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**MCB-100**  
**MCB-100 Mini Water Circulation Bath**

# MCB-100 Mini Water Circulation Bath

The MCB-100 is a closed type water circulation bath for cooling/heating of external device by circulating externally the precisely temperature controlled water in the bath. The circulating capability is 1 L/min in terms of flow rate and cooling/heating capability, 52 W, assuring high performances even with compact size. It can be used in wide variety of applications, as well as for the constant temperature control of cell part in the spectrophotometer.

## Highly precise temperature control by using Peltier device

The Peltier device is utilized for cooling/heating of circulating water. With its rapid response speed, switch-over of heating/cooling can be done with high speed, allowing more accurate temperature control as compared with general water circulator using a compressor and/or a heater. The MCB-100 has a wide temperature control range from 10°C below ambient temperature to 40°C with temperature accuracy of  $\pm 0.5^\circ\text{C}$ .



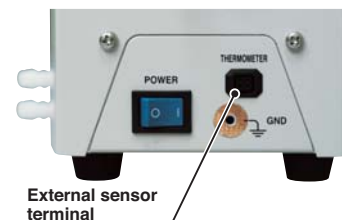
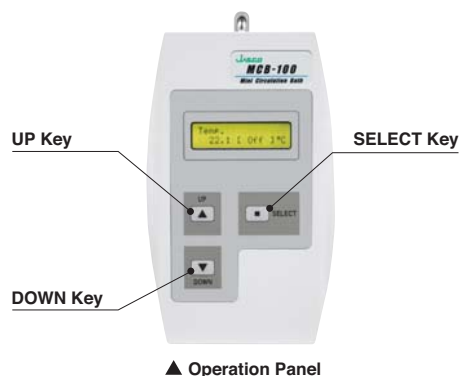
## Compact size allowing installation in anywhere

The size of MCB-100 is as small as 160(W) x 225(D) x 263(H) mm, 5.2 kg, allowing installation in anywhere. The MCB-100 can be placed very closely to external device, enabling much shorter tubing between the MCB-100 and external device, and the circulation of precisely temperature controlled water in such external device.



## Easy and simple operation

The operation is very easy and simple. The water circulation starts automatically when the power is on. The MCB-100 has only 3 buttons, such as UP key, DOWN key and SELECT key on the operation panel, allowing anyone to operate intuitively and easily.



## Temperature sensor

The MCB-100 has an internal temperature sensor as standard for monitoring the actual temperature of circulating water in the bath. An optional external temperature sensor is also available for monitoring the actual temperature of external device.

## Possible to control by PC

The MCB-100 has a USB port for connecting with a PC, enabling direct control by PC using an optional program package for the Spectra Manager software for JASCO Spectrophotometers.



## Specifications

Temperature control range:	10°C below ambient temperature to 40°C (IN and OUT connected)
Temperature setting increment:	0.1°C
Performance of circulation:	Flow rate: max. 1 L/min Pump pressure: max. 0.3 KPa (Differential pressure)
Bath capacity:	Approx. 200 mL
Temperature control precision:	$\pm 0.5^\circ\text{C}$ (at 20°C, IN and OUT connected)
Temperature sensor accuracy:	$\pm 0.2^\circ\text{C}$ (at 20°C)
Temperature sensor:	Internal sensor: IC temperature sensor for bath temperature External sensor (option): Platinum resistor type temperature sensor
Cooling/heating capability:	52 W
Temperature control method:	PID control
Capable tubing size:	4 mm ID, 6 mm ID
Alarm:	Over heat error, Low water level error, Circulation stop error Temperature difference error, Falling down error, Fan stop error
Communication port:	USB
Dimensions:	160 (W) x 263 (H) x 225 (D) mm
Weight:	5.2 kg
Power requirements:	AC 100-240 V, 50/60 Hz
Power consumption:	165 VA/75 W