



# MACH

## Fluid Dynamics Pvt. Ltd.

**Leaders in Water & Pollution Control Systems**

### *About us...*

MACH Fluid Dynamics Pvt. Ltd. is a well established organisation that excels in manufacturing of variety of Water & Pollution Control Systems. Beside M.F.D.P.L. offers you the widest, single source expertise in all areas of environment protection.

The Company's activities revolve around offering various products and systems to control particulate and waste water discharge of various industries. With a value added chain of excellent design, competent engineering, global purchasing, quality fabrication, well-scheduled erection, proper operator training and prompt after sales service M.F.D.P.L. assures that systems does not suffer either in economy or in operation. M.F.D.P.L. is a result of relentless research findings and uncompromising endeavours of studying the requirement of various industries.

# Sewage Treatment Plant



Domestic waste water management system of any city consists of collection, treatment and disposal. In conventional centralized sewage treatment system, about 80% of the cost is accounted for the collection. The cost of collection of sewage & its conveyance to the terminal point in the large cities is very high. Further, the depth of sewer goes on increasing with the increase of length of sewer line & pumping of the sewage at the intermediate and terminal points requires a lot of energy. In centralized sewage water treatment plant, volume of the sewage becomes very high. Keeping in mind all these points MACH Fluid Dynamics Pvt. Ltd. offers decentralized state of the art following the different types of sewage treatment plant.

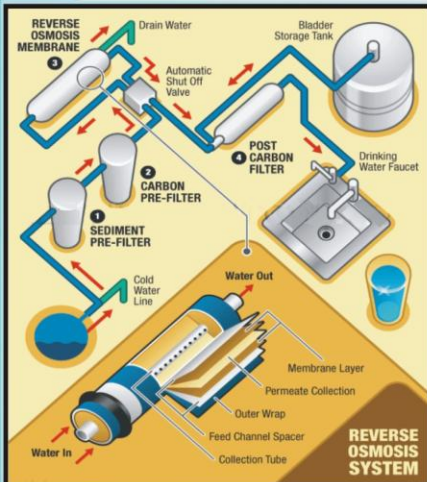
- 1- Mobile Sewage Treatment Plant.
- 2- Sewage Treatment plant for Hospital.
- 3- Sewage Treatment plant for Industries.
- 4- Sewage Treatment plant for Hotels.
- 5- Packaged Sewage Treatment Plant.
- 6- Sewage Treatment plant for Commercial Complex.
- 7- Sewage Treatment plant for Residential Complex.

## Key Features:

1. Impact resistant load ability
2. Physical and chemical stability
3. Advanced water outlet to deal with excessive sludge
4. High performance submersible pumps used
5. Consumes lowest electricity as compare to any other electric plant.
6. Provides good quality and clean effluent - up to 97.9% pollutant reduction.



# Industrial & Institutional Reverse Osmosis Plant

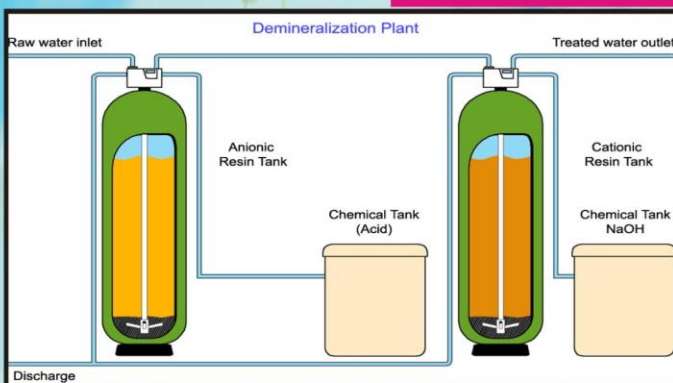


Reverse Osmosis Plant that we design and develop is an ideal product to get clean drinking water. We have engineers and designers who are capable in manufacturing Reverse Osmosis Plant using advanced components Booster Pump, Pretreatment-Vessel equipped with variety of filters such as Sand Filter, Quartz Sand Filter, GAC Filter, Active Carbon Filters, Sediment Filter, and others. These filters ensure that each of the impurities are duly removed from the water, making it suitable for drinking. As a result, we have carved a niche as manufacturer, exporter, and supplier in India.

## Key Features:

1. Equipped with High Pressure Pump.
2. Available in both Automatic and Manual mode.
3. High quality R.O. Membrane.
4. S.S.-316/ PVC Pipes are used in construction.

