

## How to check for leaks

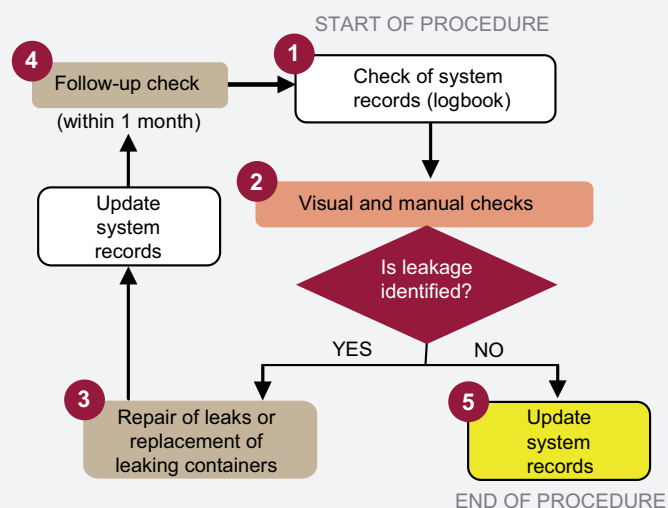
Stationary **fire protection systems** containing 3kg or more of F-Gas extinguishing agent must be regularly checked for leakage by certified personnel.

F-Gas amount	≥3kg and <30kg	≥30kg and <300kg	≥300kg
Minimum frequency of leakage checks			
Without a properly functioning appropriate leakage detection system in place	every 12 months	every 6 months	every 3 months (*)
With a properly functioning appropriate leakage detection system in place	every 12 months	every 12 months	every 6 months

(\*) A leakage detection system which on detection alerts the operator is mandatory for systems containing 300kg or more of F-Gases. Fire protection systems installed before 4 July 2007 must be fitted with such systems by 4 July 2010.

Where an existing inspection regime is in place which meets ISO 14520 standard the obligations of the Regulation are fulfilled as long as these inspections are at least as frequent.

### Standard checking for leaks according to Commission Regulation (EC) No 1497/2007



Steps 1 to 2 must be carried out always. If no leak is identified, the procedure is completed by updating the system records (logbook) (step 5).

If leaks are detected, they have to be repaired as soon as possible and a complete check has to be carried out again within one month from the date of the repair.

## 1 Checking system records (logbook)

Before carrying out leak checks, certified personnel must check the system records. The records should indicate the F-Gas amount.

Special attention must be paid to relevant information on any recurring issues and problem areas!

## 2 Visual and manual checks

**Operating controls, containers, components and connections which are pressurised** must be visually checked for damage and signs of leakage. Certified personnel must check whether **any** of the following situations, constituting a presumption of leakage, occurs:

- A fixed detection system indicates leakage
- A container shows a loss in pressure, adjusted for temperature, of more than 10%
- A container shows a loss in extinguishant quantity of more than 5%
- Other signs are indicating charge loss

Pressure gauges and weight monitoring devices must be checked once every 12 months to ensure that they function properly.

## 3 Repairing leaks

Detected leaks must be resolved by repairing or replacing leaking containers or other components **as soon as possible**. Prior to re-charging, a leakage test has to be carried out.

After the repair, the system records must be updated with the relevant information.

## 4 Follow-up check

After leaks are repaired, a follow-up check has to be carried out **within one month**. Special consideration should be given to areas where leaks had been found and repaired and in adjacent areas where stress was applied during the repair. The follow-up check must follow the requirements of a standard leak check.

## 5 Updating system records

System records must be updated after each leak check.

### More information

<http://ec.europa.eu/environment/climat/fluor>

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## Information

for

## Technical personnel and companies working with equipment containing fluorinated greenhouse gases

Stationary fire protection systems and fire extinguishers



Regulation (EC) No 842/2006  
on certain fluorinated greenhouse gases  
and implementing acts

# Stationary fire protection systems and fire extinguishers containing fluorinated greenhouse gases



## Introduction

Under the Kyoto Protocol, the European Union has made a commitment to reduce its greenhouse gas emissions by 8% compared to the base year 1990 between 2008 and 2012. Greenhouse gases covered by the Kyoto Protocol are amongst others, three groups of fluorinated greenhouse gases (F-Gases): hydrofluorocarbons (HFCs), perfluorocarbons (PFCs) and sulphur hexafluoride (SF<sub>6</sub>). Most of these F-Gases have a high global warming potential (GWP).

