



Legacy Lab Supplies

PRODUCT BROCHURE · YAMATO SCIENTIFIC

CB100 Benchtop Water Circulator

Yamato Scientific

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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 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

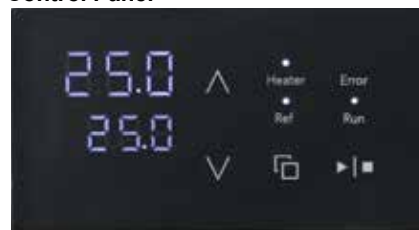
Model		CB-100
System/circulating water		Closed circulation / tap water, anti-freeze solution (for 10°C or lower)
Temperature control system		Refrigerator control + heater PID control -10 to 50°C: Refrigerator ON, control by heater PID 50.1 to 80°C: Refrigerator OFF, control by heater PID only
Operating 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
Function / Configuration	Temperature control accuracy ^{*2}	±0.1°C
	Cooling capacity (liquid temp) ^{*3}	~230W (liquid temp. at 10°C)
	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
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, refrigeration 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

