

# 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, the next-generation refrigerant.

### HIGHLY SENSITIVE, LONGER LASTING

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 1,000 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

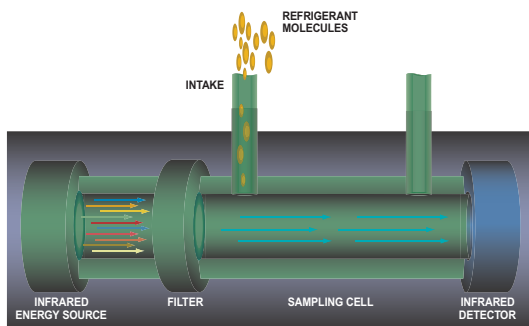
- 6 g/a sensitivity
- low risk of false alarms because it equalizes to the CO2 present in the air
- 1,000-hour infrared cell life for low cost of ownership
- consistent and accurate response because the infrared cell does not weaken over time
- will not react to smoke, humidity, airflow or temperature 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 CO<sub>2</sub> 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.

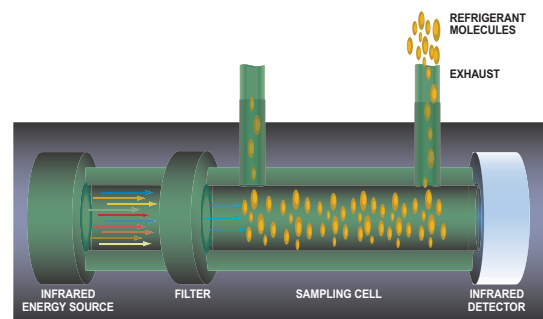
The infrared source (emitter) creates a high-intensity stream of energy incorporating all wavelengths in the infrared spectrum.



The filtered infrared energy passes through the sampling cell, striking the infrared detector. D-TEK CO<sub>2</sub> is ready to sense any CO<sub>2</sub>.

The stream passes through the optical filter, which blocks all wavelengths except those that CO<sub>2</sub> absorbs. The filtered infrared energy strikes the detector and causes it to heat up. When CO<sub>2</sub> is drawn through the sampling cell by the D-TEK CO<sub>2</sub>'s internal pump, some of the infrared energy is absorbed by the CO<sub>2</sub>. 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 CO<sub>2</sub> to alarm. This whole process takes a fraction of a second.

By utilizing an optical filter with precise characteristics, INFICON has made D-TEK CO<sub>2</sub> sensitive to CO<sub>2</sub> while minimizing false alarms. In addition, the detector recovery time is also immediate after the CO<sub>2</sub> clears the cell.



Filtered infrared energy is absorbed by the CO<sub>2</sub> present in the sampling cell, causing D-TEK CO<sub>2</sub> to alarm.

## SPECIFICATIONS

Minimum sensitivity to CO <sub>2</sub>	6 g/a
Controls	Power: on/off, sensitivity: high/low
Weight (with power stick)	1.19 lb (.054 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)
Certifications	CE Marking Power Safety and EMC
Warranty	2-year replacement

## ORDERING INFORMATION

716-202-G1	120V model
716-202-G6	220V model
032-0404	Headphones

### Replacement Parts:

703-055-P1	12V power cord with cigarette lighter plug
033-0019-G1	120V adapter and cord
033-0020-G1	220V adapter and cord
712-700-G1	NiMH power stick (battery)
716-701-G1	Infrared cell for CO <sub>2</sub>
712-707-G1	Filter cartridges
712-705-G1	Filter cap
716-702-G1	Hard storage case



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Due to our continuing program of product improvements, specifications are subject to change without notice.

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