

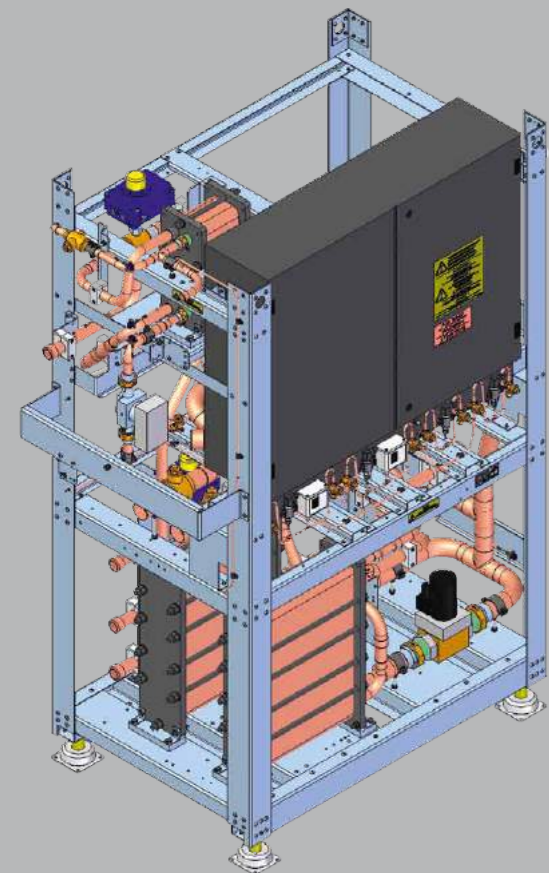
Standardised modules to suit your individual needs

Secondary Medium Temperatures

The CO₂OLheat range of heating systems is available to suit a variety of secondary medium inlet and outlet temperatures, as detailed in the table below.

Note that secondary medium inlet/outlet temperatures can be selected within +/-5K of the standard values shown below, dependant on specific requirements.

COOLheat	Primary Heating Circuit Space Heating						Optional Secondary Heating Circuit	
	10	10	20	20	30	30	Tap Water	Comfort Heating
Inlet temp °C (+/-5K)	10	10	20	20	30	30	25	35
Outlet temp °C (+/-5K)	30	40	50	30	40	50	65	45



Dimension 1.99 x 0.79 x 1.50-1.90m (H x W x L)

Scope of Supply:

CO₂OLheat Units are supplied complete with the following components as standard:

- Multiple high efficiency plate heat exchangers for best in class part load behavior
- Low energy EC pumps
- Electrical control panel
- Electronic PLC controller
- Specially designed control software allowing dynamic link with CO₂OLtec refrigeration rack
- Full remote monitoring/control capability
- Electronic control valves
- Gas cooler bypass functionality
- Integrated safety features
- Standardised, riveted frame with anti-vibration mounts

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The Optimal Heat Solution
for Carrier CO₂ Refrigeration Systems

Preserve natural resources
Sustainability
Reliability
Energy efficiency

CS-RP-CO2-449-GB-1012 | The manufacturer reserves the right to change the product specifications without notice.



Efficiently delivering the right degree of heat



CO₂OLheat® is an innovative range of modular CO₂ heating units designed to efficiently obtain heat from your refrigeration system for use elsewhere in the premises, resulting in a substantially reduced carbon footprint and lower energy costs. The CO₂OLheat range is capable of delivering from 35 to over 500 kW* of heating capacity all year round.

The CO₂OLheat product has been specially engineered to complement the entire Carrier CO₂OLtec® CO₂ refrigeration rack portfolio. All CO₂OLheat units are delivered as simple add-ons to the standard CO₂OLtec CO₂ rack range. This modular design means that the perfect CO₂OLheat rack model is always available to meet your heating and hot water demands.

In addition to utilising heat from the refrigeration system, the CO₂OLheat unit also takes control of the secondary medium cycle, for example water or glycol.

This ensures that the refrigeration and heating systems work together intelligently, maximising operational efficiency and reliability.

CO₂OLheat has the ability to utilise 100 percent of the heat from the refrigeration cycle, ensuring that none is wasted.

This factory produced, standardised product eliminates the risk of inefficient, complex and costly field engineered solutions whilst assisting customers in achieving compliance with increasingly stringent environmental legislation and responsibilities.

Optimised efficiency through intelligent design

Intelligent Controls

CO₂OLheat systems offer best in class energy efficiency, and the possibility to eliminate conventional heating almost entirely, through the implementation of intelligent controls and design.

Dynamic control algorithms ensure that the refrigeration rack and heating system work in partnership at all times in order to achieve optimal performance and efficiency across the system as a whole.

