

VCA Series Large Room Air Conditioner

Product Introduction ▼

VCA series large room precision air conditioner is a special precision air conditioner for medium and large IDC rooms, communication rooms, equipment rooms and other places to provide internal environmental temperature and humidity and cleanliness control. It is used to ensure that cabinet equipment, server equipment, etc. have a reasonable temperature and humidity operating environment.



Product Features ▼

High efficiency and energy saving

- Adopt the design of large air volume, small enthalpy difference and high sensible heat ratio.
- V or A shape evaporator, high heat exchange efficiency.
- High-precision electronic expansion valve, precise regulation of refrigerant flow.
- EC fan with real-time adjustment of airflow output according to the demand.
- Inverter outdoor fan, adjust speed according to change of system pressure, operating efficiently.
- Use R410A green refrigerant, in line with international green refrigerant requirements.
- Hermetic scroll compressor for higher efficiency and more stable operation.

Safe and reliable

- The main components adopt international famous brands
LS circuit breaker
Schneider contactors
Standard G4 filter
INVT controller & VFD
standard oil separator
- Real time monitoring of input voltage and frequency
- Intelligent monitoring of air conditioner power supply voltage, frequency and three-phase unbalance
- Double electric control box design, strong and weak electrical isolation to avoid signal disturbance
- Fan & drive integration of indoor unit
- Separate outdoor unit's switch & VFD



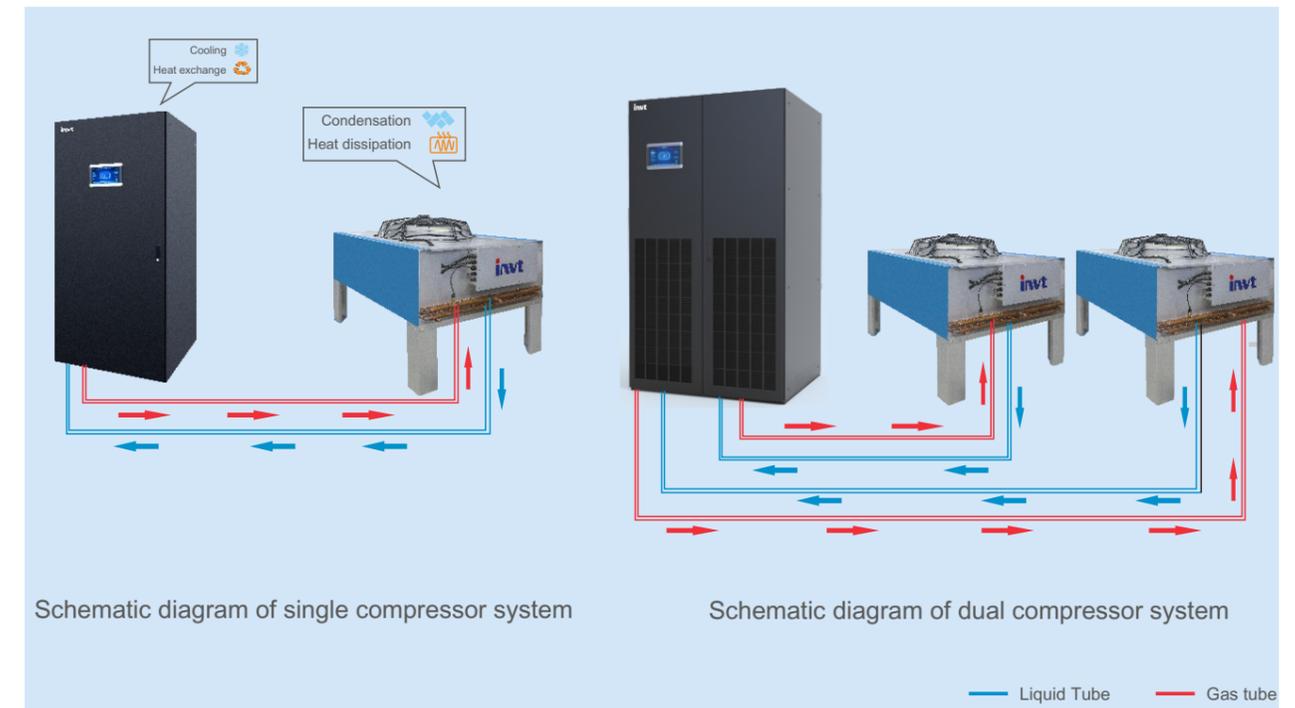
Intelligent management

- Standard 10-inch color capacitive touch screen.
- Standard RS485 interface and SNMP interface.
- Support temperature and humidity curve display and graphic status display.
- More than 2000 historical alarm information storage.
- Use CAN communication to do network group control.

