

# ***WATERMAN*** ***ENGINEERS***



# About Us

Waterman Engineers are leading manufacturing, exporting and service providing of a wide variety of high-quality Water Treatment Plant and services such as mineral water turnkey projects, water treatment plants, industrial water purification machine and mineral water plants. We also offering repair, maintenance & installation services for these water treatment equipment. We were established in the year 1994 and have many dedicated employees who are continuously working to achieve maximum customer satisfaction. To ensure that we are able to provide a smooth experience to our customers, we have implemented standardized processes that ensure smooth-scale production within the stipulated amount of time so as to ensure that our products are readily available whenever our customers demand them. We are operating under the leadership of Mr. Chirag Soni, who has a vast industry experience in our domain. His vision helps us to foresee the market trends, which further enables us to manufacture products as per the changing market demands. Our products undergo various quality checks based on various parameters. Today, with our quality products along with our business acumen have enabled us to carve a niche in this competitive market. These products are widely appreciated for high-quality effluent, minimal maintenance, maximum efficiency, low operating costs, easy to install and operate.



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Navrangpura, Ahmedabad-380009



A/15-mahalaxmi Estate, In Gate Of Maruti Estate, Bombay Conductor-  
Road, Gidc Vatva-ph-1, Ahmedabad-382445, Gujarat (India)

# Our Product Range

- Sand filter
- Activated carbon filter
- Softening plant
- Demineralisation Plant
- Ultra-Filtration Plant
- Chlorination&De-chlorination
- Mix-bed de-ioniser
- Week base Anion exchanger
- De-gasifying system
- Dosing system
- Micron filtration
- Reverse osmosis system
- Swimming pool filtration system
- Mineral water plant
- U.V. Disinfection system
- Ozonization system
- Instruments: Conductivity meter/controller
- PH meter/controller
- Pressure gauge/indicator/controller
- Flowmeter/indicator/gauge
- Chlorine meter/ ORP meter
- Lab instruments/chemicals/etc...
- Ion exchange resin
- Anion Resin
- Cation Resin
- Supercharge Mix bed Resin
- Week base Anion Resin
- Sand Media / Carbon Media / Alkalizer



# Water Filtration System

Waterman Engineers offers unique filtration systems to improve the treated water quality by removing physical impurities, organic compounds, colour, odor, iron, manganese, turbidity, etc. & also to control BOD & COD in the water. Filtration is the process by which physical impurities, solid suspended particles are filtered using different methods like:

- 1) Multigrad Sand Filter
- 2) Activated Carbon Filter
- 3) Micron Cartridge Filter
- 4) Bag Filter
- 5) Iron Removal Filter
- 6) Disc Filter

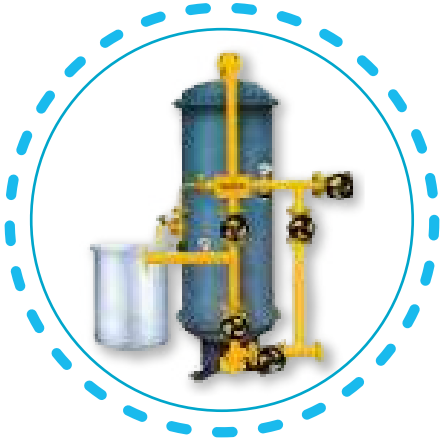
## Salient Features:

- 1) High Filtration efficiency
- 2) FRP, MSFRP, MSRL, MSEP & SS Vessel available
- 3) Low pressure drop across the vessel
- 4) Air scouring available for High flow pressure vessel
- 5) Manual, Semi Automatic & Automatic features are provided



# Softening Plant

Softening plant is designed to softened the water from the water by removing calcium & magnesium by using ion exchange resin i.e. Cation exchange. Softening plant is available in Manual as well as PLC based control system with Fully automatic option. It is available in FRP/MSRL models.



# DM Plant

Demineralization plant is based on cost effective ion technology with counter current regeneration. DM Plant is the process of removing minerals salts from water by using the ion exchange process. The DM Plants are loaded with highly efficient CATION & ANION exchanger & are also loaded with degasification system to remove every trace of minerals from the system. Waterman Engineers offers standard DM Plants with FRP / MSRL & SS construction.

## Features:

- 1) Easy to install & operate
- 2) User friendly, Low maintenance
- 3) Efficient design to suit varied requirements
- 4) Better efficiency & Low operating cost
- 5) Simpler distribution & collection system
- 6) Complete assembly with Backwash & Regeneration equipment
- 7) Flexible Layout to suit site condition
- 8) Wide range: 500 lph – 100m<sup>3</sup>/hr& more.



