

# 3000 SERIES COLDPLATES

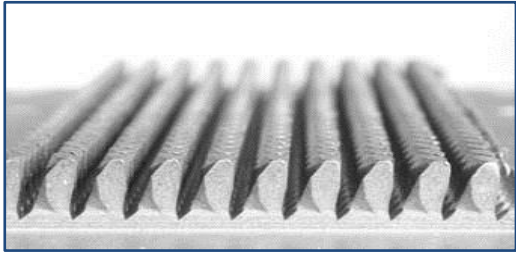
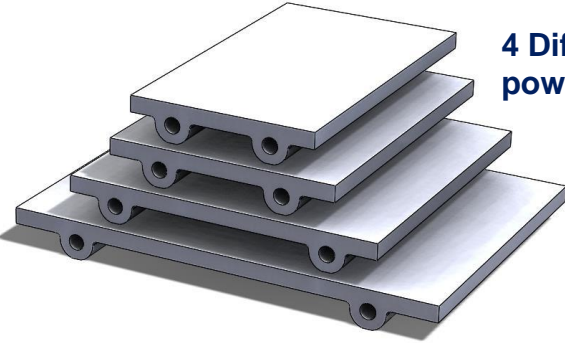
Low Cost / High Performance / Fast Shipping

\*Patent Pending Design

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

MicroCool<sup>®</sup> 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 3000 Series coldplates feature MicroCool's library of extruded tubs / manifolds, allowing for the best performing and lowest cost coldplate on the market today.

4 Different aluminum extrusion sizes to fit 90% of the power modules on the market today.



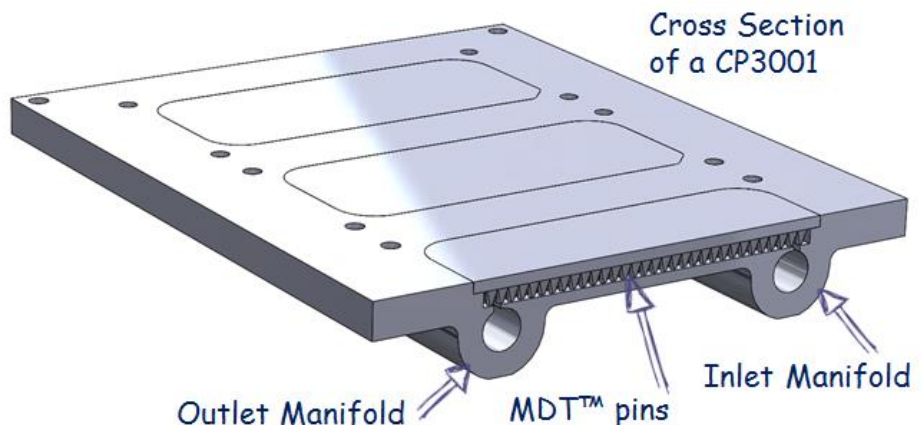
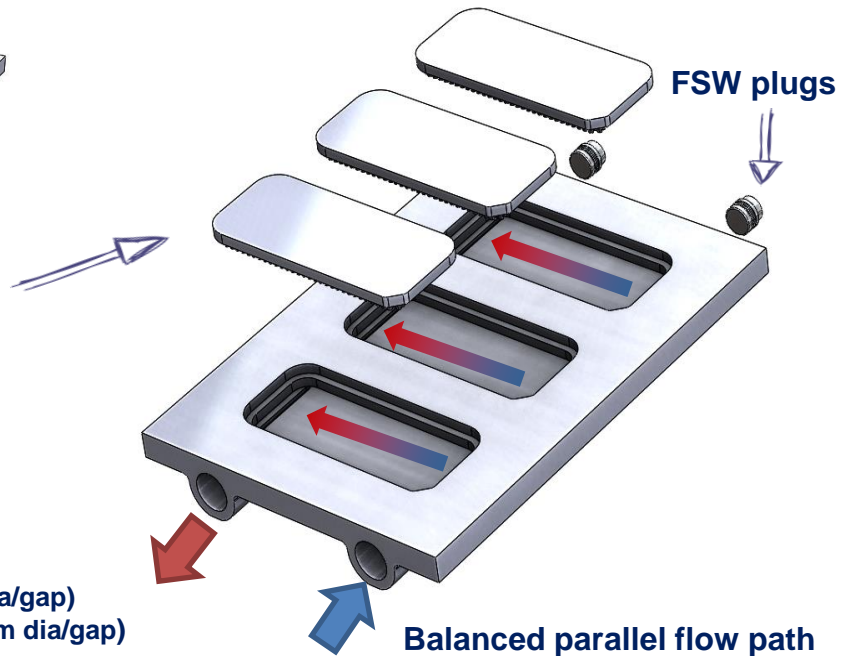
## MDT<sup>®</sup> Pin Plate Options

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

- 4mm tall 12 fins/inch inline pin (1mm dia/gap)
- XP 4mm tall 20 fins/inch inline pin (.5mm dia/gap)



Friction stir welded construction



## MicroCool® 3000 Series Coldplates



**CP3001**  
3X 122x62



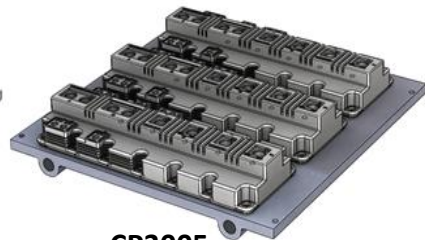
**CP3002**  
1X 122x162



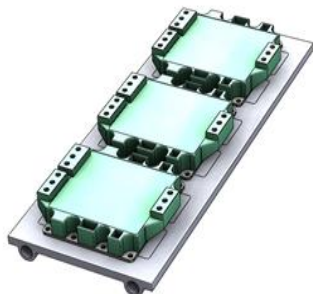
**CP3003**  
SKIM 93



**CP3004**  
SKIM 63



**CP3005**  
3X PrimePACK3



**CP3006**  
3X Mega Dual



**CP3007**  
140x190



**CP3008**  
140x130



**CP3009**  
3X 108x62



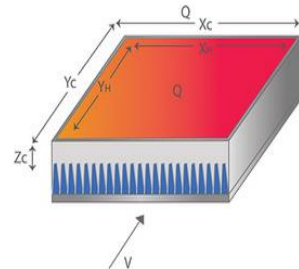
**CP3010**  
3X PrimePACK2

## MicroCool® 3000 Series Coldplate Options

- MDT™ In Line Pin Fin Options
  - 4mm tall standard in line pin fin (1mm dia/gap)
  - 4mm tall extra performance (XP) in line pin fin (0.5 dia/gap)
- Fitting Options: 3/8 NPT • G3/8 (BSPP) • SAE-6
- Electroless Nickel Plating inside and out for fluid compatibility
- Coldplate length options: Extrusions can be cut to any length, to accommodate multiple IGBT modules.



## MicroCoolTool.com



Free on-line coldplate simulator :

- Thermal Resistance
- Pressure Drop
- Velocity
- Heat Transfer Coefficients
- See the difference between 12 fins per inch and 20 fins per inch.

## Custom Coldplate Options



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



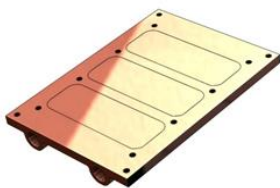
Custom Castings: we can FSW our MDT pin fin plates into most types of castings.



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