EU F-Gas Regulation Guidance

Information Sheet 21: Training and Certification Requirements for Refrigeration, Air-Conditioning and Heat Pumps

Target audience for this Information Sheet

This Information Sheet is aimed at individuals and organisations that carry out F-Gas handling operations related to stationary refrigeration, air-conditioning and heat pumps (RACHP) and refrigerated trucks and trailers (RTT). For mobile air-conditioning applications the requirements are different – see Information Sheet 22.

The guidance will also be useful for operators of equipment using F-Gases that need to use certificated companies and technicians for installation and maintenance.

1. Background

This guidance is for organisations affected by the 2014 EU F-Gas Regulation (517/2014). The F-Gas Regulation creates controls on the use and emissions of fluorinated greenhouse gases (F-Gases) including HFCs, PFCs and SF_6. The 2014 EU F-Gas Regulation replaces the 2006 Regulation, strengthening all of the 2006 requirements and introducing a number of important new measures.

Training and certification is an important feature of the F-Gas Regulation as it ensures that technicians understand how to minimise emissions during installation, maintenance and at end-of-life of equipment containing F-Gases.

This Information Sheet describes the requirements that apply to training and certification related to:

- Stationary refrigeration, air-conditioning and heat pumps (RACHP)
- Refrigerated trucks and trailers (RTT)

For training requirements related to mobile air-conditioning – see Information Sheet 22.

Further guidance is available – see Information Sheet 30 for a full list and a glossary of terms.

Training and Certification Requirements for EU F-Gas Regulation

Personnel training and certification for F-Gas handlers is required for:

- ✓ stationary refrigeration, air-conditioning and heat pump equipment
- ✓ NEW: refrigeration units of refrigerated trucks and trailers

Company certification for contractors is required for:

- ✓ stationary refrigeration, air-conditioning and heat pump equipment

Important note: training and certification requirements in the 2014 F-Gas Regulation are based largely on the existing requirements in the 2006 Regulation. Existing qualifications remain valid.

2. Personnel Training and Certification – General Requirements for RACHP

Activities covered by personnel training requirements

Personnel involved in certain activities on equipment that contains or is designed to contain F-Gases require an F-Gas handling training qualification. In particular, this applies to:

- Installation
- Leakage checking
- Maintenance or servicing
- Refrigerant recovery
- Decommissioning

Sectors requiring mandatory personnel training

The end user sectors for which these training requirements apply include:

1) Stationary refrigeration, air-conditioning and heat pumps – this includes equipment of <u>any size</u> that contains an F-Gas refrigerant (usually an HFC refrigerant).
2) **NEW:** Refrigerated trucks[1] and trailers[2] using F-Gas refrigerants.

Who should hold a personnel training certificate?

All technicians that carry out the activities detailed above on equipment in the sectors listed above that contains F-Gases must hold an F-Gas handling certificate. This requirement applies both to in-house staff and to personnel employed by external contractors.

An appropriate qualification for personnel working on these systems can only be awarded by an approved certification and evaluation body. These are bodies that have been approved by the UK Government, as detailed in GB Statutory Instrument 261/2009[3].

Scope of personnel training

The F-Gas Regulation requires all EU Member States to provide suitable training programmes for personnel working in these areas. The training programmes must cover:

- applicable regulations and technical standards
- emission prevention
- recovery of fluorinated greenhouse gases
- safe handling of equipment of the type and size covered by the certificate
- **NEW:** information on relevant technologies to replace or to reduce the use of fluorinated greenhouse gases and their safe handling.

[1] Refrigerated trucks: motor vehicles above 3.5 tonnes and equipped with a refrigeration unit.

[2] Refrigerated trailers: vehicles designed to be towed by a tractor or truck and equipped with a refrigeration unit.

[3] Note, this Statutory Instrument is being replaced, although it is still in force in the first quarter of 2015. A new SI will replace it during 2015; it is not expected that the list of approved bodies will change.

The detailed scope of training is defined in European Commission Regulations published to support the 2006 F-Gas Regulation. These Regulations are still valid. The relevant training Regulation is:

- Regulation EC/303/2008 Stationary refrigeration, air-conditioning and heat pumps

This Commission Regulation specifies the required practical skills and theoretical knowledge and it specifies the conditions for mutual recognition of certificates between EU Member States.

It should be noted that there is currently no Commission Regulation that defines the training requirements for refrigerated trucks and trailers. Until such a Regulation has been published, it should be assumed that the requirements for stationary RACHP apply to refrigerated trucks and trailers.

Validity of existing personnel certificates

Existing certificates issued in accordance with the 2006 EU F-Gas Regulation remain valid, in accordance with the conditions under which they were originally issued.

It is important to note that the training requirements have been slightly extended in the 2014 Regulation, but this will not invalidate any existing certificates. Member States need to ensure that all personnel holding existing certificates have access to information regarding each of the following:

- relevant technologies to replace or to reduce the use of F-Gases and their safe handling
- existing regulatory requirements for working with equipment containing alternative refrigerants to F-Gases

It is not yet clear how this requirement will be fulfilled in the UK. It is likely that standard information material will be prepared by experts and circulated to certificate holders via Certification Bodies or training centres.