# De-Mineralized Plant



Demineralization Plant comprise of 2 mild steel rubber-lined /FRP pressure vessels filled with strong acidic cation exchange resin and strongly basic anion exchange resin. D M Plant are available in wide range of diameters. The modular and latest construction permits flexibility in the selection of cation units to cater different types of raw water. De-gasser modules for the range Of CA units are also available. We offer Demineralization Plant that has been designed to mild steel lined with rubber with strong acidic exchange resin. The D M plant is ideal to clean water containing high level of minerals such as iron, calcium, magnesium, and others that is harmful when excessively consumed by the body

## Key Features:

1. Durable stainless steel body.
2. High performance.
3. Low maintenance.
4. Compact design.

We offers D.M. Plant from 100 LPH Capacity upto 50,000 LPH Capacity.

# Mineral Water Bottling Plant



We are engaged in offering Mineral Water Treatment Plants that is equipped with advanced water treatment technology to efficiently purify the water to make it suitable for drinking or other uses. Designed implying high sanitary standards, our water treatment plants consist of ozone generator, sodium ion exchanger, RO Machines, and variety of filters to clean the water. It is suitable to treat the underground water, water from lake, spring, rivers, and others. Equipped with advanced water filling line, our mineral water plants is suitable to achieve disinfect water. This has enabled us to carve a niche in the market as manufacturer and supplier in the industry.

## Features:

1. Outputs available from (5000 Ltrs/Day ) upto (10,00000 Ltrs/Day).
2. Epoxy coated frame / SS304.
3. TFC membranes.
4. Centrifugal H.P. Pumps / Vertical H.P. Pumps.
5. Built in membranes cleaning tank
6. Magnetic starter.
7. Built in recirculation clean pump
8. Liquid filled high/low pressure gauges
9. Analogue T.D.S. Readout meter.
10. Two commercial type profilers 20 and 5 microns
11. High / low pressure cut off switches.
12. Nema 4 electrical enclosure.
13. Membrane auto flush system.
14. Status indicator lights.
15. Product and brine flow meter.
16. Time delay device for efficient start up.
17. Automatic start/stop with float switch (optional)

## Iron Removal Plant



We stand tall in the market as manufacturer, exporter, and supplier of Iron Removal Plant in India. Our product is ideal to clean the water with high level of Iron and Manganese Content, specially from the water from direct ground source. Our engineers design and develop these Iron Removal Plants keeping a strict check on technical parameters such as filtration speed, back flush intensity, working pressure, filter layer thickness, air and water mixing time.

Iron Removal Plant Can be used in building Purpose, residence, educational institutes, resorts, hotels, restaurants, others medical institutes, hospitals, nursing homes, Corporation Purpose, Municipality water supply, Poultry Farms, Industrial purpose like paper mills, Pharmaceuticals, cotton mills, Chemical plant etc.

### Features:

Advanced oxidation method used. High quality filters.

Easy to install. Economical.

We offers Iron Removal Plant from 500 LPH Capacity upto 1,00,000 LPH Capacity.

## Domestic R.O.



Reverse osmosis (RO) is a water purification technology that uses a semipermeable membrane to remove ions, molecules, and larger particles from drinking water. In reverse osmosis, an applied pressure is used to overcome osmotic pressure, a colligative property, that is driven by chemical potential differences of the solvent, a thermodynamic parameter. Reverse osmosis can remove many types of dissolved and suspended species from water, including bacteria, and is used in both industrial processes and the production of potable water.

We offers wide range of domestic R.O. from 6 LPH to 25 LPH.

## Water Softener

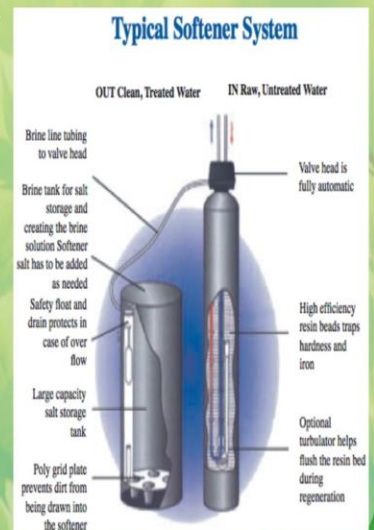


We are prominent Manufacturer, Exporter, and Supplier of Water Softening Plant that uses advanced technology to reduce the hardness of Calcium and Magnesium, which precipitate and scale at extremely low temperature. Our Water Softener Plant is versatile and easy to install. It effectively reduces the chlorine level of the water and thus make it ideal for drinking and cooking. It is flexible in flow and balances the resin quantities. Our Water Softening Plant is equipped with advanced monitor system to test the hardness of raw and treated water.

