

## Guidance for Stationary Refrigeration & Air-Conditioning

This Information Sheet provides guidance on the current and future minimum requirements for training and certification of personnel and companies working on stationary refrigeration, air-conditioning and heat pump equipment (RAC systems) using HFC or HCFC refrigerants.

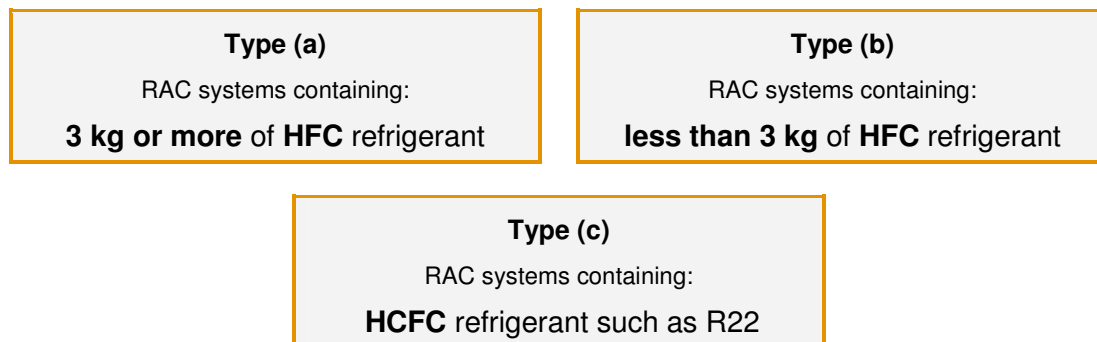
The training requirements for mobile air-conditioning systems (MACs) are different to those described in this Information Sheet. See Information Sheet MAC 5 for further details.

### Requirements for Working on Different Equipment and Refrigerants

The qualifications required by the Regulations (see section 2) may be different for the following refrigerants that might be used in RAC systems:

- ◆ Fluorinated greenhouse gases (F gases) - hydrofluorocarbons (HFCs)
- ◆ Ozone Depleting Substances (ODS) – hydrochlorofluorocarbons (HCFCs)

The size of equipment also affects the required qualifications. The following three types of stationary refrigeration and air-conditioning equipment each have different training and certification requirements:



### Activities Requiring Personnel Training and Certification

Personnel involved in “refrigerant handling” activities on stationary RAC systems that use HFC or HCFC refrigerants already require a certificate to prove they have appropriate qualifications. In particular, this applies to:

- ◆ Leakage checking.
- ◆ Refrigerant recovery.
- ◆ Installation.
- ◆ Maintenance or servicing.

The requirement to hold a suitable externally awarded qualification for personnel working on RAC systems containing 3 kg or more applies both to in-house staff and to personnel employed by external refrigeration and air-conditioning contractors. The EC F gas Regulation requires new minimum requirements to be introduced in Great Britain.

## 1. Structure of this Information Sheet

This Information Sheet has sections that address personnel training and certification requirements for each of the 3 equipment types described above, together with a separate section dealing with company certification requirements. In each section we first describe the current requirements, which apply during the relevant interim period, and then describe the future requirements.

**Section 2** provides a summary of relevant European and British legislation that define current and future training and certification requirements.

**Section 3** describes the new categories of qualification that are specified in the EC F gas Regulation.

**Section 4** addresses requirements for personnel working on stationary RAC systems containing 3 kg or more of HFC refrigerant.

**Section 5** addresses requirements for personnel working on stationary RAC systems containing less than 3 kg of HFC refrigerant.

**Section 6** addresses requirements for personnel working on stationary RAC systems containing HCFC refrigerant.

**Section 7** addresses requirements for company certification (this only applies to companies working on stationary systems containing HFCs).

**Section 8** provides further explanations and definitions.

## 2. Summary of Relevant Legislation

### F Gas Regulations

For RAC systems containing HFCs the basis of all personnel and company certification is set out in the EC Regulation on certain fluorinated greenhouse gases (the F gas Regulation, EC/842/2006).

