Optimize Your Cooling. Reduce the Risk of Downtime.

High-Performance Process Cooling Solutions for Data Centers

Watts.com

WATTS®

Our “Triple-Play” Approach

HELPING YOU BUILD A SUSTAINABLE DATA CENTER

By prioritizing these three elements as a “triple-play” strategy, we are dedicated to creating products that not only ensure the safe and proper management of water but also reduce our impact on the environment.

Safety & Regulation

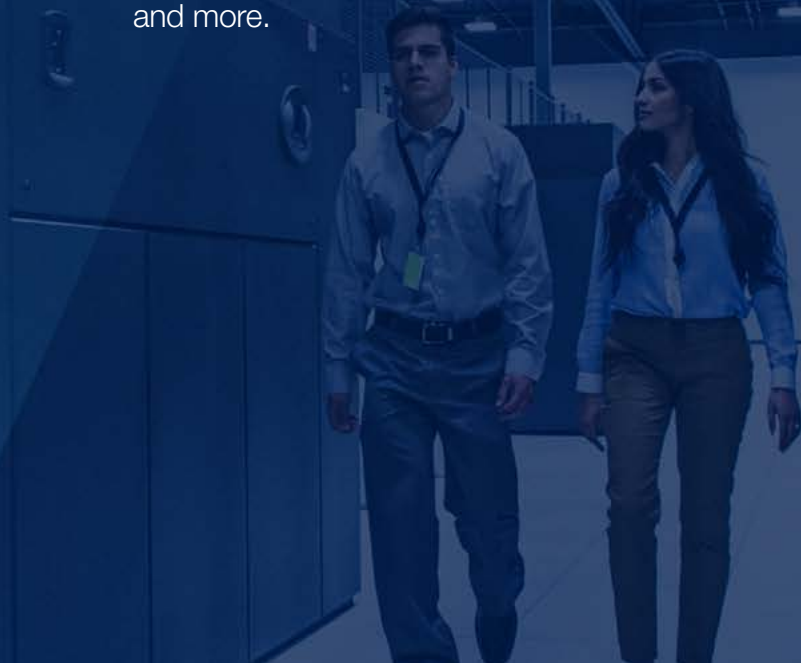
These products ensure the health and safety of inhabitants of homes, commercial buildings, and industrial facilities. They also ensure that buildings adhere to local and federal regulations.

Water Conservation

These products help our customers conserve water and reduce waste in many ways, including: detecting leaks, preventing wasted water and contamination in the municipal water supply, reducing the amount of water a facility uses, and more.

Energy Efficiency

These products help our customers improve the efficiency and sustainability of the energy usage in their buildings with finite control of the thermostat, reducing fluctuations in heating, making water flow more efficiently, and more.



Keep Your Operations Cool, Efficient & Uninterrupted.

Maintaining optimal temperatures is critical for keeping data centers running smoothly and efficiently 24/7/365. Traditional air cooling, cutting-edge liquid cooling or a hybrid approach all require a chilled water system with components that provide reliable performance under the most demanding conditions.

Watts comprehensive portfolio of industrial valves & strainers and high-purity piping & valves plays a critical role in data center cooling systems, delivering precise control, superior efficiency, and protection from costly damage to pumps and sensitive equipment.

Discover our solutions designed to optimize cooling systems and minimize downtime.

