

# GATES DATA CENTER COOLING SOLUTIONS

### STAY AHEAD OF THE GAME WITH ADVANCED COOLING SOLUTIONS

The amount of power needed to process the large quantities of data for AI technologies and cloud computing generates a significant amount of heat. This requires robust cooling systems to maintain optimal performance.

As data centers expand, the combined heat produced by densely packed servers and networking equipment can reach critical levels. Gates is leading the way in developing cutting-edge solutions to provide superior heat management and meet those growing demands.

#### THE GATES DIFFERENCE

- Experts in thermal management, materials science, and fluid conveyance in critical applications
- Family of zinc-free, peroxide-cured EPDM data center hoses specifically designed for cleanliness and flexibility
- Compact and efficient electric water pumps provide a higher power-to volume ratio
- Reliability and quality are designed into our products to maximize uptime
- High-efficiency, customizable solutions that scale to your needs

# DISCOVER THE ULTIMATE IN COOLING TECHNOLOGY

### GATES DATA MASTER<sup>®</sup> HOSES

The Data Master Family of Hoses offers cooling solutions designed to meet the demanding needs of modern data centers. Data Master and Data Master MegaFlex<sup>®</sup> are engineered for superior heat management and made to deliver superior flow and minimal maintenance. Whether you need flexibility for complex configurations, durability for high-density environments, or faster liquid cooling, Gates has you covered.

### DATA CENTER COOLING APPLICATIONS

- High-density server cooling
- Large-scale cloud computing facilities
- Edge computing and modular data centers
- Supercomputing and AI applications



CLEANER SYSTEMS

Zinc-free peroxide-cured EPDM tube to avoid fluid contamination over time

FLAME RESISTANT UL94V-0 certified and tested to UL224 VW-1 standards



SUPERIOR FLEXIBILITY For easier routing and installation



coolant mixes, including

PG25

COOLANT COMPATIBLE OZONE-RESISTANT Built for a wide range of Excellent ozone resistance



to cover degradation from

electronics

Səin ...

PROPRIETARY TECHNOLOGY

GATES

Data Madro

Gates MegaFlex cover and our zinc-free, peroxide-cured EPDM tube materials



### THE SCIENCE OF COOL: ZINC-FREE PEROXIDE-CURED EPDM

- Faster cooling flow: Optimized design and materials allow for rapid heat dissipation
- Debris-free: Prevents the buildup of contaminants, reducing the risk of blockages
- Reduced maintenance: Minimizes the need for frequent replacements, reducing downtime and operational costs

### DIFFERENT COLORS FOR DIFFERENT APPLICATIONS

Data Master hoses are available in **white** as a multi-purpose data center hose, **blue** for supply lines, and **red** for return lines. Customize your cooling system for maximum efficiency.



## GATES DATA CENTER COOLING SOLUTIONS

### ELECTRIC WATER PUMP PRODUCT FAMILY



(IN PRODUCTION SINCE 2013)

FLOW RATES UP TO ~35 L/MIN



MID POWER 30W - 100W THREE PHASE RADIAL FLUX MOTOR (IN PRODUCTION SINCE 2014)

FLOW RATE

FLOW RATES > 35 L/MIN



HIGH POWER > 100 W THREE PHASE AXIAL FLUX MOTOR (IN PRODUCTION SINCE 2021)

