

Refrigerant Gas Detection Systems

EC Regulation No 842/2006

As part of the European Union's obligations under the Kyoto protocol, the community has taken action to regulate fluorinated gases under the new EC Regulation No.842/2006 which came into force in June 2006. This regulation places obligations on operators of refrigeration, air-conditioning and heat pump equipment to reduce emissions of fluorinated greenhouse gases used as refrigerants, through better containment and leakage prevention.

The main impact of the regulation is on systems containing 3kg of refrigerant. Larger systems, especially those requiring long runs of refrigerant pipe work, are prone to leakage. The regulation is intended to reduce leakage of fluorinated greenhouse gas based refrigerants from such systems.

TYPES OF EQUIPMENT COVERED BY THE REGULATION

Refrigeration machinery – equipment to cool products or storage spaces below ambient temperature e.g. industrial process cooling plant, retail refrigerated displays, cold stores etc

Air conditioning equipment – equipment to cool buildings to a comfortable ambient temperature i.e. large chillers that cool a whole office complex or factory space etc

Heat pumps – heating devices that use a refrigeration machine to extract energy from a waste heat source and deliver useful heat

The obligations in the new regulation for stationary refrigeration equipment containing HFC refrigerant apply from July 4th 2007 and apply as follows:

Automatic leak detection systems – Plants with more than 300kg must be fitted with a leakage detection system, which is defined as "a calibrated mechanical, electrical or electronic device for detecting leakage of refrigerants which, on detection, alerts the operator".



The detection system must be checked at least once a year to ensure proper functioning.

It should be noted that the intended purpose of the legislation is to reduce leakage and help protect the environment. Therefore the legislation still applies even if your refrigerant system is mounted on a roof in the open.

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REFRIGERANT SYSTEMS >3kg TO <300kg

Facilities available

- Leak detection site surveys using portable refrigerant device carried out by engineers holding CITB safe handling of refrigerants certificates
- Results produced for input into end users Log Sheet for record keeping obligations
- Repeat surveys 6 monthly; annually or following leakage as necessary
- Quotations for fixed systems as necessary

REFRIGERANT SYSTEMS >300kg

Features available

We offer a range of solutions to meet the legislation:

- Individual sensors at the potential points of leakage
- Sample lines from the potential points of leakage back to a single sensor
- Sequential sampling lines from the potential points of leakage back to a single sensor
- Infra Red or Semiconductor sensor solutions
- Audible, visual alarms
- SMS text messaging for alarms and/or faults to site operator, end user or Pollution Monitors
- Event logging alarms and faults
- Data logging readings
- Communication outputs to Building Management Systems

Facilities available

We offer a range of solutions to meet the legislation:

- Design
- Manufacture
- Installation
- Commissioning
- Servicing



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