

CO₂ SOLUTIONS



NATURALLY READY FOR THE FUTURE!

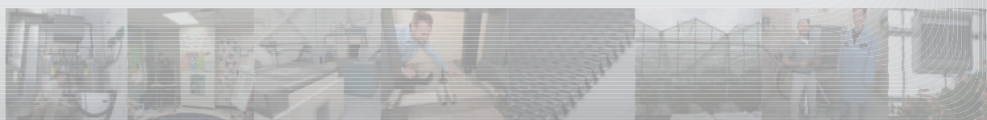
Our products have been developed to offer efficient performance and reduced energy consumption, in compliance with the latest F-Gas regulations.

Moreover, thanks to a more compact inner volume, our products use less refrigerant charge than in the past.

Modine anticipates the future by presenting cutting-edge environmentally friendly solutions!

OUR PRODUCT RANGES
MEET F-GAS REGULATIONS
AND HAVE BEEN DEVELOPED FOR PRESENT
AND FUTURE REFRIGERANTS

ECOTM heat transfer coolers





F-GAS READY!

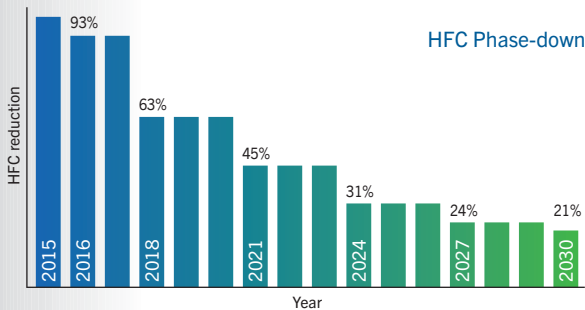
The international scientific community concurs that countries with fossil fuel-based economies are, to some extent, accountable of global warming.

In order to address and challenge the adverse effects of climate change, the European Commission has started a program to promote the establishment of a more sustainable and efficient economy.

This program covers the main economic sectors, including the refrigeration industry. In fact, it comprises the F-Gas Regulation (EU – No. 517/2014) which aims to significantly reduce the emissions of high GWP (Global Warming Potential) fluorinated refrigerants (HFCs).

The F-Gas regulation enforces the gradual ban of HFCs.

The refrigeration industry is responding to this significant change by developing and introducing new technologies and innovative designs for refrigeration installations.



The entire sector is rapidly evolving: from HFC producers, product plant management to maintenance operators.

Starting from 2018, as per F-Gas guidelines, the quantities of HFCs available on the EU market have been limited. The reduction process, called “HFC phase down”, is based on a quota system specified by a CO₂ equivalent.

HFC restrictions timeline:

- from January 2020, permanent refrigeration equipment containing HFCs with GWP equal to or greater than 2500;
- from January 2022, commercial multipack refrigeration systems with nominal capacity of or greater than 40 kW, containing fluorinated gases with GWP equal to or over 150.

These step-by-step changes will impact all manufacturers of refrigeration systems.

The evolution of our products is ongoing and prompted by current regulations. We even anticipate the future by developing and launching innovative product ranges.

Today our product portfolio includes models with smaller internal volumes, that ensure higher efficiency with a substantial reduction of the amount of refrigerant employed.

We have also designed a comprehensive range of CO₂ models (GWP=1) that can run at higher operating pressures. These units can now also be used in regions that are characterized with climates with higher temperatures; thanks to options and technical solutions that guarantee optimum performance and reduced energy consumption.

Our company is committed to the transition to more environmentally friendly refrigerants.

To check the performances with new generation low-GWP synthetic or natural refrigerants our “Scelte” selection software is at your disposal, at www.modineselect.com. This tool is constantly updated with all the latest and most significant innovations on the market.

CO₂



In the near future high GWP refrigerants will be replaced by low environmental impact alternatives.

Building an installation today, that employs increasingly expensive older generation refrigerants, implies being subjected to rising installation and operational costs. For this reason Modine has designed a new range of unit coolers, gas coolers and remote condensers for commercial and industrial applications that operate with R744 (CO₂ – carbon dioxide).

Advantages of R744

- High level of safety and reduced environmental impact.
- Non-flammable.
- Non-toxic, chemically inert and non-corrosive.
- No risk of contamination if refrigerant comes into contact with the stored foodstuff.
- No precautionary measures required in case of refrigerant recharge.
- The high efficiency of the refrigerant allows to reduce, in comparison to normal installations, the dimensions of the units and compressors used.

Our units with R744 can be calculated for direct expansion or pump applications.

Thanks to optimized finned pack heat exchangers with special tubes, the maximum operating pressures can reach up to 80 bar for the unit coolers and 130 bar for the gas coolers.

EXPERIENCE

We have designed and produced thousands of units coolers, gas coolers, and heat exchangers for an extensive range of applications

INNOVATION

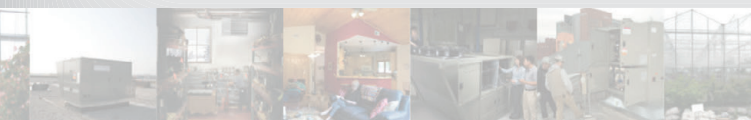
We use technologies that allow the installation of our gas coolers in regions that are characterized by climates with high average temperatures

ENERGY SAVING

With CO₂ systems it is possible to recover an important part of the heat they produce, which can be used for heating buildings

RELIABILITY

Thanks to optimized heat exchangers with special tubes, the maximum operating pressures can reach up to 80 bar for the unit coolers and 130 bar for the gas coolers



A COMPLETE RANGE OF F-GAS READY COMMERCIAL COOLERS!
 ALL OUR PRODUCTS CAN OPERATE WITH CO₂

ECO™ heat transfer coolers



UNIT COOLERS AND BRINE COOLERS

CONDENSERS, LIQUID COOLERS AND GAS COOLERS

UNIT COOLERS FOR CO₂

UNIT COOLERS FOR A2L

EVS



EP



MIC



GCE



GDE



GME



GSE



GLE



CTE



ICE



IDE



SRE



LCE



TKE



PCV



PCR



PKE



EG(K)



KCE



VCE



VCC



CGC



CDC



CGS



CGD



CDD



CGL



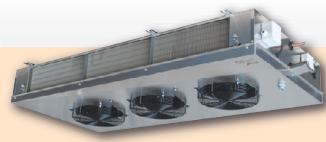
AP



AGC



AGD



AGS



AGL



Scelte

SELECTION SOFTWARE

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About Modine

Modine specializes in thermal management systems and components, bringing highly engineered heating and cooling components, original equipment products, and systems to diversified global markets through its four complementary segments: BHVAC, CIS, HDE, and Automotive. Modine is a global company headquartered in Racine, Wisconsin (USA), with operations in North America, South America, Europe and Asia.

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