

Water Circulator (Chiller)

Powerful closed circulation system with excellent cooling capacity

CF-302LA CF-312LA / CF800-115V CF800-220V

Operating temp. range -20°C~30°C (CF302LA/CF312LA) -20°C~RT (CF800)

Capacity ~3.9L (Liquid vol. 3.5L) (CF302LA/CF312LA) ~16L (Liquid vol. 14L) (CF800)

CF-302LA
CF-312LA



CF800-115V
CF800-220V

Common to all models

- Environment friendly coolant used for refrigeration
- Compact and space-saving to fit on laboratory tables and limited space
- CF302LA / CF312LA**
- User-friendly controller
- Easy maintenance of air intake filter
- Rotatable connector which can freely be moved and be set in the desired orientation
- Convenient drainage of waste water
- Environment friendly coolant used for refrigeration
- Features calibration offset function which compensates discrepancy between actual liquid temperature and display temperature
- Auto resume function allows user to select whether to resume operation or to remain at standby at the time of recovery from power failures
- CF800-115V / CF800-220V**
- Waterproof touch panel with big LED display and sheet key for easier setting
- Less energy use and less cooling capacity loss by fixing the heat-resistant lid
- Powerful cooling and big energy saver in combination with rotary evaporator distillation
- Up to 4 rotary evaporators can be connected saving investment and operation cost

Specifications

| Model | CF-302LA CF-312LA | CF800-115V CF800-220V |
|---|--|---|
| System/circulating water | Closed circulation/tap water, anti-freeze solution (below 10°C) | |
| Operating ambient temperature | 5 to 35°C | |
| Temp. setting range | -20°C ~ 30°C (no heating function) ¹⁾ | -20°C ~ Room temperature |
| Temperature control accuracy (JTM K05) ²⁾ | ±1.0 °C (≥ 0°C) ±1.5 °C (≥ 0°C) | ±1.5°C at 10°C |
| Temperature fluctuation (JIS) ²⁾ | 3.0 °C (≥ 0°C) 4.0 °C (≥ 0°C) | - |
| Cooling capacity (liquid temp) ²⁾ | ~420W at liquid temp. 10°C ~280W at liquid temp. -10°C | ~1050W (830Kcal/h) at Liquid Temp. 10°C ~910W (780Kcal/h) at Liquid Temp. 0°C ~670W (570Kcal/h) at Liquid Temp. -10°C |
| Max. flow rate ³⁾ | ~ 10L/min. | 50Hz: ~16.9L/min 60Hz: ~19.6L/min |
| Max. head ³⁾ | ~ 5.7m | 10.3m / 14.3m |
| Temperature control system | Refrigeration ON-OFF | |
| Temperature sensor | Pt100Ω | T-Thermocouple (with SUS Protection Tube) |
| Controller | White LED digital display, key entry, minimum digit of 1°C | Digital setting / LED display |
| Refrigeration system/rated performance | Air cooling/450W | Air cooling, 600W |
| Refrigerant | R404A | |
| Cooling Coil | Copper/Nickel plating | |
| External circulation connection port | One touch connector (swivel type, L type) / Flow rate valve (optional) | Outer diameter: 10.5mm (both discharge and return) with hose nipple |
| Circulation pump | 15W 20W | Magnet pump 65W 65W |
| 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 | Electric leakage breaker, refrigerator over load relay, pump thermal protector, refrigerator-protection delay timer |
| Other functions | Drain hose, condensate drain hose, Intake dust filter, cooling operation key, circulating pump key, calibration offset, Auto resume function | Overflow, Drainage cook Service power outlet (Aspirator unit power supply use) |
| Water bath material | Stainless steel | |
| Water bath capacity | ~3.9L (Liquid volume 3.5L) | ~16L (Liquid Amount 14L) |
| Power source | AC115V 7.5A with plug AC220V 4A no plug, round terminal | AC115V 13.5A with plug AC220V 7A no plug, round terminal |
| External dimension (WxDxH) mm (including protrusions) | 205 x 396 x 535 (225 x 434 x 564) | 355 x 480 x 1060 |
| Weight | ~31kg | ~80kg |
| Included accessories | Condensate drain hose(1m)(1), Hose clamp (2), Hose nozzle (for flexible hose connection)(2) | Top cover, 0.5m long drain hose, 3m long circulation hose, wire clampx2 |

¹⁾ Unit does not feature heating function. Depending on ambient temperature or connection conditions, temperature may not reach -20°C. ²⁾ Performance based on 115V/220V supplied power and 20°C ambient temp. Temp. control accuracy and temp fluctuation are standards calculated accdgd. to JTM K05 and JIS respectively. ³⁾ Pump performance based on tap water at 20°C (CF302/312) and 23°C (CF800).

Features of CF-302LA / CF-312LA

Control Panel



Discharge port, Return port (top view)



Drain plug (right side)



Features of CF800

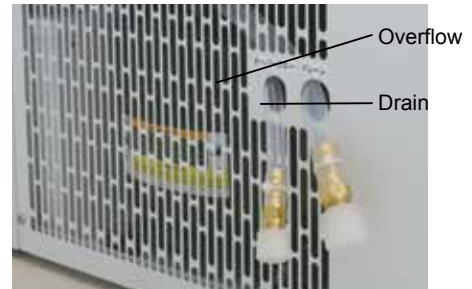
Control Panel



External Circulation Nozzle (back view)



Drain, Overflow (left side)



Installation of one touch rotation L-shaped nozzle



Optional items

CF-302LA/312LA

| Product code | Product name | Standard |
|--------------|------------------------------|--|
| LT00039314 | One touch connector (L-type) | R3/8 |
| LT00039316 | Hose nozzle | 10 mm OD connectors for flexible hose with 9 mm I.D. |
| CF30243000 | Intake dust filter | Front air intake |
| CF30241060 | Drain plug | For 12mm ID hose |
| LT00007489 | Silicon hose | φ12 × φ16 mm 1.0 m Condensate drain hose (included) |
| LT00036771 | Strainer | 20 mesh |
| LT00039454 | Inner collar | Applicable hose: φ6.5 × φ10 mm |

CF800

| Product code | Product name | Specifications |
|--------------|-----------------------------|-------------------------|
| 221581 | Circulation insulation hose | ø9 2m×2pcs |
| 221596 | Straight circulation nozzle | ø8 Rc3/8 |
| 221394 | | ø10.5 Rc3/8 |
| 221399 | | ø13 Rc3/8 |
| 221395 | | ø16 Rc/8 |
| 221681 | One touch fixing holder | ø10.5 Straight 2pcs/set |
| 221682 | | ø13.7 Straight 2pcs/set |
| 221683 | | ø10.5 L shape 2pcs/set |
| 221684 | | ø13.7 L shape 2pcs/set |
| 281440 | Cast fixing holder | 4pcs/set |