



E N E R G Y O P T I M I S A T I O N

AIR HEATERS

HELIO THERME 4000

• Axial air heaters

C O M F O R T • A I R Q U A L I T Y

EXPERT HEATING
AND COOLING SOLUTIONS



H4000 HELIOTHERME, HEATING AND COOLING

➤ Target energy performance

Equipped with an optional EC motor, the new **powerful high energy efficiency fan motor assembly** has a control device to achieve optimal energy performance levels. A Rotorex technology version is also available as standard.

Another major advantage is the **low-pressure water version of the CIAT coil** (heating or cooling) to ensure buildings warm up ultra-fast:

- Available with 1, 2 or 3 rows
- Copper tube Ø 9.52 mm
- Embossed aluminium fins
- Fin spacing 2.1 mm

THE ADVANTAGES

Save 60%* on your annual electrical consumption in comparison to a standard fan motor assembly without a JET+ diffuser.

Benefit from **excellent heat efficiency** i.e. a dry transfer coefficient above 50 W/m².k

* Source: technical document NA15.643C

➤ Feel the difference



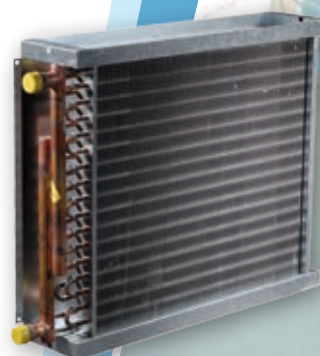
Benefit from real **acoustic comfort** thanks to the silent fan motor assembly with airfoil blades and 1-Ph HEE Box control to vary the air flow according to requirements.



Thermal comfort guaranteed thanks to the use of TPL destratifiers that are activated automatically when the temperature at the top of the building is too high. Hot air that is stored high up and serves no purpose is then redirected downwards.

THE ADVANTAGES

An optimised building warm-up time with **energy saving** levels of 15 to 20% in comparison to an AC fan motor assembly without a JET+ diffuser.



More information

The HELIOTHERME range meets APSAD and NFPA fire protection recommendations

THE SOLUTION

FOR LARGE SPACES IN THE TERTIARY AND INDUSTRIAL SECTORS

► Managing diffusion

For CIAT, comfort, silence and energy savings are essential.

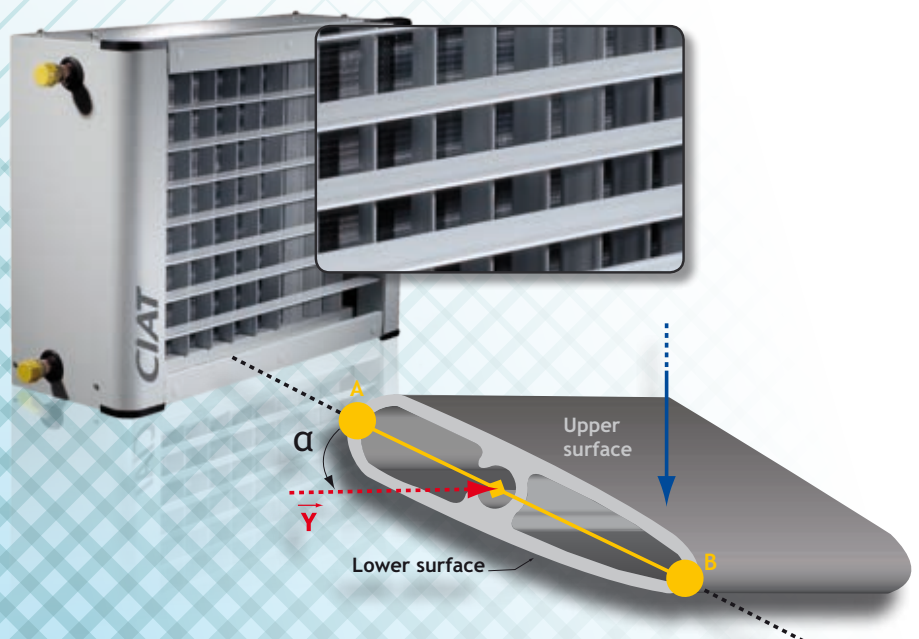
This is why all HELIOTHERMES are fitted with the double deflection diffuser with JET+ technology.

