

# GASCHECK G4 GAS LEAK DETECTOR

[edwardsvacuum.com](http://edwardsvacuum.com)

**The GasCheck G4 features an improved Micro Thermal Conductivity sensor for enhanced sensitivity and piezo disc pump for increased reliability.**

At the heart of the instrument is a sensor which can detect any gas with a different thermal conductivity to that of air. Leaks can be located and the gas leak rate can be displayed in a choice of convenient units.

Data logging is now possible over a long period of time (up to 10 days continuous) meaning less back and forth to download data. With the G4, you get a lightweight carry case which holds all the key accessories (delivered as standard) and it also protects the unit during transit.



direct display of gas leak rate



Large LCD colour display



10 days of data logging



## Features and benefits

- Detect leaks with automatic and direct display of gas leak rate
- Large LCD colour display with intuitive control and value displays
- Choice of readings in cc/sec, mg/m<sup>3</sup>h<sup>-1</sup> or ppm, g/yr and %vol
- Rapidly detects almost any known gas – particularly sensitive to ammonia, argon, butane, helium, xenon
- Data-logging facility – 10 days of continuous logging
- Ergonomically designed for portable one handed operation- IP44 protection, ruggedised design, rechargeable Li-ion battery (up to 20 hours) and lightweight

## Typical applications

- Leak detection of new installations & serviced equipment
- Leak detection of welds, joints, seams and gaskets on components that are pressurised with a traceable gas such as helium or carbon dioxide
- Leak testing refrigeration plants
- Leak check on cylinders and aerosols
- Used in mass spectrometry and gas chromatography
- Leak detection in environments with a high magnetic stray field



## Technical data

|                         |                                                               |
|-------------------------|---------------------------------------------------------------|
| Detector                | Micro thermal conductivity detector (MTCD)                    |
| Battery type            | Rechargeable Li-ion battery                                   |
| Battery life            | 20 hours                                                      |
| Audible alarm           | ≥90 dBA at 10 cm at 50 % relative humidity (room temperature) |
| Factory calibration     | 5000 ppm helium (±5%)<br>Leak: 0.0005 cc/sec (±5%)            |
| Data logging            | 10 days continuous                                            |
| Response (T90)          | 1 second                                                      |
| Flow rate               | 2 cc/s                                                        |
| Ingress protection      | IP44                                                          |
| Temperature             | Operating: 0°C to 50°C                                        |
| Humidity                | 0 - 99% R.H                                                   |
| Weight                  | 447g (approx.)                                                |
| Dimensions - instrument | 320 x 80 x 55 mm (approx.)                                    |
| Dimensions - case       | 420 x 340 x 97 mm                                             |

## Ordering information

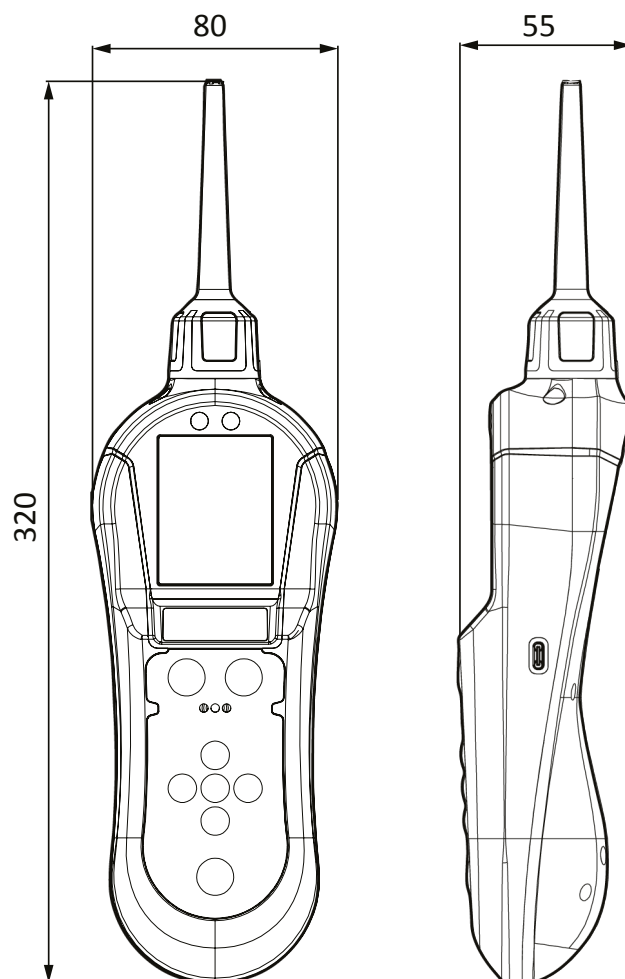
| Product description                                | Order no. |
|----------------------------------------------------|-----------|
| GasCheck G4 leak detector                          | D14135000 |
| Accessories and spares                             |           |
| Communications interface dongle                    | D14135500 |
| Flexible probe 200mm for GasCheck G4               | D14135501 |
| Probe sleeve (pack of 5)                           | D14135502 |
| Capillary probe - standard (10 mbar restriction)   | D14135503 |
| Nozzle                                             | D14135504 |
| Capillary probe - short (for 200mm flexible probe) | D14135505 |

