



VECTIOS^{POWER}™

THE ALL-IN-ONE AIR CONDITIONING SOLUTION



EXPERTISE

With over 80 years' experience in climatic engineering, we build our expertise on a close relationship with our customers. Serving different fields, we put our innovative abilities into the design and manufacture of systems that push the boundaries of efficiency and simplicity.

With genuine innovations, we work alongside retail, supermarkets, industries, logistics and cinemas to provide you with optimal engineered solutions.

With hygiene and comfort requirements in mind, we provides global solutions with a low carbon footprint that go beyond the simple notion of kW/h consumed and energy savings.



HIGH EFFICIENCY

Simplicity

We ensure easy installation and integration with building management systems.

High air quality

We are committed to the research and development of innovative solutions aimed at improving indoor air quality. By integrating ventilation, quality sensors, airflow control and increased filter efficiency into our equipment, CIAT goes even further to eliminate pollution and contamination.

Energy optimization

We develop energy efficient solutions allowing substantial savings to be made without compromising our product's efficiency.



GUIDING YOU RIGHT FROM THE START

To ensure you are provided with the right solutions, CIAT Experts will work alongside you from conception and throughout the implementation of your project.

They will analyze your specifications, and thanks to their expertise and specific software designed by our engineers, will provide you with the optimum solution to meet your requirements.



MONTILLA CENTER OF EXCELLENCE: EXPERTS IN ROOFTOPS & LIGHT COMMERCIAL CHILLERS

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

Customization

The Montilla Center of Excellence has an engineering team specifically dedicated to customization projects. It can also mobilize its specialized commissioning PCA team worldwide and offers technical data acquisition for technical documentation, as well as remote test supervision for special on-site applications.



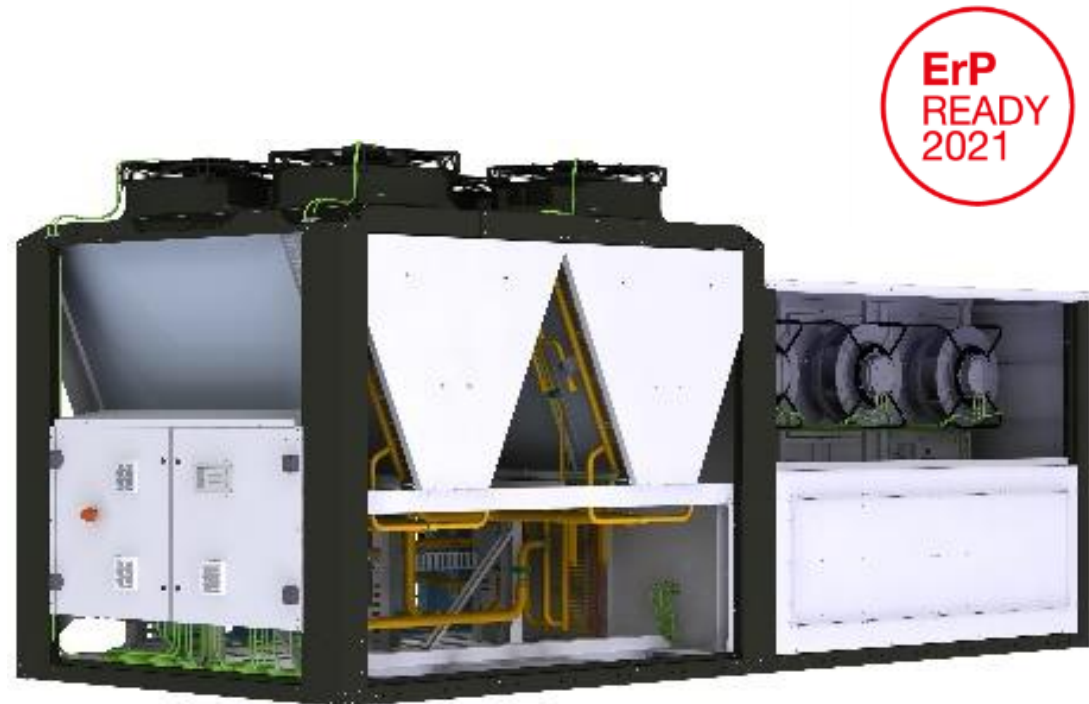
VECTIOS^{POWER}

THE ALL-IN-ONE AIR CONDITIONING SOLUTION



Vectios^{Power}

Vectios^{Power} is a **new generation of rooftop air conditioning packaged units**, designed to offer **high levels of indoor air quality** and **high-efficiency** as well as to **reduce the total cost of ownership** during its lifetime.



