

COMFORT
AIR QUALITY
ENERGY OPTIMISATION



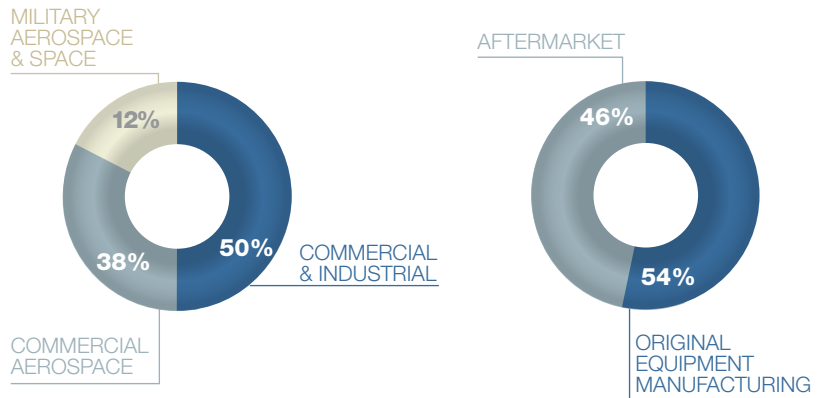


UTC THE STRENGTH

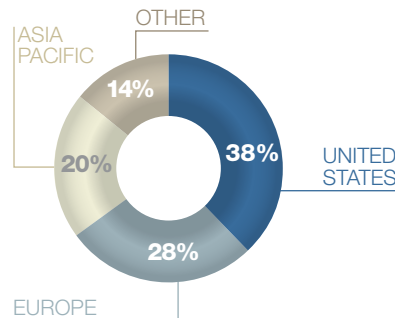
UNITED TECHNOLOGIES CORPORATION

United Technologies Corporation (UTC) is a leading provider to the aerospace and building systems industries worldwide.

Net Sales By Type as a Percent of Total Net Sales (As of December 31, 2015)



Net Sales By Geography as a Percent of Total Net Sales (As of December 31, 2015)



CIAT is part of UTC Climate, Controls and Security, a unit of United Technologies Corporation and a global provider of fire safety, security, building automation, heating, ventilation, air conditioning (HVAC) and refrigeration systems. UTC Climate, Controls and Security promotes integrated, high performance buildings and works to make them safer, smarter and sustainable.



AT THE HEART OF INNOVATION

UTC Climate, Controls and Security is focused on offering its customers the best in sustainable innovation. Its HVAC technologies and world-class expertise make it a trusted partner for companies and organisations who are leaders in their field, ensuring optimum conditions for their buildings and installations.