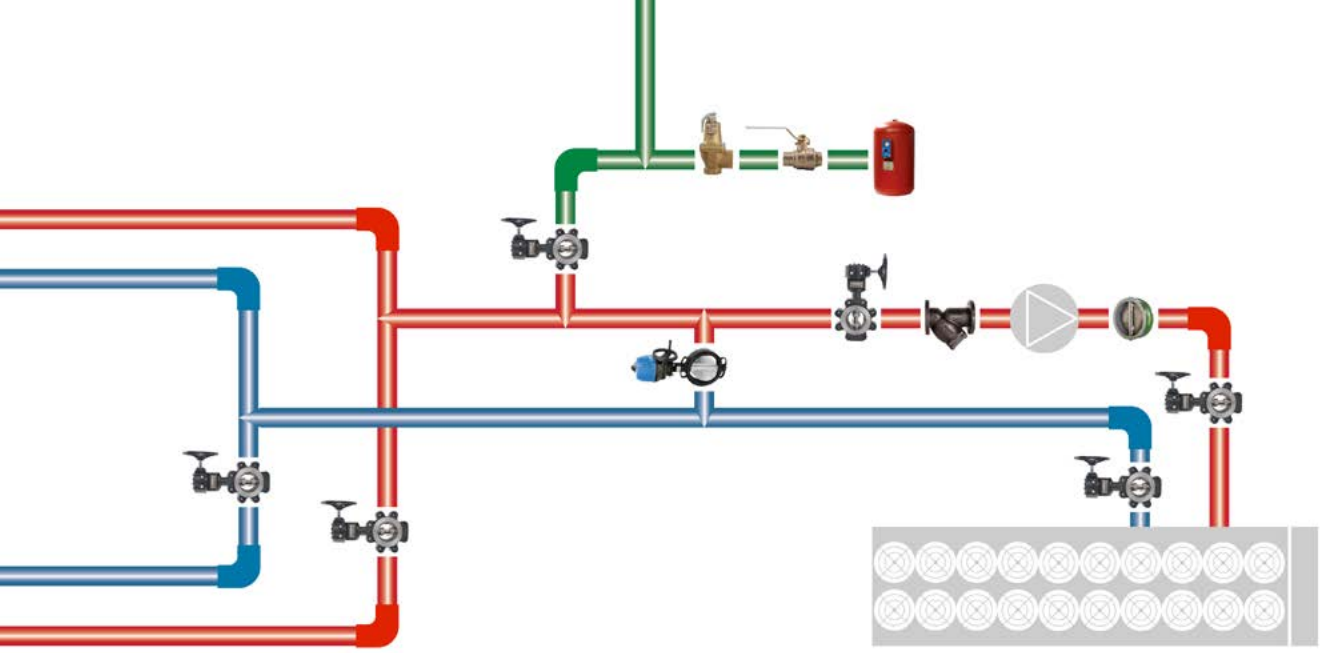
Reliable Flow Control

Accurate Balancing

Superior Pump Protection

High-Purity Piping

Smart & Connected Solutions



Wye Strainers

Check Valves

Ball Valves

Relief Valves

Expansion Tanks

High-Performance Chilled Water Systems

Enabling Scalability for Air and Liquid Cooling

Chilled water systems are a critical component of data center cooling, providing an efficient means of heat dissipation for both air-cooled and liquid-cooled systems. For air-cooled systems, chilled water typically cools air that is then distributed to data halls. For liquid-cooled systems, it directly cools the liquid in direct-to-chip cold plates or immersion cooling baths.

Key performance requirements:

- Energy efficiency
- Precise temperature control
- High reliability

Effective design, smart controls, and proactive maintenance of chilled water systems ensures that the system operates at peak efficiency with uninterrupted performance while minimizing power usage.

Reliable valves are equally critical, as any downtime in cooling could lead to overheating and damage to sensitive IT equipment.

Chilled water systems offer remarkable scalability, allowing data center operators to expand cooling capacity as IT loads grow. These systems also integrate with free cooling technologies to leverage ambient air temperature in certain climates, further reducing energy consumption.

By combining energy savings and dependable performance with adaptability, chilled water systems are a highly effective solution for modern data center cooling challenges.

