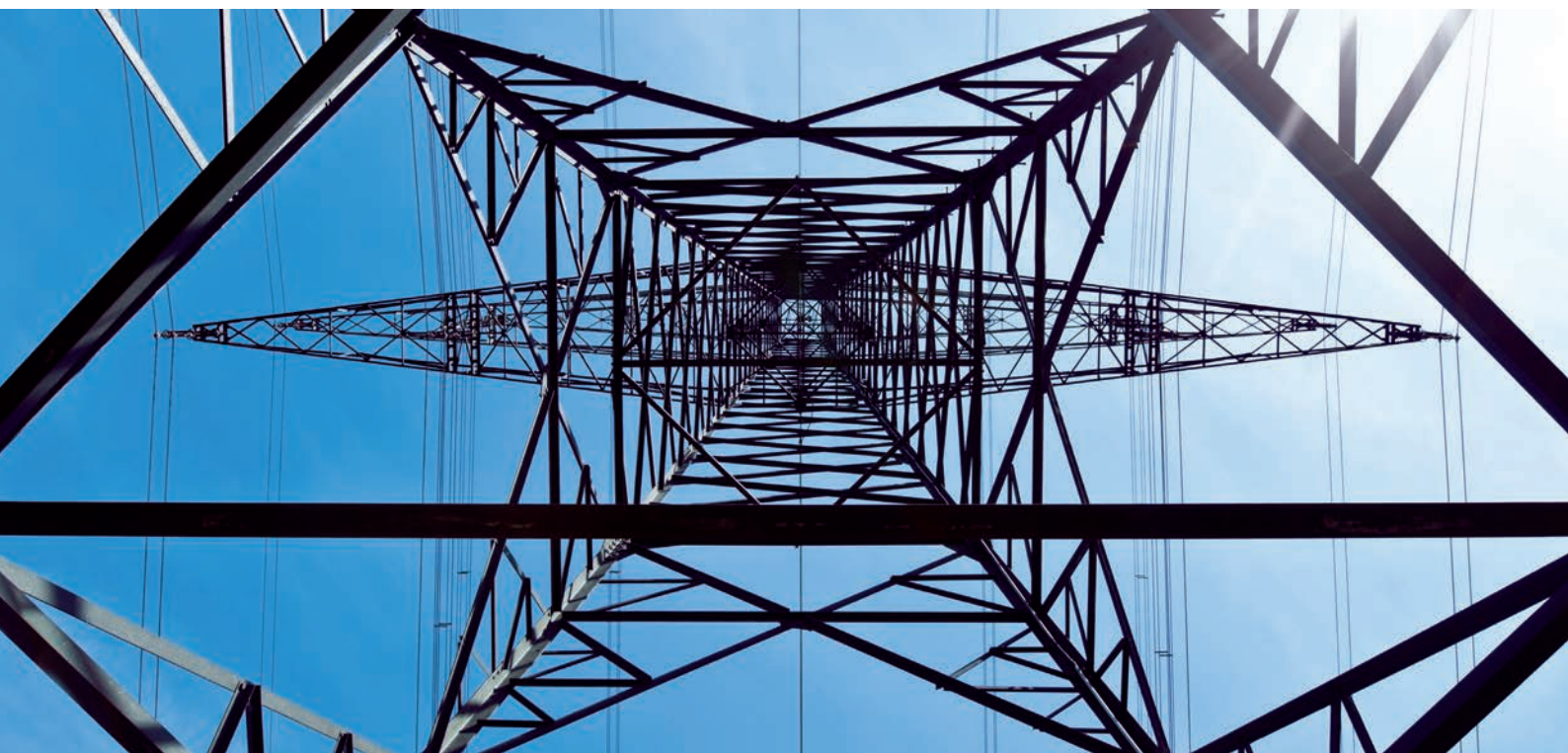


SF₆ Leak Testing Units



DILO. Sustainably tight.



DILO "LeakScanner" series

Quick and Precise Leak Detection

Minimum emissions – maximum performance

Quality demands on medium and high voltage gas compartments are very high as they must maintain their SF₆ pressure level to prevent arcing in operation and keep their constant performance over their entire service life.

