

F-GAS REGULATIONS **(EC) 842/2006**

After a long process through the European Parliament the F-Gas regulations became law when they were published in the EU Official Journal in June 2006. They entered into force on 4th July 2006 with much of the regulation applying from 4th July 2007.

The objective of the regulation is to contain, prevent and thereby reduce emissions of the fluorinated greenhouse gases covered by the Kyoto Protocol. The regulation addresses containment, use, recovery, destruction, reporting, labelling, training, certification and some placing on the market prohibitions for the fluorinated gases.

HFCs are one group of fluorinated greenhouse gases covered by this legislation.

The regulation does **not** ban the use of HFCs in any static refrigeration or air conditioning application. There is, however, a huge onus upon those working in the industry to apply these measures so that emissions are significantly reduced.

The relevant parts affecting the refrigeration and Air Conditioning industry are detailed below.

CONTAINMENT (*article 3*)

Operators of stationary refrigeration, air conditioning and heat pump equipment shall use all measures which are technically feasible and do not entail disproportionate cost to prevent leakage of HFCs and as soon as possible repair any detected leakage.

An operator is defined as; the natural or legal person exercising actual power over the technical functioning of the systems covered by this regulation. A member state may in specific situations designate the owner as being responsible for the operator's obligations.

The EU Commission have issued additional guidance on the definition of an operator and what constitutes transferring of responsibilities.

The operator must ensure systems are checked for leakage by certified personnel, as defined by the training and certification requirement and to the following schedule;

Leakage inspection

Systems shall be checked for leakage dependent on refrigerant charge

3kg charge and above - check at least once every 12 months.

30kg charge and above - check at least once every 6 months.

300kg charge and above - check at least once every 3 months.

Hermetically sealed systems, which are labelled as such and contain less than 6kg, are exempt.

The application must be checked for leakage within 1 month after a leak has been repaired to ensure the repair was effective. This check, if carried out on the same day as the repair, doesn't require a separate visit, but must be recorded as such in the log book.

If a properly functioning appropriate leak detection system is in place, the frequency of the checks required for systems with 30kg or more are halved.

Operators of equipment containing 300kg or more must install an automatic leakage detection system. These must be checked at least once every twelve months to ensure they are functioning properly.

'Checked for leakage' means that the system is systematically checked for leakage using direct or indirect methods, focusing on those parts of the system most likely to leak. The cause of any leak will need to be recorded in the log book.

A detailed definition of what constitutes a leak check will be part of legislation attached to F-Gas. Full details can be found on our website www.idsrefrigeration.co.uk

When the implementing legislation for standard leakage checking requirements enters into force, the standard procedure and methods shall apply as from the following check.

Record keeping and Log Books

Operators of equipment containing 3kg or more will need to maintain records on the quantity and type of HFC installed. Any quantities added or recovered during maintenance, servicing and final disposal will need to be recorded along with leak checks, actions taken, the name of the service Company, the engineer / technician who performed the servicing and maintenance, dates and results of inspections. These records have to be made available to the competent authority upon request.

RECOVERY (article 4)

Operators of refrigeration, air conditioning and heat pump equipment are responsible for putting in place arrangements for the proper recovery by certified personnel, who comply with the training and certification requirements, of fluorinated greenhouse gases to ensure their recycling, reclamation or destruction.

Recovery, for the purpose of recycling, reclamation or destruction must take place before the final disposal of that equipment and where appropriate, during its servicing and maintenance.

When a refillable or non-refillable container reaches the end of its life, the person utilising it for transport or storage purposes is responsible for putting in place arrangements for the proper recovery of any residual gases it contains to ensure their recycling, reclamation or destruction.

TRAINING AND CERTIFICATION (article 5)

The European Commission have defined much more onerous minimum qualifications than currently applicable in the UK for personnel using fluorinated greenhouse gases. This will entail 4 different levels of qualifications.

Category I: Full Certification for all activities on all systems

Category II: Certification for small systems and external leak checking on systems of 3 kg and over (6kg hermetic)

Category III: Recovery from small systems ONLY

Category IV: External Leak checking only

Until such time as training courses are available and the work force retrained and certified to new standards the current City and Guilds 2078 or CITB refrigerant handling applies. A derogation for existing competent personnel will apply for up to 3 years.

By 4th July 2008 Member States shall establish or adapt their own training and certification requirements for companies and all relevant personnel involved in installation, maintenance and servicing based on the minimum qualifications.

The operator of the relevant application shall ensure that relevant personnel have obtained the necessary certification which implies appropriate knowledge of the applicable regulations and standards as well as the necessary competence in emission prevention and recovery of fluorinated greenhouse gases and handling safely the relevant type and size of equipment.

