



**AAVID  
THERMALLOY**

# Hi-Contact™ Liquid Cold Plates

**RoHS ✓  
Compliant**

## HI-CONTACT™ LIQUID COLD PLATES FOR POWER APPLICATIONS

Aavid Thermalloy Hi-Contact™ liquid cold plates are designed for engineers seeking a cost effective solution for medium power density applications. Hi-Contact™ cold plates feature a interlocking groove and tube geometry that improves mechanical robustness and thermal performance over conventional designs.



### CRITICAL APPLICATION NEED:

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

### FEATURES AND BENEFITS:

- *Economical extruded base and continuous tube construction*
- *Continuous joint free tube reduces chances for leaks*
- *Tube directly contacts the base of the device cooled improving thermal resistance. Thin epoxy joint between tube and plate outperforms 'dry' joints.*

### ORDERING INFORMATION:

Part Number	"X" Dim	Finish	Configuration	Figure
416401U00000G	N/A	Unfinished	2 Pass	1
416501U00000G	152 (6.00)	Unfinished	4 Pass	2
416601U00000G	305 (12.00)	Unfinished	4 Pass	2
416101U00000G	152 (6.00)	Unfinished	6 Pass	3
416201U00000G	305 (12.00)	Unfinished	6 Pass	3
416301U00000G	610 (24.00)	Unfinished	6 Pass	3

Custom Configurations: See Figure 4 for design guidelines. Contact Aavid Thermalloy Application Engineering for assistance.



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### SPECIFICATIONS:

- Plate Material: Extrusion, aluminum
- Tube Material: Copper,  
9.5 mm (0.375") O.D. x 1.24 mm (0.049") wall
- Epoxy: Aluminum filled, high thermal conductivity
- Finish: Unfinished standard

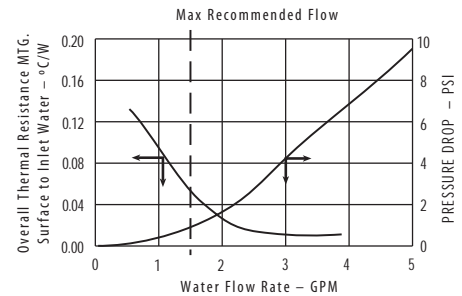
### AVAILABLE OPTIONS :

- Finishes: AavSHIELD, AavSHIELD<sup>3</sup>
- Tube Material: Stainless steel or Cupronickel tubing of the same diameter
- Sizes: Custom sizes available (see Figure 4)

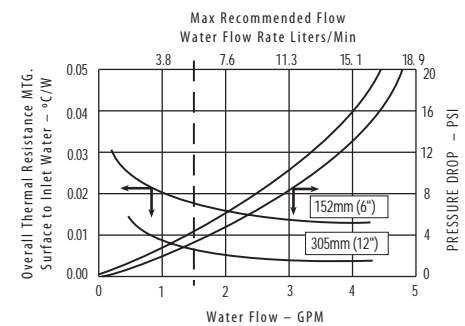
Contact Aavid Thermalloy Applications Engineering Department for assistance with custom configurations

