CO_2 ZEAS

EFFICIENCY AND SUSTAINABILITY

CASE STUDY:
Franchisee Dia
Guadalix de la Sierra

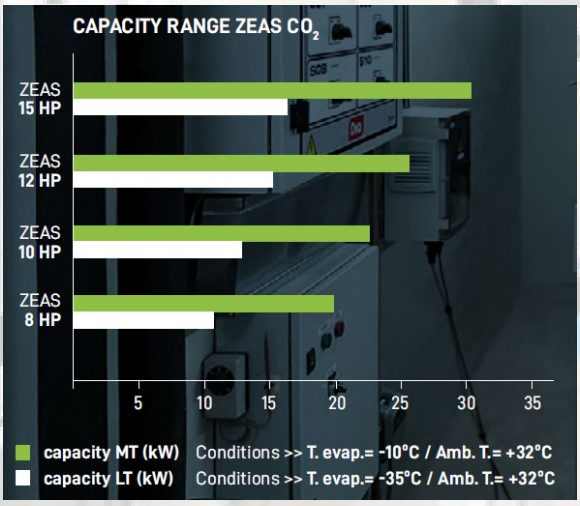
(MADRID - SPAIN)

CO_2 ZEAS

Condensing unit for medium and low temperature applications

Perfect solution for all refrigeration and cooling applications (MT - LT) with variable load conditions and need for high efficiency. Compact equipment with low energy consumption that meets the needs of each project and reduces the environmental footprint thanks to the use of natural refrigerant (CO_2).

APPLICATION: < 400 M2 / < 600 M2



CO_2 ZEAS is available in different capacity ranges, from 8 to 15 hp, and provides the necessary refrigeration and cooling capacity for 8 to 15 hp, and supplies the necessary refrigeration and freezing capacity to third-party equipment such as open cabinets, glass door freezers and evaporators.

EFFICIENT EVEN WITH LOW REFRIGERANT CHARGE

MODEL:	REFRIGERATION CAPACITY*		RATIO CAPACITY
	Mín	Max.	
DAIKIN CO2 ZEAS MT	3 kW	31,5 kW	9,5 %
DAIKIN CO2 ZEAS LT	2 kW	17,3 kW	12 %

Unit

CO_2 ZEAS, a wise decision with great benefits in the medium and long term.

In February 2023, a new Dia store opened its doors in Guadalix de la Sierra, Madrid. This opening is part of a renovation and transformation process carried out by the Dia Group. It could have been just another opening but Dia Guadalix de la Sierra became the first in the world to install a CO_2 ZEAS refrigeration system from Daikin, marketed in Spain and Portugal by Tewis. According to Dia, this installation has been successful and reached its goals in term of efficiency and sustainability. Thus, it opens up new opportunities of installations.

Furthermore, during the first half of this year, the refrigeration sector has been facing changes from the EU regarding FGAS regulations, which prohibit the use of fluorinated gases for new equipment starting from 2025* and their maintenance starting from 2027*. Therefore, the implementation of CO_2 ZEAS "provides a great peace of mind."

Dia Group is committed to optimizing and improving energy efficiency as well as minimizing its environmental impact.

INSTALLATION OBJECTIVE:

TO REDUCE ENERGY COSTS AND IMPACT ON THE ENVIRONMENT WITH AN EFFICIENT PERFORMANCE.

* still under discussion.

The perfect equipment for reduced spaces, such as Dia store in Guadalix.

Among all the options available on the market, ranging from a cooling capacity of 3 kW to 32 kW, CO_2 ZEAS is the perfect equipment for convenience stores and small supermarkets, whether they are new stores or undergoing renovations. Moreover, CO_2 ZEAS is a compact unit that can be installed both indoors and outdoors, with reduced energy costs and noise reduction modes.

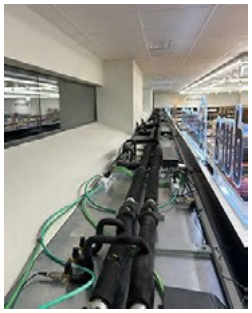
The implementation of CO_2 ZEAS brings significant results for Dia Group and its franchisees.

The unit can operate within a wide range of evaporating temperatures (-40°C to 5°C) as well as ambient conditions (-20°C to 43°C). It also features an extreme ambient kit to limit capacity losses due to high-temperature conditions (> 40°C). Additionally, a variable speed drive for each compressor allows the unit to operate efficiently even at low loads, thus reducing energy bill.

Furthermore, CO_2 ZEAS is equipped with a two-stage BLDC inverter compressor technology that enhances its reliability and minimize the loss of cooling and freezing capacity even during heat waves. Lastly, the wide modulation range of CO_2 ZEAS ensures a highly stable temperature, and ensure the quality of the stored goods.

The implementation of the CO_2 ZEAS has by Dia Group, fulfills all the objectives of energy efficiency, guarantees the preservation of goods, and above all, provides a long-term peace of mind with regards to the new FGAS regulations.

CO_2 ZEAS and its heat recovery loop, which helps to achieve an average of 23% of energy savings.



Dia Group tells us why they choose CO_2 ZEAS

Why did you decide to replace your refrigeration system instead of keeping the existing one?

At Dia we are always looking for innovation and how to improve our facilities to make them as efficient as possible. With the renovation of this store, we decided to install a new refrigeration equipment, relying on the leading technology in the market and thinking for long term.

What about the refrigerant replacement?

We have been committed for years to growing through responsibility and "green actions", and we have a strong commitment to sustainability. We are striving to reduce our environmental impact. Therefore, we are open to new alternatives, such as CO_2 ZEAS, that help us to achieve this commitment and to optimize our energy consumption.

You have chosen CO_2 ZEAS solution. Do you think this is the best system suit your type of installation/store? Why?

Both our environmental commitment and the upcoming changes with FGAS regulations, drive us to look for alternative solutions to other traditional refrigerant such as R410.
On top of that, CO_2 ZEAS has a wide range of capacities and perfectly meets the needs of our stores, especially those with limited space such as Dia store in Guadalix.