



Grundfos Data Center Solutions

# Keep your cool

Efficient water solutions  
for effective data flow

**GRUNDFOS** 

Possibility in every drop



# Meet your efficiency and redundancy goals at every step

Whether you're planning a Tier 1 or Tier 4 data center, a new build, retrofit or modular system, you can rely on Grundfos water solutions to keep your data flowing.



High-efficiency solutions



Redundancy meeting up to Tier 4 requirements

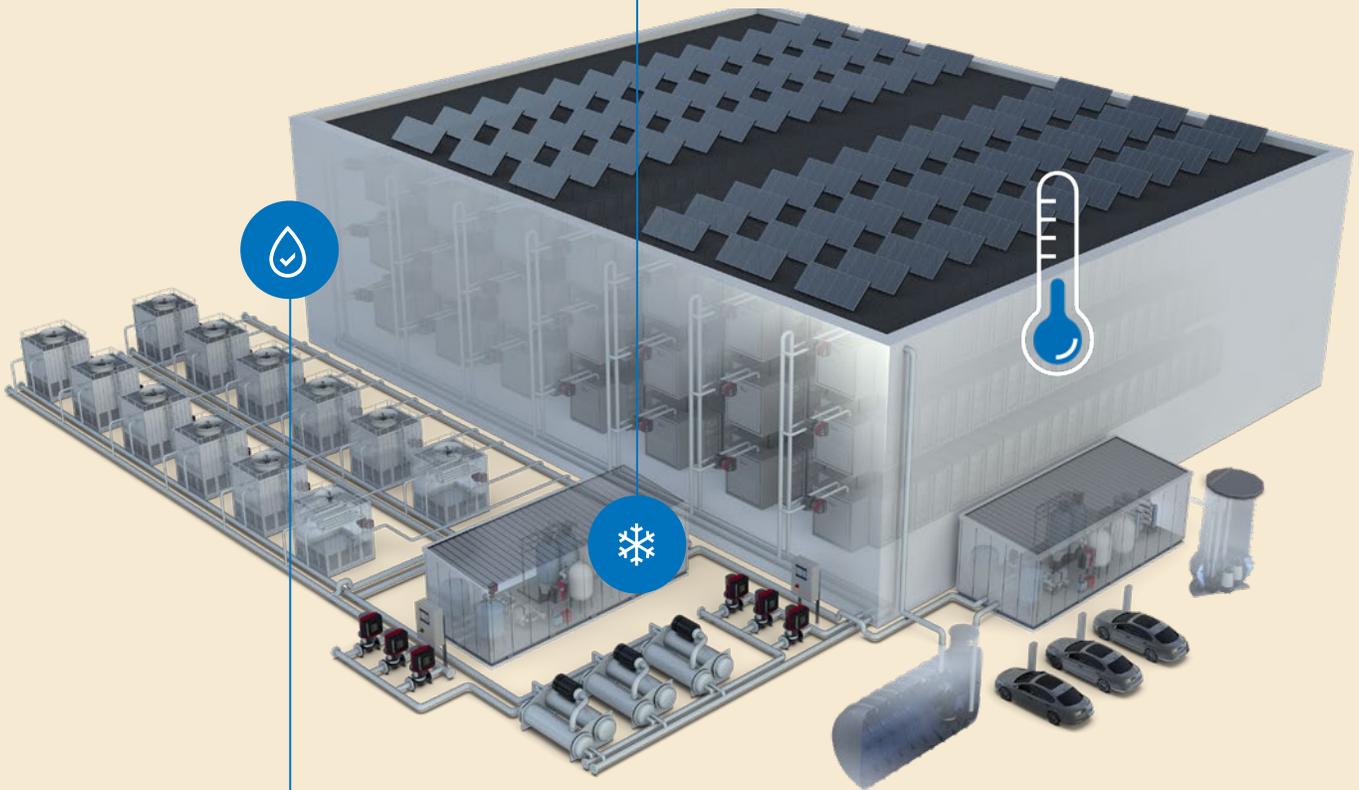


End-to-end partnership process

## Cooling

Grundfos keeps water flowing efficiently around air or liquid cooling systems through an array of intelligent pumps and sensors, saving water and energy, and guaranteeing uptime.

