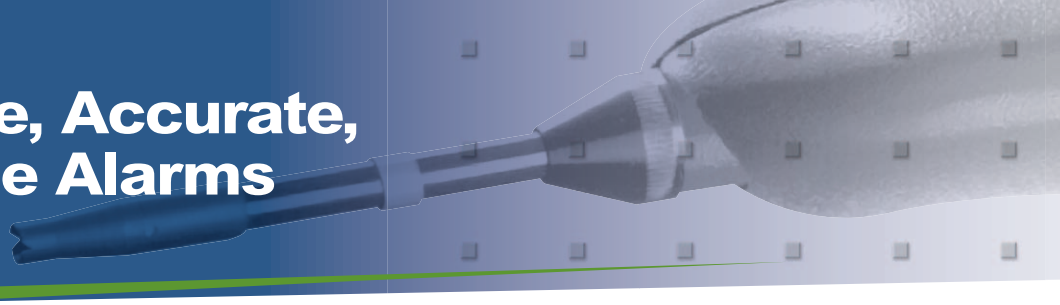
INFICON

HLD5000

Refrigerant Leak Detector

WE'VE CUT FALSE ALARMS AND THE COST OF OWNERSHIP

Fast, Reliable, Accurate, Minimal False Alarms



The HLD5000 finds leaks quickly and easily with greatly reduced false alarms making it the new standard for halogen leak detectors. Designed to detect all halogen-based refrigerants as well as SF_6 or CO_2, the HLD5000 combines a long-life IR sensor with a unique dual-inlet sampling system to effectively cancel any background contaminants that can lead to false alarms.

FEATURES AT A GLANCE

Fast and Easy to Use

- Fewer false alarms means less time wasted looking for nonexistent leaks.
- Audible alarm and LED in the probe handle provide confirmation of a leak.
- Variable pitch alarm helps locate leak sites quickly.
- The built-in COOL-Check reference leak provides convenient and fast calibration.
- Reliable and repeatable results are guaranteed through a simplified calibration system.
- RS232 interface allows for capture of quality data and easy integration into test systems.

Lower Cost of Ownership

- The unique infrared absorption sensor does not wear out.
- The sniffer probe is designed to survive the abuses of the manufacturing environment.
- The simple and robust pump provides years of trouble-free sniffing.
- The Automatic Standby reduces mechanical wear and stops the needless intake of contaminants into the sniffer probe, when it sits idle for a programmed time period. Operation automatically resumes, as soon as the operator picks up the probe handle.

The HLD5000 can be outfitted to meet your production needs through the use of specially-tuned, single gas probes or a universal probe for all halogen-based refrigerants.

TROUBLE-FREE, WORRY-FREE OPERATION

The HLD5000 is designed to offer maximum convenience and confidence to the user.

MINIMIZED FALSE ALARMS FOR MAXIMIZED EFFICIENCY

False alarms hurt productivity, because the operator wastes time looking for non-existent leaks. To dramatically reduce this wasted time, the sensor was completely redesigned. The result is an innovative sensor and sampling system that is unlike any other.

Sensor

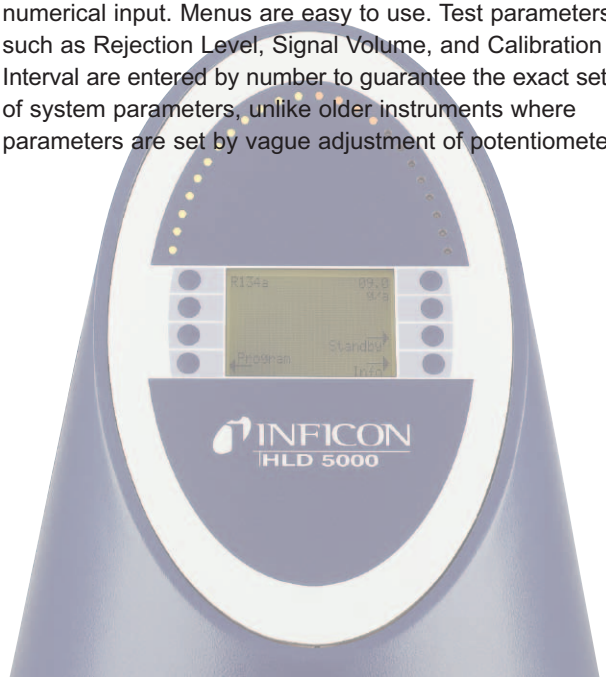
The HLD5000 uses a specially-tuned IR sensor that selectively detects halogens, SF_6, or CO_2, while being non-reactive to other potential sources of false alarms such as water, cleaning solution, perfume, deodorant, and cigarette smoke.

