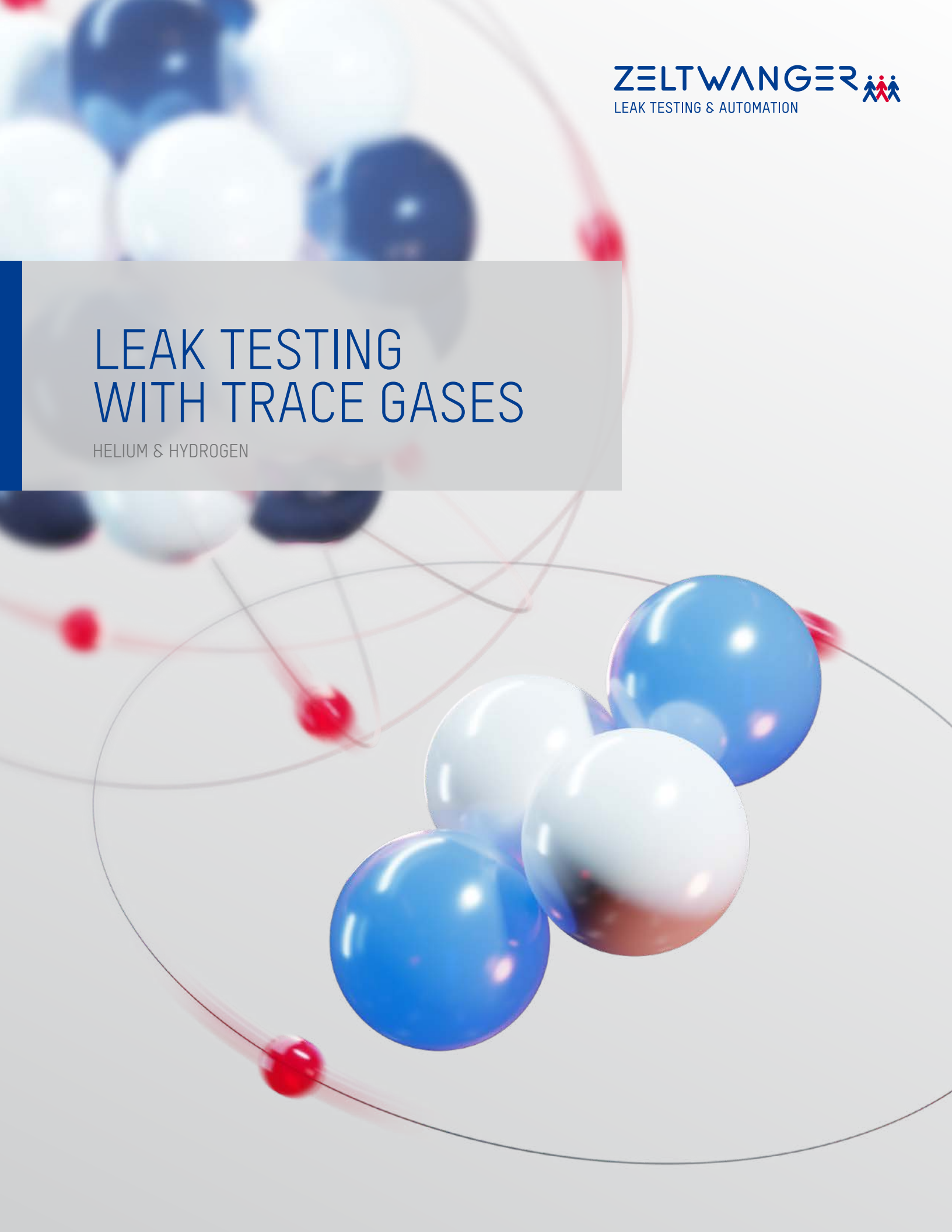


# LEAK TESTING WITH TRACE GASES

HELIUM & HYDROGEN



## LEAK TESTING WITH HELIUM

Non-toxic, odorless, and easily detectable – the inert gas helium offers numerous advantages. It occurs only in low concentrations in atmospheric air and does not react with other materials. This enables quick testing and finding even the smallest leaks.

