

ENERGY OPTIMISATION • AIR QUALITY • COMFORT

ROOF TOP

# SPACE

SELF-CONTAINED REVERSIBLE AIR-AIR UNITS OF 23 TO 281 kW



EVERY EFFICIENT SOLUTION  
FOR UNIVERSAL COMFORT



# SPACE RANGE

Intelligent air conditioning

## SPACE

AIR-COOLED ROOF TOP AIR-CONDITIONING SYSTEM



23 kW

COOLING

281 kW

23 kW

HEATING

293 kW

## SPACE GAS

ROOF TOP AIR-CONDITIONING SYSTEM WITH MODULATING CONDENSATION GAS BURNER FOR AIR CONDITIONING IN COLD CLIMATES



59 kW

COOLING

135 kW

62 kW

HEATING

143 kW

Gas burner capacity

Space PG		241	321	361	242	322	362	420	485	540	600
Maximum heating capacity (kW)	PCH-43		47								47
	PCH-54		58								58
	PCH-72		73								73
	PCH-92								93		
	PCH-150								145		
	PCH-200								197		



## SPACE AQUA

WATER-COOLED ROOF TOP AIR-CONDITIONING SYSTEM



23 kW

COOLING

281 kW

23 kW

HEATING

293 kW

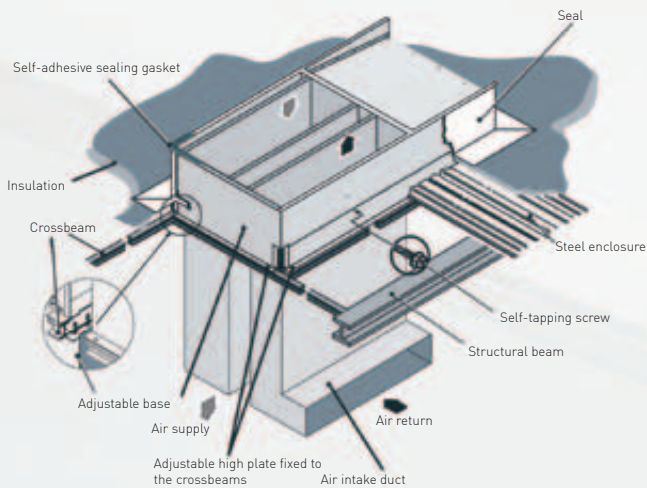


## Installation and maintenance

The SPACE range includes compact single units that are set up, filled with refrigerant and tested in the factory.

Once working, it is necessary for the units to be positioned in their final location and connected electronically. Commissioning is limited to only a few basic verification tests.

To ensure the unit is easy to maintain, all the systems are easily accessible from the exterior.



The SPACE range has bases that can be used to adapt both new works and reposition already existing systems.

## The casing's passive efficiency

The SPACE series incorporates a new frame, which improves the unit's passive efficiency by improving all the unit's characteristics:

- **D2(M) mechanical resistance, deformation < 10 mm/m**
- **L3(M) tightness, leak flow rate < 1.32 ((l/s)/m²)**
- **Acoustic insulation: 50 mm of high attenuation rock wool**
- **Fire rating: M0 Euroclass A2, s1, d0**
- **Thermal transmission: T4, l < 2 w/m²K**
- **Thermal bridge factor (Kb): TB4;  $0.3 < k_b = \frac{DT_{min}}{DT_{Air}} < 0.45$**



## Communication

The SPACE range is equipped with an AVANT platform that can connect to the most common communication protocols.

To manage the entire system, the SPACE range has monitoring systems that:

- Optimise the installation's consumption
- Monitor each of the units
- Evaluate preventive maintenance remotely



# Management of fresh air and free cooling

The SPACE range has different devices to optimise the management of fresh air, and its effect on the entire installation.

## Constant fresh air flow

Automatic adjustment of the proportion of outside air.

