

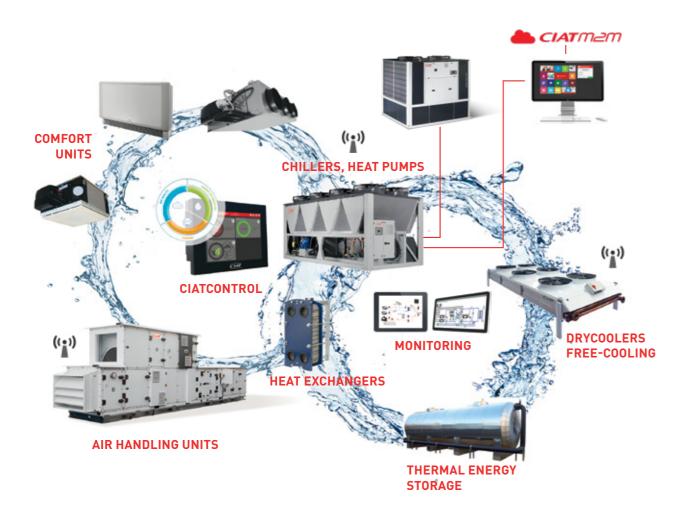
COMFORT AIR QUALITY ENERGY OPTIMISATION





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 CO_2 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.



SUPPORT THROUGHOUT YOUR PROJECT



SOLUTIONS



INDUSTRIAL FACILITIES



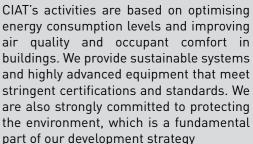
INSTALLATION



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.





WORLD-CLASS OPERATIONS OPERATIONS TO BRING BEST-INCLASS SOLUTIONS

Our European Centers of Excellence and production sites are all wolrd-class facilities in their own right. 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.



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.



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.



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 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
- for 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
- 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 optimizations offered by Smart CIATControl allow energy saving 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 FOR YOUR COMFORT, AIR QUALITY & **ENERGY OPTIMISATION**

As key European player for HVAC systems, our objective is to provide high quality service and develop partnerships with you throughout the lifecycle of your installations. We understand your changing needs, develop smart services and energy solutions for all types of applications that optimise performance and enable savings.

Committed to improve life quality, 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.



A WHOLE WORLD OF SERVICES

MAINTENANCE:

- Warranties and extensions
- Preventive and corrective
- Service contracts

REPAIRS:

- Efficient diagnostics
- Quick on-site interventions • Technical assistance

SPARE PARTS:

- Universal and Factory Authorized Parts
- Consultancy and kit solutions

CONTROL AND MONITORING:

• Prognosis and expert analysis

Real-time data, alerts and reports

Monitoring and optimizing performance

Dedicated on-line shop

MODERNIZATION:

- Upgraded installation
- Performance improved
- Turnkey projects

THERMAL ENERGY STORAGE:

- For peak cooling demand >500 kW
- Shift electricity consumptions from peak to off peak hours

CIATM2M:

OPTIMISE HVAC OPERATION & MAINTENANCE NEEDS ALERTS. REAL-TIME DATA & REPORTS WITH EXPERT ANALYSIS DATA ARE REGULARLY REVIEWED THROUGH CONTINUOUS SUPPORT

In the current context of increasingly efficient building requirements, CIAT offers monitored services that help customers to improve the efficiency of their HVAC installations.

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 pre-sales technical support and diagnostics right through to energy audits.

Our dedicated hotline for off-site support with our 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.

CONTINUOUS TRAINING FOR TEAMS &

HVAC EUROPE PARTS CENTER

BUILDING SERVICE EXCELLENCE FOR CUSTOMERS

Thanks to our dedicated parts team and our factories located throughout Europe, HVAC Europe Parts Center is able to deliver 250 orders daily and ship efficiently around the world. With more than 37,000 active parts and 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 leadtimes. 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
- · Storage permanently adjusted according to customer demand
- Dedicated, accessible and reactive teams
- Dedicated online shop to facilitate parts selection
- Stock online, order tracking, parts selection: numerous specific online tools to ease and fasten your business

+80.000 STRONG SUPPLY **CHAIN**

VENCE CLIMATE CONTROL SYSTEMS CENTER OF **EXCELLENCE**

Expert in customized control solutions, smart services for HVAC systems and plant room.

