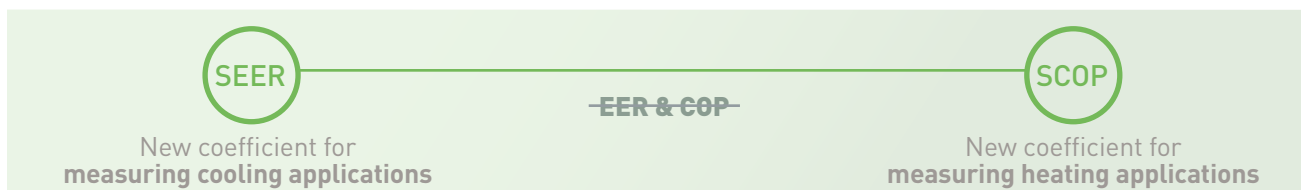


ROOFTOPS

# ECODESIGN REGULATIONS

The publication of **regulation 2016/2281** establishes the requirements for seasonal energy efficiency and brings together all the information concerning applicable equipment, including compact **rooftop** enclosure units.

**The challenge of seasonal efficiency:** the new ecodesign regulations stipulate that seasonal efficiency must be measured. The Seasonal Energy Efficiency Ratio (SEER) and Seasonal Coefficient of Performance (SCOP) parameters guarantee a standardised assessment of the energy consumption of equipment by including seasonal variations in the measurements. Both these coefficients are calculated according to technical standard EN-14825 and compliance is mandatory for a product to obtain CE marking.



$\eta_{s}$  ( $\eta_s$ ) :

In order to compare the energy efficiency of products using different energy sources, the Ecodesign regulation introduces a new measurement expressed in primary energy:  $\eta_{s}$  cool is the equivalent of SEER for cooling applications and  $\eta_{s}$  heat is the equivalent of SCOP for space heating.

## WHAT ARE THE REQUIREMENTS TO BE MET ?

Since January 1, 2018, Regulation 2016/2281 established minimum values for seasonal energy efficiency in  $\eta_{s}$  cool and  $\eta_{s}$  heat. SEER and SCOP are therefore expressed in terms of primary energy and these make it possible to compare the energy efficiency of units which use different energy sources. These requirements will become stricter starting 1 January 2021.



ROOFTOPS	SEER	$\eta_{s}$ cool (%)	SCOP	$\eta_{s}$ heat (%)
Tier 1 - 2018	3,00	117	2,95	115
Tier 2 - 2021	3,53	138	3,20	125



As stipulated in Annex II of Regulation 2016/2281, the technical data sheets for CIAT equipment are available at [www.ciat.com](http://www.ciat.com).





## VECTIOS ROOFTOP RANGE

CIAT presents its new VECTIOS™ cooling-only and reversible heat pump units, which are autonomous, horizontal, air-to-air rooftop units. The range already exceeds Ecodesign efficiency requirements applicable from 2021, translating into energy savings up to 37%.



Minimum Ecodesign requirements in Tier 2:  
SEER 3.53 ( $\eta_{s,c}$  138%)/ SCOP 3.20 ( $\eta_{s,h}$  125%)

IPJ	SEER	SCOP	$\eta_{s, cool}$ [%]	$\eta_{s, heat}$ [%]
90	4,91	3,48	193%	136%
120	4,89	3,45	193%	135%
140	4,6	3,45	181%	135%
160	4,46	3,45	175%	135%
180	4,35	3,47	171%	136%
190	4,4	3,45	173%	135%
200	4,83	3,6	190%	141%
220	4,85	3,68	191%	144%
240	4,9	3,5	193%	137%
280	4,66	3,43	183%	134%
320	4,57	3,59	180%	140%
360	4,47	3,56	176%	140%
380	4,47	3,58	176%	140%



## SPACE ROOFTOP RANGE

The new Space rooftop range includes new options to achieve high energy efficiency. Eurovent certified up to 200 kW.

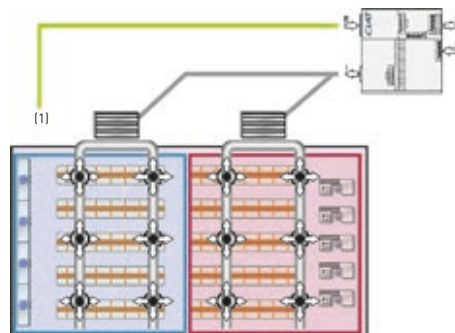


## OPTIONS AVAILABLE FOR CIAT ROOFTOP UNITS

### THERMAL ENERGY MEASUREMENT

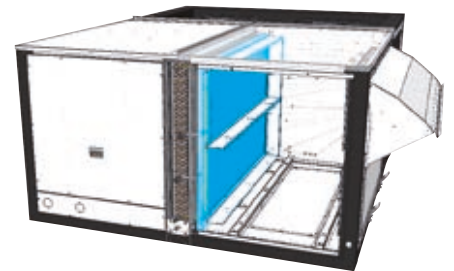
CIAT has developed an exclusive solution built into its equipment which enables the heat production, power input, EER and COP to be measured, and thus the efficiency values to be determined.

### ZONING



(1) Option for up to 4 zones control with the VECTIOS range

### HEAT RECOVERY COIL



Water coil to recover the heat from condensation in refrigeration systems



www.ciat.com