## Variable fresh air flow

CO<sub>2</sub> sensor

## The building's overpressure

## Different free cooling modes

The SPACE series manages three different types of free cooling: Thermal, enthalpic and thermal-enthalpic.

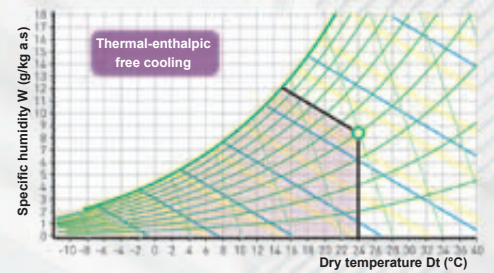
## Air extraction configuration

### · MS assembly

This installation is responsible for ensuring the air is correctly removed and its overpressure.

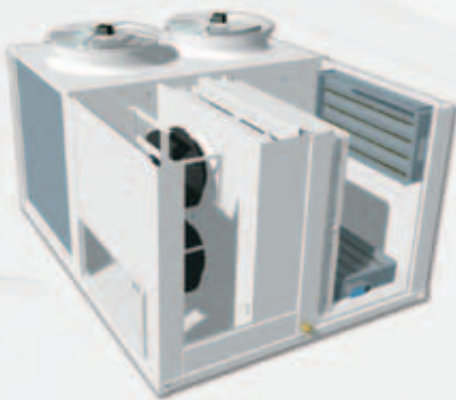


CO<sub>2</sub> SENSOR



### · MC assembly

The unit manages air extraction thanks to its electronic control plug fan centrifugal return air fan. Together with the **electronic control for the overpressure**, a correct air diffusion within the installation is guaranteed.



# Heat recovery

The Space range includes the most efficient heat recovery methods, which are optimised by different climates and interactions with the building's other systems.

## Passive recovery

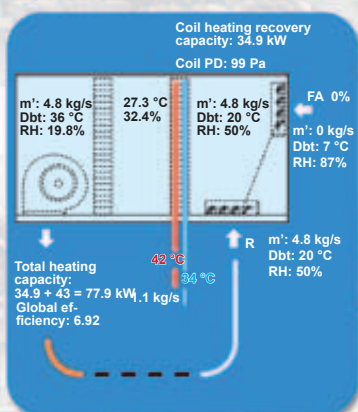
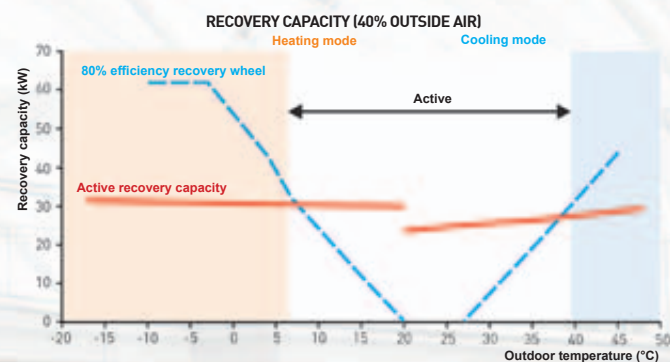
A system that is more efficient the greater the indoor and outdoor temperature difference. Sensitive and latent power is exchanged both for cooling and heating.

## Active recovery

Very stable system with regard to temperature differences. Possibility of being the main mid-season circuit, a time of increased operation hours.

## Residual heat recovery

System for using heat that is produced by the building's other systems, as is the case for cooling.



## Management of supply and return flow rates

The SPACE range manages the flow rate and the consumption of the supply and return air fans so that its operation is adjusted to the installation's requirements more efficiently.

### Constant flow

Electronic adjustment of the supply and/or return flow rate.

### Constant consumption

The fan will turn at the set speed.

### Variable flow

Different flow-rate setpoints for each application or mode.

### Textile ducts

Specific operation for this type of installation.



