INCHECK SF6

Integral SF6 Leak Detection

APPLICATIONS

Examples:

- Integral leak detection on fully assembled GIS, determinig total leak rates
- Atmospheric or vacuum test
- Integral leak detection on SF_6 filled sub assemblies
- Integral ultra high pressure leak detection with SF6 as a tracergas

FEATURES

- Direct integral measurement on SF_6 filled components (e.g. GIS)
- Display of total SF_6 leak rate in %/yr, mbar l/s, g/a, and all other commonly used units
- Avoids all operator interference
- Fully automated measurement
- Test chamber volumes of 0,01 … 40.000 L
- Detection threshold as low as 1 x 10E-11 mbar l/s *
- TURBOPROP Diffusion accelerator
- Storage of measurement data
- Monitors all relevant parameters
- Manual or automatic closure of the test chamber

** Its outstanding sensitivity of 0,3 ppb qualifies INCHECK SF6 for virtually any present or future challenge in terms of leak rate, test chamber volume, and cycle time (e.g. 0,1% annual loss, 1 x 10E-7 mbar l/s, etc.)*

DETECTION IN PERFECTION.

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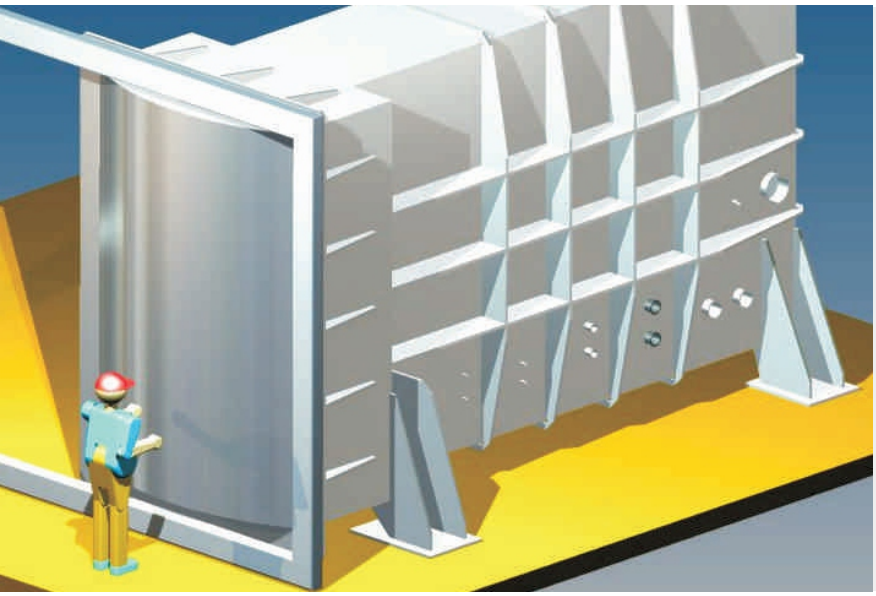
INCHECK SF6



Customized test chambers.

INTEGRAL LEAK DETECTION

The integral leak detection system INCHECK SF6 is mainly composed of three modules:

- Test chamber to hold the entire component under test
- Vacuum pumping racks to evacuate the test chamber
- Measuring instrument SF6 LASERCHECK P3:atm or SF6 LASERCHECK P3:vac, a highly sensitive SF_6 detector operating in the ppb range.

The test jig furthermore comprises automated door mechanics, all necessary valves, sensors, and control equipment.

SENSITIVITY

Measuring Range INCHECK SF6	down to 1x10E-11 mbar l/s depending on volume
Detection threshold LASERCHECK P3:vac	0,3 ppb

CONTROL EQUIPMENT

Computer	Fanless industrial PC, WIN 10 500 GB SSD hard disc
I/O	16 In- outputs, expandable 10 Analog inputs, expandable
Interfaces	Ethernet / USB / Profinet
Display	17” IP65 touch screen with USB plug on front panel

MONITORING

Compressed air supply	Pressure transducer
Component in position / Gross leak detection	Pressure drop / Absolute pressure
Optional	Flow measurement

TEST PROCEDURE

The operator places the component to be tested (e.g. GIS, measuring converter etc) on a support frame equipped with heavy duty rollers, and rolls it into the test chamber. It is also possible to move several smaller components into the chamber at the same time. The only limit is the test chamber‘s size.