#CIAT4life

VECTIOS^{POWER} RANGE OVERVIEW



- ▶ Available in 12 sizes and 4 chassis
- ▶ Airflow **10 800 to 54 000m³/h**
- ▶ Cooling capacity from **100 kW up to 280 kW**
- ▶ Heating capacity from **101 kW up to 309 kW**



VECTIOS^{POWER}

PERFECTLY SUITED FOR ALL APPLICATIONS



VECTIOS^{POWER}

THE ALL-IN-ONE AIR CONDITIONING SOLUTION



HIGH ENERGY EFFICIENCY
& ENVIRONMENTAL RESPONSIBILITY



ENERGY SAVINGS



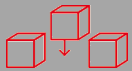
PACKAGED SYSTEM FLEXIBILITY



EXTENSIVE SCOPE



HIGHLY RELIABLE



SIMPLICITY & CONNECTIVITY



ACOUSTIC COMFORT



HEALTHIER INDOOR ENVIRONMENT





HIGH ENERGY EFFICIENCY & ENVIRONMENTAL RESPONSIBILITY

We strive to conform to your highest environmental commitments. We concentrate our efforts on making our units more efficient and more environmentally responsible. The Vectios^{Power} range goes beyond 2021 Ecodesign: **up to 38% above the requirement.** The range is compatible with mid GWP refrigerant.



**Whole range
compliant**

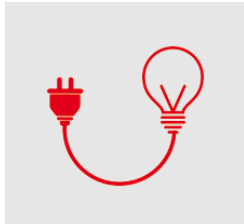


**Up to 50%
energy savings ***



**Up to 15%
energy savings ***

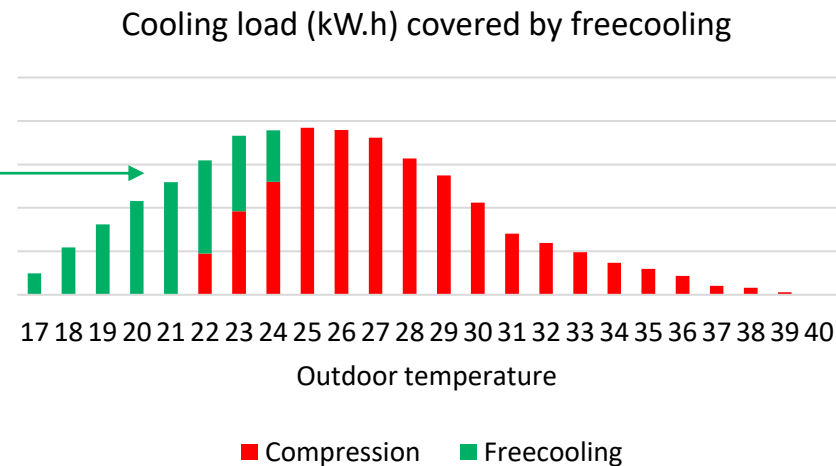
*vs previous generation



ENERGY SAVINGS

We develop energy-efficient solutions that provide substantial savings. This unit has been designed to reduce energy consumption with advanced features: variable ventilation, free-cooling, low pressure drop filters and **energy recovery systems**.

No compression
up to 21°C
Outdoor Air
Temperature



Up to
30%
energy
savings*

*with free cooling option



PACKAGED SYSTEM FLEXIBILITY

We address multiple specific applications with one of the largest ranges of options in the market:

- ▶ Free-cooling
- ▶ Energy recovery
- ▶ Fresh air
- ▶ Quality sensors
- ▶ Filtration
- ▶ Overpressure control
- ▶ Heating back-up
- ▶ Humidity control
- ▶ All season operations
- ▶ Multi-zone control
- ▶ Heat recovery coil
- ▶ Low temperature applications
- ▶ Master/slave and back up
- ▶ Energy meter
- ▶ Refrigerant or smoke detector
- ▶ Anti-corrosion options
- ▶ Supervision
- ▶ Communication

The Vectios^{Power} unit has been designed for an easy installation regardless of the space you have:

Up to
10%
footprint
reduction¹

Up to
25%
weight
reduction²



EXTENSIVE SCOPE

We address more applications in a wider temperature range. We provide a solution that is perfectly suited for multiple environments.

