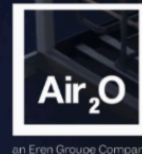


THERMAL MANAGEMENT TRENDS

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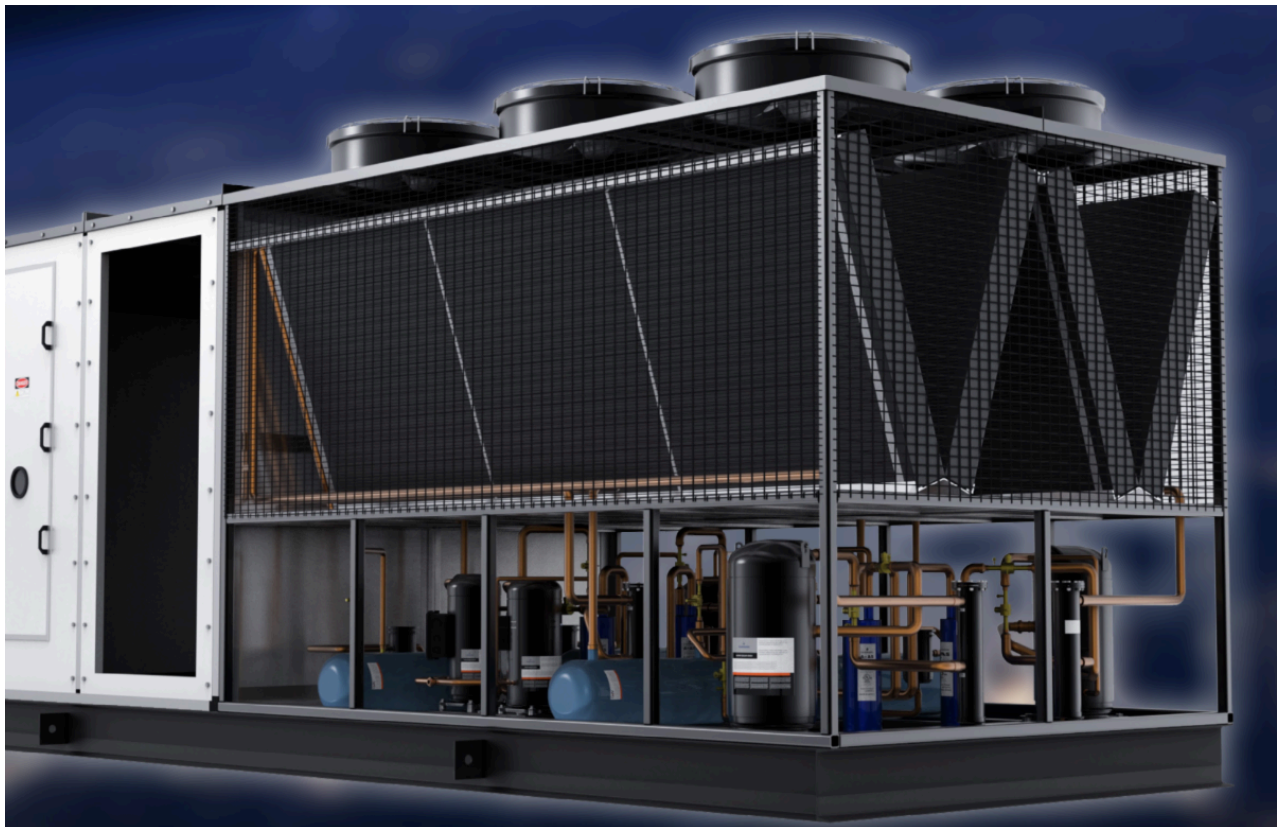


Thermal Management
Innovation

an Eren Groupe Company

Fall 2025

The Ultimate Custom Cooling Solution - DX Package Units



Air₂O continues to expand the boundaries of what's possible in HVAC and dehumidification technology. Our custom packaged DX systems are built to deliver unmatched flexibility, performance, and reliability engineered for the unique needs of commercial, industrial, healthcare, and mission critical environments. Each system is fully configurable for airflow, thermal performance, space constraints, and control

requirements, offering virtually endless possibilities for tailored design. These units have already demonstrated proven results in projects such as hospitals and large scale data centers applications where precise environmental control and energy efficiency are essential. This update reflects more than a product launch it's a testament to the creativity, engineering excellence, and commitment of the Air₂O team. We're not just manufacturing HVAC and dehumidification equipment; we're redefining what custom packaged DX solutions can achieve.