Butterfly Valves

Control Flow Precisely

Mueller Steam Specialty Industrial Butterfly Valves

- Available with dustproof/waterproof IP67-rated gear operator, manual lever or electric actuator
- 100% factory tested to guarantee bi-direction, drop tight shutoff at full rated pressure
- Meets Standard MSS SP-68
- Ideal for exterior piping systems or corrosive environments

KEY FEATURES:

> Blow out proof stems
> Primary and secondary stem seals
> Multiple combinations of materials and configurations

Triple Duty Valves

Suction Diffusers

Protect Valuable Pumps Efficiently

Mueller Steam Specialty Triple Duty Valves & Suction Diffusers

- Compact, effective, and economical way to simplify piping found in most pump locations
- Can replace up to SIX costly, space-robbing pipe components
- Reduces installation cost and maintenance time

KEY FEATURES:

> Control-Chek® Triple Duty Valves combine balancing, shutoff, and check valve functions
> Suction Diffusers strain damaging particles and replace the elbow, strainer and entry pipe on the suction side of the pump

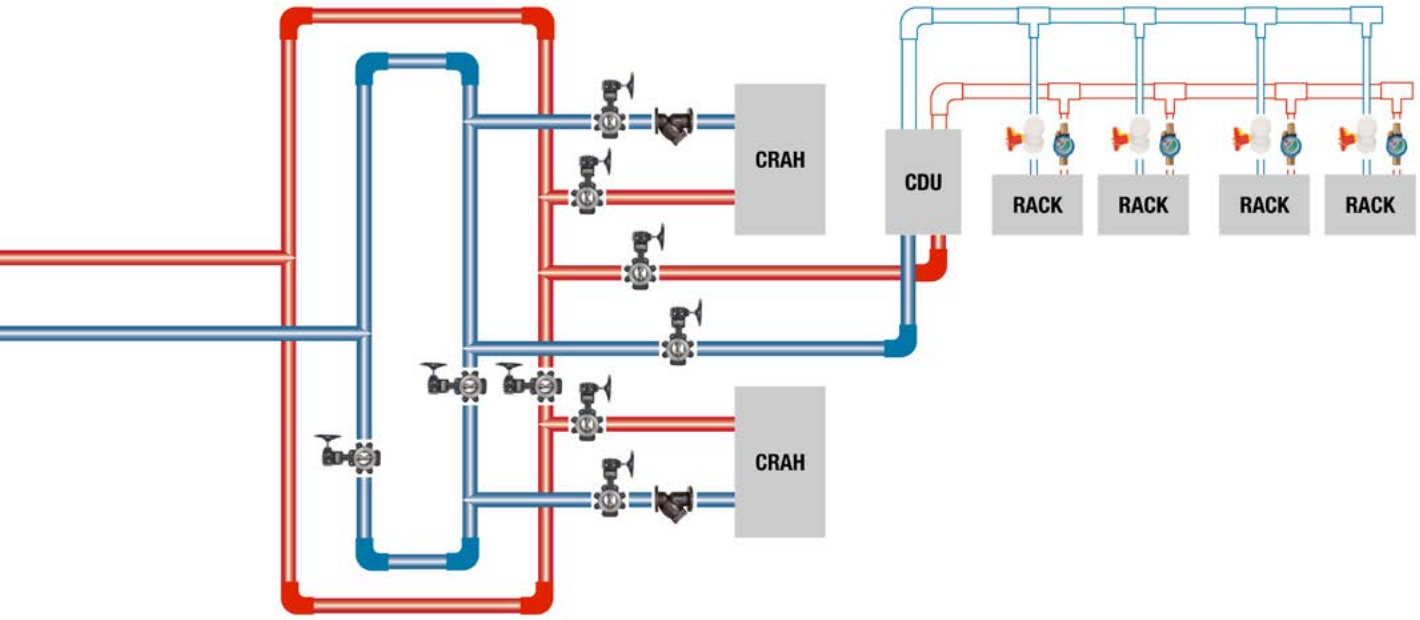
Maintain Peak Performance Proactively

Mueller Steam Specialty Smart & Connected Wye & Duplex Strainers

- Pressure sensors now come pre-installed
- Maintains consistent flow and efficient system performance
- Enables centralized control for proactive strainer maintenance
- Prevents costly damage to process and mechanical equipment
- Reduces manual inspection time, maintenance labor, and repair costs

