

# 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 cuttingedge 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™ 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 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 Al applications



#### **CLEANER SYSTEMS**

Choose Data Master's 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 COMPATIBLE** 

Built for a wide range of coolant mixes, including PG25



OZONE-RESISTANT

Excellent ozone resistance to cover degradation from electronics



PROPRIETARY TECHNOLOGY

Data Master MegaFlex's cover material increases flexibility on our large diameter hose options



## 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**

FLOW RATES UP TO ~20 L/MIN



EFFICIENCY

LOW POWER < 30W SINGLE PHASE RADIAL FLUX MOTOR

(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 RATES > 35 L/MIN



HIGH POWER > 100 W
THREE PHASE AXIAL FLUX MOTOR

(IN PRODUCTION SINCE 2021)

FLOW RATE

THERMALPRO ELECTRIC WATER PUMP LINEUP				
	12-30W PLATFORM	30-100W PLATFORM	100-350W PLATFORM	100-7000W PLATFORM
Motor	Single Phase BLDC Motor RADIAL FLUX	Three Phase BLDC Motor RADIAL FLUX	Three Phase BLDC Motor AXIAL 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
Coolant temperature	-40°F to +184°F(-30°C to +70°C)			
Ambient temperature	-40°F to +209°F(-30°C to +50°C)			
Features and benefits	<ul> <li>DC brushless motor</li> <li>Good damping effect</li> <li>Low power consumption</li> <li>Low noise</li> <li>Easy to install</li> </ul>	<ul> <li>DC brushless motor</li> <li>High efficiency</li> <li>Low noise</li> <li>Large scalability</li> <li>Easy to install</li> </ul>	<ul> <li>DC brushless axial flux motor</li> <li>High efficiency</li> <li>Low noise</li> <li>Large scalability</li> <li>Easy to install</li> </ul>	<ul> <li>DC brushless axial flux motor</li> <li>High efficiency</li> <li>Low noise</li> <li>Large scalability</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™ 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



TEMPERATURE-RESISTANT

Wide temperature range for an extended lifespan in extreme conditions



STATIC-CONDUCTIVE

Prevents damage to equipment in sensitive environments



OIL-RESISTANT

Made to withstand temporary contact with oil without being damaged



LENGTH-MATCHING

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

#### POLY CHAIN® CARBON™ VOLT™

When your data center faces peak operational demands, Poly Chain Carbon Volt synchronous belts handle the heaviest loads with ease. Ideal for demanding applications such as high-torque 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: -54°C to +85°C (-65°F to +185°F)



STATIC-CONDUCTIVE

Prevents damage to equipment in sensitive environments



GT TOOTH PROFILE

Provides high shear strength and improved load carrying capacity



CLICK OR SCAN TO EXPLORE MORE DATA CENTER COOLING SYSTEMS ASK YOUR GATES REPRESENTATIVE FOR MORE INFORMATION

