

SF₆ Leak testing units



Integral leak measurement using SF₆ gas

The integral and automated leakage measurement on serial components and assemblies is the proven strength of these systems. Even the smallest leaks are detected quickly and reliably.

■ SF₆ Leak testing units

- Model range LeakScanner

176 – 178

Model range LeakScanner

Laser-optic test method

Conventional test methods are often time consuming with the results sometimes not being precise enough or not reproducible. With leak testing units by DILO with a laser-optic measurement system and SF₆ test gas, imprecise and complicated test methods are no longer an issue. The laser-optic test method delivers fast and reproducible measurement results. It is particularly suited for quality testing and manufacturing control in the production of sophisticated serial components.

System's benefits:

- Detectable leaks 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)
- Test results are displayed within a few minutes
- As only rough vacuum (10 - 20 mbar) is needed no expensive stainless steel chambers are required
- Degassing components, moisture and heat do not impair the test result
- In case of SF₆-filled components no handling of additional test gas is required
- The leak test can be carried out under vacuum or atmospheric pressure

Model range "LeakScanner SV" - from S to XXL

DILO builds SF₆ leak testing units for integral leak measurement using SF₆ gas in various sizes - from around 50 l to approx. 50,000 l.

The integral and automated leakage measurement on serial components and assemblies is the proven strength of these systems. Even the smallest leaks are detected quickly and reliably.

We always manufacture the systems according to customer specifications while focussing on a user and maintenance-friendly configuration. We exclusively use hermetically sealed components which do not allow emissions into the environment.

To ensure an optimal workflow, the system design is always adjusted to the customer's production environment.



Download leaflet (in English)

Vacuum test chambers

Vacuum testing of smaller components (without gas handling)

This model range with a chamber volume of approx. 50 - 500 l is the ideal solution for testing smaller components where gas handling can take place outside the test chamber.



Example
Model range "LeakScanner SV"
without gas handling

Vacuum testing of larger components (with or without integrated gas handling)

We manufacture systems of this model range with a chamber volume of 500 l to approx. 10,000 l. We recommend this model range where larger components need to be tested or where integrated gas handling in the test chamber is required. In this case, the test objects are filled with SF₆ in the chamber. Gradual evacuation and filling of the test objects is also possible in order to avoid an inadmissible differential pressure between the test object and chamber.



Example
Model range "LeakScanner SV"
with integrated gas handling

Model range LeakScanner

Atmospheric test chamber

Type "LeakScanner SA"

With atmospheric test chambers it is not necessary to evacuate air before the test process. Test chambers of this construction type can be manufactured at significantly lower cost with a significantly larger volume than vacuum chambers. We build these chambers with a chamber volume of up to 50 m³. This allows for reliable testing of even larger units and assemblies.

However, we also recommend atmospheric testing when delicate, vacuum-sensitive components such as devices with touch screens need to be tested for their leak tightness.

This system configuration also allows the filling of the test objects with SF₆ gas in the test chamber and subsequent recovery of the gas. However, with atmospheric pressure, the test duration is on average 10 - 30 times longer as the increase in concentration for atmospheric pressure is significantly lower.



Example

Atmospheric test chamber with automatic roller shutter