



EPP Composites Pvt. Ltd.



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Plant - 1 : GRP Piping Division
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Plant - 2 : Chemical Plants & Equipment Division
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Plant - 3 : Building Products Division
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Plant - 4 : Pultrusion Division
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Innovative Engineering, Renovating Life





Overview

EPP Composites Pvt. Ltd. is one of leading global players in the rapidly growing composite industry. The company has gained a reputed position with more than two decades of focus on quality and customer service. Since 1986, Research & Development of new products remains a primary aim at EPP which has today resulted into multidivisional activities.

An ISO 9001:2008 certified manufacturing facilities have been extended over an area of more than 2, 50,000 sq ft. EPP has also installed latest filament winding machines, Resin transfer moulding machines, Spray up machines, Compression Moulding facility, Centrifugal Polyurethane injection for sandwich construction and Hand lay up process. EPP's involvement from design to commissioning in detailed project and engineering job has made it possible to develop our unique inhouse designing capacity. We are able to offer consolidated and concrete proposals as per the requirement of our customers with good hold and detailing with reputation with specialist designer and associates.

EPP is renowned for offering total solutions for Chemical Plants and Equipments. We provide Acid Fume Scrubbing System with a combination of Packed type Scrubber, Ducting, Piping, Centrifugal Exhaust.

Blower and Stack; Acid Pickling Tank (combination of Pickling tank, Scrubbers with Hoods); Acid Storage /Re-circulation Tank upto 250 KL storage capacity; Composite System for Desalination Plants which includes (a combination of Pipings, Tanks, and Pressure Vessels form a part of the system. Every product by EPP

is designed to meet & cater to the specific needs of the customer.

Young and versatile personalities, Mr. Siddarth Shah and Mr. Jayraj Shah along with the team of skilled and experienced engineers, marketing personnel, technicians and supporting professionals has made it possible to achieve enormous compounded growth rate.



Design & Engineering Capabilities

Dedicated design and engineering capabilities have been developed at EPP keeping in mind the complex characteristics of composite material. All products are designed and manufactured with help of latest engineering software and experienced experts to maintain our commitment of quality.

EPP offer storage tanks, reaction vessels, pressure vessels, vacuum receivers and all types of process column as per BS-4994. All the tanks and vessels can be designed in accordance with ASME/DIN/PrEN 13121-3 standard, on request.

EPP excel the designing of Air pollution control systems with detailed chemical engineering calculations to offer our customers a guaranteed performance as per local pollution control board norms and other stringent requirement of health, safety and environment.

We are designing centrifugal exhaust blower to offer our customer highest overall efficiency which offers longer service life and best possible energy efficiency. We are having latest software to design centrifugal blowers which ensures perfect designing of most critical parts like impeller design, shaft design against initial torque, centrifugal force and proper bearing selection.

We are designing FRP process pipes & fittings as per BS-7159

EPP is differentiated by turnkey solutions, as we offer total solution right from concept to commissioning to all over product range.

We work with all relevant national and international standards / Specifications as per best industry norms & customers need.





Manufacturing Capabilities

Acclaimed for providing excellent solutions in diverse areas, EPP manufactures complete piping systems, industrial equipment such as storage and process vessels, reactors, scrubbers, exhaust stacks and ductings, in FRP / PP / PVC / HDPE / PVDF / CPVC / ECTFE or in relevant combination (Dual Laminate) for critical and complex components. The combination of thermoplastic liners and FRP thermoset composites provides structures with excellent chemical resistance and structural strength. Dual Laminates are now used in numerous applications replacing more expensive metal alloys, lined steel, glass, stoneware or rubber. They offer a cost-effective solution in some of the most corrosive services encountered in industry.

Dual-Laminates are defined as a thermoplastic construction to which FRP structural layers are overlaminated.

