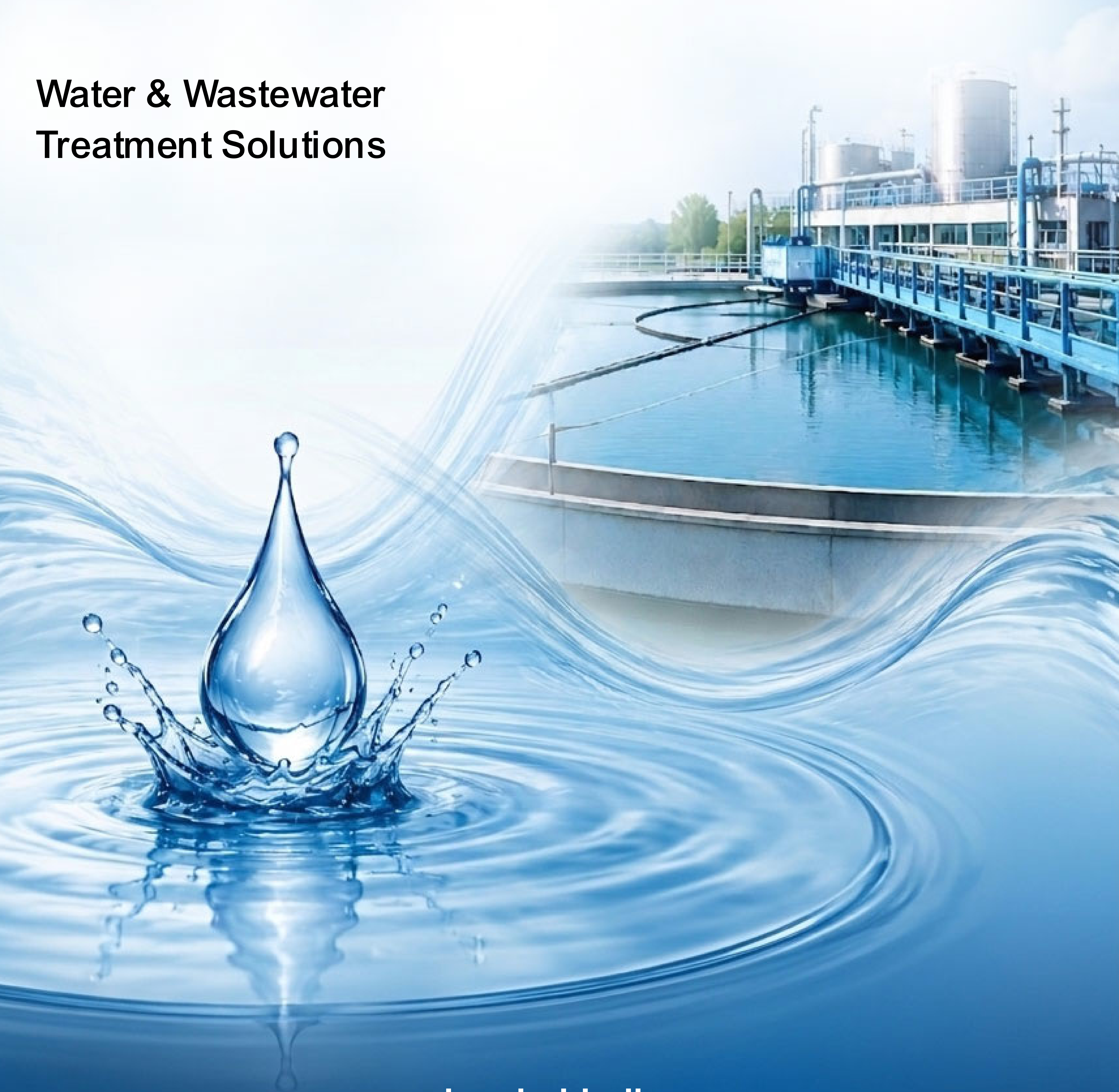




INSOHUB INDIA Pvt Ltd

**Water & Wastewater
Treatment Solutions**



www.insohubindia.com

About Us

INSOHUB India Private Limited delivers complete water & wastewater treatment solutions, from design and manufacturing to installation, commissioning, operation and maintenance.

We offer end-to-end services including Design, Supply, Installation, Testing, Commissioning. Operation & Maintenance with a strong focus on quality, safety, sustainability and compliance.

Vision

To be a trusted leader in sustainable water and wastewater treatment solutions through innovation, engineering excellence and environmental responsibility.



Mission

To deliver reliable, efficient, and customized treatment systems that help customers achieve water conservation, regulatory compliance and long-term operational excellence

Our Core Values

Quality

- High-performance, dependable water treatment solutions.