### PERFORMANCE:

#### 2 Pass Models



#### 4 Pass Models



#### 6 Pass Models

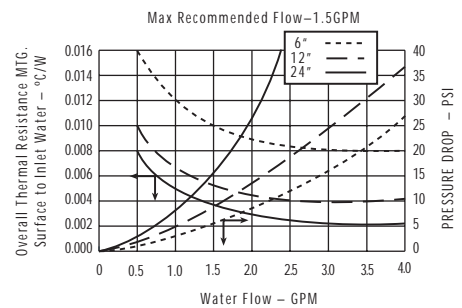
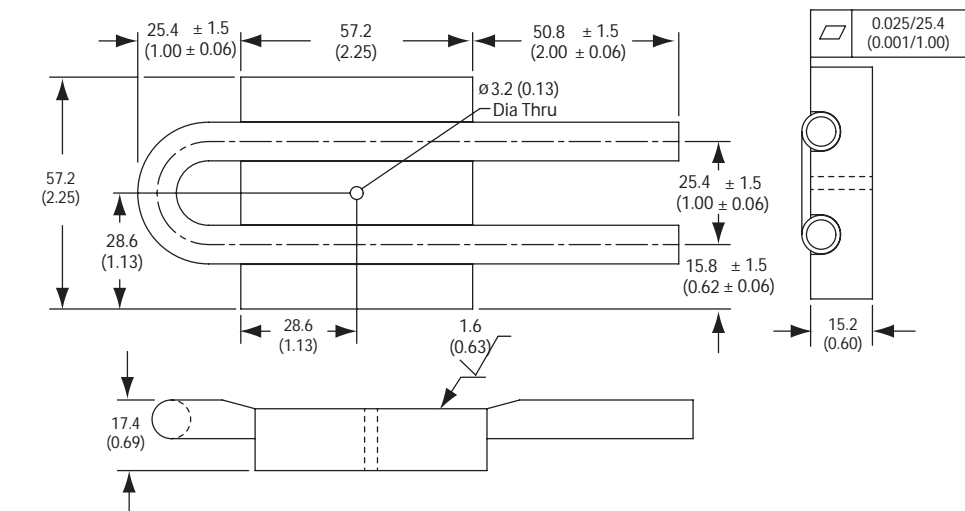


Figure 1

2 Pass Model





MECHANICAL OUTLINE:

Figure 2

4 Pass Model

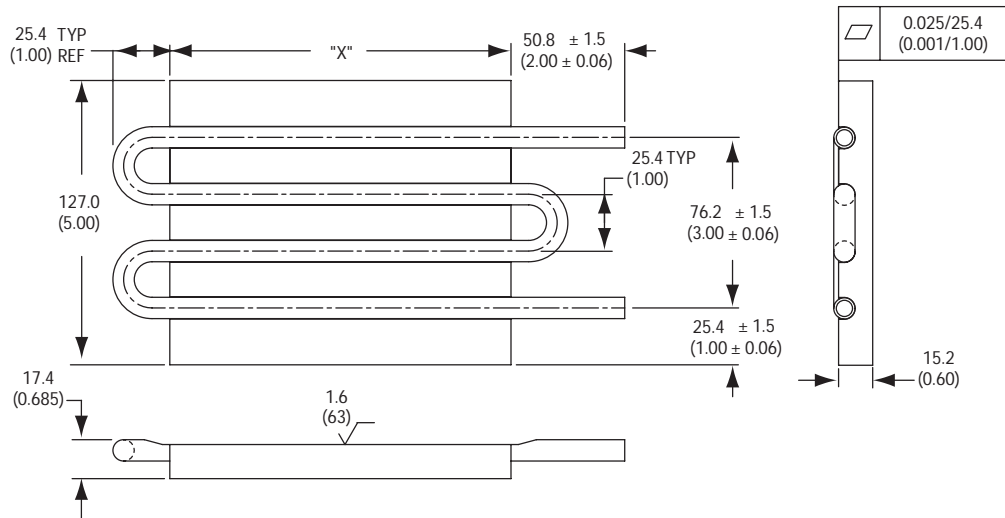
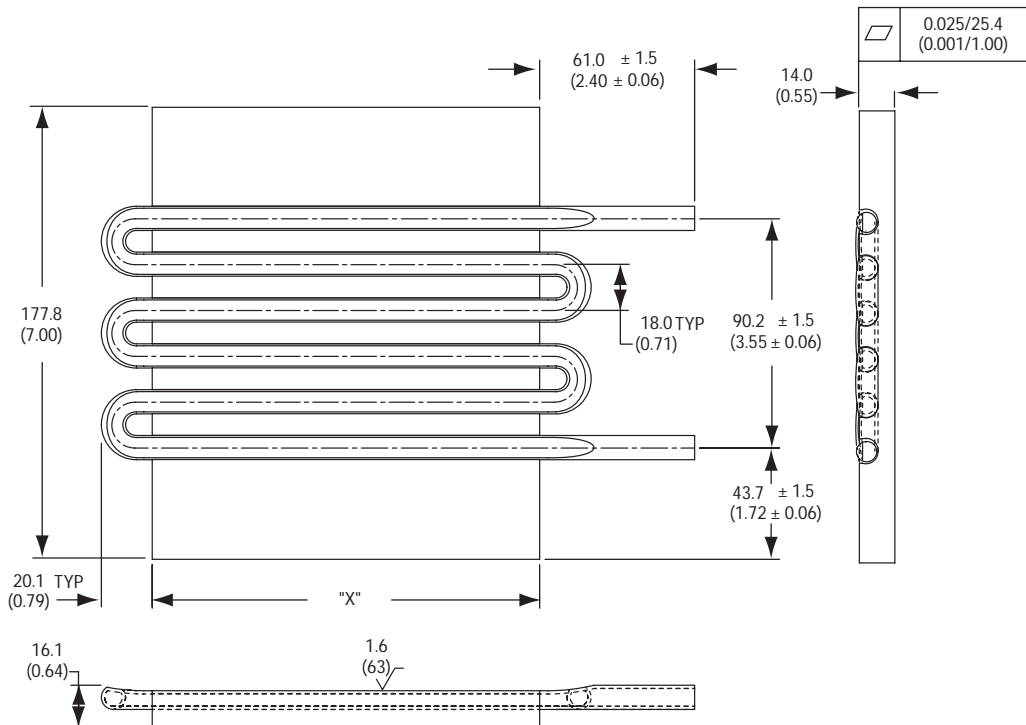