## Smallest detectable leak levels

| Name                 | Abbreviation    | Response factor (He=1) | Minimum sensitivity cc/sec |
|----------------------|-----------------|------------------------|----------------------------|
| Hydrogen             | H <sub>2</sub>  | 0.648                  | 5.00E-6                    |
| Helium               | He              | 1.000                  | 3.20E-6                    |
| Sulphur hexafluoride | SF <sub>6</sub> | 1.448                  | 7.20E-6                    |
| Carbon dioxide       | CO <sub>2</sub> | 5.576                  | 2.80E-5                    |
| Methane              | CH <sub>4</sub> | 4.007                  | 2.00E-5                    |
| Argon                | Ar              | 6.599                  | 3.30E-5                    |
| Oxygen               | O <sub>2</sub>  | 22.582                 | 1.10E-4                    |
| Refrigerant          | R134a           | 2.88                   | 1.40E-5                    |
| Refrigerant          | R14             | 2.246                  | 1.10E-5                    |
| Gas Group 2B         | 2.5             |                        |                            |

For other gas types please contact Edwards for more information

## Dimensions



## GasCheck G GAS TABLE

| Gas name                       | Trade name | Formula                     | Molecular weight | Gas group |
|--------------------------------|------------|-----------------------------|------------------|-----------|
| Air                            |            |                             |                  |           |
| GAS GROUP 1                    |            |                             | 4                |           |
| GAS GROUP 2                    |            |                             | 120              |           |
| GAS GROUP 3                    |            |                             | 80               |           |
| GAS GROUP 4                    |            |                             | 50               |           |
| GAS GROUP 5                    |            |                             | 40               |           |
| Helium                         |            | He                          | 4                | 1         |
| Hydrogen                       |            | H2                          | 2.02             | 1         |
| Ammonia                        |            | NH3                         | 17.03            | 2         |
| Butane                         |            | C4H10                       | 58.12            | 2         |
| Krypton                        |            | Kr                          | 83.8             | 2         |
| Methane                        |            | CH4                         | 16.04            | 2         |
| Neon                           |            | Ne                          | 20.18            | 2         |
| Sulfur dioxide                 |            | SO2                         | 64.07            | 2         |
| Sulfur hexa fluoride           |            | SF6                         | 146.06           | 2         |
| Trichloromethane               |            | CHCl3                       | 119.38           | 2         |
| 1,1,2-Trichlorotrifluoroethane | R113       | C2Cl3F3                     | 187.37           | 2         |
| 1,2-Dichlorotetrafluoroethane  | R114       | C2Cl2F4                     | 170.92           | 2         |
| Dichlorodifluoromethane        | R12        | CCl2F2                      | 120.91           | 2         |
| Bromotrifluoromethane          | R1301      | CBrF3                       | 148.9            | 2         |
| Chlorodifluoromethane          | R22        | CHF2Cl                      | 86.47            | 2         |
| Refrigerant R502               | R502       | CHClF2, CCIF2HCF3           | 111.6            | 2         |
| Xenon                          |            | Xe                          | 131.29           | 2         |
| Acetone                        |            | C3H6O                       | 46.07            | 3         |
| Argon                          |            | Ar                          | 39.95            | 3         |
| Refrigerant R 404a             | R404a      | R125:143a:134a = 44:52:4    | 97.6             | 3         |
| Refrigerant R 407c             | R407c      | R134a: R125: R32 = 40:40:20 | 86.2             | 3         |
| Refrigerant R 410a             | R410a      | R125:R32 = 50:50            | 72.6             | 3         |
| Refrigerant R 507              | R507       | CF3CH3:CF3CHF2 = 50:50      | 104              | 3         |
| Refrigerant R 245FA            | R245FA     | CF3CH2CHF2                  | 134              | 3         |
| Boron trifluoride              |            | BF3                         | 67.81            | 3         |
| Carbon dioxide                 |            | CO2                         | 44.01            | 3         |
| Deuterium oxide                |            | D2O                         | 20.04            | 3         |
| Diethyl ether                  |            | C4H10O                      | 74.12            | 3         |
| Ethanol                        |            | C2H5OH                      | 46.07            | 3         |
| Hexane                         |            | C6H14                       | 86.17            | 3         |
| Hydrogen chloride              |            | HCL                         | 36.46            | 3         |
| Hydrogen sulphide              |            | H2S                         | 34.08            | 3         |
| Methanol                       |            | CH4O                        | 32.04            | 3         |
| Nitrous oxide                  |            | N2O                         | 44.01            | 3         |
| Pentane                        |            | C5H12                       | 72.15            | 3         |
| Perfluorocyclobutane           | C318       | C4F8                        | 200.03           | 3         |
| Tetra fluoromethane            | R14        | CF4                         | 88               | 3         |
| Trichlorofluoromethane         | R11        | CFCl3                       | 137.37           | 3         |
| Water                          |            | H2O                         | 18.02            | 3         |
| Acetylene                      |            | C2H2                        | 26.04            | 4         |
| Ethane                         |            | C2H6                        | 32.08            | 4         |
| Ethylene oxide                 |            | C2H4O                       | 54               | 4         |
| Ethylene                       |            | C2H4                        | 28.05            | 4         |
| Isobutane                      | R600a      | C4H10                       | 58.12            | 4         |
| Propane                        |            | C3H8                        | 44.09            | 4         |
| Tetrafluoroethane              | R134a      | C2H2F4                      | 102.03           | 4         |
| Carbon monoxide                |            | CO                          | 28.01            | 5         |
| Nitric oxide                   |            | NO                          | 30.01            | 5         |
| Nitrogen                       |            | N2                          | 28.01            | 5         |
| Oxygen                         |            | O2                          | 32               | 5         |

For indication only. If in doubt, please contact Edwards quoting chemical name, and CAS number

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