Technical Guidance Document No 10
Update on the changes to the F Gas Regulations
August 2015

Introduction

This document is intended to provide guidance for individuals involved directly or indirectly in the maintenance of commercial catering refrigeration equipment and the content is limited to the most commonly encountered equipment and is not therefore exhaustive.

Background

The original EC F Gas Regulation came into force in 2007 with the intention of limiting the damage to the earth's atmosphere caused by F-gas refrigerants by reducing leakage, deliberate release to air and measuring the amount of F-Gases (HFCs) being used.
It became a legal requirement for businesses that employed their own refrigeration engineers to hold company certification from 4th July 2009. At the time CEDA advised members who did not employ their own refrigeration engineers to ensure that any refrigeration sub contractors should hold a company certificate. This regulation did not sufficiently reduce the amount of F-gas refrigerant lost to atmosphere.

Changes

The implementation of new regulations in January 2015 (EU 517/2014) is intended to encourage manufacturers to reduce the usage of the most damaging gases in stepped phases between 2015 and 2030 and to reinforce requirements for operators and companies that undertake maintenance work to take steps to prevent F-gas leaking and to repair leaks as soon as possible. Many of the changes apply primarily to equipment and gas manufacturers and have little or no implications for commercial catering refrigeration maintenance. The timeline at the end of this document indicates the full scale of the changes.

The fundamental change introduced in the new rules relates to the method of measuring the F-Gases. The previous requirements were based on the weight of F-Gas used in the equipment anything containing 3kg or over would require checking and the use of an F-gas log whereas the new regulations take into account the Global Warming Potential (GWP) of the particular refrigerant and state the new requirements to measure the quantity of gas in CO_2 equivalent.

To illustrate this, CO_2 is the base measurement for GWP and has a value of 1. A common refrigerant used in commercial catering refrigeration is R404a which has a GWP of 3922. This means that 1kg of R404a has the GWP of 3922kg (3.922 tonnes) of CO_2

Implications of the changes

Prior to the introduction of the new regulations, only refrigeration equipment containing more than 3kg of F-Gas refrigerant (6kg if hermetically sealed) required regular testing for leaks. Equipment with less than 3kg of refrigerant was exempt from the requirement of testing for leaks.
The new regulations set the new level as 5 tonnes of CO_2 equivalent which in the case of refrigerant R404a equates to 1.3kg, a reduction of over 50%.
The exemption from regular testing for leaks of equipment with less than 3kg of refrigerant has been extended until the 1st January 2017.
Under the previous regulations large amounts of commercial catering refrigeration equipment contained less than 3kg of refrigerant with only large multi door freezers, large Serve-overs, Larger Multi-decks, large cold rooms and deep freeze rooms falling within the scope. The changes in regulations will now possibly include large upright refrigerated cabinets, large chest freezers, smaller multi-decks, blast freezers, blast chillers and smaller cold rooms and freezer rooms. Many thousands of previously not effected cabinets will soon require leak testing and recording as do the larger cabinets

Recommendations
There are several thousand units currently in the market that will require regular testing for leaks from the 1st January 2017 potentially creating much more work for members. It is recommended that members create a database of these units and advise their clients of the implications so that they can plan and budget accordingly.

Opportunity
The cost of HFC refrigerants is already rising and therefore the value of reclaimed gas is increasing. The opportunity exists for members to purchase reclaim bottles so that they can remove the refrigerant from units that have reached the end of their lives and use it for other repairs or sell it into the market. This exercise also leaves the old unit ready for scrapping.

Recording test results
The CEDA/CESA Refrigeration Equipment Service Report can continue to be used as can the Refrigeration Equipment Record Sheet, however this will be amended at the next reprint to include CO_2 equivalent as well as kg. Both these documents are available from First Choice Catering Spares

Timeline
Note: all sales figures are based on the mean average recorded sales of F-Gases between 2009 and 2012 and apply both to gas and equipment manufacturers

1st January 2015 – New Test Requirements plus freeze in sales and an allowance of a 10% additional quota for equipment imported from outside the EU

1st January 2016 – Sales reduction to 93%

1st January 2017 – Sales capped, import quota ends, 3kg test exemption ends

1st January 2018 – Sales reduction to 63%

1st January 2020 – Ban on new equipment sales and servicing above 40 tonnes CO_2 equivalent of refrigerants with GWP in excess of 2500

1st January 2021 – Sales reduction to 45%

1st January 2022 – Ban on new equipment sales and servicing above 40 tonnes CO_2 equivalent of refrigerants with GWP in excess of 150

1st January 2024 – Sales reduction to 31%

1st January 2027 – Sales reduction to 24%

1st January 2030 – Sales reduction to 21%

CEDA wish to acknowledge and thank Steve James of First Choice Group for his help in preparing this document.