# Ultra-Filtration Plant

Ultrafiltration is one membrane filtration process that serves as a barrier to separate harmful bacteria, viruses, and other contaminants from clean water. An ultrafiltration water system forces water through a .02 micron membrane. Suspended particles that are too large to pass through the membrane stick to the outer membrane surface. Only fresh water and dissolved minerals pass through. We furnish Ultrafiltration Systems, which are highly efficient in cleaning water impurities. We use the most modern technologies with the best components to fabricate these ultrafiltration systems. Our ultrafiltration systems can also be manufactured as per the client's requirements.

## Features:

- 1) Compact Unit with robust mild steel structure
- 2) Range of models with different capacities
- 3) Fully assembled & tested before dispatch
- 4) Safety features to protect membranes from high pressure

## Advantages:

- 1) Most economical & efficient method of solid removal
- 2) Constant product quality regardless of feed quality
- 3) Compact plant size & Easy to start
- 4) Can handle fluctuation of TDs removal



**Application:**

- 1) Pre-treatment to RO system/ Mineral Water Plant (brackish and seawater applications)
- 2) Purification of surface and well water for potable applications
- 3) Filtration of industrial water
- 4) Wastewater recycle and reuse
- 5) Removal of virtually all particulate matter, suspended solids, bacteria, viruses & pathogenic species from pharmaceutical & industrial process water
- 6) High purity water for hospital for use in dialysis units



# Reverse Osmosis

Reverse Osmosis(RO) is a modern process technology to purify water for a wide range of applications, including semiconductors, food processing, biotechnology, pharmaceuticals, power generation, seawater desalting, and municipal drinking water.

- **Pressure Sand Filter:**

To remove suspended matter from the water. By means of Multi size Graded sand filled in the Vessel. Which is natural process of filtration adopted by the nature.

- **Activated Carbon Filter:**

To remove suspended matter from the water. By means of Multi size Graded sand filled in the Vessel. Which is natural process of filtration adopted by the nature.

- **Antiscalant Dosing:**

To prevent the desalting element from scale deposition.

- **Micron Filtration:**

To remove the micron particles from the raw water. By means of using disposable candles having Perfect micron size of porosity for filtration.

- **Osmotic pressure System (HP Pump):**

To create the osmotic pressure in raw water. By using pump.

- **Desalination by R O Membrane Element:**

To desalt raw water i.e. to reduce TDS. By using Semi permeable Membrane, where ion filtration process is carried out by applying pressure in water. So finally, we get Low salt water with low TDS and High purity. Here will Have to drain water at one side to Wash Membrane filter element continuously because of filtration there is nothing to be polluted in system.

- **UV system:**

To kill the bacteria from fine water.







## Industrial RO Plant



# Desalination

Desalination is the process to desalt the water which is having dissolved salts as ions. For desalination, following treatment are available in the world :

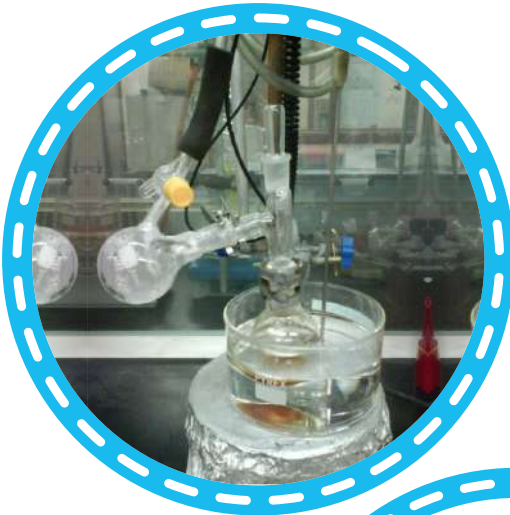
- 1) SolarDistillation
- 2) VacuumDistillation
- 3) Demineralisation
- 4) Distillation
- 5) ReverseOsmosis

## ● Solar Distillation

Water is desalted by means of solar energy. It requires huge space for desalting by evaporation through solar heat energy.

## ● Vacuum Distillation

Water is desalted by means of vacuum distillation. It is based on the principle that the water can evaporate at 65 o C temperature under vacuum.



# Sea Water Desalination System

- Desalination or desalting of water consists of a water treatment process by which sea or brackish water is converted into potable water for supplying communities that have the most difficulty accessing freshwater.
- **Sea Water Desalination by Reverse Osmosis:**  
The reverse osmosis process consists of applying pressure to a salt water solution and forcing it through a semi-permeable membrane. The water passes through the membrane, from the side where the salt concentration is highest, toward the side where the salt concentration is lower. The result is that the concentrated solution part is minimized in favour of the freshwater. Our Sea Water Desalination system as well as Containerized Sea Water Desalination Plant use Reverse Osmosis System capable of producing up to 2000 m<sup>3</sup>/day with built in pre treatment & membrane cleaning resulted in removal of metals, minerals & chemical contaminants. Our system makes it convenient to convert sea water to potable water in the world with high recovery rate.



