

External Closed Circulators, Inverter Type  
**CFI701/911/1111/601/811/1011**



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Cooling water circulation system of high output, saving energy consumption by inverter control.  
 High-lift type (Model: CFI701/911/1111) is suitable for Analyzing equipment with high power pump equipped.

Model					
701	911	1111	601	811	1011
High-lift type			General type		
Operating Temperature Range					
5 - 30°C			-10 - 30°C		
Cooling capacity					
Approx. 1000W at liquid temp. 20 deg.C	Approx. 1600W at liquid temp 20 deg.C	Approx. 2700W at liquid temp 20 deg.C	Approx. 1000W at liquid temp. 20 deg.C	Approx. 1800W at liquid temp. 20 deg.C	Approx. 2900W at liquid temp. 20 deg.C

- Cooling water circulation system of high output, saving energy consumption by inverter control.
- High-lift type (Model: CFI701/911/1111) is suitable for cooling the Analyzing equipment (ICP, ICP-MAS, X-ray analyzer device, Electron microscope etc.) with high power pump equipped.
- Various optional accessories are available.

## ■ Specifications

Model	CFI701	CFI911	CFI1111	CFI601	CFI811	CFI1011
Type	High-lift type			General type		
<b>Performance</b>						
Circulation Type	Closed System Circulation / Tap Water or Anti-freezing liquid					
Operating Temperature Range	5 - 30°C			-10 - 30°C		
Temp. fluctuation (JIS)	±0.1 deg.C					
Cooling Capacity (at Liquid Temp. 20 deg.C)	Approx. 1000W	Approx. 1600W	Approx. 2700W	Approx. 1000W	Approx. 1800W	Approx. 2900W
External Circulation Flow Rate (50/60Hz)	Approx. 15/18L/min	Approx. 22/26L/min		Approx. 15/17L/min		
Pump Max. Lift (50/60Hz)	Approx. 35/48m	Approx. 52/65m		Approx. 10/14m		
<b>Components</b>						
Tank	Polyethylene					
Temp. control	Refrigerator inverter control					
Temp. Sensor	Pt100Ω, T thermocouple					
Temp. Setting / Display	Digital setting/display					
Refrigerator / Coolant	Air-cooling inverter type / R410A					
Heat exchanger	Plate type heat exchanger, SUS316					
External Circulation Nozzle	Nozzle is option, Rc1/2					
Circulation Pump	Turbine Pump 370W	Turbine Pump 550W		Magnet Pump 65W		
<b>Safety Device</b>						
Safety Countermeasures	Over current electrical leakage breaker, Temp. sensor error, Float switch, Refrigerator over load relay, Refrigerator high pressure relay, Ambient temp. upper limit error, Refrigerator overload reducing operation, Pump thermal protector, Delay timer for protecting refrigerator, Bypass valve for protecting pump, Condenser refrigerating protecting, Inverter error			Over current electrical leakage breaker, Temp. sensor error, Float switch, Refrigerator over load relay, Refrigerator high pressure relay, Ambient temp. upper limit error, Refrigerator overload reducing operation, Pump thermal protector, Delay timer for protecting refrigerator, Inverter error		
Other Function	Water bath filter, Drain cock, Airintake filter, Calibration off-set, Auto start, Auto stop, Display the amount of Power consumption, Integration time					
<b>Standard</b>						
Water Bath Capacity	Approx. 5L					
Power Source (50/60Hz)	AC100V	Single phase AC200V		AC100V	Single phase AC200V	
	5.9/8.9A (15A)	4.9/7.1A (15A)	6.6/7.4A (15A)	5.5/6.1A (15A)	3.6/4.7A (15A)	4.0/5.2A (15A)
External dimensions (W×D×Hmm)	W380 × D520 × H690mm					
Weight	Approx. 56kg	Approx. 50kg	Approx. 53kg	Approx. 47kg	Approx. 40kg	Approx. 44kg
Accessories	Lid, Drain hose ( I.D. 9mm x 500mm), Drain hose nozzle (O.D. 10mm)					

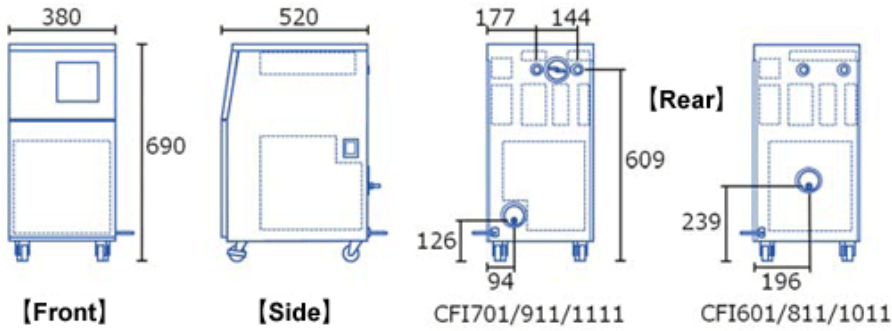
\*1 Conditions: Ambient temperature and humidity: 23 deg.C+/-5 deg.C, 65%RH+/-20% (no load). Liquid temperature 20 deg.C.

\*2 External dimensions do not include protrusions.

