CLIMATIC
ENVIRONMENT
SOLUTIONS AND
EQUIPMENT




# SOLUTIONS FOR THE HEALTHCARE SECTORS






Visit our dedicated Healthcare webpage!

MADE IN FRANCE

HEALTHCARE

www.ett-hvac.com


High quality
Air handling equipment

# ETT, specialist in air treatment

**E**nergie **T**ransfert **T**hermique is a 100% French manufacturer, based on the Brittany coast, which has been designing and manufacturing high-performance thermal machines since 1979.

With a strong team of 420 employees, the company has built its growth on constant innovation, the quality of its machines and Customer Service.

**ETT** has operated across various markets for many years, with a strong focus on the **healthcare** sector. This field is one of the most demanding: in hospitals, clinics, and care homes, precision air handling goes far beyond basic thermal comfort—it is a critical hygiene and public health imperative.

## Decarbonation, Durability, Recyclability

**ETT** is embedding **eco-design** to reduce the environmental impact of its entire machine lifecycle, from development to decommissioning.

For 45 years, ETT has been promoting aluminium, a recyclable and sustainable material ensuring equipment longevity.

All structures are **100% recyclable** aluminium, free from paints or solvents.

The refrigerants used have no impact on the ozone layer and have a **very low** "**G**lobal **W**arming **P**otential".

In accordance with the French Environment Code, **ETT** has signed up EcoLogic to collection and recycling scheme for its end-of-life units.

## ETT: Expert in the healthcare sectors

1979
Creation of Energie Transfert Thermique

1984
First hospital equipped: Créteil (94, France)

1987
First overseas hospital equipped:
Brazil - Rio de Janeiro.

1996
First equipped medicalized nursing home:
Cachan (94, France).

2001
113 ETT machines installed at Hôpital Européen Georges Pompidou - Paris (75, France).

2007
Creation of ETT Services

2010
300th machine sold to the healthcare sector.

2015
Development of the first propane-powered (R290) Air/Water heat pump—awarded at COP21 in Paris.

2022
Creation of the Energy Performance Team

2023
New range of high-temperature propane heat pumps (NEROMAX)

2025
Launching a dedicated team for the healthcare sector

2026
Release of X-RCAM+ MED and NEROMAX MED, dedicated to the healthcare sector

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# Regulatory environment

## ETT: AT THE FOREFRONT OF REGULATORY DEVELOPMENTS

**Healthcare sectors** must comply with **specific standards** and **regulations**, at every stage of their projects, from development and implementation to ongoing operation and monitoring.

**ETT has the expertise to meet the stringent regulatory constraints in these sectors** — particularly French NF S 90-351 (Healthcare cleanroom air quality) and French specific fire safety regulations (CH35, CH38, and CH40)— and **fully integrates** them into the design and manufacture of their air handling units.

Among these regulations, the **F-GAS III** Directive strictly governs the use of refrigerants in thermodynamic systems, and aims in particular to phase out **fluorinated gases**.

## PROPANE : AN ECO-RESPONSIBLE CHOICE

By incorporating propane (R290) into its machines over the past 10 years, **ETT has been able to anticipate this regulatory change**.


*GWP= Global Warming Potential*

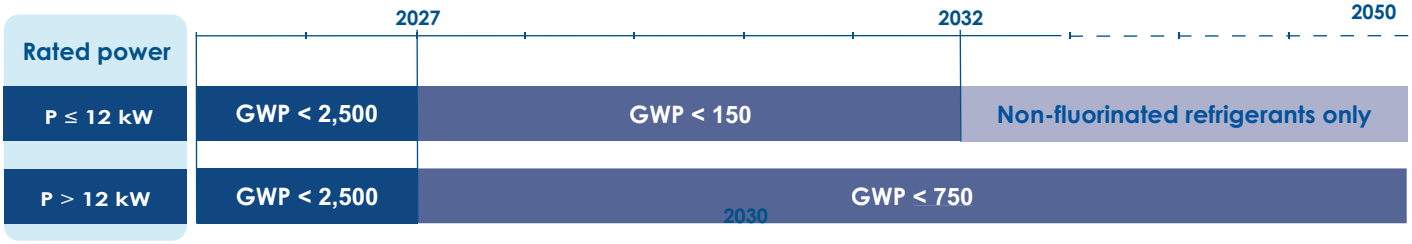
*Choice of ETT*

This **natural, non-fluorinated refrigerant** — and therefore not subject to the restrictions of the F-Gas III — has a GWP of **0.02** and combines **high performance with reduced environmental impact**, without generating **PFAS (forever chemicals).**

This approach enables ETT to achieve **compliance today** for the decades ahead.