- Several types of thermoplastics can be used in the fabrication process including PVC, PP, CPVC, PVDF, ECTFE, and HDPE
- The thermoset bonding layer provides a mechanical and chemical lock with the FRP. A layer of electrically conductive material is laminated immediately behind the thermoplastic
- A secondary corrosion barrier is laminated using thermoset corrosion resistant vinyl ester resins, surface veils and chopped strand fibreglass matt
- Such laminate is resin rich to insure adequate back-up, in the unlikely event of thermoplastic liner damage
- The FRP structure consists of either a hand lay-up, i.e. alternate layers of CSM (Chopped Strand Mat) and woven roving (WR), or filament winding construction
- Various winding patterns are used to optimize laminate properties. Finally, an exterior finish provides UV resistance, flame retardancy and external corrosion resistance



Quality & Testing Capabilities

Research & Development being our foray, we offer the most innovative solutions to all the corrosion problems. We exceed industry standards with our successful track record for manufacturing vessels for anti corrosive materials.

Our commitment to quality begins with the selection & approval of Raw Material Vendors / Suppliers. Each supplier / vendor is developed, monitored & rated, continuously. All relevant raw materials are extensively tested, as per the relevant Standards / Specifications, before being released for manufacturing.

Every product undergoes meticulous inspections at all stages throughout the fabrication process followed by rigorous quality assurance criteria before they are labelled an EPP product. Samples are drawn and tested as per the relevant specifications, for compliance.

We possess relevant approvals from National & International Authorities. Our Quality Control personnel possess the technical knowledge and equipment to perform the Barcol Hardness all mechanical properties, Laminate Coupon Testing, Burn Test, Hydrostatic Test and Vacuum Test. The products also undergo the Destructive and Non-Destructive Testing, as per the relevant applicable Standards & Specifications. Most of the tests are conducted on the facilities in-house, whereas some special tests are got done from external reputed Test Labs.





Pickling Tank

Product Range

EPP can design composite structures that take high structural loads making them ideally suitable for infrastructure. Besides providing chemical resistance, these composites perform well in applications requiring resistance to corrosion in damp soil conditions, acids, oxidising agents, metal salts, reducing gases and sulphur gases. Corrosion-resistant resins include unsaturated polyester, vinyl ester, Bisphenol - A epoxy vinyl esters. Quality infrastructure composite parts such as scrubbers, underground gasoline storage tanks, pickling tanks and blowers have been known, generally, to be successful in service for up to 40 years or more.

Pickling Tank

We offer pickling tanks for steel industry for pickling process of MS and Stainless steel coils. These tanks are manufactured from Polypropylene (PP) and High Density Polyethylene (HDPE), PP-H. Specially designed tank for galvanizing line is also offered by us.

Thermoplastic pickling tanks is offered with specially designed lip type hood for fume collection from the sides of the tank. This kind of hood is suitable for the batch pickling operation for continuous pickling operation. Hood can be offered top mounted and of any suitable shape like semi arch type or canopy type.

We offer thermoplastic pickling tanks with suitable hood and fume scrubber with centrifugal exhaust fan, ducting network, stack or chimney and with thermoplastic recirculation pump for scrubber with piping.

Capacity: size as per customer's requirement. The tanks are designed for the specific applications and are custom built. The EPP tanks are designed & tested as per the relevant DVS Standards. Full sheet of thermoplastic is used for manufacturing of the tanks, which ensures "rounded corners" instead of sharp edges / corners. This provides leak-proof edges and adds mechanical strength to the structure. The tanks are rigid & sturdy and manufactured for a long maintenance free operational performance. Depending upon the application the tanks can also be supplied with various accessories like ducts, stacks & hoods.

Advantages: Good Chemical & Weather Resistance - Light weight - Good insulating qualities - Easy maintenance - Less down time - Easy to handle - Easy to install

Self supported Pickling Tank



Chemical Storage, Reaction, Transport Tanks & Vessels

EPP storage tanks are manufactured by the Contact moulding (hand lay up) method or by filament winding (on CNC machines) method for the storage of Highly Corrosive Chemicals, Acids and Wastes. These tanks are offered as per customers' requirement complete with all the relevant accessories. EPP offers storage tanks in various shapes and configuration like Square, Round, Rectangular, Vertical and Horizontal with flat bottom or conical bottom or dished end.

Capacity: upto 250 KI. These cylindrical tanks can be suitable either for Horizontal or Vertical installations. The tanks are designed based on the application, capacity and installation requirements. They can also be supplied in dual laminate with thermoplastic lining. EPP also manufactures FRP and dual laminated Reaction Vessels, Pressure Vessels and Vacuum receivers for mixing, washing and filtration processes. Reaction Vessels are offered with suitable lined agitator, gear box and electric motor. Pressure vessels and vacuum receivers can be designed to suit the operating pressure up to 10 kg / cm² and for full vacuum services.