The UK authorities are in discussion with REFCOM on a suitable company certification scheme, which will involve some form of registration.

By 4th July 2009 Member States must ensure that companies involved in activities affected by containment and recovery will only take delivery of fluorinated greenhouse gases where their relevant personnel hold the required training and certificates.

REPORTING (article 6)

For the calendar year 2007 each producer, importer or exporter of more than 1 Tonne of fluorinated greenhouse gases must report quantities to the Commission. The first report has to be submitted to the Commission by 31 March 2008.

LABELLING (article 7)

This only applies to new equipment including those fabricated on site and is in addition to existing labelling requirements and applies from 1st April 2008. Each product or piece of equipment must have a label identifying the chemical name of the fluorinated greenhouse gas using the accepted industry nomenclature the contents of the F-Gas by weight and the phrase '**Contains fluorinated greenhouse gases covered by the Kyoto Protocol**'.

This should be clearly and indelibly stated with the quantity adjacent to the service points for charging or recovery.

Full details can be found on our website www.idsrefrigeration.co.uk

Hermetically sealed systems will need to be labelled as such.

PLACING ON THE MARKET (article 9)

The ban on disposable cylinders applied from 4th July 2007. The ban does not apply to cylinders filled prior to that date.

HFCs and PFCs were banned from use in new non-confined direct evaporation systems from 4th July 2007.

REVIEW (article 10)

The EU Commission will publish a report by 31st December 2007 for air conditioning systems and refrigeration systems in modes of transport other than motor vehicles. If appropriate the containment provisions may apply from by 31st December 2008.

By 4th July 2011 the EU Commission will publish a full report based on the experience of the application of this regulation and may make proposals for revision of the regulation.

ENFORCEMENT

The UK Government have brought into law, statutory instruments to apply the F-Gas legislation. Compliance is policed by the Environment Agency and Local Authorities who have wide ranging powers to impose prohibition notices and fines on those not adhering to the F-Gas regulations.

DEFINITIONS

'Hermetically sealed system' means a system in which all refrigerant containing parts are made tight by welding, brazing or a similar permanent connection which may include capped valves and capped service ports that allow proper repair or disposal and which have a tested leakage rate of less than 3 grams per year under a pressure of at least a quarter of the maximum allowable pressure.

'Leakage detection system' means a calibrated mechanical, electrical, or electronic device for detecting leakage of fluorinated greenhouse gases which, on detection, alerts the operator.

AUTOMOTIVE A/C (cars and car derived vans)

This sector is covered by the MAC directive 2006/40/EC which also entered into force on 4th July 2006. Fluorinated greenhouse gases, such as R134a, with a GWP 150 or greater are banned in New type vehicles from 2011 and the ban extends to all new vehicles from 2017. It is illegal to retrofit air conditioning systems to vehicles type approved after 2011 or any new vehicle after 2017. Vehicles fitted with R134a air conditioning systems prior to these dates can continue to use the refrigerant for servicing.

Service providers shall not refill equipment with R134a if an abnormal amount of refrigerant has leaked from the system, until the necessary repair has been completed.

Further reviews and other implementation measures for reducing emissions are required by this directive.

Training requirements for this sector are also now defined.

Details of the full directive can be found in our download section of our website www.idsrefrigeration.co.uk

Please note the information above is intended as a summary only and is given to the best of our knowledge based on information available to us at the time of writing.

IDS are able to supply copies of the document from the Official Journal upon request.

Updates will be produced as and when relevant information becomes available.

Consultation documents

The UK will be issuing a public consultation document in due course to cover the new training requirements.

Supplementary Guidance:

BERR/Defra have published Supplementary Guidance for Stationary Refrigeration, Air-conditioning and Heat Pump Users and a Refrigerant Charge Calculator is now available on their website.

<http://www.berr.gov.uk/innovation/sustainability/fgases/page28889.html>

The Refrigerant charge calculator spreadsheet has been prepared to help estimate the amount of refrigerant in refrigeration or air-conditioning equipment. Making a reasonable estimate of the refrigerant charge in a circuit is necessary in order to understand which of the Regulation's obligations will apply to the operator responsible for that piece of equipment.

Useful Websites for further information

www.idsrefrigeration.co.uk

Electronic versions of above summary

Other legislation information such as ODS qualifications,

R22 and HCFC phaseout

Hazardous Waste

Technical and product information

Safety data sheets for products

BERR (formerly Dti)

www.berr.gov.uk/innovation/sustainability/fgases/page28889.html

DEFRA

www.defra.gov.uk/environment/climatechange/uk/fgas/index.htm

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