- ▶ For **LARGE AREAS**: choose **air zoning** to control up to 4 zones with high thermal dispersion.
- ▶ For **INDUSTRIAL PROCESSES** or food refrigeration systems: use rejected energy with a **heat recovery coil**.
- ▶ When **MORE AIRFLOW** is required: **air flow extensions** fulfill the need.
- ▶ For **FOOD STORAGE IN LARGE FACILITIES**: **low return temperature to 15°C** in cooling mode.



SHOPPING
CENTRES



INDUSTRY



LOGISTICS



OFFICES



CINEMA

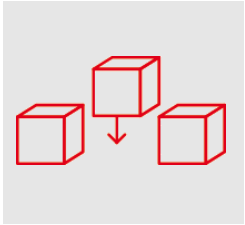


HIGHLY RELIABLE

We ensure the high-reliability of your equipment through a robust qualification process.

- ▶ We design and manufacture reliable products that meet your expectations and facilitate easy maintenance.
- ▶ We utilize high-quality components and a robust leak test process to minimize refrigerant leakages.
- ▶ Unit performance is certified by Eurovent, and rated in testing conditions.





SIMPLICITY & CONNECTIVITY

We ensure easy installation and integration with building management systems.

- ▶ Plug and play solution fully programmed and set-up from factory guarantees an easy installation.
- ▶ Communication with all building management system protocols through modbus, Ethernet, LonWorks, Bacnet and KNX.
- ▶ Wide supervision available from 1 to 300 units.
- ▶ Remote supervision solution CIATM2M.
- ▶ VECTIC control optimizing performance, seasonal efficiency and operational limits in all seasons.





ACOUSTIC COMFORT

We guarantee low noise levels during operation thanks to design optimization and the latest technology to meet the most exigent requirements.

70%

of the operation time
below half-load.
Sound level reduction
in partial load operation.

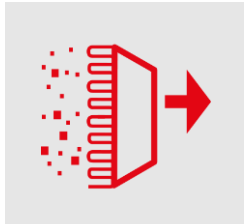


High **reduction**
of 7dB(A)*
in radiated power
sound level.



High operation mode
available with free-cooling
and disabling compressors.

*vs previous generation



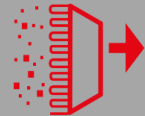
ENHANCED SOLUTIONS TO CONTRIBUTE TO A HEALTHIER INDOOR ENVIRONMENT

#CIAT4life



Ventilation

of spaces with outdoor air reduces indoor contaminants to maintain indoor air quality.



Filtration

is an efficient way to reduce particles that can harm our health. Filter fouling detector determines when the filter needs to be replaced.



CO2 sensors

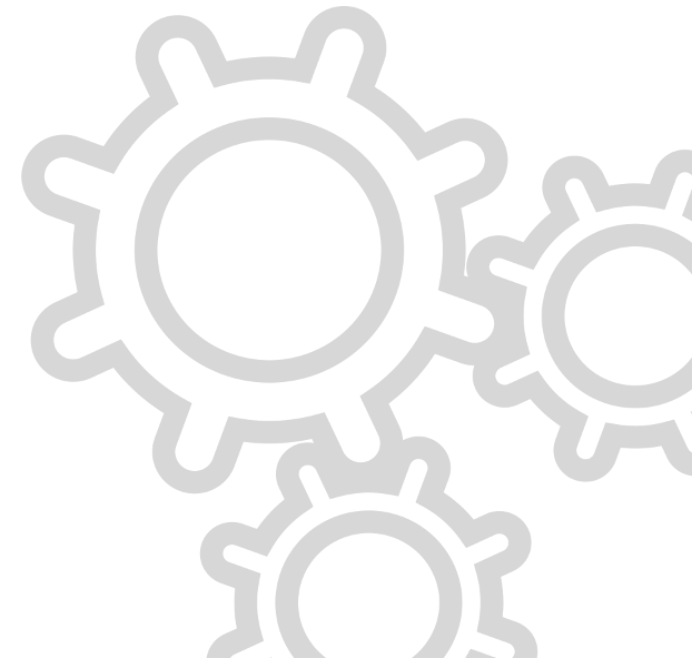
allow ventilation based on CO₂ levels between indoor and outdoor sources.



Air flow control

ensures proper comfort in spaces: temperature, humidity, air flow and overpressure.

