

## Specifications

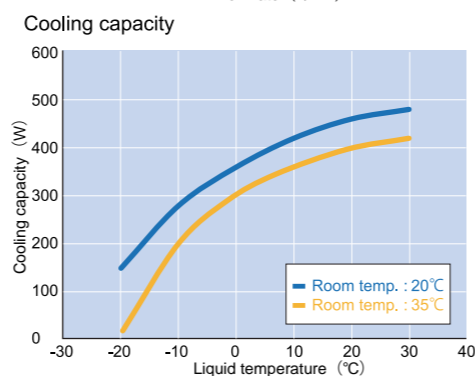
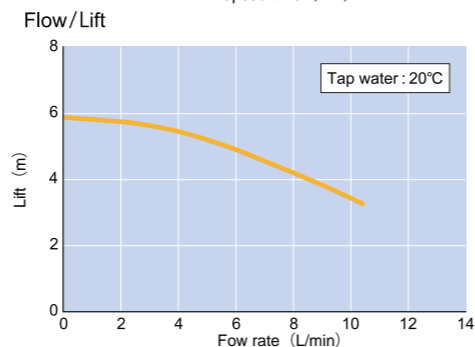
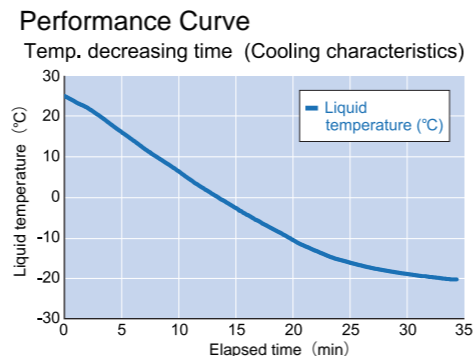
Product Code	221628	
Model	CF312L-D	
Circulation type	Closed circulation	
Circulating water	Tap water, nybrine (liquid temperature below 10°C)	
Operation temperature range	5°C to 35°C	
Performance	Temperature control range*1	-20°C to 30°C
	Temperature adjustment accuracy	JTM K05±1.0°C (≥0°C) JTM K05±1.5°C (<0°C)
	Temperature fluctuation	JIS 3.0°C (≥0°C) JIS 4.0°C (<0°C)
	Cooling capacity	Approx. 420W at 10°C liquid temp. Approx. 280W at -10°C liquid temp.
	Max. flow rate (60Hz)	Approx. 10 L/min
Configuration	Max. lift (60Hz)	Approx. 5.7m
	Temperature control	Refrigerator ON/OFF control
	Temperature sensor	Pt100Ω
	Temperature setting/display	White LED digital display, key input, minimum digit 1°C
	Refrigerator and refrigerant	Air-cooling 450W, R404A
	External circulation nozzle	One-touch connector (Flexible rotary L type) Top rear, 1 system Outer diameter φ 10 mm rigid hose connection (Inner diameter φ 9 mm flexible hose mountable with attached hose nozzle)
Safety features	Water circulating pump	Magnet pump 20W (60Hz)
		Electric leakage breaker, temperature sensor abnormality, Temperature upper/lower limit alarm, Temperature upper/lower limit abnormality, Refrigerator overload relay, Fan motor protection, Pump thermal protector, Refrigerator protection delay timer
Other features	Drainage hose, Circulation port condensation water drainage hose, Intake port dustproof filter, Cooling operation switch, Circulation pump switch, Calibration offset, Power failure recovery function (selected)	
Standard	Inner tank material	Stainless steel
	Inner tank capacity	Approx. 3.9L (liquid volume 3.5L)
	External dimensions (W×D×Hmm)	205×396×535
	Weight	Approx. 31 kg
Accessories	AC220V 4A Single-phase	
	Two hose nozzles (for flexible hose connection), One condensation waterdrainage hose 1m (inner diameter φ 12 mm), Two clamps for hose fixing	

\*1 This model is not equipped with the heating function. Depending on the ambient temperature and connection conditions, it may not be able to reach -20°C.

