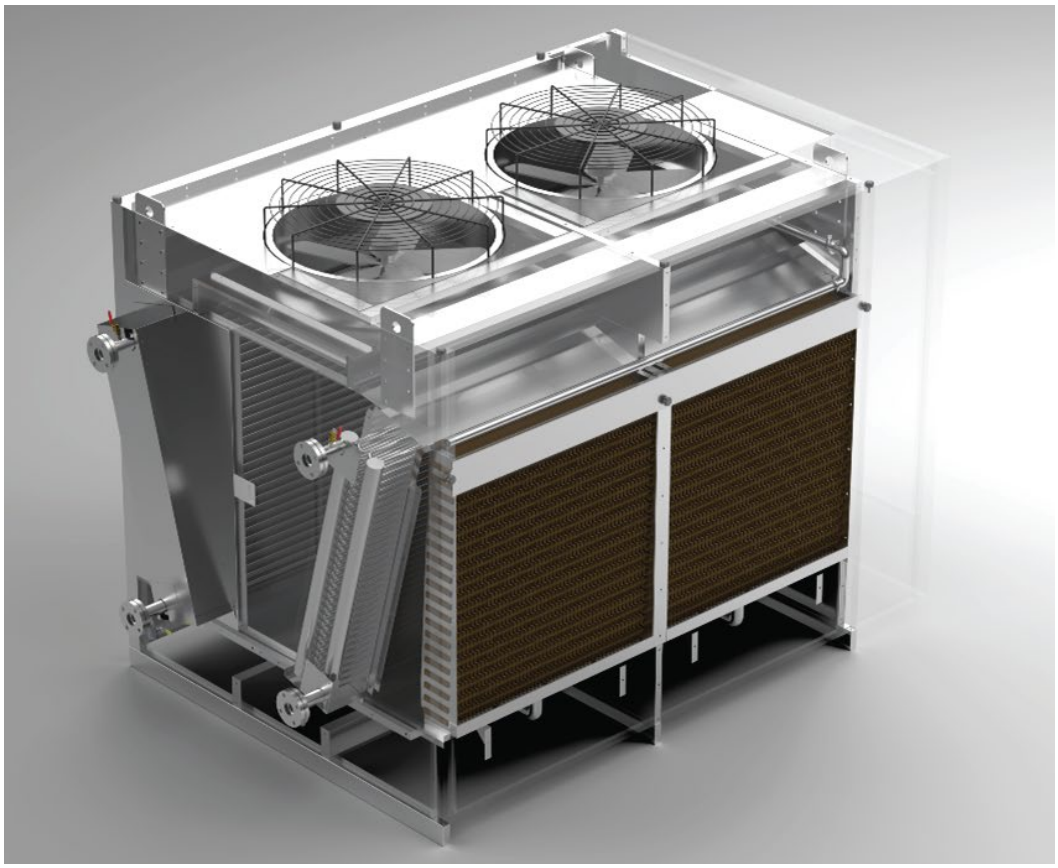
TRUWATER®
... providing solutions to your cooling needs

TRULIQUID

Truliquid Series Adiabatic Cooling Tower

Leading the Cooling Revolution for Liquid Cooling, CDU Loops, and Immersion Setups

Efficient | **Energy-Saving** | **Eco-Friendly** | **Smart**



Tailored for Tropical Climates in Malaysia & Southeast Asia

Over

Years of Pioneering Cooling Solutions

This is the

Truwater Advantage

For more than a quarter-century, Truwater Cooling Towers Sdn Bhd has been at the forefront of cooling innovation. As an ISO 9001 and ISO 14001 certified manufacturer, Truwater specializes in advanced wet and hybrid cooling tower solutions that cater to a wide array of industries, including power generation, petrochemicals, biomass, co-generation, district cooling, data center, and oil and gas.

Truwater's cutting-edge cooling towers constructed from premium materials such as reinforced concrete, pultruded composite FRP, PVC, steel and timber are designed to excel in both cross-flow and counter-flow applications. These versatile systems are meticulously engineered to deliver reliable and high-performance cooling solutions tailored for diverse application.

At Truwater, our unwavering commitment to innovation, reliability and versatility ensures that we remain the trusted choice for cooling excellence. Experience the Truwater difference - where over 25 years of experience converge to redefine the cooling landscape.

Truwater: The Cooling Tower Company with Experience You Can Trust

Our Environmental Commitment

At Truwater, we understand that the environment—Mother Nature's greatest gift—and water, mankind's most vital resource, are essential for life on Earth. Recognizing their importance, we are committed to protecting our fragile ecosystem.

