



## SF6 LASERCHECK P3:FH

CONTAINMENT TEST SYSTEM

TRACER GAS CONTAINMENT TESTING  
WITH WORLD LEADING FEATURES

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Unrivaled Gas Detection.





# FUME HOOD TRACER GAS CONTAINMENT TESTING WITH WORLD-LEADING PPB SENSITIVITY AND DATA LOGGING

## Features

- Ultra-high sensitivity with a detection limit of 6 ppb (0.006 ppm) with SF6 as a tracer gas
- No radioactive source
- Pure Argon not required
- Measurement results independent of temperature and moisture
- Permanent self-diagnostics
- Fully automated measurement and data storage according to ASHRAE 110-2016 and DIN EN 14175
- Portable with rugged case
- No regular maintenance required

## Applications

The SF6 LASERCHECK P3:FH is ideal for laboratory settings containing fume hoods, such as university chemical labs and industrial labs. This device traces contained gas in the fume hood with world-leading ppb sensitivity and data logging according to ASHRAE 110-2016 / DIN EN 14175

## Product Contents

1 pcs.	SF6 LASERCHECK P3:FH
1 pcs.	Operating and Evaluation Software
1 pcs.	Internal Vacuum Pump
1 pcs.	Control Computer

**Delivery Time**  
3 to 4 weeks

**Warranty**  
12 months



## Principle of Detection

SF6 LASERCHECK P3:FH uses an advanced principle of photoacoustic gas detection (patent pending), reaching a detection threshold as low as 6 ppb (parts per billion) at extremely low cross sensitivity and excellent long-term stability.

A gas sample is transferred into the instrument's measuring chamber, where it is exposed to the pulsed beam of a wavelength-optimized CO<sub>2</sub> laser. The laser light is partially absorbed by the SF<sub>6</sub> molecules, turning part of its energy into heat. Due to the pulsation of the beam, a cyclic expansion of the gas can be observed in the presence of SF<sub>6</sub> molecules, which is detected as sound waves by highly sensitive microphones. The intensity of these sound waves is in a fixed ratio with the SF<sub>6</sub> concentration contained in the sample gas.

Unlike conventional absorption spectroscopy, the advanced principle used in SF<sub>6</sub> LASERCHECK P3:FH makes it possible to determine, and compensate for, a beginning contamination of the internal measuring chamber. This ability accounts for its excellent long-term stability of measurement.

## System Characteristics

SF<sub>6</sub> LASERCHECK P3:FH is composed of a base unit, comprising the measuring cell, laser, vacuum pump, and a controller. A WIN PC (Win 7.8.20) running a custom control software serves as the man-machine interface. This software controls the measuring process, visualizes its results, and processes user inputs such as parameter settings. It also stores resulting data for evaluation.





# Technical Specifications

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**Detection Cell**

- Photoacoustic

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**Measuring Speed**

- 7 seconds

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**Compressed Air Supply**

- 5 to 8 bar
- Dry
- Clean
- Free of oil

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**Measuring Range**

- 6 ppb or 30 ppm SF6

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**Laser Class**

- 1; no protective measures required

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**Temperature Range**

- 15 °C to 35 °C for operation
- 0 °C to 45 °C for storage

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**Resolution**

- 1.5 ppb

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**Self Diagnostics**

- Continuous

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**Dimensions**

- 19" x 6 HE x 520 mm

## Manufactured by:

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