

Precision Constant Temp. Water Circulators | External Closed Loop, High Precision Temp. Control

CFA311C/610C

Operating temp. range -10°C~+80°C

Temp. adjusting accuracy ±0.1°C

Precision type, external closed water circulator with a temperature adjusting accuracy of ±0.1°C.

Features

- Provide high-precision circulating water with an operating temperature range of -10~+80°C, and a temperature adjustment precision of ±0.1°C.
- As a cooling device, it has a strong cooling capacity.
- Monitors low water level, refrigeration unit pressure anomalies, refrigeration unit operation, and circulation pump operation, allowing real-time monitoring of the device's operating status.
- Equipped with various functions such as automatic stop operation, automatic start operation, temperature output terminal, deviation correction function, and RS485 external communication function.

Safety

- Feature various protection devices such as overcurrent leakage protection switch, self-diagnosis function, key lock function, refrigeration unit overload protector, refrigeration unit protection time delay timer, refrigeration unit pressure detection, float switch for preventing pump dry running, bypass for circulation pump protection, automatic overheating protection function, and overheating protector.



Specifications

Model		CFA311C	CFA610C	
System		External closed circulation by circulation pump		
Performance	Operating temp. range	-10~80°C		
	Temp. adjusting accuracy	±0.1°C		
	Temp. unit	0.1°C		
	Cooling capacity	Approx. 330W (284Kcal/h), at liquid temperature 10°C	Approx. 900W (770Kcal/h), at liquid temperature 10°C	
Composition	Temp. control	PID control		
	Temp. sensor	Temperature regulator: Pt thermal resistor, for overheat protection: K-type thermocouple		
	Temp. setting, display	Digital setting, digital display		
	Refrigerator, refrigerant	Air cooling		
		300W, R404A	675W, R404A	
	Circulation pump	Magnetic pump		
		45W	65W	
	Device circulation capacity (50/60Hz)	Maximum flow rate	8.9/10.3L/min	16.4/18.3L/min
		Pump capacity	15/17L/min	22.0/25.0L/min
		Maximum lift	6.6/9.0m	9.7/13m
Pump capacity		8.0/11.0m	10.0/13.5m	
Heater	Stainless steel heating tube 1.0KW		Stainless steel heating tube 2.5KW	
Cooling pipe	Nickel-plated copper			
External circulation port	Rc3/8 (CFA301 standard equipment pagoda joint)			
Operating ambient temp. range	5~35°C			
Safety device	Self-diagnosis function, overcurrent leakage protection switch, refrigeration unit overload protector, refrigeration unit pressure detection, refrigeration unit protection time delay timer, float switch for preventing pump dry running, bypass for circulation pump protection, automatic overheating protection function, overheating protector			
Other functions	Drain valve, condenser filter, RS485 external communication function, refrigeration unit pressure indicator, key lock function, deviation correction function, temperature output terminal (4-20mA)			
Specifications	Water bath dimensions	Dimensions: width 250×depth 315×height 180mm	Inner diameter 300×height 236mm	
	Water bath material	Stainless steel		
	Water bath capacity	Approx. 13L	Approx. 16L	
	Power supply (50/60Hz)	AC220V 8A	AC220V 17A	
	External dimensions (W×D×H mm)	380×565×720	420×565×1050	
Weight	Approx. 60kg	Approx. 77kg		
Accessories	Drainage pipe, overflow pipe			

1 Sterilizers

2 Granulation and Spray Dryers

3 Muffle Furnaces

4 Ovens

5 Incubators

6 Plasma Equipment

7 Water Purifiers

8 Baths

9 Water Circulators

10 Rotary Evaporators

11 Freeze Dryers & Cold Traps

12 Stirrers & Shakers

13 Washers

14 Analysis and Test Devices

15 Options

Internal water bath (CFA610C)

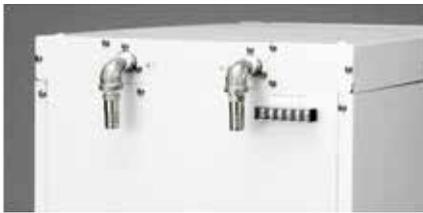


Control panel



Water level monitoring, refrigeration unit monitoring, refrigeration unit action indicator

Back (CFA311C)



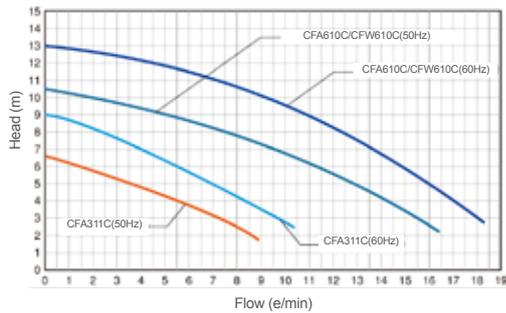
- RS485 external communication terminal
- Temperature output terminal
- circulation port

Back (CFA610C)

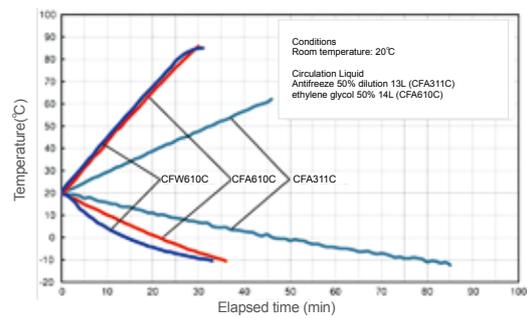


- RS485 external communication terminal
- Temperature output terminal
- circulation port

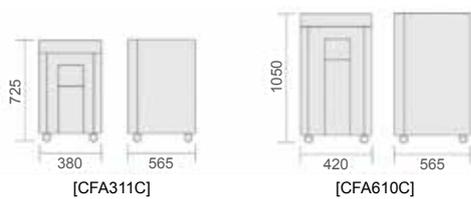
Flow/Head Curve



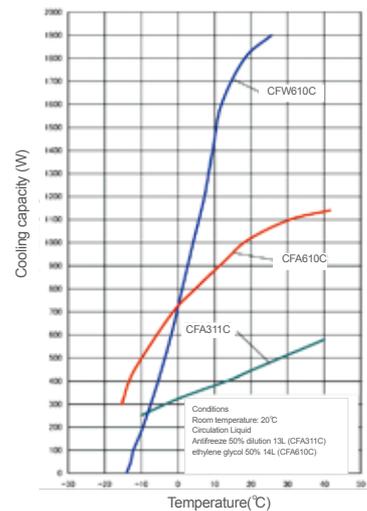
Heating Cooling Curve



Dimension diagram (mm)



Cooling Capacity Curve



Sterilizers	1
Granulation and Spray Dryers	2
Muffle Furnaces	3
Ovens	4
Incubators	5
Plasma Equipment	6
Water Purifiers	7
Baths	8
Water Circulators	9
Rotary Evaporators	10
Freeze Dryers & Cold Traps	11
Stirrers & Shakers	12
Washers	13
Analysis and Test Devices	14
Options	15