KEY FEATURES:

> Add-On Connection Kit for easy activation
> Real-time alerts when pressure drop exceeds pre-configured threshold
> Seamless integration with any BMS



Flow Measurement Valves

Electric Acutated Butterfly Valves

True Union Ball Valves

Stainless Steel Butterfly Valves

Stainless Steel Ball Valves

Combining Chilled Water with Air and Liquid Cooling

Manage Higher Heat Loads, Lower Energy Consumption

Air-cooled systems integrated with chilled water systems play a pivotal role in maintaining reliable temperature control in data centers. Key components include chillers, water pumps, air handlers, and fans, all working together to ensure efficient thermal management.

The primary benefits of this setup include improved energy efficiency, reduced operating costs, and enhanced system reliability. This approach also supports eco-friendly operations by reducing dependency on refrigerants and minimizing the system's carbon footprint.

Liquid-cooled systems powered by chilled water infrastructure are revolutionizing data center cooling. These cutting-edge setups rely on reliable flow control for key components like water-cooled heat exchangers, pumps, cooling distribution units (CDUs), and containment systems to effectively transfer heat away from server racks.

By utilizing water, which has a much higher thermal capacity than air, these systems can manage higher heat loads with lower energy consumption. This leads to increased hardware density, reduced operational costs, and a smaller environmental footprint. For data centers aiming to meet growing performance demands while staying energy-efficient, liquid-cooled systems offer a smart, long-term solution.

Protect Sensitive IT Equipment

Orion Whiteline® Pure Water Process Pipe & Fittings

- Ideal for branch circuits and liquid cooling technologies
- Smooth, non-porous surfaces means no bacterial growth
- Excellent chemical resistance
- Joined by socket fusion method, providing strong, durable, and hermetically-sealed joints

KEY FEATURES:

> Available in Kynar® Polyvinylidene Fluoride (PVDF)
> Available Type 1 Homopolymer Polypropylene (PP)

Balance Faster, More Accurately

Watts iDroset CSD Balancing Valves

- 100% factory tested to a minimum accuracy of +/- 10%
- Patented integrated flow measurement technology
- Gauge reads flow directly with no external instruments, no calculations, no guesswork

KEY FEATURES:

> Positive shutoff ball valve
> Lockable hand wheel quickly and easily sets flow with no tools
> Balancing turn-down ratio of up to 25:1 covers broad range of design flow requirements

Avoid Water-Related System Interruptions

Leak Defense® Wired & Wireless Water Leak Detection

- 24/7 water flow monitoring with automatic shutoff if settings are exceeded
- All Leak Defense units can be monitored from one convenient dashboard
- Mobile App enables remote water monitoring and control for multiple systems

KEY FEATURES:

> Point-of-leak detectors can be placed in high risk and hard-to-access areas
> Water can be shut off at selected zones or for the entire building
> Onsite Control Panel does not require Wi-Fi