Our efforts focus on three key pillars:

ENERGY EFFICIENCY

Our modern cooling towers are designed to optimize energy use, minimizing electricity consumption and reducing carbon footprints. By integrating energy-efficient motors, fans, and controls, we ensure our solutions are both powerful and sustainable.

EMISSION CONTROL

We take proactive measures to protect the atmosphere by implementing advanced drift eliminators and rigorous chemical treatment protocols. These efforts help minimize the release of harmful substances, keeping our air clean and safe.

MATERIAL SUSTAINABILITY

We prioritize the use of durable, corrosion-resistant, and sustainable materials in the construction of our cooling towers. This reduces the need for frequent replacements, minimizes waste, and lowers the environmental impact over the lifespan of our products.

Our long-term vision guides us as we continue to innovate and refine our cooling towers, ensuring we meet the highest environmental standards for a sustainable future.

Leading the Way in Cooling Solutions Worldwide

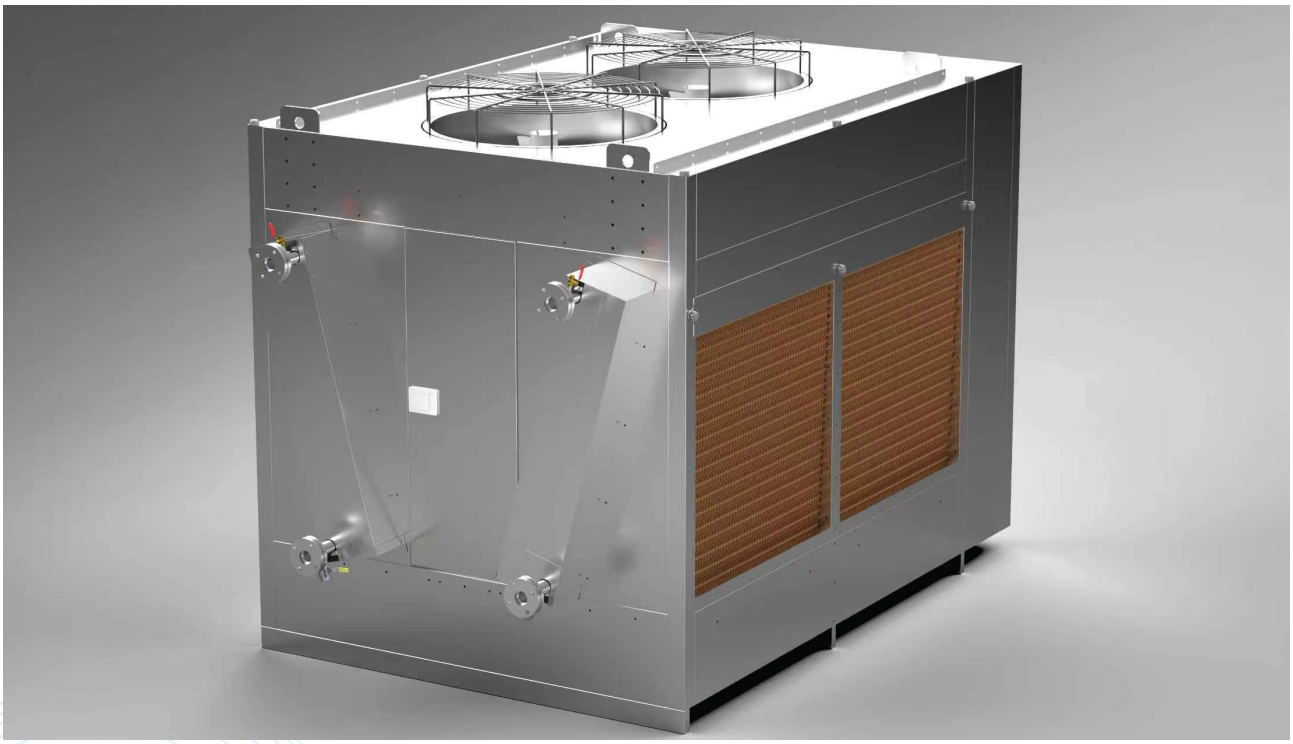
With a commitment to excellence, Truwater has become a leading provider of cooling tower solutions across Southeast Asia and beyond. Our innovative products serve diverse markets, including Malaysia, Thailand, Indonesia, Singapore, Taiwan, Indochina, South Korea, Australia, East Africa, and the Middle East.

