

# Water Circulator (Chiller)

Powerful closed circulation system with excellent cooling capacity



**CF-302LA CF-312LA / CF802A**

Operating temp. range -20°C~30°C no heating function

Capacity ~3.9L (Liquid vol. 3.5L) (CF302LA/CF312LA) ~15.5L (Liquid vol.14L) (CF802A)



## Operation and functions

- User-friendly controller  
Controller with high visibility and improved operability. Possible to switch between measured temperature and set temperature.
- Convenient circulation pathway connection  
Connection is completed by inserting a hard tube with 10 mm OD or flexible hose with 9mm ID. Connector can be freely moved and be set in the desired direction
- Easy drainage of condensate water  
A condensation drain port is designed near the connector on the upper rear of the unit
- Easy to clean intake filter  
Filter mounting plate located on the front of the unit can be easily removed when cleaning
- Space-saving solvent recovery device stored in the main body as secondary trap (option for CF802A)  
Used to recover solvent gases remaining in the concentration recovery process

## Specifications

Model	CF-302LA CF-312LA	CF-802A
System/circulating water	Closed circulation / tap water, anti-freeze solution (below 10°C)	Closed circulation / tap water, anti-freeze solution (over 10°C)
Operating ambient temperature range	5 to 35°C	
Temperature setting range <sup>1</sup>	-20°C ~ 30°C (no heating function)	
Temperature control accuracy <sup>2</sup>	±1.0 °C (≥ 0°C) ±1.5 °C (< 0°C)	±1.0°C
Temperature fluctuation <sup>2</sup>	3.0 °C (≥ 0°C) 4.0 °C (< 0°C)	3.0°C
Cooling capacity (liquid temp) <sup>2</sup>	~420W at 10°C ~280W at -10°C	~1320W at 10°C ~700W at -10°C
Max. flow rate <sup>3</sup>	~ 10L/min.	~ 14L/min.
Max. head <sup>3</sup>	~ 5.7m	~ 14.3m
Temperature control system	Refrigeration ON-OFF	
Temperature sensor	Pt100Q	
Controller	White LED digital display, key entry, minimum digit of 1°C	
Refrigeration system/rated performance	Air cooling / 450W	Air cooling / 700W
Refrigerant	R404A	R410A
Cooling coil	Copper/Nickel plating	304 stainless steel
External circulation connection port	Rear top panel, single line One touch connector (swivel type, L type) Flow rate valve (optional)	Rear top panel, single line One touch connector (swivel type, L type) Flow rate valve
Safety device	Overcurrent ELCB, temp. sensor failure, temp. upper/lower limit alert, temp. upper/lower limit error, refrigerator high pressure cut off switch fan motor protection, circulation pump protection, delay timer for refrigerator protection, overcurrent protection fuse (service outlet) for CF802, refrigerator overload relay (CF802)	
Other functions	Drain hose, condensate drain hose, Intake dust filter, cooling operation key, circulating pump key, calibration offset, auto resume function, service outlet (2A) for CF802A	
Water bath material	Stainless steel	
Water bath capacity	~3.9L (Liquid volume 3.5L)	~15.5L (Liquid volume 14L)
Power source	Single phase AC115V 7.5A with plug AC220V 4A no plug, round terminal	AC115V 15A with plug
External dimension (WxDxH) mm (including protrusions)	205 x 396 x 535 (225 x 434 x 564)	340 x 370 x 838 (340 x 408 x 920)
Weight	~31kg	~44kg
Included accessories	Condensation drain hose(1m)(1), Hose clamp (2), Hose nozzle (for flexible hose connection)(2), spare fuse for service outlet 2A (1) for CF802A	

<sup>1</sup> Unit does not feature heating function. Depending on ambient temperature or connection conditions, temperature may not reach -20°C.

<sup>2</sup> Performance based on 115V/220V supplied power and 20°C ambient temp. Temp. control accuracy and temp fluctuation are standards calculated accdg. to JTM K05 and JIS respectively.

<sup>3</sup> Pump performance based on tap water at 20°C

## Features

### Control Panel



### Filter mounting plate



### Drain plug



### Discharge and Return Ports (CF302LA)



### Circulation Hose Connection (CF302LA)



### Circulation Hose Connection (CF802A)



## Optional items

Product name	Product code	Applicable models
Circulation Connection components (fittings)	Refer to instruction manual for listing of all fitting components	CF302LA/312LA and CF802A
Circulation Connection components (hoses)	Refer to instruction manual for listing of all available hoses	CF302LA/312LA and CF802A
Strainer set	281482	CF302LA/312LA and CF802A
External interlock input terminal	281484 281485	CF302LA/312LA CF802
Flow rate valve	281477	CF302LA/312LA
Secondary trap	281478	CF802A
Seal lid for external open connection	281479	CF802A