

VOLGA – HVAC.™ Cooling Tower Series

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VOLGA – HVAC ®

VOLGA – HVAC ® COOLING TECHNOLOGIES

ALSHEHRI INTERNATIONAL GROUP are leading suppliers and Manufacturers of all types of cooling towers in Saudi Arabia & GCC Countries, We at VOLGA Cooling Tower having more than 12 years of experience in the field of cooling tower. We are located in Saudi Arabia As Head Office, Hong Kong Branch And In China Guangzhou City We established in the year of 2007 and we are member with Cooling Technology Institute USA (CTI). Our designing and development departments are regularly updated with world standards by CTI membership. VOLGA – HVAC are exporting of cooling towers for all types of industries in Saudi Arabia, GCC Countries, Meddle East & North Africa Area. Corporate Member of CTI USA

(Cooling Technology Institute USA)



VOLGA Closed Circuit Cooling Tower

VOLGA Closed Circuit Cooling Tower

Closed Circuit Cooling Tower

VOLGA - HVAC/ MOHAMMAD ALSHEHRI GROUP is leading Closed Circuit Cooling Tower Manufacturer/ Supplier IN Saudi Arabia, GCC Countries, Middle East & North Africa. We also Cooling tower Manufacturer in China (SOON). Closed circuit cooling tower just like the open type, this type of heat exchangers are mostly in the huge industries. We manufacture two types of closed circuit cooling tower and combined flow and counterflow cooling tower. Closed Circuit Cooling Tower is suitable for Thermal Power Plants. Closed Circuit cooling tower certain processes need a closed loop, that's why the process water for cooling does not come in make contact with the full of atmospheric air. Closed loop type cooling is minimized process fouling.

Types of Closed Circuit Cooling Tower

- Combined Flow
- Counter Flow

We may well include various percent of the cooling water from the available water resources to the closed circuit cooling system and we are able to decrease the cooling tower size.

Mixing ration means the percentage of the added water. If our mixing ratio is zero, it is called an absolutely closed system. When the mixing ratio is 100%, it is called an open system.

Closed Circuit Cooling Tower Water Temp.

Closed Circuit Cooling Towers are accomplished of incoming fluid temperatures as high as 180°F (82.2°C),.

Closed Circuit Cooling Tower Design

Our Closed Circuit Cooling System gives completely rated thermal presentation, which also by yourself verified over special types of flow and high-temperature requirements. Closed Circuit Cooling Towers are high efficiency and water saving.

VOLGA - HVAC / MOHAMMAD ALSHEHRI GROUP.

SAUDI ARABIA.

ALSHEHRI INTERNATIONAL GROUP.