SF₆ gas is known as a potential greenhouse gas; therefore emissions are to be avoided whenever possible and should not exceed the relevant regulations. Efficient and reliable leak testing of GIS components is therefore a determinant quality factor in GIS production.

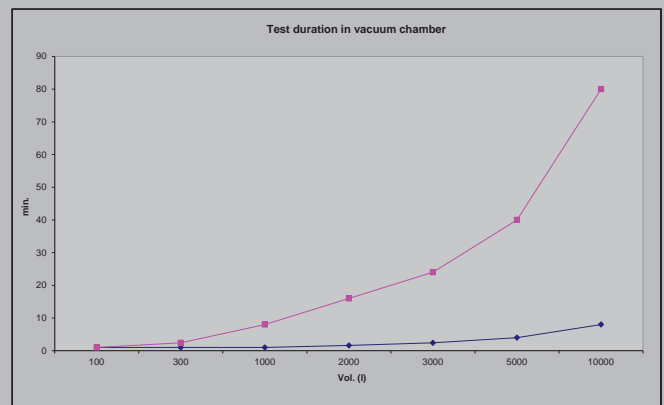
Turning problems into solutions

In the past conventional leak testing methods, such as manual sniffing, were used to identify potential leakages. These manual measurement methods, however, often proved to be a problem as they are a time consuming process not allowing any indication of the leakage rate.

This problem is solved through DILO's "LeakScanner" units, configured as turn-key and customized solutions fitting well into our customer's workflow. The plants allow integral and fully automatic leak measurement on SF₆-insulated components. Even the smallest leakages are detected within a short period of time. The measurement result always indicates the total leak rate of the test object.

Automated leak testing units from DILO help you to

- enhance efficiency in production
- reduce warranty costs
- enhance your products' quality level
- protect the environment
- assure compliance with regulations such as IEC 60694, 842/2006 EC Regulation, TA Luft, and others.



Test duration in vacuum test chamber dependent on volume and a suggested leak rate of 1×10^{-5} and 1×10^{-6} mbar l/s

Major components

The "LeakScanner" comprises a highly sensitive laser-optical measuring system, a test chamber with diffusion accelerator, a vacuum pump for evacuation of air, various subassemblies for integrated gas handling and a 19" PC for comfortable operation.

Other fields of application

Leak testing with SF₆ as tracer gas is also highly suitable for automotive components, refrigeration and air conditioning technology, plant engineering, and many other sectors.



Leak testing under vacuum

With the "LeakScanner SV" series even automated filling of test objects inside the chamber is feasible. As SF₆ is used as a quenching and insulating gas in the GIS assembly itself, it can stay in the test object when the test is completed. Therefore, the SF₆ leak test method is a viable alternative to the well-established helium leak test as no test gas needs to be recovered upon completion of the process. Thus, with the SF₆ test method, the handling time per test object is shorter.

Leak testing under atmospheric pressure

Compared to vacuum chambers, the "LeakScanner SA" series can be configured with a much higher chamber volume. This type of leak testing unit is the optimum solution in case of larger test objects or vacuum sensitive components.

From S to XXL size

We build tightness checking units for integral leak detection with SF₆ test gas of various volumes, ranging from 50 l up to approx. 50,000 l. It is a matter of course that operator and maintenance friendly design is highly respected.



LeakScanner SV for leak testing of small components

Major system features at a glance:

- Automated test process
- Detectable leakages up to $1 \cdot 10^{-9}$ mbar l/s (dependent on chamber volume and test time)
- Detection limit of laser system < 1 ppb (0.001 ppm)
- Only rough vacuum (10 - 20 mbar) needed in test chamber
- Degassing components, moisture and heat do not impair the test result
- Test under vacuum or atmospheric pressure
- In case of SF₆-filled components no handling of additional test gas required
- Flexible system configuration as turn-key solution

Leak testing as a service

DILO also carries out leak tests on a subcontract basis. This is a viable solution when production quantities do not allow an economical investment or when an interim solution in the start-up phase of production is being looked for.



LeakScanner SV with a chamber volume of approx. 15 m³

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For this purpose please register at www.dilo-gmbh.com

SF₆ Gas Handling

For information on our full range of SF₆ gas handling equipment please ask for our catalogue or refer to our website www.dilo-gmbh.com.

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