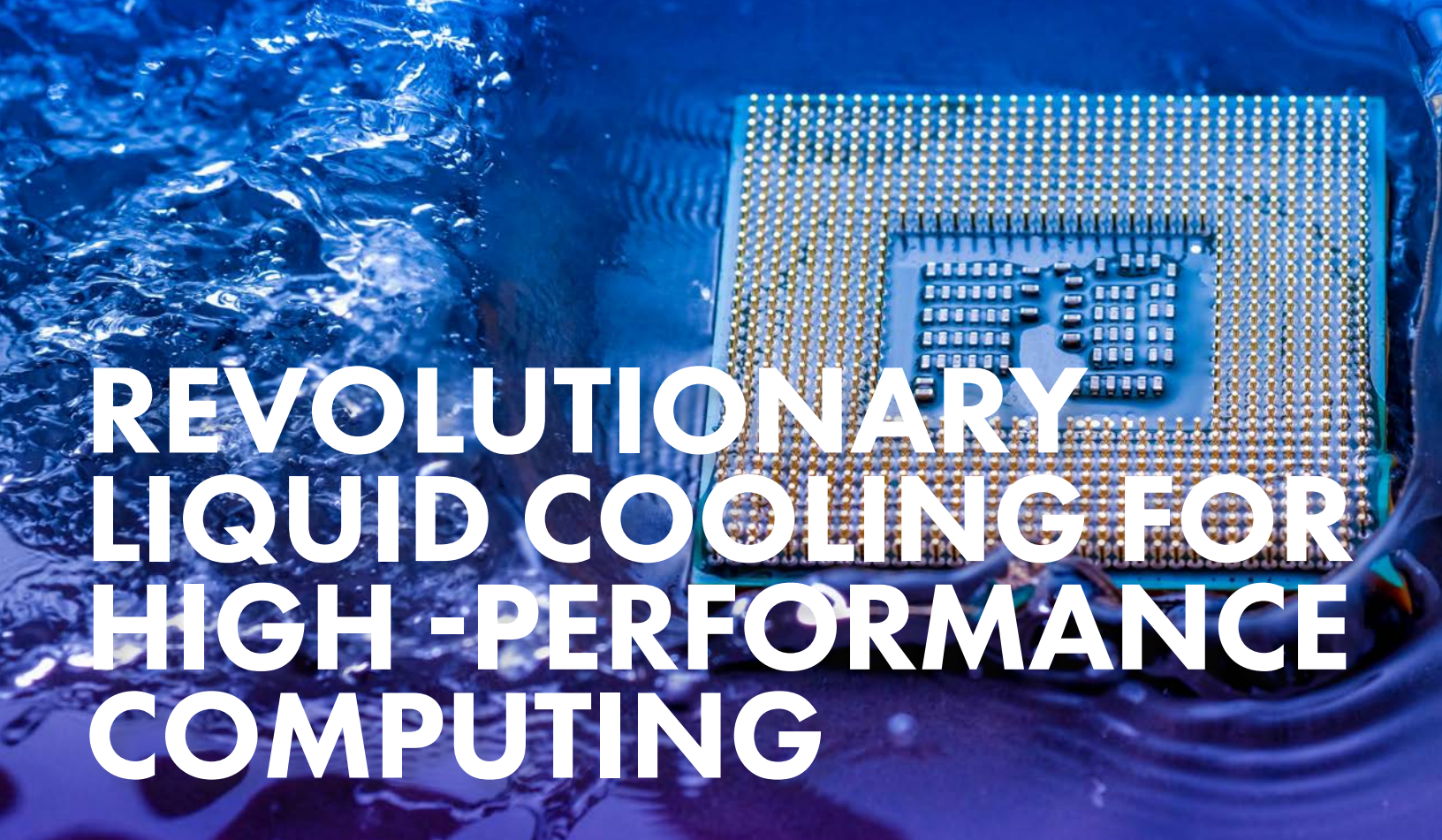


 **motivaire**<sup>®</sup>  
DYNAMIC COLD PLATES<sup>™</sup>

Breakthrough Performance for  
Liquid Cooling



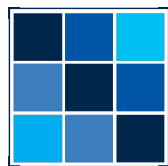
# REVOLUTIONARY LIQUID COOLING FOR HIGH-PERFORMANCE COMPUTING

## Motivair Dynamic Cold Plates™ empower the next generation of high-performance computing

Motivair's Dynamic Cold Plates™ harnesses innovative fluid dynamics to redefine direct liquid cooling. The free-flowing nature of the Dynamic Cold Plate™ accelerates particles and other contaminants moving through and minimizes risks of poor water quality.

