

Clones Credit Union

Ensuring comfort for customers and employees

Established in 1959, Clones Credit Union in Co. Monaghan is a non-profit financial institution that specialises in providing loans and savings.

In common with many commercial buildings, the offices require a cooling and heating system to provide a comfortable environment for both employees and customers.



Project background

The credit union planned to replace an existing chiller with a newer, more cost-effective solution with increased efficiency.

The latest European Ecodesign regulations, ENER LOT21- Tier 2, came into force on 1st January 2021. This regulation imposes new performance requirements. The minimum SEER value required for air-cooled chillers with a cooling capacity of less than 400kW is now 4.1.

Having reviewed various options, the client chose the Thermocold Domino SEA for the project as it met all the requirements.



Installation at Clones Credit Union

The primary objectives of the installation were to:

- Provide efficient cooling for the building
- Minimise running costs
- Ensure reliability long-term



A Thermocold Domino SEA 175 Z was installed in June 2021 by Noel Cusack Mechanical Ltd.



The Domino SEA 175Z is a commercial three-phase air/water chiller equipped with EC axial fans and hermetic scroll compressors.

The chiller has a nominal cooling capacity of 72.3kW and can deliver chilled water from -7°C to 18°C.

The Domino SEA is designed to meet the latest 2021 Ecodesign ENER lot 21 regulations.

It utilises two scroll compressors in a single circuit—the unique heat exchanger design with a low refrigerant Δt results in a very high operating efficiency.

Thermocold SEA family of Chillers

Flexible: 11 basic models from 55 to 135 kW can be combined in a cascade of up to 6 units to reach the desired capacity.

Compact and Light: The innovative design optimises overall dimensions.

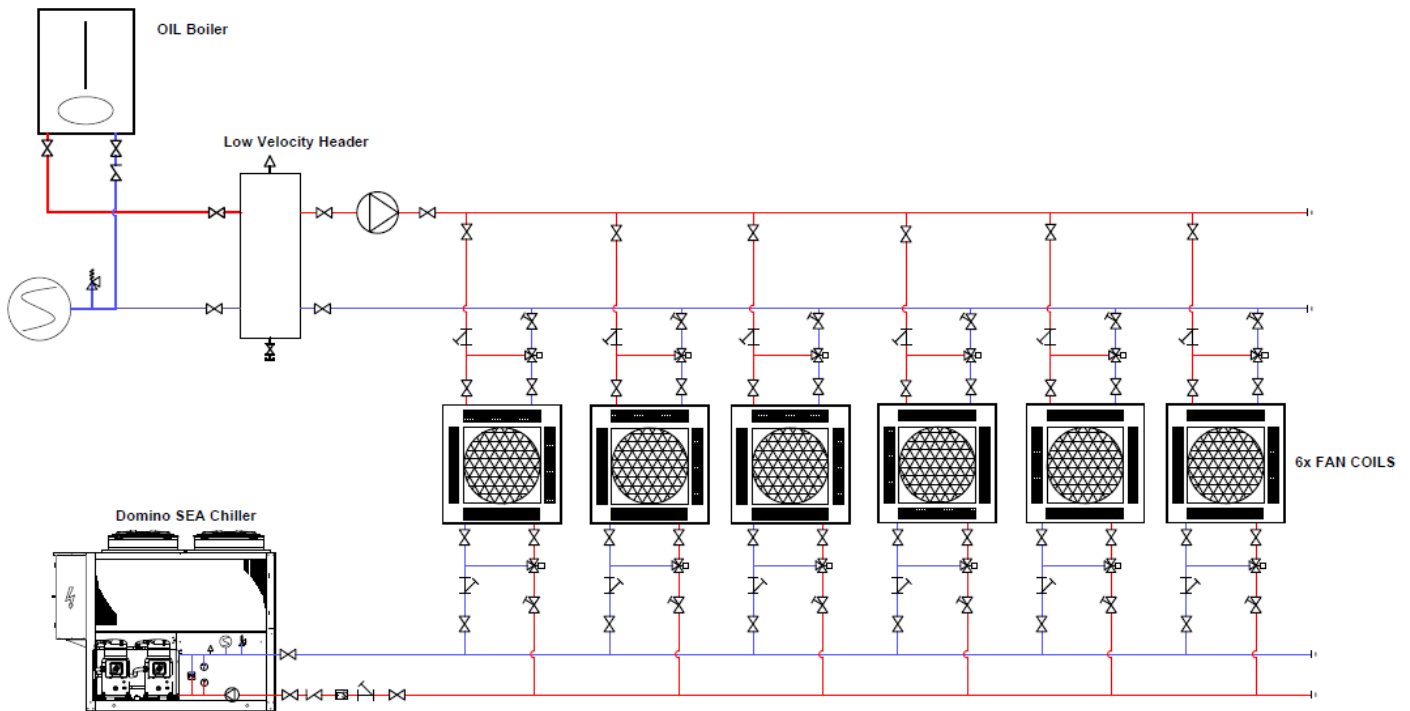
Eco-friendly: There is a choice of refrigerant. Low GWP R454B or R410A is available. The amount of refrigerant charge is minimised through the use of micro-channel condenser coils.

Easy to Install: Hydraulic connection kits allow easy and quick connection of individual modules, where a cascade is required.

Easy to Maintain: Complete accessibility of all components and easily removable electrical panel.

Hydraulic schematic

The general layout of the system is shown in the schematic below. The Domino SEA chiller supplies chilled water to six fan coils units to deliver air conditioning.



The chiller has an inverter-driven, speed-controlled pump that operates in constant pressure mode to deliver the required flow rate of chilled water to the system.

The fan coil units are also connected to an oil boiler by a low-velocity header to provide space heating for the credit union when required.

Control

An existing BMS system monitors conditions in the various building zones. The operation of the chiller and boiler is automatically controlled so that chilled water and LTHW are available as required.



Applications

The Domino SEA range of chillers is ideal for many commercial and industrial cooling applications. They may be used in conjunction with air handling units or fan coils.

Applications include:

- Banks
- Hotels
- Offices
- Retail
- Commercial buildings
- Gyms and sport centres
- Food Processing



Benefits

- Easy to install and maintain.
- Ecodesign compliant with new European regulations. SEER up to 4.43
- Quiet and efficient as EC Fans and inverter control minimise noise and increase efficiency.
- Modern low GWP refrigerant option (R454B) lessens environmental impact.

About Thermocold



Thermocold is a leading European manufacturer of chillers and heat pumps. They were founded in 1995 and have their headquarters in Bari, Italy.

Thermocold is a subsidiary of Trane Technologies (formerly Ingersoll Rand Climate Division).

Parties involved

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