

Department for Environment, Food and Rural Affairs

# Guidance for Stationary Refrigeration & Air-Conditioning

## Guidance: F Gas and Ozone Regulations

### Information Sheet RAC 4: Getting Started

April 2012

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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 EU 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 fluorinated gases (F gases) and Ozone Depleting Substances (ODS).

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

The first step is to identify those elements of the EU 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 personnel are qualified**

Make sure that all relevant personnel – both in-house staff and 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 personnel involved in working on RAC systems containing or designed to contain F gases or ODS have the appropriate qualifications.

If you need to take delivery of containers of F gas then you may need to employ appropriately qualified and certified personnel, be they in-house staff or contractors. However, the qualification obligation only applies to those personnel who are actually carrying out leak checking, gas recovery, installation, maintenance and servicing work. This does not prevent unqualified personnel from physically taking delivery of the F gases, providing that they do not carry out these activities.

Your fluid supplier may ask for a certificate as evidence that only appropriately qualified personnel will be using the F gases for maintenance or servicing.

## **Step 7: Company certification**

Make sure your organisation has the relevant company certification. All companies undertaking refrigeration and air-conditioning work such as installation, maintenance or servicing on RAC systems that contain or are designed to contain F gases must hold a company certificate. See Information Sheet RAC 5 for more details.

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

For all plants containing 3 kg or more of F gas or an ODS, a leak test at least annually is required. Many stationary RAC systems contain 30 kg or more 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. Information Sheet RAC 3 contains a table of leak checking frequencies for all sizes of equipment. 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. Stationary RAC systems that contain HCFCs have required an annual leak check since 2000. This rule changed with effect from 1<sup>st</sup> January 2010 under the recast Ozone Regulation 1005/2009 and the leak checking frequencies were brought into line with those for F gas. Information Sheets RAC 3 and RAC 8 contain further detail.

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

For plants containing 300 kg or more 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. Automatic leak detection is not mandatory for plants that contain 300kg or more of HCFCs.

## **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 has been banned since the end of 2009. Recycled/reclaimed supplies can be used until the end of 2014, but there is no guarantee these will be available at a reasonable price.

The information in this document is intended as guidance and must not be taken as formal legal advice or 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.

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