



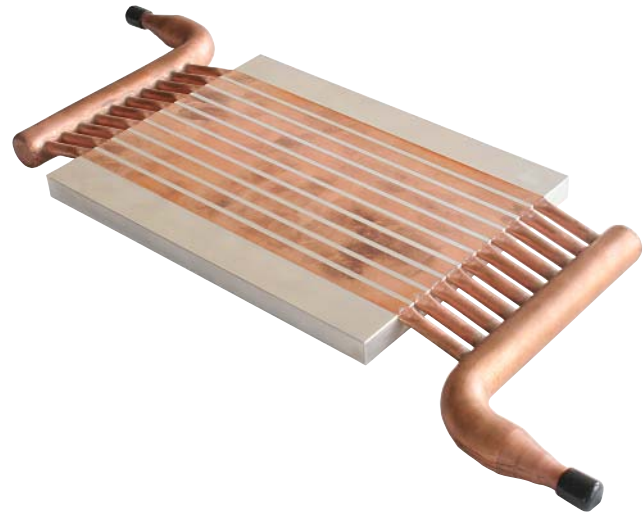
AAVID  
THERMALLOY

## Turbo Tube Liquid Cold Plates

RoHS   
Compliant

### TURBO TUBE LIQUID COLD PLATES FOR POWER APPLICATIONS

Aavid Thermalloy Turbo Tube cold plates feature an innovation on our patented Hi-Contact™ design which embeds tubes in the base plate to form a mechanically robust cold plate. Extended Surface cold plates increase the surface area in contact with the cooling fluid by using flatter and more closely spaced tubes in order to increase surface area thereby increasing thermal transfer performance. Unlike narrow tube designs, the wide tube puts more fluid in close contact to the device base plate to increase thermal transfer.



#### CRITICAL APPLICATION NEED:

- *Cost/performance value*
- *Leak free operation*
- *Thermal performance*

#### FEATURES AND BENEFITS:

- *Headers provide parallel fluid flow for lower pressure drop*
- *Hi-Contact tubes put cooling fluid in close contact with the heat load*
- *Base plate provides mechanical support and area to accommodate device mounting*
- *Configured to accept a variety of fittings*

#### ORDERING INFORMATION:

<b>Part Number</b>	<b>"A" Dim</b>	<b>Finish</b>	<b>Configuration</b>	<b>Figure</b>
044586	178 mm (7.0")	Unfinished	Single Pass	1

Custom Configurations: See Figure 2 for design guidelines.  
Contact Aavid Thermalloy Application Engineering for assistance.

FOR MORE INFORMATION, VISIT OUR WEB SITE: [WWW.AAVIDTHERMALLOY.COM](http://WWW.AAVIDTHERMALLOY.COM)



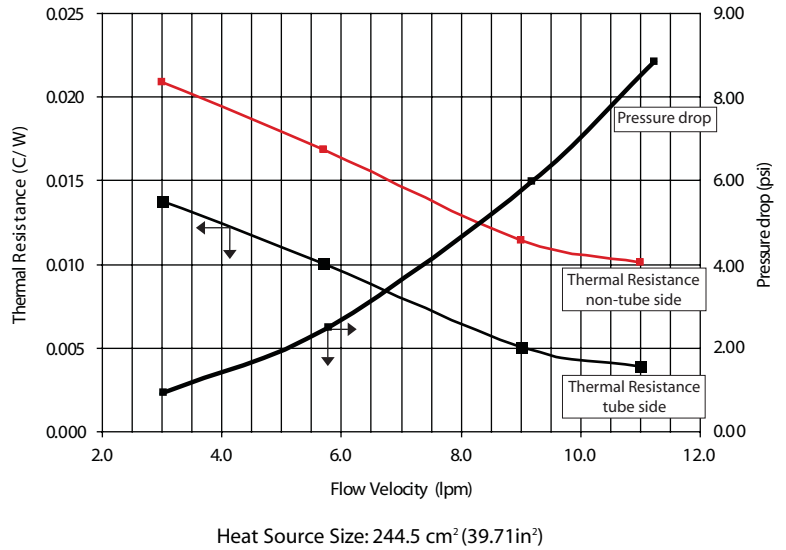
### SPECIFICATIONS:

