

Industrial V-type adiabatic hybrid cooler up to 300% higher capacity than a dry solution

Cooling Your Daily Life®

General information & application

The VXX3 WETWALL adiabatic hybrid cooler is designed to meet the increasing demand for free-cooling, high cooling capacities or for installation with limited surface.

WETWALL design is optimised using the benefits from EC fans and the adiabatic system.

Adiabatic saturation of the air adopting a water recirculation system. The water and power consumption are thus minimised, resulting in Providing high Energy Ratio and the possibility to use "free-cooling" applications throughout all the year.

The VXX3 WETWALL has two different running conditions: dry and wet.

In dry mode only the fans are activated In wet mode the adiabatic system is activated, using the adiabatic saturation of the air to boost the cooling performance.

Coil, frame and structure

The standard heat exchanger coils are constructed of high-grade Industrial aluminium fins and copper tubes. The standard options for fin material are:

- AlMg
- Copper
- AluPlus

The coils are supplied single or double inlets and outlets with stainless steel flanges. The frame consists of the upper V-shape framework and lower horizontal beams. All body work is made of magnelis with corrosion class C5 and the frame panels are powder coated. The frame has fixed lifting lugs mounted on the upper horizontal part.

For other special applications please contact our air heat exchangers specialists.











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Fans and sound dampers

VXX3 WETWALL hybrid cooler is equipped with electronically commuted (EC) fans. Required power supply is 380-460V, 50/60Hz, 3 phases. Each fan is equipped with multiple functions; temperature alarm, phase failure alarm, running time logging and build in motor protection etc. The fans have integrated bus communication and can be individually controlled (ModBus RTU).

Each fan has ultra-effective low energy motors, UL certified and IP 55 protection class.

As an option VXX3 WETWALL can be equipped with LU-VE's patented Whisperer (sound dampers). The whisperer provides the reduction of fan power consumption with up to 19% and noise level with up to 6,5 dB(A). The whisperer reduces the risk of air recirculation and there of the risk for reduced performance.

Electrical cabinet

VXX3 WETWALL is equipped with an electric cabinet in powder coated steel and insulation class IP65. The cabinet is equipped with electrical heater with thermostat, main circuit breaker, automatic fuses for each fan, terminals for external connections.

Controller

AIA LOGIC PLC

Fan data can be displayed on the controller: alarms for faults, energy measurements, operating currents and running time.

AIA LOGIC PLC features:

- PLC Based controller with touch screen
- Optimized fan control 7-zon.
- 3-way valve control. 0-10v, 2-10v or 4-20mA
- Feedback signal 3-way valve.
- Dry and Adiabatic mode.
- · Enthalpy control.
- ModBus RTU / TCPIP to control and to collect information from the EC fan
- BMS communication multi-protocol













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Adiabatic system and water tank

VXX3 WETWALL can run in either dry or wet mode. If the cooling capacity in dry mode can't be achieved and the condition is within the temperature and humidity limitations, then the adiabatic system is activated to boost the performance.

The adiabatic system is designed to provide maximum performance with the use of minimum energy and water. For the nonevaporated water, the hybrid cooler offers two different solutions.

- 1. The non-evaporated water is flushed out of the system
- 2. The non-evaporated water is recycled via pump module made of stainless steel with built-in water level control and flow control. The water is automatically drained every 24hours or when the adiabatic system is turned off to be drained



Transport arrangement, the units can be delivered either as FCA Asarum or DAP to site. The unit will be delivered with protective plastic cover.

Accessories and options

- · Water recirculation unit.
- · Antivibration pads.
- · Rails and ladders.
- Design pressure PN 16 bar Ts 110°C.
- Manifolds.
- · Stainless steel Electrical cabinet
- Multi communication protocol.
- External sensors and sensor pockets
- AIA LOGIC Energy optimized functionality.
 Free cooling / Mixed mode / Chiller mode
- ATS for dual power supply.
- Project -Easy to add functions.
- · Air shutters.

To boost the performance the bottom part of the hybrid cooler can be equipped with air shutters to make the air bypass the adiabatic panels when the unit is running in dry mode. In wet mode the dampers are closed, and all air is lead via the wet panels for maximum adiabatic effect. Brackets for air dividers (to avoid air recirculation).

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AIA LU-VE is a product brand with more than 60 years of experience in heat exchange technology. We develop, manufacture and market products of excellent quality for commercial and industrial cooling applications.

Our trademark AIA LU-VE is well-known for excellent product quality and unbeatable high delivery service. We are part of LU-VE Group, one of the world's largest producers of air heat exchangers.

LU-VE Group is the combination of experience, tradition, forward thinking, and innovation.

LU-VE Group is the third largest operator in the world and second largest in Europe in the production of air heat exchangers.

Founded by Iginio Liberali in 1985 by acquiring Contardo S.p.A, LU-VE Group has reached a leading position in the HVACR industry.

Since 1986 LU-VE has been designing and manufacturing its products based on cutting-edge technologies in the field of industrial and commercial refrigeration and industrial air conditioning.

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