Material of Construction

- FRP moulded & filament would using Isophthalic, Bisphenol, Vinlyester and Epoxy Resin
- PP & HDPE Spiral Wound
- PP/FRP, PPH/FRP, PVC/FRP, CPVC/FRP, PVDF/FRP, ECTFE/FRP, FEP/FRP

- Advantages :** - Good Chemical and Weather Resistance - High Physical and Mechanical Strength
 - Light in Weight - Easy to handle and install - Good insulating qualities
 - Ease of Maintenance with Zero Downtime





Scrubbers & Columns

This equipment is used to purify hazardous exhaust gas through its internal special filling material which enlarge the surface between exhaust gas and fluids. The entire Pollution Control System consists of the following equipments and components:

- Scrubbers (Packed Bed, Sieve Tray and Venturi Scrubbers) - Centrifugal Exhaust Blowers - Fume Collection Hoods - Ducts - Stack or Chimney

Material of Construction

- FRP moulded & filament wound using Isophthalic, Bisphenol, Vinylester and Epoxy Design

- PP & HDPE Spiral Wound

- PP/FRP, PPH/FRP, PVC/FRP, CPVC/FRP, PVDF/FRP, ECTFE/FRP, FEP/FRP

Capacity: 100 m³ / hr to 100,000 m³ / hr.

These are perhaps the most important & widely used gas scrubbers. The Packed Bed Scrubbers, packed with hollow thermoplastic elements remove soluble gases like HCL, CL, BR₂ and NH₂, SO₂, H₂S & NO_x. The thermoplastic elements are fluidized by the ascending gas stream as it passes counter to the descending scrubbing liquid. The efficiency of the scrubber is the function of interfacial area between the gas, the liquid and the turbulence at the interface. The packing area not only provides a high interfacial area per unit volume but also ensures uniform distribution & flow of the liquid over it. The column diameter is designed based on the gas and liquid flows and the column height is designed based on the required concentration change.



Venturi Scrubbers

Venturi Scrubbers remove fumes, dust, solids and liquid particulate. Pollutants are removed by bringing gas stream and Scrubbing Liquid into turbulent contact as they pass through a high velocity Venturi Throat Section and destroyed or absorbed.

Capacity: 100 m³ / hr to 100,000 m³ / hr.

late matter from industrial emission sources. They are commonly used to remove particulate matter (upto 0.1 micron) from exhaust gas streams which are corrosive, flammable, or which contain difficult to handle solids. The liquid phase is introduced into the throat of the venturi either as a flow along the wall, which is then atomized by the gas flow, or more generally by nozzle atomization directly into the gas stream. The cleaned gas exits the cyclone vertically and the recovered liquid is returned to the sump for recycling.



Centrifugal Exhaust Blowers

The Centrifugal Exhaust Blowers of volumetric capacity 100m³ / hr to 160,000 m³ / hr and negative pressure upto 400mm water column are designed and successfully installed.

Capacity: Volumetric – 100 m³ / hr to 1,000,000 m³ / hr

Negative Pressure – upto 400 mm water column

Power – 1 to 100 hp

Our Centrifugal type Exhaust blowers are designed either for direct coupling drive or by the belt – pulley drive. The EPP blowers are specifically designed to provide the exact volume, pressure, vacuum or horsepower needed for the specific processes. The impellers and other rotating parts are statically & dynamically balanced. The blowers and exhausters are rigidly tested for performance, in addition to mechanical run-in.





Industrial Filters

EPP has a long-standing experience in designing and manufacturing different types of filters for various applications in Industries like Pharmaceutical, Dyes and Intermediaries, Fertilizers, Chemicals, Food Processing and Petrochemicals. EPP offers Nutsche Filters, Disc Filters and Cartridge Filters.

Material of Construction

Filter Body: PP / FRP, PPH / FRP, PVC / FRP, PVDF / FRP

Filter Plate: PP, PPH, PVC, PVDF

Pump: PP, PVC, PVDF

EPP offers various types of Industrial filters namely Nutsche filters and Disc / Sparkler filters.

