



RMXCBA VRC

Heat pump

RMXCA VRC

Cooling only



ROOF TOP AIR - AIR UNITS | VRC | VRC MTQ
Centrifugal fans

A different Roof Top unit

The units of the KUBIC VRC series are Roof Top units with centrifugal return fan and thermal freecooling as standard, especially designed for installation on rooftops, roof terraces or in any other outdoor location.

MAIN FEATURES

- Cooling capacities: from 48.2 to 141.2 kW
- Heating capacities: from 48.4 to 150.4 kW
- R-410A refrigerant
- Scroll compressors, specially designed for heat pump applications; they provide very wide operational limits
- Condenser axial fans, hermetic, comprising aluminium blades, designed to produce low noise levels
- Cabinet: built from galvanised steel plate with a polymerised polyester resin finish (RAL 1013); high corrosion resistance and protection from the elements
- Thermal freecooling

APPLICATIONS

- Specially designed to be installed outdoors (rooftops, roof terraces, etc.) for large areas with air duct installation

ADVANTAGES

- Extra-compact unit: high versatility for both installation and operation, which can be adapted to each and every project
- Units will be delivered completely finished and tested, with the appropriate load of R-410A refrigerant for their correct operation
- Anti-vibration operation thanks to the internal damping system in each compressor and the assembly over the dampers in the chassis

AVAILABLE VERSIONS

- Cooling only
- Heat pump
- VRC MTQ: version with gas burner

REGULATION

Controls available:
PGD



MINI PGD



See regulation and control on page 22.

AVAILABLE OPTIONAL FEATURES

OPTIONAL FEATURES: PLUG FAN FOR DISCHARGE AND/OR RETURN

- Greater energy efficiency
- Lower consumption
- Quieter
- High pressures available
- Low maintenance cost
- Lower installation cost
- Plug and play: the flow is adjusted to the installation
- The flow can be modified on-site just by changing a few parameters



MORE OPTIONS

- Enthalpy freecooling
- Compressor soft-start
- Air quality sensor
- High-performance thermo-acoustic insulation
- Compressor acoustic insulation
- External pressure taps
- Detector of dirty filters
- Motor protection by means of magneto-thermal switches
- Overpowered indoor ventilation group for higher pressure
- Heating coils for backup and hot water
- Electrical resistance to provide auxiliary heating
- Thermal insulation Euroclass A1 (M0)
- Copper-copper coils
- Anti-corrosion treated coils
- Proportional condensation control through the axial fans speed shifter
- Condensation tray in outside section
- G4, F6 to F9 combinable filters
- Economiser
- Protective grille in outdoor section exchangers
- Smoke detection
- Remote run/stop
- Unit without thermostat
- Ambient temperature or wall-mounted sensor
- Return temperature sensor in duct
- Centralised control for up to 90 units
- Centralised control for up to 300 units
- Operation without neutral
- ModBus IP/RTU, BacNet IP, WebServer, etc. connections (check chapter on thermostats)

As well as these options, please check with our Commercial Department for any other configuration or function not described as available.

AVAILABLE VERSIONS

KUBIC VRC

Roof top with centrifugal return fan



The VRC module allows us to manage different discharge flow renovation percentages. Furthermore, its section combines three dampers and this allows to manage freecooling, whether with thermal, enthalpy or thermo-enthalpy.

KUBIC VRC MTQ

Roof top with centrifugal return fan and gas burner

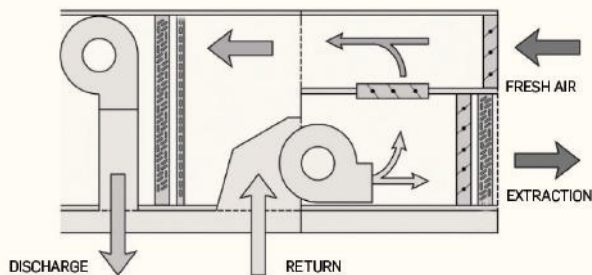


The module with a gas burner is especially designed for the climate control of large areas in the industrial and commercial sectors, and in areas with extremely low temperatures.

KUBIC VRC

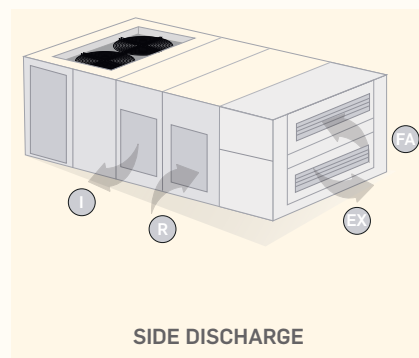
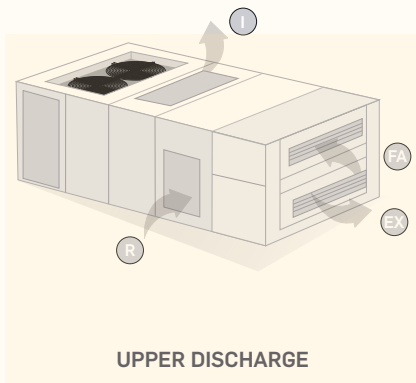
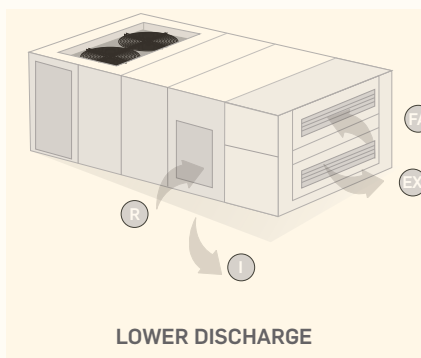
DESCRIPTION

The VRC module allows to manage different discharge flow renovation percentages. Its combined section with three dampers also allows managing freecooling, whether with thermal, enthalpy or thermo-enthalpy. It is necessary to change to regulation μ PC and PGD.

