Benchtop Water Circulator (Chiller)

Precision low temperature, compact water circulator

CB-100

Operating temp. range: -10°C ~ 80°C

Capacity: ~3.4L (Liquid volume 2.3L)

Operation and functions

- **Wide temperature range of -10 ~ 80°C**
  Can be used for various applications such as as maintaining temperature for cell samples in a spectrofluorometer and a viscometer
- **High head and flow rate**
  Lift is ~3.3/4.7m (50/60 Hz), which is very high in this class, so even piping with pressure loss can be circulated sufficiently. In addition, the maximum flow rate is as large as ~6.8/8.0L/min (50/60 Hz).The lift and flow rates allow stable circulation even when installed under a desk.
- **Easy to clean cooling air intake filter**
  Filter mounting plate located on the front of the unit can be easily removed when cleaning
- **Standard equipped with drain**
  Maintenance work such as replacement of liquid can be easily performed. After use, it can be stored in the space inside the main unit.
- **Nozzle can be used in any orientation**
  Since the nozzle is freely rotatable, it can be installed in any direction
- **Compact**
  With a width of 180mm and a depth of 360mm, it is ideal for limited spaces
- **Low GWP value that is friendly to the global environment**
  Since the alternative CFC refrigerant R-134a is used, the global warming potential is as low as 1430, good for the global environment.

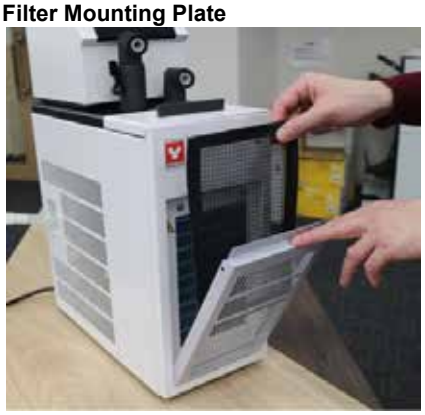
Specifications

Model		CB-100
System/circulating water		Closed circulation / tap water, anti-freeze solution (for 10°C or lower)
Temperature control system		Refrigerator control + heater PID control
		-10 to 50°C: Refrigerator ON, control by heater PID 50.1 to 80°C: Refrigerator OFF, control by heater PID only
Operating ambient temperature range		5 to 30°C
Performance	Temperature setting range	-10°C to 80°C
	Temperature setting range for refrigerator continuous use	-10°C to 50°C
	Max. flow rate *1	8 L/min.
	Max. head *1	4.7m
	Temperature control accuracy *2	±0.1°C
	Cooling capacity (liquid temp) *3	~230W (liquid temp. at 10°C)
Function / Configuration	Controller	7-segment 3-digit white LED digital display, key input, resolution: 0.1°C
	Control heater	115V 650W stainless steel
	Refrigerator / Refrigerant	Air cooling / 100W / R134a
	Temperature sensor	Pt100Ω
	Circulation pump motor	Induction motor 40W
	Cooling pipe	Stainless steel 304
	External input	External temperature sensor input connector
	User function	Calibration offset, auto-resume mode select
	Circulation system	Control unit front side, one system / One touch connector (swivel type, L type) / Flow rate valve
Safety devices		Overcurrent ELCB, temp. sensor failure, temp. rise/fall alarm (operation continues), temp. upper/lower limit error (operation stops), float switch for dry heating prevention, refrigeration overload relay, refrigeraotr high pressure cut-off switch, fan motor protection, circulation pump thermal protector, delay timer for refrigerator protection, overheat prevention device
Standard	Water bath material	Stainless steel
	Water bath capacity	~3.4L (Liquid volume 2.3L)
	Power source	Single phase AC115V 13A, with plug
	External dimension (WxDxH) (including protrusions)	180 x 360 (440) x 553 (600) mm (including protrusions)
	Weight	~22kg
	Included accessories	Hose nozzle 10mm O.D. connection (for flexible hose connection (2), knurled screw (2)

1 Pump performance based on tap water at 20°C
2 Circulating water -10 to 10°C: Nybrine/10.1 to 80°C water. Performance based on 115V 60Hz supplied power, being short circuited, no load applied.
3 Performance based on 115V 60Hz supplied power and 23°C ambient temperature.

Control Panel

Filter Mounting Plate



Compact