

The Complete Water Solution



# Motto Tech

## INDUSTRIES PVT. LTD.



*Save Water Save time*

# COMPANY PROFILE

We Offer Precision FRP Cooling Towers, Which is Widely used in Various Industrial Application and water Treatment Chemical in Terms of Quality, Features and Cost.

## ABOUT US

Mottotech Industries Pvt. Ltd. is an acclaimed manufacturer and exporter of FRP cooling Towers and Dealer of Water Treatment Chemicals. We provide compact, light weight, sturdy, durable, reliable and efficient products to meet high standard demanded by users. We also give water treatment solutions for your systems. From product design, application engineering, operation to customer service, we are committed to exceed customer expectations in every area of our business and all this has helped us to achieve maximum degree of customer satisfaction resulting in worldwide customers base. Giving a proper importance to produce qualitative products, we constantly invest in the upgradation of our products, process and system. Today, we are a trusted name when it comes to providing skillfully engineered products that improve productivity and efficiency for industrial applications worldwide. Our wide distribution network and efficient transport facilities ensure the customers of prompt delivery.

## INFRASTRUCTURE

We have installed all the latest and sophisticated machineries at our plant that are handled by highly skilled technocrats and professionals. Our team of engineers have been working in the cooling tower industry for the past several years with an in depth knowledge in Thermal Engineering and its application. They work with the prime objective of providing customer satisfaction.

## OUR QUALITY

The cooling Towers manufactured at our plant are the best in terms of quality features and cost. The products have an unpressurized gravity flow distribution system requiring minimum of maintenance the possibilities of breakdown due to clogging of nozzles or sprinkler hole / breaking of sprinkler head , as experienced in circular cooling towers. Our reasonable priced and zero defect cooling tower have helped us to set exemplary benchmarks in the global market. Our team of quality control inspectors maintain a strict vigilance at all the stages of the production process to guarantee to give the customer of world class product. Our stringent quality control procedures have further established us as one of the most preferred companies satisfying the specific requirements of wide spectrum of customers.

## FEATURES

- Easy Maintenance
- Exclusive one year Warranty
- Vertical Air Discharge
- Superior Louver Design
- Industrial Grade Motors
- Efficient Drift
- Eliminators
- Lower Operating Costs
- Reliable Accessible Components
- Motor and Fan Assembly
- Minimizes Possibility of Re-Circulation
- Eliminates Splash Put, Reduces Algae
- Totally Enclosed Motors Standard
- Solve Water Carryover Problems
- Reduce Water Usable

## PRODUCT RANGE

We are Manufacturer wide Comprehensive Range of Products as per Following type

- FRP Round Shape Induced Draft FRP Cooling Tower Series (5 TR to 300 TR Capacity in Single Cell)
- FRP Square Shape Induced Draft FRP Cooling Tower Series (5 TR to 750 TR Capacity in Single Cell & More Than Multi Cell is Available)
- FRP Cross Flow Cooling Tower Series (20 TR to 300 TR Single Cell & More Than Multicell is Available)
- FRP Fanless Fills Less Natural Draft Cooling Tower (15TR to 2000 TR Capacity)

# ROUND BOTTLE TYPE FRP COOLING TOWER



The Round Shape FRP Cooling Towers Also Called As Bottle Shape Cooling Towers.

The Casing And Basins Are Designed To Withstand Severe Vibrations, High Wind Load And To Resist Corrosion.

The Cooling Towers Consists Of Honey Comb PVC Fills In Design That Maximum Economy And Efficiency And Directly Driven Fan And Motor "minimum Drift Losses" Uniform Distribution Of Hot Water By Rotating Arm Sprinkler.

Hot Dipped Galvanised Hardware To Withstand Wind Forces. The Bottle Shape Makes Possible To Provide Maximum Cooling Efficiency In Minimum Plan Area With Lower Energy Consumption.

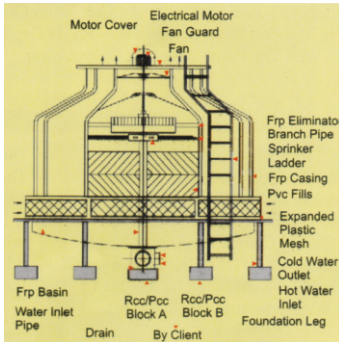
Round Shape Cooling Tower That Performs Under Induced Draft Counter Flow Principle For The Operation.

The Hot Water Enters Through Hot Water Inlet That Passes Through Sprinkler By Perforated Branch Pipe Which Distributes The Water Evenly.

This Water Is Spread Over The Heat Exchange Fills. Then, The Water Flows Downward

As A Thin Film Through The Fill In Direct Contact With Ambient Air Moving Upwards In A Counter Flow Direction.

