

# SF6 LASERCHECK P3:FH

ASHRAE 110-2016  
DIN EN 14175

## SF6 Containment Test System



### APPLICATIONS

- Fume Hood tracer gas containment testing with world leading ppb sensitivity and data logging according to ASHRAE 110-2016 / DIN EN 14175

### FEATURES

- Ultra high sensitivity: Detection limit of 6 ppb (0,006 ppm) with SF<sub>6</sub> as tracer gas
- No radioactive source
- No pure Argon 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

**DETECTION IN PERFECTION.**

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# SF6 LASERCHECK P3:FH



## ULTRA-HIGH SENSITIVE Containment Test System.

SF6 LASERCHECK P3:FH is designed for tracer gas containment testing using SF<sub>6</sub>.

Its novel principle of measurement (patent pending) not only enables SF6 LASERCHECK P3:FH to determine very low gas concentrations, but also makes it suitable for use in any environment.

The fully automated measuring process eliminates any influences by the operator. SF6 LASERCHECK P3:FH thus continuously delivers high precision measurements.

Ist outstanding sensitivity makes SF6 LASERCHECK P3:FH capable of determining SF<sub>6</sub> concentrations in the ppb range.

Ist permanent self diagnostic monitors all vital system parameters, ensuring continued precision of measurement.

## TECHNICAL DATA

Detection Cell	Photoacoustic
Measuring range	6 ppb ... 30 ppm SF <sub>6</sub>
Resolution	1,5 ppb
Continous graph	1 s resolution
Laser class	1; no protective measures required
Self diagnostics	continuous
Temperature range	15 °C ... 35 °C for operation, 0 °C ... 45 °C for storage
Dimensions	670 x 300 x 600 mm
Weight	35 kg



## PRINCIPLE OF DETECTION

SF6 LASERCHECK P3:FH uses an advanced principle of photo-acoustic 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 SF6 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

SF6 LASERCHECK P3:FH is composed of a base unit, comprising the measuring cell, laser, vacuum pump and a controller.

A WIN PC (Win 7,8,10) 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.

## 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	12 weeks
Warranty	12 months



Distributor