### Air

- Low cost of testing
- Also for large leaks
- Easier implementation of testing systems

### Available modules

- RD** Gauge pressure
- RD/GP** Gauge pressure with bell testing
- RD/DF** Gauge pressure with flow
- DD** Differential pressure
- SD** Stagnation pressure
- MF** Mass flow

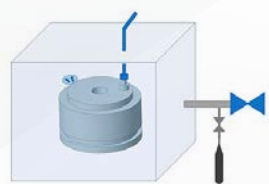
### Helium

- Low occurrence in environment
- Smaller leak rates measurable
- Unaffected by temperature and volume changes

### Available modules

- IV** Integral vacuum test
- SP** Sniff test
- AK** Accumulation test

## MODULES FOR LEAK TESTING WITH TRACE GASES



### INTEGRAL VACUUM TEST

Application: in production environments

The test item is placed in a vacuum test chamber and filled with test gas. If there is a leak, the test gas will be leaking out of the test item into the test chamber where it is measured by the leak detector.

- + Very high sensitivity
- + High throughput
- + Easy to integrate into the production line
- + Easy to calibrate
- + High repeatability

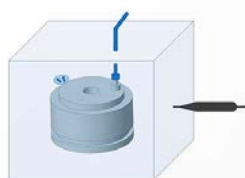


### SNIFFING TEST

Application: for leak localization of pressurized parts

The test item is pressurized with test gas. Then the sniffer probe is placed around the part. If there is a leak, the leak detector will detect the escaping test gas and determine the location of the leak.

- + Localization of the leak
- + The test object does not need to be emptied in most cases – or at least not entirely.
- + Easy to perform

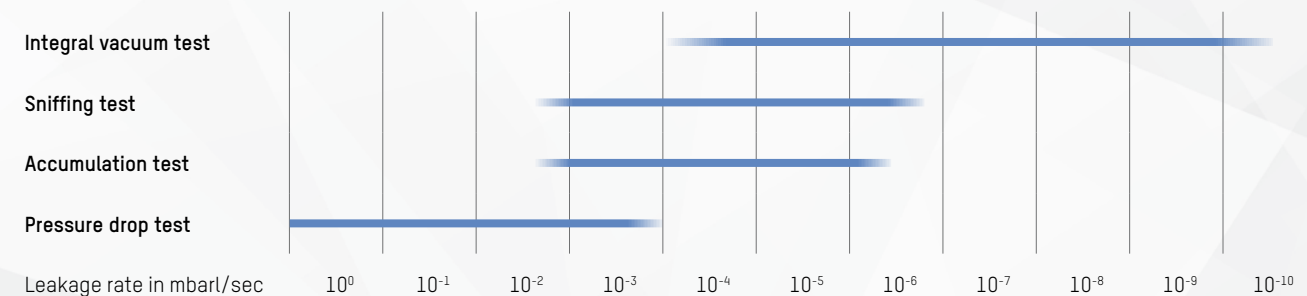


### ACCUMULATION TEST

Application: The test item must be tested as a complete product.