Sampling System

The sampling system is based on our exclusive dual inlet technology, so the concentration of gas at the probe tip is constantly compared to the concentration in the surrounding atmosphere. This eliminates false alarms due to background levels of these gases.

EASY AND PRECISE SYSTEM SET-UP

All programming is done via the front panel with direct alpha-numerical input. Menus are easy to use. Test parameters such as Rejection Level, Signal Volume, and Calibration Interval are entered by number to guarantee the exact setting of system parameters, unlike older instruments where parameters are set by vague adjustment of potentiometers.



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LEAK RATE DISPLAY AND REJECTION INDICATION

A half-circle of lamps on the front-panel display responds like a bar graph to show the relative leak rate level. A speaker alarms when the leak rate is exceeded and provides a variable pitch tone for leak location. An LED on the probe handle changes color to provide additional confirmation when the leak rate trigger level is exceeded.

ADDITIONAL CONVENIENCE FEATURES

With the press of a button on the probe handle, you can immediately switch the unit to its maximum sensitivity to isolate the smallest leaks. And with extensive self-monitoring features incorporated into the design, the HLD5000 immediately detects any malfunctions of the unit and provides a warning to the operator.

INTELLIGENT CALIBRATION

The built-in COOL-Check reference leak allows fast and easy verification of the calibration status of the unit and provides for immediate recalibration when necessary. To ensure accuracy, the calibrated leak contains unique electronics that correct for leak rate changes caused by temperature fluctuations. It also monitors the lifetime of the calibrated leak and provides warning when it needs to be replaced.

MULTIPLE GAS DETECTION OPTIONS

The HLD5000 features a universal base unit that can be used with a number of different probes to meet your leak detection needs. Single gas probes tuned to a specific gas enable you to selectively search for leaks. Available in R134a, R600a, R290, R744 (CO_2) and SF_6, the HLD5000 can be set-up to detect any one of these gases by simply attaching the appropriate probe to the base unit. The universal Smart Probe can detect any halogen-based refrigerant, and switching between gases can be done easily through the “soft keys” on the user interface.