Customer Focus

- Customized solutions with dedicated support.

Integrity & Professionalism

- Honest, ethical, and transparent business practices.

On-Time Delivery

- Efficient execution with timely project completion.

Engineering Excellence

- Innovative, efficient and future-ready engineering.

Innovation & Sustainability

- Driving sustainability through advanced water technologies.

Safety & Compliance

- Safe, compliant, and environmentally responsible operations.

Continuous Improvement

- Constant innovation to enhance performance and customer satisfaction.

Delivering Sustainable Water Solutions through quality, Innovation & Engineering Excellence.

Why Choose Insohub?

01 End-to-End Engineering Expertise

We provide complete solutions from concept to commissioning, including

- Process design & engineering
- Equipment selection & supply
- Installation & commissioning
- Operation & maintenance support
- This ensures a single-point responsibility model with smooth project execution.

02 Strong Technical Capability

Our engineering strength covers

- STP (ASP, MBBR, SBR, MBR)
- ETP (Physico-chemical & biological systems)
- WTP (RO, UF, DM, filtration systems)
- ZLD (RO + MEE + ATFD systems)
- We design systems based on actual effluent characteristics, not standard templates.

03 Proven Project Experience

We have successfully delivered projects for

- Residential townships & apartments
- IT parks & commercial buildings
- Industrial manufacturing units
- Hospitality & institutional sectors
- With capacities ranging from small-scale plants to large MLD-level systems.

04 Focus on Performance & Compliance

- Meeting PCB (Pollution Control Board) norms
- High treatment efficiency (BOD, COD, TSS reduction)
- Water reuse and recycling solutions
- Zero Liquid Discharge (ZLD) capabilities

05 Advanced Technology Integration

We adopt modern and efficient technologies

- Energy-efficient aeration systems
- Automated PLC/SCADA controls
- Compact modular plant designs
- Advanced filtration and membrane systems

06 Strong O&M Support

- Skilled operation team deployment
- Preventive & predictive maintenance
- Real-time monitoring and reporting
- Quick breakdown response system

07 Cost-Effective & Sustainable Solutions

- Optimized chemical consumption
- Reduced energy usage systems
- Water recovery and reuse focus
- Long-term operational savings

08 Customer- Centric Approach

- Customized design for each client
- Transparent communication
- On-time project delivery
- Long-term partnership mindset

Our Expertise

- | | | |
|---------------------------------|-----------------------------------|-----------------------------------|
| ■ Sewage Treatment Plants (STP) | ■ Water Treatment Plants (WTP) | ■ Effluent Treatment Plants (ETP) |
| ■ Reverse Osmosis (RO) Systems | ■ Ultrafiltration (UF) Systems | ■ Water Softening Systems |
| ■ Zero Liquid Discharge (ZLD) | ■ Water Recycling & Reuse Systems | ■ Advanced Filtration Solutions |

Engineering Solutions

Sewage Treatment Plants (STP)

Sewage Treatment System

Treats domestic wastewater from residential, commercial and institutional sources by removing organic matter, suspended solids, nutrients and pathogens. Produces treated water suitable for reuse or safe discharge.

STP Technologies

01	ASP – Activated Sludge Process	Conventional biological treatment with aeration and clarification for reliable performance.
02	EASP – Extended Activated Sludge Process	Longer aeration, lower sludge generation and higher treatment efficiency.
03	MBBR – Moving Bed Biofilm Reactor	Uses floating biofilm media for compact design and high treatment efficiency
04	FBBR – Fixed Bed Biofilm Reactor	Fixed media biofilm system offering stable operation and low maintenance.
05	SBR – Sequencing Batch Reactor	Single-tank automated process with fill, aeration, settling and decant cycles.
06	MBR – Membrane Bioreactor	Advanced membrane filtration producing superior quality treated water for reuse.