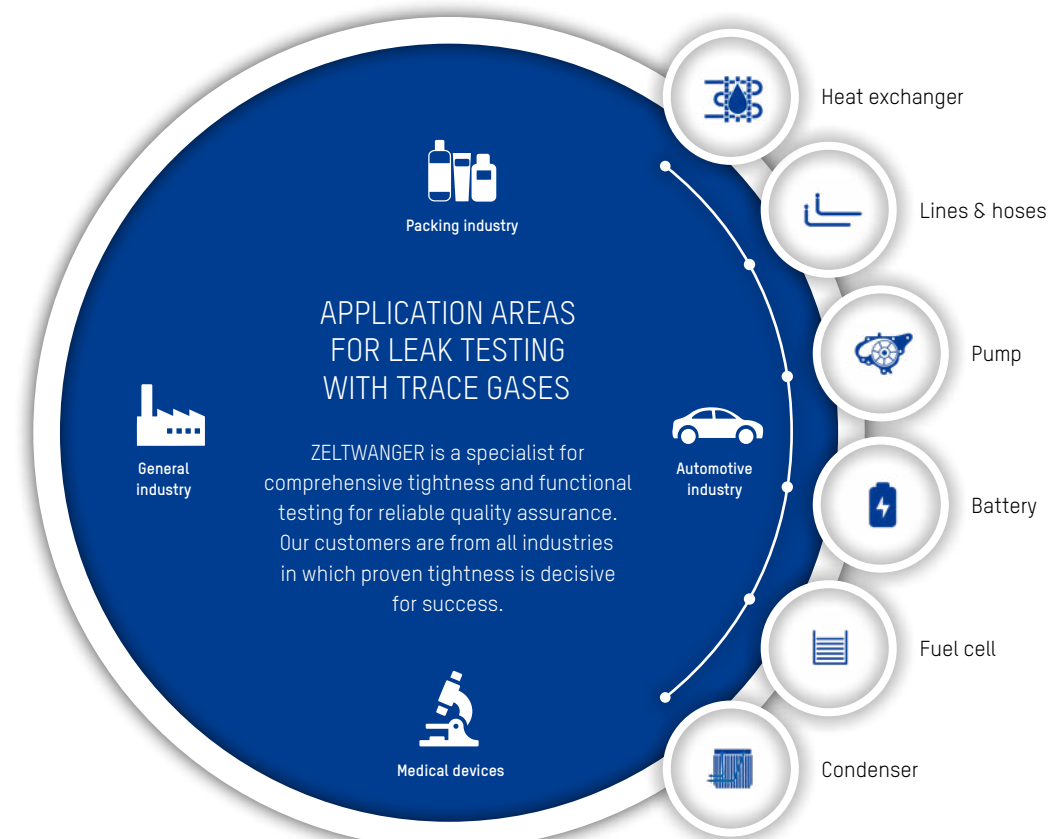
The test item is placed into a simple collection chamber under atmospheric pressure and filled with test gas. After an accumulation period, the detector analyzes the air in the chamber and determines whether an increase in the test gas concentration is measurable.

- + Easy to integrate into the production line



## MORE SAFETY FOR THE TECHNOLOGIES OF THE FUTURE

For many products, tightness is paramount for their functionality and reliability. ZELTWANGER has made it its business to develop customized, comprehensive, and demand-oriented leak testing concepts for its customers. Take advantage of our expertise from a single source: from the test concept to final assembly.



**X-CELL:** Maximum flexibility at the highest technical level – for assembly, robotics, leak testing, and laser applications

**ZEDsystem:** Individually configurable sliding carriage system for leak testing (additional processes can also be integrated)

# AUTOMATION AND LEAK TESTING OVERVIEW

## AUTOMATION

ZELTWANGER offers intelligent assembly and testing concepts based on standardized processes and architectures. We cover all areas of expertise: analysis, consulting, custom developments, software, and process integration.

Our work focuses on three areas: leak testing systems, assembly and functional testing systems, and the X-CELL. The latter involves a standardized processing cell designed for core processes, such as leak testing, laser welding, laser engraving and handling that can be individually extended.

## LEAK TESTING

With ZELTWANGER, leak testing has a system. Because successful leak and functional testing requires not only optimal equipment, but a perfectly tuned overall system.

As a leader in technology and innovation for air-based leak testing as well as high-end testing devices, we offer comprehensive solutions for analysis, adaptation, automation, services, and knowledge transfer.



**ZELTWANGER Leak Testing  
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