A COMBINATION OF TECHNOLOGIES



A COMBINATION OF TECHNOLOGIES

Energy recovery options

EC outdoor fans for high-efficiency and **low noise level**

Assemblies with mixing box and **free-cooling**

VECTIC control
optimizing performance and energy consumption

Lightweight and **dimension optimization**



Aluminum panels and registers

Double skin
50mm insulation (option)

Indoor air quality
large filter selection

New functionalities: air zoning, heat recovery coil, low return temperature

Optimized cooling circuits design including **tandem compressors and electronic expansion valves**

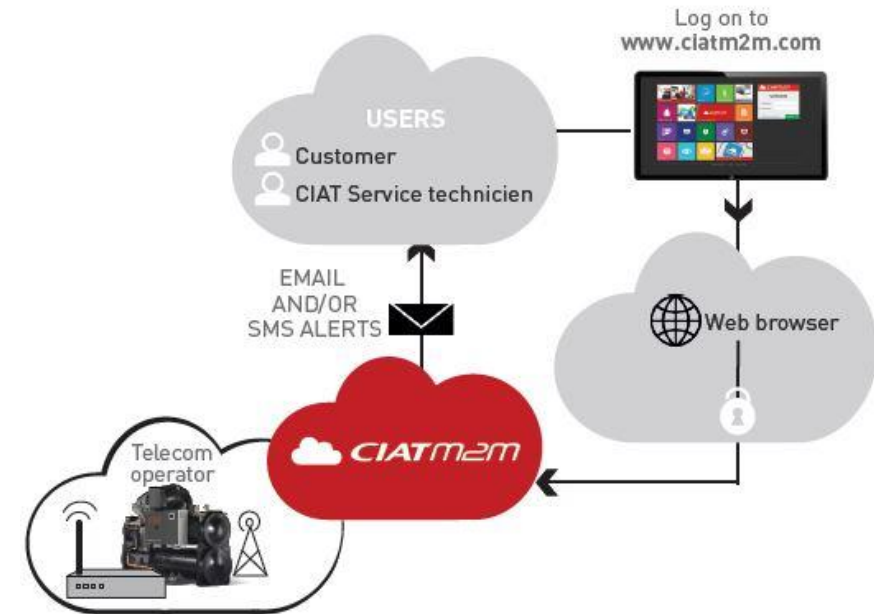


ADVANCED SYSTEM CONTROL



CIAT M2M is an advanced monitoring solution which enables customers for all applications to track and monitor their CIAT equipment.

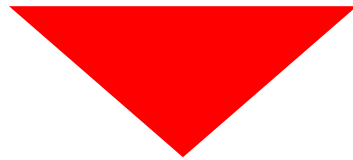
- ▶ Real-time data retrieval through custom access to the CIATM2M website (synoptic, controller dashboard, event and temperature curves, alert and fault memory, black box and parameters log).
- ▶ Email alert for any event concerning the equipment.
- ▶ Monthly and annual reports with analysis and recommendations from CIAT experts.



