

CLOSE CONTROL
AIR CONDITIONERS



TECNAIR LV

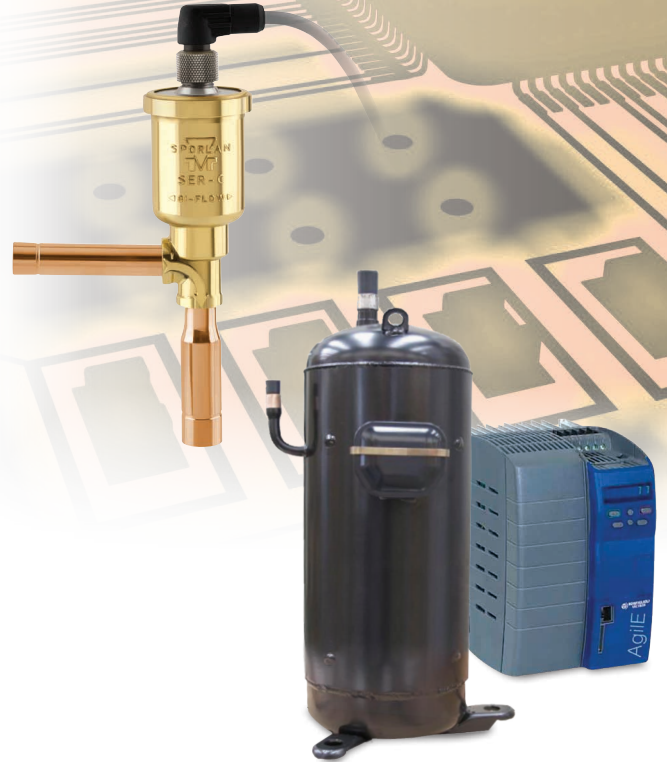
TECHNICAL SPECIFICATIONS



ADVANCED COOLING CIRCUIT MANAGEMENT SYSTEM

The cooling circuit is a key component in ensuring optimum performance in direct expansion units.

Therefore, TECNAIR LV has developed the SMART COOL system, which consists of hardware and software solutions designed to optimise the management, maintenance, safety and reliability of the cooling circuit.



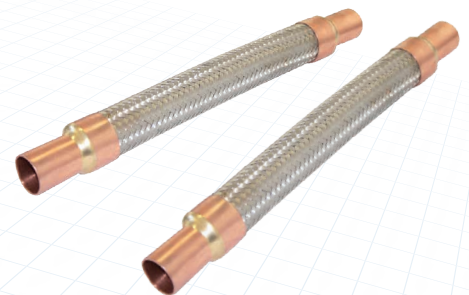
HARDWARE SOLUTIONS

The following come as standard on each cooling circuit:

- Anti-vibration systems installed on the compressor's suction and delivery pipes, which eliminate operating vibrations and reduce noise.
- Liquid receiver with safety valve and filter with refrigerant transit sight glass.
- High-efficiency electronic expansion valves (EEV).
- Non-return valves on delivery and liquid pipes (supplied).
- Refrigerant evaporation and condensation pressure probes.
- Suction, discharge and liquid refrigerant temperature probes.

Accessories:

- Brushless compressors with inverter control and oil separator.
- Condensation pressure control for air and water condensation.
- Condensation control kit for low ambient temperatures.

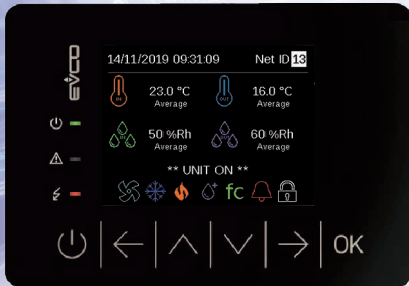


SOFTWARE SOLUTIONS

- Visualisation of the operating conditions of the entire cooling cycle of the unit on the unit display and via the building supervision system (BMS). This allows remote supervision of the operation of the unit and prompt intervention should the need arise, thus reducing the risk of any defects in the system.
- Control of the electronic expansion valve (EEV) and compressor inverter via Modbus master protocol.
- Active control of superheating, de-superheating and subcooling.
- Over 15 control functions for performance and energy optimisation of cooling circuit components.
- Over 20 active and passive safety functions to safeguard the components on the cooling circuit.