Figure 3

6 Pass Model

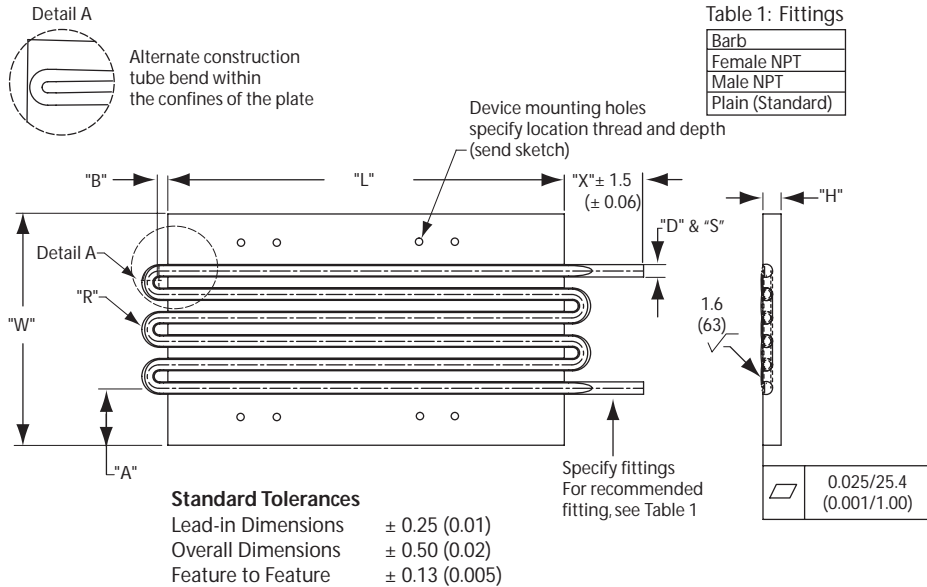


Dimensions as shown are mm (inches)



**MECHANICAL OUTLINE:**

Figure 4



**CUSTOM DESIGN GUIDELINES**

Dim	Description	Min	Max
A	Tube to edge	6.4 (0.25)	
B	Center line of tube radius to plate	3.0 (0.12)	
H	Plate thickness	1.7 x Dim D	25.4 (1.00)
L	Plate length	25.4 (1.00)	1219.2 (48.00)
R	Tube bend radius measured at centerline (Copper only. For alternate materials please contact application engineering.)*	1 x Dim D	
S	Tube wall thickness	1.25 (0.050)	
D	Tubing diameter	6.4 (0.25)	25.4 (1.00)
W	Plate width	38.1 (1.50)	250.4 (10.00)
X	Tube extension	25.4 (1.00)	254.0 (10.00)

\* To simplify tooling, a single bend radius dimension is recommended for all tube bends