

Cooling Water Circulator (Externally Closed Circulation)

High-precision temp.control

CFA302/611・CFW611

Operating temp. range -10~+60°C
CFA302

-10~+80°C
CFA611/CFW611

Temp. control accuracy ±0.1°C JTM K05

Temperature fluctuation 0.6°C JIS
CFA302

0.4°C JIS
CFA611/CFW611

- Operating temp. range -10 to 80°C (CFA302: -10 to 60°C), high temp. control accuracy of ±0.1°C
Provides precision circulating water.
- Powerful cooling capacity as a cooling system.
(at a liquid temp. of 10°C, room temp. of 20°C)
CFA302 cooling capacity 370W
CFA611 cooling capacity 850W
CFW611 cooling capacity 1,300W (water-cooled)
- The CFA302/611 is an air-cooled type and the CFW611 is a water-cooled type with low heat dissipation from the equipment.
- Auto-stop operation, auto-start operation, temperature output terminal, calibration offset function Various support functions, such as the RS485 external communication function, are provided as standard.
- High-performance pump (factory-set option) The flow rate and head are improved. (CFA611/CFW611)



CFA302

CFA611

CFW611

Specifications

| Product code | 221348 | 221565 | 221566 |
|------------------------------------|---|--|---|
| Model | CFA302 | CFA611 | CFW611 |
| Method | External closed circulation | | |
| Circulating water*1 | Setting temp. +10°C or higher: Tap water or softened tap water Setting temp. less than 10°C: Non-freezing liquid | Tap water~A1 level pure water (JIS K0557 compliant), Non-freezing liquid | |
| Cooling method | Air cooling | Water cooling | |
| Operating temp. range*2 | -10 to +60°C (refrigerator operation to 40°C) | -10 to +80°C (refrigerator operation to 40°C) | |
| Temperature setting range | -15~+65°C | -15~+85°C | |
| Temperature control accuracy*2 | ±0.1°C at 20°C JTM K05 | | |
| Temperature fluctuation*2 | 0.6°C at 20°C JIS | 0.4°C at 20°C JIS | |
| Temperature indicating unit | 0.1°C | | |
| Cooling capacity*2 | Approx. 370W (318Kcal/h) at fluid temp. 10°C | Approx. 850W (731Kcal/h) at fluid temp. 10°C | Approx. 1,300W (1,118Kcal/h) at fluid temp. 10°C |
| Ambient operating temp. range | 5 to 35°C | | |
| Refrigerator, refrigerant | Air cooling 300W, R404A | Air cooling 600W, R404A | |
| Temperature control | PID control | | |
| Temperature sensor | Pt100 (for temperature control)+K thermocouple (for overheat protection) | | |
| Circulating pump | Magnetic drive pump, 45W | Magnetic drive pump, 65W | |
| Unit circulation ability (50/60Hz) | Max. flow | 8.9 / 10.3L/min | 12.7 / 14.4L/min |
| | Pump capacity | 15 / 17L/min | 22.0 / 25.0L/min |
| | Max. lift | 6.6 / 9.0m | 10.0 / 13.4m |
| | Pump capacity | 8.0 / 11.0m | 10.0 / 13.5m |
| Heater | 850W (SUS316) | 2.5kW (SUS316) | 3.2kW (SUS316) |
| Cooling coil | Copper with nickel plating | SUS brazing plate type | |
| External circulation nozzle | Rc3/8, φ13mm with straight circulation nozzle | Rc3/8 | |
| Water supply/ Drainage | | | Water supply (Tap water) Water temp.: 10 to 28°C, Volume: 15 L/min or more, Pressure: 3 to 7kg/m ² (0.5 kg/m ² or more during operation) Water supply connection: coupler, Drain: φ16 nipple |
| Safety device | Self-diagnosis, Overcurrent ELB, Refrigerator overload relay protection circuit, Refrigerator pressure detection, Refrigerator delay timer of protection, Float switch preventing pump idling, Bypass for protecting circulating pump, Auto overheat protection, Overheat protector, Refrigerator overload reduction operation (CFA611/CFW611), Water supply pressure drop detection (CFW611) | | |
| Other functions | Drain cock, Dust-proof filter, External communication (RS485), Refrigerator pressure indicator, Key lock, Calibration Offset, Temp. output terminal (4 to 20 mA), Water tank filter, Overflow, strainer (return port) (CFA611/CFW611) | | |
| Accessories | Drain hose 0.5m (1pc), Overflow hose 0.5m (1pc), Strainer (return port) (1pc) (CFA611/CFW611) CFW611: Cooling water supply hose 2m (1pc), Cooling water drain hose (blade) 2m (1pc), Wire hose clamp (1 pc) | | |
| Bath dimension*3 | W245×D315×H180mm | W127×D317×H160mm | |
| Bath capacity | 13L | 6L | |
| External dimensions*3 | W380×D565×H725mm | W380×D535×H955mm | |
| Power supply (50/60Hz) | AC115V / AC220V Single phase with step-down transformer | AC220V Single phase with step-down transformer | |
| Power supply (50/60Hz) | AC115V / AC220V Single phase with step-down transformer | | |
| Weight | Approx.60kg | Approx.76kg | Approx.78kg |