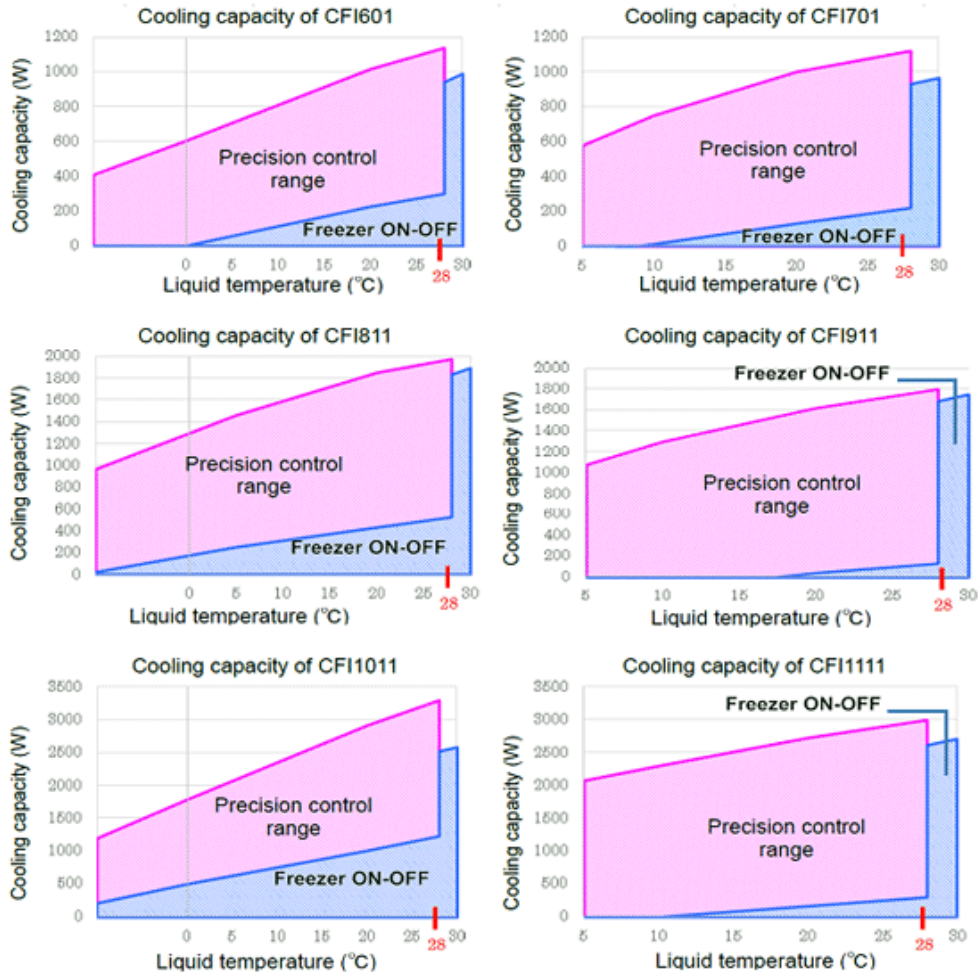
## ■ System configuration



■ Dimensional drawing (mm)



■ Cooling curve



■ Optional items

Remark	Description	Main Unit Model No.	Item Code
	Straight circulation nozzle 9mm dia Rc1/2	CFI series	221650
	Straight circulation nozzle 10.5mm dia Rc1/2	CFI series	221651
	Straight circulation nozzle 12.7mm dia Rc1/2	CFI series	221652
	Straight circulation nozzle 16.0mm dia Rc1/2	CFI series	221653
	Straight circulation nozzle 19.0mm dia Rc1/2	CFI series	221654
	Male/female elbow	CFI series	221655
	Coupling for Brade hose 9.0mm dia, R1/2	CFI series	221677
	Coupling for Brade hose 15.0mm dia, R1/2	CFI series	221678
	Coupling for Nylon rigid hose 8.0/9.0mm dia, R1/2	CFI series	221679
	Brade hose, PVC, 9mm dia, 5mX1pc.	CFI series	221673
	Brade hose, PVC, 15mm dia, 5mX1pc.	CFI series	221674
	Nylon rigid hose, 9mm dia, 5mX1pc.	CFI series	221672
	Heat-resistant circulation hose (2m. X 2pcs., 9mm dia)	CFI series	221581
	Flow adjusting valve, Rc1/2 × R1/2	CFI series	221656
	Flow meter, Rc1/2 × R1/2	CFI series	221691
	Pressure meter, R1/2 × Rc1/2	CFI series	221657
	Filter set 50μm, should be connect with Nylon rigid hose	CFI series	221692
	Strainer set, R1/2 × Rc1/2	CFI series	221671
•	External communication terminal (RS485)	CFI series	221690
•	Operation signal output terminal	CFI series	221688
•	External combination terminal	CFI series	221687
•	External alarm output terminal	CFI series	221686
•	Temperature output terminal (4-20mA)	CFI series	221689
	External Communication Adapter set (USB-RS485 adapter, USB cable 1m, RS485 connection cable 3m, utility software for Windows XP/Vista/7)	CFI series	211884
•	Leak detection system	CFI series	221685
	Noise reduction panel	CFI701/CFI911/CFI1111	221693
	Connecting set for analyzing equipment	CFI series	221694

Note: The item marked "•" in the column of "Remark" shall be ordered together with the main unit.



Straight circulation nozzle



Male/female elbow



Coupling for Brade hose



Coupling for Nylon rigid hose



Brade hose, PVC



Nylon rigid hose



Flow adjusting valve



Strainer set



Pressure meter



Leak detection system



Noise reduction panel