Nutsche Filters

The Nutsche filters are the simplest type of batch filters using cloth as the filtering media; largely used in laboratories, small plants for the separation of mother liquor from the slurry. It can be manufactured for operating under vacuum upto 720 mm of Hg.

Disc / Sparkler Filters

The Disc / Sparkler filters are used for filtration of low viscous fluids with small quantities of suspended solids and almost always operated under pressure and can be offered for operating pressures upto 6 kg / cm². The disc filters can be designed to suit the fluid flow and particle content in the fluid. These are usually portable assemblies, enabling mobility and ease in operations.

Pipes & Fittings

EPP FRP Pipes are made out of Fiber Glass & Resins. It combines the extremely high ultimate strength of Fibreglass with the corrosion and media resistance of the resin. They are being manufactured on Fully Automatic CNC Filament Winding Machines and fully automatic CNC dual helical filament winding machine and continuous filament winding machine.

Capacity: DN - 15 mm to 2800 mm Ø

PN - upto 30 Bar

Temp. - upto 120° C

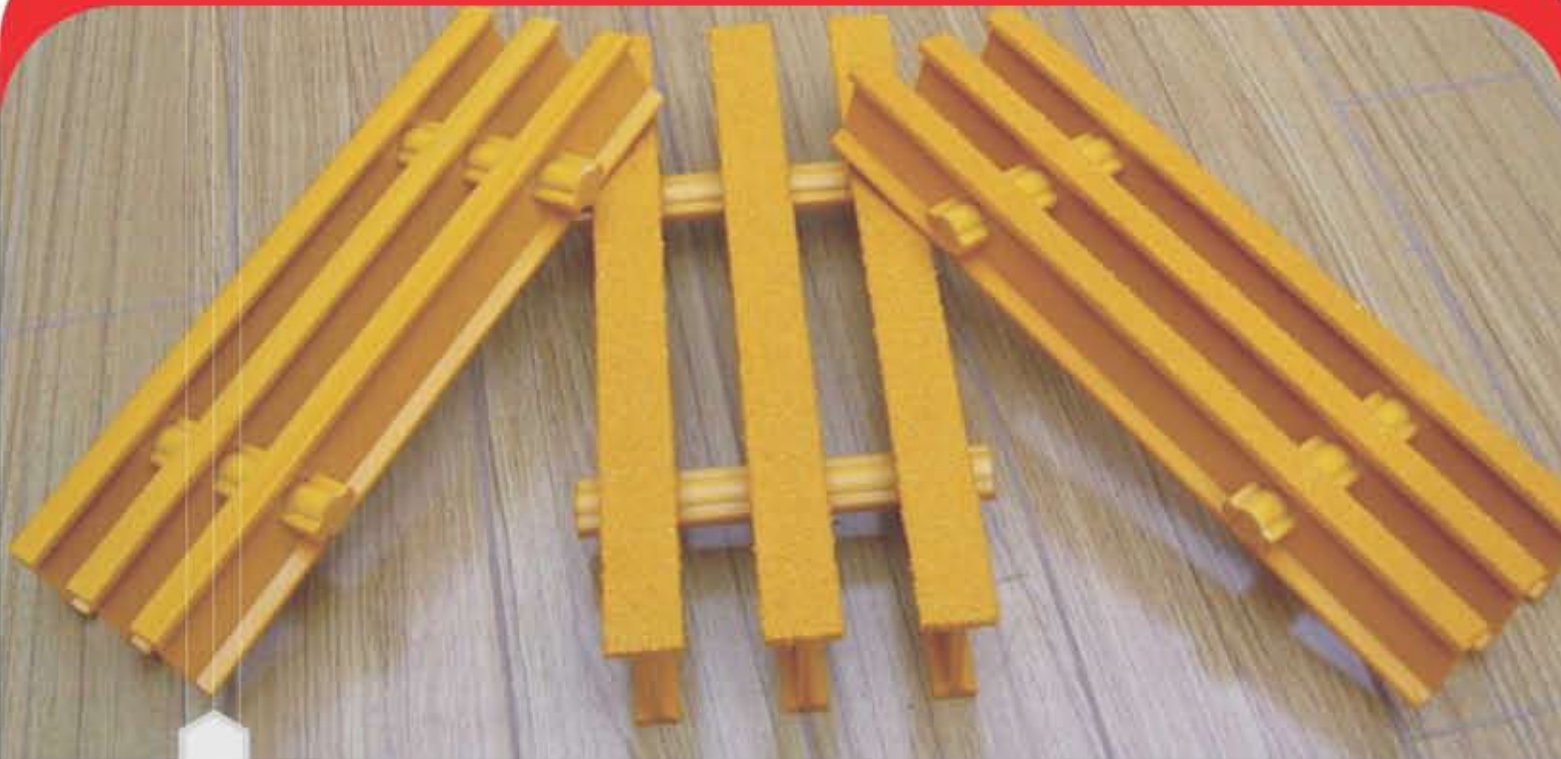
EPP pipes & fittings are designed for specific applications as per relevant ASTM, BS, API & DIN standards. They can be manufactured by hand layup and filament winding methods. The pipes & fittings can also be offered in dual laminate structure. EPP pipes & fittings possess high mechanical properties hence can be operated in high pressure or vacuum conditions

