

## F Gas Directive Update

In April this year the European Council adopted the revised 'F' gas regulations. The directive is focused on methods to accelerate the reduction of emissions of fluorinated greenhouse gases into the environment and within the document are some fundamental changes regarding leak checking and fixed refrigerant leak detection equipment.

As a supplier and manufacturer of refrigerant leak checking and fixed refrigerant detection equipment we have outlined below the implications and requirements of the revised 'F' gas directive regarding these two activities.

### Practical methods to reduce emissions

The most fundamental change is that the frequency of leak checking and provision of fixed detection systems is focused on the equivalent CO<sub>2</sub> effect of the refrigerant charge. This value can be determined from the refrigerant charge (kg) multiplied by its Global Warming Potential (GWP). This value can be divided by 1000 to determine the CO<sub>2</sub> equivalent in Tonnes.

There are three key thresholds that owners of refrigeration equipment must be aware:-

5 Tonnes CO<sub>2</sub> Equivalent

50 Tonnes CO<sub>2</sub> Equivalent

500 Tonnes CO<sub>2</sub> Equivalent.

### Manual Leak Checks

The frequency of manual leak checks by a suitably qualified individual depends upon the CO<sub>2</sub> equivalent of the system charge as outlined in the table. There are however some temporary exemptions until 31<sup>st</sup> December 2016 for systems with a charge of less than 3kg or 6kg for hermetically sealed equipment. If however a fixed refrigerant leak detection system is installed the frequency of manual checks is halved.

### Fixed Leak Detection Systems

For refrigeration systems with an equivalent CO<sub>2</sub> charge size greater than 500 Tonnes there is a mandatory requirement for a fixed refrigerant leak detection system. For high GWP refrigerants such as R404a, R507a and R422d this means that many systems which under the earlier version of the 'F' gas directive did not require a fixed detection system now fall within the requirement. In addition there is now a mandatory requirement for the refrigerant detection system to automatically communicate leak alarms to the system owner or service provider.

The directive also highlights that the fixed leak detection equipment must be checked at least once every 12 months for refrigeration and air-conditioning applications.

### Refrigeration equipment owners must react quickly

Owners of refrigeration equipment must act quickly as the regulations are applicable from 1<sup>st</sup> January 2015.

### How can we assist you?

CPC (UK) have a more detailed overview of the Directive with regards to leak checking, fixed detection and key dates for bans which is available on application to [cpc.sales@cpck.co.uk](mailto:cpc.sales@cpck.co.uk) or for those with an eye for detail the directive is available on our web site, [www.cpck.co.uk](http://www.cpck.co.uk)

CPC (UK) have been providing refrigerant leak detection and leak checking equipment for over 20 years to the refrigeration industry with customers in all sectors of the Industry. Allow us to assist your company in fulfilling the requirements of the new 'F' gas directive with regards to the provision of fixed and portable refrigerant leak detection equipment.

Refrigerant	GWP	5T CO2 equivalent (kg) <i>Leak check frequency:-</i> - 12 months (no fixed LD) - 24 months (fixed LD)	50T CO2 equivalent (kg) <i>Leak check frequency:-</i> - 6 months (no fixed LD) - 12 months (fixed LD)	500T CO2 equivalent (kg) <i>Leak check frequency:-</i> - 3 months (no fixed LD) - 6 months (fixed LD)
R32	675	>7.4	>74	>740.7
R134a	1430	>3.5	>34.96	>349.6
R245fa	1030	>4.85	>48.5	>485
R404a	3922	>1.27*	>12.7	>127
R407A	2107	>2.37*	>23.7	>237
R407C	1774	>2.8*	>28	>281.8
R407F	1850	>2.7*	>27	>270
R410A	2088	>2.39*	>23.9	>239
R422D	2729	>1.8*	>18.3	>183
R437A	2550	>1.96*	>19.6	>196
R507A	3985	>1.25*	>12.5	>125
R1234yf	4	>1,250	>12,500	>125,000
R1234ze	7	>714	>7,142.8	>71,428

\*Leak checks not mandatory until 31<sup>st</sup> December 2016 for equipment <3kg of HFC refrigerant OR <6kg for hermetically sealed equipment.