SURVEY³

ELECTRONIC CONTROL SYSTEM



The Survey³ control microprocessor has been designed for simple, intuitive operation and real-time monitoring of all unit operating cycles using a large colour display (320 x 240 pixels) and touch keys.

The Survey³ provides an integrated storage system for operating conditions, includes USB download and a real-time temperature and humidity graphical display.

The RS485 and RJ45 ports allows the Survey³ to interface with monitoring and BMS systems with the following built-in protocols: Modbus RTU, Modbus IP, BACnet IP (Accessory) and BACnet MS/TP (Accessory). Integration of supervisory web pages is also possible and includes an option of sending e-mail alerts in the event of an alarm (Accessory).



SMARTnet

THE INTELLIGENT LOCAL NETWORK

The innovative SMART NET system revolutionises the concept of the local network. Taking advantage of the unit's modular nature, the SMART NET system allows the workload to be actively shared among all the units in the local network.

This translates directly into energy savings of up to 60% compared to redundant networks (n+1 or n+n).

POWERvalve

A VALVE TO REGULATE WATER FLOW RATE AND MONITOR ENERGY CONSUMPTION

Electronic control of the water flow rate allows the POWER VALVE system to automatically balance the hydraulic circuit independently of the pressure, ensuring a continuous, unvarying water flow rate.

Moreover, by detecting the water inlet and outlet temperatures, real-time monitoring of the delivered cooling by the unit and a calculation of the energy efficiency ratio (EER) are both possible.



CUSTOMISED MODELS

CEILING MOUNTED CLOSE CONTROL AIR CONDITIONERS

Available with direct expansion circuit for remote condensing unit and with chilled water circuit, for cooling capacities from 5 to 20 kW.



CONSOLE CLOSE CONTROL AIR CONDITIONERS

Available with direct expansion circuit for remote or built-in condensers and with chilled water circuit, for cooling capacities up to 15 kW.



AIR-COOLED CONDENSERS AND DRY COOLERS

TECNAIR LV provides a wide range of air-cooled condensers and dry coolers.

- Range of air-cooled condensers with capacities from 4.6 to 2,340 kW
- Range of dry coolers with capacities from 11 to 2,333 kW



P series PACKAGED

Close control air conditioners

GENERAL SPECIFICATIONS

- Strict control of room temperature and humidity.
- Very high EER (energy efficiency ratio) and low operating costs.
- High usage flexibility and wide range of accessories.

Direct expansion:

Cooling capacity: 6 to 100 kW
Air flow rate: 2,000 to 21,000 m³/h

Chilled water:

Cooling capacity: 10 to 170 kW
Air flow rate: 2,000 to 40,000 m³/h

Free Cooling and Two Sources models available



FREEcooling TWOsources



G series GREAT

Close control conditioners for large data centres

GENERAL SPECIFICATIONS

- Separate air-cooling section for mounting under raised floors.
- High delivered cooling capacity to footprint ratio.
- Optimised air distribution in raised floor.
- Reduced energy consumption of fans.

Direct expansion:

Cooling capacity: 50 to 150 kW
Air flow rate: 9,000 to 40,000 m³/h

Chilled water:

Cooling capacity: 60 to 280 kW
Air flow rate: 9,000 to 48,000 m³/h

Chilled water versions available for XH (Extended Height)
Free Cooling and Two Sources models available



FREEcooling TWOsources



R series IN-ROW

Close control air conditioners for "in-row" mounting

GENERAL SPECIFICATIONS

- Airflow distribution as close as possible to servers.
- Rear suction from hot aisles and front delivery to cold aisles.
- Front and rear access for ease of maintenance. Hydraulic, refrigeration and electrical connections from above or below.