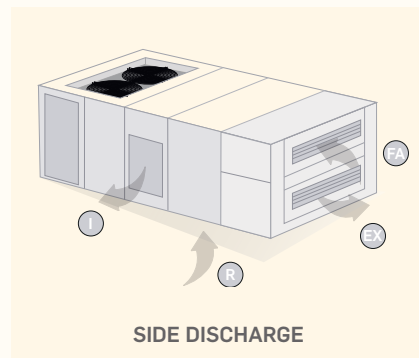
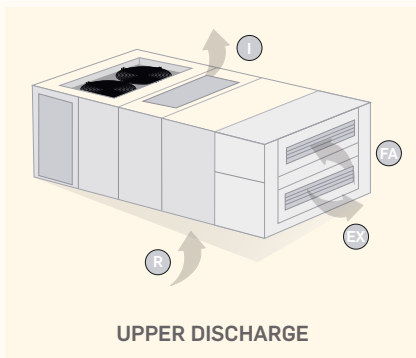
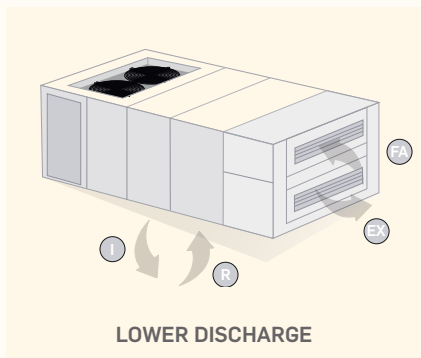


POSSIBLE AIR INLET/OUTLET CONFIGURATIONS

RETURN SIDE CONFIGURATIONS



RETURN LOWER CONFIGURATIONS



I: DISCHARGE

R: RETURN

FA: NEW AIR

EX: EXTRACTION AIR

KUBIC VRC SERIES

MODEL		1402.2	1602.2	2002.2	2402.2	3002.2	3502.2	4002.2	4502.2	
CAPACITIES										
Cooling capacity (1)	kW	48.2	54.9	68.0	82.8	91.0	118.7	131.1	141.2	
Power input (3)	kW	17.2	21.4	23.2	30.8	36.5	43.3	49.3	55.7	
EER coefficient		2.80	2.56	2.93	2.69	2.49	2.74	2.66	2.53	
Heating capacity (2)	kW	48.4	56.7	67.3	83.2	93.3	121.2	137.3	150.4	
Power input (3)	kW	14.9	18.8	19.9	27.0	31.5	39.4	46.5	51.9	
COP coefficient		3.24	3.01	3.38	3.09	2.96	3.08	2.95	2.90	
REFRIGERANTS										
Type		R-410A								
PCA (4)		1720								
Load	kg	12.5	13.2	14	15.6	16	31	32	33	
COMPRESSOR										
Type		Scroll								
Number		2								
Number of cooling circuits		2								
Number of stages (5)		2								
Oil type		POE 160 SZ								
OUTSIDE CIRCUIT FAN										
Type		Outdoor axial rotor								
Number		2						4		
Nominal airflow	m ³ /h	31,724	31,724	39,332	39,332	39,332	39,332	60,088	60,088	
Available static pressure	Pa	0								
Diameter	mm	710			800			710		
Power	kW	1.25/0.97			2.06/1.33			1.25/0.97		
Speed	rpm	950/825			890/690			950/825		
INDOOR CIRCUIT										
Nominal airflow	m ³ /h	9,000	10,200	11,500	14,000	15,500	21,000	23,000	25,000	
Available static pressure	Pa	100	100	125	125	125	150	150	150	
Quantity/Dimensions		15/15		2x15/11			2x18/18			
Power	kW	1.5	2.2	2.2	4	5.5	4	5.5	5.5	
Speed	rpm	616	677	712	802	860	642	673	707	
Condensate evacuation	Ø	Junction 3/4" M								
RETURN CIRCUIT										
Nominal airflow	m ³ /h	9,000	10,200	11,500	14,000	15,500	21,000	23,000	25,000	
Available static pressure	Pa	75	75	100	100	100	100	100	100	
Quantity/Dimensions		15/15		2x15/11			2x18/18			
Power	kW	1.5	2.2	2.2	3	4	4	4	5.5	
Speed	rpm	575	604	602	686	742	568	603	637	
Condensate evacuation	Ø	Junction 3/4" M								
ELECTRICAL SPECIFICATIONS										
Power supply		400V - 3N 50Hz								
DIMENSIONS										
Length	mm	3,988					5,845			
Width	mm	2,219					2,219			
Height	mm	1,240					1,900			
Weight	kg	1,233	1,265	1,347	1,376	1,442	2,238	2,380	2,405	

All the data have been measured for an air renovation flow of 25%.

(1) Nominal cooling conditions: outside air temperature: 35 °C. Return temperature 27 °C (dry bulb) / 19 °C (wet bulb).

(2) Nominal heating conditions: outdoor air temperature 7 °C (dry bulb) / 6 °C (wet bulb). Return temperature 20 °C.

(3) Climate warming potential of a kg of fluorinated greenhouse gas in relation to a kg of carbon dioxide gas over a period of 100 years.

(4) The number of stages increases with freecooling (FC).