### Key Features:

1. Made from mild steel/ F.R.P. Vessels
2. Internally painted with anti-corrosive polish.
3. Assure proper distribution and collection system.
4. Equipped with advanced filter media

We offers Softener Plant from 500 LPH Capacity upto



## Venturi Scrubber



Venturi Scrubbers are high performance system which can reduce the contamination level of flue gas up to 99%. They can remove both particulate matter and gaseous pollutant. The flue gas is scrubbed at high speed and pressure at the Venturi and gas velocity is dropped at the Separator. The separator can be converted to spray tower in case the concentration of pollutant is very high. The material of construction of Ventruri is depended on the composition and temperature of the flue gases entering the system. When the flue gases are rich in SO<sub>x</sub> and NO<sub>x</sub> then the scrubbing process generates acid and consequently high-grade stainless steel such as SS-316 has to be used. They can be used for any industry where the concentration of particulate matter or gaseous pollutant is high. Our installations in base metal refining sectors where aluminum and copper scraps are refined at high temperature are exemplary.

Specifications:

1- MOC: MS/SS

2- Volume: 2000 - 1,00,000 CMH 3- Capacity (CFM): 1200

4- We offers Venturi Scrubber from 1000 CFM Capacity upto 1,00,000 CFM Capacity.

## Medical Waste Incinerator



Incinerator For Bio Medical Waste is manufactured by us using latest techniques. Incineration of waste materials converts the waste into flue gas, ash, and heat. The ash is most oftenly produced by the inorganic constituents of the waste, and may take the form of solid lumps or particulates carried by the flue gas. These flue gases must be cleaned of gaseous and particulate pollutants before they are dispersed into the atmosphere. In some cases, the heat produced by incineration can be used to produce electric power.

Specifications:

1- MOC: MS/SS 2- Capacity (CFM): 1200

3- We offers Bio Medical Waste Incinerator from 2000 CFM Capacity upto 1,00,000 CFM Capacity.

## Cyclone



Cyclonic separation is a method of removing particulates from an air, gas or liquid stream, without the use of filters, through vortex separation. Rotational effects and gravity are used to separate mixtures of solids and fluids. Larger denser particles in the rotating stream have too much inertia to follow the tight curve of the stream, and strike the outside wall, then falling to the bottom of the cyclone where they can be removed. In a conical system, as the rotating flow moves towards the narrow end of the cyclone, the rotational radius of the stream is reduced, thus separating smaller and smaller particles.

### MACH's ADVANTAGE:

- 1- Energy Efficient Cyclone. It will reduce the fuel consumption by 15-20%.
- 2- Convenient and efficient cleaning of work area.
- 3- Highly durable.
- 4- No expensive filters.
- 5- Ease of operation.
- 6- Low maintenance costs.
- 7- Works at high temperatures as well.
- 8- Flexible designs to suit variation in available space.
- 9- User friendly and easy to handle constructions.
- 10- Provision of extensive safety features for smooth and trouble free operation.
- 11- A team of knowledgeable professionals dedicated solely to your project.

## Multi-Cyclone



We offer multistage cyclones to handle large volumes of gases and better efficiency than single stage cyclones. A multi-stage cyclones uses multiple cyclones at the same time in the same process to clean the air being sucked out of the cleaning the volume it handles is greater than 20,000 cmh.

### Specifications:

1. Driving Type: Motor.
2. Working Pressure: Low Pressure Pump.
3. Impeller Number: Single-Stage Pump.
4. Usage: Pumps Max.Head: >150m

### APPLICATIONS:

- 1- Wood Products Manufacturing.
- 2- Buffing and Polishing.
- 3- Ceramics.
- 4- Chemical Processing.
- 5- Ore Processing.
- 6- Dust Collection involving sticky materials, etc.

We offers Energy Efficient Cyclone from 2000 CFM Capacity upto 1,00,000 CFM Capacity.

## Bag House Filter



Dust is a problem in any working environment. There are multiple sources of dust, smoke and chemical odour in the Production Line and Process. They may include conveyor belts, furnaces, cutting machines, grinding machines, mixing machines, chrome plating, paint mixing and spraying, and so on. At MACH Fluid Dynamics Pvt. Ltd. we try to offer you a very cost effective solution to any typical dust control problem.

