

The logo for Aditya Envirotech is a blue circular emblem with a stylized 'A' shape. It is positioned in the top left corner of the page.

**Aditya
Envirotech**
Environment Consultant



**WATER TREATMENT SOLUTIONS FOR
ALL TYPE OF APPLICATIONS**

ADITYA ENVIROTECH

A ONE STOP SOLUTION PROVIDER FOR TOTAL WATER MANGEMENT SYSTEM



1) Design, Engineering and Manufacturing

ADITYA ENVIROTECH offers professional Design and Engineering manufacturing and Consultancy services in the area of Water & wastewater treatment in India . We provide fully integrated array of key consultancy services for India's major markets in Industrial, Municipal and Commercial segments in the field of Total Water Management.

Our services include:

- Tender Evaluation, Process Design & Engineering cost estimation of Water, Sewage, Waste Water Treatment, ZLD Systems
- Basic and Detailed Engineering -Water & Wastewater treatment (Conventional & Advanced processes)
- 3D Engineering Plans - Layout, Sections, Piping, Isometrics
- SCADA & PLC configuration for total WTP system
- Technical Supervision
- Civil-Structural design
- Renovation & Up-gradation of Existing Plant
- Technology Simulations- Blending advance technology with customized engineering
- Instrumentations, Automation of plant

2) Contracting and Project Management

ADITYA ENVIROTECH undertakes the comprehensive project management assignment from our client on water and wastewater projects from Industrial, Municipal and commercial Segments.

Primary challenge of project management is to achieve all of the project goals within the given constraints. We do the minute detailing on

primary constraints of project that are surmounted by the key project pivots such as scope, time, quality and budget. Our expert team work on optimizing the allocation of necessary inputs/resources and integrate them to meet pre-defined objectives.

Achme Water Solution Private Limited focuses on following pillars of project management function.

Our services include:

- Turnkey Project Management-Detailed Project Report
- Site Management
- Budget Schedule, Quality Client
- Procurement
- Sub-Contractor Selection
- Value Engineering- providing cost effective and energy optimized designs
- As Built Drawings
- Construction & Installation Management



3) Operation and management services

We are offering complete range of operation and maintenance services in the field of water and wastewater management. Our team is leveraging on years of experience, we hold expertise in offering WTP/STP/ETP/ZLD total Operation and Maintenance services. Our experience staff interact with our clients and in accordance with their needs, plan and render the best service. Moreover, this service is highly reliable and

efficient and is carried out in compliance with the industry standards.

Clients can avail this service from us at genuine rates. Our offered services are highly recognized for its timely execution, high efficiency and reliability to achieve client's requirements and satisfaction.

Our services include:

- Training
- Erection and Commissioning
- Research, Analysis and Development
- Laboratory Testing
- Consent to Operate, Renewal, Expansion and Establishment.
- Environmental Surveillance Reports.
- Online Process Monitoring
- Trained / Tested Operators 24/7
- Manual - O & M / Quality etc.
- Supply of Spares , Consumables and Chemicals
- Environmental Monitoring : Air / Stack / Noise
- Servicing of New/Existing Plant
- Full Plant Operation & Maintenance
- EIA, Environment Statement report, Water Cess reports.



SEWAGE TREATMENT PLANT (STP)



Aditya Envirotech is offering a complete solution for the Sewage Treatment Plant. We have also gained expertise in designing and developing compact sewage treatment plants.

We professionally deal in the following sewage water treatment technologies.

- Moving bed bio reactor technology (MBBR)
- sequencing batch reactor technology (SBR)
- Electro chemical technologies (for small sized institutions)
- Membrane bio- reactor (MBR)
- Extended aeration technology (EA)

The Sewage from the residential and commercial buildings is treated for reduction in BOD, COD, TSS TN & TP in order to comply with the pollution control board standards for disposal in gardening , flushing etc.

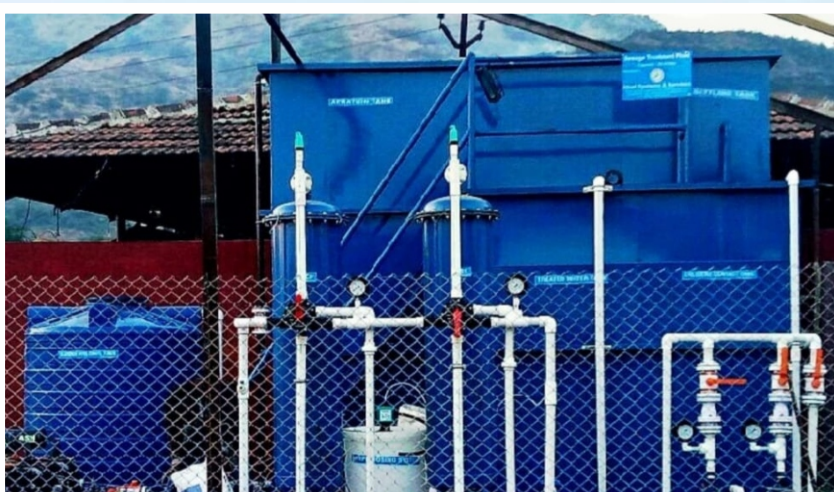
The sewage treatment plants are available in RCC constructed designs for commercial and residential buildings as well as Mild Steel FRP Lined and Fibre constructed tanks for easy installation and commissioning.

