

# 2000 SERIES COLDPLATES

Low Cost / High Performance / Fast Shipping

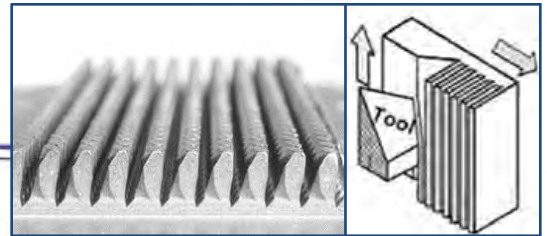
\*Patent Pending Design

WOLVERINE  
**MICROCOOL**<sup>®</sup>  
ENGINEERING THERMAL INNOVATION

MicroCool<sup>®</sup> standard liquid cooled coldplates are designed to fit common IGBT and Power electronics configurations used today. At the heart of each MicroCool<sup>®</sup> cold plate is our patented Micro Deformation Technology (MDT<sup>™</sup>) in line pin fin, Friction Stir Welded construction, and CFD optimized parallel cooling. The 2000 Series coldplates feature machined and gun drilled tubs / manifolds with a flat bottom and the ability to go double sided with fin plates top and bottom.



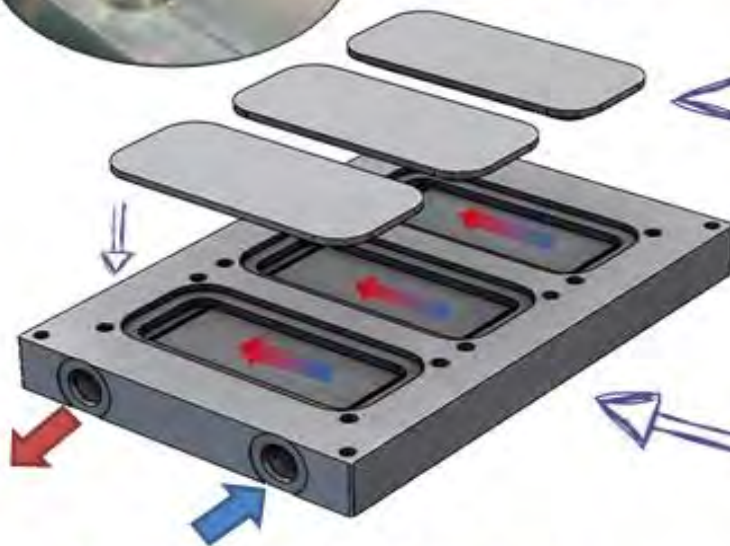
Friction Stir Welded construction



MDT<sup>®</sup> pin plates

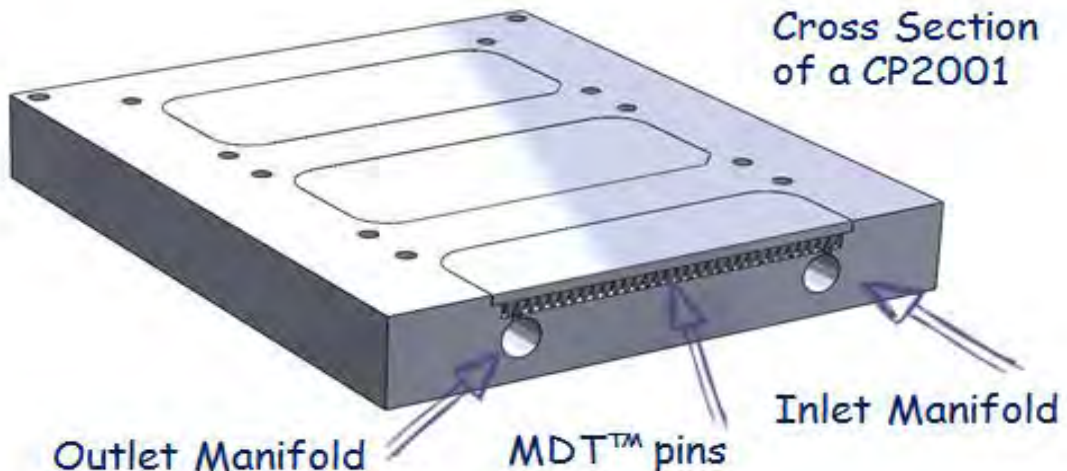
(AL 1100-H14: 220 W/m-K)

- 4mm tall STD inline pin (1mm dia/gap)
- 4mm tall XP inline pin (.5mm dia/gap)



Balanced parallel flow path

Machined and gun drilled tub/manifold  
(AL 6061-T6)



Cross Section  
of a CP2001

Outlet Manifold

MDT<sup>™</sup> pins

Inlet Manifold

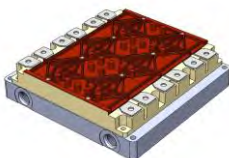
# MicroCool® 2000 Series Coldplates



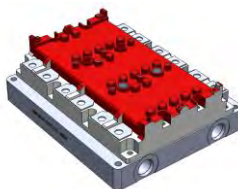
**CP2001**  
3X 122x62



**CP2002**  
1X 122x162



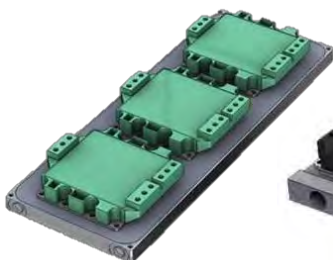
**CP2003**  
SKIM 93



**CP2004**  
SKIM 63



**CP2005**  
3X PrimePACK3



**CP2006**  
3X Mega Dual



**CP2007**  
140x190



**CP2007**  
140x130



**CP2009**  
3X 108x62



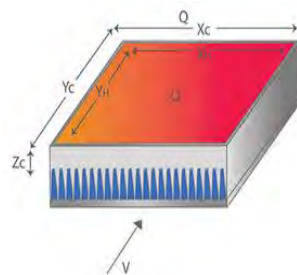
**CP2010**  
3X PrimePACK2

## MicroCool® 2000 Series Coldplate Options

- MDT™ In Line Pin Fin Options  
4mm tall standard (STD) in line pin fin (1mm dia/gap)  
4mm tall extra performance (XP) in line pin fin (0.5 dia/gap) →
- Fitting Options: 3/8<sup>th</sup>NPT • G3/8<sup>th</sup> • SAE-6
- Electroless Nickel Plating inside and out for fluid compatibility
- Double sided capability



[www.MicroCoolTool.com](http://www.MicroCoolTool.com)



Free on-line coldplate simulator can predict:

- Thermal Resistance
- Pressure Drop
- Velocity
- Heat Transfer Coefficients

## Custom Coldplate Options



Double Sided: MDT pin fin plates can be friction stir welded in to both sides



Custom Castings: we can FSW our MDT pin fin plates into most types of castings.



Custom Extrusions: similar FSW construction to our 3000 series coldplates, we can create custom extrusions to fit your needs.



Large Sizes (up to 1 sq meter)



All copper construction



Light Weight Construction