A further Commission Regulation, EC/303/2008 provides extra details and defines the training and certification requirements for RAC systems.

The relevant EC Regulations as listed above provide the basis for both interim and future requirements.

The GB Fluorinated Greenhouse Gases Regulations 2008 (Statutory Instrument 2008 No. 41) lists the current required qualifications for RAC.

The above Regulations are collectively referred to as “the F gas Regulations”.

The Government is in the process of consulting on proposed new GB Regulations that would establish interim and final qualification and certification arrangements for personnel and companies respectively, including allowing existing qualification holders to have until July 2011 at the latest to obtain a new minimum qualification.

## Ozone Regulations

The use of HCFC refrigerants (such as R22) must comply with the EC Regulation on substances that deplete the ozone layer (EC/2073/2000).

The GB Ozone Depleting Substances (Qualifications) Regulations 2006 (Statutory Instrument 2006 No. 1510) lists the qualifications that are suitable for working on systems containing HCFC refrigerants.

The above Regulations are collectively referred to as “the Ozone Regulations”.

There are no interim arrangements under “the Ozone Regulations” because the current requirements for personnel have been in force since 2006.

## 3. New Categories of Training in the F Gas Regulations

For RAC personnel, the European Commission Regulation 303/2008 refers to four different levels of certification, which allow personnel to carry out different activities. These are now described. Note that Category I covers all activities whereas the other 3 categories are more restrictive:

**Category I** certificate holders may carry out all refrigerant handling activities for any size of RAC systems containing HFC refrigerants. This includes leakage checking, refrigerant recovery, installation, maintenance and servicing.

**Category II** certificate holders may carry out refrigerant recovery, installation, maintenance and servicing, in relation to RAC systems containing less than 3 kg of fluorinated greenhouse gases (or less than 6 kg for systems that are hermetically sealed). Category II certificate holders may also carry out leak checks on any plant provided that it does not entail breaking into the refrigeration circuit containing fluorinated greenhouse gases.

**Category III** certificate holders may carry out refrigerant recovery in relation to RAC systems containing less than 3 kg of fluorinated greenhouse gases (or less than 6 kg for systems that are hermetically sealed).

**Category IV** certificate holders may carry out leak checks on any plant provided that it does not entail breaking into the refrigeration circuit containing fluorinated greenhouse gases.

#### 4. Personnel Requirements: Equipment Type (a)

System type	<b>Stationary RAC</b>
Refrigerant type	<b>HFC</b>
Refrigerant quantity	<b>3 kg or more</b>

Personnel working on RAC systems containing 3 kg or more of HFC refrigerant must comply with the requirements described below. Holders of these qualifications may also work on smaller HFC equipment and on HCFC equipment.

##### **Current and Interim Requirements, RAC, HFC Refrigerants, 3kg or more**

The current minimum qualifications that apply in Great Britain are specified in GB Fluorinated Greenhouse Gases Regulations 2008 (Statutory Instrument No 41) which has applied from 15<sup>th</sup> February 2008. This Regulation specifies two alternative qualifications:

- ◆ City & Guilds Certificate in Handling Refrigerants Scheme 2078
- ◆ Construction Industry Training Board (CITB) Safe Handling of Refrigerants Reference 206710.

The Government is in the process of consulting on proposed interim arrangements for F gas qualifications that would include allowing holders of one of the above qualifications to have until July 2011 at the latest to obtain a new minimum qualification.

##### **Future Requirements from July 2011, RAC, HFC Refrigerants, 3kg or more**

The minimum requirements for certification of personnel handling F gases are set out in Commission Regulation 303/2008. These requirements go beyond the content of the two qualifications described above in the “Current Requirements” section. This means that new RAC qualifications will need to be introduced and all personnel in Great Britain will ultimately have to obtain a new qualification.

It is expected that City & Guilds and CITB will both introduce new courses by the autumn of 2008. Summit Skills also have proposed new qualifications under development. There will be 4 different levels of new qualification, referred to as Category I to Category IV, as described in Section 3 above.