*1 Pure water cannot be used with CFA302.

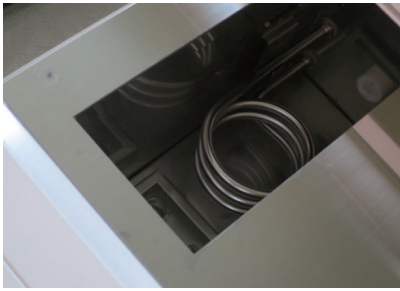
*2 The performance data are for a room temp. of 20°C with no load and a rated power supply voltage of 50Hz. It varies depending on the Ambient temp. and usage conditions.

*3 Bath dimensions and external dimensions do not include the protruding parts.

The length of the power cord is about 2 meters outside the unit.

Bath

CFA611/CFW611



Control Panel



Low water level monitoring,
Compressor monitoring,
Compressor operation indicator
Circulation Pump Indicator

Output Terminal / Connection Port



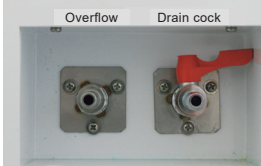
CFA302
(Back)

- RS485 external communication terminal
- Temperature output terminal
- Circulating Water port

* L-type circulation nozzles are optional.
CFA302: Straight circulation nozzle
φ13.0mm (standard)

Connection Port

CFA611 (Left side)



- Overflow φ10.5mm
- Drain cock φ10.5mm

CFW611 (Left side)



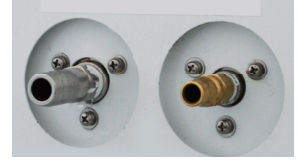
- Overflow φ10.5mm
- Drain cock φ10.5mm

CFA611/CFW611 (Back)



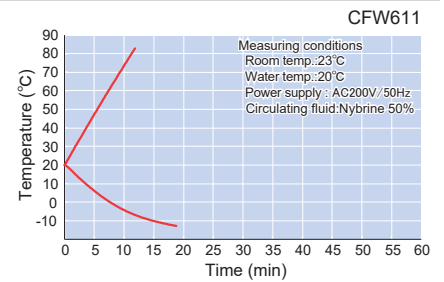
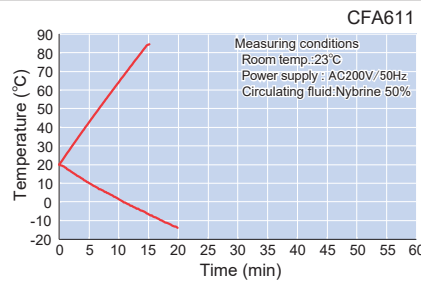
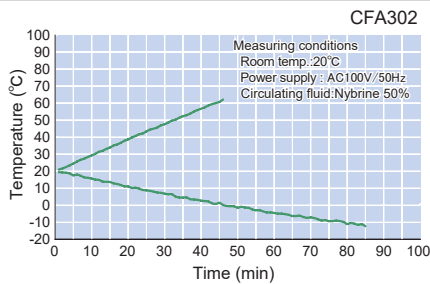
- Circulating Water connection port
Rc3/8 (Nozzle is optional)