ELECTRIC WATER PUMP LINEUP					
	12-20W PLATFORM	30-50W PLATFORM	50-100W PLATFORM	100-150W PLATFORM	100W-7000W PLATFORM
Motor	Single Phase BLDC Motor (Radial Flux)	Three Phase BLDC Motor (Radial Flux)	Three Phase BLDC Motor (Radial Flux)	Three Phase BLDC Motor (Radial Flux)	Three Phase BLDC Motor (Axial Flux)
Control strategy	IO PWM REVERSE CONNECTION	PWM,LIN,CAN PROTECTION FUNCTIONS BUS voltage Over temperature Reverse connection Over current No load and over load Locked rotor	PWM,LIN,CAN PROTECTION FUNCTIONS BUS voltage Over temperature Reverse connection Over current No load and over load Locked rotor	PWM,LIN,CAN PROTECTION FUNCTIONS BUS voltage Over temperature Reverse connection Over current No load and over load Locked rotor	PWM,LIN,CAN PROTECTION FUNCTIONS: BUS voltage Over temperature Reverse connection Over current No load and over load Locked rotor
Coolant temperature	-40°F to +184°F (-40°C to +120°C)				
Ambient temperature	-40°F to +209°F (-40°C to +135°C)				
Features and benefits	<ul> <li>DC brushless motor</li> <li>Low power consumption</li> <li>Low noise</li> <li>Good damping effect</li> <li>Easy to install</li> </ul>	<ul> <li>DC brushless motor</li> <li>FOC control, high efficiency</li> <li>Low noise</li> <li>Large scalability</li> <li>Easy to install</li> </ul>	<ul> <li>DC brushless motor</li> <li>FOC control, high efficiency</li> <li>Low noise</li> <li>Large scalability</li> <li>Low temperature rise</li> <li>Easy to install</li> </ul>	<ul> <li>DC brushless motor</li> <li>FOC control, high efficiency</li> <li>Low noise</li> <li>Large scalability</li> <li>Low temperature rise</li> <li>Easy to install</li> </ul>	

### THERMAL-FORMED NYLON TUBING SOLUTIONS

Gates offers several options of smaller profile, custom thermalmolded nylon tubing in alternate colors for tight routings.

### OIL-BASED AND LARGE I.D. HOSE SOLUTIONS

Gates offers a wide variety of fluid conveyance solutions to meet data center requirements, including oil-based solutions compatible with dielectric oil and flexible larger diameter solutions.





# GATES POWER TRANSMISSION **PRODUCT FAMILY**

#### QUAD-POWER<sup>™</sup> 4

A premium maintenance-free premium V-belt that delivers unmatched power density, fitting into compact spaces while driving fans, pumps, and compressors with up to 98% total power efficiency.

With Gates Quad-Power 4, you're investing in a long-lasting solution that eliminates retensioning downtime and reduces replacement cycles, allowing your team to focus on the job without interruptions.





MAINTENANCE-FREE Superior products remove

the need to retension the belt drive after installation



ETHYLENE ELASTOMER (EE) EE rubber compound ensures long-lasting performance and wear-resistance



for an extended lifespan in extreme conditions





Prevents damage to

equipment in sensitive

environments



OIL-RESISTANT

Made to withstand temporary

contact with oil without

being damaged



I FNGTH-MATCHING

Superior belt tolerance allows multiple belts to be installed on the same drive

#### POLY CHAIN® GT<sup>™</sup> CARBON<sup>™</sup>

When your data center faces peak operational demands, Poly Chain GT Carbon synchronous belts handle the heaviest loads with ease. Ideal for demanding applications such as hightorque HVAC systems and large-scale coolant pumps. The patented use of carbon fiber tensile cord provides increased horsepower rating for greater power density and compactness.





MAINTENANCE-FREE

Superior products remove the need to retension the belt drive after installation



DURABLE CONSTRUCTION Polyurethane materials that resist chemicals, oil, pollutants and abrasion



CARBON TENSILE CORD

Robust cord combines minimal stretch with strength and load-carrying capacity



TEMPERATURE-RESISTANT

Wide temperature range:

-65°F to +185°F (-54°C

to +85°C)



LUBRICATION-FREE Nylon tooth facing reduces friction and eliminates the need for lubrication



GT TOOTH PROFILE

Provides high shear strength and improved load carrying capacity



LICK OR SCAN TO **EXPLORE MORE DATA CENTER COOLING SYSTEMS** 

**ASK YOUR GATES** REPRESENTATIVE FOR **MORE INFORMATION** 

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