Wherever cooling challenges arise, Truwater stands ready with cutting-edge technology and exceptional service, ensuring that every cooling demand is met with excellence.

Truliquid Series
Adiabatic Cooling Tower

Overview

Truliquid Series Adiabatic Cooling Tower is an innovative, high-efficiency cooling unit that combines the advantages of dry and wet cooling. Its intelligent control system automatically switches operation modes based on the ambient wet-bulb temperature, ensuring optimal cooling performance while maximizing water and energy savings. It is particularly suited for tropical climates like Malaysia, characterized by high temperatures and humidity.



Working Principle

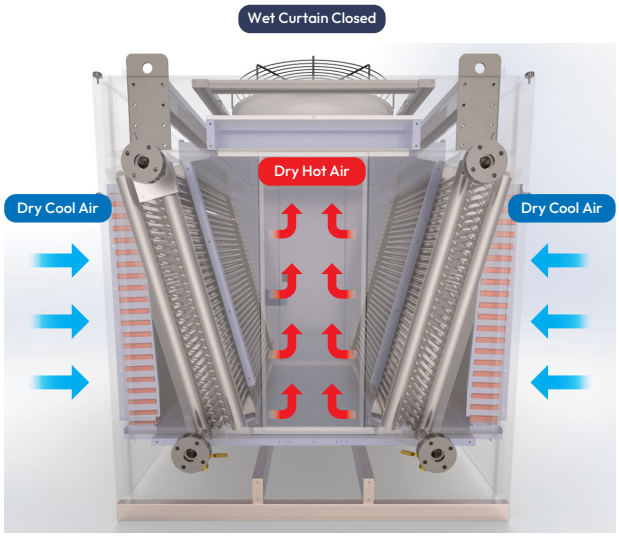
Truliquid Series Adiabatic Cooling Tower is an innovative, high-efficiency cooling unit that combines the advantages of dry and wet cooling. Its intelligent control system automatically switches operation modes based on the ambient wet-bulb temperature, ensuring optimal cooling performance while maximizing water and energy savings. It is particularly suited for tropical climates like Malaysia, characterized by high temperatures and humidity.

Mode 1: Dry Mode (During Lower Ambient Temperature)

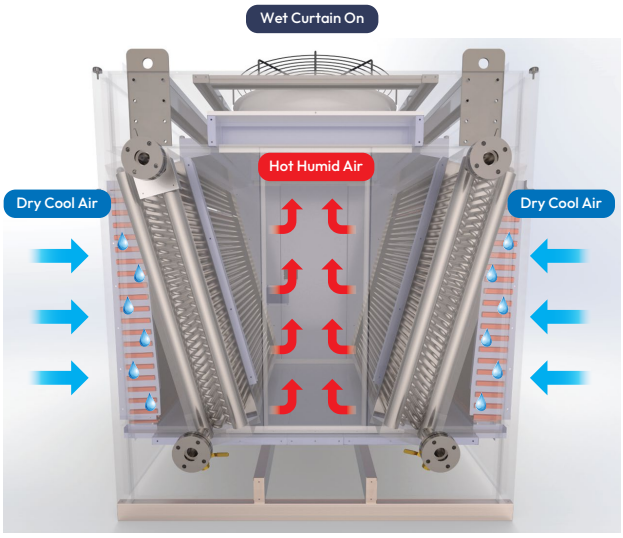
Air passes directly over the finned heat exchanger, removing heat from the process fluid inside the tubes. This process consumes no water, resulting in zero water consumption and no visible plume.

Mode 2: Adiabatic Pre-cooling Mode (During Higher Ambient Temperature)

When ambient temperature rises and dry cooling efficiency decreases, the intelligent system activates the spray system. Water evaporates in a special pre-cooling media pad on the air intake side, absorbing heat and significantly reducing the dry-bulb temperature of the air entering the heat exchanger. This pre-cooled air drastically enhances heat exchange efficiency. This mode uses a minimal amount of water with extremely high efficiency.

