



"Your Direct Source for Condition Monitoring, Test & Measurement"

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D-TEK™ CO₂



Refrigerant Leak Detector



PROVIDES CONSISTENT, ACCURATE RESPONSES TO NEXT GENERATION REFRIGERANT

As the first accurate, reliable, highly sensitive, cordless refrigerant leak detector, the original D-TEK revolutionized the field. Now we have built on that technology leadership with the D-TEK CO₂, the *only* hand-held refrigerant leak detector designed especially to detect carbon dioxide (R744), the next generation refrigerant.

HIGHLY SENSITIVE, LONGER LASTING

The D-TEK CO₂ uses an innovative infrared absorption sensing cell which is extremely selective to carbon dioxide, yet its circuitry allows the instrument to equalize to the CO₂ present in the atmosphere, so there is minimal risk of false alarms. D-TEK CO₂ maintains its sensitivity over time for consistent, accurate and reliable performance. Its specialized infrared sensor cell lasts for approximately 800 hours, so you buy fewer replacement parts.

Additional features include a charging status indicator, sensor failure indication, sensor test mode and rechargeable NiMH (nickel metal hydride) batteries.

FEATURES AT A GLANCE

- 6 g/a sensitivity
- low risk of false alarms because it equalizes to the CO₂ present in the air
- 800-hour infrared cell life for low cost of ownership
- consistent and accurate response because the infrared cell does not weaken over time
- will not react to smoke, humidity, airflow or temperature changes
- quick response and quick clearing ("zeroing") from high-efficiency air sampling pump
- on-board diagnostics indicate charging status and warn of low battery or infrared cell failure
- NiMH power stick won't corrode and provides greater charging capacity
- hard plastic case, NiMH power stick, 12V and AC adapter/recharger, tip filters and infrared cell included

HOW IT WORKS

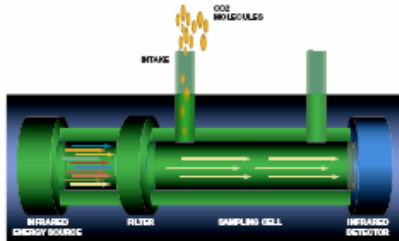
At the heart of the D-TEK CO₂ Refrigerant Leak Detector is an infrared absorption filterometer. It consists of a sampling cell with an infrared source (or emitter) at one end, an infrared energy detector at the other end, and an optical filter in between them.

Like the visible light we see, infrared energy is part of the electromagnetic energy spectrum. Most materials absorb specific and known wavelengths of infrared energy. The particular wavelengths of energy absorbed by a material are known as its absorption spectra. Carbon dioxide has its own unique absorption spectrum.

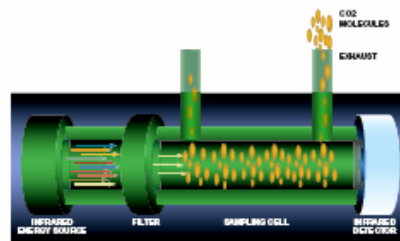
The infrared source (emitter) creates a high-intensity stream of energy incorporating all wavelengths in the infrared spectrum.

The stream passes through the optical filter, which blocks all wavelengths except those that CO₂ absorbs. The filtered infrared energy strikes the detector and causes it to heat up. When CO₂ is drawn through the sampling cell by the D-TEK CO₂'s internal pump, some of the infrared energy is absorbed by the CO₂. This causes a decrease in the amount of infrared energy reaching the detector and a corresponding drop in the detector's temperature, which triggers the D-TEK CO₂ to alarm. This whole process takes a fraction of a second.

By utilizing an optical filter with precise characteristics, INFICON has made D-TEK CO₂ sensitive to CO₂ while minimizing false alarms. In addition, the detector recovery time is also immediate after the CO₂ clears the cell.



The filtered infrared energy passes through the sampling cell, striking the infrared detector. D-TEK CO₂ is ready to sense any CO₂.



Filtered infrared energy is absorbed by the CO₂ present in the sampling cell, causing D-TEK CO₂ to alarm.

SPECIFICATIONS

Min. sensitivity to CO ₂ (R744)	6 g/a
Controls	Power: on/off, sensitivity: high/low
Weight with power stick	1.19 lb (.54 kg)
Power	NIMH power stick for 6.5 hours of continuous operation
Charging options	AC adapter with 6 ft cord (1.83 m) 12V adapter with cigarette lighter plug
Probe length	17" (43.18 cm)
Recharger	Built-in
Operating temperature range	32° F to 122° F (0° C to 50° C)
Storage temperature range	14° F to 140° F (-10° C to 60° C)
Case material	Self-extinguishing per UL94HB
Certifications	CE Marking Power Safety and EMC
Warranty	2-year replacement

ORDERING INFORMATION

716-202-G1	120V model
716-202-G6	220/230V model
032-404	Headphones
Replacement Parts:	
703-055-P1	12V power cord with cigarette lighter plug
033-0019	120V adapter and cord
033-0020	220/230V adapter and cord
712-700-G1	NIMH power stick (battery)
716-701-G1	Infrared cell for CO ₂
712-707-G1	Filter cartridges
712-705-G1	Filter cap
716-702-G1	Hard storage case

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