SMARDT AIR

Chilled Water Precision Air Conditioner
CRAH



Product Overview

Chilled water air conditioner is a type of precision temperature control solution. It is usually combined with chiller units, water pumps, chilled water pipelines, etc. to form a refrigeration system, utilising a centralised chilled-water source for cooling. It has high cooling capacity and delivers significant energy savings.

Product Features

Energy Efficient

- Equipped with EC backward-curved centrifugal fans, which has a wide range of adaptations. It can automatically adjust the rotational speed according to the load of the unit.
- The unit uses copper tube hydrophilic aluminium fin heat exchanger, which has high heat density and higher heat exchange efficiency.

Intelligent Control

- The intelligent controller is used for PID adjustment, the temperature control accuracy can reach ±1°C, creating a more stable operating environment for the equipment in the computer room.
- RS485 communication interface is configured as standard.
- Electric valves precisely regulate water flow to ensure a stable water supply, and optional EPIV or EV valves can be used to directly and accurately regulate and monitor water flow.

Environmentally Friendly and Reliable

- The use of chilled water as a cooling medium is the most natural way of air conditioning, sustainable, safe and environmentally friendly.
- Perfect automatic alarm and diagnosis function, all-round protection of the air conditioning unit, but also more effective prevention of failure, extends equipment service life.

Convenient Maintenance

- The control system and safety protection devices are installed in a separate space isolated from the airflow for front maintenance.
- Using a centralised cooling source for refrigeration, no additional outdoor units need to be installed. The cooling towers are centrally placed, effectively saving installation space.

Specifications

Model		TRAC035AC	TRAC050AC	TRAC090AC	TRAC135AC	TRAC190AC	TRAC230AC
Cooling Capacity	kW	35	50	90	135	190	230
Return/Supply AT	℃	34/22	34/22	34/22	34/22	34/22	34/22
Inlet/Outlet WT	℃	15/22	15/22	15/22	15/22	15/22	15/22
Media	/	Water	Water	Water	Water	Water	Water
Power Supply	/	380~415V/3Ph/50Hz					
Input Power	kW	1.7	2.3	4.8	7.2	10.5	13.2
Air Flow	m³/h	10000	12000	24000	36000	37500	50000
Num of Fans	/	1	1	2	3	3	4
ESP	Pa	150	150	150	150	150	150
Water Pressure Drop	kPa	≤80	≤80	≤80	≤80	≤80	≤80
Connection Type	/	Flange	Flange	Flange	Flange	Flange	Flange
Pipe Diameters	/	DN32	DN50	DN50	DN65	DN50	DN65
Net Weight	kg	300	350	680	1060	1300	1400
Width(W)	mm	1180	1250	1830	2730	3000	3300
Depth(D)	mm	900	1000	1000	1000	1000	1000
Height(H)	mm	2000	2100	2100	2100	2400	2400

Notes: 1. The above unit dimensions do not include the dimensions of optional accessories such as air valves.
2. Alternative power supply configurations are available upon request. For details, please consult Smardt technicians.
3. The unit capacity is strongly related to the operating conditions. The above data is only for reference. For other media (ethylene glycol), other operating conditions or altitudes exceeding 1,000 m, please contact Smardt technicians.

Asia Pacific

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Subject to design conditions and selected refrigerants.

SMARDT AIR

Dual Cooling Source Precision Air Conditioner
CRAC



Product Overview

The dual-source precision air-conditioning unit features an integrated water-cooled and refrigerant system. It uses cooling towers or dry coolers as the medium-temperature water-cooling source, and prioritises free cooling to minimise power consumption. It is well-suited for applications such as data centres and power distribution rooms.

Product Features

High Efficiency & Energy Saving

- Equipped with EC fan for broad application flexibility. It can automatically adjust the rotational speed according to the load of the unit.
- DC variable-frequency scroll compressor, significantly improving the energy efficiency ratio at partial loads.
- The unit uses copper tube hydrophilic aluminium fin heat exchanger, which has high heat density and higher heat exchange efficiency.

Sustainability & Reliability

- Use environmentally friendly refrigerants: R410A
- High-reliability component design
- Safe and reliable control system

Intelligent Control

- PID intelligent control adjustment with control accuracy of ±1˚C, creating a more stable operating environment for the equipment in the computer room.
- RS485 communication interface is configured as standard.
- Electric valves precisely regulate water flow to ensure a stable water supply, and optional EPIV or EV valves can be used to directly and accurately regulate and monitor water flow.
- Real-time display of operating status of each component.

Convenient Maintenance

- The control system and safety protection devices are installed in a separate space isolated from the airflow, allowing for front maintenance.
- Maintenance of the unit can be carried out during operation.

Specifications

Model		TRAC030AD	TRAC055AD	TRAC090AD
Cooling Capacity	kW	30	55	90
Return/Supply AT	℃	32/20	32/20	32/20
Inlet/Outlet WT	℃	34.5/40.5	34.5/40.5	34.5/40.5
Power Supply	/	380~415V/3Ph/50Hz		
Input Power	kW	6.5	12.5	20.4
Air Flow	m³/h	8000	15200	24000
Num of Fans	/	1	1	2
ESP	Pa	150	150	150
Water Pressure Drop	kPa	≤70	≤70	≤70
Connection Type	/	Flange	Flange	Flange
Pipe Diameters	/	DN32	DN50	DN80
Dimension(WxDxH)	mm	1180×1000×2000	1780×1000×2000	2200×1100×2400

Notes: Unit performance is highly dependent on operating conditions. The above data is for reference only. For other operating conditions or altitudes exceeding 1,000 m, please contact Smardt technicians.

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