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 indepth 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.

CONNECTED SERVICES AND ENERGY OPTIMIZATION

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



+1 300
CONNECTED EQUIPMENT





+6 000 000 kWh

MARKETS SOLUTIONS





HEALTHCARE

Control of airborne contamination and noise levels in risk zones.

Protection of health and comfort in reception areas and patient rooms.





SHOPPING CENTERS

Full modularity with plug and play system.

Optimized operating costs.



CLIMACIAT AIRCLEAN

Air handling unit designed for the specific characteristics of controlled environm Certified Eurovent DIN 1946-4 /VDI 6022



COADIS LINE Esure

Cassette comfort unit with Coanda effect for increased occupants' comfort.



COMFORT

LINE

Esure

Ductable comfort units with excellent acoustic comfort



EPURE DYNAMICS

Smart CIAT control air purification function for higher quality indoor air, specifically through purification on fine particles in accordance with WHO



POWERCIAT He Xe

Groupe d'eau glacée à condensation par air à haut rendement doté de technologies de réduction du bruit.



THERMAL ENERGY STORAGE

High efficiency air-coled chiller with noise reduction technologies.



POWER' CONTROL

Plant system designed to control a complete thermal energy production system (heating wand cooling).



VECTIOS

Rooftop unit. All-in-one air conditioning solution, with flexible configuation, designed both to offer high levels of indoor air quality and high efficiency reducing total cost of onership during its lifetime.



AQUACIATPOWER

High efficiency and integrated hydraulic module.



air-cooled chiller & heat pump with noise reduction technologies



HYDROCIAT

Compact and reliable



VEXTRA

Compact drycooler Hydrociat for an optimised global solution.



CLIMACIAT

AIRTECH

COADIS LINE Esure

Accessible and efficient air handling unit that is simple to Cassette comfort unit with Coanda install and use. effect for increased occupants' comfort.



MELODY 2

Optimum heating and cooling performance cassette, designed for perfect



ENERGY

STORAGE

Reduced operating cost and non-stop support.



Comfort, silence and discretion for the satisfaction of your clients.

Controlled running costs.





LIGHT COMMERCIAL





MAJOR LINE

Versatile and highly efficient comfort unit providing improved comfort and very low sound level.



COMFORT LINE

Esure Comfort unit with high available static pressure, modular air discharge configurations, flexible installation and excellent acoustic comfort.



AQUACIAT

High efficiency air-cooled chiller with scroll compressor



DYNACIAT

OPERA

Drycooler range compatible with Compact and silent High energy efficiency Scroll compressors High-efficiency brazed-Dynaciat range for favourable all-round plate heat exchangers Self-adjusting electronic performance levels



CLIMACIAT **AIRACCESS**

Accessible and efficient air handling unit that is simple to install and use.



EREBA HE

Simplicity and reliability in a high efficiency heat pump with integrated hydraulic module and NHC controls.



AQUACIAT

Compact and silent heat pump with integrated hydraulic module



FLOWAY

Compact air handling unit leading in its category in terms of ease of use, energy efficiency



MAJOR LINE

Versatile and highly efficient comfort unit providing improved comfort and very low sound level.



MELODY2

Optimum heating and cooling performance cassette, designed for perfect integration in suspended ceiling.

MARKETS SOLUTIONS





OFFICES

Thermal and accoustic comfort.

High interior air **quality** for improved productivity.



AQUACIATPOWER

High efficiency aircooled chiller with scroll compressor



EPURE DYNAMICS **DYNACIAT**POWER

High energy performance water-cooled chiller with optimised footprint.