### Product Features:

- 1) Compact structure, large volume production.
- 2) Available with basic, Semi-Automatic & Automatic controller option.
- 3) Medium or large size equipment, optimizing configuration of energy recovery device according to customer's requirement.
- 4) Available with Automatic fresh-water flush controlled by Multiway valve, avoid frequent cleaning.

### Containerized Sea Water Desalination System

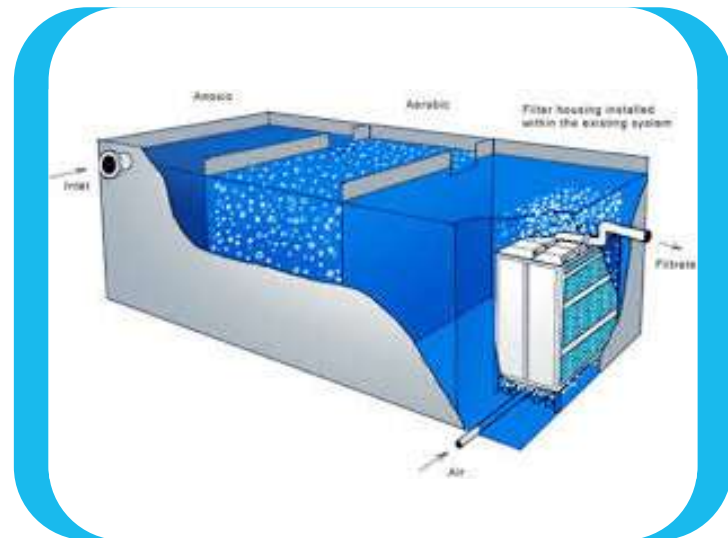


# MBR (Membrane Bio-Reactor)/SBR

Membrane bioreactors for wastewater treatment is a combination of a suspended growth biological treatment method, usually activated sludge, with membrane filtration equipment, typically low-pressure microfiltration (MF) or ultrafiltration (UF) membranes. The membranes are used to perform the critical solid-liquid separation function. In activated sludge facilities, this is traditionally accomplished using secondary and tertiary clarifiers along with tertiary filtration.

## Advantages

- 1) Compact
- 2) High volumetric load possible
- 3) High rate of degradation
- 4) Possible to convert from existing conventional active sludge purification



# U.V. Disinfection System

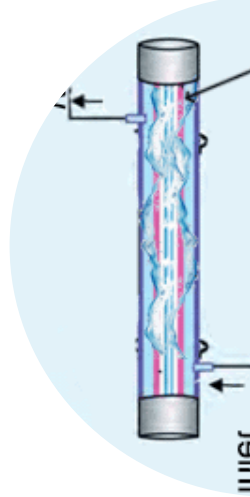
U.V.i.e. Ultraviolet use for sterilization used to create sterilization effect on the material. Where the fluorescent tube will work as a mediator to produce U.V. light. High intensive U.V. light & high reflectivity of housing surface is giving very effective to inactivate the bacteria/virus/algae, etc.

## Advantages

- 1) Inactivate the microorganism in seconds. No chemicals required.
- 2) No effect on properties of the material as well as material to be sterilized.
- 3) No environment effects.
- 4) Water does not lose its taste as well as chemical properties

## Application

- 1) For sterilization of Soft drinks Vegetables & fruits
- 2) Pharmaceuticals.
- 3) Food & beverages.
- 4) Mineral water.
- 5) Hotels, Hospitals, Dairy & Laboratories



# Ozonation System

Because of its excellent disinfection and oxidation qualities, ozone is widely used for drinking water treatment. The treatment of water with ozone has a wide range of applications, as it is efficient for disinfection as well as for the degradation of organic and inorganic pollutants. Waterman Ozonator will be Completely in S.S. with latest Ozone technology to generate high capacity ozone with minimum power consumption and minimum brake down.

