

## **Guidance for Stationary Refrigeration & Air-Conditioning**

Information Sheets RAC 1 to RAC 3 give information for operators of stationary refrigeration, air-conditioning and heat pump systems (RAC systems) in relation to the EC F gas and Ozone Regulations. In this Information Sheet we provide advice on the steps that you should consider to ensure that your organisation meets its obligations and minimises emissions of F gases and ozone-depleting substances.

### **Step 1: Identify general scope of obligations**

The first step is to identify those elements of the EC F gas and Ozone Regulations that apply to your organisation. The key obligations are summarised in Information Sheet RAC 3. Three key questions should be addressed:

- ◆ **Do you still use HCFC refrigerants?** If so, you must ensure that annual leak checking is being done and you must plan for phase out. Many organisations still use some HCFCs, especially R22 and blends such as R408A.
- ◆ **Do you use HFC refrigerants?** Typically RAC system users make extensive use of HFCs for both refrigeration and air-conditioning requirements. Many are above the 3 kg threshold and will be subject to various obligations.
- ◆ **Do you have any non-RAC obligations related to F gases?** For example, do you use HFCs for fire protection systems? (See Information Sheet GEN 3)

As you establish the answers to these questions you should make an estimate of the number of sites and systems that are affected. This will help you assess the overall impact of the Regulations and influence the way in which you will plan for compliance.

### **Step 2: Determine who is responsible for compliance**

Determine who is responsible for compliance. Typically, the main responsibilities are held by the "Operator". Refer to Information Sheet RAC 3 for details.

### **Step 3: Allocate director level and operational responsibilities**

The next important step is to allocate responsibilities. It is suggested that a Director has overall control, so you can be certain that obligations are being met. It may be necessary to identify operational responsibilities in several parts of the organisation to ensure full coverage.

#### **Step 4: Establish inventory of relevant equipment**

Consider establishing an inventory of the F gas and ODS equipment in the organisation. It is sensible to give each piece of equipment a unique identification and record the location and other relevant details (e.g. cross reference with your asset register). For each system you should also identify:

- ◆ Type of refrigerant (F gas, ODS, other),
- ◆ Quantity of refrigerant (see Information Sheet RAC 6 for advice),
- ◆ Whether the system is hermetically sealed (this is only important if the refrigerant charge is between 3 and 6 kg).

#### **Step 5: Set up a record keeping system**

For all F gas systems of 3 kg or more, you must keep records (see Information Sheet RAC 6 for details). The inventory is a good starting point for record keeping. Records must be regularly updated by certified/qualified personnel working on the equipment. A key issue will be to decide how the records are kept up to date and how they can be consolidated from site level up to organisation level. The only way that you can be reasonably sure of compliance is to check records. There is no obligation to keep records for HCFC systems (regardless of the quantity of refrigerant in a system) or for F gas systems below 3 kg, although it may be prudent to include all systems in your records.

#### **Step 6: Ensure that all your staff and contractors are qualified**

Make sure that all relevant staff or the contractors you employ to deal with F gases and ODS understand the requirements and the purpose of these Regulations. Put procedures in place to ensure that any staff involved in working on RAC systems containing F gases or ODS have the appropriate qualifications.

#### **Step 7: Company certification**

Make sure your company has the relevant certification. Refrigeration and air-conditioning companies that carry out installation, maintenance or servicing of RAC systems must hold a certificate. See Information Sheet RAC 5 for more details,

#### **Step 8: Ensure leak test obligations are being met**

For all plant of 3 kg or more an annual leak test is required. Many RAC systems are above 30 kg and will require 6 monthly tests. The obligation for testing applied from 4<sup>th</sup> July 2007 so leak testing records should already be in place. Leak tests must be carried out by qualified personnel and the results of tests must be recorded. Any leaks identified must be repaired and the plant re-tested by appropriately qualified personnel. For further guidance on leak testing see Information Sheet RAC 6. Don't forget that HCFC systems have required an annual leak check since 2000.

#### **Step 9: Ensure automatic leak detectors are fitted**

For plants above 300 kg of F gas refrigerant it is mandatory to fit automatic leak detection systems. Ensure a process is in place for annual checking of these systems. This obligation has applied since 4<sup>th</sup> July 2007.

## Step 10: Use records to identify and improve “rogue” plants

There is good evidence that a significant proportion of leaks occur from a small number of “leaky” plants. The 80:20 rule often applies quite well, i.e. that 80% of leaks come from only 20% of the systems. Identifying the “rogue” plants gives a good opportunity for a company to significantly reduce overall leakage. It is worth investing effort to improve these plants.

## Step 11: Prepare for HCFC phase out

If you are still using HCFCs, such as R22, it is important that you prepare a phase out strategy. The use of virgin HCFCs for plant maintenance will be banned from the end of 2009. Recycled supplies can be used, but there is no guarantee these will be available at a reasonable price.



### How to Contact F-Gas Support:

**Telephone Help Line:** 0161 874 3663 **Website:** [www.defra.gov.uk/fgas](http://www.defra.gov.uk/fgas)

**Email:** [fgas-support@enviros.com](mailto:fgas-support@enviros.com)

**Post:** F-Gas Support, P O Box 481, Salford, M50 3UD

This document has been prepared by F-Gas Support; the information provided is intended as guidance and must not be taken as formal legal advice nor as a definitive statement of the law. Ultimately only the courts can decide on legal questions and matters of legal interpretation. If you have continuing concerns you should seek legal advice from your own lawyers.

F-Gas Support is a Government funded team set up to help organisations understand their obligations under the EU Fluorinated Greenhouse Gases and Ozone Regulations. F-Gas Support is also working with Regulators to promote compliance. It is being run on behalf of Defra and the devolved administrations by the Local Authorities Coordinators of Regulatory Services (LACORS) and Enviros.