



EFCTC NEWSLETTER

An update on fluorocarbons and sulfur hexafluoride

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GOVERNMENT STATISTICS SHOW IMPROVEMENT OF CONTAINMENT OF F-GASES

The annual [emission rates](#) of F-gases used in [refrigeration](#) and [air conditioning](#) have improved significantly over the past 10 years and now represent between only 5 and 10% of the bank still contained in equipment. This implies that it would now take between 10 and 20 years for the original mass of refrigerant charged into a system to be released into the atmosphere. In the 1980s, this figure was above 30%.

The conclusion was gained from examining the [reports submitted by European countries](#) as part of their commitment under the Rio Convention and has recently been [published](#). The paper also shows that, despite significant growth in the uses of F-gases, the improvement is being maintained; an observation consistent with the lower charge sizes and leakage rates of new equipment and [better maintenance and service](#).

Source: McCulloch, A., Evidence for improvements in containment of fluorinated hydrocarbons during use: an analysis of reported European emissions. Environ. Sci. Policy (2009).

AN HFC-134A USING CONTAINER REFRIGERATION UNIT DESIGNED TO REDUCE ITS ENVIRONMENTAL IMPACT



Fitted with a digital scroll compressor and other enhancements, a technologically advanced container [refrigeration](#) unit using refrigerant [HFC-134a](#) delivers lower energy consumption, excellent pull down capacity and a high deep frozen capacity.

Designed to reduce environmental impact and lifecycle cost of container refrigeration, the new unit helps shippers lessen their environmental impact by reducing emissions related to energy production.



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Fuel conservation, reducing environmental impact and managing total cost of ownership are core concerns of refrigerated fleets. Energy savings are especially important, as energy costs represent about one to two-thirds of a refrigeration unit's Total Ownership Cost.

Refrigerated transport is an essential global market. Consumers demand safe, high-quality perishable foods. The challenges to suppliers include food safety and energy consumption.

The new unit's low power consumption and fast pull down make it most appealing to the banana trade. Bananas are among the most challenging produce items to ship, as once they are picked from the tree the ripening process accelerates.

Source / Equipment Manufacturer

NEW IMAGING CAMERA TRACKING FUGITIVE SF₆ LEAKS IN REAL-TIME

A rapid scanning camera has been developed, delivering real-time thermal images of gas leaks and capable of imaging fugitive greenhouse gases such as [Sulfur Hexafluoride](#) (SF₆) and NF₃.

The camera takes advantage of an advanced detector and an optical system that are tuned to a narrow spectral infrared waveband specific to SF₆ detection.

SF₆ is an [effective insulator](#) that prevents arcing in high-voltage circuit breakers and gas-insulated substation equipment. When used properly, the gas enables safe and efficient utility operations, but leaks must be avoided and tracked as rapidly as possible when they appear. Voluntary efforts to curb SF₆ emissions are underway.

Utilities worldwide are working together to implement SF₆ gas leaks detectors.

Source: Equipment Manufacturer

GUIDANCE NOTE FOR THE NEW REFRIGERATION SYSTEMS SAFETY STANDARD INCORPORATING EU REGULATIONS REQUIREMENTS

UK's [IOR](#) (Institute of Refrigeration) has published a [Guidance Note](#) to help designers, installers, maintenance personnel and those interested in the new European Standard for the design and construction of refrigeration systems EN378:2008 "Refrigerating systems and heat pumps — Safety and environmental requirements".



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EN378 was republished following a comprehensive review period. The previous version of the standard, EN378:2000 has been withdrawn and is replaced by EN378:2008.

EN378 is published in four parts:

- Part 1: Basic requirements, definitions, classification and selection criteria
- Part 2: Design, construction, testing, marking and documentation
- Part 3: Installation site and personal protection
- Part 4: Operation, maintenance, repair and recovery

The main reason for the update was to harmonise the standard with the EU Pressure Equipment Directive 97/23/EC, and it was also assessed for conformity with the Machinery Directives 98/37/EC and 2006/42/EC.

The IOR has also updated its refrigerants [codes of practice](#) to complement the new standard, for

- Carbon Dioxide
- Ammonia
- A2 and A3 Refrigerants (flammable halocarbons and hydrocarbons)
- A1 Refrigerants (non flammable halocarbons)

The Ozone Depleting Substances Regulation and the EU F-GAS Regulation European Regulation on Certain Fluorinated Greenhouse Gases (2006) (F Gas Regulations) impose certain obligations on the 'user' of refrigerating equipment, which are also incorporated.



NEW ON FIGAROO.ORG

EXTINGUISHING SYSTEMS GUIDANCE NOTE FOR THE F-GAS REGULATION

F-Gases as fire extinguishing agents are also covered by the [F-Gas Regulation](#) and its [implementing Regulation](#) on minimum requirements and conditions for mutual recognition for the certification of companies and personnel.

The [FIA](#) (Fire Industry Association) has endeavoured to make the regulation practical and workable, and to reflect best practice in the industry.

The FIA has published a [Guidance Note](#) for the Fire Protection Industry.



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Support from the FIA for end users, specifiers, contractors and members includes:

- impartial guidance
- training materials
- feedback from the continued dialogue with the UK Government and the European Commission.
- company and personnel certification.

NEW LINKS ADDED

Applications of Fluorocarbons

FIA (UK Fire Industry Association)

<http://www.fia.uk.com/>

Regulatory

Summary of the EU legislation on ODS

<http://europa.eu/scadplus/leg/en/lvb/l28064.htm>

Summary of the EU legislation on F-Gases

<http://europa.eu/scadplus/leg/en/lvb/l28138.htm>