- Smart pumps, up to IE5 efficiency
- Up to 2N+1 redundancy
- High density liquid cooling
- Easy commissioning & monitoring



## Water treatment and distribution

Efficient solutions for sourcing, distributing, treating and discharging water all contribute to optimizing your data center's PUE and WUE and reliably integrating into your monitoring systems.

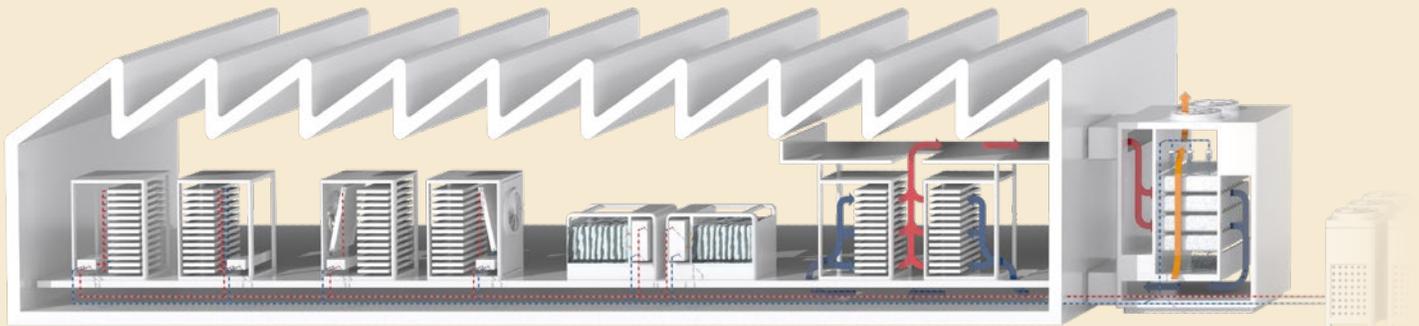
- Efficient distribution from any source
- Superior treatment to combat legionella
- Turnkey wastewater solutions
- Easy BMS & SCADA integration

Explore our 3D data center online  
for the full details on how we keep  
your data flowing.