- Plate: Extrusion, aluminum 6063-T5
- Tube: Copper 9.5 mm (0.375") O.D. x .8 mm (0.032") wall
- Epoxy: Aluminum filled, high thermal conductivity
- Finish: Unfinished standard

### AVAILABLE OPTIONS:

- Finishes: AavSHIELD, AavSHIELD<sup>3</sup>
- Tube Material: Stainless steel or Cupronickel tubing of the same outside diameter
- Length: Custom lengths available (see Figure 2)

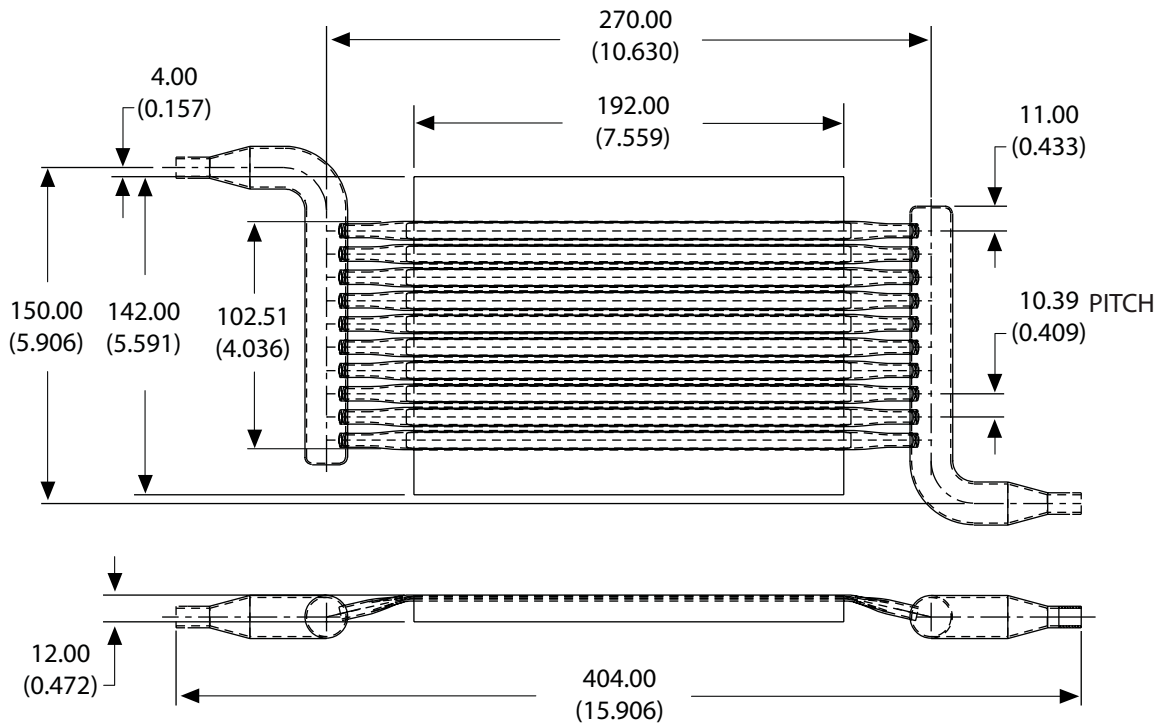
### PERFORMANCE:



Contact Aavid Thermalloy Applications Engineering Department when ordering custom configurations.