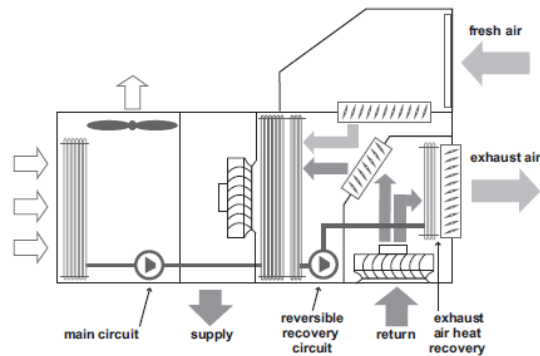
ENERGY RECOVERY

ACTIVE

High performances in mild weathers

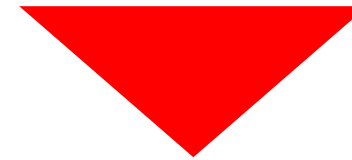


Additional frigorific circuit



PASSIVE

With low outdoor temperatures in winter, and high fresh air ratios



Rotary wheel



MAXIMUM EFFICIENCY



MAXIMUM EFFICIENCY

VECTIOS POWER									
Sizes IPJ	Cooling capacity KW (1)	SEER	Heating capacity KW (1)	SCOP	Supply fan				Radiated sound power level (dB(A))
					Nominal airflow m3/h	Nominal available pressure (mmWC)	Minimum airflow	Maximum airflow m3/h	
420	100.3	4.76	100.5	3.44	18000	25	10800	25920	86.0
450	110.1	4.64	110.3	3.44	19800	25			86.5
500	119.5	4.55	121.5	3.42	21600	25			87.0
560	129.6	4.76	131.5	3.43	23400	30	14040	36720	87.5
620	144.5	4.62	148.6	3.41	26100	35			88.0
680	158.9	4.57	163.1	3.37	28800	35			88.3
720	167.1	4.58	171.3	3.38	30600	35			88.5
760	180.1	4.88	190.1	3.4	32400	35	19440	46800	88.5
840	200.4	4.71	210.4	3.38	36000	35			89.3
960	220.3	4.7	235.3	3.39	39000	35			90.5
1050	253.2	4.61	280.4	3.38	40500	35	24300	54000	92.0
1200	280.2	4.56	308.7	3.37	45000	35			93.0

- (1) In accordance with the EN-14511-2018
- (2) In accordance with the EN-14825-2016



Eurovent certified values

FEATURES AVAILABILITY



Vectios ^{power}					
400 V / 3 ph / 50 +N	●	Hot water coil	▲	Active Recovery through frigorific circuit	▲
400 V / 3 ph / 50 (without neutral)	▲	Electrical heaters	▲	Rotary wheel (sensible or enthalpic)	▲
EC supply plug-fan with variable airflow rate controller	●	Gas heater (located in roofcurb)	▲	Electric energy meter	▲
EC return plug-fan with variable airflow rate controller	▲	Coil anti-corrosion protection	▲	Energy meter (electric + capacities)	▲
High/low available pressure for supply fan	▲	Refrigerant leak detector (ppm)	▲	Hot water recovery coil	▲
High available pressure for return fan	▲	Smoke detector	▲	Air zoning up to 4 zones	▲
EC outdoor axial fan	●	Fresh air management	●	Low return temperature applications	▲
2-speed outdoor axial fan	▲	Free-cooling (T, H, T+H)	▲	Signal control for an outdoor humidifier	▲
Double skin panel 50mm insulation (A2-s1, d0 (M0) class)	▲	Up to 4 room sensors (T or T+H)	▲	Different control terminals	▲
Electronic expansion valve	●	Quality sensors (CO2)	▲	Master / slave (2-8 units) and back-up (2 units)	●
Phase control relay (phase failure and sequence)	●	Double quality sensors (indoor + outdoor) CO2	▲	Communication cards for integration in BMS	▲
Extended phase control relay	▲	Filters and stop-drop combinations	▲	Supervision offer	▲
Low temperature protection	▲				

Supplied as standard	●
Option	▲

YOUR CHALLENGES

SHOPPING MALLS
SUPERMARKETS
RETAIL

- ▶ **Customers' thermal comfort**
- ▶ **Air ventilation**
- ▶ **Energy savings**
- ▶ **Multi-zone control**
- ▶ **Peace-of-mind with supervision**



YOUR CHALLENGES

LOGISTICS

STORAGE

EXHIBITION VENUES

- ▶ High air quality conditions
- ▶ Multi-zone control
- ▶ Flexibility to extend airflows

YOUR CHALLENGES

CINEMAS

- ▶ **Multi-zone control allowing just one rooftop to service up to four cinemas**
- ▶ **Air ventilation control based on occupancy**
- ▶ **Energy savings**

YOUR CHALLENGES

OFFICES

- ▶ Occupants' thermal comfort
- ▶ High air quality conditions
- ▶ Multi-zone control
- ▶ Air ventilation
- ▶ Energy savings



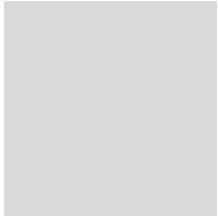
YOUR CHALLENGES

INDUSTRIES
COMFORT PROCESS

- ▶ Humidity and temperature control
- ▶ Extended life cycle
- ▶ Flexible configuration
- ▶ Piece of mind
- ▶ High-air conditions
- ▶ Energy savings
- ▶ Continuous operation for critical spaces with back-up unit management

