LIQUID COOLING FOR HIGH-PERFORMANCE COMPUTING

Cooling advanced systems.
Propelling essential technologies.

motivair®
COOLING SOLUTIONS

PUSH THE BOUNDARIES OF LIQUID COOLING

Motivair's Liquid Cooling Technology allows you to leverage increased processing power while using less energy and space

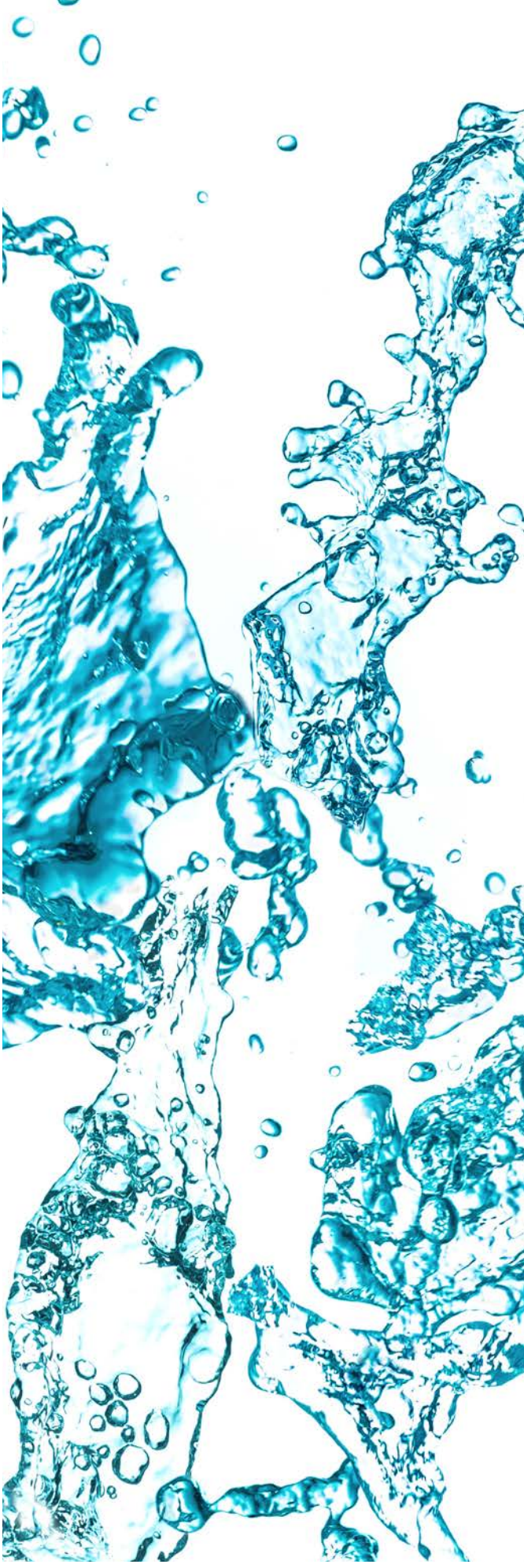
Market demands & technological advances are driving a growing need to use liquid-cooled servers. Equipment inside the white space is getting hotter and more dense.

Data centers have seen an exponential growth in the need for high density servers and switches in the last five years – and that trend will continue.

Liquid cooling enables the adoption of high performance technology for critical businesses and essential technologies, like artificial intelligence, autonomous vehicles, cutting-edge medical research, remote work capabilities, and hyper-converged Infrastructure.

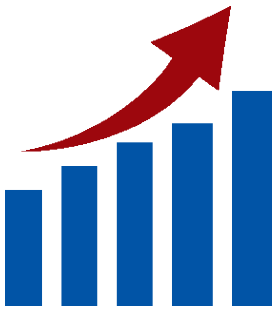
These technologies are accelerating, and with them the need for increasing CPU & GPU power densities.

Motivair's Liquid cooling technology offers robust thermal performance while minimizing the risk of fluid contamination and supply chain disruptions.

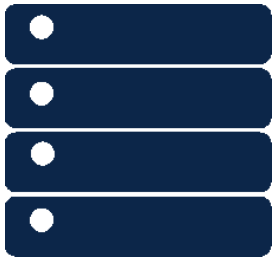


BENEFITS OF LIQUID COOLING

Leverage Breakthrough Performance

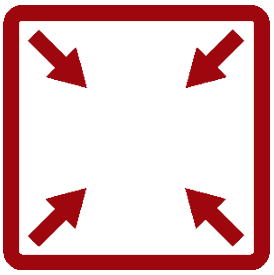


MORE EFFICIENT



INCREASE RACK UTILIZATION

INCREASE PROCESSING POWER



USE LESS SPACE

LOWER OPERATING COSTS

MORE CONTROL

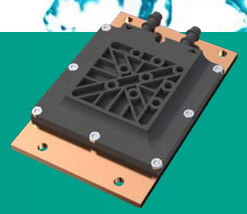
END-TO-END DIRECT LIQUID COOLING SYSTEMS

Motivair's End-to-End Cooling Solutions for High-Performance Computing, Data Centers & IT Infrastructure are an all-in-one liquid cooling solution, providing products and the post-sales service for the entire lifetime of your cooling infrastructure.

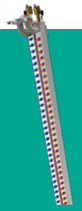
LIQUID COOLING FOR COMPACT OR TDS SYSTEMS

For 1:1 rack high-density servers or TDS rack (test and development system), small systems, requires building cooling system.