CO₂OLheat units can process a variety of heat demand signals; both analogue

and digital. Additionally, integrated heat exchangers, pumps, control valves and water side capacity control ensure that CO₂OLheat can accurately match the required heating load even at low load conditions.

Gas Cooler Bypass

Integrated gas cooler bypass functionality within the CO₂OLheat unit means that all heat can be utilised when necessary, with nothing being lost to the external atmosphere. This ability is available during both supercritical and subcritical operation.

Carrier CO₂OLtec Racks

The CO₂OLheat product has been specifically designed and optimised to operate as an add-on to the Carrier standard range of CO₂OLtec refrigeration racks.

Carrier's CO₂OLtec refrigeration racks – named MaxiCO₂OL® and MiniCO₂OL® – are designed to meet every store format capacity requirement, from discount stores to hypermarkets.

Standardised modules to suit your individual needs

Module Types

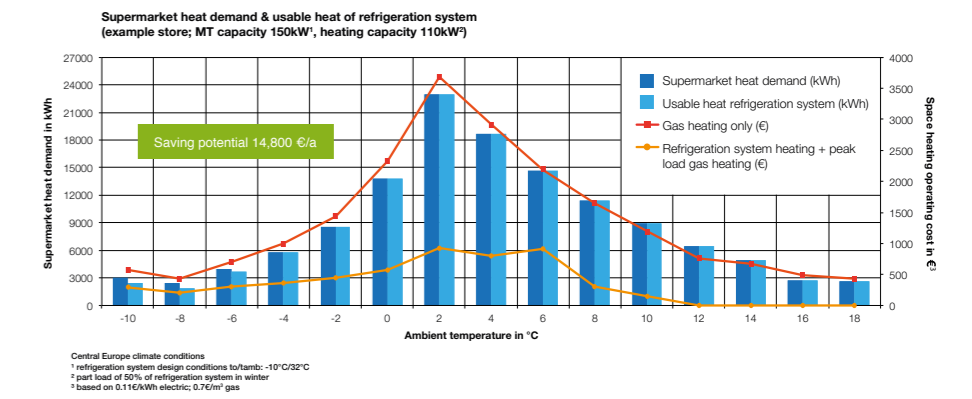
There are a number of standardised CO₂OLheat module types available to suit your individual heating requirements. The module types include:

- 1) Space heating.** Deliver heat directly to your space heating circuit.
- 2) Space heating and hot water.** Two separate water/glycol circuits providing heat for both space heating and either hot tap water, air curtain, or comfort heating.
- 3) Combined space heating.** Combine the heat output of two CO₂OLtec refrigeration systems into a single CO₂OLheat unit, with the option of having either one or two water/glycol-side circuits.

Satisfying Demand

In many cases CO₂OLheat can satisfy the entire store heating demand at the vast majority of ambient temperatures, allowing traditional heating systems to be virtually eliminated.

For an average supermarket, the CO₂OLtec refrigeration system heating capacity can exceed building demand almost all year round.

