# Liquid Cooled Aquasink® Heatsink Configurator

About Aquasink heatsinks

The Aquasink heatsink has been developed to provide the design engineer with a rugged, low cost, high performance heatsink. This Aluminum/ Copper liquid cooled cold plate is suitable for high power, isolated base semiconductors and other heat sensitive components. Aquasink's unique copper tube mandreling technology provides intimate long term contact of the tube with the aluminum cold plate. It is impossible to loosen Aquasink's copper tubes. The integrity of an Aquasink tube is never compromised by flycutting, guaranteeing that an Aquasink will survive the most rigorous of pressure tests.

Embedding process

The embedding process employed to manufacture Aquasink allows you to mount electronic components on both sides of the cooling plate with equal thermal efficiency.
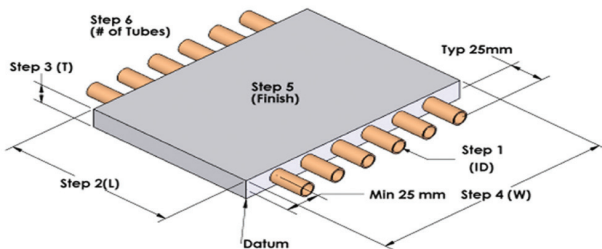
* Please refer to the numbered steps illustrated in this diagram. Step numbers to the right correspond to the steps above.

Base materials

The heat collecting semi-conductor mounting surface is fabricated from extruded 6063 aluminum alloy. Commercial grade ASTM B-75 copper tubes of a size to suit given applications are embedded within the aluminum plate by a proprietary mechanical process that provides an industry unique metal to metal bond between the aluminum and copper. This process is free of heat impeding glue or epoxy at the copper/ aluminum interface. The copper tube location can be specified for practically any dimension from the datum point.

* Tube location and thermal modeling can be performed on R-Tools.

7 EASY STEPS TO CONFIGURE AQUASINK

STEP 1: Select tube diameter
Select tube nominal internal diameter (ID):
AA = 1/4" (6.35 mm)
AB = 3/8" (9.53 mm)
AC = 1/2" (12.7 mm)
AD = 5/6" (7.9 mm)
Part Number Example: AC

STEP 2: Select baseplate length
Select length (L) specified in mm (user defined):
eg. L = 250 mm
Maximum allowable length is 813 mm
Part Number Example: AC250

STEP 3: Select baseplate thickness
Select baseplate thickness (T) minimum 2x ID:
TA = 12.7 mm
TB = 19.1 mm
TC = 25.4 mm
TD = 15.9 mm
Part Number Example: AC250TC

STEP 4: Select baseplate width
Select baseplate width (W) specified in mm (user defined): eg. W = 230 mm
Maximum allowable width is 610 mm
Part Number Example: AC250TC230

STEP 5: Select a finish
Choose from the following finishes:
D = Degrease Only
Part Number Example: AC250TC230D

STEP 6/7: Number of tubes/select configuration
Select number of Tubes (user defined): eg. 6 tubes
Select tube configuration A,B,C,D,E or F
(visit website configuration details): eg. A
Part Number Example: AC250TC230D6A

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