UTC key figures

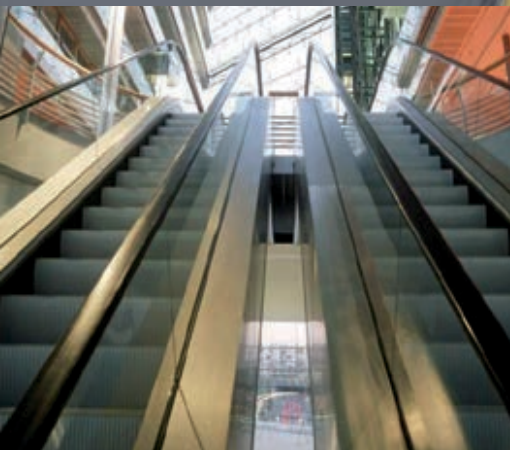
200,000 employees

\$57.4B net sales

\$6.61B net income attributable to common shareholders

\$3.7B total R&D investment

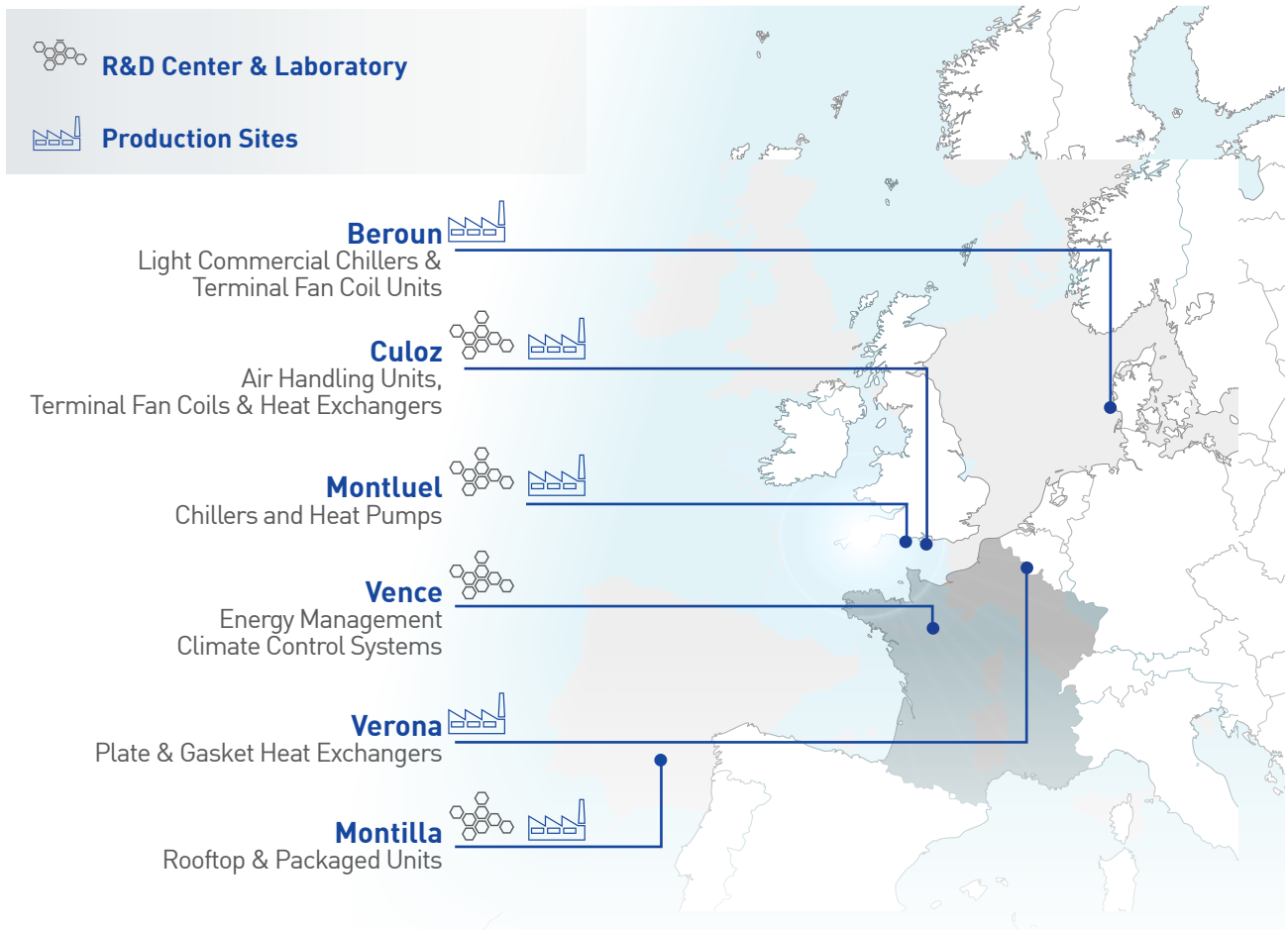
www.utc.com



OF A GLOBAL GROUP

CENTERS OF EXCELLENCE

As a leading provider of HVAC solutions, United Technologies Corporation has created a number of European Centers of Excellence. All world-class facilities, each center focuses on a specific field of expertise to support our customers in meeting the challenges they face today.



CULOZ CENTER OF EXCELLENCE FOR AIRSIDE TECHNOLOGIES

Equipped with state-of-the-art development, test and measurement tools, teams of experts at the Culoz site carry out prototyping and testing for customers who are looking for the best in innovation in air handling units, fan coil units and heat exchangers.

MONTLUEL CENTER OF EXCELLENCE FOR CHILLER AND HEAT PUMP TECHNOLOGIES

Experts at the Montluel site draw on over 50 years of specialist knowledge and engineering skills to offer customers tailor-made solutions to meet their individual needs in chiller and heat pump innovation.