[Download Our DX Brochure](#)

Logos That Define Us Today



This year marks a defining moment in Air₂O's journey and two new logos capture exactly who we are in 2025.

The first is the Inc. 5000 recognition logo. We now carry the distinction of being listed in the 2025 Inc. 5000 magazine as one of America's fastest growing private companies with an impressive three year revenue growth of 81 percent our first ever appearance on this prestigious list.

This first time recognition by Inc. magazine is a powerful validation of our business strategy and operational investments, but most importantly, it is a tribute to our employees. Their dedication, expertise, and relentless drive fuel our growth and success every day. It is their contributions that energize our company and set us apart.

Our culture shaped and sustained by our people is the true engine behind our ability to deliver custom thermal management solutions and seize new opportunities with our mission critical clients.

The Inc. 5000 honor reflects our team's resilience, innovation, and relentless focus on delivering value to our customers. With this recognition, Air₂O joins a legacy of entrepreneurial companies that fuel the American economy.

The second is our new Arizona community symbol, created to appear alongside the Air₂O logo on our HVAC units and in our marketing materials. Featuring Arizona's outline filled with the bold state flag colors, it proudly reflects where we live, work, and build.

This emblem is more than design...it's a statement of our identity: Air₂O products are proudly engineered and manufactured in Phoenix, Arizona, one of the most exciting growth regions in the country.

Our team represents 17 countries, yet most of us proudly call Phoenix home. We are supported by outstanding Arizona partners: vendors, trade schools, the Arizona Commerce Authority, Greater Phoenix Economical Council, and the Arizona Technology Council.

By building locally, we deliver faster lead times, stable pricing, and meet Build America, Buy America (BABA) requirements, reducing risk and providing greater peace of mind for our customers.

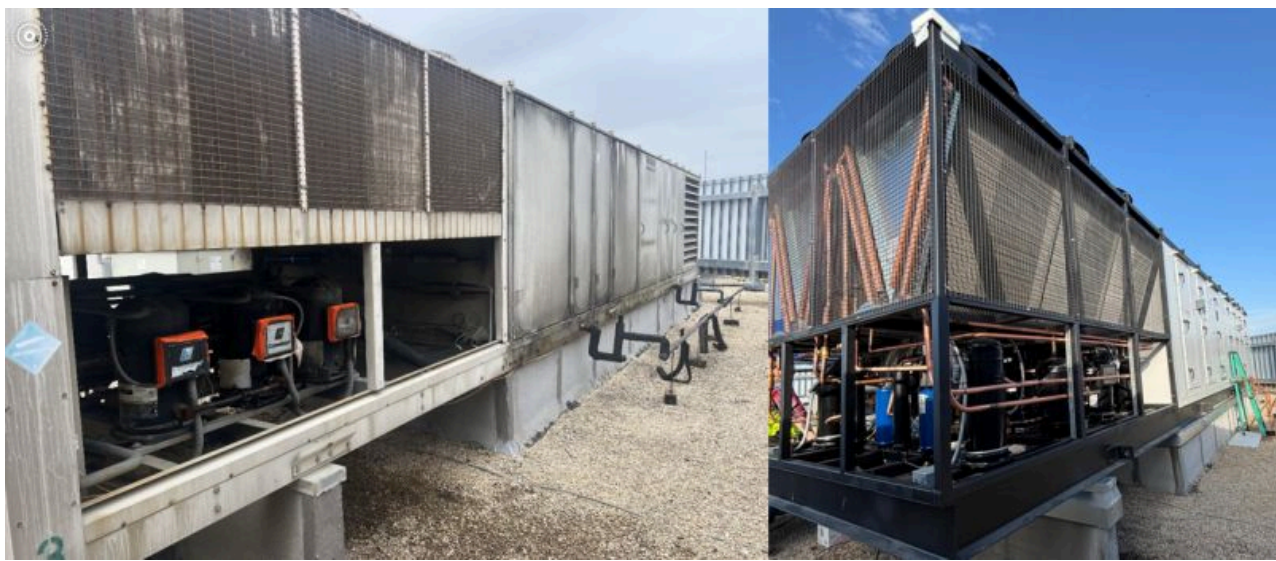
Together, these two logos define Air₂O in 2025. One symbolizes our growth and national recognition, while the other grounds us in our community and identity. They remind us that our strength comes from both our ambition and our roots.