We Offer Cooling Tower In Rang Of 5 TR To 300 TR Capacities To Cool Water From 3 m<sup>3</sup>/Hr To 200 m<sup>3</sup>/Hr In Range of 8 °C To 10 °C Temperature Difference.



**We Have 15 Models In 5 TR To 300 TR Cooling Tower Capacities.**



**FRP Round Shape Induced Draft FRP Cooling Tower Series  
(5 TR to 300 TR Capacity in Single Cell)**



# SQUARE BOTTLE TYPE FRP COOLING TOWER



The Square Shape Cooling Towers Designed Especially For An Alternative To Round Model For Selection To Our Buyers. The Cooling Towers Consists Of Honey Comb PVC Fills And Eliminators In A Design That Maximizes Economy And Efficiency And Directly Driven Fan And Motor With Spray Nozzles With Minimum Drift Loss.

Hot Dipped Galvanized Hardware With Rectangular Casing Body In Elegant Design.

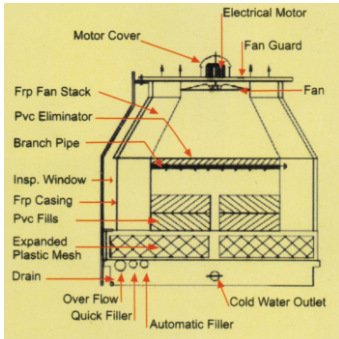
Square Shape Cooling Tower That Performs Under Induced Draft Counter Flow Principle For The Operation.

The Hot Water Enters Through Hot Water Inlet That Passes Through Nozzles Which Distributes The Water Evenly. This Water Is Spread Over The Heat Exchange Fills.

Then The Water Flows Downward As A Thin Film Through The Fill In Direct Contact With Ambient Air Moving Upwards In A Counter Flow Direction.

We Offer Cooling Tower In Rang Of 5 TR To 750 TR Capacities To Cool Water From  $3 \text{ m}^3 / \text{hr}$  To  $450 \text{ m}^3 / \text{hr}$  In Range Of  $8^\circ \text{C}$  To  $10^\circ \text{C}$  Temperature Difference & For More Than We Can Give In Multi Cell Cooling Tower In Any Range.

**We Have 18 Models in 5 TR to 750 TR Cooling Tower Capacities**



**FRP Square Shape Induced Draft FRP Cooling Tower Series (5 TR to 750 TR in Single Cell & more than Multi Cell is Available)**



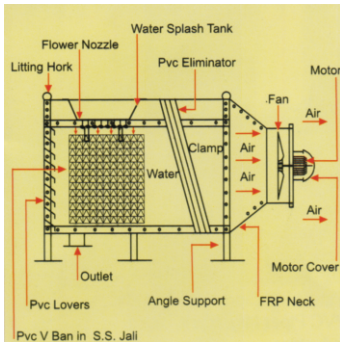
# FRP CROSS FLOW COOLING TOWER



To Provide A Longer Functional Life We Engage Ourselves In Manufacturing Specially Designed Cross Flow Cooling Towers. These Are Widely Known For Its Dependability And High Performance And Readily Adaptable For Any Natural Flow Of Water- Cooling Application.

We Manufacture These Cross Flow-cooling Towers With Qualitative Grades Of FRP. Which Helps In Supporting Structure That Makes Them Resistant From The Chemicals And Corrosion.

The Special Design Makes It A Lesser Maintained Rotary Sprinklers Or Tiny Nozzles. It Is Easy To Clean The Distribution Basin And Nozzles While The Towers Is In Operation. As The Main Function Is To Move The Water To The Top Of The Towers, The Power Is Saved And Further More Gravity Does The Final Thing. The Fan, Motor And Water Distribution System Are Out Where You Can Easily Maintain Them.



FRP Cross Flow Cooling Tower That Performs Under Induced Draft Cross Flow Principle For The Operation. The Tower Design Incorporates A FRP Distribution Basin With No. Of Flower Type Target Nozzles In It And Are Located At The Tower Top. The Water, By Gravity, Is Dispersed Over The Fill Media Uniformly And Water Is Allowed To Pass Vertically Down Along The PVC V-Bar. The Fan Coupled Directly To The Motor Is Placed Horizontally To Draw Air Across The Fill Media. A Small Portion Of Water Is Evaporated Which Removes The Heat From The Remaining Water In Warm Moist Air Is Drawn To The Horizontally Placed Fan / Motor And Is Discharged Through The Fan Deck, To The Atmosphere. The Resultant Cold Water Is Collected At The Cooling Tower Collection Sump From Where It Is Re-circulated To The Application.