The Government is in the process of consulting on proposals to introduce a requirement for personnel carrying out refrigerant handling activities on RAC equipment containing 3 kg or more of refrigerant to hold one of these new qualifications that will meet the Category I requirements. Under these proposals, personnel would need to obtain the new qualification by 4<sup>th</sup> July 2011.

## 5. Personnel Requirements: Equipment Type (b)

System type	<b>Stationary RAC</b>
Refrigerant type	<b>HFC</b>
Refrigerant quantity	<b>Less than 3 kg</b>

### **Current and Interim Requirements, RAC, HFC Refrigerants, less than 3kg**

The current qualification requirements are to hold either a City and Guilds 2078 or CITB 206710 qualification or:-

- a) to hold an in-house qualification (see Section 8 for more details) or
- b) before the 15<sup>th</sup> February 2008, to have carried out such work on equipment containing less than 3kg of HFC refrigerant without supervision.

Commission Regulation 303/2008 permits the UK to introduce a system for personnel that do not hold a certificate that meets the future minimum qualifications to continue working if they hold an “interim certificate”. Interim certificates would be valid up to 3<sup>rd</sup> July 2011. The Government is in the process of consulting on proposed Regulations that are likely to have the following effect:

- ◆ Personnel holding an in house qualification would be deemed holders of an interim certificate.
- ◆ Personnel holding the City & Guilds 2078 or CITB 206710 would be deemed holders of an interim certificate.
- ◆ Personnel relying on Option (b), previous experience, will need to apply for and obtain an interim certificate before 4<sup>th</sup> July 2009. At least one body is needed so that companies can obtain certificates and the Government is interested to know of any bodies that would be interested in operating such a scheme. A final decision on who will run this scheme will not be taken until the current public consultation process has been completed.

### **Future Requirements from July 2011, RAC, HFC Refrigerants, less than 3kg**

As described in Section 4 above, the current qualifications will not meet the long term minimum requirements specified in Commission Regulation 303/2008. It is expected that new GB qualifications that meet the minimum requirements will be introduced during autumn 2008.

The future requirement for personnel carrying out refrigerant handling activities on RAC systems containing less than 3 kg of refrigerant will be to hold either a Category I or a Category II certificate awarded for one of these new qualifications. See Section 3 above for a description of the 4 categories of new qualification.

All personnel must obtain this new qualification by 4<sup>th</sup> July 2011.

## 6. Personnel Requirements: Equipment Type (c)

System type	<b>Stationary RAC</b>
Refrigerant type	<b>HCFC</b>
Refrigerant quantity	<b>Any quantity</b>

Personnel working on RAC systems containing any quantity of HCFC refrigerant must comply with the training requirements described below.

### **Current and Future Requirements, RAC, HCFC Refrigerants**

The current minimum qualifications that apply in Great Britain are specified in GB Ozone Depleting Substances (Qualifications) Regulations 2006 (Statutory Instrument 2006 No. 1510) which has applied from June 2006. This Regulation specifies two alternative qualifications:

- ◆ City & Guilds Certificate in Handling Refrigerants Scheme 2078
- ◆ Construction Industry Training Board (CITB) Safe Handling of Refrigerants Reference 206710.

The EC Ozone Regulation does not require any new qualifications to be introduced, so the above qualifications will be sufficient to work on any HCFC RAC systems in the future. They will not however be sufficient for work on HFC systems from 4<sup>th</sup> July 2011 because by then personnel working with F gases will need to have obtained a new F gas qualification. If personnel wish to keep working not only on HCFC equipment, but F gas equipment as well from 4<sup>th</sup> July 2011, they will need to have obtained one of the new F gas qualifications relevant to the activity being carried out.

## 7. Company Certification Requirements under the F Gas Regulations

All companies undertaking refrigeration and air-conditioning work, be that as an in-house function or acting as contractors on behalf of other companies, must hold a certificate if they employ personnel that carry out the following activities on RAC systems containing HFCs:

- ◆ Installation.
- ◆ Maintenance or servicing.