Customizable

- Optional water leakage detector, front-up flow kit.
- Optional built-in low-temperature component.
- Support upflow supply, top front supply and downflow supply, which can be flexibly selected according to the actual application requirements.

Operation Principle ▼



Applicable Scene ▼



Large-scale server room



Traditional Server Room



Large-scale data centers



High heat density data center

Technical parameters ▼

Model	VCA025	VCA030	VCA035	VCA040	VCA045	VCA050	VCA060
Configuration	Constant Temp&Humidity						
Total cooling capacity (kW)	27	30.5	36.2	41.1	45.3	51.1	60
Sensible cooling capacity(kW)	24.8	27.5	33.3	38	41.1	47	54
Ton(USA)	7.82	8.71	10.8	11.37	12.97	14.22	17.14
Air volume (m³/h)	8500	9500	11000	12000	12500	13000	14000
Heating capacity (kW)	6	6	6	9	9	9	9
Humidification capacity (kg/h)	5	5	5	10	10	10	10
EER(W/W)	2.93	2.81	2.66	2.62	2.7	2.82	2.48
AEER (W/W)	4	4	4	4	4	4	4
Compressor type	GMCC rotor/ Hitachi Scroll	GMCC rotor/ Hitachi Scroll	Hitachi Scroll				
Fan type	EC Fan						
Refrigerant	R410A						
Power supply	380V/50Hz-60Hz 3P						
Full-load current(A)	34.99	38.52	42.92	45.45	49.98	51.67	60.75
Width (mm)	900	900	900	900	900	1100	1100
Depth (mm)	995	995	995	995	995	995	995
Height (mm)	1975	1975	1975	1975	1975	1975	1975
Weight(kg)	320	320	350	370	370	470	470

NOTE:

1. Test conditions: indoor return air temperature 24°C, relative humidity 50%, outdoor temperature 35°C.
2. AEER test conditions: indoor return air temperature and humidity: 24°C/50%RH, outdoor temperature 35°C/25°C/15°C/5°C/-5°C respectively.
3. The upflow supply fan set supports two different air outlet methods: vertical top air supply (with on-site air duct) and top front supply.
4. Top front supply mode, can add front up flow kit on site (height increase) or standard height top front supply (factory prefabricated).
5. In order to save fan consumption, efficient cooling, downflow supply air conditioner standard products for the fan sink type, electrostatic floor height recommended ≥ 450mm.
6. In case of special circumstances at the site, the downflow supply air conditioner can support the customization of the optional fan unsinking, or other ways of air supply and return, etc.
7. Working temperature: -20~45°C, less than -20°C need to add low temperature components.

Technical parameters ▼

Model	VCA060 (Dual Sys.)	VCA070 (Dual Sys.)	VCA080 (Dual Sys.)	VCA090 (Dual Sys.)	VCA100 (Dual Sys.)	VCA110 (Dual Sys.)	VCA120 (Dual Sys.)
Configuration	Constant Temp&Humidity						
Total cooling capacity (kW)	61	72.4	82.2	90.6	102.2	110.3	120
Sensible cooling capacity(kW)	55	66.6	76	82.2	94	100.3	108
Ton(USA)	17.4	21.61	22.75	25.93	28.5	31.51	34.28
Air volume (m³/h)	19000	22000	24000	25000	26000	27000	28000
Heating capacity (kW)	9	9	12	12	12	12	12
Humidification capacity (kg/h)	10	10	10	10	10	10	10
EER (W/W)	2.81	2.66	2.62	2.7	2.82	2.74	2.48
AEER (W/W)	4	4	4	4	4	4	4
Compressor type	GMCC rotor/ Hitachi Scroll	Hitachi Scroll	Hitachi Scroll	Hitachi Scroll	Hitachi Scroll	Hitachi Scroll	Hitachi Scroll
Fan type	EC Fan						
Refrigerant	R410A						
Power supply	380V/50Hz-60Hz 3P						
Full-load current(A)	65.7	74.48	79.54	88.59	92.04	99.09	110.14
Width (mm)	1800	1800	1800	1800	2200	2200	2200
Depth (mm)	995	995	995	995	995	995	995
Height (mm)	1975	1975	1975	1975	1975	1975	1975
Weight(kg)	600	650	690	690	880	880	880

NOTE:

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