

www.aeroteche.com



EVOLVES with
PROCESS industry's
Needs...

technology

engineering

project governance

“ Aerotech covers the entire spectrum of process cooling technology. This drives our ability to meet future challenges.”

AEROTECH ENERGY PRIVATE LIMITED is an ISO certified Company, incorporated in 1997, to provide specialized engineering services in energy sector. We are headquartered in Mumbai, Maharashtra. We have manufacturing facilities at WADA, Maharashtra (India). We provide high efficient cooling solution for all power & process industries while assuring cooling water economy and energy efficiency. Our enrich product portfolio ranges from all dry air cooled & water cooled condenser (ACHE & ACC) technologies to all Wet & Dry cooling system, with limitless combination of evaporative add-on solutions in between.

Our specialty in designing & manufacturing & upgrading of all kinds of cooling systems & many FRP products for industrial application.

“The process of cooling industry is changing and AEROTECH is always evolving to match these changing needs.”

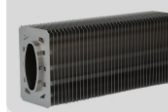


CIRCULAR FINNED TUBE (Aluminium fin)



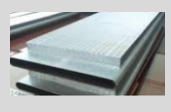
- Provide a larger surface area
- Can achieve the desired cooling capacity
- Reduce the air-side pressure drop, which can improve the overall efficiency
- Performance better in high ambient temperatures.
- Typically have lower maintenance costs compared to other types of condensers.

ELLIPTICAL 2-ROW FINNED TUBE (Aluminium fin)

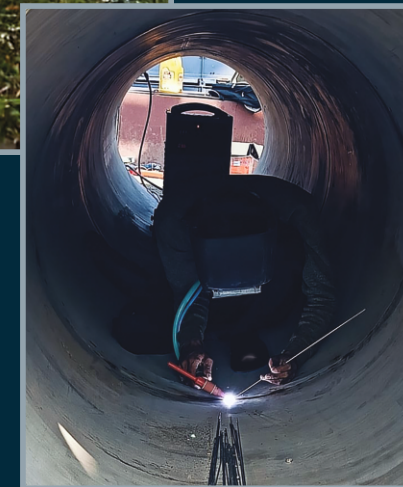


- The elliptical tube design and two-row configuration promote turbulent airflow, leading to improved heat transfer efficiency.
- Allow for a more compact condenser design,
- Minimize airside pressure drop, resulting in lower fan power consumption
- Corrosion resistance, contributing to a longer lifespan.
- Finned tubes can be lighter, reducing structural support

FLAT FINNED TUBE (Aluminium fin)



- Flat finned tube (aluminium fin)
- This results in reduced fan power consumption and lower operating costs.
- The single-row design allows for better air flow and heat dissipation, leading to increased efficiency.
- The simpler design makes it easier to clean and maintain, reducing the risk of fouling and performance degradation.
- They often require less space, making them suitable for installations with limited space.



Design, Engineering, and Procurement Services: Aerotech Energy offers comprehensive design, engineering, procurement and site supervision for systems like ACCs, ACHES WCC, cooling towers and fans ensuring high-quality industrial solutions.

Energy Efficiency and Thermal Upgradation: They provide up to 30% energy savings over conventional fan systems, along with thermal upgrades and performance testing to enhance efficiency.

Refurbishment and Performance Analysis: Specializing in refurbishing equipment like air-cooled condensers and cooling towers, they use CFD and FEA analysis to optimize heat exchanger performance, ensuring long-term reliability and efficiency.

OUR PRODUCT RANGE



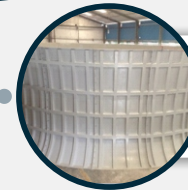
AIR COOLED
STEAM CONDENSER



AIR COOLED
HEAT EXCHANGER



ENERGY
SAVING FANS



COOLING TOWER
REVAMPING



CLOSED CIRCUIT
COOLING TOWER



ADIABATIC AIR
COOLING SYSTEM



WATER COOLED
CONDENSER

Air Cooling Systems

Given the growing socio-environmental challenges and resource deficits, many projects are becoming non-viable, with water scarcity being a major concern. Exploring alternative solutions to minimize water usage is crucial to ensuring project feasibility and sustainability.