To obtain a certificate companies will need to meet the following requirements:

- a) That they employ appropriately certified personnel in a sufficient number to cover the expected volume of activities. In the long term this will be based on the new personnel qualifications described in Section 3 and 4 above. During the interim period, "interim certificates" including the City & Guilds 2078 or CITB 206710 qualifications will be sufficient.
- b) That the necessary tools and procedures are available to the personnel engaged in activities for which certification is required.

The timetable specified in the Commission Regulation 303/2008 is as follows:

- ◆ An interim company certificate must be held from 4 July 2009.
- ◆ A full company certificate must be held from 4 July 2011.

At least one body is needed so that companies can obtain certificates and the Government is interested to know of any bodies that would be interested in operating such a scheme. A decision on who will run this scheme will not be taken until the current public consultation process has been completed.

## 8. Other Useful Information

This section provides further details of issues related to qualifications and certification of personnel.

### Exemptions from Personnel Qualifications

There are exemptions for three categories of personnel:

- 1) Trainees are exempt for up to 2 years, but they must work under the supervision of a person with the requisite qualification (including an interim certificate) and must be enrolled on a relevant training course.
- 2) Personnel only undertaking brazing, soldering or welding on a piece of RAC equipment would be exempt if they hold a nationally recognised qualification to undertake such activities and if they are supervised by a person holding the requisite F gas certificate covering the relevant activity. A proposal for the appropriate qualification is included in the current consultation process, so that GB personnel can benefit from this derogation.
- 3) Personnel undertaking recovery of F gases from “waste equipment” under the WEEE Directive (Waste Electrical and Electronic Equipment) EC 96/2002 with an F gas charge less than 3 kg, in premises covered by a suitable permit, are exempt provided that they are employed by the company holding the permit and have completed a training course on the minimum skills and knowledge corresponding to Category III that is verified by an attestation of competence issued by the permit holder.

### Manufacturers

Personnel and company certification requirements do not apply to any RAC manufacturing and repairing activity undertaken at a manufacturer’s sites.

### What is an in-house qualification?

**In-house qualification** is defined in national regulations and means a qualification verified by a certificate of competence or other written confirmation issued by an employer to such of its employees who have successfully completed a course of training provided by that employer relating to the work in question.

A **course of training** provided by an employer must enable an employee who has been trained to carry out relevant work satisfactorily. An employer must keep a record of training must provide a copy to an employee which shows the name of employee trained, course provided, dates provided and date of completion or other confirmation that course was completed.

### What is the status of a non-UK personnel qualification?

The EC F gas Regulation requires that Member States give mutual recognition to certification of suitable qualifications from other EU countries. This will only apply to a “full qualification” that meets the minimum requirements specified in Commission Regulation EC 303/2008. In some EU countries the existing qualifications already meet or go beyond these minimum requirements. The European Commission will be compiling a list of qualifications that meet the new minimum requirements (not available at the time of writing this document).

Interim personnel certificates issued by other EU Member States will not be valid in the UK.

### What is the status of a non-UK company certificate?

As with personnel certificates, a company certificate issued in another EU Member State is valid in the UK.

Interim company certificates from other Member States will not be valid in the UK.

## What is meant by “installation”?

Commission Regulation 303/2008 defines installation as follows:

*“installation” means joining two or more pieces of equipment or circuits containing or designed to contain fluorinated greenhouse gas refrigerant, with a view to assembling a system in the location where it will be operated, including the action by which refrigerant conductors of a system are joined together to complete a refrigerant circuit irrespective of the need to charge the system after assembly*

This is a wide ranging definition that covers all activities that involve joining individual parts of a refrigeration system together.

## What is meant by “maintenance or servicing”?

Commission Regulation 303/2008 defines maintenance or servicing as follows:

*“maintenance or servicing” means all activities, excluding recovery and checks for leakage, that entail breaking into the circuits containing or designed to contain fluorinated greenhouse gases, in particular supplying the system with fluorinated greenhouse gases, removing one or more pieces of circuit or equipment, re-assembling two or more pieces of circuit or equipment, as well as repairing leakages.*



### 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.