

ALD 404

Portable Helium Leak Detector

artin ALD404

Helium Leak Detector Mass Spectrometer

A helium leak detector is a very accurate device for finding and measuring leaks in closed systems.
This device is usually based on a mass spectrometer and can detect very small amounts (5*E-12 mbar .l/s) of helium gas escaping from a container or pipeline.

Advantages

Very high sensitivity	Detection of the smallest leaks that cannot be detected by conventional methods.
High speed	Ability to quickly check several points in a short time.
Selective detection	Only helium is detected, thus eliminating the effects of other gases.
Determination of the location and extent of the leak	Useful for both immediate repairs and quality control.

Applications

Medical and sensitive equipment	Imaging equipment, MRI medical gas tanks
Oil, gas and petrochemical	Testing pipelines, heat exchangers and pressure equipment
Military and aerospace industries	Testing fuel tanks, oxygen tanks, and pressure control systems
High vacuum industries	Particle accelerators, nuclear physics research systems, Semiconductor chip manufacturing



Vacuum Chamber



Linear Accelerator

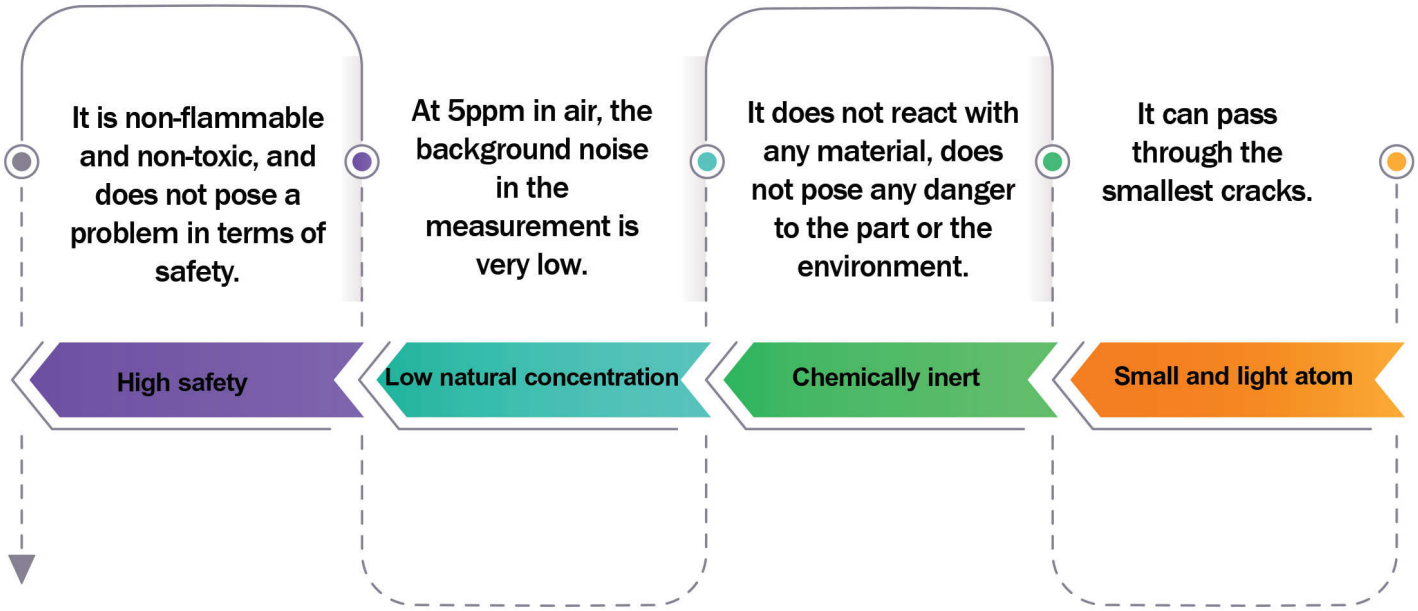


Physical Vapor Deposition

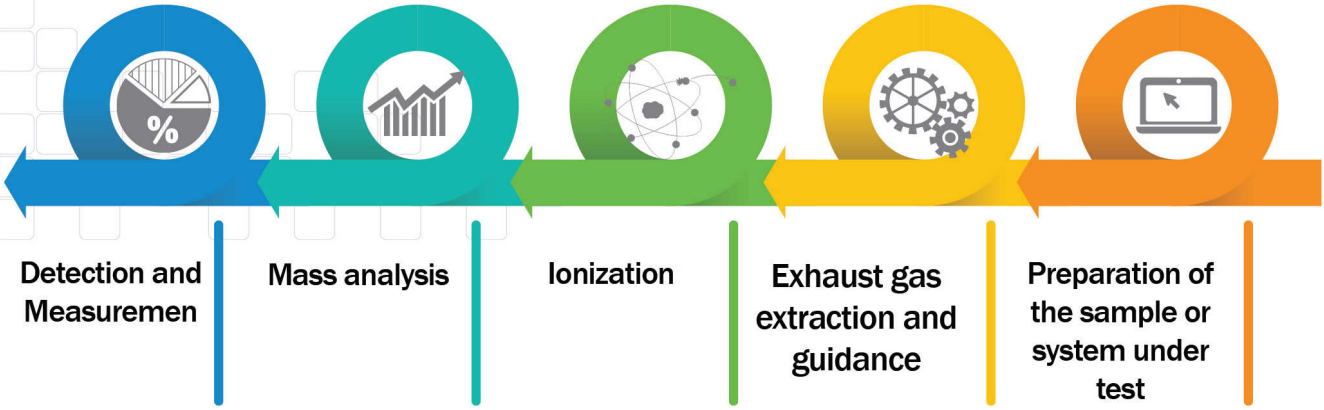


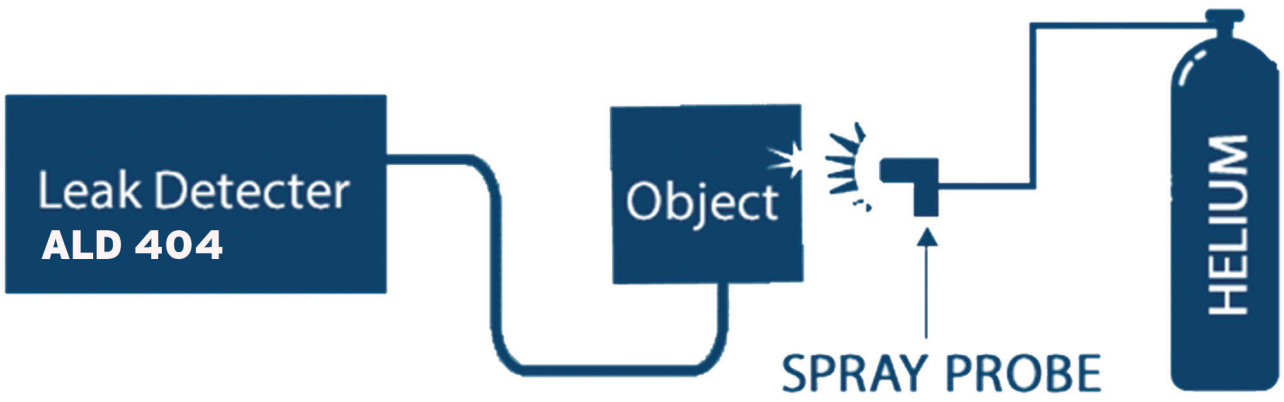