Materials of Construction

FRP using Resin System of Isophthalic, Bisphenol, Vinylester, Superior Vinylester and Epoxy. EPP follows design standards like ASTM D 2992, 3517, 3754, 3681, BS 5480, AWWA C 950.

Advantages: - Light Weight - Corrosion Resistance - Longer Service Life - High Hydraulic Efficiency - High Temperature Resistance - High Resistance to Surge Pressure - Non Toxic - Low Thermal & Electrical Conductivity & lower life cycle cost.





PVDF Pipes/Fittings and Valves

PVDF [Polyvinylidene fluoride] is offering excellent welding and formability properties. PVDF is most suitable for the services where chemical and mechanical resistance is required at high temperatures.

PVDF offers excellent resistance to wide range of inorganic and organic acids, alcohols, aromatic hydrocarbons and halogenated solvents.

PVDF pipes / fitting and valves are un-favorable to proliferation of microorganism. Due to this unique property of PVDF material it is widely used in pharmaceutical industry.



PP and HDPE Pipes/Fittings and Valves

We offer PP and HDPE piping in wide range of size and pressure ratings. All type of fittings like bends, tees, stub ends, flanges, blind flanges and reducers.

PP pipes are manufactured as per DIN 8077/78. PP pipes fitting and valves can be used for transport to aggressive media up to 80 to 90 deg.c, cold and hot water supply and for suction and exhaust ducts.

HDPE pipes are IS 4984 / 1995. HDPE pipes, fitting and valves can be used for the transport of aggressive media up to 60 deg.c, drainage system, for water treatment plants and for cooling system



Cable Trays, Gratings & Hand Railings

EPP offers molded as well putruded gratings.

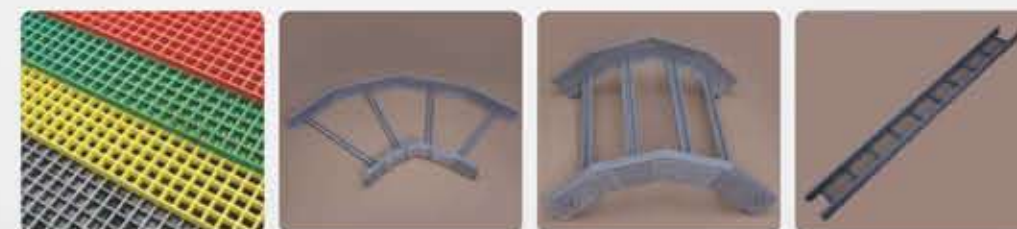
EPP Molded Gratings are woven with Fibreglass cured in the matrix of unsaturated resins in one piece in a whole mould. These are tested and supplied with clamps, bolts and other relevant fixtures, as per customer's requirements. The standard size of gratings is 1 mtr x 2 mtrs, whereas the thickness and other dimensions are purely designed based on the load bearing capacity.

