

CIAT systems
make my choices easier

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Evolution[s]

> **Aérofresh**
adiabatic cooling

> **Aéroconnect**
intelligent connection



Aérofresh

by CIAT

eco-
energy
optimisation

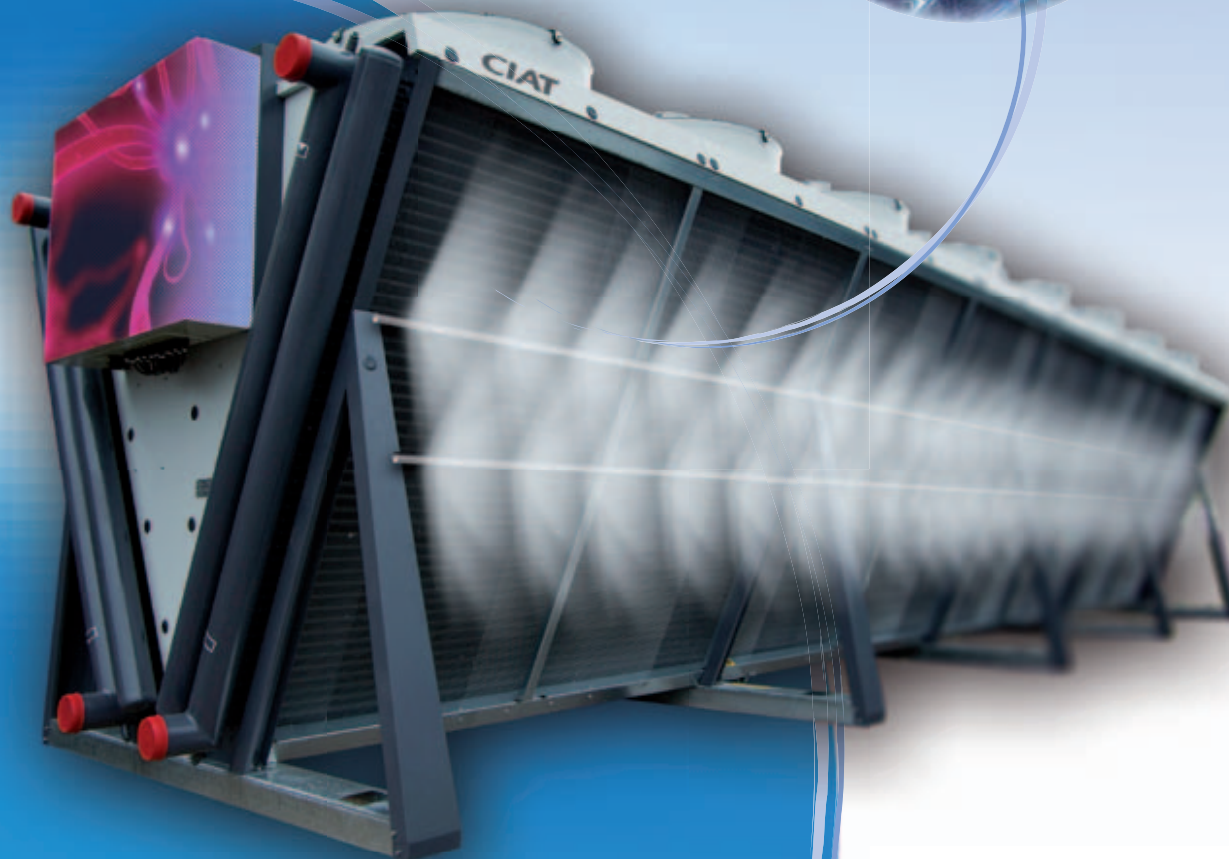
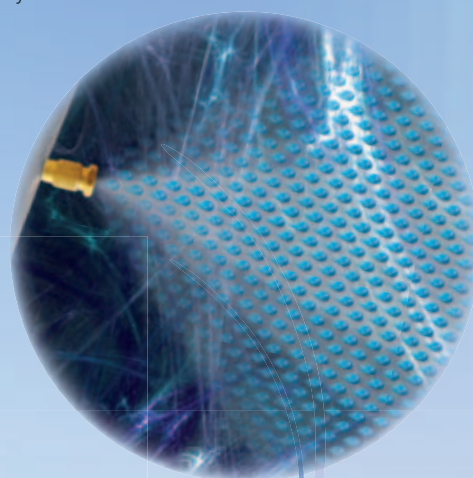
Aérofresh is an air cooling system that uses a high-pressure water mist, designed for use on CIAT drycoolers. Sprayed in the opposite direction to the flow of air, ultra-fine droplets lower the air temperature through evaporation. **The ambient air is cooled BEFORE it enters the drycooler.**

This means space savings, increased energy and the capacity to cope with summer temperature peaks.

Aérofresh is available as an option on new equipment and may also be installed on your existing stock.

ADIABATIC COOLING

HIGH
PRESSURE



Aérofresh

design

positive
energy
solutions

> Aéroconnect by CIAT

Aéroconnect is an electronic control board allowing drycooler fan motor assemblies to be intelligently controlled and information to be exchanged via a BUS connection.