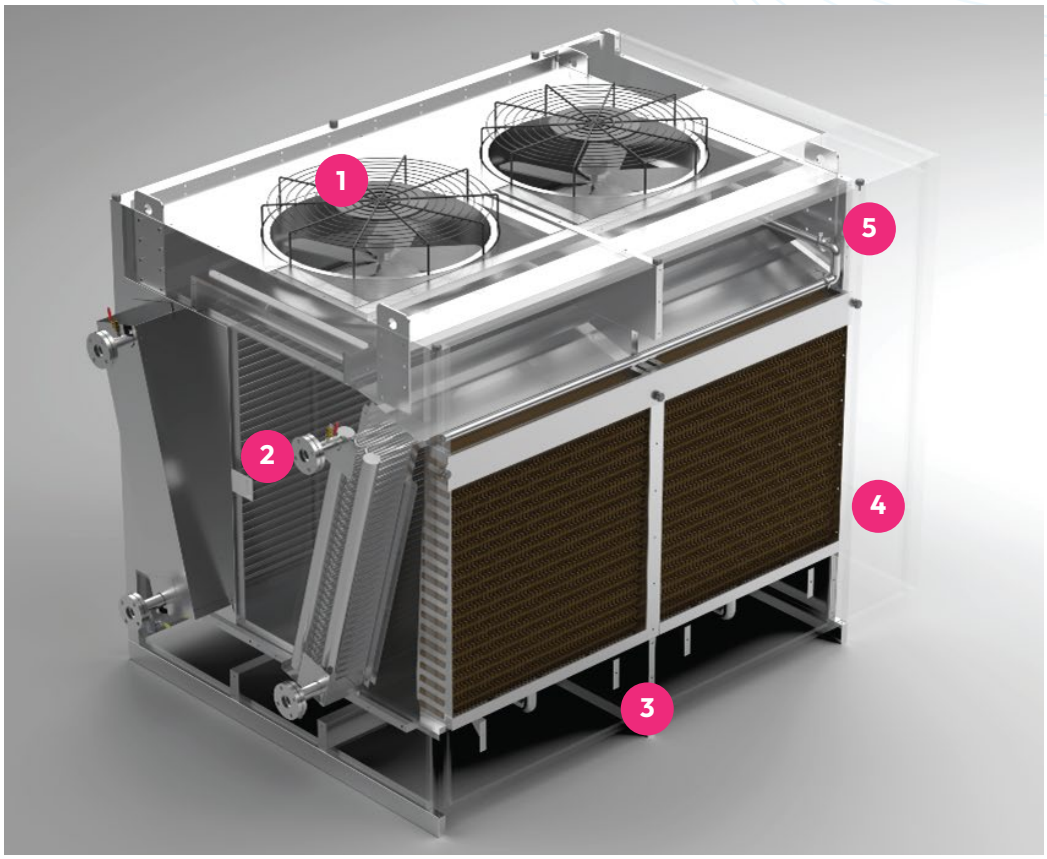


[Diagram: Dry Mode Operation]



[Diagram: Adiabatic Pre-cooling Mode Operation]

Product Structure



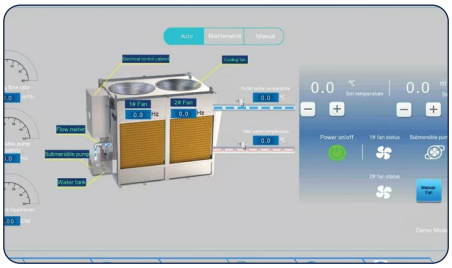
1 **High-Efficiency Low-Noise Fan System**
Features aerodynamically designed airfoil fans and high-efficiency motors, providing stable airflow with low energy consumption and minimal noise.