HONG KONG / CHINA

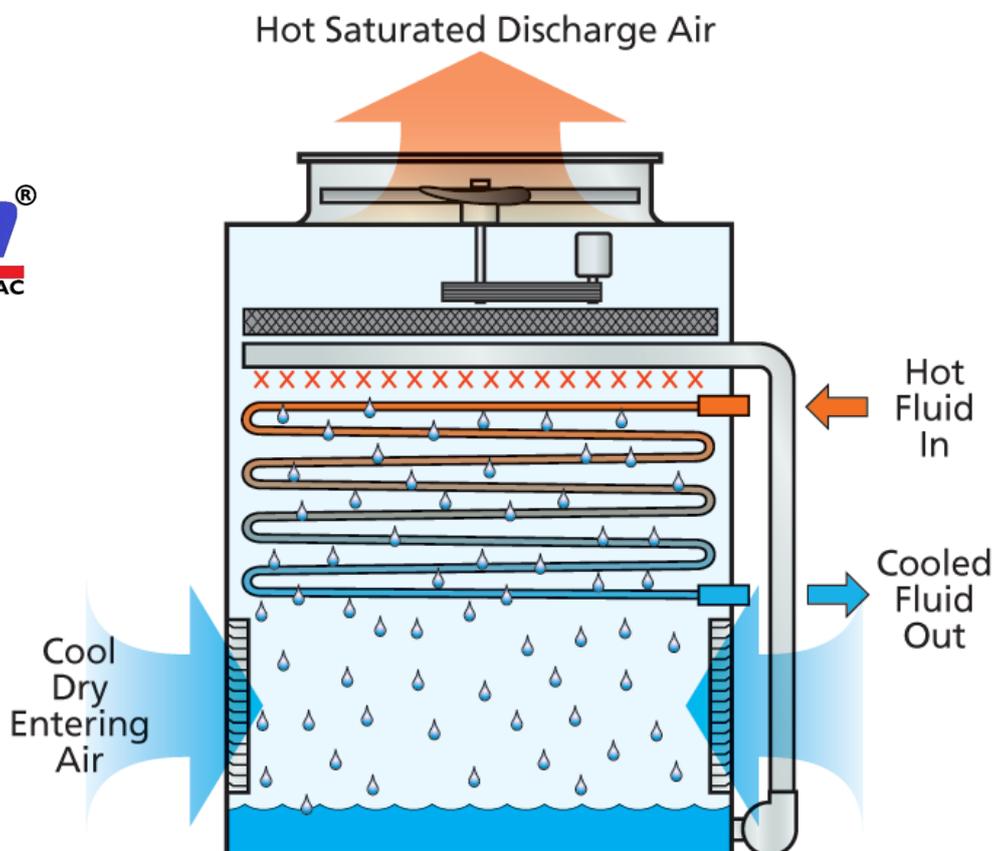
VOLGA Closed Circuit Cooling Tower

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VOLGA RCC Cooling Tower

VOLGA - HVAC Cooling Tower as a one of the leading Supplier of RCC Cooling Tower and all types of industrial cooling tower and also we are member with CTI (Cooling Technology Institute USA). VOLGA - HVAC I ALSHEHRI GROUP offers the high quality Counterflow and Cross flow cooling tower design with RCC Cooling Tower for huge level and various applications. Plastic and concrete fills are additional with the purpose of makes the tower extra heavy-duty.

The RCC Cooling Towers are mostly used by the following industries, Engineering industries, Huge industry Plants, Power Plants, Chemical Processing Industries are used this type of cooling tower and etc.

Specification of RCC Cooling Tower

- Range of our RCC Cooling Tower Capacity 200CuM/hr. to 3500 CuM/hr. per cell
- Package type (Range from 5TR to 500TR).
- High effectiveness mechanicals such as gear boxes, axial flow fans and drive shafts.
- Spiral Bevel type Gear.
- Higher capacities are offered in multi cell production.
- Available sizes are 1Cell to Many cells.
- Privileged capacities are offered in multi cell production.
- Wood used can be preferred by the customers
- Types : Cross Flow and Counter Flow.

Features of VOLGA Saudi RCC Cooling Tower

- We manufactured Cross flow type and Counter Flow Type cooling towers
- Lower maintenance for this type of cooling tower.

RCC Cooling Tower Design

- We are using latest design technology to manufacturing the RCC cooling tower.
- We design and developed the cross flow and counter flow type for specific requirements.
- We are Structural and standard design of RCC Cooling Tower in the market.
- Our new special design makes it a less important maintained rotary sprinklers or tiny nozzles.

RCC Cooling Tower at Power Plant: For All types of power plants we offer our rcc cooling tower. The RCC Cooling Towers are mostly used in the power plants. we offer you to go for RCC Cooling Tower for your thermal power plants.

Types of RCC Cooling Tower

- Cross Flow Cooling Tower
- Counter Flow Cooling Tower

Capacity of RCC Cooling Tower

- Capacity Available : 500 m³/hr to 4,500 m³/hr per cell and upto any capacity in multi cell.
- RCC Cooling Tower Capacity 200CuM/hr. to 3500 CuM/hr. per cell
- JC Equipments has a enormous variety of models to go well with different requirements.