OUR REFERENCES

CUSTOMER REFERENCE



Customer – city – country
Application

Project

XXX

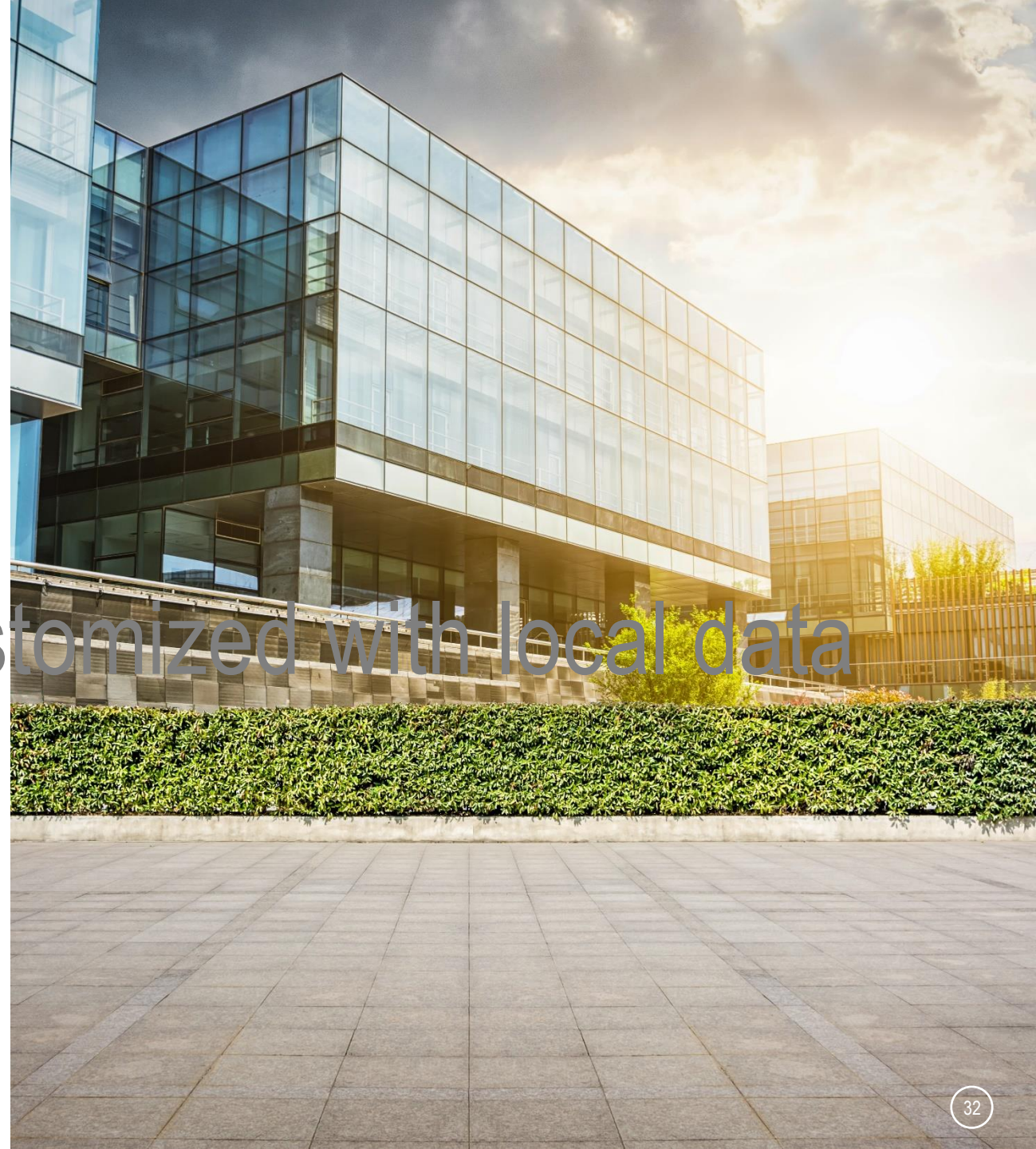
Customer's challenges

XXX

CIAT's solution

XXX

TEMPLATE – to be customized with local data



CIAT AT YOUR SERVICE

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

We provide the support you need to get the most out of your solution:

- Preventive and corrective service maintenance.
- On-site inspection by experts close at hand.
- Online parts shop.
- Dedicated hotline for off-site technical support.

We also offer you a comprehensive range of smart services:

- Consulting on energy performance upgrade.
- Advanced monitoring and plant system management solutions.
- Equipment and system modernization.

PRESENT
IN
OVER



50
countries

OVER
80
years
OF EXPERIENCE



THANK YOU FOR YOUR ATTENTION



Name

Title

Business unit

+33 (0)000000000

email



A CARRIER COMPANY

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