ITEX

Smart CIAT control air purification function for higher quality indoor air, specifically through purification on fine particles in accordance with WHO



High thermal transfer capacity gasketed plate heat exchanger.



CLIMACIAT AIRACCESS

Accessible and efficient air handling unit that is simple to install and use.



COADIS LINE

Esure

Cassette comfort unit with Coanda effect for increased occupants' comfort.



COMFORT LINE





Esure

Ductable comfort



units with excellent acoustic comfort.



Energy management centralization of the information, remote management of equipment, automatic changeover and enhanced



INDUSTRY

High efficiency and full reliability for industrial equipment and global process.

Risk control with ATEX certified heating (air heaters), ventilation, air handling and smoke extraction equipment.





POWERCIAT He Xe

High efficiency air-cooled chiller with heat recovery.



Highly efficient,

HYDROCIATTURBO

compact and flexible water-cooled chillers unit working with Hydrociat for an equipped with a Maglev (Magnetic levitation) optimised global centrifugal two stage compressor.



Air handling unit



combining efficiency and modularity to meet technical requirements.



VECTIOS

Rooftop unit. All-in-one air conditioning solution, with flexible configuation, designed both to offer high levels of indoor air quality and high efficiency reducing total cost of onership during its



SPACE PF

capacity range. Active or passive recovery option available. Quiet operation. Flexible configuration and adapted for renovation Scroll compressor with R410A.



POWER' CONTROL

Plant system management designed to control a complete thermal energy production system (heating and cooling).



Reduced operating support.





cost and non-stop



AIR TREATMENT SOLUTIONS

AIR HANDLING UNITS

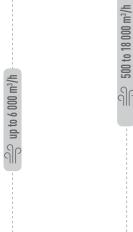
CLIMACIAT **AIR COMPACT FLOWAY AIRTECH**

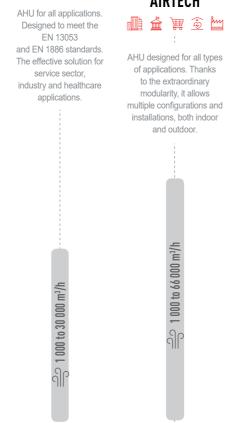
■ ★ ● EN 13053 service sector, applications. All range class A+. High-efficiency heat

recovery unit. High performance direct drive EC fan motor Plug & play unit (built-in control).



The modular and ultra-





AIR HEATER

AIRCLEAN

AHU designed for

specifically controlled

environments .This



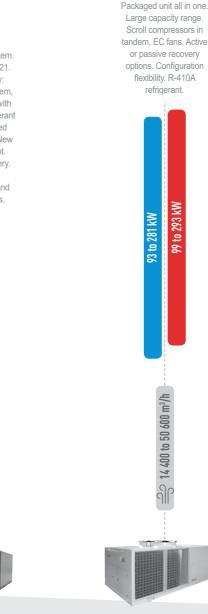
range incorporates latest hygienic technological The most competitively priced solutions. technical solution for heating large spaces. Ensures ultra-fast warm-up of buildings. Excellent diffusion thanks to the double deflection diffuser with its patented JET+ technology.

New low energy consumption HEE motor version. New 3-speed thermostat for HEE motor.

ROOFTOP REVERSIBLE AIR-TO-AIR AND WATER-TO-AIR

ROOFTOP UNITS

VECTIOS™ PJ ≜ 票 ㎞ Integrated "plug&play" system Eco-Design ready ErP 2021. High seasonal efficiency: scroll compressors in tandem. EC fans, EEV. Reliability with superior quality. Low refrigerant charge R-410A. Optimized dimensions and weights. New intelligent control concept. Active and passive recovery. Air zoning option (up to 4 different zones) and other key feature options. 20 to 90.1kW

