

Your High-Density GPUs' New Best Friends.



At the Forefront of Data Center Cooling Innovation

With over a decade of cooling innovation and expertise, Aligned Data Centers delivers advanced air, liquid, and hybrid cooling solutions that support the next-generation technologies of world's largest hyperscale and large enterprise customers.

**100 kW to
1 MW in
1 second**



Validation Through Innovation

Explore the next generation of data center cooling at Aligned's Advanced Cooling Lab. Our lab is purpose-built to test, refine, and continuously improve the performance of Aligned's cutting-edge cooling solutions, ensuring their ongoing operational excellence and testing the limits of thermal management.

Our lab empowers customers to confidently validate their latest technologies and IT configurations. Simply roll in your racks, connect to our advanced cooling infrastructure, and experience superior performance in our data halls.

Cloud, AI, & Beyond

Designed to support high-density compute AI and cloud applications, our Advanced Cooling Lab showcases how Aligned's air, liquid, and hybrid cooling solutions maximize efficiency, scalability, and sustainability, supporting virtually any density and GPU cloud requirement.

Discover the Aligned Cooling Advantage

- **Seamless Hybrid Environments:** Effortlessly transition between air and liquid cooling in the same data hall.
- **Scalable Design:** Increase compute density on demand.
- **Sustainability:** Optimize energy use while reducing environmental impact.
- **Flexibility:** Simply drop in air or liquid cooling to adapt, eliminating the need for major infrastructure upgrades.



Advanced Cooling Lab Features

- **Flooded Room Design:** Allows for flexible and dynamic deployment of high-density workloads.
- **Patented Microchannel Coil:** Enables high ΔT 's and efficiently transfers heat to the primary water loop.
- **Structural Ceiling Grid:** Acts as a return plenum for heat load while providing clearance and hanging load for power distribution and cabling.
- **MW-Scale Liquid Cooling Loops:** enable a fully integrated solution for high-density workloads.

DeltaFlow~ Liquid Cooling Technology

Engineered for high-performance computing, DeltaFlow~ integrates seamlessly with Aligned's existing infrastructure:

- **AI Enablement:** Supports high-density compute and AI workload requirements.
- **Seamless Integration:** Operates with Aligned's existing primary water loop and chiller designs.
- **Physical Compatibility:** Occupies the exact same footprint as a DCA for interchangeable design.

Primary Water Loop

- **Mechanical Galleries:** Primary water loop, connections, and cooling units are located and operated outside of customer data hall space in mechanical galleries.
- **High Operating Temperatures:** Provides 62F supply water with $\sim 30F$ target ΔT on the return for increased chiller efficiency.
- **Closed Loop Design:** Integrates with air-cooled chiller plants for a sustainable, water-less design.

Discover how Aligned's Advanced Cooling Lab is revolutionizing data center cooling with DeltaFlow~ and Delta³ technologies, delivering the power and flexibility needed for today's high-performance computing.





ADVANCED COOLING LAB

For more information
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About Aligned

Aligned Data Centers is a leading technology infrastructure company offering innovative, sustainable, and adaptive Scale Data Centers and Build-to-Scale solutions for global hyperscale and enterprise customers across the Americas. Our intelligent infrastructure allows densification and vertical growth within the same footprint, enabling customers to scale up without disruption, all while maintaining industry-leading Power Usage Effectiveness (PUE). By reducing the energy, water and space needed to operate, our data center solutions, combined with our patented cooling technology, offer businesses a competitive advantage by improving sustainability, reliability, and their bottom line.