PLUG FANS

## Highly efficient refrigerating circuits

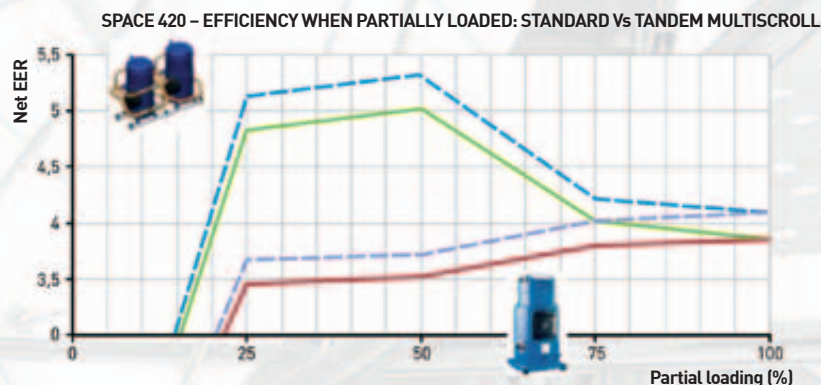
To increase the system's overall efficiency, the refrigerating section is characterised by:

### Highly efficient R-410A Scroll compressors

### Double refrigerating circuits in each unit

### An increase in seasonal efficiency as a result of using tandem compression systems

### Extended operating limit thanks to the condensation and evaporation float control



## Monitoring

Monitoring systems to control and optimise conditioned air and cooling systems allow substantial savings to be made in terms of costs associated with maintenance and using the installation.

### pCO web

Monitoring system to manage the operation and to control the heating, ventilation and conditioned air systems within a single unit.

### PlantWatchPRO

This control system is designed for medium-sized surfaces, integrates installation monitoring, measures energy and electrical consumption, and allows the temperature to be remotely controlled.

### PlantVisorPRO 2

This is the ideal monitoring solution for large surfaces in which there are many installations and the control requirements are particularly demanding. Provides tools to control the operation and save energy from a single point.



1 unit



10 units



100 units

With over 80 years' experience and 6 production sites, CIAT has obtained ISO 14001 certification and is renowned as a major player in the HVAC industry.



## The CIAT Group: European leader in heating, cooling and indoor air quality



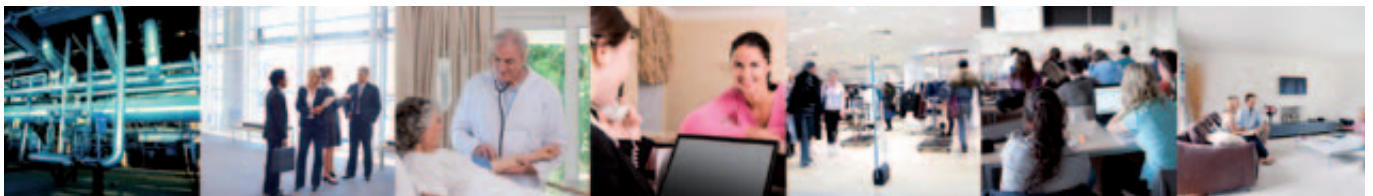
### An environmentally-responsible company working towards a greener world

For many years, CIAT has been pursuing an industrial policy based on an ongoing strategy of continued sustainable development and eco-design in order to minimise the environmental impact of its equipment. The equipment integrated into Hysys system solutions benefit from this commitment.

### A Group resolutely focused on innovation

CIAT's Centre for Research and Innovation, one of the largest in Europe, brings engineers and technicians together around a simulation platform dedicated to well-being. As a team, they constantly improve the comfort, IndoorAir Quality and energy performance levels of CIAT solutions to meet the requirements of consumer sectors.

### An exclusive network of advisers



Industry

Offices

Healthcare

Hotels

Shopping Centres

Administration Education

Residential

To ensure customer satisfaction, at CIAT we have organised our teams into seven centres of expertise. Operating in more than 70 countries, our experts listen to your needs and, because they speak your language, they provide you with the best solution to meet your requirements.



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