

F-gas REGULATION (EU) No 517/2014 & Containment of Refrigerant Compressors

The objective of the REGULATION (EU) No 517/2014⁽¹⁾ known under F-gas regulation is to protect the environment by reducing emissions of fluorinated greenhouse gases.

Accordingly, rules on containment, use, recovery and destruction of fluorinated greenhouse gases, have been established.

CONTAINMENT⁽²⁾ developed in CHAPTER II Article 3 on the Prevention of emissions of fluorinated greenhouse gases is one among key measure related to reduction of fluorinated greenhouse gases:

- Intentional release of fluorinated greenhouse gases into the atmosphere shall be prohibited
- Operators of equipment that contains fluorinated greenhouse gases shall take precautions to prevent the unintentional release ('leakage') of those gases. They shall take all measures, which are technically and economically feasible to minimize leakage of fluorinated greenhouse gases.
- Where a leakage of fluorinated greenhouse gases is detected, the operators shall ensure that the equipment is repaired without undue delay.

Where the equipment is subject to leak checks under Article 4, and a leak in the equipment has been repaired, the operators shall ensure that the equipment is checked by a certified person within one month after the repair to verify that the repair has been effective.

ASERCOM member companies are always concerned by any refrigerant leakages from systems and strive to work with partners to achieve the best possible system containment at all times. Leakages, in addition to impairing system performance can, in the case of HFC's, have a direct effect on global warming, and in the case of other refrigerants can have a detrimental and possibly dangerous effect on the immediate environment. The following general guidelines have been prepared to provide information on the containment procedures being followed by member companies during development and final compressor product testing.

Compressors being components of the refrigerating system have to be considered as a potential source of leakage. However, studies by independent institutes⁽³⁾ have proven that compressors are not normally a significant source of refrigerant leakage. Nevertheless, *ASERCOM* members have put into place measures for further improvements concerning tightness of products and connections. An internal survey covering all *ASERCOM* member companies shows that updates to their specifications are continually demanding improvements in containment requirements, and although the production procedures show some differences the final results are equivalent.

- All compressors manufactured by *ASERCOM* members fulfil stringent tightness requirements especially regarding the main connections to the system pipe work as well as connections for required accessories. These topics are handled in close relation with the Controls Manufacturers Member Companies.
- Compressor tightness verification is conducted using helium spectrometer or other appropriate methods according to EN 1779 that guarantee tightness as requested by relevant standards.

STATEMENT



Last update: November 2019

ASERCOM member companies obviously agree to continue to stress containment issues in their daily manufacturing process and in all their new product development.

- (1) The Fourth Assessment Report of the Intergovernmental Panel on Climate Change ('IPCC') of the United Nations Framework Convention on Climate Change ('UNFCCC'), to which the Union is party, stated that, on the basis of existing scientific data, developed countries would need to reduce greenhouse gas emissions by 80 % to 95 % below 1990 levels by 2050 to limit global climate change to a temperature increase of 2 °C and thus prevent undesirable climate effects
- (2) The Commission report of 26 September 2011 on the application, effects and adequacy of Regulation (EC) No 842/2006 of the European Parliament and of the Council (4) concluded that the current containment measures, if fully applied, have the potential to reduce emissions of fluorinated greenhouse gases
- (3) (e.g. ILK Dresden) & EN ISO 14903 "qualification of tightness of the component and joints".

These recommendations are addressed to professionals, industrial, commercial and domestic refrigeration system manufacturers / installers. They have been drafted on the basis of what *ASERCOM* believes to be the state of scientific and technical knowledge at the time of drafting, however, *ASERCOM* and its member companies cannot accept any responsibility for and, in particular, cannot assume any liability with respect to any measures - acts or omissions - taken on the basis of these recommendations.