Application

- Industries
- Hotels & Resorts,
- School & Institutions
- Township
- Restaurants

Salient Features

- Custom-made technology to suit rigorous site conditions.
- Low operating & maintenance cost.
- Trained team for installation & after sales service.
- Environment friendly systems.
- Energy efficient.
- Water recycle for Gardening, Cooling Tower, Toilet Flushing etc.
- Low foot print.



EFFLUENT TREATMENT PLANT (ETP)



Effluent Treatment Plant (ETP) covers the mechanisms and processes used to treat waters that have been contaminated in some way by anthropogenic industrial or commercial activities prior to its release into the environment or its re-use. Most industries produce some wet waste although recent trends in the developed world have been to minimize such production or recycle such waste within the production process.

However still many industries remain dependent on processes that produce waste waters. **Aditya Envirotech** manufacturer complete line of ETP including biological treatment of liquid, solids separation systems, dewatering equipments & instruments.

We have professional experts to deal in the following effluent treatment of technology :-

- Physico chemical treatment
- Biological treatment
- Aerobic treatment plant
- Activated sludge treatment plant
- Extended aeration system
- Diffused Aeration system

Application

- Iron and steel industries
- Hospitals
- Dairy
- Mines and queries
- Food and Beverage
- Pulp and paper industries
- Automobile
- Pharma and chemical industries

Expertise

- On site visit and design accordingly
- Project management
- Designing Installation and Maintenance
- Civil and Electro-Mechanical work
- Commissioning of the plant including training to operators
- After sales service and AMC



ZERO LIQUID DISCHARGE (ZLD)



In general the best strategy to clean highly contaminated and toxic industrial wastewater is to treat at source and by applying onsite treatment within the production lines when recycling treated effluent.

Many plants in the manufacturing industry are turning to water efficiency initiatives aimed at recycling water from waste streams for reuse in plant processes to help multistage water security related risks. Extending the water reuse concept further, important trend in the industry is the increasing adoption of zero liquid discharge (ZLD).

Zero-liquid discharge (ZLD) is a water treatment process in which all wastewater is purified and recycled; therefore, leaving zero discharge at the end of the treatment cycle.

ZLD is an advanced wastewater treatment method that includes ultra filtration, reverse osmosis, evaporation/crystallization.

Aditya Envirotech has the expertise to design and build wastewater reduction and ZLD facilities of any size.

Treatment Process

- Primary clarifications
- Biological process
- Secondary clarifications.
- Tertiary treatment
- Polishing units i.e. UF, RO, DM & ME



ADITYA ENVIROTECH RANGE OF INDUSTRIAL / COMMERCIAL ION EXCHANGE DEMINERALISATION / MIXED BED UNITS



ADITYA ENVIROTECH is leading manufacturer of industrial water deionization systems designed for efficient removal of dissolved salts and minerals. These water treatment systems produce high purity water for industrial/commercial applications. We also design and manufacture a complete line of ion selective resin deionization systems to remove selective ions to meet the end user's water quality requirements at optimum cost. Our highly efficient designed D.M. plant ensures the maximum utilization of the effective surface area, uniform space and linear velocity across the resin bed which provides effective contact time between water and resin bed.



Demineralization Process

Demineralization or Deionization is the process of removing mineral salts from water by using the ion exchange process. Impurities that remain dissolved in water dissociate to form positive and negative charged particles known as ions. An ion-exchange vessel holds ion-exchange resin of the required type through which water is allowed to pass. The selective ions in the water are exchanged with ions or radicals loosely held by the resin. In this way, the water is passed through further vessels or a polishing mixed bed vessel so that both positive and negative ions are removed and water is demineralized.

