

## IMPORTANT INFORMATION

# REGARDING YOUR AIR CONDITIONING AND/OR REFRIGERATION EQUIPMENT ENVIRONMENTAL OBLIGATION

**Leaks? You really can't tell and to wait for a breakdown is no longer the right thing to do**

If you continue to use refrigeration or air conditioning equipment containing HCFCs, you must take measures to prevent leaks of HCFCs, such as regularly maintaining your equipment.

A technician must check your equipment for leaks, to try to simplify this minefield we have given you a table below which highlights the old and new regulations. The newest currently is the 2014 regulations. Note we are emailing you as we strongly believe that you need to comply.

Table 1: Size Thresholds for Mandatory Leak Checks Leak Check Frequency

Leak Check Frequency*	2006 Regulation	2014 Regulation		
		Tonnes CO <sub>2</sub> e threshold for all HFC refrigerants	Kg threshold for HFC 404A	Kg threshold for HFC 134a
Annual	3kg	5 tonnes CO <sub>2</sub> e**	1.3kg	3.5kg
Every 6 months	30 kg	50 tonnes CO <sub>2</sub> e	13kg	35kg
Every 3 months	300kg	500 tonnes CO <sub>2</sub> e	127kg	350kg

\* Leak check frequency is halved if automatic leak detection system is installed

\*\* The threshold for annual leak checks of hermetically sealed equipment is 10 tonnes CO<sub>2</sub>

### Operation of Existing Equipment

The 2014 F-Gas Regulation includes a number of requirements that affect the use and maintenance of existing commercial refrigeration equipment containing HFC refrigerants. The exact rules depend on the type and size of commercial refrigeration equipment being used.

The regulations affecting existing equipment relate to

- leak prevention,
- record keeping,
- the Service Ban and
- the use of trained technicians.

These requirements are described below.

### **Leak Prevention and Mandatory Leak Checks**

The intentional release of F-Gases into the atmosphere is prohibited and operators of all commercial refrigeration equipment must take all measures that are technically and economically feasible to minimise leakage. Where leaks are detected operators must carry out repairs without undue delay.

**NEW:** Under the 2014 Regulation the requirements are now defined in terms of tonnes CO<sub>2</sub> equivalent (CO<sub>2</sub>e)<sup>5</sup>. These new CO<sub>2</sub>e size thresholds mean that the kg threshold for each refrigerant is different. Refrigerants with a high GWP (e.g. HFC 404A) will have a lower size 3 HFC phase down:

The new CO<sub>2</sub>e thresholds will require some systems below the old 3 kg threshold to be regularly leak tested. As shown in the Table, the size threshold for HFC 404A is only 1.3 kg. Operators should check which of their systems are affected by the new CO<sub>2</sub>e size thresholds.

Most of the leak checking rules apply from 1st January 2015, continuing the similar requirement as the 2006 Regulation. However, for systems with less than 3 kg, the 5 tonnes CO<sub>2</sub>e threshold only applies from 1st January 2017.

If a leak is found during a mandatory leak check it must be repaired without undue delay and the leak test repeated within one month to ensure the repair was effective.

### **Mandatory Automatic Leak Detection**

**NEW:** For all commercial refrigeration systems containing 500 tonnes CO<sub>2</sub>e or more there is a mandatory requirement for an automatic leak detection system to be fitted. This is a continuation of a similar requirement in the 2006 Regulation, although the size threshold is changed from 300 kg to 500 tonnes CO<sub>2</sub>e. This will have a significant impact on plants using high GWP refrigerants. For HFC 404A refrigeration systems, the new threshold for automatic leak detection is reduced from 300 kg to 127 kg. This rule applies from 1st January 2015. The lower size threshold for HFC 404A will affect many central pack systems as they often contain more than 127 kg.

An automatic leak detection system is defined as a “calibrated mechanical, electrical or electronic device for detecting leakage of F-Gases which, on detection, alerts the operator or a service company of any leakage”.

Automatic leak detection systems must be tested at least once every 12 months to ensure their proper functioning.

### **Record Keeping**

Operators of commercial refrigeration equipment must keep records for each piece of equipment that is subject to a mandatory leak check (i.e. above the 5 tonnes CO<sub>2</sub>e threshold). The records that must be kept are similar to those required under the 2006 Regulation:

- quantity and type of F-Gas installed

- b) quantities of F-Gas added during installation, maintenance or when repairing a leak EU F-Gas Regulation Guidance IS 2: Commercial Refrigeration Equipment 5 Version 2.1, December 2014
- c) **NEW:** whether the F-Gases used have been recycled or reclaimed (including the name and address of the recycling or reclamation facility and, where applicable, the certificate number).
- d) quantity of any F-Gases recovered
- e) the identity of the undertaking that installed, serviced or decommissioned the equipment, including, where applicable, their certificate number
- f) dates and results of all mandatory leak checks
- g) **NEW:** if the equipment was decommissioned, the measures taken to recover and dispose of the F-Gases.

**NEW:** Records must be kept by the plant operator for at least 5 years

**NEW:** Records collected by a contractor on behalf of an operator must be kept by the contractor for at least 5 years

The records shall be made available on request to the UK Government's competent authority (i.e. the Environment Agency) or to the Commission.

### **NEW: Service Ban**

An important new feature of the 2014 F-Gas Regulation is the Service Ban, affecting existing systems:

- **From 1st January 2020 the use of F-Gases with a GWP above 2,500 to maintain commercial refrigeration systems with a charge size of 40 tonnes CO<sub>2</sub>e or more shall be prohibited.**

In the commercial refrigeration sector this will mostly affect systems that use HFC 404A. The size threshold of 40 tonnes CO<sub>2</sub>e is equivalent to 10 kg of HFC 404A. Small systems, including hermetically sealed units and many condensing units will be unaffected if they are below this size threshold.

All existing central pack systems and larger condensing units (with more than 10 kg of HFC 404A) will need to comply with the 2020 Service Ban. It will be legal to continue operating such systems, but you will not be allowed to top up any leaks with virgin HFC 404A. Owners of equipment affected by the Service Ban have 3 main options:

- a) You can replace the plant with new equipment using a refrigerant with a lower GWP. This is a good option for plants close to end-of-life.
- b) You can "retrofill" the plant, replacing the HFC 404A with a lower GWP alternatives such as HFC 407A, HFC 407F, HFC 448A and HFC 449A. This option is a good one for younger equipment. There is good evidence that retrofilling with these refrigerants will improve energy efficiency by between 5% and 10% - this creates a good financial case for retrofill.
- c) You can use reclaimed or recycled HFC 404A for plant maintenance until 1st January 2030.

### **Use of Trained Technicians**

All refrigerant handling operations on commercial refrigeration equipment containing HFC refrigerants must be carried out by suitably trained technicians holding an F-Gas handling certificate and working for an F-Gas Certificated company. This includes plant installation, leak testing, maintenance and end-of-life decommissioning.

## **ACRS Ltd are registered under FGAS to carry out these checks**

**All our engineers are fully qualified and we are sending you this email as not only a guide but as a reminder that it is your responsibility to keep your equipment up to date with checks we have outlined within this document.**

**If you need to discuss your level of commitment to this legislation please call or email us and we will happily go through your individual needs.**

**We can assist with keeping your company log up to date and labelling your equipment to maintain your on-going compliance for an initial administration set up fee and a labelling cost depending on the amount of equipment on site.**

**This information has been extracted off the following link where you will be able to gain further information on the old and new legislation**

**<http://www.gluckmanconsulting.com/wp-content/uploads/2014/12/IS-2-Commercial-Refrigeration.pdf>**

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