

Last update: April 2018

## Energy Efficiency Rating

*ASERCOM* members have been energy conscious for years. All developments are showing significant improvements in compressor efficiency. With regards to the demand of the KYOTO Protocol to decrease the emission of greenhouse gases and related energy saving measures (e.g. ErP Directive 2009/125/EC, which is currently under review) *ASERCOM* members support the following regulations:

(EU) No 813/2013 of 2 August 2013 implementing Directive 2009/125/EC of the European Parliament and of the Council with regard to ecodesign requirements for space heaters and combination heaters

→ compressors and components for heat pumps

(EU) 2015/1095 of 5 May 2015 implementing Directive 2009/125/EC of the European Parliament and of the Council with regard to ecodesign requirements for professional refrigerated storage cabinets, blast cabinets, condensing units and process chillers

→ compressors and components for chillers; condensing units etc.

(EU) 2016/2281 of 30 November 2016 implementing Directive 2009/125/EC of the European Parliament and of the Council establishing a framework for the setting of ecodesign requirements for energy-related products, with regard to ecodesign requirements for air heating products, cooling products, high temperature process chillers and fan coil units

→ compressors and components for chillers etc.

*ASERCOM* members participate in the reduction of CO<sub>2</sub> emission by continuing to work on further improvements and actively participate in the eco-design regulations that are in development as well as in the existing eco-design regulations that are under review.

However, the highest potential for energy savings is obviously on system design, system control, operation and maintenance. *ASERCOM* members will continue to support their partners to ensure the efficient application of their products.

In order to compare and select the most appropriate compressor with the highest Coefficient of Performance (COP) for a particular application *ASERCOM* established a tool for the user with its Performance Certification Programme based on the European Standard EN 12900 for compressors and EN 13215 for condensing units (rating conditions, tolerances and presentation of manufacturer's performance data). *ASERCOM* publishes the certified products (compressors and condensing units) on their website to support market transparency)

An *ASERCOM* Common Refrigerant Data Base serves as a reference base for all evaluation of performances. This ensures comparability over time since the public refrigerant property

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libraries are not fully synchronized and thereby result in slight discrepancies over time, resulting in different efficiency values and causing confusion to users.

*ASERCOM* members are supporting all efforts towards energy efficiency – but are facing the following challenge:

Currently there are 3 ecodesign regulations concerning HVACR components and 6 ecodesign regulations concerning HVACR equipment/systems in force. The HVACR components are now already under review again, one more HVACR equipment/system regulation is still under development, and 3 HVACR equipment/systems regulations are under review.

Regulating parts within regulated products is endangering innovation and draws on resources that the manufacturer could use to invest in alternative innovative and more energy efficient technical solutions. Exchanging existing components in equipment – where the equipment is fulfilling the ecodesign requirements – is not helping efficiency, but slowing down innovation.

On top the requirements from the F-gas regulation are impacting as well all HVACR system design. The market demands the qualification and/or design of components for new refrigerants.

The HVACR component manufacturers are stretched to the very limit to follow all relevant legal and technical discussion at the EU level, and at the same time working with their European and global customers on their demands concerning component development.

This does not leave much room for innovation and being competitive outside of Europe. Furthermore attention has to be given to Market Surveillance in order to establish a level playing field. Member States have to ensure the Market Surveillance activities are adequate to cover all these regulations.

*ASERCOM* is committed and is contributing to ensure industry's compliance and has established a certification scheme for condensing units to ensure that the market can select products with a proven energy efficiency that fulfill the COMMISSION REGULATION (EU) 2015/1095 of 5 May 2015 implementing Directive 2009/125/EC of the European Parliament and of the Council with regard to ecodesign requirements for professional refrigerated storage cabinets, blast cabinets, condensing units and process chillers.

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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 reliability with respect to any measures - acts or omissions - taken on the basis of these recommendations.

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