## Optional Items

No.	Product Name	Specifications	Model	Product Code
①	Heat insulated circulation hose	Inner diameter 9mm, ethylene propylene (soft) hose (2m) 2 pcs., clamps 4pcs.	OCF12	221581
②	Heat insulated circulation hose	High heat insulation, inner diameter 9mm, silicone (soft) hose (2m) 2pcs., clamps 4pcs.	OCF62	221599
③	Heat insulated circulation hose	Outer diameter 10mm, polyurethane (hard) tube (2m) 2pcs.	OCF78	281475
④	L shaped circulation nozzle	φ 8mm R3/8 SUS304	OCF80	281476
⑤	L shaped circulation nozzle	φ 10.5mm R3/8 SUS304	OCL30	221396
⑥	L shaped circulation nozzle	φ 13mm R3/8 SUS304	OCL40	221397
⑦	L shaped circulation nozzle	φ 16mm R3/8 SUS304	OCL50	221398
⑧	Flow control valve	R3/8	OCF82	281477
⑨	External linkage input terminal*2	Operation/stop by no-voltage A contact input	OCF96	281484
⑩	One touch connector	Straight one-touch connector R3/8×outer diameter φ 10mm for hard tubes	OCF88	281480
⑪	One touch connector	L-shaped swivel type one-touch connector R3/8×outer diameter φ 10mm for hard tubes	OCF90	281481
⑫	Strainer set	Y-type strainer (20 mesh, Rc3/8)+Outlet connection tube	OCF92	281482
⑬	Hose nozzle	Connection from outer diameter 10mm hard tube to inner diameter 9mm soft hose*3	OCF94	281483

\*2 Please specify the external linkage input terminal when ordering the main unit. \*3 Standard accessories



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# Cooling Water Circulator

(Externally Closed Circulation)

## Neocool® Circulator

### CF312L

## Amazing Price, Performance, Design

- Low cost
- High Performance
- Design • Operability



## CF312L

Temperature control range: -20°C to 30°C

◦ Neocool is a registered trademark of Yamato Science Co., Ltd.

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For the development of scientific technologies

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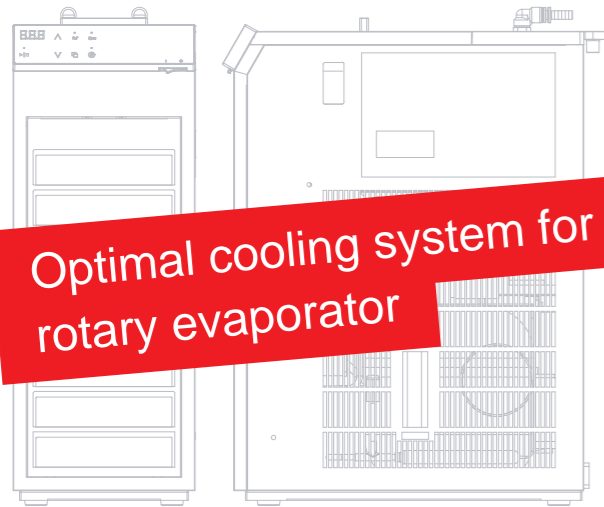
## Yamato Scientific Co., Ltd.

# Cooling Water Circulator

(Externally Closed Circulation)

## CF312L

Cooling of the heat generating parts by closed circulation in various applications such as research equipment, industrial machinery, analysis and measuring instruments!



Optimal cooling system for rotary evaporator



CF312L

### CF312L

Temperature control range:  $-20^{\circ}\text{C}$  to  $30^{\circ}\text{C}$

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Installed under the table



Installed on the table

#### Easy maintenance of the inlet filter

The front filter mounting plate is only fixed by a magnet, so it can be easily removed by pulling for cleaning. The sheet filter is easy to clean and remount.



#### New user friendly controller

A new controller with high visibility and improved operability with a high brightness white LED is adopted. Switching between measured temperature display and set temperature display is possible. The design is simple and easy to use.



#### Stress-free circulation connection

Connection is completed by inserting a hard tube (outer diameter of  $\phi 10\text{mm}$ ) only. The connector part is rotatable, so it can be turned freely and does not apply stress to the hose. Connection to a flexible hoses such as silicone hose (inner diameter of  $\phi 9\text{mm}$ ) is also possible by inserting the supplied hose nozzle.



#### Safe drainage of condensation water

A drain for condensation water is provided near the connector on the upper rear side. Connect the provided drainage hose and utilize it to drain condensation water.