Our patent pending technology enables robust performance without the use of skived microchannels. It allows CPUs and GPUs to operate at peak performance while reducing the possibility of cooling degradation and costly system failures.

This simple yet effective technology is optimized for cost efficient and scalable production, targeted specifically for high-performance computing, small-to-large clusters and Exascale class systems. All products are engineered and manufactured in the USA, ensuring a predictable, end-to-end experience while eliminating the risks of foreign supply chain disruptions.



**CUSTOMIZABLE  
CONFIGURATIONS**

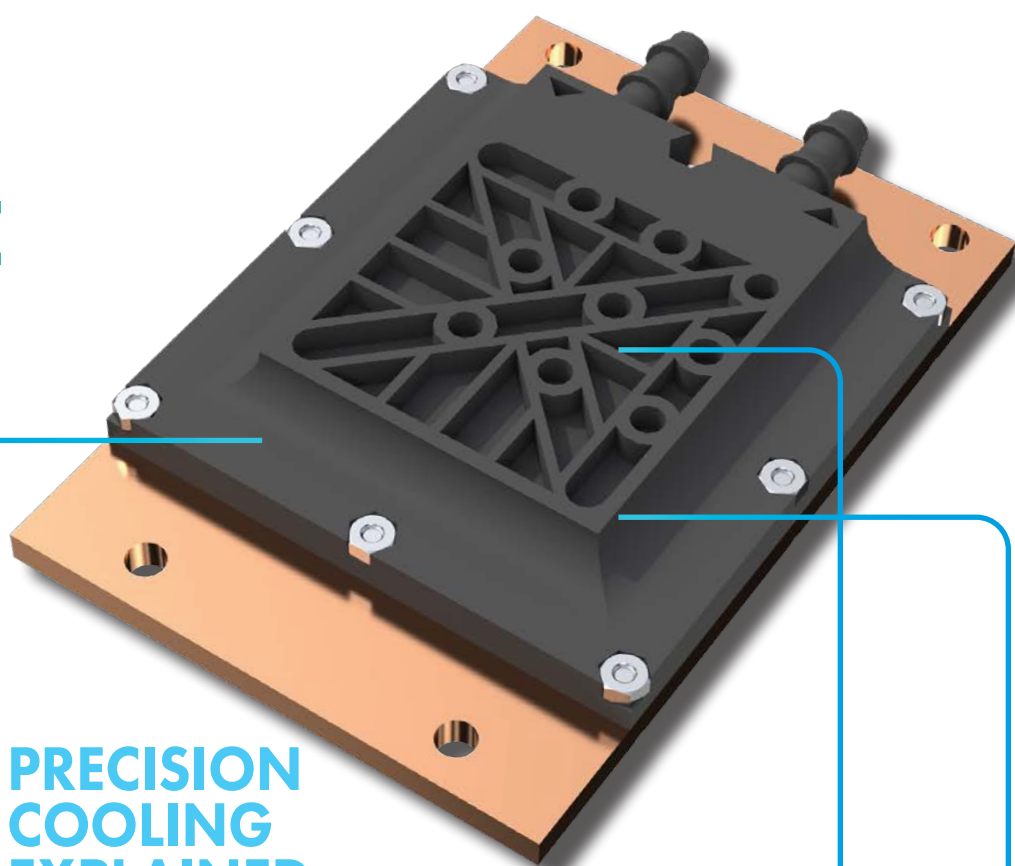


**MADE IN  
THE USA**

### ONE SOURCE FOR END-TO-END DIRECT LIQUID COOLING

Looking for a single source liquid cooling system for high-performance computing? Our Dynamic Cold Plates™, coupled with our Coolant Distribution Units or Heat Dissipation Units, provide users an all-in-one, End-to-End Direct Liquid Cooling System with comprehensive post-sales services.

# THINK OUTSIDE THE BOX



## PRECISION COOLING EXPLAINED

### 1. RESISTANCE TO FLUID FOULING

- Designed to tolerate much larger impurities than microchannel cold plates.
- Dynamic coolant flow prevents stagnant regions where fouling is more likely to occur.
- Patent-pending technology minimizes the impact of variations in coolant viscosity.
- No moving parts that can get stuck or malfunction due to poor fluid quality or cold plate orientation.