Mike Sullivan
Air₂O "Thermal Management Innovation"



Let's Talk Retrofits

By John Libby, US Sales Manager



Across the country, thousands of large packaged rooftop units are reaching the end of their life. However, replacing them isn't always straightforward due to factors such as new refrigerants, updated codes, electrical upgrades, fan options, and evolving efficiency requirements, which can all complicate a like-for-like swap.

That's where Air2O comes in. We provide (free) design services to create and build a custom, packaged DX system engineered to replace outdated units directly. Our solutions are built to meet or exceed:

- ✓ Weight
- ✓ Capacity
- ✓ Electrical requirements
- ✓ Footprint
- ✓ Curb size
- ✓ Supply/return orientation

The result? An actual 1:1 swap that minimizes downtime. From hospitals to data centers, hotels to other mission-critical facilities, we can deliver a cost effective unit that's installed in a single day, keeping operations running without interruption. That's what we did for this hospital, shown in the photos, while also increasing cooling capacity by 20%! See the difference?

The PUE Dilemma: Are We Measuring What Truly Matters?

By Ahmed Khader, Technical Director

PUE (Power Usage Effectiveness), introduced in 2007 by The Green Grid, was a breakthrough; it gave us a standard way to quantify energy efficiency in data centers. Today, with real-time DCIM tools and compliance frameworks, it's still widely used.



But in the era of high density computing, AI workloads, and sustainability mandates, PUE is no longer enough, and often misleading:

What PUE misses:

- Server cooling fans are counted under IT load, even though they're part of the cooling system.
- Raising allowable #CPU/ #GPU temps lowers cooling demand (and PUE), but reduces computational efficiency due to thermal throttling.
- A "great" PUE can hide inefficiencies like underutilized servers or high carbon intensity from dirty energy sources.
- Lower IT loads can worsen PUE; total facility energy doesn't scale down proportionally, giving the illusion of inefficiency.
- Local climate matters; a cooler climate can achieve a better PUE with less effort, skewing cross-region comparisons.
- A narrow focus on electricity ignores other vital sustainability factors, like water usage, equipment utilization, and overall productivity.

Bottom line: PUE optimizes the building, not the compute.

What We Should Measure Instead: Compute Efficiency Index (CEI)

To reflect actual operational and environmental performance, we need a composite metric that includes:

- PUE – energy efficiency.
- CUE – carbon usage effectiveness.
- WUE – water usage effectiveness.
- Renewable energy % – clean energy adoption.
- Performance output – actual compute work (#FLOPs, transactions, etc.).
- Resource circularity – hardware lifecycle, reuse, and recycling.
- Think of #CEI as a modern Efficiency Index for smart infrastructure; one that captures real productivity and sustainability.

The Takeaway:

PUE was a necessary first step. But as data centers evolve, we need smarter, broader metrics that reflect real efficiency, not just energy ratios.

Are you still reporting just PUE? What else are you tracking?

Let's evolve the conversation.

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