Analytical Instruments and Research

Helium: The Ideal Tracer for Safe and Precise Leak Detection

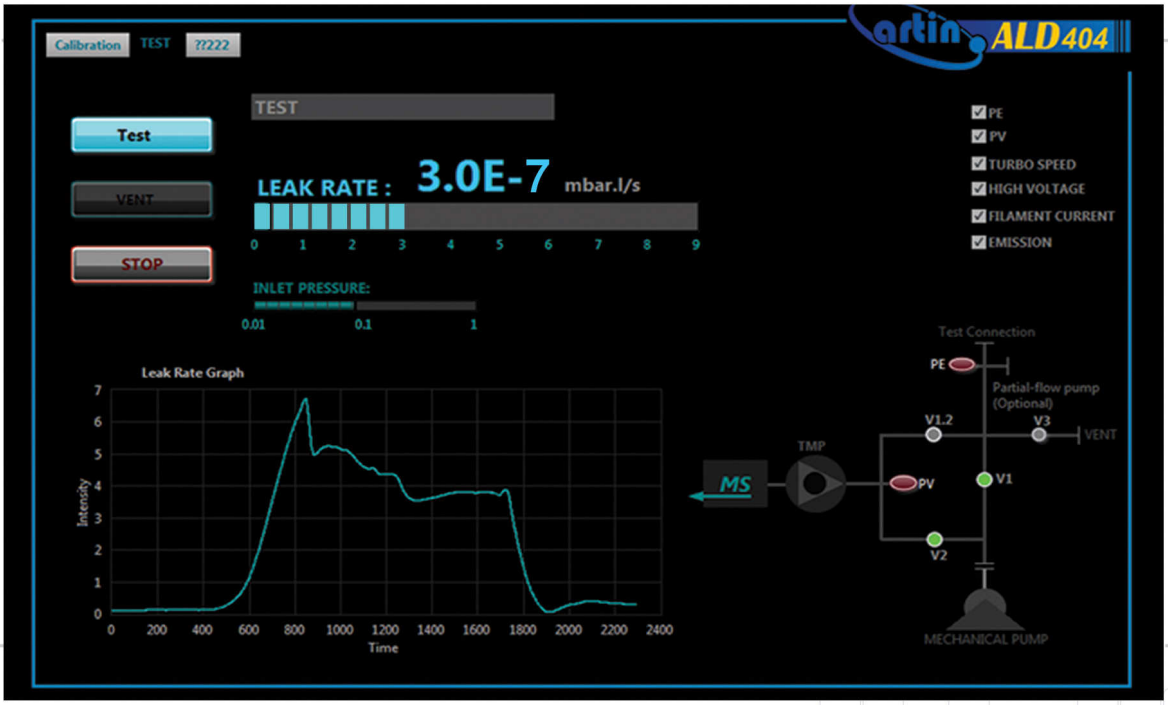


Principles





User-Friendly Interface for Precision Leak Detection



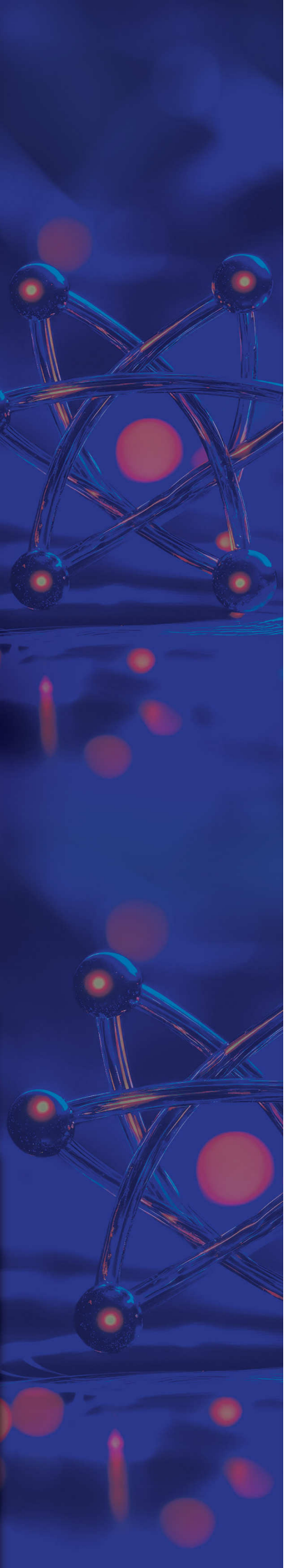


- High accuracy in helium leak calibration
- Easy-to-use, engineered user interface
- High sensitivity real-time leak rate display (numerical and graphical leak rate over time , suitable for UHV applications and precise leak testing in advanced equipment)
- Real-time monitoring of key system components
- Precise calibration and automatic zero adjustment to achieve the highest sensitivity in leak measuremen

Technical Data

Portable Helium Leak Detector	ALD 404
Test methods	Vacuum leak detection
Minimum detectable leak rate for He (vacuum lead detection)	5.10^{-11} mbar l/s
Tracer gases	^4He, ^3He, H_2
Maximum inlet test pressure	15 mbar
Roughing capacity	36 m^3/h
Pumping speed for He at inlet	4 l/s
inlet port	DN 25 ISO-KF
Time until for ready for operation	<3min
Operating temperature (hard vacuum test)	Customised, 0 to 35 °C
interface	USB
Dimensions	350*40*35 mm
Weight	30 kg
Unversal voltage	100-240 V AC - 50/60 Hz
Helium background suppression	Auto
Selectable languages	Persian, Arabic, English

The ALD404 Helium Leak Detector, featuring industrial-grade design and exceptional precision, is ideal for vacuum testing in advanced industries. The table above provides detailed technical specifications of this product for expert evaluation.



Artin Instruments Co.

Artin Instruments Co. is a technology-driven company specializing in the design and development of helium leak detector mass spectrometers. Backed by a team of seasoned experts and innovative engineering solutions, we are committed to continuous growth and technical excellence.

By integrating cutting-edge global technologies, we deliver high-precision, high-sensitivity systems tailored to meet the diverse needs of our clients. Our approach ensures that every project is executed with maximum accuracy and reliability.

We believe that true collaboration goes beyond delivering a product. That's why we offer comprehensive technical support and expert consulting—guiding our clients through every stage, from concept and design to implementation and operation.

Combining deep technical knowledge, hands-on experience, and an unwavering commitment to quality, Artin Instruments has become a trusted partner for organizations seeking advanced, long-lasting solutions in precision instrumentation.

www.artin-instruments.ir

+98 9380809091

+98 9360122337