

Cooling pump CHA-500/900/1500/2200/CHW-900/1500/2200

The Simple chiller series can respond to various needs from consumers by selecting various options. We are proud of our various kinds of pump abilities that are available to meet a high flow rate and a high pump head. Stainless steel wetted parts, etc. are available as an option.

•External dimensions --> P.201



CHA-900

CHA-1500

CHA-2200

CHW-900

CHW-1500

CHW-2200

Features and Applications

- The air-cooled integrated chiller does not require primary cooling water and plumbing
- The water-cooled integrated type is ideal for cleanroom
- Available in various optional pump units by select
- The enhancement for the precision of temperature control, stainless steel wetted parts, etc. are available as an option

Optional Accessories

(See also "★ mark" in the specification table below)

① For the precision of temperature control	Heater
② Enhancement for the pumping capacity	High flow/High pump head/Stainless steel, Bronze Casting
③ Safety devices/ functions added	No-fuse breaker
	Short circuit breaker
④ Materials of wetted part changed	Stainless steel wetted parts
	Piping for Antifreeze
	Ball tap
⑤ CUSTOM-MADE	Remote control box
	Fan speed controller (Noise reduction by revolving speed control for cooling fan)
Safety measure	Fixing brackets

Standard specifications: Air-cooled type (Specifications can be modified as an option)

Model	CHA-900	CHA-1500	CHA-2200
Temperature range	+7°C to +25°C		
Ambient temperature range	+5°C to +35°C		
Control accuracy (*1) ★	±2.0°C Compressor On-Off control		
Compressor output, Refrigerant	0.9 kW, R407C	1.5 kW, R407C	2.2 kW, R407C
Cooling capacity [kW] (50/60 Hz) (*2)	Circulation temperature at 10°C	1.7/2.1	4.0/4.3
	Circulation temperature at 20°C	2.7/2.9	4.5/4.7
Pumping capacity ★ (50/60 Hz) (*3)	Max. discharge pressure [MPa]	0.14/0.19	0.52
	Flow rate [L/min]	15/27	22/31
	Motor output [kW]	0.1/0.15	0.4
Water bath capacity (at 80% water level)	26 L	56 L	
Safety device/function ★	Alarm and warning for water shortage, Compressor pressure abnormal, Compressor overload, Pump overcurrent, Water temperature abnormal, Warning indicator lamp		
Connecting pipe diameter (Circulating fluid in/out)	Rc 1/2	Rc 1	
Dimensions (WxDxH)	500 × 555 × 896 mm	570 × 677 × 1286 mm	570 × 677 × 1427 mm
Weight	approx. 110 kg	approx. 178 kg	approx. 190 kg
Power Supply (three phase AC 200 V, 50/60 Hz) (*4)	15 A	20 A	30 A
Operation current [A] (50/60 Hz)	4.7/5.3	8.2/8.6	10.5/10.9

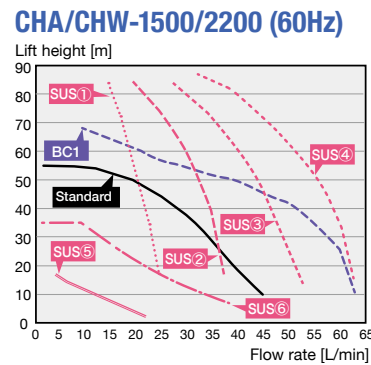
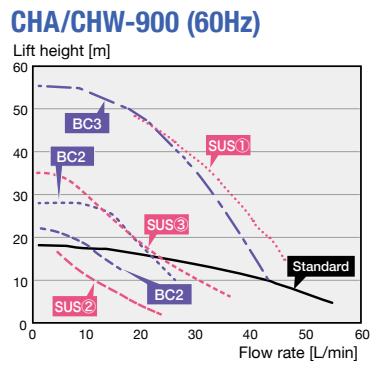
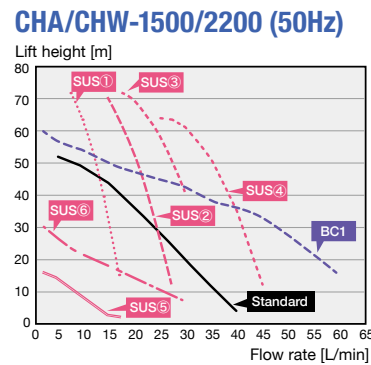
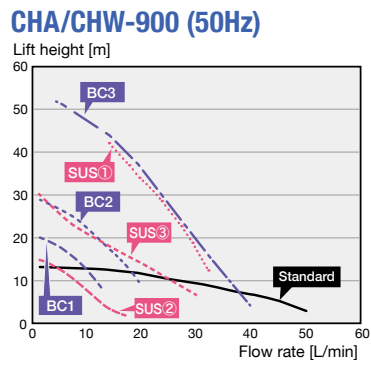
(*1) There may be a case where the temperature performance cannot be maintained due to environmental temperature, heat load, circulation pipe distance, etc. (*2) Capacity when the ambient temperature below +25°C. (*3) Capacity when using tap water. Flow rate when the discharge pressure of CHA-500/900 is at 0.125 MPa and of CHA-1500/2200 at 0.3 MPa. •Power cable is not included. •Standard products cannot use pure water as circulating fluid. •The cooling capacity may not be maintained if the unit is placed in direct sunlight and hindrance of exhausting. •Please ask us when mixing chemicals for water treatment to circulating fluid. •The fee for Delivery and installing are quoted separately.