## THE F-GAS III RESTRICTIONS ON FLUORINATED REFRIGERANTS

### Liquid chillers




### Reversible self-contained air conditioners and heat pumps


**Notes**: These restrictions apply to new units installed in the EU.

# Dedicated solutions

In **healthcare facilities**, controlling environmental conditions (temperature, humidity) is a **key challenge.** It plays a vital role for patients, residents and staff by ensuring their comfort and optimal hygiene conditions within healthcare facilities.

Each area (care units or living areas, pharmacies, kitchens and laundry facilities) has specific requirements in terms of **air treatment**.

### ECOPS

4-pipe heat pump with thermal energy recovery.

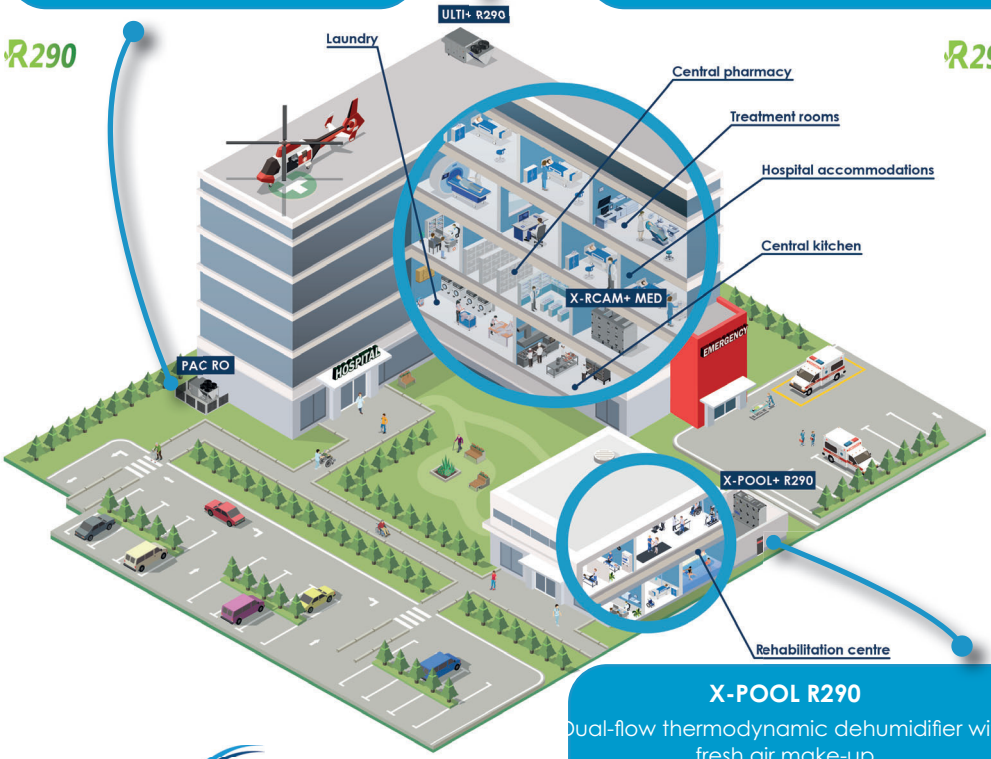
Simultaneous production of chilled water and hot water

### ULTI+ R290

Single-flow air-to-air heat pump

Large-volume air handling

Heating - Cooling - Free Cooling




### X-POOL R290

Dual-flow thermodynamic dehumidifier with fresh air make-up

Air handling for small to medium-sized hydrotherapy/swimming pools

Dehumidification - Dechlorination - Air Conditioning - Domestic Hot Water production (optional)

R290

# for the healthcare sector

Our solutions are also designed to address current and future **healthcare requirements and environmental challenges.**

ETT machines are fully in line with a **decarbonisation strategy**, thanks to their use of a natural refrigerant such as **propane**: a high-performance, environmentally friendly solution aligned with energy transition objectives.

DECARBONATION

**ULTI+ RE**

Dual-flow 4-damper thermodynamic heating system with energy recovery from the extracted air

Highly variable occupancy rates

Heating - Cooling - Free Cooling

R290

R32


R290

Air-to-water heat pump for hot-water or chilled-water production

**Hot water production:**

Operating range: +70°C up to -2°C ambient

**Chilled water production:**

Operating range: +7°C up to 45°C ambient

R290

**X-RCAM+ MED**

Dual-flow heat pump with two-stage of energy recovery from exhaust air

Hygienic fresh air treatment

Casing Classification: Class L1 / T2 / TB2 strictly in accordance with BS EN 1886

# ETT, A provider of global solutions

## EXPERTISE SUPPORTING YOUR SYSTEM PERFORMANCE

In the healthcare sector, where operational continuity and reliability are mission-critical, **ETT Services** provides turnkey solutions tailored to your regulatory and operational challenges.