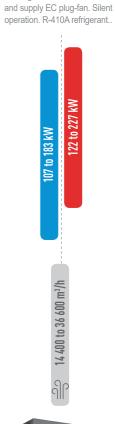


SPACE PF

W



Rooftop water cooled for centralized systems with closed water loop. Applicable also for geothermal installations. Configuration flexibility. High efficiency. SEER > 5.6; SCOP > 4.4 in configurations with tandem

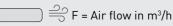


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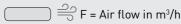




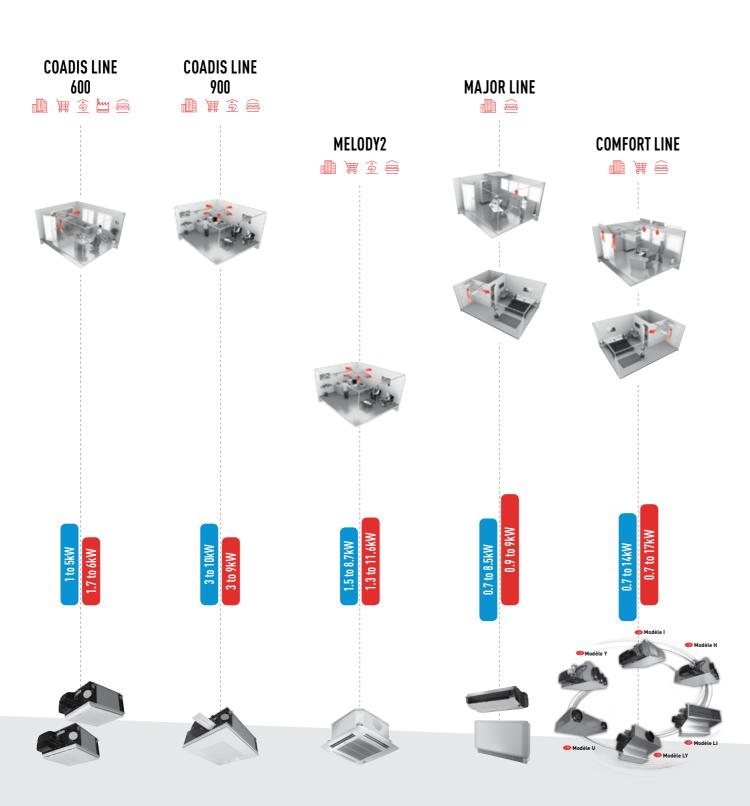








COMFORT UNITS



CONTROL FOR COMFORT UNITS

Customised performance at minimum cost.

Electronic control V30



V300 Simplified access with the Master/Slave function.

4 operating modes: complies with RT 2012. Quick and easy to upgrade on site. Centralised timer for managing multiple zones. CIAT concept and design. EuBac certification.

Electronic control V300



V3000 KNX New generation networked control. Variable flow HEE function control. Condensation-free function management. CIAT Concept & Design. EuBac certification.





FRESH AIR Energy saving and optimal air quality in office buildings.



Fresh air control

HYSYS® THE SYSTEM SOLUTION ON WATER LOOP

The hydraulic solution which adapts itself to

your requirements and guarantees optimum

HYSYS®: THE HYDRAULIC **SOLUTION WITH** HYMOD











levels of comfort and performance.

HYSYS®: THE **AERAULIC SOLUTION**



Guaranteeing high quality indoor air, specifically through purification of fine particles in accordance with WHO recommendations.

onitor the air renewal according to the

HYSYS®: THE INTELLIGENT SOLUTION





Management of your installation together with energy optimisation, and the setting of parameters via an intuitive interface, simplifying your day-to-day usage.

SMART CIATControl (System tracking and

SYSTEM CONTROL

SMART CIATCONTROL

Optimisation of Hysys® system performance:

- Centralisation of the information, - Remote management of equipment,
- Automatic changeover,
- Enhanced energy optimisation,
- Air quality optimisation function.