Direct expansion:

Dimensions: 300 and 600 mm width models
Cooling capacity: 10 to 30 kW
Air flow rate: 2,500 to 6,600 m³/h

Chilled water:

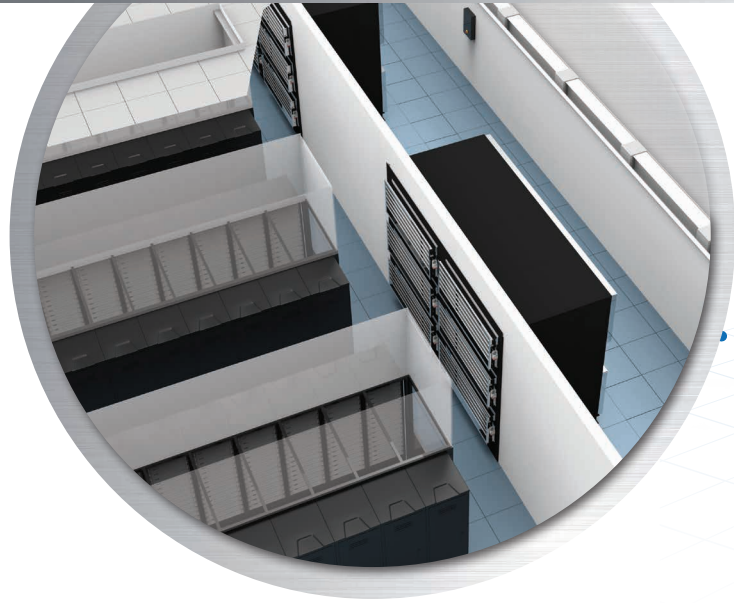
Dimensions: 300 and 600 mm width models
Cooling capacity: 15 to 50 kW
Air flow rate: 2,500 to 9,000 m³/h

Free Cooling and Two Sources models available



FREEcooling TWOsources





Wseries COLD WALL

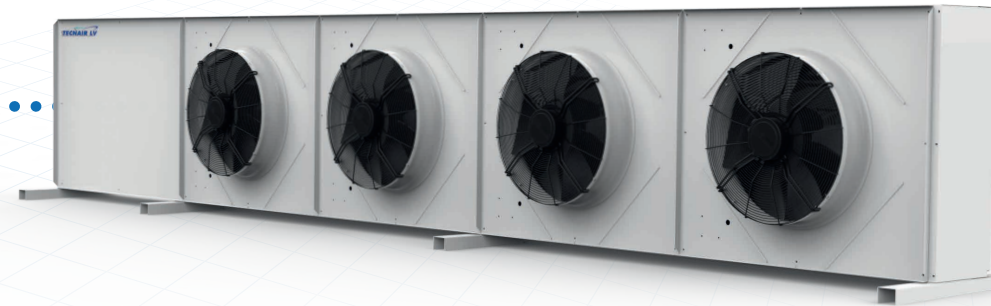
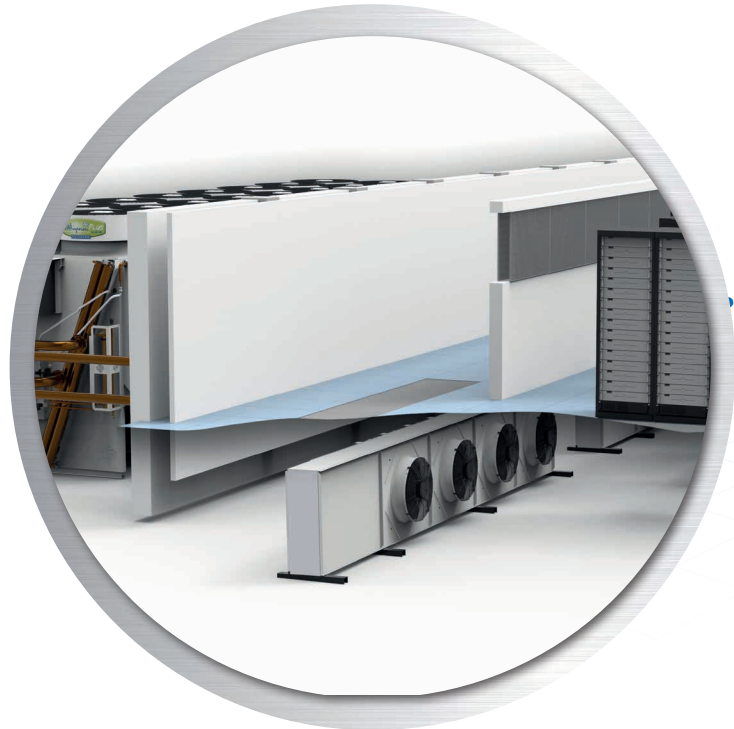
Close control air conditioners for mounting in technical services corridors