Partnering with Watts

Aligning & Adapting with Your Evolving Data Center Needs

Broad Material Capabilities for Direct-to-Chip & Immersion Cooling

- Iron, Brass, Bronze, and Stainless Steel

High Purity Piping Solutions

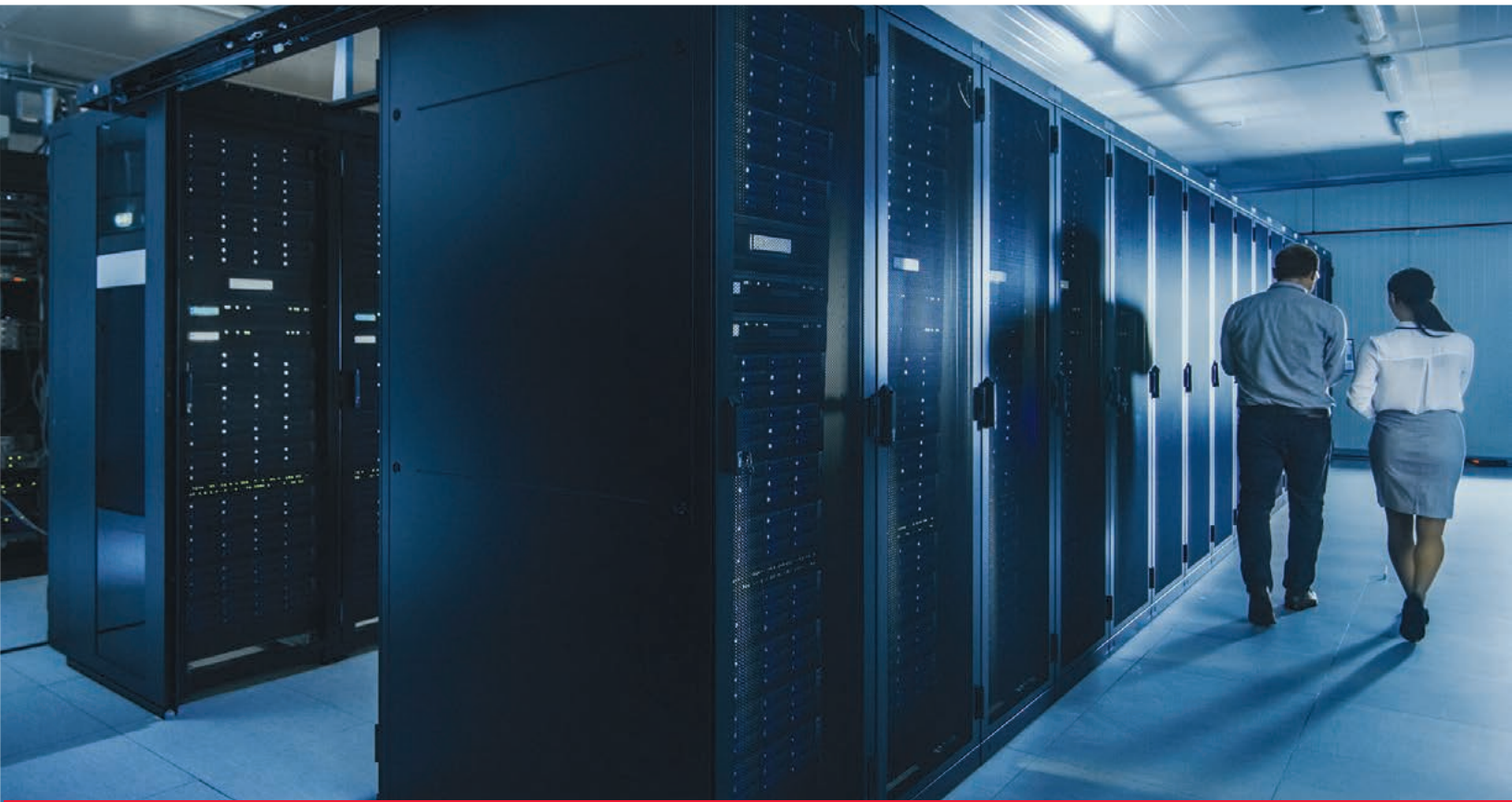
- Compatible with precision cooling & process water systems

Modular and Scalable Designs

- Flexible configurations for various project specifications

Global Supply Chain Strength & Simplified Management

- Worldwide manufacturing and distribution – consistent availability & on-time delivery
- Integrated supply chain solutions – customizable programs to enhance construction efficiency
- Global presence – ensures seamless support for your projects



Localized Rep Network Expertise

Quick response times & alignment with local requirements

Extensive Planning, Design & Spec Tools

Object/Spec libraries, 3D modeling, calculators & more

Industry Leading Education

Instructor-led training, online training, and CEU webinars

WATTS®

Learn More About Our Process Cooling Solutions

Watts.com/Solutions/Data-Centers/Process-Cooling

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