## Advantages

- 1) No raw required for ozone generation, produces from natural air.
- 2) Very negligible power required to operate it.
- 3) It is use full for air & water/liquid.
- 4) It works as good oxidising agent.
- 5) Easy operation.
- 6) More effective than U.V.& Chlorine for sterilization.
- 7) For drinking water, it is best & water becomes healthiest

## Application

- 1) For Sterilisation of air & water as oxidising agent.
- 2) For ion precipitation.
- 3) For drinking water sterilization of bottled water.
- 4) For vegetables & fruit sterilization.
- 5) To control Micro-organism in water & surface



# Sewage Treatment Plant

Waterman Sewage Treatment Plant used to treat sewage generated by hotels, Hospitals, Industries, Colonies, IT parks & Commercial Buildings, etc. We manufacture & assure usage of qualitative materials in fabricating Sewage Treatment Plant up to industrial standards. STP plant treats the sewage to make it fit for safe disposal, agricultural use or domestic use in toilets etc. It is easy to install & operate, & requires low maintenance cost. It helps providing the society with a clean healthy environment around them. Waterman STP uses three treatment stages Primary Treatment to remove all large object & grit, Secondary Treatment to remove suspended solid, collide particles & oil & grease particles with Aerobic & Anaerobic treatment, Tertiary Treatment includes processes like filtration, ion exchange, activated carbon adsorption, electro dialysis, nitrification, and denitrification.

## Application:

- 1) Institutions
- 2) Restaurants
- 3) Golf & Country Clubs
- 4) Holiday camps
- 5) National parks
- 6) Service stations





# Effluent Treatment Plant/ Waste Water Treatment Plant

A large quantity of industrial & commercial effluents causes pollution in our environment. Our plants handle these effluents in most to make our environment safe & healthy. To keep our environment safe, we offer Waste water Treatment Plants such as Effluent Treatment Plant to remove the pollution effluent with economical operation & quality discharge. Waterman ETP offers a wide range of ETP in RCC constructed designs for commercial & residential building as well as MSFRP & Fibre constructed tanks for easy installation & commissioning. ETP plants are available from 5 m<sup>3</sup>/day to 1000 m<sup>3</sup>/day.

## Features:

- 1) High quality system components like Flocculator, Aeration system, Sludge drying bed.
- 2) Underground or Above Ground RCC (Civil) Tanks
- 3) Minimum Maintenance
- 4) BOD and COD values of effluent are reduced up to 90%.
- 5) Available in skid mounted system

## Application:

- 1) Dairy Industries
- 2) Food & Food Processing Industries
- 3) Dye & Pigment manufacturing industries
- 4) Textile & Ceramic Industries
- 5) Sugar & Distilleries
- 6) Fertilizer Manufacturing industries



# Mineral Water Turnkey Project

With intention the best quality of water, we design & install turnkey system of mineral water plants incorporating the equipments & components. We offer a single convenient source for all system accessories, including pre treatment, filtration, Disinfection & packaging of water.

## The Project Involves Machinery:

- 1) Mineral Water Plant
- 2) Jar Washing/ Filling Machine
- 3) Automatic Rinsing, Filling & Capping Machine
- 4) Semi/ Automatic PET Blow Moulding Machine
- 5) Automatic Bottle Rinsing, Filling & Capping Machine
- 6) Automatic Pouch Packing Machine
- 7) Cup Filling Machine
- 8) BOPP Labeling Machine / Label Shrink Machine
- 9) Shrink Wrapping Machine
- 10) Batch Coding Machine
- 11) Water Chiller

