

Do you have **Refrigeration, Air-conditioning, Heat pump, or Fire suppression** systems in your premises?

If so, you have legal responsibilities for your systems.

**Here's what you must do to comply with the law:**

1. Make a full list of all your refrigeration, air-conditioning, heat pump, and fire suppression systems. All systems must have a label and this will help you to make your list, which should include the type and quantity of gas in each system – your contractor will be able to help you with this.
2. Have your systems checked for leaks and get them repaired, leaks will cost you money. How often you must check your systems depends on how big they are.
3. Check that the people working on your systems have the right qualifications and that their company is certified. You can check their certification on [www.fgasregistration.ie](http://www.fgasregistration.ie).
4. Check your equipment is not running on gases that are banned, and make sure you are ready for the phase out of HCFCs (i.e. R22) at the end of 2014. From 1 January 2015, you will not be able to get systems serviced if they contain R22 or other HCFCs.
5. Make sure any waste gas taken from your systems is treated as a hazardous waste.
6. Keep written records to prove you have checked your equipment, used qualified people to maintain it and managed your waste legally. See inside for further details.

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Refrigeration, air-conditioning, heat pump, and fire suppression systems usually run on gases that can damage the environment. These include **Fluorinated greenhouse gases (F-gases)** such as HFCs, which are very powerful greenhouse gases that contribute to climate change and **Ozone-Depleting Substances (ODS)** such as HCFCs (e.g. R22), which are chemicals that can damage the Earth's ozone layer.

Because of these threats to the environment, the EU brought in Regulations to control F-gases and ODS. This guide tells you how to comply with the regulations. The most common gases in use are listed below. Although ammonia and CO<sub>2</sub> have many of the same uses as F-gases and ODS, their use is not controlled because they are less polluting.

**Table 1: Common gases in use as refrigerants and fire suppression agents**

Common Gases in Use	F-gases (HFC)	ODS (HCFC)
R22	✗	✓
R408A	✓	✓
R134a	✓	✗
R404A	✓	✗
R407C	✓	✗
R410A	✓	✗
Ammonia	✗	✗
CO <sub>2</sub>	✗	✗
FM200	✓	✗

1. The best way for you to manage your systems is to have an **inventory**. You should have the following details recorded for each piece of equipment.

**Table 2: Sample layout for inventory of equipment containing f-gases or ODS**

Equipment No.	Equipment Location	Gas Type	Charge/ Amount of Gas (kg)	Leak Checking Requirement	Contractors Responsible	Next Service
1	Roof	R 410A	12kg	1 x year	Xx Freeze Ltd	Feb 2010
2						
3						

All of your systems should have a **label** on them showing the type and amount of gas contained. If the system contains F-gas it must also include the following text "Contains fluorinated greenhouse gases covered by the Kyoto Protocol".

**Figure 1: Sample label on equipment, as legally required by the F-gas Regulation**

<b>Contains fluorinated greenhouse gases covered by the Kyoto Protocol</b>	
Gas Type: <u>R134a</u>	Charge: <u>150Kg</u>

2. Ensure your equipment is **checked for leaks**. The label will tell you the charge (how much gas is in the system) and the type of gas the system contains. You can then check the chart below to see how often it should be checked for leaks.

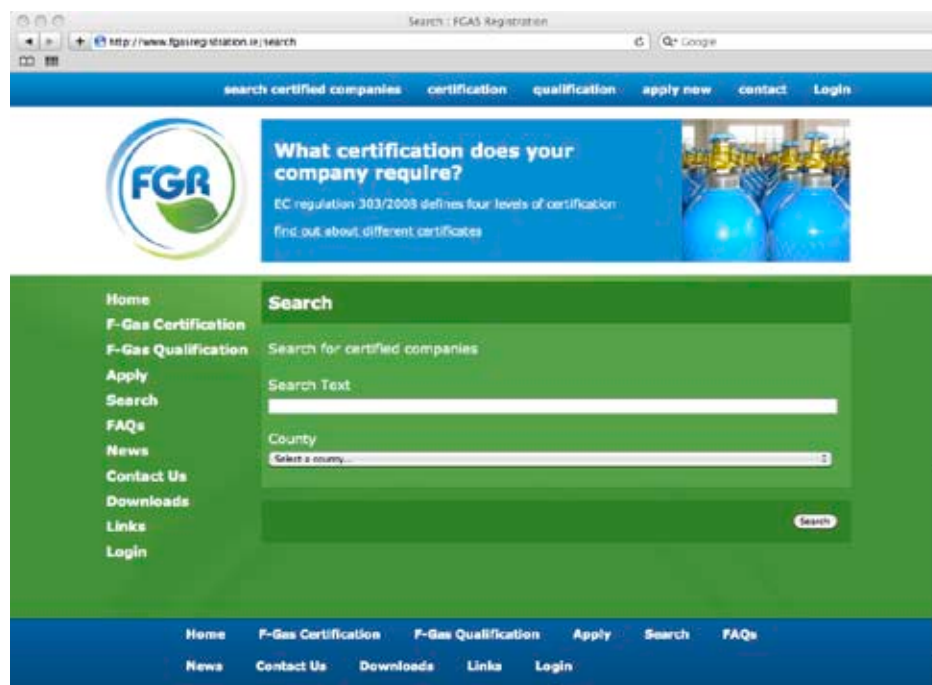
**Table 3: Leak testing frequency for equipment containing F-gases or ODS**

Leak Checking Frequency F-gas & ODS	System charge
None	< 3 kg
Annual	3 kg to 30 kg
6-monthly	30 kg to 300 kg
Quarterly	> 300 kg

Hermetically sealed systems and F-gas systems with automatic leak detection systems can have lower manual leak checking frequencies. For further detail speak to your f-gas certified contractor or check on [www.ozone.ie](http://www.ozone.ie).

3. You must be sure that people working on your equipment have the **right qualifications and are properly certified by F-gas Registration Ltd.** This is to prevent unqualified individuals causing illegal emissions into the environment. You can check your contractor is correctly certified on [www.fgasregistration.ie](http://www.fgasregistration.ie). Please note that your contractor may be certified in another EU country, but must prove this to you.

**Figure 2: Screenshot of F-gas Registration Ltd. website – search facility for certified companies with qualified personnel**



4. The use of certain **ODS gases is now banned**, and all other ODS will be banned by the end of 2014, except in a very limited number of uses. R22 is the most common of these gases still in use. However, the use of virgin R22 is now banned in maintenance and servicing; only reclaimed or recycled R22 can be used in servicing or maintenance of any equipment that still runs on this gas. You should make a plan to upgrade or replace any remaining R22 systems well before the end of 2014 as it will not be possible to have them maintained or serviced from 1 January 2015.
5. Gas taken from a system that you have no further use for is a **hazardous waste** and must be disposed of correctly. Your contractor may take the gas away for treatment if they have provided Prior Annual Notification to the EPA. You must check this on [www.ozone.ie](http://www.ozone.ie) before allowing them to take the gas away.
6. You must keep **written records** to prove you have had your equipment leak checked, that you have used certified people/companies and managed your waste legally.

For further information including record templates and a detailed set of guidance documents please see [www.ozone.ie](http://www.ozone.ie) or [www.fgases.ie](http://www.fgases.ie).

**Figure 3: Guidance documents for Refrigeration and Air-conditioning Contractors and for end users in the Retail, Industrial, Offices and Public Buildings, and Hospitality and Leisure Sectors**



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