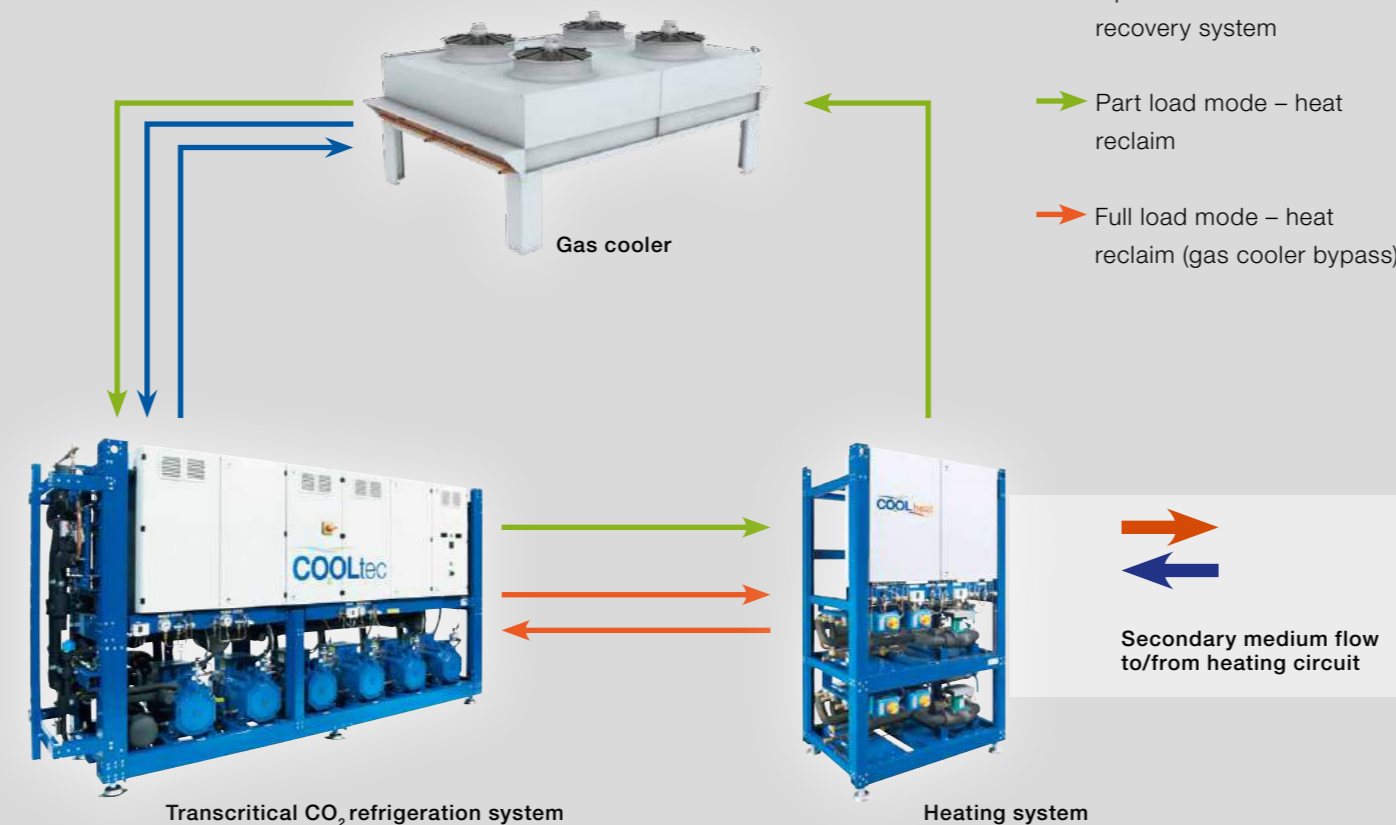


Benefits at a glance:

- From 35 kW to over 500 kW heating capacity*
- Reduced carbon footprint and energy costs
- Best in class energy efficiency
- Attractive return on investment
- Standardised, modular, factory produced units
- Utilise 100 percent of heat from refrigeration cycle
- Remote monitoring & control functionality

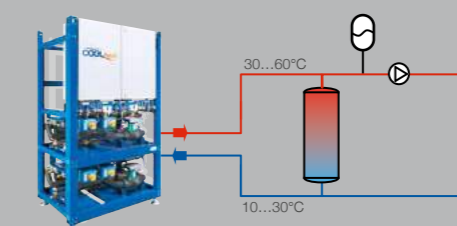
* Heating capacity shown is at -10°C, winter, 85 bar high pressure

Improving Efficiency: Gas Cooler Bypass

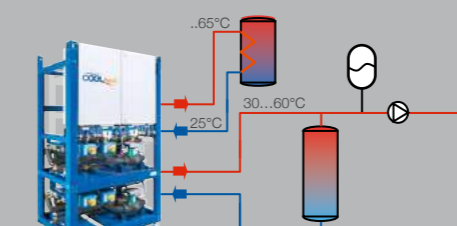


CO₂OLheat applications

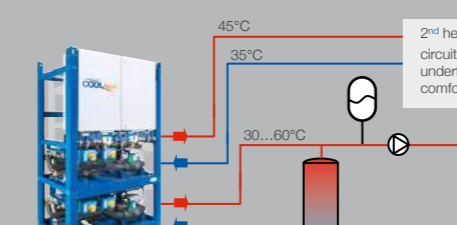
For heating system with buffer tank



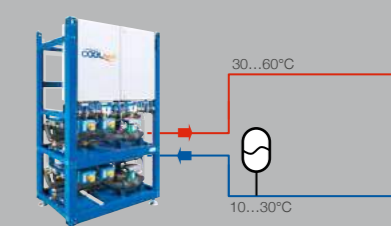
For heating system and tap water heating



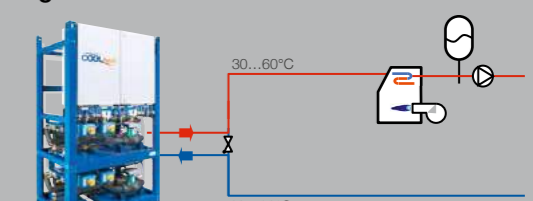
For heating system and comfort heating



For direct heating system



For heating system with conventional gas burner as reheater



For two CO₂OLtec MT refrigeration systems