(*4) Need a step-down transformer outside when used.

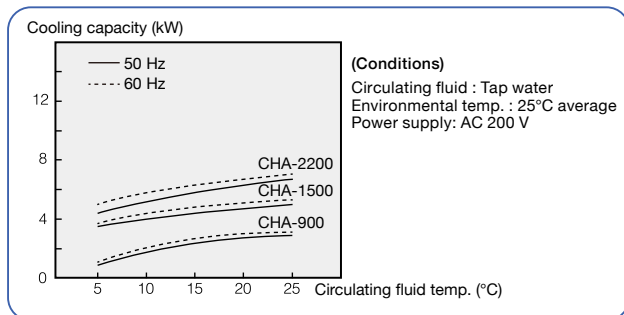
★ Can upgrade the abilities and add some functions by selecting the following options. ① To improve accuracy of temperature adjustment (Heater added) ② To improve capacity of the pump unit (changes to Large flow rate/High head; Several types) ③ To add safety devices (No-fuse breaker and Earth leakage breaker) ④ To change materials such as the stainless steel wetted parts, the circulating fluid piping for the antifreeze, and the ball tap ⑤ Additional functions (Special order/Option: Remote control box, To reduce noise by fan speed controller) ⑥ Other (Device fixing brackets)

Pump Characteristic Curves and Cooling Capacity

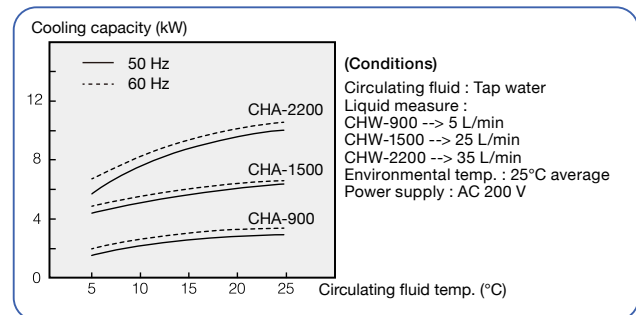
•External dimensions --> P.201



Cooling capacity curve (Air-cooled type)



Cooling capacity curve (Water-cooled type)



Standard specifications: Water-cooled type (Specifications can be modified as an option)

Model	CHW-900	CHW-1500	CHW-2200	
Temperature range/Ambient temperature range	Temperature range: +7°C to +25°C, Ambient temperature range: +5°C to +35°C			
Control accuracy (*1) ★	±2.0°C Compressor On-Off control			
Compressor output, Refrigerant	0.9 kW, R407C	1.5 kW, R407C	2.2 kW, R407C	
Cooling capacity [kW] (50/60 Hz) (*2)	Circulation temperature at 10°C	2.4/2.8	4.8/5.3	7.4/8.2
	Circulation temperature at 20°C	2.8/3.3	5.8/6.1	9.4/10.2
Pumping capacity ★ (50/60 Hz) (*3)	Max. discharge pressure [MPa]	0.14/0.19	0.52	
	Flow rate [L/min]	15/27	22/31	
	Motor output [kW]	0.1/0.15	0.4	
Water bath capacity (at 80% water level)	26 L	56 L		
Safety device/function ★	Alarm and warning for water shortage, Compressor pressure abnormal, Compressor overload, Pump overcurrent, Water temperature abnormal, Warning indicator lamp			
Required primary cooling water rate [L/min] (*4) (cooling water temperature: +25/+30°C)	5/10	25/50	35/60	
Connecting pipe diameter (circulating fluid in/out, primary cooling water in/out)	Rc1/2, Rc1/2 (with valve)	Rc1, Rc1/2 (with valve)	Rc1, Rc3/4 (with valve)	
Dimensions (WxDxH)	500 × 555 × 896 mm	570 × 677 × 1236 mm	570 × 677 × 1236 mm	
Weight	approx. 89 kg	approx. 170 kg	approx. 172 kg	
Power Supply (three phase AC 200 V, 50/60 Hz) (*5)	15 A	20 A	30 A	
Operation current [A] (50/60 Hz)	4.4/4.7	7.8/8.0	9.5/10.7	

(*1) There may be a case where the temperature performance cannot be maintained due to environmental temperature, heat load, circulation pipe distance, etc. (*2) Capacity when the cooling water temperature below +25°C. (*3) Capacity when using tap water. Flow rate when the discharge pressure of CHW-900 is at 0.12 MPa and of CHW-1500/2200 at 0.3 MPa. (*4) Capacity varies with the water temperature. Please note it may cause a defect if the flow rate does not increase at high temperature, so please confirm if the required flow rate is secured in advance. *Power cable is not included. *Standard products cannot use pure water as circulating fluid. *Please ask us when mixing chemicals for water treatment to circulating fluid. *The fee for Delivery and Installing are quoted separately. (*5) Need a step-down transformer outside when used.
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NEW

Constant-temperature incubator/shaker OD Monitor

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Aluminum block Bath Mini-size Bath

Water bath Shaking Water bath Immersion cooler

Hybridization Incubator Constant-temperature Chambers

Centrifugal Concentrators Cold Trap

Freeze dryers

Submarine Bioting device for hybridization

Constant-temperature water circulating system [Chiller]

Appendix