Air Cooled Steam Condenser

Dry Cooling Division specializes in design, manufacturing, supply, erection and commissioning for power, chemical, and food processing plants. Single Row Fin-Tube manufactured to precise specifications including pitch, fin height and tube dimensions.

Air Cooled Steam Condenser features tube bundles with Circular / Flat / Elliptical finned tubes and axial flow fans on a "A" or "V" frame structure at 60° angle for efficient cooling at ambient temperature.

Water Cooled Condensers

Aerotech offers a unique combined package solution featuring water-cooled condensers paired with suitable cooling towers. Known for quick & hassle-free installation, these robust long-lasting units provide quiet operation and reliable performance, making them ideal for various industrial process cooling applications



Air Cooled Heat Exchangers

Air Cooled Heat Exchangers reject heat from hot process fluids to the surrounding atmosphere using ambient air as the cooling medium. Air Fin Coolers feature multiple rows of finned tubes and fans to circulate cool air over the tubes, efficiently lowering the temperature of the heated fluid.



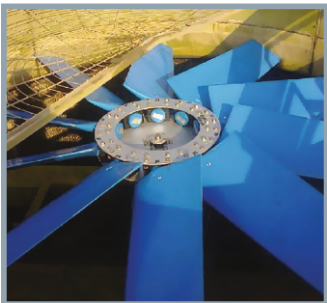
Aerodynamically Designed Energy Efficient FRP Fans



The cost of power has been prompted to the industries look in to equipment to reduce energy consumption with Aerodynamically designed Aerotech make FRP hollow bladed fans for Air Cooled Condenser, Cooling Towers, Air Cooled Heat Exchanger, Ventilation & Entire range of Axial Flow Fans for industrial applications. Unique manufacturing and balancing methodology ensured high quality as well as trouble free operation throughout the life.

Aerotech in-house technology & more than 25 years of experience grant a qualification to the industries for reliable source of all our products. In all size with various configuration.

We have already replaced more than thousands of cooling tower and air cooled condenser fans as well as other type metallic and solid FRP industrial Axial Flow Fans with our Energy Efficient light weight FRP Hollow Bladed Axial Flow Fan Assemblies where clients got advantage of good power saving or improved air flow with existing motor rating.



Cooling Tower Modernization

Cooling towers are designed for specific industrial applications, and not all are suitable for every process. We help you explore the different types of cooling towers, their advantages and disadvantages and guide you in selecting the right one for your needs. Our comprehensive cooling tower and parts lists offer an overview of available options, helping you choose the best tower for your process and identify necessary replacement parts.

- **Cross Flow Cooling Towers**
- **Counter Flow Cooling Towers**
- **Forced Draft & Induced Draft Cooling Towers**
- **Factory Assembled Cooling Towers (FAP)**
- **Field-Erected-Towers (FEP)**

Energy cost savings

Reduction of maintenance costs

Attenuation of sound emissions

Revamping & retrofitting

Cooling Tower Restoration: Technical Analysis and Optimization Solutions

- **Replacement and Repair of Prisoner Components:** This includes components such as fills, drift eliminators, distribution systems and other related elements.
- **Mechanical Equipment Overhaul:** Replacement or repair of mechanical systems aimed at enhancing performance, improving efficiency, reducing noise and simplifying maintenance.
- **Cooling Tower Redesign:** Modifying the cooling tower structure to optimize it for new operating conditions.
- **Comprehensive Structural and Enclosure Repair:** Addressing general repairs to the overall structure and protective enclosures.