We Offer Cooling Tower In Rang Of 20 TR To 300 TR Capacities To Cool Water From 12 m<sup>3</sup> / hr To 200 m<sup>3</sup> / hr In Range Of 8 °C To 10 °C Temperature Difference In Single Flow & For More Than We Can Give In Double Flow Cooling Tower In Any Range.

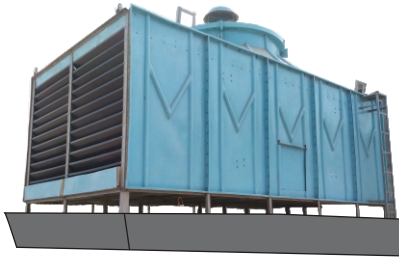


**We Have 15 Models In**

**FRP Cross Flow  
Cooling Tower Series  
(20 TR to 300 TR In  
Single Cell & More than  
Multicell is Available)**



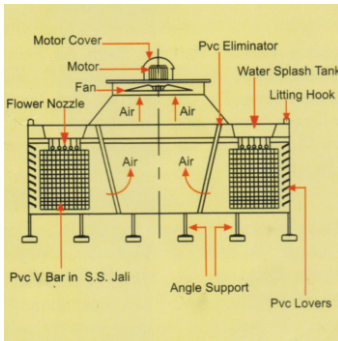
# FRP DOUBLE CROSS FLOW COOLING TOWER



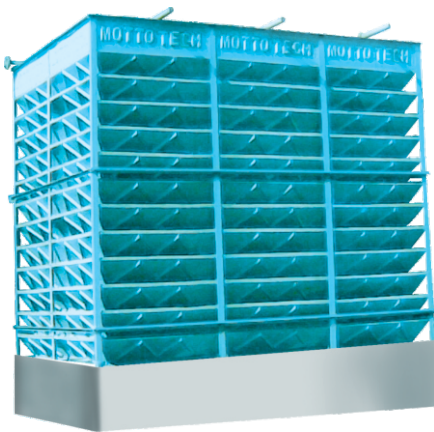
Induced draft cross flow principle for the operation. The tower design incorporates a frp distribution basin with no. Of flower type target nozzles in it and are located at the tower top. The water, by gravity, is dispersed over the fill media uniformly and water is allowed to pass vertically down along the PVC V bar.

The fan coupled directly to the motor is placed vertically to draw air across the fill media. A small portion of water is evaporated which removes the heat from the remaining water in warm moist air is drawn to the vertically placed fan / motor and is discharged through the fan deck, to the atmosphere. The resultant cold water is collected at the cooling tower collection sump from where it is re-circulated to the application.

We offer cooling tower in rang of 300 TR to 2000 TR capacities in range of 8°C to 10°C temperature difference.



## FANLESS FILLES COOLING TOWERS



Fanless Filled Cooling Towers The Name "Fan Less Fill" Says It All Devoid Of Either The Fan Or The Fill Media These Towers Are Guaranteed For 100% Savings In Power & Maintenance Down Time.

The Hot Water From The Heat Source Is Circulated To The Inlet Header Of The Cooling Tower. The Inlet Header Pipes Have Branches And Sub Branches Covering The Internal Area Of The Cooling Towers. The Non Clog Nozzles Are Connected At The Outlets Of The Sub Branch Piping. At A Inlet Pressure Of 1 – 1.5 Kg/cm<sup>2</sup> To The Cooling Tower. The Hot Waters Are Atomized To A Mist State. The Nozzles Are Self Designed To Create More Pressure Thereby Converting Water Into Minute Atomized Particles. From The Four Sides Of The Louvers, Plenty Of Fresh Air Is Automatically Circulated By The AeroDynamic Designed FRP Louvers.

Waters Are Directed By The Special Aero Dynamic Louvers Towards The Collection Sump. The Louvers Ensure That The Water Do Not Spill Out Of The Towers.

The Hot Waters, That Are In A Mist State, Comes Directly Into Contact With The Ambient Air And The Cooling Is Achieved Mainly By The Portion Of Water, That Gets Converted To Vapors, Thus Carrying Away The Latent Heat Of Evaporation. Therefore, Water Gets Cooled And In This Process.

# OUR SILENT FEATURES

## CASING

The tower casing is made from tough fiberglass reinforced plastic (FRP) and has sufficient structural strength it can withstand high wind velocity and vibrations. UV – stabilized resin is used along with gelcoat for resist of sun rays. It requires no painting & is compact in design with long life. The water collection sump, also of FRP, is leak proof & avoids water spillage.

