NEWS RELEASE

Johnson Controls launches series of thermal management reference design guides for gigawatt-scale AI data centers

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Comprehensive guides address water-cooled, air-cooled and absorption chiller use cases, integrated with advanced building controls, for next-generation AI factories

MILWAUKEE, Feb. 2, 2026 /PRNewswire/ -- Johnson Controls (NYSE: JCI), the global leader in smart, healthy and sustainable buildings, today announced the launch of its Reference Design Guide Series for 1 Gigawatt AI data centers. Each guide in the series maps the full thermal chain, offering cooling architectures tailored to diverse compute densities, geographies and elevations. The series begins with a detailed blueprint for water-cooled chiller plants with future guides to address air-cooled and absorption chiller solutions.

As AI transforms industries, the scale and complexity of data center infrastructure is rapidly evolving. The ability to efficiently manage thermal loads at gigawatt scale is now a critical enabler for AI innovation, and the industry faces mounting pressure to deliver facilities that are not only high-performing, but also sustainable and future-ready. Johnson Controls' Reference Design Guide Series responds to this challenge by outlining how to achieve industry-leading energy and water efficiency (PUE and WUE) while maintaining flexibility to scale across diverse climates and operational requirements.

The guide outlines a complete thermal architecture supporting both liquid and air- cooled- IT loads through integrated computer room air handlers (CRAHs), fan coil walls, coolant distribution units (CDUs) and high efficiency YORK centrifugal chillers. It provides- detailed sizing guidance for 220MW compute quadrants and defines temperature and operating conditions across all major facility loops, including Technology Cooling System (TCS) loops supporting next- generation GPUs.

Key outcomes enabled by the updated design include:

- **Zero Water Consumption:** A fully water free heat rejection process using dry coolers, reducing

operational costs and advancing sustainability objectives.
- **Future Ready- Thermal Flexibility:** High -temperature TCS loop readiness ensures compatibility with forthcoming GPU architectures.
- **Optimized High Density- AI Performance:** Alignment with NVIDIA DSX reference architecture enables scalable deployment of 1-GW-class AI Factories.
- **Energy Efficient- Operation:** Elevated condenser water temperatures, bifurcated loops and YORK high-lift chillers deliver industry-leading PUE and improved annualized efficiency.

"AI Factories are production facilities — the places where intelligence is manufactured at an industrial scale," said Austin Domenici, vice president & general manager, Johnson Controls Global Data Center Solutions. "By supporting the NVIDIA DSX reference architecture and improving water and energy efficiency in the cooling process while maintaining high temperature- loop compatibility, our Reference Design Guide equips customers to deploy gigawatt-scale AI infrastructure that is scalable, repeatable, resilient and sustainable."

Learn more about Johnson Controls's Reference Guide Series at www.johnsoncontrols.com/industries/data-centers/reference-designs.

MEDIA CONTACTS:
Louise Colledge
+4179 414 4996
Email: louise.colledge@jci.com

Kari Pfisterer
Direct: +1 414-217-1488
Email: kari.b.pfisterer@jci.com

About Johnson Controls:

At Johnson Controls (NYSE:JCI), we transform the environments where people live, work, learn and play. As the global leader in smart, healthy and sustainable buildings, our mission is to reimagine the performance of buildings to serve people, places and the planet.

Building on a proud history of nearly 140 years of innovation, we deliver the blueprint of the future for industries such as healthcare, schools, data centers, airports, stadiums, manufacturing and beyond through OpenBlue, our comprehensive digital offering.

Today, Johnson Controls offers the world`s largest portfolio of building technology and software as well as service solutions from some of the most trusted names in the industry.

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