Closed Circuit Cooling Tower

In Closed Circuit Cooling Tower, both air and water are used to extract heat from the condensing refrigerant. Evaporative condensers combine the features of a cooling tower and water-cooled condenser in a single unit.

In these condensers, the water is sprayed from top part on a bank of tube carrying the refrigerant and air is induced upwards. There is a thin water film around the condenser tubes from which evaporative cooling takes place. The heat transfer coefficient for evaporative cooling is very large. Hence, the refrigeration system can be operated at low condensing temperatures.

Compared to a traditional cooling tower, an evaporative condenser can potentially save between 50% to 70% on water usage due to its more efficient heat transfer process, resulting in significantly less evaporation needed to achieve the same cooling effect; however, the exact percentage can vary depending on factors like climate, system design and operating conditions.

Adiabatic Cooling System

An adiabatic cooling tower is a closed-circuit cooling system that uses ambient air to cool process water by pre-cooling the air through evaporation, essentially "adding moisture" to the air to lower its temperature, while minimizing water usage compared to traditional cooling towers by only utilizing water when needed during hot weather periods.

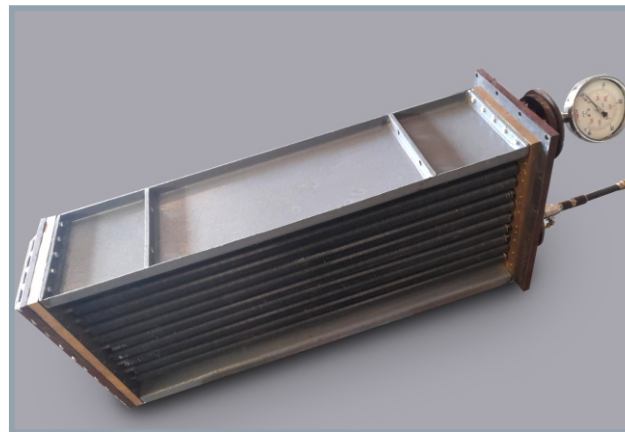
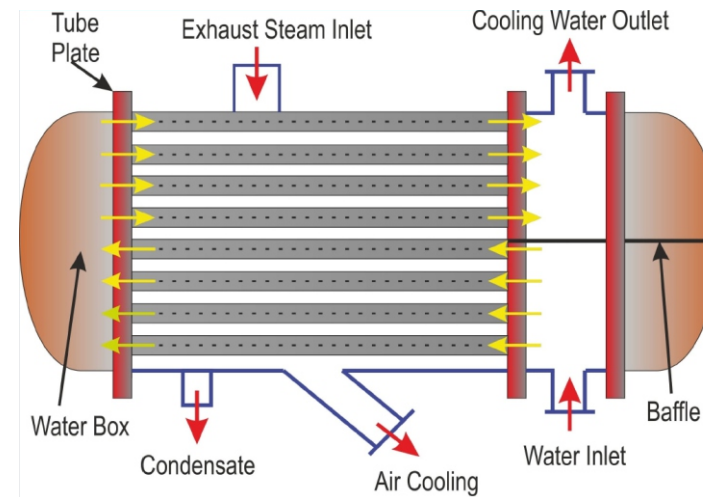
- **Energy-efficient design** reduces power consumption and operational costs.
- **Combines air and water cooling** for optimal heat rejection.
- **Durable construction** with corrosion-resistant materials like stainless steel and coatings.
- **Compact design** saves space and simplifies installation.
- **Low noise operation** for minimal environmental impact.
- **Low maintenance** with easy access to internal components.
- **Environmentally friendly** with reduced water and energy usage.



Water-cooled condenser

Water-cooled condensers are mainly used for heat pumps with large capacity, and it is usually integrated with a cooling tower to dissipate heat into the ambient air. Water-cooled condensers are especially used in situations where the cooling source is located far from the system

A water-cooled condenser is typically manufactured using a "shell and tube" design, where the refrigerant flows through tubes inside a larger shell, while cooling water circulates around the tubes, allowing for efficient heat transfer; the manufacturing process involves cutting and bending tubes, welding them into a tube bundle, then assembling the shell around it, with additional components like baffles and connections added depending on the specific application.



