Q 200

ULTRA HIGH SENSITIVITY TRACE GAS LEAK DETECTOR

For R&D and Testing of Laboratory Fume Hoods

The high specification Q200 is the ultimate in instrumentation for high sensitivity trace gas leak detection and is designed to locate and quantify leaks in the development and testing of fume hoods..

- Portable and easy to use
- Responds to SF6,
- Fast response and recovery
- Locates exact position of leaks
- Quantifies the leak rate
- Displays leak rate or concentration
- RS232 serial interface for connection to data logger.
- 0-2 volt analogue output
- User adjustable audible alarm level
- Measurement store facility
- Simple user calibration procedure
- In-built fault diagnosis

The Q200 is a portable instrument, comprising a carrying case containing the power supply and electronics, a small cylinder of compressed argon gas, and the main display panel. The detector is mounted in a hand held probe, attached to the main unit by means of a 3.5 meter umbilical connection. A display panel is mounted in the hand probe to enable the operator to monitor measurements even when working in difficult locations.



The Q200 with optional calibration kit.

The instrument is extremely easy to use, and provides highly accurate leak rate measurements. The response is almost instantaneous and the detector recovers quickly, even after exposure to high concentrations of trace gas.

Where products are manufactured or maintained to a high leak tight specification the Q200 is an invaluable aid in ensuring quality.

Q200 facilities

- Adjustable audible alarm, activated when user set leak rate is exceeded
- Factory calibrated for SF6
- Simple user recalibration as required by ASHRAE 110 - 2016
- Diagnostic menu helps identify fault conditions

Highest performance

The trace gas technique involves pressurising the test component with a gas which is then detected as it escapes through any leak. Using an optimum combination of trace gas and detector, extremely small leaks can be identified and measured.

The QUALICHEK 200 is equipped with one of the most sensitive gas detection systems ever developed, the Electron Capture Detector (ECD) which is highly selective, responding only to compounds that exhibit a high affinity for electrons.

Ideally a tracer gas for leak detection should be:

- inert, non-toxic and non-corrosive
- not normally present in the atmosphere
- readily available
- detectable at very low concentrations

Sulphur hexafluoride (SF_6) satisfies these requirements and, due to its strong electron capture character, can be detected in extremely low concentrations using an ECD. For these reasons SF6 and the ECD are the ideal combination for these applications.

Wide Range of Uses

The Q200 has been used for process and quality assurance on a broad range of products which include

- Fume hoods/cupboard and glove box containment checks (Method ASHRAE 110- 2016 and EN 14175
- Building Re-Entrainment
- Checking hazardous materials storage vessels
- Building ventilation rate studies

In the development of Containment devices, only the Q200 offers the level of precision and responsiveness needed to verify the details of a high performance product.



ACCESSORIES

Standard Leak Kits

These consist of a 600 mL cylinder containing pressurised SF_6 (or a mixture of SF_6 in N_2), fitted with a pressure gauge and an outlet restrictor manufactured to provide the required leak rate. Standard leaks ranging from 1 x 10^{-6} to 1 x 10^{-4} mL/s are used for calibrating and checking the instrument, and are certified to traceable National Standards.

SPECIFICATION

Detection Limits

Leakrate:	1 x 10-8 mL/s SF6 1 x 10-10 mL/s SF6)
Sensivity:	0.01 ppm
Size:	Case: 43 x 40 x 23 cms (17"x 16"x 9")
Weight:	Hand Held Probe: 0.9 Kgs (2.lbs) Total Unit Weight 16 Kgs (35 lbs)
Operating time on battery	Approxmately. 20 hours
Response Time	1 second 85% of reading

Radioactive Source: 10 mC Ni63 (370 MBq)

Due to a program of Continious Improvement, specification may change without notice

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