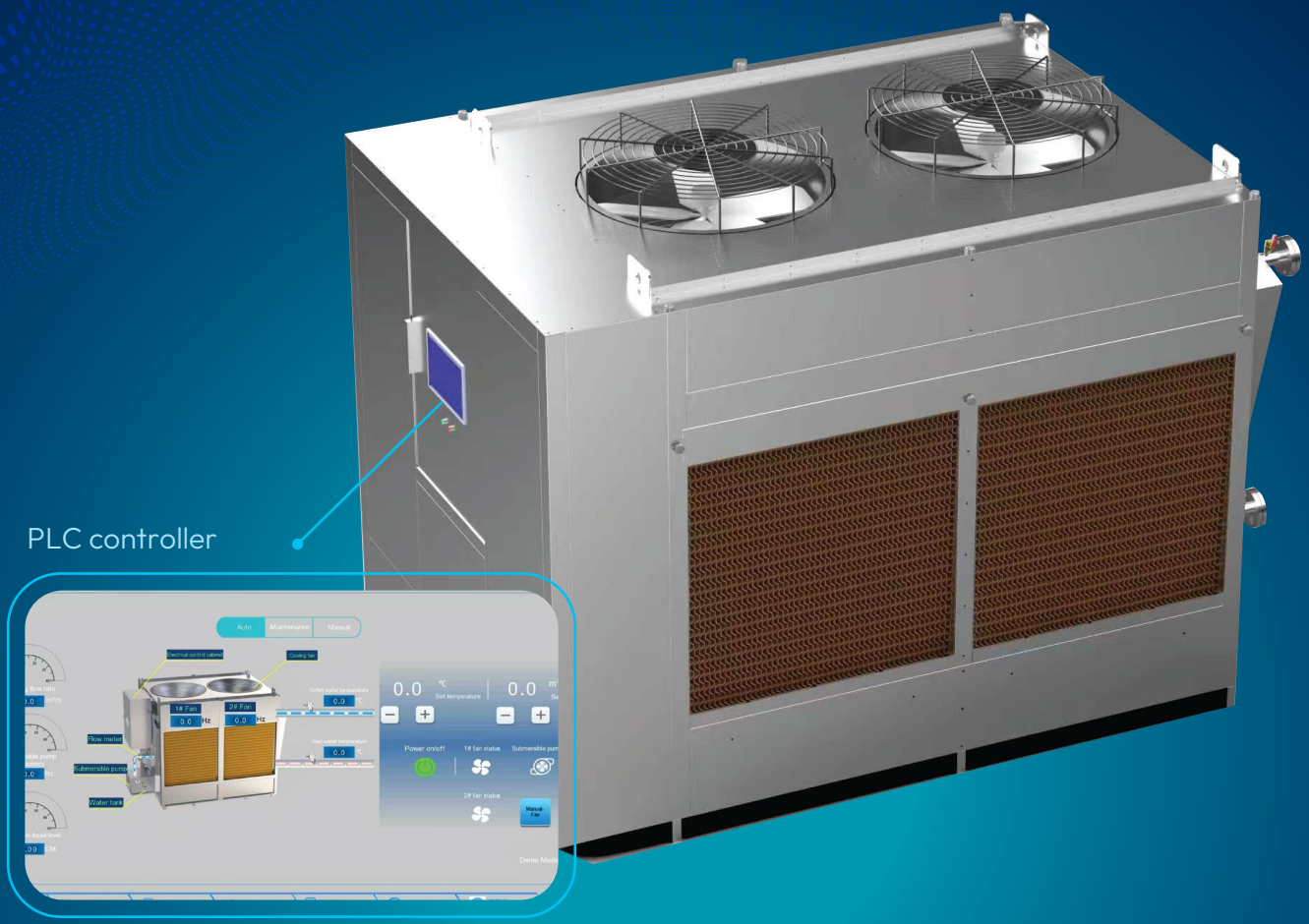
2 **High-Efficiency Finned Tube Heat Exchanger**
The core heat transfer component, made of premium hydrophilic aluminum fins and high-efficiency internal tubes, offers a large heat exchange area with low resistance.

3 **Robust Tower Structure**
Constructed from hot-dip galvanized steel or stainless steel materials, offering exceptional corrosion resistance and adaptability to coastal high-salinity environments, ensuring a long service life.

4 **Adiabatic Pre-cooling System**
Includes a water pump, water distribution system, high-efficiency evaporative fill media, and a water collection pan. Ensures precise spraying, high evaporation efficiency, and significant water savings.

5 **Intelligent Control System**
Equipped with a **PLC controller** that automatically switches operation modes based on preset parameters. Monitors real-time data (water temperature, pressure, energy consumption) and supports remote connectivity.