Performance & Technology

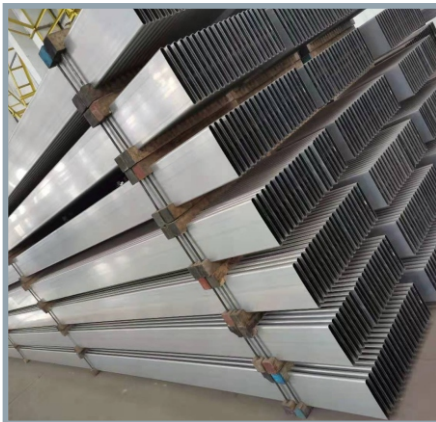
Over the years, Aerotech has honed its expertise in designing Air Cooled Condensers, Cooling Towers and energy-efficient thermal systems, transforming underperforming conventional systems with advanced fans and heat transfer solutions. The company's strength lies in effectively addressing unique challenges related to ACC and CT systems. Aerotech delivers fully customized designs tailored to meet the specific needs of each client, leveraging state-of-the-art software for precise and reliable engineering solutions. Dedicated to continuous innovation, Aerotech constantly refines both its design processes and manufacturing technologies to ensure superior performance and long-term reliability.

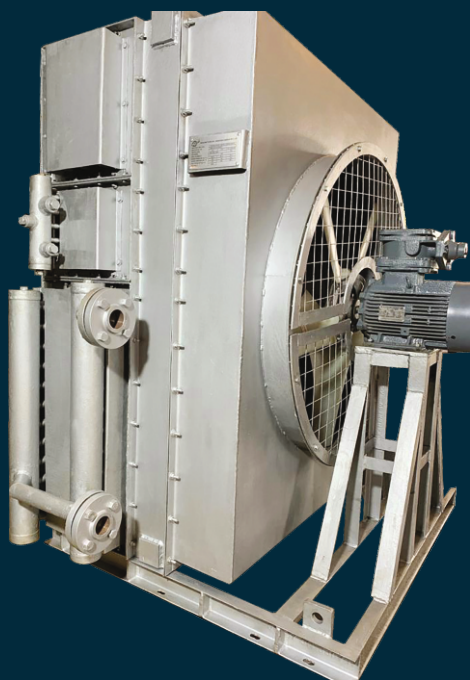
Quality & Safety

Aerotech products are crafted with a strong focus on quality, ensuring reliable performance even under the most demanding operating conditions for years after installation. We prioritize exceptional design and construction, applying rigorous quality management at every stage. Our unwavering commitment to quality is the cornerstone of our organization, driving excellence in every product we deliver.

"Aerotech Quality & Safety is the important aspect in our production line. We have implemented and maintained a standard for every process of production and installation".

In fact **"Aerotech"** Products are supplied and installed all over India and Overseas, making us the biggest as well as the best manufacturer of cooling system.



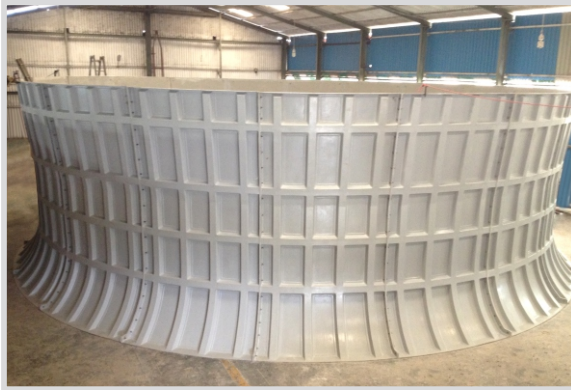


Global Clientele

						
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Domestic Clientele



Our Global Reach



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