GENERAL SPECIFICATIONS

- Technical services corridor mounting.
- No space occupied in the data centre.
- Very high EER (energy efficiency ratio) due to optimised airflow.
- Fully customisable to data centre specifications.

Chilled water:

Cooling capacity: 100 to 300 kW
Air flow rate: up to 78,000 m³/h



Iseries INVISIBLE

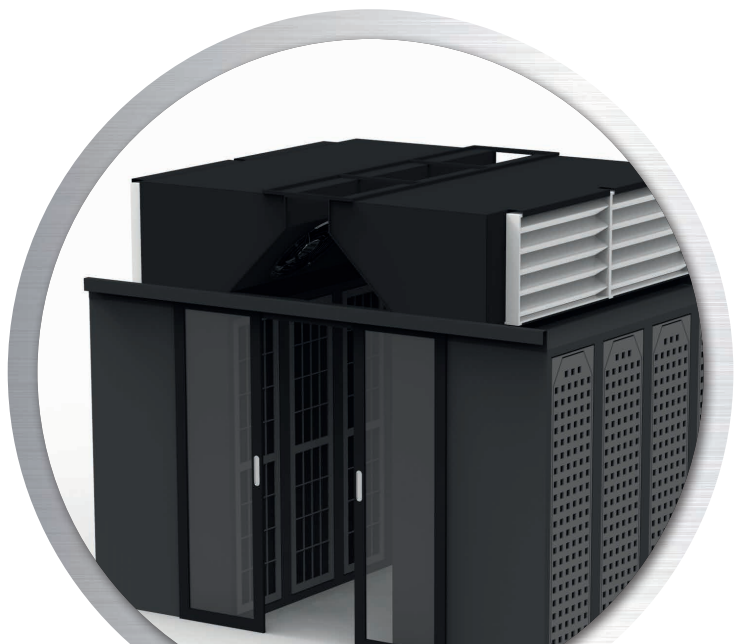
Close control air conditioners for mounting under raised floors

GENERAL SPECIFICATIONS

- Installation in raised floor.
- No space occupied in the data centre.
- Very high EER (energy efficiency ratio) due to optimised airflow.
- Fully customisable to data centre specifications.

Chilled water:

Cooling capacity: 10 to 200 kW
Air flow rate: 2,000 to 40,000 m³/h



Tseries COLD HAT

Close control air conditioners for mounting above racks

GENERAL SPECIFICATIONS

- No space occupied in the data centre.
- Very high EER (energy efficiency ratio) due to optimised airflow.
- Compatible with racks available on the market and suitable for both cold-aisle and hot-aisle systems.

Direct expansion:

Cooling capacity: 50 kW
Air flow rate: 10,500 m³/h

Chilled water:

Cooling capacity: 50 kW
Air flow rate: 10,500 m³/h



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