Smart CIAT Control: Energy







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HEAT PUMPS & WATER CHILLERS

AIR-COOLED UNITS

CONTROL AND SUPERVISION

POWER'CONTROL

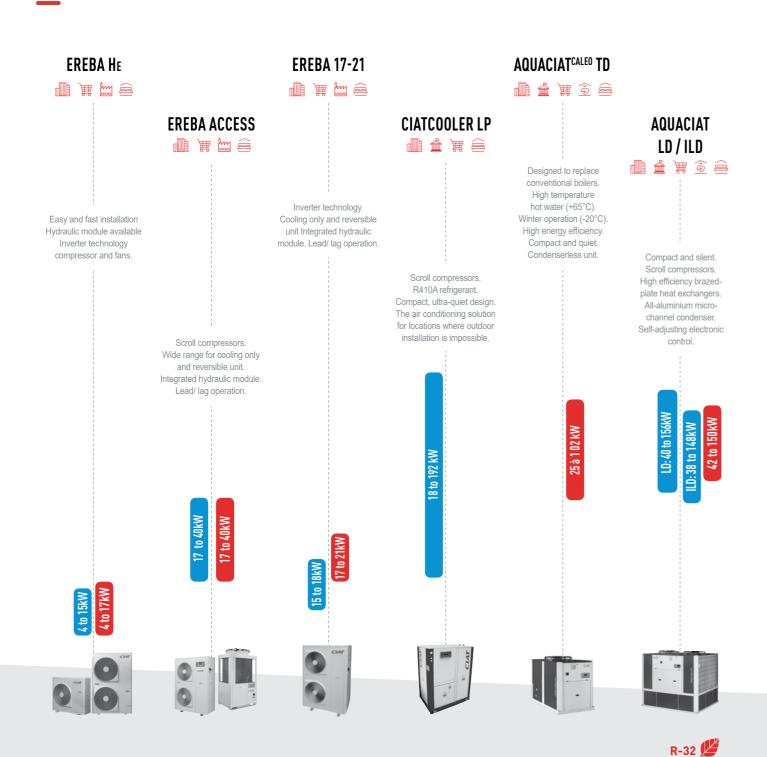
Plant system management. Designed to control a complete thermal energy production system (heating and cooling).

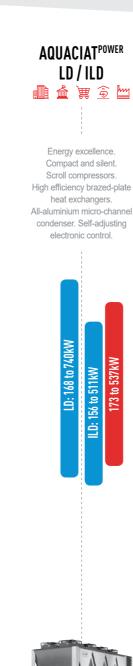


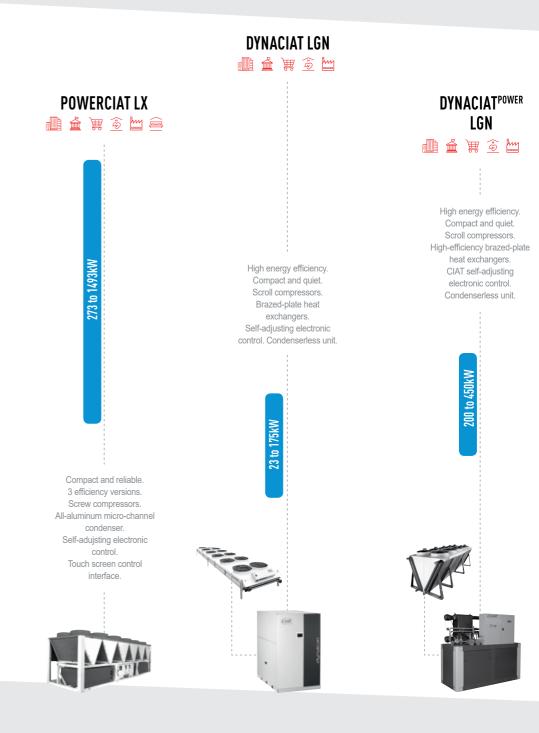
CIATM2M To track, monitor hvac system performance & take preventive and corrective actions