A Typical two-bed DM Plant consists of two FRP/MSRL/SS Pressure vessels connected in series along with its internal fittings. The first unit consists of high capacity strong acid cation (SAC) exchange resin, which replaces positive ions of

Salient Features

- High quality ion exchange resin provides stability and uniform size for top performance and long life.
- Range of demineralization Plant/Mixed Bed Unit to suit end user requirements.
- Easy to install and operate.
- Produces high quality Water
- Total Dissolved solid removal.
- Manual/Timer-based automatic regeneration (Optional)

Applications

- Medium and High Pressure Boiler feed.
- Process Water
- Post treatment of RO Plant
- Use of SAC-SBA as Pre Treatment of Mixed Bed unit for High Purity

salt with hydrogen ions to form respective acids, which are absorbed in next vessel by strong base anion (SBA) exchange resin. The water obtained by this process shows conductivity less than $20 \mu S / cm$ at $25^\circ C$ and total dissolved solids less than 10 ppm.

Aditya Envirotech also provides broad range of custom-built Mixed Bed Units for high purity industrial process water & utility applications. Our exclusive design of Mixed Bed plant ensures the maximum utilization of the High bed depth, effective surface area, uniform space and linear velocity across the resin bed, which provides effective contact time between water and resin bed yield high purity water for sensitive process application i.e. WFI (water for Injection) High Pressure Boilers, EC circuits etc.

- Simple inline configuration for ease of installation and maintenance.
- DM/MB Plants are available in MSRL,FRP,SS.
- Proved mechanism of top distribution and bottom collection system
- Complete Assembly with backwash & regeneration equipment
- Variety of cost effective standard models.

- WFI (Water for Injection) Pharmaceutical application.
- Dissolved Silica removal for Power Plant Industries



ADITYA ENVIROTECH RANGE OF INDUSTRIAL / COMMERCIAL RESIDENTIAL WATER SOFTENING SYSTEM



Aditya Envirotech Offers highly efficient Softening Plants which are designed to treated hard water to suit for various applications. Treated Water is of consistency quality with low residual hardness throughout the service cycle. The high synthetic resin is used to exchange Sodium ion with hardness forming Calcium and Magnesium ions. After producing desired output, the resin is regenerated with (NaCl) Sodium Chloride solution after which unit is again ready to deliver next batch. These units are easy to operate and with low maintenance. These softening systems can be designed and manufactured upto capacities of 200 m³/hr, depending upon the inlet water hardness level.

We design and manufacture very efficient Water softeners that are effective in reducing the hardness of the Water. They help in producing commercial zero soft Water by highly acidic cation exchanger resin, which removes calcium and magnesium ions from the Water. **Aditya Envirotech** as one of the leading Industrial/commercial Water softening plant manufacturers based in India, we make our products available to our customer's at the most competitive rates. These Water softeners are available in customized Material of construction like-MSRL/MSEP/FRP/MSFRP/ client's requirement.



The Softening Process

Water is considered 'hard' when it has excessive levels of calcium and magnesium dissolved in it. Hard Water can lead to the following Water problems:

1. Scale build-up on heating and cooling systems, leading to increased electricity costs and breakdowns.
2. Scale build-up in pipes, resulting in decreased flow rates.
3. Staining/Scaling on surfaces

The pressurized inlet hard water is passed through the softener vessel which consists of a bed of cation resin in sodium form. The hardness ions Ca & Mg are taken up by resin and in exchange sodium ions are relinquished from the resin. Raw water will continue to get softened till the resin gets exhausted. Bringing back the resin

The production stage of the softening process may be represented by the following reactions:



The surface of the resin gets coated with the calcium and magnesium minerals. The resin is cleared by flushing a strong sodium (salt) solution (NaCl) prepared in the brine tank. The sodium ions are powerful and they easily overpower the calcium and magnesium ions and drive them off of the resins which is later drained out of the unit.

Salient Features of ACHME Water Softeners

- User friendly and low maintenance System
- Require less foot print
- Manual/Automatic system as per client's requirement
- Low power consumption
- Reduction of scales and clogging in pipes and vessels
- Increases the efficiency and service life of post treatment equipments
- Available in customized MOC as per client's requirement

Applications

- Low Pressure Boiler feed.
- Process Water
- Cooling water make-up
- HVAC & Cooling Tower
- Prevents scale formation

to its original form is called regeneration of resin. Softener resin is regenerated by sodium chloride (NaCl).

In this process hard water is converted into soft water. Thus the calcium and magnesium ions responsible for the hardness in the incoming water, are replaced by the less harmful and acceptable sodium ion thereby making the water soft. As there is an exchange of cations with a preference for the sodium ion, a cation exchange resin in the sodium form is used in the process. The conventional resin employed for the softening process is the strong acid cation (SAC) resin the sodium form. All the hardness, both temporary and permanent, present in water is removed. The hardness is easily reduced to commercial zero level of hardness

The regeneration stage of the softening process may be represented by the following reactions.