Smart Control

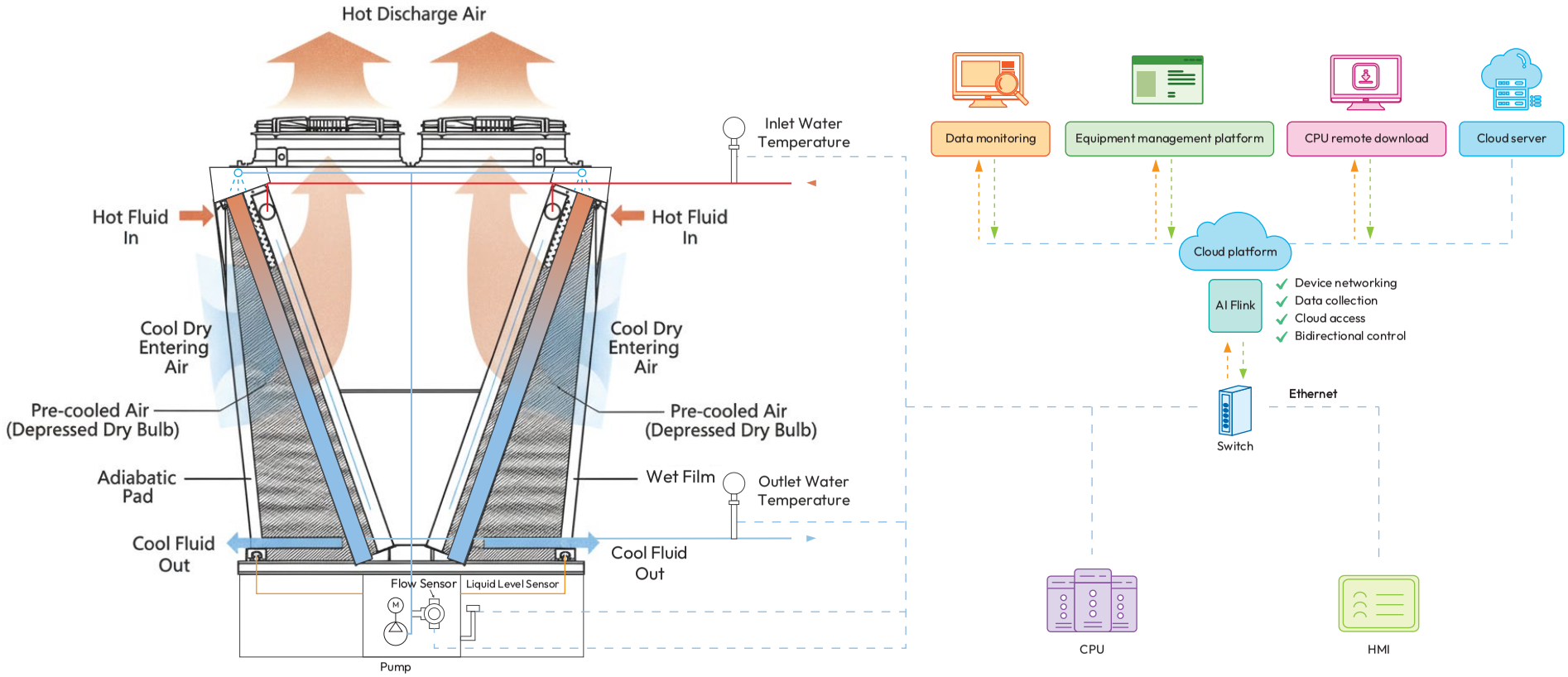
Our intelligent control system combines automatic operation, cloud-based centralized management, and advanced algorithms. It seamlessly adjusts operating modes based on your settings while monitoring water temperature, pressure, and energy consumption in real time—delivering a truly comprehensive smart service.

Greater Efficiency
Intelligent algorithms paired with energy-saving drives help significantly reduce power consumption.

Greater Ease
A clear, intuitive display makes on-site operation and maintenance simple and effortless.

Greater Intelligence
Seamlessly integrates with AI-driven models to create a smarter, more innovative customer experience.

Adiabatic Cooling Tower Logic Diagram



Core Technical Advantages

Ultimate Energy Efficiency

Achieves 30%-50% higher comprehensive energy efficiency compared to traditional open cooling towers. Key factors include zero fan power consumption in dry mode and intelligent mode switching.

Significant Water Savings

Reduces water consumption by over 80%. Only requires minimal water replenishment during high-temperature periods, greatly alleviating pressure in water-scarce regions.

No Visible Plume

Eliminates the white plume (visual pollution) generated by wet cooling towers in cold and humid conditions, meeting environmental requirements.

Low Water Quality Requirements & Easy Maintenance

The process fluid circulates in a closed coil, free from external contamination. Spray water is only used for evaporation, requiring far lower water quality than open towers, with minimal risks of scaling and biofouling, reducing water treatment costs and maintenance frequency.

Strong Adaptability

Specifically optimized for Malaysia's high-temperature and high-humidity climate, ensuring efficient and stable operation year-round.

Long Lifespan & Reliability

Key components feature anti-corrosion designs and robust construction, ensuring long-term reliable performance even in harsh environments.

Application Fields

Industrial Refrigeration

Plastic injection molding, chemical production, food processing, pharmaceuticals, and other process industries.

Commercial Air Conditioning

Large commercial complexes, hospitals, data center cooling systems.

Power Industry

Gas power plants, backup generator cooling for data centers.

Renewable energy

Emerging manufacturing sectors such as photovoltaic polysilicon and lithium battery production

Your Solution Starts Here

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