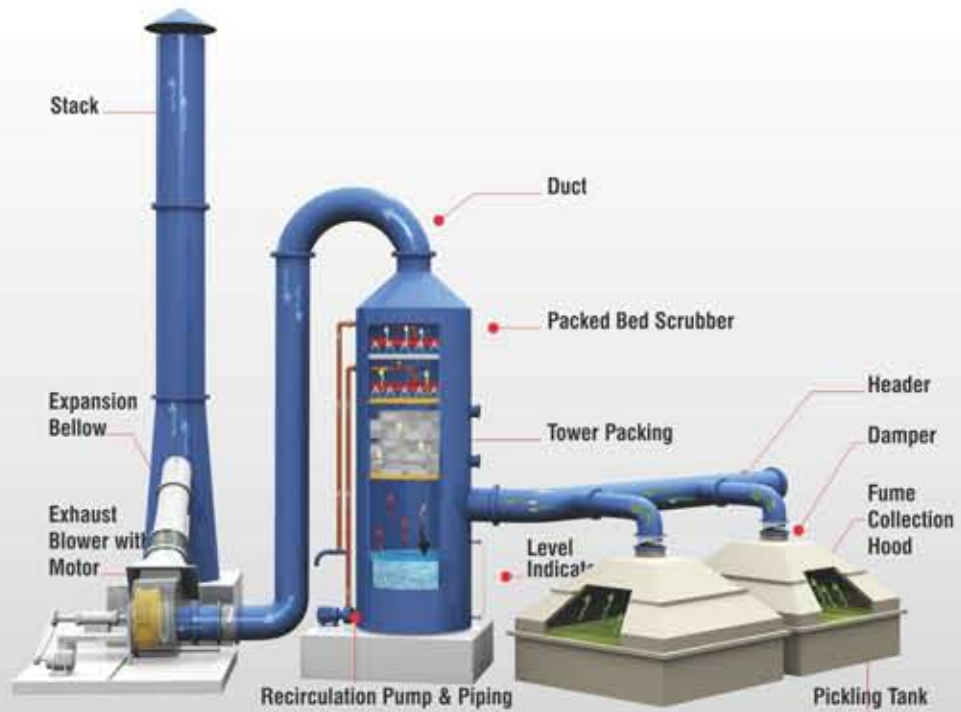
EPP Pultruded FRP Gratings are panels with open space, assembled through specially designed process with I or T shaped bearing bars and interlocked with solid grooved rods, and notch bar, which are all Pultruded. Resin System consists of Isophthalic / Vinylester with FR or Non FR properties. Pultruded I or T - section profiles are designed & manufactured, for the relevant load bearing capacities. These are then interlocked with solid grooved rods and notch bars. The resin and other additives / retardants used in the manufacturing are based on the applications & site conditions / requirements. EPP has a wide range of Pultruded FRP Products. EPP manufactured Staircase, Hand Railings and ladders ideal for Industrial Applications with their non-conductive polymer construction offering increased protection in electrical areas. EPP offers OSHA standards for Ladders and Handrailings. Resin System consists of Isophthalic / Vinylester / Epoxy with FR or Non FR properties. Phenolic Resin System is also available on request.

EPP FRP Cable Trays are manufactured on highly sophisticated Pultrusion Plant and are widely used in Chemical Process Industries where corrosion is the major problem.

Advantages of Pultruded FRP Products

~ Corrosion & Weather Resistant ~ Light Weight & Durable ~ Low Cost Installation ~ Maintenance Free ~ Eco Friendly ~ Sturdy & Structurally Stable





Complete System Concepts

Acid Fume Scrubbing System

A combination of Packed type Scrubber, Ducting, Piping, Centrifugal Exhaust Blower and Stack forms the system for a Chemical Plant. Stacks of upto 1600 mm diameter can be designed & installed.

Pickling Tank with Fume Scrubbing System

A typical combination of Pickling tank, Scrubbers with Hoods. The canopy type hoods of push-pull type or the lid type can be designed.



Composite Systems for Desalination Plants

A combination of Piping, Tanks, and Pressure Vessels form a part of the system. These are designed to meet & cater to the specific needs of the customer.

Composite Stripper System for Water Treatment

A combination of tanks and scrubbers with relevant piping provides an efficient & effective system for a Water Treatment Plant.