### SERVICES INCLUDED WITH YOUR UNIT

- Commissioning carried out by **certified engineers**,
- Unlimited technical telephone support,
- Reactive breakdown cover under warranty, with **response times adapted to your site constraints**,
- **A dedicated team of after-sales service engineers and technicians** providing personalised support for your installations.

### MAINTENANCE SUPPORT PACKAGE PROPOSAL

- **Tailored maintenance courses**, in line with technical and regulatory requirements,
- Statutory compliance inspections, including **PED** (Pressure Equipment Directive), leak testing, and safety standard checks,
- Dedicated spare parts stock for **rapid, delay-free interventions,**
- **Comprehensive audit** and servicing of your equipment,
- Tailor-made training courses for your staff.

## ENERGY PERFORMANCE TEAM

Through digital simulation, we can accurately identify **energy savings and decarbonisation opportunities**. To achieve this, our IPMVP-certified Energy Managers place their expertise at your service.

IPMVP® INTERNATIONAL PERFORMANCE MEASUREMENT & VERIFICATION PROTOCOL

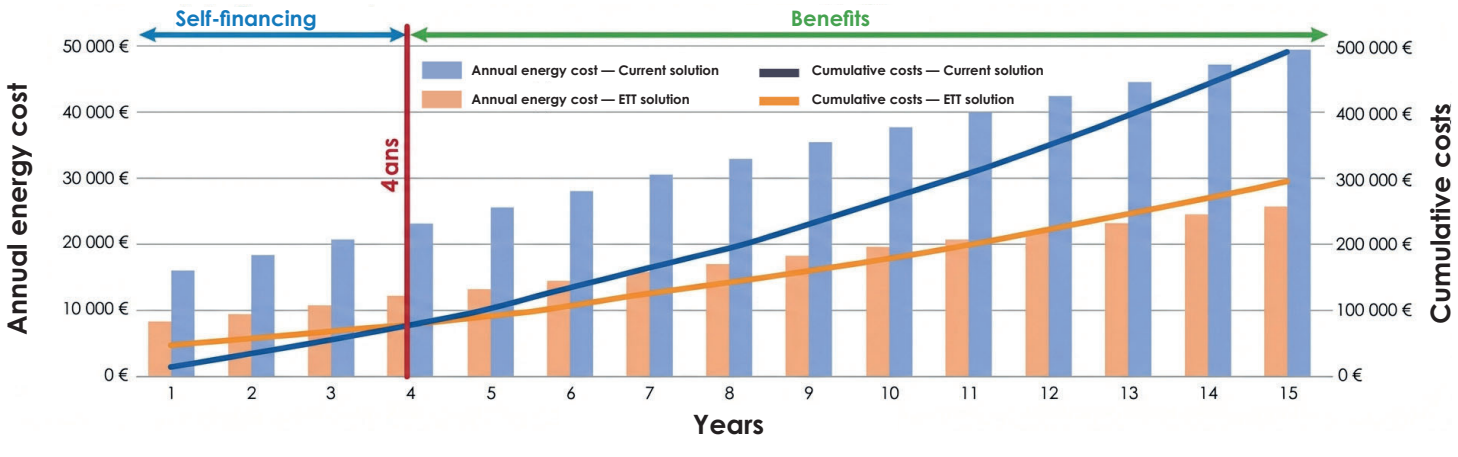
### KEY FUNCTIONS

- **Numerical simulations** to visualise, forecast, and optimise your energy consumption,
- A clear picture of your **Return on Investment (ROI)** so you can fund your projects with confidence,
- Calculation and monitoring of your carbon footprint to support your energy transition towards a **sustainable approach,**
- **Advice on operations and energy management,**
- The drafting of **Energy Management and performance contracts**.

**Example of a customized comparative study enabling separation of equipment investment (CAPEX) and operating expenses (OPEX) for a hospital**