RCC Cooling Tower Applications

- RCC Cooling Tower in Power Plant,
 - Engineering industry plants,
 - Industrial processing units
 - Huge industry Plants,
 - Steel Manufacturing industry plants
 - Power Plants,
 - Cement factory industries,
 - Chemical Processing
- Industries are used this type of cooling tower



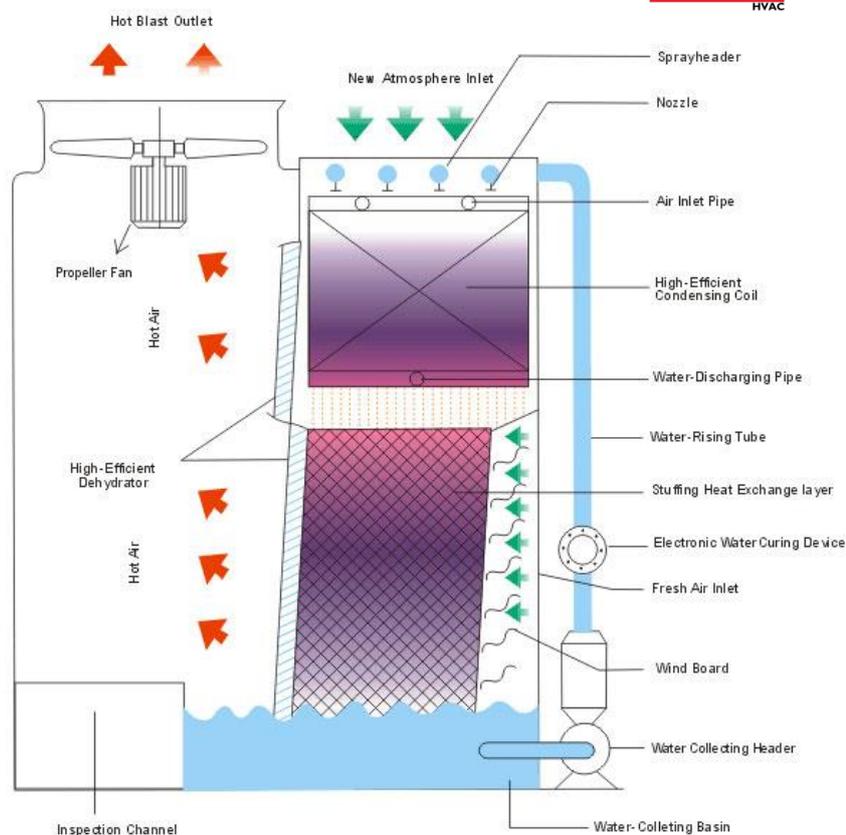
VOLGA Evaporative Condenser

Evaporative Condenser

VOLGA - HVAC Series Evaporative Condenser – Saudi Arabia - uses water and air as cooling medium. The cooling medium exchanges the heat with high-heat gaseous refrigerant medium and hence the refrigerant medium becomes liquid. Inside, there are water dispatching system, condensing coils/plate, wet padding heat exchange layer, and dehydrator and so on. Outside, there are water circulating pump, an electronic water-curing device and a propeller fan on the top of condensing coil/plate. The propeller fan strengthens the flow of the air and causes negative pressure inside. When the condenser works, the cooling water is sprayed from water dispatching system to the surface of condensing coils/plate equably to form a thin layer of water film. The high-heat steam of refrigerant medium enters from the top of condensing coil/plate and then the cooled liquid refrigerant medium is discharged from the bottom of the condensing coil/plate. During this process, high-heat refrigerant medium exchanges the heat with the water and air outside the coil/plate and increases the efficiency of medium exchange with the help of wind. After absorbing the heat of refrigerant medium, some water turns into steam and is discharged by propeller fan. Meanwhile, the moisture in the air is collected by dehydrator to collecting basin, and then the non-gasified cooling water flows into heat exchange layer and its heat is taken away by the airflow. The cooled water converges in the basin to be used circularly by the pump later. In addition, there is a ball cock in the basin. When the water is consumed to a certain point, the ball cock will automatically open to replenish the cooling water.



Chart of Operation Principle



Why Dry Cooling Tower?