The regeneration of the softener consists of the following steps in sequence

- Backwash
- Injection of sodium chloride solution
- Rinse



ADITYA RO-COMplete RO SYSTEMS, RO SPARE PARTS



Aditya Envirotech water treatment plant is designed, engineered and manufactured to treat surface and ground water and make it suitable for the usage in commercial/industrial purposes. ACHME RO Plant is the most cost effective water treatment system for the removal of salts, low level of metals, chemicals and other impurities present in the water

Aditya Envirotech systems are designed as per client's requirement to produce high quality water with trouble free and durable operation.

Aditya Envirotech Plants are best suitable for normal drinking application to the specific usage, such as - Food Processing, Pharmaceuticals, Dialysis, Boiler Feeding, Beverages Effluent and Wastewater Purification, Fruit Syrup Production, Hydrogen Production and various other Commercial/Industrial usages.

Aditya Envirotech water treatment plants production is available from 50 LPH to 100 m³/hr permeate capacity. Total systems are designed and built for easy installation. We are utilizing the high quality components and advance system designs. User can use the system with years of trouble free service.

Special attention has been taken to understand the client's requirement for process applications. Designing, engineering and building suitable RO Water Treatment Plants as per the client's satisfaction, has made **Aditya Envirotech** a Renowned name in commercial and Industrial sectors for their water treatment requirements.



STANDARD COMPONENTS OF RO AS PER THE CLIENT'S REQUIREMENT :



Economy RO System	Standard RO System	RO System(Fully SS)
FRP Pressure Vessels	FRP Pressure Vessels	SS-316 grade Pressure Vessels
Heavy duty PVC piping	Heavy duty PVC piping	Heavy duty SS-316 grade piping
Powder coated MS frame	SS-304 grade SS frame	SS-304 grade SS frame
High Pressure Pump	High Pressure Pump	High Pressure Pump
PLC Control	PLC Control	PLC Control
Power ON/OFF switch	Power ON/OFF switch	Power ON/OFF switch
5 Micron pre-filter	5 Micron pre-filter	5 Micron pre-filter
Semi permeable Membrane	Semi permeable Membrane	Semi permeable Membrane
FRP RO Pressure Tube	FRP RO Pressure Tube	SS grade RO Pressure Tube
Product water flow meter	Product water flow meter	Product water flow meter
High pressure gauge	High pressure gauge	High pressure gauge
High/Low pressure switch	High/Low pressure switch	High/Low pressure switch
Level control ON/OFF	Level control ON/OFF	Level control ON/OFF
Auto flush with solenoid valve	Auto flush with solenoid valve	Auto flush with solenoid valve
Multistage booster pump	Multistage booster pump	Multistage booster pump
Flow meters for permeate/reject	Flow meters for permeate/reject	Flow meters for permeate/reject
Water quality indicator	Water quality indicator	Water quality indicator
TDS meter with LCD	TDS meter with LCD	TDS meter with LCD
Electrical control Panel	Electrical control Panel	Electrical control Panel
Overload breakers	Overload breakers	Overload breakers
LED indicators	LED indicators	LED indicators
Pressure Control Valve	Pressure Control Valve	Pressure Control Valve
Optional: UV sterilizer/Ozone system	Optional: UV sterilizer/Ozone system	Optional: UV sterilizer/Ozone system
Optional: CIP system	Optional: CIP system	Optional: CIP system

Benefits:

- Cost effective water treatment system
- Suitable for all types of commercial/industrial usage
- Suitable designing & best engineering work
- Easy to install and cost-efficient
- Removes salts, minerals and other impurities
- Easy Installation and trouble free durable operation

Aditya Envirotech is also a leading manufacturer and supplier of commercial and Industrial RO spare parts throughout the India. Based on our in-depth knowledge and experience, we offer cost effective range of RO Spares and Components as per our client's requirements.



Our Mission is to provide committed, Innovative & cost effective solutions & services to the customers for efficient & Reliable operation of Solar power plants.



Large Scale PV Power Plant



Roofop PV Power Plant



Solar Wind Hybrid System



Joint Venture Projects



Roofop PV Power Plant



Solar Hybrid Power Systems



**SPV Power Systems:-
Ground Mounted, Grid Support
& Grid Connected**



**Partnering Solar Energy Research
& Development Projects**



**SPV Training Programs :-
Components & Systems**



Solar Water Pumping



**Energy Audits Commercial Bld.,
Residential Bld. And Industrial**



**Annual Maintenance Contracts
(AMC) / Operation & Maintenance**

COMPANIES WE HAVE WORKED WITH



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