MONTILLA CENTER OF EXCELLENCE FOR ROOFTOPS AND PACKAGED SOLUTIONS

The teams in southern Spain have in-depth expertise in rooftop, packaged, dehumidifier and preconditioned air (PCA) for aircraft units. The center houses the largest HVAC factory in Spain and Europe's biggest laboratory for aircraft preconditioned air units.

VENCE CENTER OF EXCELLENCE FOR CLIMATE CONTROL SYSTEMS

Providing climate control systems for HVAC environments is the key activity at the Vence Center of Excellence. Here the engineering team develops cutting-edge solutions to optimise and improve the energy efficiency of HVAC systems.



CIAT A GLOBAL SYSTEM PROVIDER

With over 80 years of experience, CIAT is one of Europe's leading names in heating, air conditioning and air handling solutions for the commercial, residential, healthcare and industrial sectors. Renowned for our capacity to create innovative, durable and high-performing products, we offer a complete range of equipment that is designed to work together. The skills and expertise of our teams are backed by completely integrated powerful production facilities which enables us to guarantee the optimal development of our global system solutions. Our latest innovations have been specially designed to meet your most demanding requirements and provide you with the best in technology.



CIAT COMMITMENTS THAT CONSTITUTE EXCELLENCE

Construction standards are increasingly stringent and buildings must be designed not only with the comfort of occupants in mind, but also with the aim to protect their health equity while reducing energy consumption and environmental impacts. CIAT responds by a constant commitment to offer more than just an extensive product range; we provide a comprehensive system offer developed around three fundamental values:

INDOOR AIR QUALITY

CIAT is committed to the research and development of innovative solutions aimed at improving indoor air quality, a major health issue of critical importance in the design of buildings. By integrating dynamic purification systems, particulate and chemical sensors and increased filter efficiency into its equipment, CIAT helps control CO₂ and fine particle concentration, achieving an air quality as close as possible to the recommended threshold defined by the World Health Organisation.

COMFORT

CIAT designs and manufactures products and systems with the well-being of occupants in mind. By developing equipment that provides the best possible thermal, aeraulic and acoustic comfort, we put individuals at the heart of our strategy and create interior environments that are renowned for their quality. Our comfort units ensure minimised temperature fluctuations, quiet operation and better visual integration, providing optimal comfort at all times.

ENERGY OPTIMISATION

CIAT develops products with a constant concern for performance. Our thermodynamic equipment meets the highest standards in energy use classification (class A) allowing substantial savings to be made without compromising on performance and efficiency. Heat recovery and thermal energy storage units harness calories that would otherwise be wasted, thereby using less energy and contributing to the reduction of greenhouse gases.



SPECIFICATIONS



SOLUTIONS



INDUSTRIAL FACILITIES



INSTALLATION



SERVICE

SUPPORT THROUGHOUT YOUR PROJECT

CIAT makes a long-term commitment as a partner by your side: from the specifications stage right through to installing the equipment, experts analyse your requirements to provide you with the best possible solution.

The integrated engineering department, the ultramodern research and design centre and the cutting-edge industrial facilities, from which we manage the entire production process, allow us to adapt to your specific needs.



CIAT's activities are based on optimising energy consumption levels and improving air quality and occupant comfort in buildings. We provide sustainable systems and highly advanced equipment that meet stringent certifications and standards. We are also strongly committed to protecting the environment, which is a fundamental part of our development strategy.

CIAT EXPERT IN INDOOR CLIMATE SYSTEMS

As a pioneer of customised HVAC solutions, CIAT understands the importance of increasing the well-being of individuals in their living areas and places of work. Aware of the thermal, energy and air quality issues faced today by every sector of activity, we have responded by developing global systems based on an adapted and efficient combination of products.

WATER-BASED GLOBAL ENERGY SYSTEMS FOR HEATING, COOLING AND INDOOR AIR QUALITY

To comply effectively with today's thermal and environmental regulations, CIAT designs optimised water-loop energy systems comprised of comfort units, heat pumps and dual-flow air handling units. As a renewable resource and a highly effective heat transfer fluid, water not only represents an excellent alternative to direct expansion systems it also meets F-Gas regulations in terms of confinement and limitation of refrigerants within buildings.