They are used in several applications, inter alia as extinguishing agents in stationary fire protection systems and fire extinguishers.

Regulation (EC) No 842/2006 of the European Parliament and of the Council on certain fluorinated greenhouse gases (F-Gas Regulation) came into force in 2006. The aim of the Regulation is to reduce emissions of these gases and contribute to the Kyoto emission reduction target of the European Union and its Member States.

The Regulation, supplemented by 10 Commission Regulations (implementing acts), lays down specific requirements for the various stages of the whole life cycle – from the production to the end of life – of F-Gases. Consequently, various actors are affected by the Regulation.

## Who does this leaflet address?

This leaflet is for technical **personnel and companies** working with **stationary fire protection systems** and **fire extinguishers** covered by the F-Gas Regulation. The aim of this document is to provide information and guidance on the relevant provisions of Regulation (EC) No 842/2006 and its implementing acts and is not of a binding nature. Information for operators of the above mentioned equipment is available in a separate publication.

## Which are the relevant activities?

The following activities concerning stationary fire protection systems and fire extinguishers, unless undertaken at the sites of manufacturers during manufacture or repair, can only be carried out by personnel and/or companies holding the appropriate certificate according to Commission Regulation (EC) No 304/2008.

Activity	Certified personnel	Certified companies
Installation of stationary fire protection systems	✓	✓
Maintenance or servicing of stationary fire protection systems	✓	✓
Leakage checking of stationary fire protection systems containing ≥3 kg of F-Gases	✓	
Recovery of F-Gases from stationary fire protection systems and fire extinguishers	✓	

**Installation** means connecting for the first time at the location in which they will be operated, one or more containers containing or designed to contain fluorinated greenhouse gas extinguishing agent with associated components, excluding those components which do not affect the containment of the extinguishing agent prior to its release for the purpose of fire extinguishing

**Maintenance or servicing** comprises all activities that entail work on the containers containing or designed to contain fluorinated greenhouse gas extinguishing agent or on the associated components, excluding those components which do not affect the containment of the extinguishing agent prior to its release for the purpose of fire extinguishing

**Leakage checking** means the examination of the system for leakage of fluorinated greenhouse gas extinguishing agent

**Recovery** means the collection and storage of fluorinated greenhouse gas extinguishing agents from fire protection systems and fire extinguishers (typically the collection of the gas from the containers is undertaken at the sites of manufacturers)

Important: While the operator is responsible for making arrangements so that the above described activities are carried out by certified personnel, the certified personnel (and or company) are responsible for the proper execution of the activities.

## How to obtain a certificate

### Personnel

To obtain a certificate personnel must pass a theoretical and practical examination organised by a designated evaluation body. Commission Regulation (EC) No 304/2008 sets minimum requirements as to the practical skills and theoretical knowledge to be covered in the examination. Certificates are issued by certification bodies designated by Member States.

### Companies

To obtain a certificate for installation, maintenance or servicing activities, companies must fulfil certain requirements. As minimum conditions, Commission Regulation (EC) No 304/2008 requires that companies:

- employ certified personnel for the relevant activities in a sufficient number to cover the expected volume of activities, and
- prove that the necessary tools and procedures have been made available to the personnel engaged in those activities

Certificates are issued by certification bodies designated by Member States.

### Mutual recognition

Certificates issued in one Member State are valid in all Member States, but Member States may require a translation of the certificate.

### Interim certificates

In some Member States, interim certification systems will be in place for an interim period not exceeding 4 July 2010. Personnel and companies should contact the competent authorities in their Member State for more information. EU-wide recognition does not apply to interim certificates.