- Dry cooling tower be able to a great extent speed up the Planning approvals process.
- Options are ever-increasing expenditure premiums are falling.
- Preservation expenses a great deal reduced
- Legislation is able to protect water provisions to power stations in droughts
- **Dry Cooling Tower Benefits are:** Very economical in cost, Conserving significant amount of water, Minimizing environmental impact.

Dry Cooling Tower Design

- VOLGA SAUDI COOLING TOWER are designed and developed with to work with any size for various industries.
- VOLGA SAUDI Dry Cooling Tower designing department is routine updated with world standards according to the International Standards designing by CTI membership.
- Dry Cooling Tower Designing teams are technically qualified of engineer with facility to meet various application need.

Applications of Dry Cooling Tower

- Dry Cooling Tower used for air compressor
- Lots power plants are using the Dry Cooling Tower
- Steel manufacturing industries are used Dry Cooling System
- Dry cooling towers for geothermal power plants
- Diesel Power Plants are using this type of cooling tower

Advantages of Dry Cooling Tower

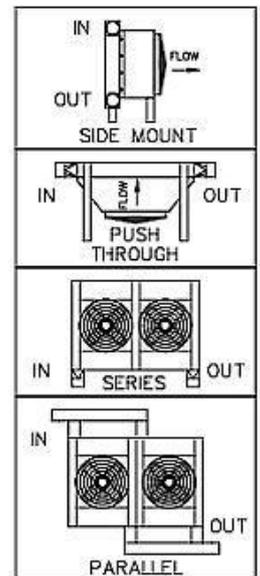
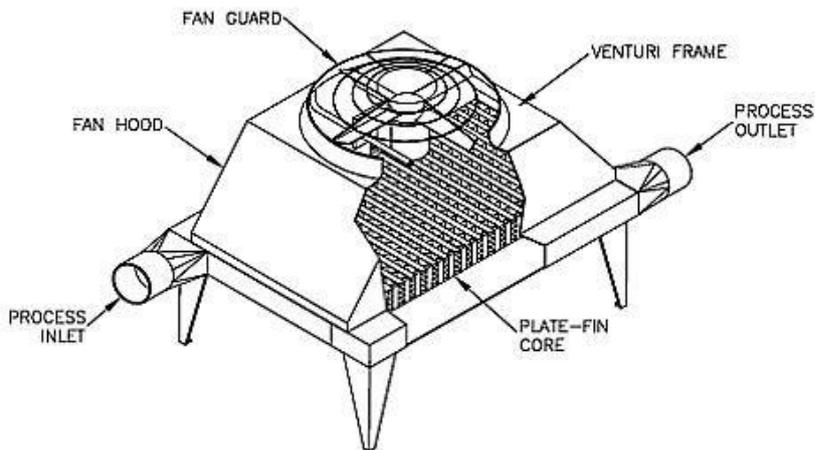
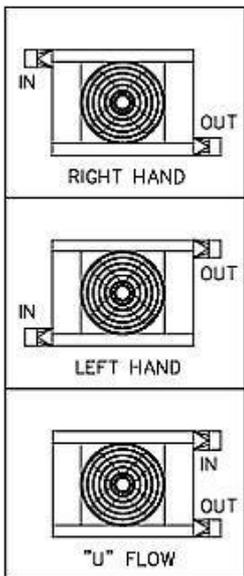
- No water consumption in this type of Dry Cooling Tower System because the air does not in a straight line contact between the water.
- This cooling tower efficacy ensures minimum ecological impact
- A huge of water gets conserved on using dry cooling towers.
- Less water resources and greater than before water pollutions concerns have led to explosive development of Dry Cooling worldwide

How to Design Dry Cooling Tower?

We are designing the dry cooling tower as per the client requirements and we in Our Head Office In Hong Kong - cooling tower industry Division We have well designed and develop the timber cooling tower for various industries. Our designing department is updated and very qualified engineers with designing knowledge and designing standards by cooling tower technology.

