D-Tek CO_2

CO2 Refrigerant Leak Detector

A handheld detector to provide consistent, reliable & accurate detection of CO2. The D-TEK CO2, is a hand-held refrigerant leak detector designed especially to pinpoint the source of the leak.

The D-TEK CO2 uses an innovative infrared absorption sensing cell which is extremely selective to carbon dioxide, yet it's 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 1000 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.

Specification	
Minimum sensitivity to CO2 (R744):	6 grams / annum.
Controls:	Power: on/off, Sensitivity: high/low.
Weight with power stick:	0.54kg.
Power:	NiMH power stick for 6.5 hours of operation.
Charging options:	AC adapter with 1.83m cord 12V adaptor with cigarette lighter plug.
Probe Length:	43cm.
Recharger:	Built In.
Operating temperature range:	0°C to 50°C
Storage temperature range:	-10°C to 60°C
Case Material:	Self-extinguishing per UL94HB.
Certifications:	CE marking power safety and EMC.

Features at a glance

- 6 grams / annum sensitivity.
- Low risk of false alarms because it equalizes to the CO2 present in the air.
- 1000-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 change.
- 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.

CPC (UK) Unit 3, Beta Way, Thorpe Industrial Estate, Egham, Surrey, TW20 8RE, England
Telephone: +44(0) 1784 222 110 Fax: +44(0) 1784 222 119 web: www.cpcuk.co.uk email: cpc.sales@cpcuk.co.uk

D-Tek CO_2

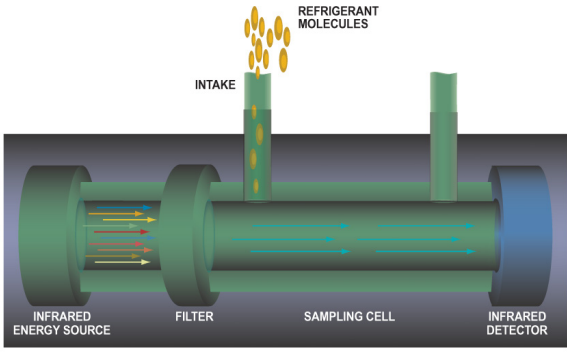
Issue: 08/12

Technical Overview

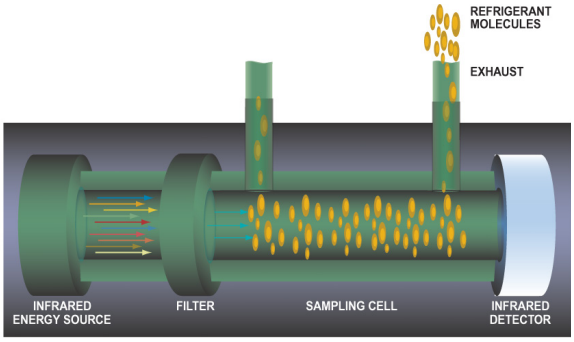
At the heart of the D-TEK CO2 Refrigerant Leak Detector is an infrared absorption filtometer. It consists of a sampling cell with an infrared source (or emitter) at one end, an infrared energy detector at the other end, and an optical filter in between them.

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 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.

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.

D-Tek CO2 / Accessories	
712-202-G5	Standard 230V model.
032-404	Headphones.

Replacement Parts	
703-055-P1	12V power cord with cigarette lighter plug.
033-0020	220/230V adapter and cord.
712-700-G1	NiMH power stick (battery).
716-701-G1	Infrared cell for CO2.
712-707-G1	Filter cartridges.
712-705-G1	Filter cap.
716-702-G1	Hard storage case.

CPC (UK) Unit 3, Beta Way, Thorpe Industrial Estate, Egham, Surrey, TW20 8RE, England
Telephone: +44(0) 1784 222 110 Fax: +44(0) 1784 222 119 web: www.cpcuk.co.uk email: cpc.sales@cpcuk.co.uk