WHAT IS JET+ TECHNOLOGY?

A CIAT innovation based on Bernoulli's principle on fluid dynamics and on the NACA0012 type aeroplane wing profile.

THE ADVANTAGES OF JET+ TECHNOLOGY

- Adjustable airstream distribution in four directions for optimum coverage of the occupied space while eliminating draughts.
- Laminar flow of the airstream for improved acoustic comfort (no turbulence at the diffuser outlet).
- Increased velocity of the air streams thanks to the aerodynamics of the curved airfoil (low pressure on the underside of the wing) increases the coverage of the air streams and the induction rate.
- Double induction zone thanks to two layers of blades (double deflection).
- Limits stratification.
- No interference with the sprinkler systems: speed less than 5 m/s at 0.5 m from the diffuser.



HEATING AND COOLING IN THE TERTIARY SECTOR



PERFORMANCE

| Model | Heating* | | Cooling** | | Electrical | |
|-------|------------------------------|-----------------------|------------------------------|-----------------------|------------------------------|-----------------------|
| | Air flow (m ³ /h) | Heating capacity (kW) | Air flow (m ³ /h) | Cooling capacity (kW) | Air flow (m ³ /h) | Electrical power (kW) |
| 4300 | 1500 | 5 to 18 | 1200 | 2 to 4 | | |
| 4350 | 2600 | 12 to 27 | 1640 | 2.1 to 5.4 | 2600 | 9.6 |
| 4400 | 4200 | 17 to 40 | 2160 | 2.8 to 7.4 | 4000 | 18.9 |
| 4450 | 5200 | 22 to 58 | 3025 | 4.6 to 8.7 | - | - |
| 4500 | 7100 | 30 to 76 | 4060 | 6.2 to 15.2 | 7500 | 28.8 |
| 4630 | 10450 | 45 to 110 | 5960 | 10 to 24 | 7500 | 43.2 |

Source: Selection software SABAT data

* 3-Ph 400V+ Earth or 1-Ph 230V supply

The heating capacities are calculated for water temperatures of 80/60°C - 60-40°C and 45/35°C and air inlet temperatures between 8 and 18°C.

In cooling mode, the H4630 size is only available in the HEE version.

** 1-Ph 230V supply

The cooling capacities are calculated for water temperatures of 7/12°C - 8-13°C and 10/15°C and air inlet temperatures between 23 and 27°C.

COOLING MODE

Built-in condensate drain pan with antibacterial design and a perforated bottom for complete draining.

No more need for clamps; the quick connection drain coupling allows quick and simple installation.



OPTIMISED MIXING RATE

The combination of a H4000 heliotherme and a TPL destratifier ensures excellent temperature throughout the whole volume of air in the room.



CIAT OFFERS A COMPLETE RANGE OF ACCESSORIES FOR TERTIARY AND INDUSTRIAL APPLICATIONS

Installation

- Wall mounting plate, on IPN or ceiling unit to facilitate fitting.
- Filter box for indoor environments with loaded air.
- Mixing box to manage the essential supply of fresh air.
- Specific diffusers (high mounted, on door, etc.).

Control and command

- 2-speed switch for Three-Phase motors.
- 5-speed variable drive for Single-Phase motors.
- Room thermostats for tertiary and industrial applications.

[MORE INFO](#)

HELIO THERME 4000: A WINNING ALLY

INDUSTRIAL PROCESS APPLICATIONS

PERFORMANCE

| Model | Air flow (m ³ /h) | Heating capacity (kW) | |
|-------|------------------------------|-----------------------|---------|
| | | Superheated water* | Steam** |
| 4350 | 2600 | 36 | 40 |
| 4400 | 4200 | 50 | 58 |
| 4500 | 5400 | 100 | 100 |
| 4630 | 11150 | 155 | 150 |

Source: Selection software SABAT data

* 3-Ph 400V + Earth or 1-Ph 230V supply - Water temperature: 180-120°C/ Air inlet temperature: 15°C-Humidity: 50%

** 3-Ph 400V + Earth or 1-Ph 230V supply - Temperature-Steam pressure: 175°C-8 bar/ Air inlet temperature: 15°C-Humidity: 50%

TUBE COILS IN STEEL, CUPRONICKEL OR STAINLESS STEEL VERSION

- Applications for superheated water, steam, oil etc.
- Finned aluminium block for industrial indoor environments (dirty air) that can be cleaned with a high-pressure water jet.