Designed for your needs, intuitive and responsive, it is the real brain of your machine.

It allows you to control your unit with precision and simplifies installation. Aéroconnect communicates with CIAT chillers and incorporates the FREE COOLING function.

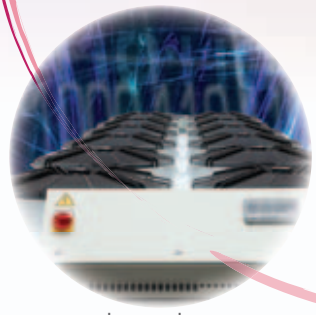
Relax - Aéroconnect controls automatically.

INTELLIGENT CONNECTION

chiller



- TEMPERATURE
- PRESSURE
- STAGES
- SETPOINT 1
- SETPOINT 2
- ALARM



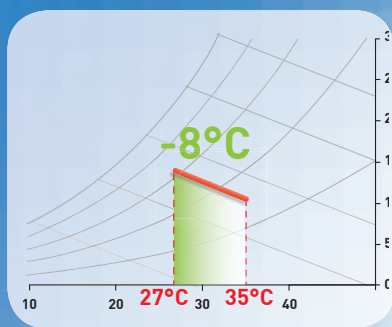
drycooler

Aéroconnect
control console



> Aéroconnect

Used during the warmest times of the year, adiabatic cooling consists in saturating the air with humidity. With optimal evaporation conditions, the air temperature lowers and moves closer to that of the wet bulb.



High pressure m

An innovative, reliable of the system: high The 100 bar pump performance nozzle water mist. The m flow of air, causing evaporation and giving Thanks to high press



> With drycoolers, our project required more floor space than was available at our site. Aérofresh allowed us to adhere to the specifications by **reducing the footprint by 50%**.

> Due to the risk of legionellosis, our cooling towers were replaced by coolers equipped with Aérofresh. **For us, sanitary safety is paramount.**

> We no longer need worry about heatwaves; equipped with Aérofresh, **my air cooler continues to provide power**, even on extremely hot days.

> Increased production meant we required greater output from our existing equipment. **Aérofresh gave us an increase in power** and meant that we didn't need to replace our air coolers.

Aérofresh

by CIAT



Misting

The misting process lies at the heart of the Aérofresh system. It is based on high pressure misting. Combined with high pressure, the misting process creates a very fine mist. The mist is sprayed against the heat exchanger, giving almost instantaneous cooling, resulting in a perfect result. In short, less water is used.

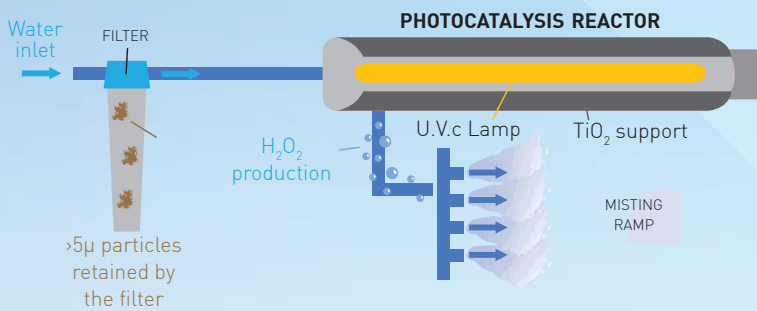
Automatic control

Aérofresh is controlled by Aéroconnect, the brain of the system. The electronic board controls the activation of the misting function, giving you the choice to prioritise either optimisation of the water quantities or electricity consumption.

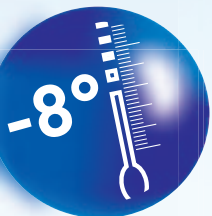
Complete safety

Before being dispersed, the water undergoes a rigorous antibacterial treatment using hydrogen peroxide. The peroxide has a bactericidal effect, in particular against legionella bacteria. It is produced continuously by a photocatalysis reactor with titanium medium.

The water is completely clean, with no risk of bacterial proliferation; no request for authorisation is required.



The HEAT AND ENERGY laboratory at CIAT's R&I Centre has developed the Aérofresh misting system and studied its adiabatic efficiency. All the components have been certified in terms of quality and reliability. This is your guarantee of trouble-free operation.



> Aéroconnect

by CIAT

Savings

The benefits of the components

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-
- th
-

System offer

When Aéroconnect links a dual speed chiller, the result is perfect synchronization between the 2 machines:

- installation costs
- the system is fully automatic
- it is easier to use.

Information circulates and you are fully satisfied.



Aéroconnect

- Controls using temperature or pressure
- Controls the fan motor assembly stages
- Incorporates 2 remotely switchable setpoints
- Displays operating parameters
- Provides fault diagnosis and history
- Balances the fan motor operating times
- Manages FREE COOLING and MISTING
- Uses the MODBUS protocol with RS 485 for BMS
- Remotely controls starting/stopping
- Controls forced operation of the fan motor assemblies
- Optional: independent console, relay board.