VOLGA Dry Cooling Tower

Dry Cooling Tower



VOLGA - HVAC, FRP Bottle Shape Cooling Tower

(or)

FRP Bottle Type Cooling Tower

The Round Shape FRP Cooling Tower may call as Bottle Shape . The casing and basins are .designed to withstand severe vibration, high wind load and to resist corrosion

The VOLGA Saudi Cooling Tower FRP Bottle shape Cooling Tower consists of Honeycomb PVC fills and eliminators in a design that maximizes economy and efficiency and directly driven fan and Motor 'Minimum drift Losses'. Uniform distribution of hot water by .rotating arm sprinkler

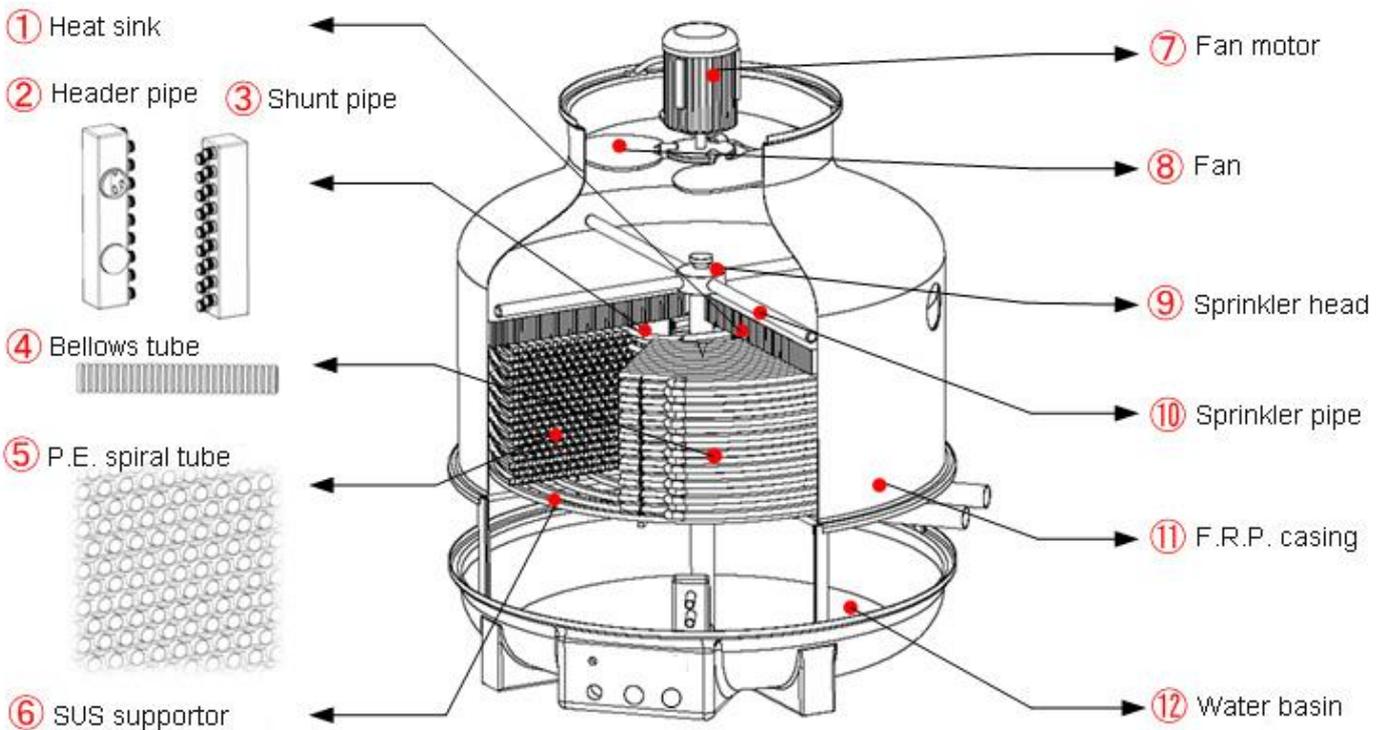
Hot dipped Galvanized hardware to withstand wind forces. The bottle shape makes possible to provide maximum cooling efficiency in minimum plan area with lower energy consumption

Specifications of Bottle Shape FRP Cooling Tower

- **The Ranges are from 10 TR to 10000 TR.**
- **Send your requirement to get our best free quote**
 1. Water flow rate,
 2. Hot water Inlet temperature,
 3. Required cold water Outlet
 4. temperature and
 5. Wetbulb temperature.

