Liquid-Cooled Breadboards



MBC Series

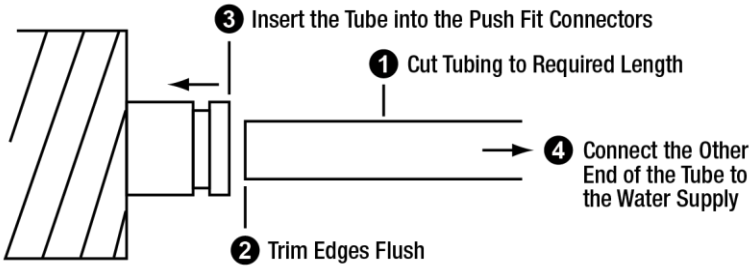
Description

These breadboards are versions of our anodized aluminum breadboards that have been plumbed to accept a water or coolant supply. They feature a standard 1" or 25 mm hole pitch and are ideal for applications involving sensors, detectors, lasers, LEDs or other apparatus which may require temperature stabilization. The boards can be used for either cooling or heating, depending on requirements.

Connections

The boards are fitted with 1/4" or 6 mm ID fittings for easy connection to a water supply or chiller unit and are shipped with 16' (5 m) of connection tubing. To connect the breadboard:

1) Cut the tubing supplied to the required length.
2) Trim the tube edges flush.
3) Insert the tubing into the push to fit connectors.
4) Connect the other end to your water supply/chiller unit.
5) To disconnect the tubing, depress fully the ring surrounding the connector, and at the same time gently pull the tube straight out.



Specifications

General Specifications	
Material	Aluminum Plate
Finish	Matte Black Anodized
Pressure Rating	80 psi
Operating Temperature Range	0 °C to 60 °C
Compatible Coolant	Water or CDTX



Item #	Dimensions (L x W x H)	Weight[a]	Flatness	Hole Size and Spacing	Tube Fitting Inner Diameter
MBC12	12" x 12" x 0.5"	2.9 kg (6.4 lbs)	±0.006" Over 1 ft^2	1/4"-20 Tapped Holes on 1.00" Centers	1/4"
MBC1218	12" x 18" x 0.5"	4.3 kg (9.5 lbs)			
MBC2412	12" x 24" x 0.5"	5.7 kg (12.6 lbs)			
MBC1824	18" x 24" x 0.5"	8.6 kg (19.0 lbs)			
MBC3030/M	300 mm x 300 mm x 12.7 mm	2.8 kg (6.2 lbs)	±0.15 mm Over 0.09 m^2	M6 x 1.0 Tapped Holes on 25.0 mm Centers	6 mm
MBC3045/M	300 mm x 450 mm x 12.7 mm	4.1 kg (9.0 lbs)			
MBC6030/M	300 mm x 600 mm x 12.7 mm	5.6 kg (12.3 lbs)			
MBC4560/M	450 mm x 600 mm x 12.7 mm	8.3 kg (18.3 lbs)			

a. These weights are approximate and subject to change.

Precautions

Operating Temperature and Condensation[a]			
Relative Air Humidity (RH%)	**T_{env} - T_{plate} (ΔT)**	**Relative Air Humidity (RH%)**	**T_{env} - T_{plate} (ΔT)**
95%	1 °C	55%	9 - 12 °C
90%	2 °C	50%	10 - 13 °C
85%	2 - 3 °C	45%	12 - 14 °C
80%	3 - 4 °C	40%	13 - 17 °C
75%	4 - 5 °C	35%	16 - 19 °C
70%	5 - 6 °C	30%	18 - 21 °C
65%	6 - 8 °C	25%	21 - 23 °C
60%	7 - 9 °C	20%	24 - 27 °C

a. Due to the humidity of the work area, and the difference between the operating temperature of the board and the environmental temperature levels, there is a possibility that condensation may form on the breadboard surface. This table shows the approximate temperature difference between the breadboard and the environment that would cause condensation to form at a specific relative humidity.