CFW611 (Under the back)

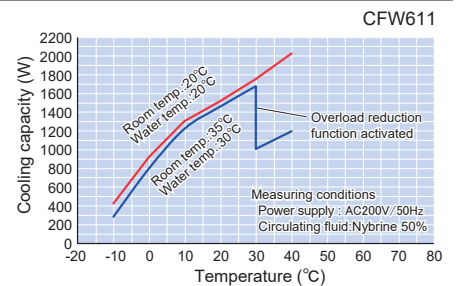
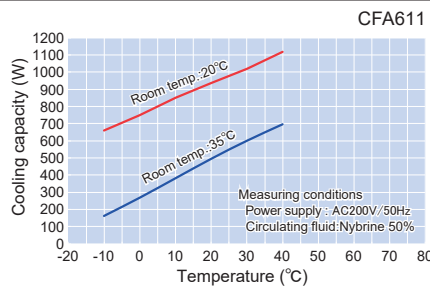
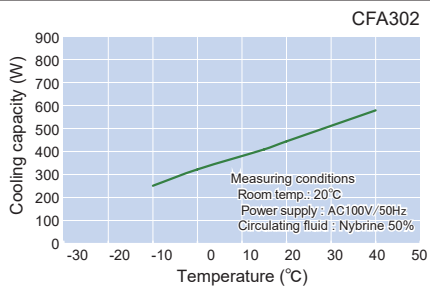


- Coolant water connection port
Outlet: φ16 Inlet: Coupler type

Heating and cooling curve



Cooling capacity curve



Optional Items

| No. | Description | Specifications | Product code | |
|-----|--|---|--|--------|
| ① | *Conversion to high performance pump (CFA611/CFW611) | Max. flow rate: 15/17.7L/min Max. headroom: 14.2/20.4m (50/60Hz) | 281441 | |
| ② | Straight circulation nozzle | φ10.5mm, Connecting screw: Rc3/8 | 221394 | |
| ③ | | φ13.0mm, Connecting screw: Rc3/8 | 221399 | |
| ④ | | φ16mm, Connecting screw: Rc3/8 | 221395 | |
| ⑤ | L-shaped circulation nozzle | φ10.5mm, Connecting screw: Rc3/8 | 221396 | |
| ⑥ | | φ13.0mm, Connecting screw: Rc3/8 | 221397 | |
| ⑦ | | φ16.0mm, Connecting screw: Rc3/8 | 221398 | |
| ⑧ | Insulated circulation hose | I.D. φ9mm×2m length (2pcs), Clamp (4pcs) | 221581 | |
| ⑨ | One touch fixing holder | Straight | φ10.5mm, Connecting screw: Rc3/8, 2pcs set | 221681 |
| ⑩ | | | φ13.7mm, Connecting screw: Rc3/8, 2pcs set | 221682 |
| ⑪ | | L-shaped | φ10.5mm, Connecting screw: Rc3/8, 2pcs set | 221683 |
| ⑫ | | | φ13.7mm, Connecting screw: Rc3/8, 2pcs set | 221684 |
| ⑬ | External communication adapter | RS485-RS232C conversion | 281388 | |
| ⑭ | Castor fixing holder | Set of 4pcs. | 281440 | |

* Please specify when ordering main unit.