FRP Cooling Tower (Bottle Type)

FRP Cooling Tower (Bottle Type)



VOLGA - HVAC, Open Circuit Cooling Twoer

VOLGA – HVAC, Open Circuit Cooling Tower Saudi Arabia. The casing and basins are .designed to withstand severe vibration, high wind load and to resist corrosion

The VOLGA Saudi Cooling Tower Bottle shape Cooling Tower/ NORMAL DESIGN/ TYPE. consists of Honeycomb PVC fills and eliminators in a design that maximizes economy and efficiency and directly driven fan and Motor 'Minimum drift Losses'. Uniform distribution of hot .water by rotating arm sprinkler

Hot dipped Galvanized hardware to withstand wind forces. The bottle shape makes possible to provide maximum cooling efficiency in minimum plan area with lower energy consumption

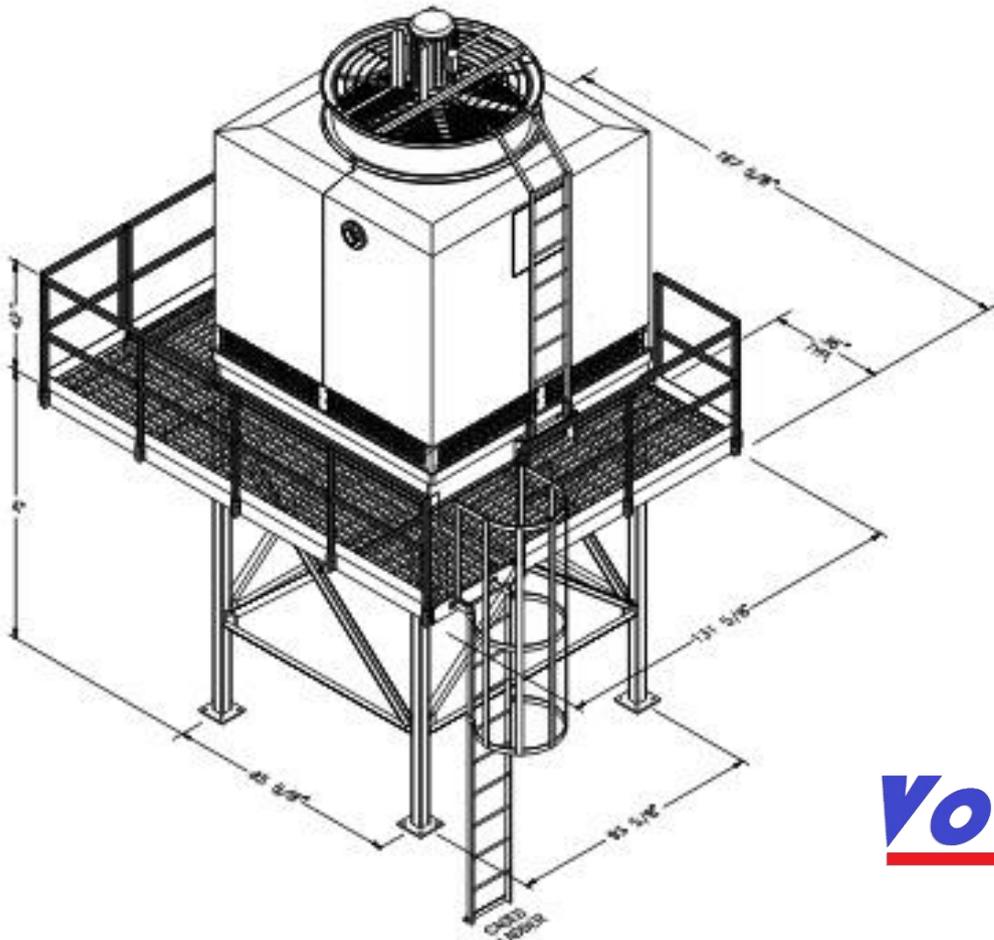
Specifications of Bottle Shape FRP Cooling Tower

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VOLGA Open Circuit Cooling Tower

Open Circuit Cooling Tower

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Motor Fan

Motor Fan For Cooling Tower

VOLGA COOLING TECHNOLOGIES (Volga Saudia) is a Global Supplier, Exporter, and Distributor of Cooling Tower Motors, delivering complete motor solutions to the world's most demanding industries. Our Cooling Tower Motors are approved by the international set of standards.