The SYSCOM (communication systems) division has developed and certified the 3 key elements of the **Aéroconnect** system:

- the electronic board and microprocessor;
- the software based on the connect nucleus;
- the control console.

R&I Center
CIAT



Simplicity

Ergonomics and user-friendliness were constant concerns at every stage of the Aéroconnect design process. The result is:

- a simple, practical, multilingual interface;
- the option of remotely controlling an independent console;
- clearly displayed operation statuses;
- a configuration manual which can be accessed and used immediately.



ts of purchasing a SYSTEM with optimised, intelligent
ts are numerous:

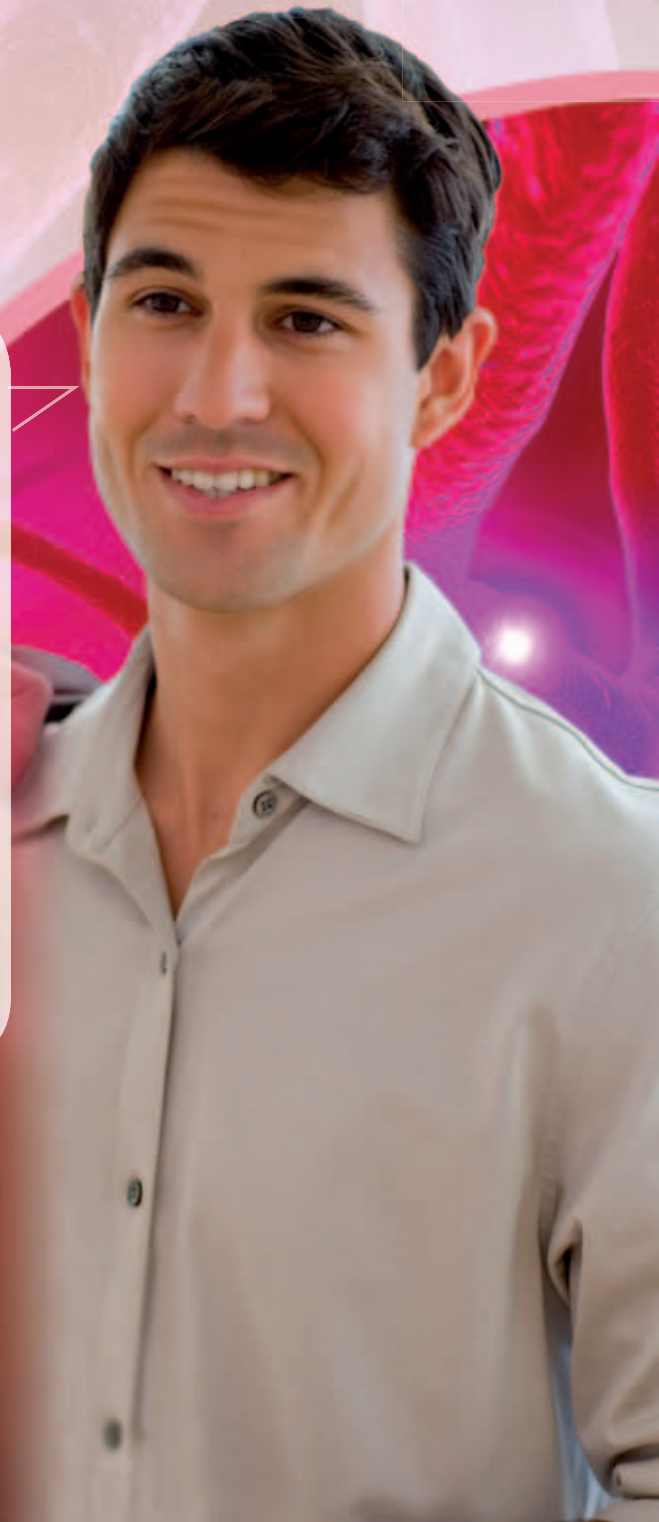
the system manages the FREE COOLING function;
it extends the service life of the fan motor assemblies by equalising
the operating times;
it uses energy in a responsible manner.

rycooler to a CIAT
compatibility

are reduced;
y optimised;

our customer is

- > Connecting CIAT machines using the Aéroconnect system? A real pleasure! **Just a single cable required to start communication!**
- > With FREE COOLING controlled by Aéroconnect I was able to **make real energy savings.**
- > Our user teams were confronted with very different pieces of equipment; we needed help from the manufacturer. **With Aéroconnect, everything is very clear**, and furthermore, the independent console allows the equipment to be controlled remotely.
- > With its balanced motor management, Aéroconnect considerably extends the equipment's service life. **It's a real long-term investment.**



Energie[s]

Energy is expensive.

To save energy, we need to manage it better and learn to use natural resources without depleting them.

CIAT is at the heart of these challenges and holds the assets necessary to carry these developments through to fruition.



OPERA



VEXTRA



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