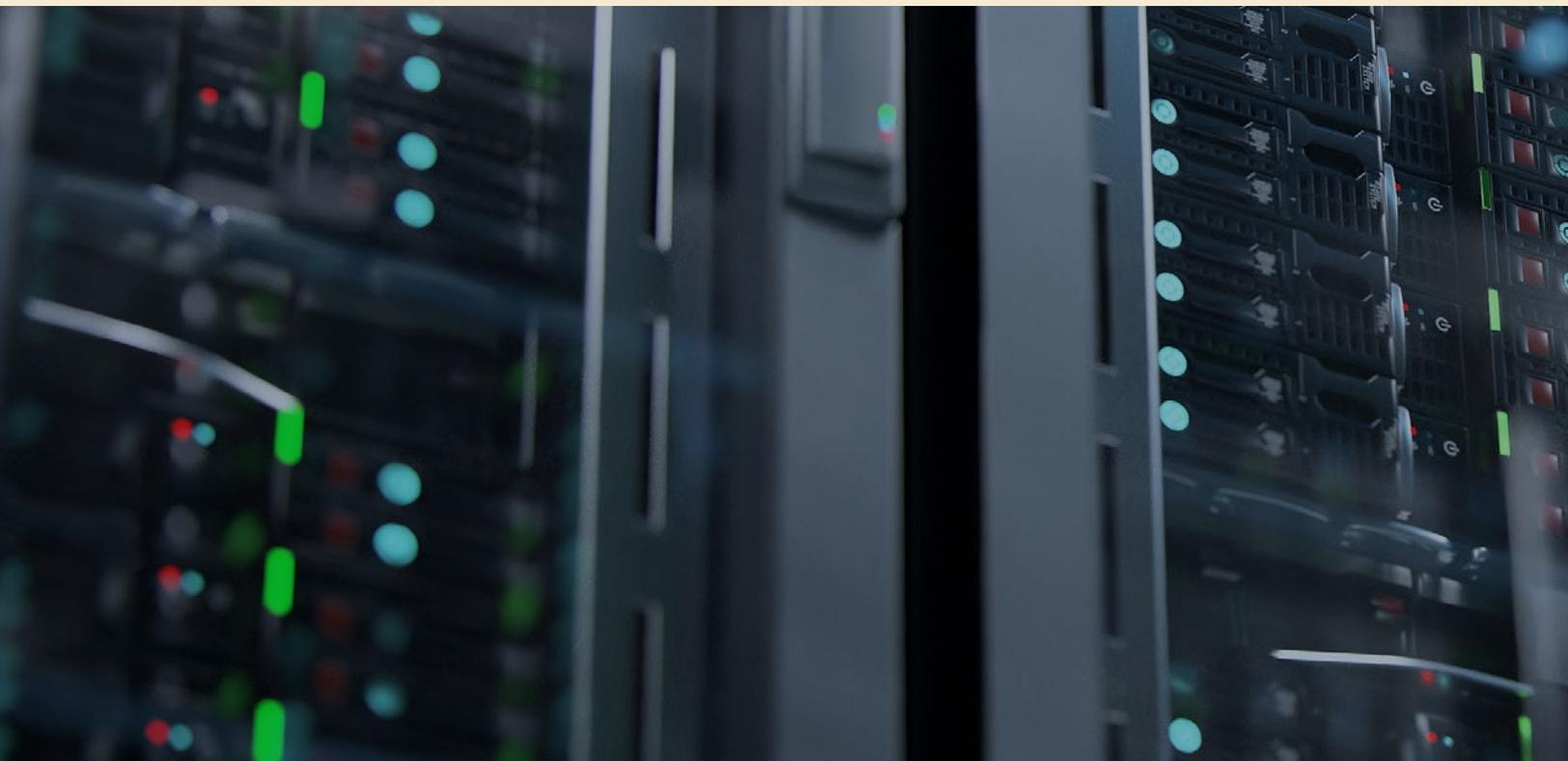
# Data Center Cooling

Reliable cooling solutions are necessary to keep your data center up and running. Grundfos understands the challenges of your critical operation and has a range of pumping solutions that can be used individually or as a system.



## IT Cooling Solutions for Your Entire Data Center

CDU & CHIP COOLING | CRAH | RACK IN-ROW-COOLING | IMMERSION COOLING | EVAPORATION | CHILLERS



Our pumps and sensors provide better reliability, flexibility, efficiency, compact footprints, as well as easy installation and maintenance — because downtime is not an option for you.

## Permanent Magnet Motor Efficiency

- Up to 10% reduction in energy costs over NEMA Premium
- Up to 1 ton less CO<sub>2</sub> produced annually (per 4 HP)
- Up to 35% reduction in energy costs when integrated with VFD

## Integrated Control

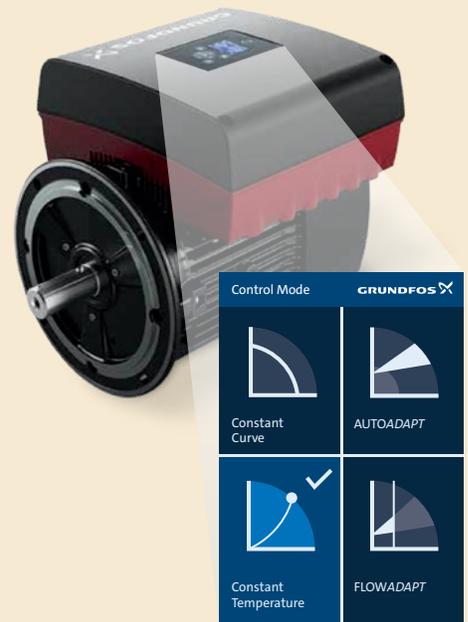
- Flexibility to use existing controls, or override
- Controls designed with years of pump algorithm data pre-loaded for easy start-up and optimized pumping performance

## Data Collection

- Collect performance data, including temperature, flow and pressure from the pump
- Continuously optimize your system
- Predict maintenance needs, and avoid downtime, based on historical data

## Dielectric Fluid Compatible

- Efficient, non-conductive fluid for immersion cooling



# Grundfos Data Center Cooling Solutions



## KPVS

The split-coupled, split case, vertically mounted frame offers a compact footprint, along with easy installation and maintenance — access to seal and internal components without need to remove the motor or alignment. The double volute design balances radial loads and reduces vibration, while extending the life of wear rings, shaft seals and bearings. The liquid cooled sleeve bearing design also adds to increased pump life and uptime.