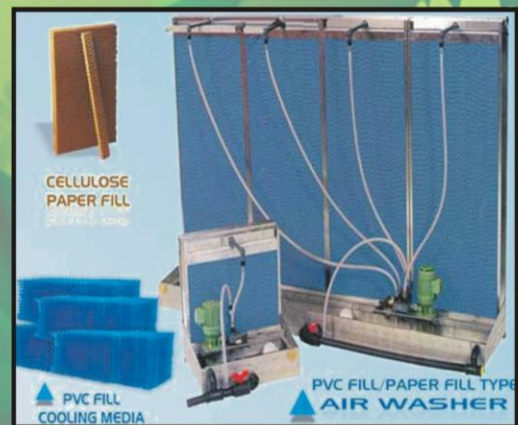
### OUR ADVANTAGE:

1. Robust system.
2. Highly efficient operation
3. Tailored made design
4. Firm Bag Support and dimensional stability ensures longer bag life.
5. Improved design facilitates easy bag removal and protects the operator from hazardous dust during maintenance

### Product Details:

- |                            |                       |                                    |                 |
|----------------------------|-----------------------|------------------------------------|-----------------|
| 1. Minimum Order Quantity- | 1 Piece               | 2. Rated Flow(m <sup>3</sup> /hr)- | 250 to 250000   |
| 3. Min Working Pressure-   | 1 kg/cm <sup>2</sup>  | 4. Medium Material-                | Synthetic Fiber |
| 5. Construction-           | Bag Filter, Wire Mesh |                                    |                 |

## Air Washer cum Cooling System



An air washer is basically a piece of equipment that is used to improve the quality of air. It does so by scrubbing the air that moves inside it and then adjusting the humidity levels in order to keep the environment consistent. The Air Washer Double Skin Type from MACH Fluid Dynamics Pvt Ltd are designed to meet your needs and also for climate control and drastically the quality of air in the environment.

### Features of Air Washer Double Skin Type:

1. Long and functional Life.
2. Durable and Rugged
3. Made of Galvanised Steel frames of superior quality & a thickness range of 1.4 millimetre.
4. Multi slope S.S-304, Aluminium or G.I. drain pan which will ensure that there is proper drainage of condensate at all times.
4. Common frame for blower and motor.

We offers Air Washer from 2000 CFM Capacity upto 1,00,000 CFM Capacity.

## Industrial Blowers/Induced Draft Fan



Our company is engaged in offering high efficiency Industrial blowers which are parallel with quality standards. These are manufacturer using premium quality raw material which enable us to deliver supreme products. These are made as per the client's requirements and specifications.

### Product Details:

1. Air Flow Rate- 500 CMH to 200000 CMH      2. Speed (RPM)- 960 to 2500

3. Body Material- Mild Steel, Stainless Steel

### Specifications:

1. MOC: MS/SS/PP/ MS FRP

2. Capacity (CFM): 2000

We offer a complete range of custom designed centrifugal blowers in MS, CS, SS and FRP lined for various industrial applications. We can supply centrifugal blowers with air handling capacities of 500 CMH to 200000 CMH with pressure as high as 1400 mm WC. Impellers are available in different geometries as per end user's applications.

## Fumes Extraction System



MACH Fluid Dynamics Pvt. Ltd. (MFDPL) offers an extensive range of Fumes Extraction & Filtration Systems (FES) to protect men working in the manufacturing plants from hazardous gases and fumes. FES is installed to confine the fumes & unburnt particles of material, which are generated during melting and other industrial processes. MFDPL offer technically advanced, highly efficient, custom made systems to suit specific industrial applications and satisfies the requirement of the Pollution Control Board.

### Industrial Applications

Fume Extraction and Filtration for Induction furnace.

• Fume Extraction and Filtration for AOD Furnace.

• Fume Extraction and Filtration for Electric ARCFurnace.

• Fume Extraction and Filtration for Incineration kiln in Waste Incineration Plants.

• Fume Extraction and Filtration in any kind of industry Industrial Applications.

### Advantages

• Creates safe & clean environment at work

• Captures the dry dust so no need to install ETP plant to clean water

• All emission levels can be achieved with this Fume Extraction & Filtration System

• System contains complete equipments (Swivel hood, Dust Collector, Ducting, ID Fan etc.)