Via suitable pipes, the test chamber is then evacuated by the pumping racks. The pipes connect to the chamber at two distant points near the ground (Vacuum method only).

After selecting the product specific code number, the measuring process is started by pressing the start button. The test chamber is either automatically or manually closed, and then evacuated to a preset pressure of 0,1 to 10 mbar.
Thereafter, it is flooded to the process pressure of approx. 10 ... 15 mbar. The concerning pressure levels are product specifically deposited in the numeric control device.

In case the component exhibits a gross leak, pressure monitoring will at this point trigger an alarm, and exit the process in a controlled way.

An automated purging cycle follows. Thus, contamination of the test chamber with high concentrations of tracer gas is avoided.

If no gross leak was determined, the measuring device SF6 LASERCHECK P3:vac connects to the test chamber.

When measuring time has elapsed, the result (PASS/FAIL) is indicated, and the test chamber flooded to atmospheric pressure.

Before removing the component from the test chamber, the operator must acknowledge a failed component.

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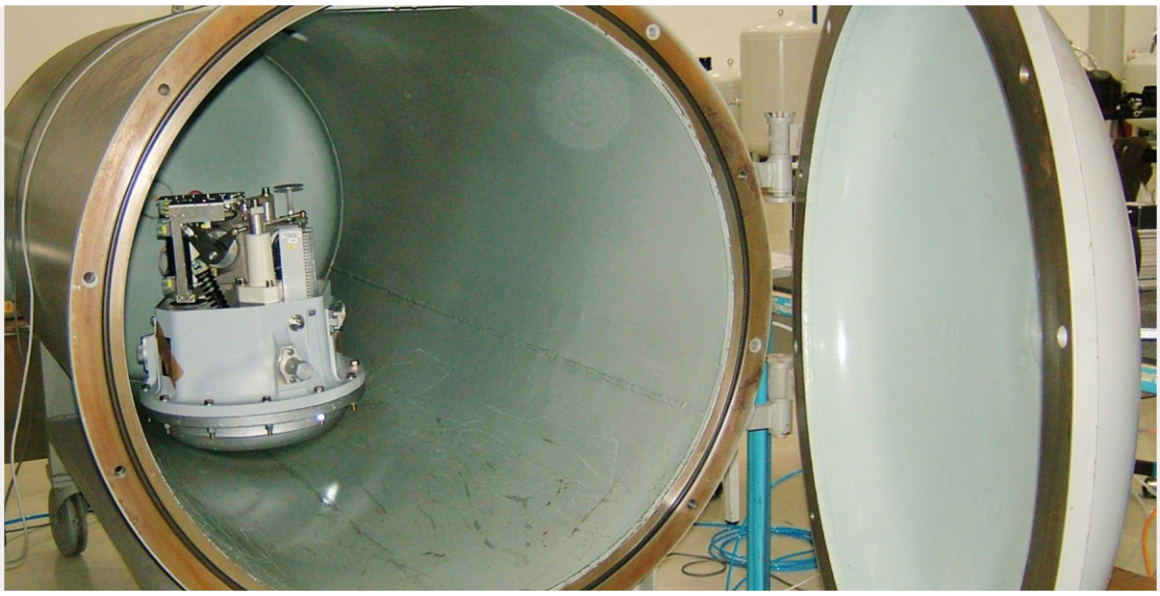

Vacuum test chambers for evaluation available in our test department.

Atmospheric test chamber with variable height.

SUPPLIES

Power supply	230 - 400 V 50/60 Hz
Power consumption	up to 100 KW
Pneumatic supply	Compressed air, dry, clean, free of oil, min. 6 bar

PRODUCT CONTENTS

1 pcs.	Test rack
1 pcs.	SF6 LASERCHECK P3
1 pcs.	Electrical cabinet housing control and data processing equipment 17" touch screen IP 65
1 pcs.	Customer specific test chamber

Delivery time	14 Weeks
Warranty	12 Months

Distributor

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