>3</sup>/h
- Test aerosols: DEHS, ISO-fine, ASHRAE, Arizona Road Dust, (diesel) soot, KCl and NaCl ≥ 4nm
- Test gases: Toluene, n-butane, VOC and other organic compounds  
 (2.0 – 5000) ppm<sub>v</sub>  
 SO<sub>2</sub> (2.0 – 20) ppm<sub>v</sub>  
 NO<sub>2</sub> (0.3 – 50) ppm<sub>v</sub>  
 NO<sub>2</sub> (0.3 – 50) ppm<sub>v</sub>  
 Ozone (10 – 0.5) ppm<sub>v</sub>  
 NH<sub>3</sub> (2.0 – 2000) ppm<sub>v</sub>

## Exemplary Results



Particle filtration efficiencies according to DIN 71460 Part 1 and ISO/TS 11155-1



Breakthrough curves according to DIN 71460 Part 2 and ISO 11155-2