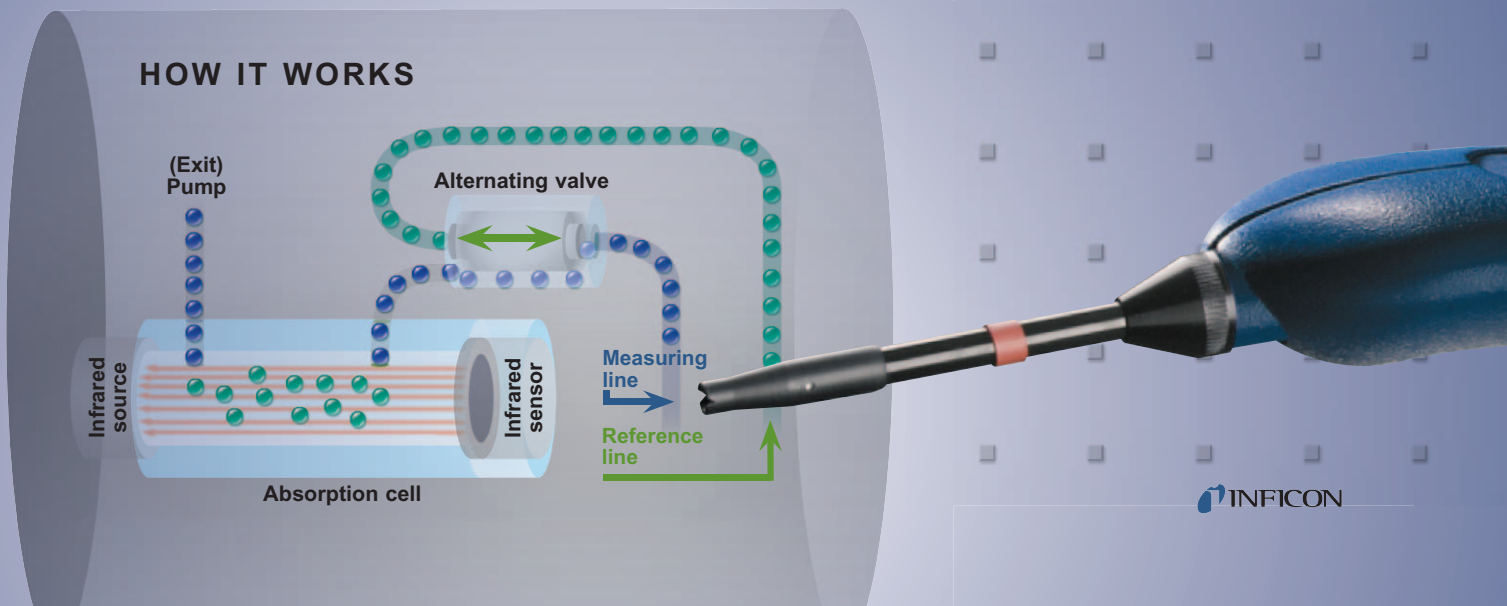
THE HLD5000 COSTS LESS TO OPERATE

There is more to the cost of owning a leak detector than just the purchase price. To lower the total cost of ownership, the HLD5000 uses an infrared absorption sensor that has no consumable parts. All components and materials in the HLD5000 were selected to provide trouble-free operation in the manufacturing environment. The few components that are consumables, such as the filters and built-in COOL-Check reference leak, are inexpensive and easy to replace. With its unique sensor and durable components, the HLD5000 delivers consistent and reliable low-cost performance.

The HLD5000 is a superior method to find leaks in less time and with less uncertainty, while providing a low cost of ownership.

BASIC OPERATING PRINCIPLE

The gas samples are drawn from a switching valve into an absorption cell. Infrared light is directed through the cell. When refrigerant is present in the flow, the sensor absorbs some of the infrared light and this amplitude drop is detected. INFICON is the only company to use this unique patented sensor and sampling system in a refrigerant leak detector.



SPECIFICATIONS

Detectable refrigerant	single gas probe universal Smart Probe	R134a; R600a; R290; R744 (CO_2) all halogen-based refrigerants; SF_6
Minimum detectable leak rate	single gas probe universal Smart Probe	1 g/a (0.03 oz/yr) 0.5 g/a (0.014 oz/yr)
Measuring scale	single gas probe universal Smart Probe	0 - 100 g/a (3.57 oz/yr) 0 - 300 g/a (10.7 oz/yr)
Response time		< 1 s
Leak rate units		g/a; mbar l/s; oz/yr; lb/yr; Pa m^3/s
Warm-up time		30 s
Dimensions (diameter; height)		260 mm (10.25 in.); 365 mm (14.4 in.)
Weight		4.5 kg (10 lb.)
Length of sniffer line		4.8 m (15.5 ft.)
Standard sniffer tip length		100 mm (3.9 in.)
Gas flow		320 sccm
Ambient temperature range		5 - 50°C (40 - 120°F)

ORDERING INFORMATION

HLD5000		
includes complete sniffer probe (4.8 m / 15.5 ft)		Cat.-No.
with standard sniffer tip (100 mm / 3.9 in.)	R134a	510-010
	R744 (CO_2) *	510-015
and COOL-Check reference leak	Universal Smart probe	510-017
	R600a, R290	510-018
Additional sniffer probes sold separately	R134a	511-030
	R744 (CO_2)	511-035
	Universal Smart probe	511-037
	R600a, R290	511-038
Options, Accessories		
Sniffer tip, 100 mm (3.9 in.)		511-021
Sniffer tip, 400 mm (15 in.)		511-024
Sniffer tip, 400 mm (15 in.), prebent to half circle		511-022
Extension, 400 mm (15.7 in.) for sniffer tip		511-020
Extension, 500 mm (19.7 in.) for sniffer tip, 45° offset		511-029
Water protection tip		511-025
Extension for probe cable, 4.8m (15.5 ft)		511-040
Adapter for R744 (CO_2) calibration[1]		511-042
External test leak R600a	(2 - 5 g/a)	122 21
External test leak R290	(2 - 5 g/a)	122 31
External test leak R744(CO_2)	(2 - 5 g/a)	122 32
External test leak R600a	(10 - 14 g/a)	122 41
Consumables		
Set of tip filter holders (20 pcs.)		511-027
Set of filter cartridges (20 pcs.)		511-018
Replacement COOL-Check reference leak [2]		511-010

* Without COOL-Check.
[1] Included in delivery of HLD5000 for CO_2 (511-015).
[2] Limited shelf life, purchase only when needed.

INFICON Instruments for Intelligent Control®

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