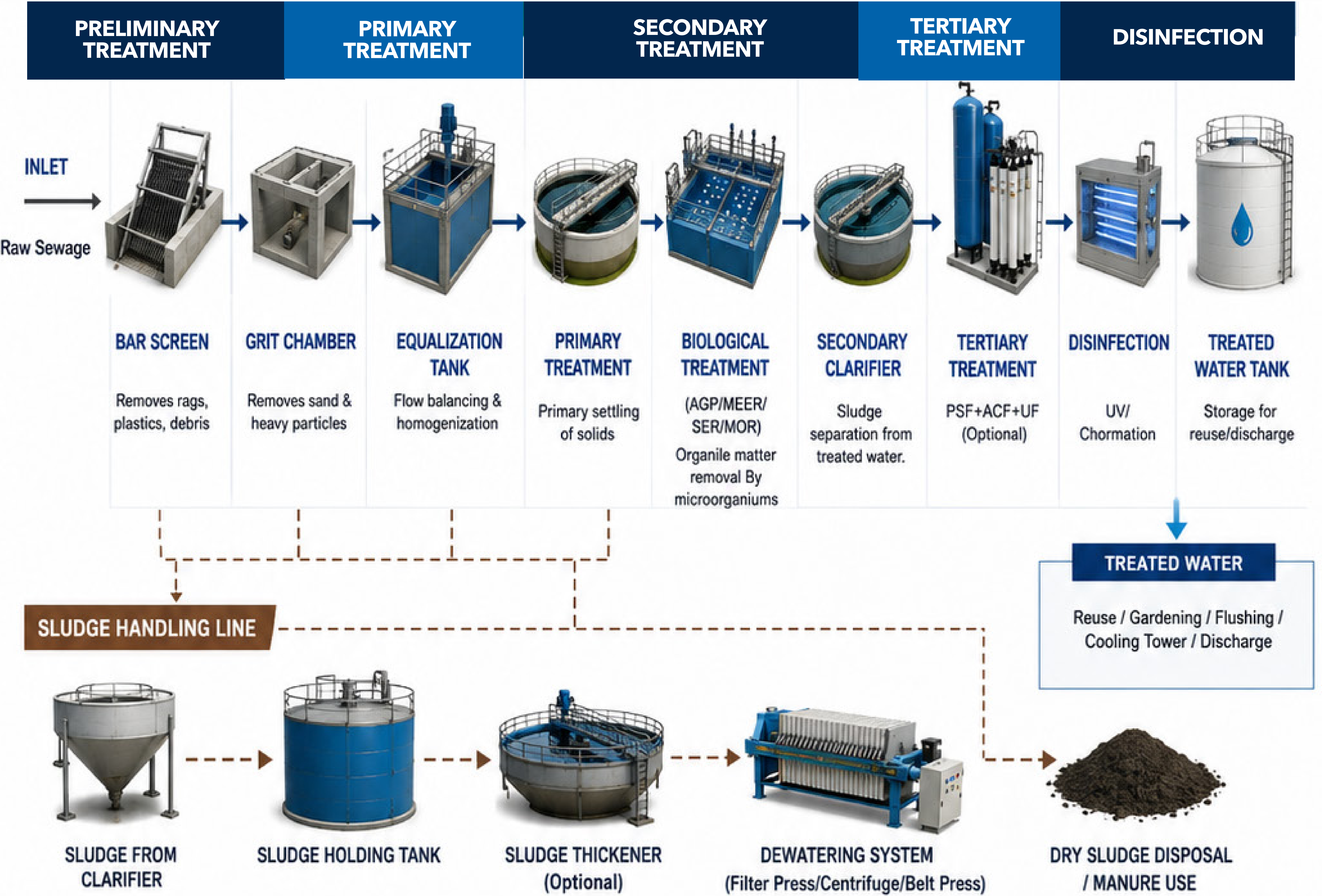
Key Benefits

- High treatment efficiency
- Compact & energy efficient systems
- Automated operation with low maintenance
- Reuse-ready water meeting environmental standards



