

AIR-COOLED ROOFTOP PACKAGED UNITS



# VECTIOS™

THE ALL-IN-ONE AIR  
CONDITIONING SOLUTION





# VECTIOS™: THE NEW STANDARD IN ROOFTOP PERFORMANCE

Vectios™ is a new generation of rooftop air conditioning packaged units, designed both to offer high levels of indoor air quality and full efficiency as well as to reduce the total cost of ownership during its lifetime.

## 5 REASONS TO CHOOSE VECTIOS™



**HIGH ENERGY EFFICIENCY  
& ENVIRONMENTAL RESPONSIBILITY**



**PACKAGED SYSTEM FLEXIBILITY**



**FULL RELIABILITY**



**EXTENSIVE SCOPE**



**ADVANCED SYSTEM CONTROL**

## VECTIOS™ SOLUTIONS FOR EVERY APPLICATION



SHOPPING  
CENTRES



LOGISTICS



CINEMAS



INDUSTRIES



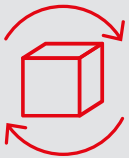
OFFICES

# 5 KEY ADVANTAGES OF VECTIOS™



## HIGH ENERGY EFFICIENCY & ENVIRONMENTAL RESPONSIBILITY

CIAT concentrates its efforts on making its units more efficient and more environmentally friendly. Vectios™ goes beyond 2021 Ecodesign requirements: SEER > 3,53 and SCOP >3,20. Up to 37% savings compared to TIER1.



## PACKAGED SYSTEM FLEXIBILITY

Vectios™ offers a wide range of options to customize the unit according to any particular needs. With optimized weight and dimensions for a perfect fit in either new or renovation projects. Stackable units for transport optimization.



## FULL RELIABILITY

CIAT designs and manufactures reliable products that meet expectations and facilitates maintenance.



## EXTENSIVE SCOPE

More applications in a wider temperature range to provide Indoor Air Quality. Reversible heat pump from 20 kW to 100 kW operating conditions: -15 °C and up to 48 °C outdoor air. Cooling-only version up to 52 °C outdoor air.



## ADVANCED SYSTEM CONTROL

VECTIC, the brand new control dedicated to optimizing performance at part load conditions, increases the seasonal efficiency and operational limits in all seasons.



## FULL ADAPTABILITY

### VECTIOS™ OFFERS A WIDE RANGE OF OPTIONS TO ADDRESS THE MOST SPECIFIC APPLICATIONS

#### VARIABLE AIR VOLUME

Special application for managing more than one volume at the same time.  
Control would manage:

- **Dampers for each independent room** based on temperature.
- **Airflow, to adjust to actual installation needs** (duct pressure).
- Blowing temperature to **maintain comfort** in the building.
- **Up to 4 zones.** Minimum airflow 35%.

#### LOW TEMPERATURE FOOD STOCKS

Low temperature have to be maintained for food conservation.  
Unit have to adapt all its devices to manage this low return temperature (15°C).  
This operation could be consider with or without free-cooling operation.

#### REFRIGERATION HEAT RECOVERY COIL

Energy recovery system to **use hot water coming from refrigeration systems.**  
This coils are designed for **low water temperature applications.**

#### 100% FRESH AIR WITHOUT EXTRACTION

Dedicated to **special applications** where it is necessary **to blow 100%** fresh air inside the building : kitchens, activities producing polluted extraction air.

#### DEHUMIDIFICATION ACTIVE CONDENSATION COIL

**Extra condensation coil** for dehumidification applications in high **relative humidity ambients.**

The **dehumidification process** is done by the main refrigerant coil . Hot gas recovered is injected in the additional **coil** to reheat the air. Supply air will have in this way a **low humidity rate at neutral conditions.**