## FILLING

The fill is of rigid poly vinyl chloride (PVC) and is of honeycomb design with very large contact surface area. The fill splits the air and water into several streams, increasing the time of contact and also heat transfer between water and air. The fill is in modules and is packed in the tower casing without any cutting for curves. The air pressure drop through the fill is negligible. The fills are available with flute height of 6 mm, 12 mm, and 19 mm with sheet thickness of 1mm and 1.2 mm. PVC modules are vacuum formed and have been provide with double edges to give highly efficient and robust packing. It is the heart of cooling tower.

## AXIAL FAN

Specially designed energy efficient fans are of induced draft axial type with adjustable pitch. Material chosen are non corrosive of plastic, FRP and aluminium alloy, the high efficiency design ensures low running cost and the lowest possible noise level. Fan blade pitch is factory set and dynamically blanced. Aerodynamically designed adjustable blade type axial efficient ensures large air flow at low static pressure & dynamically balanced reduce vibration & more efficient to remove heat from water in cooling tower.

## MOTOR

Squirrel cage TEFC induction motor with IP 55 weather proof electric motor suitable for humid outdoor weather condition.

## WATER DISTRIBUTION

The round Bottle Tower Have Rotary aluminum alloy sprinkler/ plastic sprinkler with seated Ball bearings is designed to take care of radial and thrust loads rotating at 5 to 7 R.P.M. Distributes water through PVC Branch pipes. it sprays water on the PVC fills uniformly. The frp eliminators attached sprinkler pipe are specifically designed for low pressure drop and minimize the drift loss of water.

The square bottle cooling tower have SCSP nozzles distribute water evenly through a wide spray angle without any dry pockets over the fill area. Nozzle are light weight and reduce the frequency of clogging.

## ELIMINATOR

Reduces carry over loss of water. The eliminators is of rigid pvc.(applicable for square type cooling tower.) FRP drift eliminators reduces moisture losses through fan draught. (applicable for round cooling tower.)

## STRUCTURE

The structural of the tower support the casing, basin and motor mounting the loads to the foundation. These are of mild steel and are hot dip galvanized so as to resist corrosion.

## DATA REQUIRED FOR OPTIMAL SELECTION

- Rate of Water Circulating, LPM
- Water Inlet Temperature °C
- Water Inlet Temperature °C
- Ambient Wet Bulb Temperature °C
- Water Quality and Site Conditions

## SERVICE

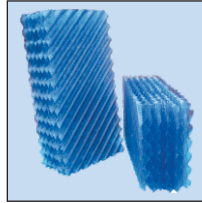
We Undertake Service Contract for Main Maintenance, Repair of any Type & any Make Cooling Tower and also System Descaling.

# COOLING TOWER SPARES



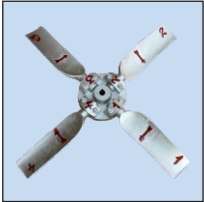
## Sprinkle

- MOC : Plastic, Aluminium, SS
- Size : 1 1/2" to 8"
- No. of Way : 4, 6



## Fills

- PVC/ABS
- 12mm/19mm Flute size
- Size : (600x300x150) mm Regular or any Size



## Cooling Tower Fan

- MOC : Plastic, Aluminium, FRP
- Size : 400mm to any...
- No. of Blade : 4, 6, 8
- Dynamically Balance



## Cooling Tower Nozzle

- Size : 1/2", 3/4", 1"
- Flower Type : 3/4", 1"
- Back Spray Nozzle : 1 1/2", 2", 2 1/2", 3"



## Electrical Motor

- 0.5 HP to 25 HP
- Squirrel cage induced type
- IP 55 Protected
- Weather Proof



## PVC V-Bar & Eliminator

- Size: 35mmx35mm  
65mmx65mm

**Other Parts :** Branch Pipe, Check Nut, Spacer, Tension Bar, Tunbuckle, etc...

## APPLICATIONS

- Aluminum Die Casting M/c.
- Air Compressor
- A/c. Plant & Cold Rooms
- Blow Moulding M/c.
- Chemical Industries
- Dairy Citrus and other Food Processing
- Industrial Soap / Cosmetics Plants
- Distilleries and Breweries Plants
- Diesel / Gas Gensets & Megawati project
- Glass Mfg. Plant
- Herbal, Aromatics & Extraction Plants
- Industrial Heat Process
- Oil Refineries
- Plastic Injection Moulding M/c.
- PVC Pipes Mfg. Plant Industries
- Steel Factory and Foundry

## MFG OF : FRP COOLING TOWER & DEALER OF WATER TREATMENT CHEMICALS



The Complete Water Solution

**Motto Tech**  
INDUSTRIES PVT. LTD.

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