**Aim**: Understand the overall investment in a facility over its lifetime

- Calculation of energy consumption
- Calculation of ROI for technical solutions

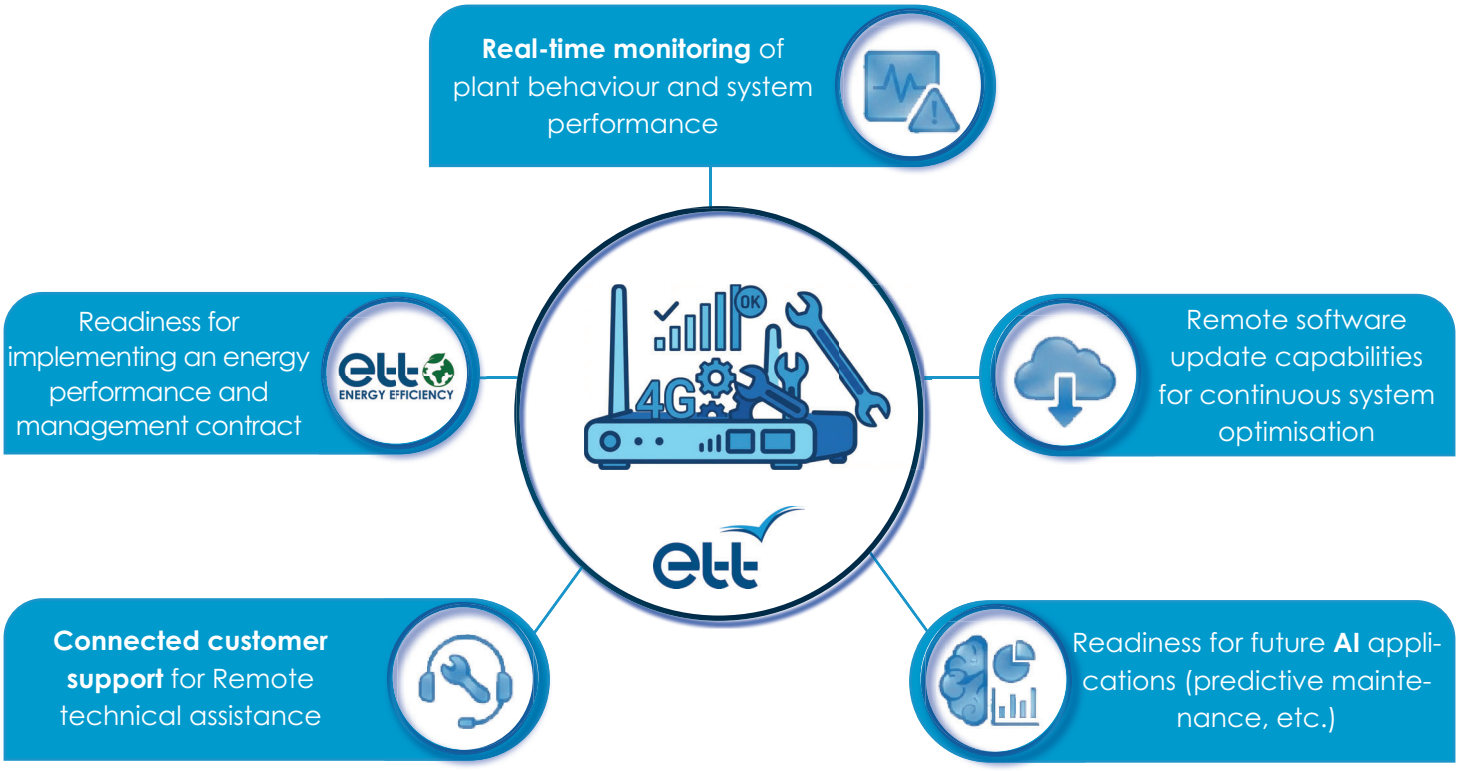


# A remote support powered by ETT digital tools

## REAL-TIME SUPERVISION WITH myETTvision


## 4G GATEWAY: THE ULTIMATE SOLUTION FOR EFFECTIVE REMOTE MAINTENANCE

Each ett unit IS equipped with a **4G** maintenance gateway, providing operators with the following features :



# INTERVIEW with Lucas MORALES

**Lucas MORALES**

Healthcare Market Development Manager at **ETT**:

**What prompted ETT to establish a dedicated Healthcare division?**

ETT has always designed and manufactured HVAC equipment for this sector, which is subject to exceptionally stringent technical and regulatory standards.

Amidst a rapidly evolving economic and environmental landscape, ETT has restructured its operations to respond to the emerging needs of the healthcare sector as a true specialist.

**Which healthcare professionals are you targeting?**

We offer our expertise to Project Owners and Project Managers involved in the design of hospital or care home projects, as well as to General Contractors, Installers and Maintenance Providers responsible for carrying out the works and operating the facilities.

**What value does ETT bring to this sector?**

Over recent years, we have seen environmental concerns compound the economic constraints that the healthcare sector has historically faced. This is driving stakeholders to integrate comprehensive decarbonisation and energy-saving approches into their strategies.

To address this, ETT is dedicating its 45 years of expertise in energy efficiency, alongside its latest innovations in refrigerant technology, to support these new challenges.

HEALTHCARE

## CONTACT US!

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ett A different climate
Environmental control solutions

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