Flow: max. 13,000 gpm (2,953 m<sup>3</sup>/h) | Head: max. 420 ft (128 m) | Liquid temperature: -20 °F to 275 °F



## NBSE

The Grundfos NBSE split-coupled, end-suction pump with integrated permanent magnet motor, drive, and control serves as the industry standard in performance, quality and durability. Intelligently engineered to provide a smarter, cost-saving alternative to base-mounted pumps with a 35% smaller footprint, simplified installation and lifetime alignment guarantee.

Flow: max. 1,200 gpm | Head: max. 270 ft | Liquid temperature: -13 °F to 248 °F



Available in single or dual head models.

## TPE3 & TPE3D

The smartest and most efficient inline pump features a permanent magnet motor, integrated intelligent controls and communication options, including AutoADAPT™, which reduces energy consumption by automatically adjusting pump setpoint. Use alone or as a system; wireless technology allows you to connect up to four TPE3 pumps, and control jointly using cascade mode without the need of an additional controller. The dual head configuration gives you built-in redundancy with a 2-in-1 pump system.

Flow: max. 500 gpm | Head: max. 80 ft | Liquid temperature: -13 °F to 248 °F



## Distributed Pumping

A smarter approach to chilled water system design, Grundfos Distributed Pumping replaces traditional control valves with intelligent pumps, making it easy to balance your system. This award-winning solution reduces overall horsepower and provides chillers with the perfect flow at the right pressure to meet the exact demands of your building, allowing you to achieve significantly increased Delta T, improved occupant comfort and unmatched energy savings.

Significantly Increased ΔT | Up to 80% Energy Savings on Annual Pumping Power



## CR

The CR vertical multistage pump design decreases seal and bearings wear, improves energy efficiency and provides easy install and start up. The CR features a compact, inline design that fits into small footprints, and a unique cartridge seal design that can be replaced in minutes, without the need to remove the motor.

Flow: max. 1,060 gpm | Head: max. 1,000 ft | Liquid temperature: -40 °F to 248 °F



<sup>†</sup> Higher temperature available.

## HYDRO MPC HVAC

The modular Hydro MPC pumping system allows you to customize configuration from two to six CR/CRE pumps, and comes pre-packaged, pre-wired, pre-tested and pre-commissioned for an easy and reliable plug-and-pump solution. It includes built-in redundancy and monitoring settings, along with data logging capabilities and multi-sensor zone control.

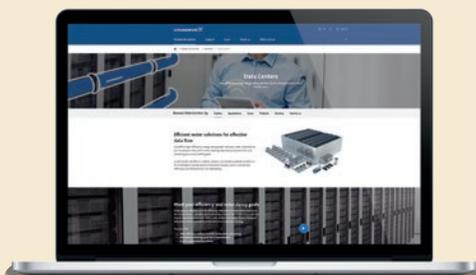
Flow range (2–6 pumps): max. 6,000 gpm | Head: max. 1,000 ft | Liquid temperature: 32 °F to 180 °F<sup>†</sup>



## GRUNDFOS ENGINEERED SYSTEMS

Grundfos engineers work with you to find the right solution to meet your needs. Whether that is a modification to an existing product or creating a completely new, site-specific solution. All our systems are built with the most efficient pump technologies and intelligent controls available. We handle installation and startup, and operate as a single source of responsibility to minimize your costs.

Engineered-to-order packaged fluid handling solution | Pre-piped, Pre-wired, Pre-tested, Pre-commissioned



LEARN MORE AT:

[grundfos.us/datacenters](https://grundfos.us/datacenters)



# We believe it's possible to cool a data center without warming the planet

Sustainability is at the core of everything we do at Grundfos.

We share with the data center industry an acute sense of responsibility that drives us to even more energy-efficient solutions, helping you exceed your own sustainability goals.

With data center specialists around the world, we'll be by your side at every stage: from consultation and design to commissioning, maintenance and monitoring.

To discuss your next cooling, water treatment or distribution project, contact us today at [grundfos.us/datacenters](https://grundfos.us/datacenters)

Visit [grundfos.us/pei](https://grundfos.us/pei) to learn more about Department of Energy (DOE) pump energy index (PEI) requirements and PEI ratings on specific Grundfos models.