3. Personnel Training and Certification – Specific Requirements for RACHP

Categories of Training and Certification

For personnel working on stationary refrigeration, air-conditioning and heat pumps, the European Commission Regulation 303/2008 refers to four different levels of certification, which allow personnel to carry out different activities. Category I covers all activities whereas the other 3 categories are more restrictive: The categories are defined in Table 1.

Table 1: Categories of RACHP Personnel Training

Category	Size of system	Activities Allowed
I	Any size	Leakage checking, refrigerant recovery, installation, maintenance and servicing
II	< 3kg* Any size	Refrigerant recovery, installation, maintenance and servicing Leak checking (not entailing breaking into the refrigeration circuit)
III	< 3 kg*	Refrigerant recovery
IV	Any size	Leak checking (not entailing breaking into the refrigeration circuit)

* < 6 kg for systems that are hermetically sealed

UK Personnel Certification Bodies for RACHP

Two certification and evaluation bodies are named in the GB Fluorinated Greenhouse Gases Regulations 2009 (SI No. 261) in relation to stationary refrigeration, air-conditioning and heat pumps. These are City and Guilds and the Construction Industry Training Board (CITB). Both offer qualifications that meet the minimum requirements of EC/303/2008, as shown in Table 2. These qualifications are available from a number of specialist RACHP training providers in the UK.

Table 2: Personnel qualifications that meet the minimum requirements for RACHP

Category	City & Guilds	CITB
I	**2079-11** City and Guilds Level 2 Award in F Gas and ODS Regulations: Category I **6187-01** City and Guilds Level 2 NVQ Diploma in installing, testing and maintaining air-conditioning and heat pump systems **6187-02** City and Guilds Level 2 NVQ Diploma in installing and maintaining refrigeration systems	**J11 Category I** – leak checking, recovery, installation, service and maintenance of equipment
II	**2079-12** City and Guilds Level 2 Award in F Gas and ODS Regulations: Category II	**J12 Category II** – installation, service and maintenance of equipment with a charge of less than 3kg, (6kg if hermetically sealed) and leakage checking
III	**2079-13** City and Guilds Level 2 Award in F Gas and ODS Regulations: Category III	**J13 Category III** – recovery of refrigerant
IV	**2079-14** City and Guilds Level 2 Award in F Gas and ODS Regulations: Category IV	**J14 Category IV** – leakage checking

4. Company Certification

In addition to personnel certification, contractors working on stationary RACHP systems require a Company Certificate.

Activities covered by company certification requirements

Companies (including sole traders) require an F-Gas Company Certificate if they carry out the following activities on stationary RACHP equipment containing F-Gases:

- Installation
- Maintenance or servicing
- Refrigerant recovery
- Decommissioning

Who should hold a Company Certificate?

A Company Certificate is required by contractors providing services related to stationary refrigeration, air-conditioning and heat pumps. It is not required by contractors that only work with refrigerated trucks and trailers. All businesses that carry out the above activities for other parties[4] require a

[4] All contractors working for other parties need a Company Certificate. An end user of RACHP equipment that employs its own staff to carry out the above activities on their RACHP equipment must ensure their staff have the appropriate personnel certificate, but they do not require a Company Certificate.

Company Certificate. This requirement applies to sole traders as well as limited companies. Each separate "legal person", including both companies and sole traders, needs a Company Certificate.

Requirements for a Company Certificate

To gain a full Company Certificate, businesses need to show that:

a) they employ sufficient personnel to cover the expected volume of activities and those personnel hold qualifications that meet the minimum requirements of EC/303/2008 as described above

b) they have the necessary tools and procedures available to their trained personnel to ensure that their clients' F-Gas emissions can be minimised.

UK Company Certification Bodies for RACHP

Defra has designated three Company Certification bodies. Others may be designated at a later date. To obtain a Company Certificate contact one of the designated bodies as listed in Table 3.

Table 3: UK Company Certification Bodies for RACHP

Body	Website	Email	Telephone
Bureau Veritas	www.bureauveritas.co.uk/fgas	fgas.mail@uk.bureauveritas.com	0207 661 0726
Quidos	www.fgasregister.com	fgas@quidos.co.uk	01225 318400
Refcom	www.refcom.org.uk	info@refcom.org.uk	01768 860409

5. Other Related Information

Purchase of F-Gases

NEW: The F-Gas Regulation states that: *"bulk supplies of F-Gases shall only be sold to and purchased by undertakings that hold the relevant certificates or attestations".* Companies selling F-Gases will need to screen their customers to ensure compliance with this requirement. In most cases the required proof is a Company Certificate. See Information Sheet 19 for further details about customer screening.

Exemptions from Personnel Certification

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 an appropriate F-Gas personnel qualification and must be enrolled on a training course to obtain one of the appropriate F gas qualifications.

2) Personnel only undertaking brazing, soldering or welding on a piece of RACHP equipment would be exempt if they hold a nationally recognised qualification to undertake such activities and if they are supervised by a person holding an appropriate personnel certificate to undertake installation of F-Gas containing equipment.

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 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 applies to certificates that meet the minimum requirements specified in Commission Regulation EC/303/2008. The European Commission has published a list of qualifications that meet the minimum requirements.

What is the status of a non-UK Company Certificate?

A Company Certificate issued in another EU Member State is valid in GB.

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.

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This Information Sheet has been prepared by Gluckman Consulting

in collaboration with the Defra (UK Department for Environment, Food and Rural Affairs) and Jacobs

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