Cooling Towers



FRP BLADED FAN



FRP RECOVERY FAN STACK



EPP offers Large Industrial Cooling Towers in FRP Counterflow Designs in single and multicell construction which is designed to perform as per the specified parameters. They are such designed to achieve optimum performance, optimal heat transfer and energy saving.

EPP Packaged Towers are available in FRP Counter Flow Designs to achieve optimum performance and optimal heat transfer.

CASING of structurally strong FRP materials to withstand various forces and impacts.

FILLS and DRAFT ELIMINATOR are of Rigid PVC Honey comb design which ensures maximum heat transfer.

WATER DISTRIBUTOR SYSTEM is of Stationary Type with branch pipes & PP spray nozzles for Uniform distribution throughout the FILL area. FAN is of axial flow type made of cast AL.

Alloy/ PPG / FRP Bladed and is directly coupled to Electric motor which saves from perennial headache of V-Belt / Gear Drive.

INSPECTION / ACCESS WINDOW is provided for Maintenance and periodical checking of various Components of the Cooling Tower without disturbing the normal working of the Cooling Tower.

EPP also offers Power Saving FRP Bladed Fans and Recovery Fan Stack.

We have designed and developed structurally strong FRP hollow bladed fans which are lighter in weight, having low drag aerofoil shape, large uniform twist, high camber to increase fan efficiency with resultant low operating cost. Our range starts from 4 ft. to 30 ft. diameter in solid and hollow FRP bladed fans.

Material of Construction

Casing of structurally strong FRP materials to withstand various forces and impacts

Capacity: 5 TR to 250 TR. The highly efficient EPP Cooling Towers are vertical induced draft Counter Flow design. They can be supplied in single or multi cell designs and are constructed from non-corrodable materials. The cooling tower is designed considering flow rate, temperature drop and site installation requirements. Inspection window is provided to carry out periodical maintenance and minor repairs without the need to shut down.

Applications - Air Conditioning and Refrig Aeration - Compressors - D.G. Sets - Power Plants - Induction Furnace - Plasting Processing Machinery

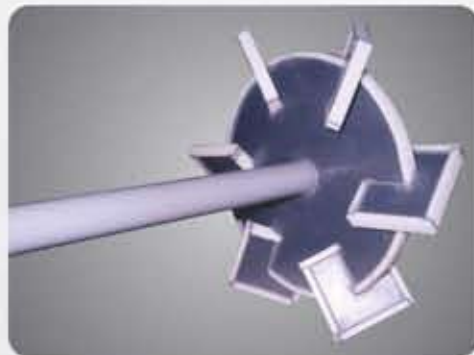


GRP/GRE Pipes & Fittings.

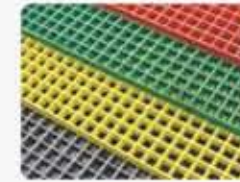
Customer service

In today's competitive era EPP gets inspired by a saying "customer is king". Total customer orientation approach has been developed to streamline the development process, improve co-ordination and result in a better engineered project. Our approach works from the very basic of conceptualizing to completion of project with involvement of people who know the technology at par. At EPP our extensive experienced representative a number of key customer services including in-depth technical support and product training. Short notice operational readiness is just one of the customer friendly features of our service department.

At EPP we believe in long term relation with customers as a result our service does not end with the completion of our project but we keep on advising how to achieve optimum performance of installed pipe system. This service attitude has built up a base of repeat order by our customers.



Other Products of 'EPP'



Grating
Moulded & Pultruded



FRP Ladders



FRP Cable Tray



SMC Products



Roof Sheets



3 Types of
Pyramid Structure



Prefab Houses



FRP
Bath Tub



Play Equipments



Application

Our Clients are as diverse as our product range and feature companies in the following fields:

- | | |
|---|---|
| - Chemical Industries | Desalination Plants |
| - Paper & Pulp Industries | Treatment Plants |
| - Petrochemical Industries & Refineries | Steel Pickling & Electroplating Plants |
| - Fertilizers & Pesticides Industries | Air Conditioning & Refrigeration Plants |
| - Dyes & Intermediate Industries | Marine & Offshore Rigs / Plants |
| - Pharmaceutical Industries | Power Plants |



Valuable Customers