Monitoring solution for CIAT equipment

















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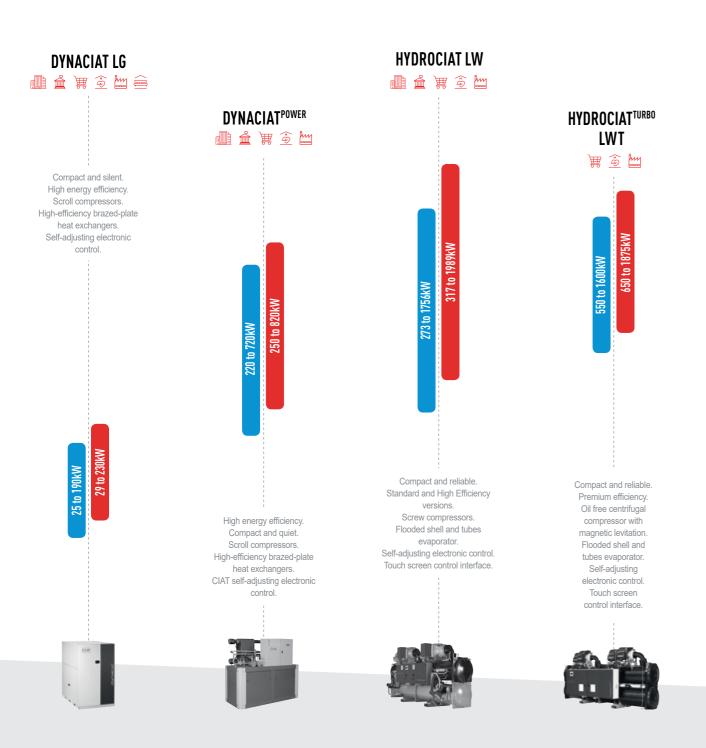
Heating

19

R-32

HEAT PUMPS & WATER CHILLERS

WATER-COOLED UNITS



DRYCOOLERS - CONDENSERS - HEAT EXCHANGERS - THERMAL ENERGY STORAGE

ENERGY OPTIMISATION SOLUTIONS

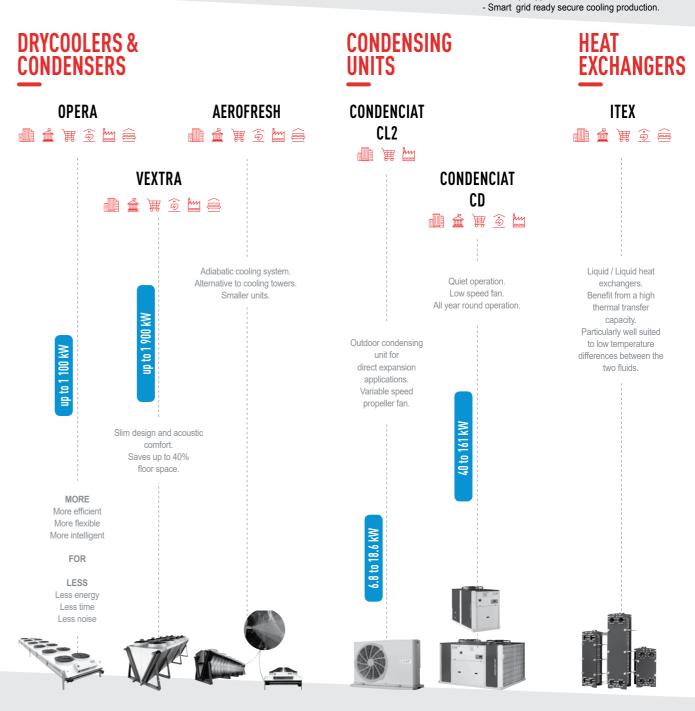
Optimised energy management. Information in multilingual clear text.