The Volga Cooling tower applications present extremely harsh environments the fan motors are often installed in 100% humid environments. They are available in Totally Enclosed Air Over enclosures for mounting in the air stream and Totally Enclosed Fan Cooled enclosures for mounting outside the air stream.

We have all kinds of motors for fans of cooling towers of different sizes, capacities. We produce our own cooling towers and supply all parts, components, and components of other cooling towers. We have VOLGA - HVAC motors, and we are sure to try to provide different types and models to meet our customers' demands and give them the ability to choose according to quality and price but we confirm that all our motors and dynamos Competitive quality, please its many sources, as we provide many cooling towers motors American industry and the industry of English and European multiple and we have an Indian industry and Chinese quality and competitive price, In any case, we check the motors and engines of cooling towers in B LED through Volga engineering team and all of our products carry our trusted brand in the field of VOLGA - HVAC cooling towers

We always advise you to choose the best motor engine for Your cooling towers fans In Saudi Arabia So You Can Contact Us Any Times For That.



COOLING TOWER FAN

COOLING TOWER FAN

To ensure the best performance and power consumption, VOLGA - HVAC, SAUDI ARABIA Is a Supplier And Sealer Of All Types Of the Cooling Tower Parts Included Fans special And Specially FRP Fan, (High Quality) which is a highly energy efficient axial product. These fans are specifically designed to meet the demands of cooling towers for all tropical conditions. FRP Energy Efficient Fans are made using quality raw materials and advanced technology to deliver high performance at the lower noise level. We make sure that these fans save up to 25% power as compared to conventional aluminum fans. (We Have Aluminum Fan Also)

Reinforced fiberglass polyester resin provides non-corrosive and shocks absorbent quality to the CT fan blades, which make them withstand the aggressive environment. In addition, it also reduces material cost, installation cost and the possibility of damage to the fan during sudden stops. Delta's FRP fans are electronically balanced on computerized dynamic balancing machines, which ensure maximum outputs on low vibrations.

The adjustable pitch enables the engineers or technicians to alter the pitch angles easily in order to optimize fan performance. The basic criterion of efficient axial flow fan design is uniform velocity over the entire blade area. For this, a fan blade must vary from a thin tip to thick cambered root. The proper combination of the chord (blade width) and angle must be maintained at each point on the blade. These blades are jig-formed to provide the complex contour, which is required for the high aerodynamic efficiency

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Fill Of Cooling Tower All Models

VOLGA cooling tower fill packing media all sizes Rectangle Cooling Tower PVC fills

the reputed organizations, highly engaged in offering an optimum quality range of **Honeycomb PVC Fill** that finds its wide usage in cooling towers. Available in various specifications, and sizes, this fill is widely admired in the market. The provided **Cooling Tower PVC Fill** is perfectly manufactured using best grade polyvinyl chloride and cutting-edge techniques by our diligent professionals at our well-established production unit.

Features:

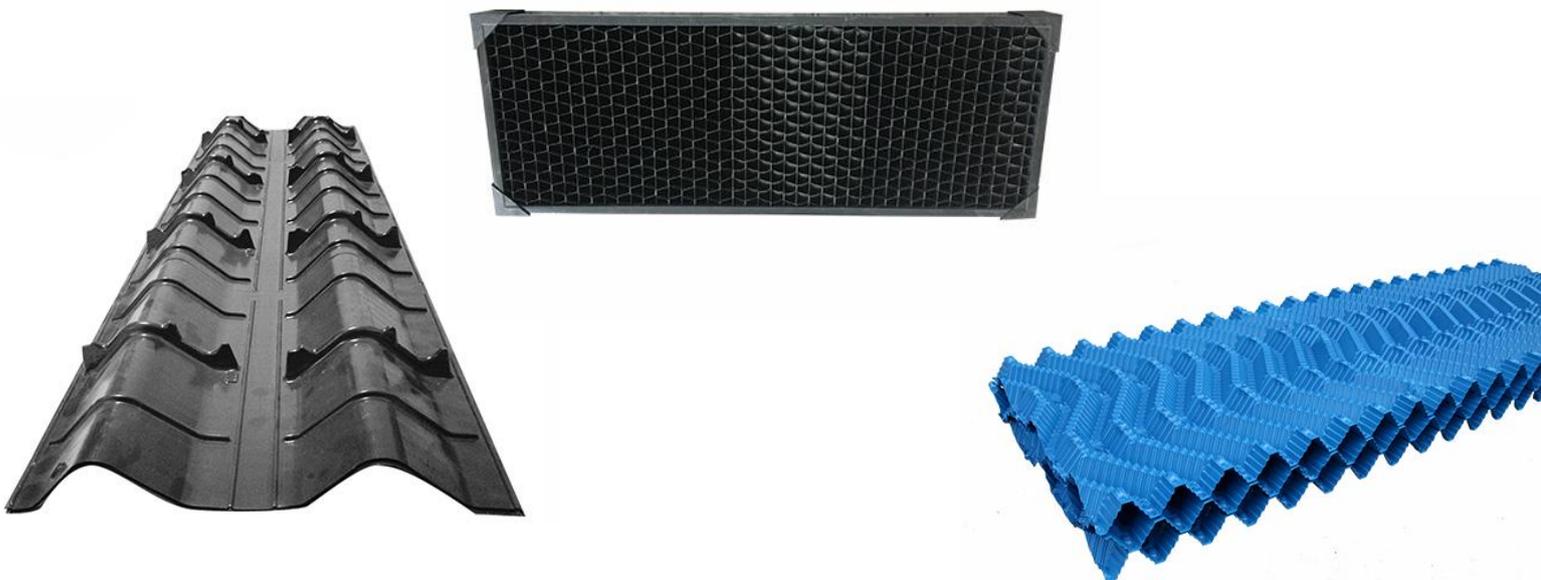
- Long working life
- Withstand with high temperature
- Seamless finish



DRIFT ELIMINATOR PVC

In all different types of cooling towers drift eliminators are used to reduce the loss of water and emissions. Above the water distribution and the cooling fills, a layer of drift eliminators is installed for this purpose. It catches the water drops which are carried away with the air flow and redirects them into the cooling water circuit.

*These values base on the CTI ATC-140 test method (Isokinetic Drift Test Code) and are to be understood as guideline values only. The performance of the drift eliminator is indicated by the ratio drift loss/water flow rate (in % of the circulating water volume). These guideline values based on measurements with a rain density of 20 m³/m²h and an approximate medium air velocity of 3 m/s. To achieve these values, an absolutely tight assembly of drift eliminator elements to each other, to the housing wall and to any openings is required. The face velocity must not be exceeded at any point of the VOLGA SAUDI drift eliminator.



ABS VOLGA spray nozzle for cooling towers

The Spiral Target nozzle is an injection molded polypropylene unit consisting of two parts—the main body with integral target diffuser and a snap-on insert or orifice cap.

The orifice cap is available in 13 diameters ranging from .362 through 1.099. This amount of flexibility allows for a wide range of adjustment in water flow rates and basin water levels.

The Spiral Target nozzle is available in three lengths. The 2.625 nozzle is used on wood, steel, and fiberglass cooling towers where basin support structure does not obstruct the release of water. The 4.875 nozzle is used on larger industrial wood and concrete cooling towers and on applications where clogging might be a concern. The 6.875 nozzle is used on towers where the release of the water has to clear obstructions within the tower structure.

In every application, the target portion of the nozzle should be located at the correct distance above the top of the cooling tower fill to obtain maximum water distribution over the fill area.



Notes

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VOLGA SAUDI COOLING TOWER



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