STP Process Flow

STP (Sewage Treatment Plant) - LINE DIAGRAM



LEGEND

Main Flow Line

Sludge Line

Air Line

Chemical Line

KEY FEATURES

Efficient removal of BOD, COD, TSS & pathogens

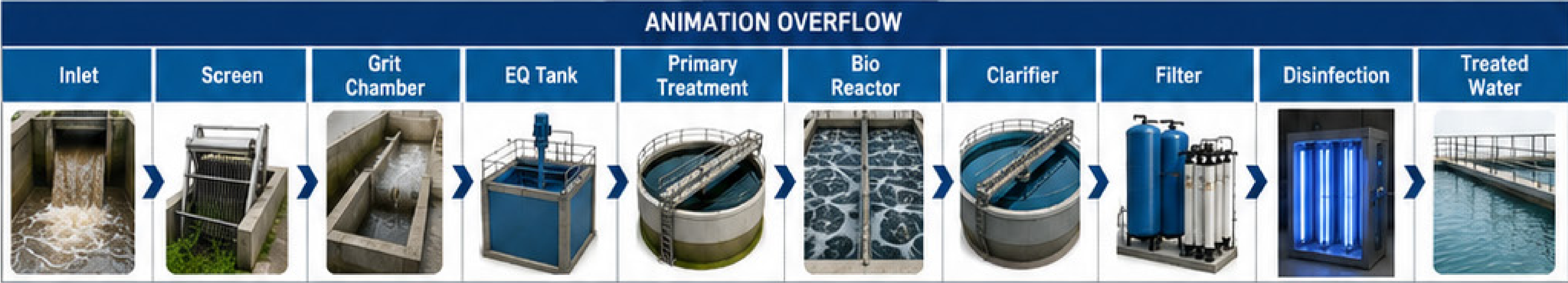
Modular & Compact Design

Low power consumption

High quality treated water for reuse

Environment friendly & minimal sludge disposal

Easy operation & low maintenance



Reverse Osmosis System

The Reverse osmosis process uses a semipermeable membrane to separate and remove dissolved solids, organic, submicron, colloidal matter, viruses and bacteria from water. The process is called reverse Osmosis since it requires pressure to force pure water across a membrane leaving the impurities behind. Reverse Osmosis is capable of removing 95 – 99% of the total dissolved solids (TDS) and 99% of all bacteria, thus providing safe, pure water.

Ultra Filtration System



Filtration System

- Multi Grade Sand, carbon Filters
- Ultra Filtration
- Water Softener
- Iron Removal Filters
- Fluoride Removal Plant
- DM Plant
- Recycling Water
- Zero liquid Discharge System



De watering System

- Filter Press
- Decanter



Flow Meter

- Electro Magnetic Flow meter
- Digital Flow Meter
- Ultrasonic flow meter



Spares & Membranes

- | | | | |
|----------------------------------|--------------------|----------------------|--------------------------------|
| ■ Filter Media | ■ RO Membrane | ■ Pressure gauge | ■ Resin |
| ■ UF Membrane | ■ Flow meter | ■ Activated Carbon | ■ Valve & Valve Spares |
| ■ Air Diffuser | ■ SDI Kit | ■ Tube Settler Media | ■ Multiport Valves |
| ■ Basket Strainer | ■ FRP Vessel | ■ MS Vessel | ■ Cartridge Element |
| ■ Pumps , High Pressure & Spares | ■ Membrane Housing | ■ Dosing Pump | ■ Zero liquid Discharge System |



Speciality Chemicals

Pre Treatment Chemicals

- Coagulant
- Polyelectrolyte –Anionic & Cationic
- Odour & Fouling Control Chemicals
- Defoamer



Water Treatment Chemicals

- Cooling Tower Treatment Chemicals
- Boiler Treatment Chemicals
- Chillier water circuit Treatment Chemicals
- pH Booster
- Potable Water Treatment Chemical



Effluent Treatment Plants (ETP)

Industrial Wastewater Treatment System

Treats industrial wastewater by removing physical, chemical, and biological contaminants, making it safe for discharge or reuse while meeting environmental standards.

ETP Treatment Process

01

Preliminary Treatment

Screening, grit removal & oil / grease separation.

02

Primary Treatment

Sedimentation and suspended solids removal.

03

Secondary Treatment

Biological treatment using ASP, MBBR, SBR, or MBR for BOD/ COD reduction

04

Tertiary Treatment

PSF, ACF, UV/Chlorination, UF and RO for advanced polishing and reuse.

ETP Technologies



Physico-Chemical ETP

Removes color, TSS and heavy metals using chemical treatment



Biological ETP

Uses microorganisms for efficient organic pollutant removal



Hybrid ETP

Combines chemical and biological treatment for high-performance waste water treatment.

Industry Applications

Textile

Pharmaceutical

Chemical

Food Processing

Dairy

Manufacturing

Key Components



Equalization Tank



Neutralization Tank



Clarifier



Aeration Tank



Sludge Dewatering System



PSF



ACF

Reliable · Efficient · Sustainable
Industrial Wastewater Treatment Solutions

Effluent Treatment Plants (ETP) - ZLD

Zero Liquid Discharge (ZLD) System



Our Services

01	Pre-Treatment	Removes suspended solids, oil & grease and conditions wastewater
02	Biological Treatment	ASP / MBBR / SBR processes reduce BOD & COD.
03	Reverse Osmosis (RO)	Recovers high-quality reusable water and concentrates dissolved salts.
04	Evaporation (MEE)	Further concentrates RO reject for maximum water recovery.
05	Crystallizer / ATFD	Converts concentrated brine into dry salt for safe disposal
06	Water Reuse	Recovered water is reused in process, cooling towers, and boilers, minimizing freshwater consumption.

