



F-Gas and ODS Regulations

What do the regulations cover?

The ODS (Ozone Depleting Substances) regulation is looking to phase out all use of HCFC gases in refrigeration by 2015. The main HCFC used in air conditioning systems is R-22.

The F-Gas regulation looks to measure and control the use of HFC based air-conditioning systems. Common HFCs used in air-conditioning systems include R-134a, R-407c and R-410a.



Why are the regulations being introduced?

Current estimates suggest that up to one third of refrigerants sold in the UK are used to top-up existing systems that are leaking. HCFCs which leak are extremely damaging to the ozone layer. HFCs that leak are extremely potent greenhouse gases. HFCs can have an effect on global warming many thousands of times higher than carbon dioxide if allowed to leak into the atmosphere.

What can I do with my R-22 based system?

From 2010 it will no longer be possible to buy virgin HCFCs to top-up air-conditioning systems. From 2010 to 2015 it will be possible to use recycled HCFCs from de-commissioned air-conditioning systems to top-up existing systems. This will no longer be allowed from 2015.

A complete replacement of any R-22 based system should be considered. Alternative refrigerants may be available but these are likely to affect system performance.

What do I need to do with an R-134a, R-407c or R-410a system?

HFC based systems with a refrigerant charge over 3.0kg will need to be tested annually for leaks and the results recorded. For systems with over 30kg of refrigerant testing will be required 6 monthly and for

systems with over 300kg of refrigerant testing will be required quarterly.

Who is responsible for ensuring the systems are tested?

Most of the key obligations under the EC F gas Regulation are the responsibility of the "operator" – defined as "the natural or legal person exercising actual power over the technical functioning of the equipment and systems".

How do I know what refrigerant my system uses or how much?

The refrigerant type might be shown on the equipment label. Alternatively the refrigerant type will be shown in the maintenance manuals. Manufacturers should be able to provide data on refrigerant charge volumes. The 3.0kg lower limit for testing means that most small 'split' systems will not need testing. There is no lower limit on the size of R-22 system that requires phasing out. R-134, R-407c or R-410a VRF or chiller systems, 6 monthly testing will probably be required on systems of over 125kW capacity.

What should I do now?

If you do not already have a testing regime in place it is vital to start this as soon as possible. The first stage is to establish how many systems you are responsible for and what the refrigerant type and charge is for each system. Following this a testing regime can be established. Phasing out of R-22 and other HFC systems should also be considered.

Where can I find out more?

The DEFRA website has information sheets on aspects of the F-Gas regulations affecting air-conditioning systems at:

<http://www.defra.gov.uk/environment/air-atmos/fgas/comply/quantity.htm>

Alternatively contact Mecserve who can offer advice on inspections and good maintenance practice.

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