THERMAL **ENERGY** STORAGE

Shift your electricity consumption from peak to off peak hours:

- Turnkey solution
- Proven technology - Unique expertise
- Reduced operating cost - Non-stop support to













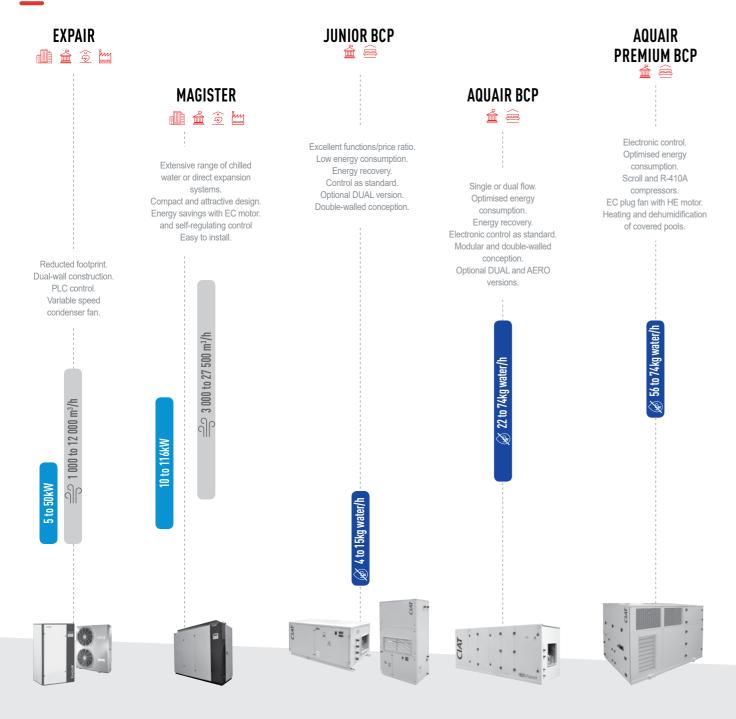
Cooling

Heating

BOSS

SUPERVISION

SWIMMING POOL DEHUMIDIFIERS





4 000 to 21 000m³/h

篇 **ISPK** 簫 Air-cooled condensing units designed for installation outdoors. They can be Vertical packaged in monoconnected on-site with one block or split configuration direct expansion exchanger for indoor installations. Configuration flexibility. Reversible heat pump. Silent operation. Tandem scroll compressors R-410A refrigerant.. and EC plug-fan for indoor and outdoor section. High seasonal efficiency. Configuration flexibility. R-410A refrigerant.

CIAT SYSTEM CONTROL AND SUPERVISION

Remote control, managing up to

300 units (3500 variables). Alarm

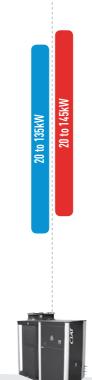
management, planner and event management, diagrams and

reports. Installation drawing with

units located, energy mangement,

analysis of risks and critical control

points, notes and integrated WiFi.



PR03

Indoor units with direct

expansion exchanger

for R-410A refrigerant.

Horizontal construction

designed for installation

indoors, connected

to a network of ducts.

Configuration flexibility.

PLANTWATCH Management of up to 30 units (with a total of 300 variables). Panel version and wall version. Remote control over the internet with IP address. Management of units in groups or zones. Managing alarms. Planner. Creation of diagrams. Touch screen.



WATER-SOURCED HEAT PUMPS CZ

NEPTUS XP

■ 章 萬

Personalized control in offices and shopping centers. Vertical construction designed for installation indoors. Discreet solution in centralized units with closed water loop. Applicable also for geothermal installations.

R-410A refrigerant.





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CLOSE

CONTROL UNITS

























OFFICE LOCATIONS

LEATHERHEAD
TCUK Ltd
United Technologies House
Guildford Road
Leatherhead
Surrey
KT22 9UT

MANCHESTER TCUK Ltd Unit 15, S:Park Business Park Hamilton Road Stockport Greater Manchester SK1 2AE BROMSGROVE TCUK Ltd Units 7/8 Topaz Business Park Topaz Way Bromsgrove Worcestershire B61 0GD

t: 01372 220 151

e: marketing.uk.ciat@carrier.com