HERESITE coating



EPOXY painted casing
+ specific motor



STAINLESS tube coil

CORROBLOC MOTOR VARIANT

- Highly corrosive and/or very dusty environments.
- CPD-treated epoxy polyester-coated casing, propeller and grille.
- Salt spray resistance: 700 hours.
- Protection: IP65.



ATEX VERSION

The ATEX HELIO THERME range is certified for your applications:

- In the presence of explosive gas or dust.
- In Zone 1 or 2.
- For IIB or IIC explosion groups.
- With T4 to T6 gas auto-ignition temperatures.
- Low-pressure water, superheated water, steam, oil, compressed air, etc.



FOR YOUR SUSTAINABLE PROJECTS

TECHNICAL PARTNERSHIP

CIAT'S EXPERTISE MEANS YOU ALSO BENEFIT FROM:

A DEDICATED CONTROL FOR EACH APPLICATION



1-Ph Eco+ Box:

Control solution for air and water for AC single-phase air heater.



3-Ph Eco and Elec box:

Plug&Play control solution for air and/or water for H4000 equipped with a 3-phase fan motor assembly.



1-Ph HEE box:

Plug&Play control solution for air for H4000 equipped with 1-Ph HEE fan motor assembly.



ECODESIGN

High standards guaranteed

The H4000 heliotherme is ecodesigned and is part of CIAT's sustainable development strategy which is one of the brand's key values.

- 94% recyclability rate
- CIAT has formed a partnership with Ecologic for the collection and recovery of end-of-life equipment governed by European Directive on WEEE.
- TPL 4000 destratifiers are eligible for energy saving certificates (building height above 5 metres, destratifier equipped with a thermostat, existing room heated by air heaters).





FOR CENTRALISED MANAGEMENT OF A GROUP OF AIR HEATERS

1-Ph Eco+ box

Management of 3 heliothermes via a 1-Ph ECO+ box



Regulator

- 1-Ph 230V/50Hz supply

3-Ph Eco and Elec box

Management of 3 to 9 heliothermes maximum via a controller depending on the application



Control unit

Regulator

- Plug & Play solution (electronic components integrated into the control unit).
- Three-phase 400V + Earth + N/50Hz supply

MORE INFO

1-Ph HEE box

Management of 6 heliothermes or 6 destratifiers or 3 heliothermes + 3 destratifiers.



Control unit + Regulator

- Proportional battery management (0-10V).
- Remote On/Off control.
- Two fault summaries.
- Optional ModBus/JBUS board or Bacnet IP.
- 1-Ph 230V/50Hz supply.

MORE INFO



For an annual operation of 1268 hours to maintain 17°C in the comfort zone, **savings of 60%** can be achieved regarding the electrical consumption of a H4453 heliotherme equipped with a HEE fan motor assembly in comparison to a standard fan motor assembly.



CIAT, a European leader and expert in HVAC engineering



An environmentally-responsible company working towards a greener world

For many years, CIAT has been pursuing an industrial policy based on an ongoing strategy of continued sustainable development and ecodesign in order to minimise the environmental impact of its equipment. The equipment integrated into Hysys system solutions also benefits from this commitment.

A Group resolutely focused on innovation

CIAT's Research and Design Centre, one of the largest in Europe, brings engineers and technicians together around a simulation platform dedicated to well-being. As a team, they constantly improve the comfort, indoor air quality and energy performance levels of CIAT solutions to meet the requirements of consumer sectors.



An exclusive network of advisers



Industry

Administration
Education

Shopping
centres

Offices

Hotels

Healthcare

Collective
housing

To ensure your satisfaction, CIAT has organised its teams into centres of expertise. Operating in France and in fifty other countries, our experts are able to provide you with the best solution to meet your requirements.



www.ciat.com