### 2. LEAK-FREE DESIGN

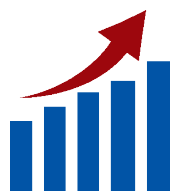
- Unitary molded Flow Distributor
- Single, static o-ring seal; no dynamic seals
- Tried and true push-lock hose connections, employed for decades for pressure hoses.

### 3. SCALABILITY

- Unconstrained by micro channels, thermal performance scales as flow and package power increase up to 1000 watts per processor.
- Dynamic fluid distribution ensures fresh, cool fluid flows wherever heat is generated.
- Scalable from small to large package sizes; equally effective at low and high power densities.



**UNIFORM  
COOLING**



**HIGHER  
PERFORMANCE**



**LOW  
PROFILE**

# Application Defined Options



## MEMORY COOLING

Capturing the heat from DIMM packages is important when you want in order to take full advantage of direct liquid cooling.

Motivair has customizable designs for DDR4 and DDR5 server memory that integrate into the server liquid cooling package with the same, reliable leak-free connections and robust performance that characterizes the Dynamic Cold Plates™.

### Features

- Made in the USA.

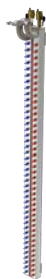


## QUICK CONNECTS

Quick Connects provide a seamless, make-or-break connection of water transfer lines for Motivair's Dynamic Cold Plates™

### Features

- Designed by CPC from the ground up for data center liquid cooling
- Employs an advanced engineering polymer for maximum fluid compatibility and long service life
- Double O-Ring Seal for unparalleled reliability even after years of connection
- 200 PSI Rating
- Made in USA



## IN-RACK MANIFOLD

Motivair's stainless steel manifolds provide a common connection point between Motivair's Dynamic Cold Plates™ and the supply and return cooling infrastructure system or Coolant Distribution Unit.

### Features

- 304 Stainless Steel
- Variable Size Options 42U/48U/50U/Custom
- Universal Top/Bottom Design
- Made in USA

# **motivair**<sup>®</sup>

## COOLING SOLUTIONS



### **COOLANT DISTRIBUTION UNIT (CDU)**

A CDU provides the ability to deploy higher density, load diverse IT equipment in a smaller footprint while at the same time improving a facility's overall efficiency (PUE) and life expectancy. The CDU provides 100% sensible cooling up to 2.3MW, depending on the model. For use with the ChilledDoor<sup>®</sup> or other IT cooling systems.



### **CHILLED DOOR<sup>®</sup> RACK COOLING SYSTEM**

Advanced server rack cooling system fits any standard or OEM computer rack. Removes up to 75 kW of server heat per door.



### **MANIFOLD SYSTEMS**

A manifold provides a common connection point between the ChilledDoors<sup>®</sup> and the supply and return cooling infrastructure system or CDU. Each manifold is preconfigured for each door to include a check valve, individual 2-way valve and quick connect fittings for use with Motivair<sup>®</sup> hoses. Available options for semi-custom designs include 6, 12 and 16 port assemblies.



### **HEAT DISSIPATION UNIT<sup>™</sup>**

The Motivair HDU is connected directly to the computer cooling loop and sits adjacent to or proximate to the computer racks. Circulation pumps located inside the HDU move hot water from the computer system to the HDU's air-cooled heat exchanger. High-efficiency EC fans draw cool room air across the HDU's internal heat exchanger, removing heat from the computer cooling system. A high-powered PLC controls and monitors all aspects of HDU performance ensuring the HPC system can operate within thermal specifications and without dependence on a building water supply.



### **MODULAR DATA CENTER**

Backed by our ChilledDoor<sup>®</sup> and Coolant Distribution Unit (CDU) technology, our Modular HPC Data Center can accommodate power densities of up to 75 kw/rack in air cooled systems and 150 kw/rack for modern liquid-cooled supercomputers and HPC clusters. Each system can be equipped with Motivair's integrated Free-Cooling Chiller technology or warm water fluid cooling systems for maximum uptime and efficiency.



### **SERVICE & MAINTENANCE PROGRAM**

Motivair<sup>®</sup> provides customer-focused service and support for your mission critical equipment. We offer site surveys, installation services, Level III Commissioning support, service agreements, and extended warranties on parts.

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