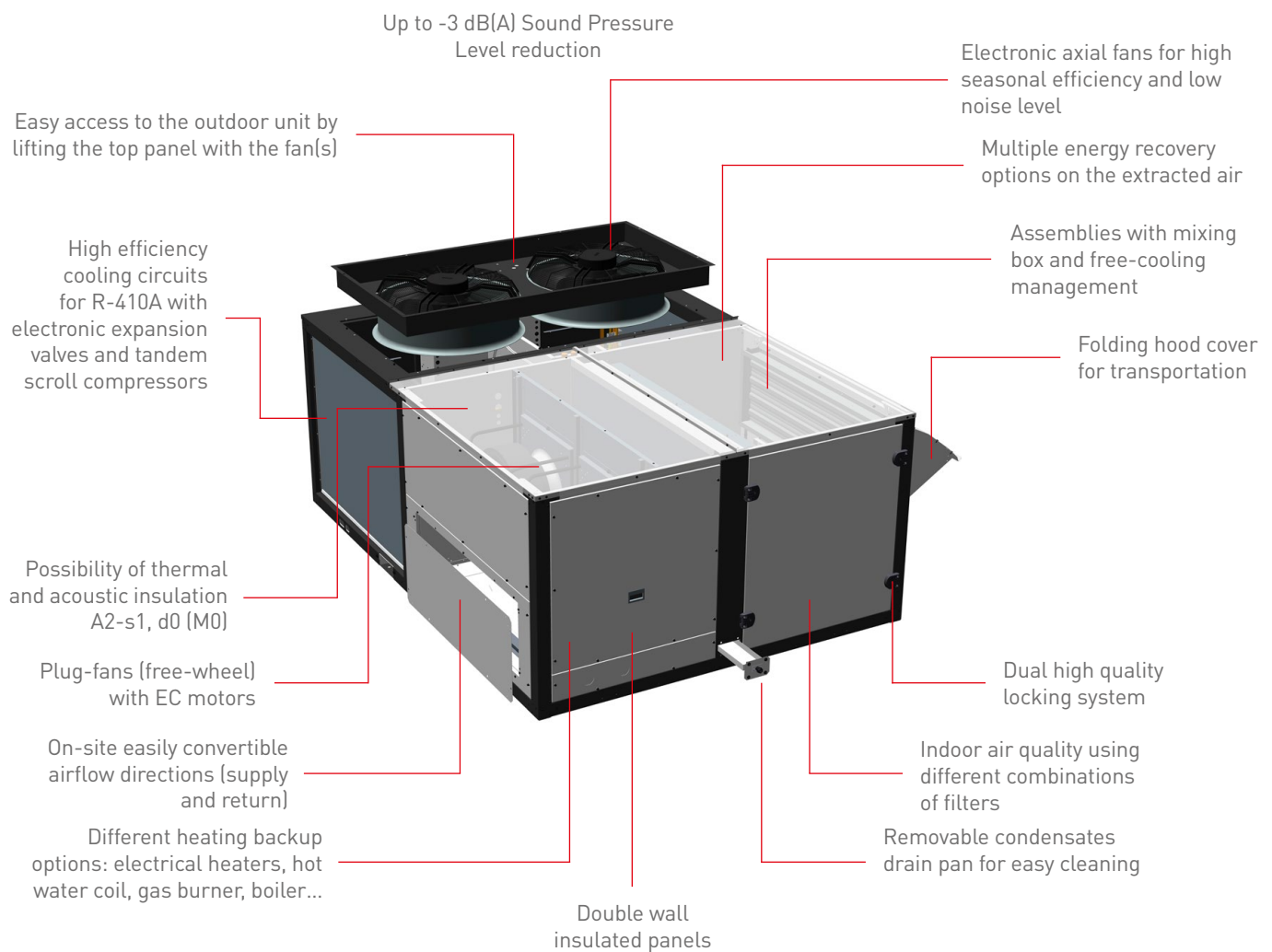
Used in low temperature stock applications **to avoid condensation** over goods or refrigeration cabinets glass doors.







## A COMBINATION OF BEST IN CLASS TECHNOLOGIES



### Key features

- Configurations for **new installations or renovation projects**
- **High efficient gas fired** condensing boilers and burners for heating support
- **Smart defrosting** management
- **On-site adaptation** capabilities
- **Adaptation and renovation** roofcurbs
- **Enhanced A Efficiency Class** for EER and COP in all models (Eurovent certified)
- **Energy saving:** brand new CIAT's Active Recovery system, new heat recovery wheels, freecooling system as standard

# MAXIMUM SEASONAL EFFICIENCY IN A COMPACT SOLUTION

The Vectios range offers 26 models of Rooftop units available in cooling only and reversible version.

## COOLING ONLY

VECTIOS						
Sizes RPJ	Cooling capacity kW <sup>(1)</sup>	SEER	Supply fan		Outdoor fan	
			Nominal air flow (m <sup>3</sup> /h)	Available static pressure mm Pa	Nominal air flow (m <sup>3</sup> /h)	Available static pressure mm Pa
0090	23,00	4,92	5,100	12	9,000	5
0120	29,01	4,89	6,500	12	14,500	5
0140	34,98	4,60	8,500	12	17,000	5
0160	38,96	4,46	8,750	15	17,000	5
0180	43,58	4,34	9,000	15	17,000	5
0190	45,21	4,33	9,000	15	17,750	5
0200	50,10	4,66	12,000	20	31,000	5
0220	54,50	4,58	12,500	20	31,000	5
0240	60,20	4,50	12,500	20	31,000	5
0280	69,06	4,51	15,500	20	33,000	5
0320	73,15	4,50	15,500	20	33,000	5
0360	81,26	4,32	16,000	20	34,500	5
0380	90,85	4,26	16,000	25	35,000	5

[1] Cooling capacity calculated in accordance with the EN-14511-2018 standard given for indoor temperature conditions 27°C, 19°C WB and 35°C outdoor temperature.