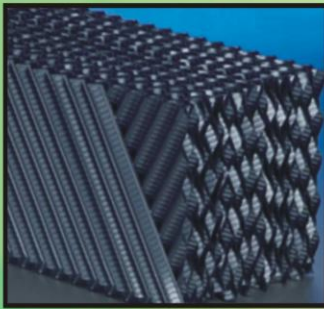
• Creates safe & clean environment to work • User friendly & maintenance free operations

• No binding or clogging of bags

• Minimum power consumption

• Minimum downtime which is crucial in case of process equipment

# Accessories



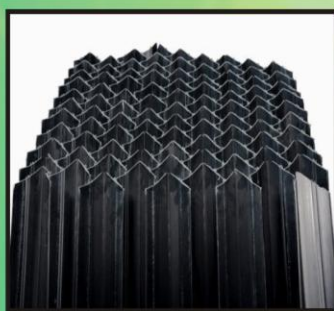
## SAFF Media

Size Available  
600 MM X 1200 MM  
Color Available Black  
MOC- PP



## MBBR/FAB Media

Features : Low investment,  
Clog free operation,  
Provides high Bio – Surface  
Area, No Sludge return  
Systems Needed, Longer  
Media Life, Extremely easy to  
install, Longer Media Life  
Features:  
MOC- PP  
Size - 16 X 22 MM



## Settling Media

Size Available  
600 MM X 1200 MM  
Color Available Black  
MOC- PP



## FRP Vessels

Introducing FRP Tanks with  
very high quality, Blow  
moulded PE Liner with  
smooth internal/external  
surface finish with  
extended curing to ensure  
proper adhesion of FRP  
windings.



## Dosing Pump

We offer a qualitative assortment of  
pumps such as Plunger Type  
Pumps, Metering Pumps and  
Dosing Systems. The offered  
pumps are fabricated from the fine  
grade materials such as stainless  
steel and alloys that are sourced  
from the trusted vendors. Owing to  
their low power consumption,  
compact design.



## Membrane

Nanofiltration is also known as  
“loose” RO and can reject  
particles smaller than 0.002 µm.  
Nanofiltration is used for the  
removal of selected dissolved  
constituents from wastewater. NF  
is primarily developed as a  
membrane softening process  
which offers an alternative to  
chemical softening.



## Manual/Automatic Multiport Valve

We Supply Manual/Automatic  
Multiport valves in below Range:  
20NB(20mm) Multiport Valves  
25NB(32mm) Multiport Valves  
40NB(40mm) Multiport Valves  
65NB(65mm) Multiport Valves  
Accessories - Manual Multiport Valves  
Multiport Valve Ejectors  
Brine Directors  
Air Release valve



## High Pressure Pump

Vertical multi-stage pump maximize performance,  
demonstrates high degree of consistency and is  
economical. Pumps with VFD lasts longer as they  
can adjust the work load to meet the system  
requirement. Extremely quiet and low vibration  
when in operation. The smooth, automated start  
and stop , reduces water hammer. It also serves as  
the best replacement for the traditional roof tank  
water supply way, which is a source of water  
pollution.



## Rotameter

A Device used to measure fluid flow, in  
which a float rises in a tapered vertical  
tube to a height dependent on the rate  
of flow through the tube.

Available in  
250 LPH to 10000 LPH



## Cartridge/Micron Filter

The sediment filter system reduces  
sand, silt, sediment and debris in  
the supplied water down to 5  
micron routine replacement of this  
5-micron sediment filter will  
increase the effectiveness and  
protect plumbing and appliances  
from excess sediment.

10 LPH to 10000 LPH

## Company Profile

We develop our products on the basis of changing market trends and customers' requirements. With the usage of most advanced technology and equipment, we are able to offer a wide gamut of Commercial and Industrial Reverse Osmosis Plants (Industrial RO plants), Demineralized water system (DM water treatment plants) etc. Our technical expertise and extensive product knowledge has enabled us to acquire a position of noted Manufacturer, Wholesaler, Service Provider, Supplier & Trader in this domain.

**Business Type:-** Manufacturer, Wholesaler, Service Provider, Supplier & Trader

- ▶ Primary Competitive Advantages.
- ▶ Ethical business policies.
- ▶ Timely delivery of products.
- ▶ Dedicated team of employees.
- ▶ Well laid out distribution network.
- ▶ Prompt customer services.
- ▶ Modern infrastructure.
- ▶ Premium quality products.

## Why Us :

We have been able to meet the precise needs of our clients, owing to our state-of-the-art infrastructure and skilled professionals. With our ability to meet the bulk demands and ensure optimum quality, we have been able to win the trust of our clients. Customer centric approach, transparency in all the business dealings and ethical business policies is followed, in a zest to attain maximum customer approval.

## Quality Assurance:

Being a quality oriented name, we follow different quality assurance procedures at each stages of production to ensure that the premium quality of the offered dosing pumps and systems are never compromised. We have appointed a team of expert quality inspectors, to manage different quality testing procedures.

Quality of the offered range of dosing pumps is checked on:

- Durability
- Performance
- Maintenance
- Energy efficiency



# MACH Fluid Dynamics Pvt. Ltd.

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