



Instruction Manual Circulating Water Baths

Item: B2023-10 10L

Item: B2023-20 20L



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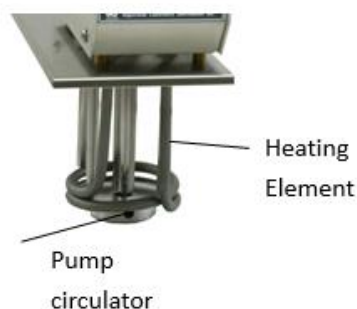
Introduction

Benchmark's Circulating Water Baths provide precise temperature control to temperatures up to 100° C. The baths consist of the main water tank/reservoir (10L or 20L), a heating controller that circulates the water, providing uniform temperature distribution.

I. Specifications:

	<u>B2023-10</u>	<u>B2023-20</u>
Capacity:	10L	20L
Interior Dimensions:	24 x 30 x15 cm	29 x 49 x 15 cm
D x W x H	9.4 x11.8 x 5.9 in	11.4 x 19.3 x 6 in
Stability:	0.2° C	0.2° C
Weight:	9kg / 20lbs	10kg / 22lbs
Exterior Dimensions:	27.5 x 33.5 x 30.3 cm	34 x 54 x 30.3 cm
D x W x H	11.45 x 13.2 x 11.9 in	13.4 x 21.6 x 11.9 in
Temp. Range:	Ambient +5°C to 100°C	
Electrical:	120V or 230V 50-60HZ, 1200W	

II. Diagram and Product Set-Up:



Remove the water bath and heating controller from the box and keep all packing materials until the unit has been setup for use.



1. Remove the Control head from the packaging and set it into 'Tank' as Figure 1
 2. Pour purified water (or distilled water) into the tank. Ensure that the tank is at least 50% full.
 3. Plug the controller into a power outlet. Please make sure the power voltage is the same as the voltage shown on the electrical label on the backside of the instrument. Once powered, you will see the 'Power indicator' becomes red.
 4. Press 'ON/OFF Button', the power indicator changes to green. Wait for about 5 seconds and the display will illuminate, displaying the set and actual temperature values.
 5. Press 'Up Key' or 'Down Key' to adjust the set value and then press 'STORE' key to store.
 6. When no longer in use, press the power button to turn off the power, the power indicator change to red.
- Caution:** If at anytime the water levels to the point where the heating element is not submerged, please refill the water tank. NOTE: The built-in over temperature protection will turn off power to the heater, if the temperature exceeds 100°C.

Maintenance and care:

1. Always keep the tank and controller clean. Cleaning can be performed with a damp cloth with water or a 70% isopropyl alcohol solution. Avoid the use of any solvents for cleaning, as they may damage the product.
2. When not in use, it is recommended to empty the tank and dry using a soft cloth.

III. Diagram and Product Set-Up:

Note: To adjust the advanced parameters, the functions must be unlocked. To lock/unlock these advanced parameters, please see below.

To unlock, press and hold the STORE and SETTINGS button simultaneously. YEYP is displayed on the screen. Press the Up button so that 0000 is displayed and press STORE. The parameters are now unlocked.

Once completed adjusting the advanced parameters, it is recommended to set the lock. To set the lock, press the SETTINGS button three times. LOC is displayed. Press the up button to select LOC2 and Press STORE. (Select LOC1 if you choose to also lock the set temperature.)

- 1.) High and Low Alarm Settings: Setting upper-limit point for the alarm: (when the difference between the actual temperature and the set temperature exceeds this set value, the alarm Indicator (ALM1) will initiate.
 - Press the SETTINGS button 4 times, AL 1H is displayed. Press the Up or Down keys to select the desired deviation setting for the over temperature alarm. The default is 4C.
 - Press the SETTINGS button 5 times, AL 1L is displayed. Press the Up or Down keys to select the desired deviation setting for the low temperature alarm. The default is 4C.
- 2.) Setting the Temperature Unit (°C or °F)
 - Press and hold the STORE button for 3 seconds, CnPt is displayed. Press the Settings button, tPUn is displayed. Use the up or down keys to select °C or °F.
- 3.) Adjusting the Temperature Offset (Calibration)
 - Press the STORE button once, At is displayed. Press the SETTINGS button seven times until PuoF is displayed. Use the Up or Down keys to adjust the offset accordingly. NOTE: Each bath is calibrated prior to shipment. Adjusting this setting is only recommended by trained personnel and with the use of a calibrated thermometer.

Service and Contact:

For customer service or technical support, please write to

Benchmark Scientific at info@benchmarkscientific.com or call in the USA: **908-769-5555** from 8:30 to 5:00 EST