## HEATING AND COOLING

VECTIOS								
Sizes IPJ	Cooling capacity kW <sup>(1)</sup>	SEER	Heating capacity kW <sup>(2)</sup>	SCOP	Supply fan		Outdoor fan	
					Nominal air flow (m <sup>3</sup> /h)	Available static pressure mm Pa	Nominal air flow (m <sup>3</sup> /h)	Available static pressure mm Pa
0090	22,51	4,91	21,99	3,48	5,100	12	9,000	5
0120	28,04	4,89	27,86	3,45	6,500	12	14,500	5
0140	33,83	4,60	33,21	3,45	8,500	12	17,000	5
0160	37,32	4,46	36,79	3,45	8,750	15	17,000	5
0180	41,97	4,35	42,03	3,47	9,000	15	17,000	5
0190	44,42	4,40	44,78	3,45	9,000	15	17,750	5
0200	53,71	4,83	50,96	3,60	12,000	20	31,000	5
0220	58,34	4,85	56,07	3,68	12,500	20	31,000	5
0240	60,95	4,90	58,86	3,50	12,500	20	31,000	5
0280	69,04	4,66	68,01	3,43	15,500	20	33,000	5
0320	73,04	4,57	72,12	3,59	15,500	20	33,000	5
0360	81,58	4,47	80,77	3,56	16,000	20	34,500	5
0380	91,20	4,47	90,10	3,58	16,000	25	35,000	5

[1] Cooling capacity calculated in accordance with the EN-14511-2018 standard given for indoor temperature conditions 27°C, 19°C and 35°C outdoor temperature.

[2] Heating capacity calculated in accordance with the EN-14511-2018 standard given for indoor temperature conditions 30°C and 6°C WB outdoor temperature.



CIAT participates in the ECP program for RT. Check ongoing validity of certificate: [www.eurovent-certification.com](http://www.eurovent-certification.com)



Cooling



Heating

FEATURE	AVAILABILITY
EC supply plug-fan	✓
Supply flow rate controller	✓
High/low pressure supply fan	•
EC outdoor axial fan	✓
2-speed outdoor axial fan	•
Croos flow assemblies	✓
Tunnel flow assemblies	•
Tandem compressors	✓
Electronic expansion valve	✓
High and low pressure transducers	✓
Multi-language controller	✓
Free-cooling (T, H, T+H)	•
Dynamic setpoint	✓
Fresh air management	✓
Advanced defrosting management	✓
Filters and stop-drop combinations	•
Antifreeze protection	•
Coils anti-corrosion protection	•
Active Recovery	•
Passive Recovery wheel	•
Hot water coil	•
Electrical heaters	•
Gas heater	•
Gas boiler	•
Double-wall m0 insulated side panels	✓
Full Euroclass A2-s1, d0 (M0) insulation	•
Removable condensates drain pan	✓
Outdoor coil protective grille	•
Adjustable roofcurb	•
Renovation roofcurb	•
Stackable design for transportation	✓
400 V / 3 pH / 50 (with neutral)	✓
400 V / 3 pH / 50 (with transformer)	•
3 phase control detector	•
Compressor soft starter	•
Clogged filter pressure switch	•
Overpressure management	•
CO2 air quality sensor	•
Smoke detection as per NFS 61-961	•
Energy consumption measurement	•
Capacity measurement	•
BMS communication capability	•
Air zone management	•
Low return temperature application	•
Heat recovery coil	•
100% fresh air without extraction	•
Dehumidification active condensation coil	•

✓ Supplied as standard  
• Option

# EXPAND YOUR POSSIBILITIES WITH THE NEW *space*



Cooling capacity from 90 kW to 298 kW



**ErP 2018  
COMPLIANT**

## Complete your system with the space 3 rooftop

- Compliant with Ecodesign regulation EU 2016/2281 for Tier 1.
- Fully certified by Eurovent up to 200 kW.
- Equipped with multi-scroll tandem compressors.
- Supply EC plug-fans for part load optimization.
- EC axial outdoor fans for high seasonal efficiency and low noise levels.
- Higher capacities and efficiency levels than the previous range.
- Options available are in line with Vectios™ range.



CIAT participates in the ECP program for RT. Check ongoing validity of certificate:  
[www.eurovent-certification.com](http://www.eurovent-certification.com)



# 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.



[www.ciat.com](http://www.ciat.com)