

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

CLH312C/411C/610C

Operating temp. range CLH312C: -10°C~80°C CLH411C/610C: -15°C~80°C

Temp. adjusting accuracy ±0.1°C

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

Features

- Operating temperature range of -10~+80°C and -15~+80°C for external opened cooling water circulator.
- Equipped with a flow adjustment valve to freely adjust the circulation pump flow rate according to the size of water bath.
- Use a flow sensor to monitor pipeline flow, with an automatic stop protection device in case of pipeline blockage, indicated by a flashing red light.
- Include quick automatic stop, automatic stop, automatic start, deviation correction, power outage compensation, temperature output terminal, and other functions.

Safety

- Feature self-diagnosis function, overcurrent leakage protection switch, key lock, power failure compensation function, as well as flow monitoring, refrigerating machine monitoring, delayed timer for refrigerating machine protection, abnormal flow, abnormal high pressure, and other safety protection devices.



Specifications

Model		CLH312C	CLH411C	CLH610C	
System		External opened loop circulation by circulation pump			
Performance	Operating temp. range	-10~+80°C	-15~+80°C		
	Temp. adjusting accuracy	±0.1°C			
	Cooling capacity	Approx. 450W (387Kcal/h), at liquid temp. 15°C	Approx. 570W (490Kcal/h), at liquid temp. 15°C	Approx. 820W (705Kcal/h), at liquid temp. 15°C	
	Temp. control	PID control			
Composition	Temp. sensor	Temperature regulator: Pt thermal resistor, for overheat protection: K-type thermocouple			
	Temp. setting, display	Digital setting, digital display			
	Heater	Stainless steel heating pipe			
		900W	900W	1.5KW	
	Refrigerator, refrigerant	Air cooling			
		200W, R404A	350W, R404A	600W, R404A	
	Circulation pump	Magnetic pump			
	Device circulation capacity (50/60Hz)	Max. flow rate	5.4/6.2L/min	5.4/6.3L/min	6.7/7.8L/min
		Pump capacity	10.0/11.0L/min	10.0/11.0L/min	15.0/17.0L/min
		Max. lift head	3.5/5.0m	3.7/5.3m	6.2/8.7L/min
		Pump capacity	4.9/6.9m		8.0/11.0L/min
	Cooling pipe	Nickel-plated copper			
External circulation port	Inlet and outlet ports are outer diameter 13mm				
Operating ambient temp. range	5~30°C				
Safety device	Self-diagnosis function, overcurrent leakage protection switch, key lock, power failure compensation function, as well as flow monitoring, refrigerating unit monitoring, delayed timer for refrigerating unit protection, abnormal flow, abnormal high pressure, overheating protector				
Other functions	Flow adjustment valve, drainage valve, condenser filter, temperature output terminal, deviation correction function, key lock function, power outage compensation function				
Specification	Water bath dimensions	Inner diameter 120× depth 200mm	Inner diameter 150× depth 200mm		
	Water bath material	Stainless steel			
	Water bath capacity	1.5L	3L		
	Power supply (50/60Hz)	AC220V 6A	AC220V 7.5A	AC220V 11A	
	External dimensions (W×D×H mm)	410×460×550	380×513×725	380×615×725	
Weight	Approx. 40kg	Approx. 45kg	Approx. 60kg		
Accessories	1 thermal insulation pipe for circulation, 1 pump circulation pipe, 4 clamps, 1 drainage 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

Usage cases



The test bath is an optional product

Control panel



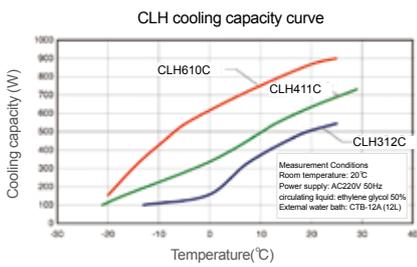
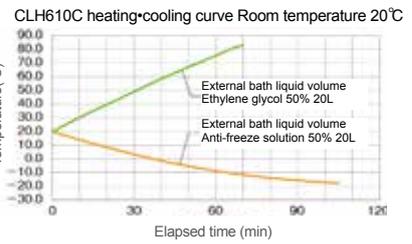
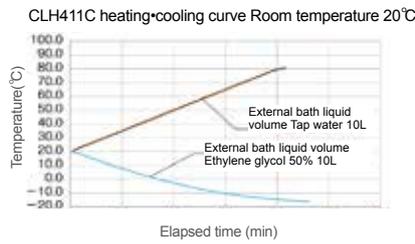
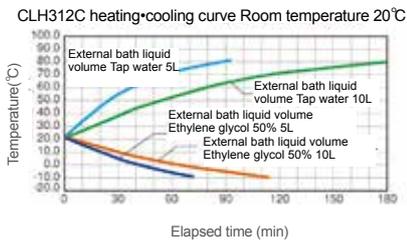
Water level monitoring, refrigeration unit monitoring, refrigeration unit action indicator

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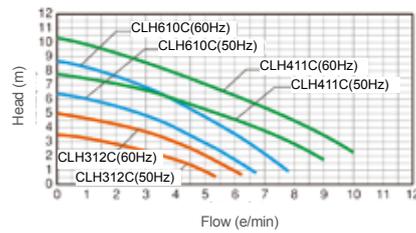


- Due to the installation of a shut-off valve on the discharge side, external circulation can be switched using a quick connector.
- RS485 external communication
- Temperature output terminal

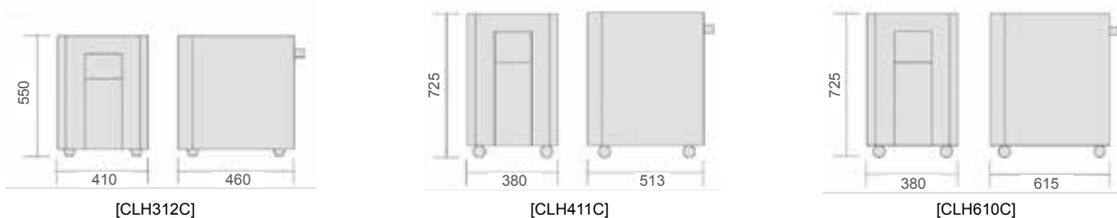
Cooling curve



Flow/head curve



Dimension diagram (mm)



Sterilizers	1
Granulation and Spray Dryers	2
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Plasma Equipment	6
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