KEY USES: High-Performance Computing • Semiconductor • Data Center • Telecom • Colocation Data Center • Enterprise Data Center • Higher Education • Government



DYNAMIC COLD PLATES™



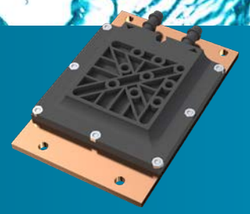
IN-RACK MANIFOLD
QUICK CONNECTS & HOSES

IN-RACK CDU

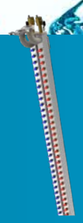
LIQUID COOLING FOR MEDIUM-TO-LARGE SYSTEMS

For larger HPC clusters & supercomputers. Requires building cooling system.

KEY USES: Semiconductor • Data Center • Telecom • Colocation Data Center • Enterprise Data Center • Higher Education • Government • Artificial Intelligence • Exascale Class



DYNAMIC COLD PLATES™



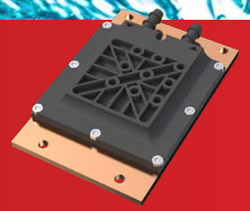
IN-RACK MANIFOLD
QUICK CONNECTS & HOSES

COOLANT DISTRIBUTION UNIT

CONVERT LIQUID TO AIR COOLING

For small, medium or large high-density servers or simply liquid-cooled servers, used when building cooling water is not available. Ideal for large enterprise or co-lo data centers.

KEY USES: High-Performance Computing • Semiconductor • Data Center • Telecom • Colocation Data Center • Enterprise Data Center • Higher Education • Government



DYNAMIC COLD PLATES™

IN-RACK MANIFOLD
QUICK CONNECTS & HOSES

HEAT DISSIPATION UNIT™

OUR BUSINESS IS COOLING YOURS™ motivaircorp.com

MITIGATE RISK & ACCELERATE PROGRESS

Motivair's Liquid Cooling Technology offers the best combination of performance, resiliency, and total cost of ownership at the chip level

WATER QUALITY RESILIENCE

Patent-pending fluid flow naturally generates uniform cooling across the entire package

ROBUST PERFORMANCE

Optimized for cost efficient and scalable production for High Performance Computing, small to larger clusters and Exascale class systems

END-TO-END USA VALUE CHAIN

End-to-End Value Chain Partner with USA based design, manufacturing and support services

CUSTOMIZATION

OEM Solutions uniquely designed for your specific need. Available in small, medium or large quantities.

COMPREHENSIVE POST-SALES SERVICES

Motivair's Global Cooling Critical Services offers the highest level of service to customers before, during and after a project is completed.

- Improves system uptime
- Extends equipment life & ROI
- Reduces unintended disruptions in your business
- Maximizes system efficiencies

DYNAMIC COLD PLATES™

Motivair's Dynamic Cold Plate™ harnesses innovative fluid dynamics to redefine direct liquid cooling. Our patent pending technology enables robust performance without the use of skived microchannels. The free-flowing nature of the Dynamic Cold Plate™ accelerates any system particles preventing them from depositing on the cold plate.

It allows CPUs and GPUs to operate at peak performance while reducing the 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 larger 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.

motivair® DYNAMIC COLD PLATES™

FEATURES

- Uniform cooling across entire package
- Resistance to fluid fowling
- Unique enhanced cold plate design
- Low profile
- Pushlok connections
- Variable connection locations
- OEM Customization
- Made in USA

COOLANT DISTRIBUTION UNIT

Coolant Distribution Units (CDUs) represent the widest range and highest capacity standard and custom OEM CDUs available. By decoupling a building cooling loop from liquid cooled computer systems or the ChilledDoor rack cooling system, critical IT equipment can be ensured to receive precise coolant temperatures and flow yielding optimal server performance and maximum uptime.

FEATURES

- Five (5) Standard Models
- Custom OEM Solutions
- Floor Mount & In-Rack profiles
- Capacities to 1.6 MW of IT load
- Built in redundancy and resiliency features
- Advanced PLC control and safety system
- Exascale Ready
- Made in USA
- UL/CSA/CE

CDU coolant distribution unit

THE CHILLEDDOOR®

Active rear door heat exchanger that is mounted directly to the back of any standard server rack.

Designed for and used by the world's preeminent enterprise data center and super computer owners and operators, the ChilledDoor® allows for on-demand cooling on a per rack, row or room level ensuring optimal computer performance and maximum uptime.

ChilledDoor®
Rack Cooling System

FEATURES

- 0-75kW cooling capacity with 100% Heat Removal
- Designed to fit any industry standard server rack – Open 19 and OCP compliant
- Made in the USA
- High powered adjustable PLC control system for active cooling of server racks

HEAT DISSIPATION UNIT™

In the absence of available building cooling water, the heat from the computer cooling system must be rejected to air, a process that can now be facilitated by Motivair's Heat Dissipation Unit™ (HDU).

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.

HDU heat dissipation unit™

FEATURES

- Location of liquid cooled system prevents water from being plumbed to the computers
- Current cooling solution does not have enough capacity to absorb heat from the liquid cooled computer system
- Chilled or cool water is not available at the site
- Beta testing of liquid cooled computer systems prior to full scale deployment
- Made in the USA

motivair®

COOLING SOLUTIONS