### MECHANICAL OUTLINE:

Figure 1

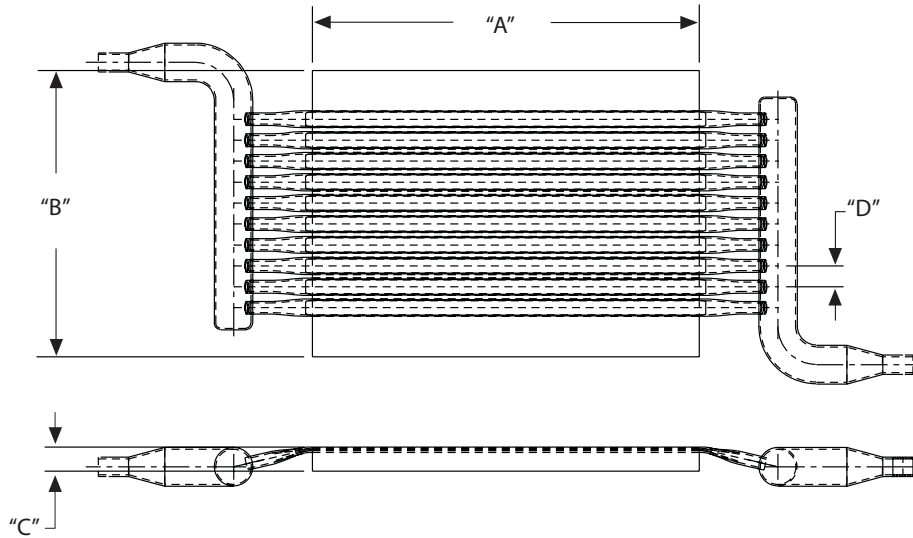


Dimensions as shown are mm (inches)



### CUSTOM DESIGN EXAMPLE AND GUIDELINES

Figure 2



#### Standard Tolerances

Lead-in Dimensions	± 0.25 (0.01)
Overall Dimensions	± 0.50 (0.02)
Feature to Feature	± 0.13 (0.005)

Dim	Description	Min	Max
A	Plate Length	75 (2.93)	450 (17.72)
B	Plate Width	100 (3.94)	360 (14.17)
C	Plate Thickness	8 (0.32)	25 (0.98)
D	Tube Pitch	9.5 (0.37)	25 (0.98)

Manifold layout, size, and end terminations are readily customized

\* For alternate materials please contact application engineering.

#### North America

70 Commercial Street  
Suite 200  
Concord, NH 03301  
TEL: (603) 224-9988  
FAX: (603) 223-1790  
EMAIL: info@aavid.com

#### Europe - Italy

ViaXXV Aprile, 32  
40057 Cadriano (BO), Italy  
TEL: (39) 051 764011  
FAX: (39) 051 764090  
EMAIL: sales.it@aavid.com

#### Asia - Taiwan

14F-4, NO. 79, Hsin Tai Wu RD.  
SEC. 1, Hsi Chih  
Taipei Hsien  
TEL: 011 (886) 2-2698-9888  
FAX: 011 (886) 2-2698-9808  
EMAIL: sales.tw@aavid.com

#### Asia - Shanghai

Building No.1, No.1199 XinFei RD,  
SongJiang  
Shanghai 201611  
Tel: +86-21-6115-2000  
Fax: +86-21-6115-2555  
E-Mail: info-Shanghai@aavid.com

#### Asia - India

7, Manjara Gidc, Savli,  
Vadodara-391775,  
Gujarat, India  
Tel: +(91) 2667 264781/82/83  
Fax: +(91) 2667 264784  
E-Mail: sales.in@aavid.com

PLEASE NOTE: Any information furnished by Aavid Thermalloy is believed to be accurate and reliable, but our customers bear all responsibility for use and applications of Aavid Thermalloy products. AAVID THERMALLOY MAKES NO WARRANTIES EXPRESSED OR IMPLIED, AS TO THE FITNESS, MERCHANTABILITY, OR SUITABILITY OF ANY AAVID THERMALLOY PRODUCTS FOR ANY SPECIFIC OR GENERAL USES. AAVID THERMALLOY SHALL NOT BE LIABLE FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES OF ANY KIND. All Aavid Thermalloy products are sold pursuant to the Aavid Thermalloy Domestic Terms and Conditions of Sale in effect from time to time, a copy of which shall be furnished upon request (8911A). Copyright © Aavid Thermalloy, LLC. February, 2010. All icons, drawings, illustrations, and trademarks are the property of Aavid Thermalloy, LLC. and may not be reproduced without express written permission. (2/2010)

FOR MORE INFORMATION, VISIT OUR WEB SITE: [WWW.AAVIDTHERMALLOY.COM](http://WWW.AAVIDTHERMALLOY.COM)