

# VCR Series In-row air conditioner (12.5kW-60kW)

## In-row air conditioner ▼

VcolRow series in-row air conditioner is kind of intelligent temperature control product especially suitable for modular data center. It is usually deployed in the cabinet arrangement, installed side by side with the server cabinet, combined with enclosed hot and cold aisle, close to the heat source and efficient cooling, creating an ideal operating environment for the key infrastructure of the data center.



## Product Features ▼



### High reliability

- Adopting variable frequency scroll compressor , excellent resistance to liquid impact and lower noise.
- Highly reliable full frequency conversion control, starting current less than rated current and lower impact of power grid.
- Adopting two stage evaporator, add water tray in the middle, effectively prevent blowing water.
- Intelligent detection of supply voltage, frequency and three-phase imbalance.
- Adopting high-quality components that are strictly tested and certified.
- High strength structure design could ensure solidification and reliability.



### High efficiency and energy saving

- Accurate control of temperature and humidity.
- Adopting variable frequency scroll compressor that has 20%~100% dynamic adjustment of cooling capacity output.
- Adopting EC Backward Centrifugal Fan, adjusts the speed output according to the real-time thermal load change.
- Adopting electronic expansion valve that has fast response speed and precise flow adjustment.
- Full frequency conversion design, intelligent control cooling capacity and air volume output on demand to achieve efficient operation.
- High return air temperature design improves cooling efficiency.



### Diversified configuration

- High refrigeration density, the max refrigeration capacity of the full cabinet is 60kW, max cooling capacity of half cabinet is 35kW.
- Standard electrode humidifier, support optional wet film humidifier.
- Optional delivery style grid to meet left and right air delivery needs.
- Optional fluorine pump natural cooling module to make full use of free natural cooling source.
- Optional dual power input.



### Intelligent management

- Using 7-inch color capacitive touch screen.
- Support graphic status and temperature and humidity curve display.
- Support 64 units for CAN communication networking.
- 10 temperature sensors can be connected.
- Standard Rs485 interface, support optional SNMP interface.
- Three-level password protection, hierarchical authorization management.
- Multiple intelligent control modes.

## Specification ▼

	Unit	VCR012	VCR025	VCR030	VCR040	VCR050	VCR060
Unit Configuration	-	*	Refrigeration type / Constant temperature&humidity type				
Total cooling capacity	kW	12.5	25.5	30.8	42.8	51.5	62.7
Sensible cooling capacity	kW	12.5	25.5	30.8	42.8	51.5	62.7
Ton(USA)		3.55	7.25	8.76	12.17	14.64	17.83
Air volume	m³/h	2800	5000	5200	8500	10500	11500
Heating capacity	kW	3	4.5	4.5	6	6.5	6.5
Humidifying capacity	kg/h	1.5	3	3	3	3	3
EER	/	3.38	3.07	3.09	3.3	3.22	3
Power supply	/	380V 50/60Hz	380V 50/60Hz	380V 50/60Hz	380V 50/60Hz	380V 50/60Hz	380V 50/60Hz
Width	mm	300	300	300	600	600	600
Depth	mm	1100/1200	1100/1200	1100/1200	1100/1200	1100/1200	1100/1200
Height	mm	2000	2000	2000	2000	2000	2000
Weight	kg	200/210	220/230	230/240	300/310	330/340	335/345
Outdoor unit	Unit	VCP018	VCP038	VCP045	VCP056	VCP076	VCP088
Air volume	m³/h	5000	12000	15000	15000	22000	28000
Fan Num.	pcs	2	1	1	1	2	2
Size(W*H*D)	mm	832*1220*310	982*740*1378	1275*750*1578	1275*750*1778	1275*740*2178	1275*750*2378
Weight	kg	64	136	138	152	178	188

Working temperature: -20~45°C, less than -20°C need to add low temperature components.

\* : VCR012 has constant temperature type/constant temperature & humidity type.

Test condition: The indoor dry-bulb temperature is 37°, and the relative humidity is 24%.

## Applicable Scene ▼



Modular data center



Container data center



High heat density data machine room



Small and medium-sized data center

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### Evaporator ▼

Adopt two-stage evaporator, can increase the refrigeration area, and increase the water tray in the middle, can effectively prevent blowing water.



### Scroll compressor ▼

Adopt variable frequency scroll compressor that has 20%~100% dynamic adjustment of cooling capacity output. It has superior resistance to liquid impact and low noise and vibration level, and has long life.

### EC Fan ▼

High efficiency EC centrifugal fan with low energy consumption, high cooling efficiency, less maintenance, and it can adjust the speed output according to the real time heat load changes to achieve maximum savings in operating energy consumption, more than 40% less than ordinary fans.



### Electronic expansion valve ▼

The use of electronic expansion valve, has fast response speed, which can quickly stabilize the working conditions, as well as accurate control of refrigerant flow with variable frequency compressor to achieve energy saving.

