Liquid-Cooled Baseplates



WCB Series

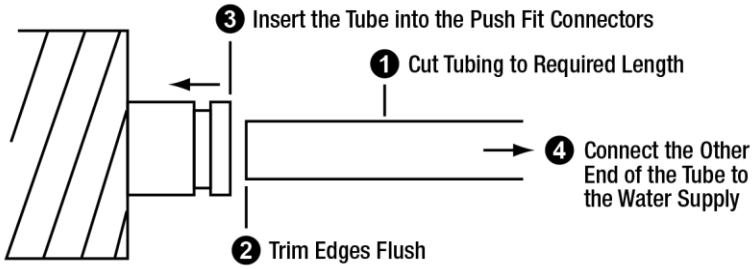
Description

These baseplates are versions of our liquid-cooled aluminum breadboards. These plates are unanodized and with only four threaded mounting holes and four or five counterbores, allowing users to drill their own custom mounting solutions. They are ideal for applications involving sensors, detectors, lasers, LEDs, or other apparatus that may require temperature stabilization. Depending on the requirements, they can be used for heating and cooling.

Connections

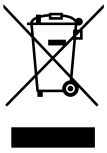
The boards are fitted with 1/4" or 6 mm ID fittings for easy connection to a liquid chiller and are shipped with 16' (5 m) of connection tubing. To connect the breadboard:

1) Cut the tubing supplied to the required length.
2) Trim the tube edges flush.
3) Insert the tubing into the push fit connectors.
4) Connect the other end to your chiller.
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	Unanodized Aluminum Plate
Pressure Rating	80 psi
Operating Temperature Range	0 to 60 °C
Compatible Coolant[a]	CDTX



a. Please drain the baseplate completely when not using it for an extended period. CDTX coolant consists of ultrapure water and ethylene glycol with anti-corrosion agents and other inhibitors. Use of other liquids may promote corrosion to the internal surfaces of the baseplate and eventually lead to mechanical failure.

Item #	Dimensions (L x W x H)	Weight[a]	Flatness	Tube Fitting Inner Diameter
WCB6	6" x 6" x 0.5"	1.5 lbs (0.7 kg)	±0.006" Over 1 ft^2	1/4"
WCB12	12" x 12" x 0.5"	6.6 lbs (3.0 kg)		
WCB1218	12" x 18" x 0.5"	9.7 lbs (4.4 kg)		
WCB2412	12" x 24" x 0.5"	13.2 lbs (6.0 kg)		
WCB1824	18" x 24" x 0.5"	19.6 lbs (8.9 kg)		
WCB1515/M	150 mm x 150 mm x 12.7 mm	0.7 kg (1.5 lbs)	±0.15 mm Over 0.09 m^2	6 mm
WCB3030/M	300 mm x 300 mm x 12.7 mm	2.9 kg (6.4 lbs)		
WCB3045/M	300 mm x 450 mm x 12.7 mm	4.3 kg (9.5 lbs)		
WCB6030/M	300 mm x 600 mm x 12.7 mm	5.8 kg (12.8 lbs)		
WCB4560/M	450 mm x 600 mm x 12.7 mm	8.6 kg (19.0 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.