




COOLER DATA CENTERS BY DESIGN

# **CASE STUDY: SCALABLE COOLING INNOVATION FOR A LARGE-SCALE HYPERSCALER**

DATA CENTERS



**CLIENT:** Large-Scale Hyperscaler  
**INDUSTRY:** Data Centers  
**SOLUTION:** Air Cooled Heat Exchangers (ACHX)  
**SCOPE:** 72 ACHX units deployed across multiple U.S. regions  
**MANUFACTURING SITES:** Tulsa, OK & Beasley, TX  
**TIMELINE:** Less than 12 months from purchase order to delivery

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## CHALLENGE

A leading hyperscaler faced a critical supply challenge when their existing Air Cooled Heat Exchanger (ACHX) supplier was unable to meet growing demand that was driven by their rapid data center expansion. With multiple facilities under development across the United States, they needed a partner capable of matching exact technical specifications while delivering at scale – and on an accelerated timeline. The project required both design innovation and rapid manufacturing execution to ensure long-term performance and serviceability.

## SOLUTION

Chart Industries partnered with the hyperscaler, leveraging deep engineering expertise and agile manufacturing capabilities to deliver a tailored solution. Key initiatives included:

- **Design Optimization:** Refined ACHX designs for repeatability and scalability, ensuring consistent performance across multiple builds and ease of future expansion.
- **Access & Maintenance Enhancements:** Walking platforms and motor access points were redesigned to improve safety and serviceability in demanding data center environments.
- **Fleet Standardization:** Developed a modular design that became the hyperscaler's standard across its entire ACHX fleet, streamlining future procurement and operational processes.

## IMPACT

Chart Industries successfully delivered 72 ACHX units in under 12 months, from purchase order to final delivery, helping the hyperscaler stay on track with their nationwide expansion. The solution supported multiple large-scale data centers with consistent, high-quality cooling infrastructure. Moreover, the enhanced ACHX design set a new benchmark for the client, becoming their reference point for cooling performance and operational efficiency across future deployments.