BENEFITS OF THE WATER LOOP

- ⊕ **More competitive:** equipment that is more cost effective and requires less maintenance than direct expansion systems
- ⊕ **Greater comfort:** flexible, precise control of comfort for the occupants
- ⊕ **Increased energy efficiency:** homogenous and thermally stable, water reduces the energy requirements for heat transfer
- ⊕ **Environmentally sustainable:** no refrigerant is required on the premises and only a small amount is used in the heat pump installed outside the building's occupied areas
- ⊕ **Easy to install:** no refrigerant specialists are required during installation
- ⊕ **Flexibility:** a water-loop energy system adapts easily to the design of buildings and the changes that may be made to its layout over time

SMART CIATControl: THE ENERGY MANAGEMENT SYSTEM

Connected to all HVAC components (refrigeration, comfort units, air handling unit) and using a patented algorithm that can be programmed according to building occupancy and weather conditions, Smart CIATControl adapts the efficiency of the thermodynamic producer to the needs of the emitters in real time.

In addition to automatic system changeover based on calculation requirements, features include:

- **Optimal Stop & Start:** predictive function which anticipates the stop and start times of the HVAC system.
- **Optimal Water®:** allows the temperature of the chiller or heat pump to be controlled according to the demand from the emitters. 
- **Night cooling:** charges the building with fresh air during the night and delays the activation of the refrigeration request during the day.
- **Epure Dynamics®:** patented process which ensures a particulate level for the building that is beneath the fixed WHO recommendation of 10µg/m³. 

The optimisations offered by Smart CIATControl allow an **average energy saving of 40% for the building**

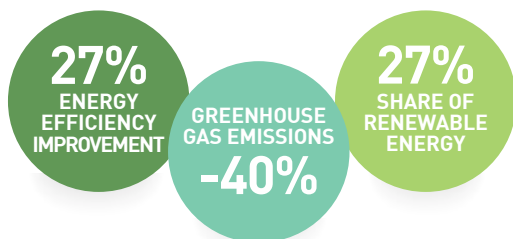


COMPLIANCE WITH STANDARDS AND RESPECT FOR THE ENVIRONMENT

CIAT pursues an exemplary quality approach to developing sustainable and efficient systems which conform to the standards of today and anticipate those of tomorrow. We ensure that our developments conform to the various environmental directives and regulations and, as a real driving force in our sector, also participate in their implementation.

THE ENERGY-RELATED PRODUCTS (ERP) EUROPEAN DIRECTIVE

The European Directive 2009/125/CE ErP outlines the conditions and criteria relating to the eco-design of products that affect energy consumption throughout their life cycle, from manufacture, to use and until disposal at end of life. It encourages manufacturers to design products that improve energy efficiency while reducing their overall impact on the environment, in particular the resources consumed throughout their service life. All CIAT products included in our catalogue conform with the ErP directive.



F-GAS REGULATIONS

Since 1 January 2015, the measures to control emissions from fluorinated greenhouse gases have been strengthened and a number of far-reaching changes have been introduced with a view to cutting the EU's F-Gas emissions by two-thirds by 2030 compared with 2014 levels.

These directives have a direct impact on HVAC equipment and involve the implementation of appropriate solutions. Direct expansion systems are destined to disappear as technological choices increasingly turn to water-based solutions which confine small amounts of refrigerant to a limited part of the installation.

ECO-DESIGN: RESULTS THAT EXCEED THE REGULATORY REQUIREMENTS OF TOMORROW, TODAY

At CIAT we strive to reduce the ecological impact of our equipment throughout its life cycle, from creation to final decommissioning. We confirm this strong environmental policy in our commitment to respecting ISO 14001 and OHSAS 18001 certifications, and undertake:

- To integrate environmental aspects as early as possible in the product design process;
- To take into account and make available the results of the life cycle analyses (LCA) for products (complete system for heating, ventilation and cooling);
- To provide environmental reports related to the equipment.

This approach benefits from an internationally recognised standard ISO 14062 "Environmental Management - integrating environmental aspects into product design and product development".





SERVICE SOLUTIONS

CIAT AT YOUR SERVICE

At CIAT, our objective is to provide high quality service and develop partnerships with you throughout the lifecycle of your HVAC system. We understand your changing needs, develop smart services and energy solutions that optimise performance and enable savings.

We provide the support you need to get the most out of your solution and develop strong partnerships with our customers, from project analysis to commissioning and operation for long-term satisfaction.