## Mineral Water Plant Comprises of:

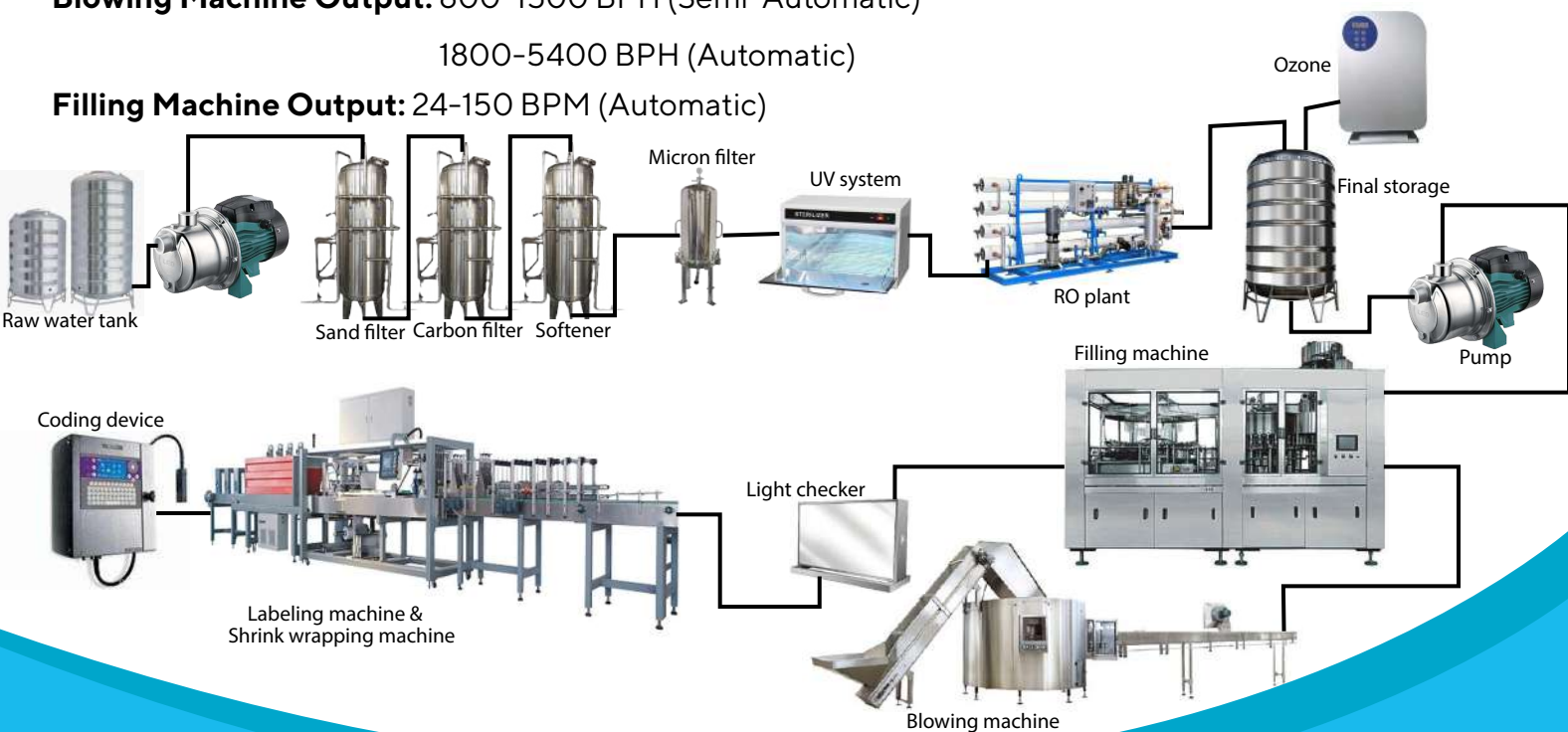
- 1) Raw Water Pump
- 2) Chlorine Dosing System
- 3) Multi Media Filtration
- 4) Activated Carvon Filter
- 5) Ultra Filtration (Optional)
- 6) Anti Scalant Dosing System
- 7) High Pressure Pump
- 8) Reverse Osmosis System
- 9) Stainless Steel Storage Tanks
- 10) Micron Cartridge Filtration
- 11) UV Sterilization
- 12) Ozone Disinfection System

**Bottle Blowing & Filling Range:** 200 ml – 2000 ml

**Blowing Machine Output:** 800-1500 BPH (Semi-Automatic)

1800-5400 BPH (Automatic)

**Filling Machine Output:** 24-150 BPM (Automatic)



# Complete Range Of Water Treatment Spares



**CENTRIFUGAL PUMPS**



**FRP VESSEL**



**SS VESSEL**



**MANUAL & AUTO MPV'S**



**PP FILTER HOUSING & CTZ**



**SS FILTER HOUSING**



**HIGH PRESSURE PUMP**



**FRP PRESSURE TUBE**



**SS PRESSURE TUBE**



**MEMBRANE**



**DOSING PUMP**



**CONTROL PANEL**



**TDS & CONDUCTIVITY METER**



**ROTA METER**



**SS STORAGE TANK**



**FLOAT SWITCH**



**PRESSURE GAUGE**



**HIGH & LOW PRESSURE SWITCH**



**SWIMMING POOL FILTER**

# Area of Application in Industries

- Agricultural Industry
- Automobile Industry
- Biotechnology Industry
- Boiler & Cooling Tower Blowdown
- Chemical & Fertilizer Industry
- Distillery & Brewery Industry
- Dairy Industry
- Electronic Industry
- Electroplating Industry
- Engineering Industry
- Food & Beverages Industry
- Fisheries Industry
- Food Processing Industry
- Hotel/restaurant Industry
- Hospitals
- Lather Industry
- Metal Plant
- Municipality
- Paint Industry
- Pharmaceutical Industry
- Paper & Pulp Industry
- Petrochemical Industry
- Power Plant
- Plastic Industry
- Rubber Industry
- Sugar Industry
- Textile Industry
- Tannery Industry
- & Many More...