MAINTENANCE

Preventive and corrective actions

REPAIRS

Optimal operation of your equipment

PARTS

Quality solutions for quick repairs and step-by-step upgrades

MODERNISATION

Customised projects to refurbish and upgrade your installation

MONITORING & CONTROLS

Improvement of the energy efficiency of your installation



FOR SMART ENERGY MANAGEMENT & OPTIMISATION



WE INNOVATE TO FIND THE BEST SOLUTION FOR MANAGING AND OPTIMISING YOUR INSTALLATION

CIATM2M is an advanced monitoring solution, which enables customers for all applications to track and monitor their CIAT equipment.

- Real-time data retrieve through a custom access to the CIATM2M website (synoptic, controller dashboard, event and temperature curve, alert & fault memory and parameters log)
- Email alert at any event on the equipment
- Monthly and annual reports with analysis and recommendations from CIAT experts.



- ⊕ Better profitability
- ⊕ Equipment availability
- ⊕ Steady indoor air quality
- ⊕ Optimal equipment control
- ⊕ Fully secured connection



HVAC EXPERTS CLOSE AT HAND

A COMBINATION OF KNOWLEDGE AND EXPERIENCE FOR BETTER TECHNICAL SUPPORT

Our qualified and responsive teams of technicians are available to implement actions on site and ensure optimal operation of your equipment. Thanks to our expertise and experience in the fields of maintenance and technical service, CIAT offers a wide range of services from diagnostics right through to energy audits.

Engineers and technicians on the field work hand in hand to meet your expectations in terms of energy efficiency. Our priority, 24/7: to allow you to focus on your business whilst CIAT provides you with the best possible level of service.

+60 SERVICE TECHNICIANS	A LARGE RANGE OF UNITS UNDER SERVICE CONTRACTS	CONTINUOUS TRAINING FOR TEAMS & CUSTOMERS
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EUROPEAN PARTS CENTER

BUILDING SERVICE EXCELLENCE FOR CUSTOMERS

Thanks to our dedicated parts team and our factories located throughout Europe, CIAT is able to deliver 250 orders daily and ship efficiently around the world. With more than 10,000 items in stock, we propose a comprehensive parts offer including compressors, universal parts and manufactured components. Our purchasing power ensures optimised pricing and lead-times. Thanks to our manufacturing expertise, we provide advice to help you find the best service solution to meet your specific needs.

- State-of-the art logistics with reliable next day delivery for Europe
- Storage permanently adjusted according to customer demand
- Accessible and reactive contacts
- Dedicated online shop to facilitate selection of parts

+70.000 MANAGED PARTS NUMBER	STRONG SUPPLY CHAIN	99% DELIVERIES ON TIME
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VENCE CLIMATE CONTROL SYSTEMS CENTER OF EXCELLENCE

Expert in Smart Services and Thermal Energy Storage for Energy Management

At the Vence Center of Excellence for Climate Control Systems, our engineers focus on developing and offering technical support for smart services and designing, engineering and implementing HVAC systems with storage solutions.


Their know-how is proven and unique with in-depth knowledge of both cooling/heating and automation. The Vence centre works closely with Europe's leading science park located in Sophia-Antipolis, in the south of France. The team is frequently involved in major European research and innovation projects.

SMART SERVICES

- Monitoring
- Equipment control
- Plant and system management
- Climate control solutions compatible with every Building Management System

THERMAL ENERGY STORAGE

- Shift electricity consumption from peak to off-peak hours
- For peak cooling systems > 500 kW
- Turnkey projects

 **+3 000**
CUSTOMERS
WORLDWIDE

 **+500 MW**
ELECTRICITY SAVED

 **+6 000 000 kWh**
DAILY TRANSFER

CIAT SOLUTIONS FOR ALL TYPES OF APPLICATIONS WHEREVER YOU ARE



INDUSTRY



OFFICE



ADMINISTRATION



SHOPPING CENTRE



HOTEL



HEALTHCARE



COLLECTIVE HOUSING



RESIDENTIAL



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2



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5

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 ⑤ Hospital Del Mar, Barcelona, Spain

PRESENT
IN
OVER **50**
countries

OVER
80
years
OF EXPERIENCE

AVAILABLE
24/7



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