KEY BENEFITS

- ✓ Zero Liquid Discharge
- ✓ Maximum Water Recovery
- ✓ Environmental Compliance
- ✓ Reduced Freshwater Consumption
- ✓ Sustainable & Cost-Effective Operation



Operation & Maintenance (O&M)

Professional O&M services for WTP, STP, ETP & ZLD systems. Ensuring reliable performance, efficiency, compliance and uninterrupted operation.



Scope of Services



Water Treatment Plants (WTP)

- Clarification, Filtration & Softening
- UF & RO Systems
- Chemical Dosing



Sewage Treatment Plants (STP)

- ASP, MBBR, SBR & MBR Technologies
- Biological Treatment
- Sludge Management



Effluent Treatment Plants (ETP)

- Physico-Chemical Treatment
- Biological Treatment
- Sludge Handling



Zero Liquid Discharge (ZLD)

- RO Systems
- MEE, ATFD & Crystallizer
- Water Recovery & Salt Management

Operation Services

Plant Operation

- SOP-based plant start-up & shutdown
- Flow, pressure & process monitoring
- pH, DO, TDS & turbidity testing
- Water quality monitoring

Process Control

- Filtration & filter backwashing
- RO performance monitoring
- Chemical dosing optimization
- Aeration & biological process control
- Sludge recirculation & dewatering
- ZLD operation for maximum water recovery

Reporting & Documentation

- Daily operation log sheets
- Water quality analysis reports
- Chemical & energy consumption records
- Equipment performance reports

Water Treatment Solutions



PSF – Pressure Sand Filter
Removes suspended solids, turbidity and fine particles through multi-layer sand filtration.



ACF – Activated Carbon Filter
Eliminates chlorine, color, odor, taste and organic impurities while protecting RO membranes.



DMF – Dual Media Filter
Provides high-efficiency depth filtration using anthracite and sand for superior suspended solids removal.



AQS – Quartz Sand Filter
Delivers polishing filtration by removing fine suspended particles for crystal clear water.



DM Plant – Demineralization System
Produces high-purity water by removing dissolved salts and minerals using ion exchange technology.



IR System – Ion Exchange Resin
Softens and deionizes water by removing hardness and unwanted ions for process applications.



Degasser System
Removes dissolved CO₂ and O₂ to prevent corrosion and improve DM plant performance.



UF System – Ultrafiltration
Membrane-based filtration that removes bacteria, viruses, colloids and suspended solids.



UV System – Ultraviolet Disinfection
Chemical-free disinfection that effectively destroys microorganisms for safe, hygienic water.



Complete Filtration & Purification Solutions



Reliable



Efficient



Customized



Sustainable

Maintenance & Performance Management

Maintenance Services

Preventive Maintenance	● Routine inspection of pumps, blowers & motors ● Filter backwashing ● Pipeline & diffuser cleaning ● Lubrication & valve inspection
Corrective Maintenance	● Breakdown repairs ● RO membrane replacement ● Electrical & control panel servicing ● Pipeline leakage rectification
Predictive Maintenance	● Equipment condition monitoring ● Instrument calibration ● Membrane performance analysis ● Process trend monitoring
Annual Maintenance	● Complete plant inspection ● Pump & blower overhauling ● RO membrane CIP cleaning ● Tank inspection & component replacement

Benefits of Professional O&M	
✓	Reliable & Efficient Plant Operation
✓	Reduced Downtime & Maintenance Costs
✓	Regulatory Compliance Assurance
✓	Optimized Chemical & Energy Consumption
✓	Extended Equipment Life
✓	Sustainable Water Reuse
✓	Maximum Water Recovery & ZLD Performance



Key Performance Indicators (KPIs)

- PCB Compliance
- Plant Uptime
- Water Quality Performance
- Chemical Consumption Optimization
- Energy Consumption per m³
- Sludge Management Efficiency
- RO & ZLD Recovery Performance

Skilled Manpower

- Plant Operators
- Process Engineers
- Maintenance Technicians
- Laboratory Technicians
- Safety Officers

Safety & Compliance

- PPE Compliance
- Safe Chemical Handling
- Electrical Safety (LOTO)
- Pollution Control Board (PCB) Compliance
- Emergency Response Procedures

Engineering Capabilities

Our company is a professionally managed engineering organization delivering end-to-end water, wastewater, and effluent treatment solutions. From concept, design and manufacturing to installation, commissioning and long-term operation & maintenance, we provide reliable, efficient, and sustainable engineering solutions for industrial and municipal sectors



Engineering & Design

- Process Design (PFD, P&ID, BEP & DEP)
- Hydraulic & Equipment Sizing
- Mass & Water Balance Studies
- Technology Selection & Process Optimization
- Energy-Efficient Plant Design

Mechanical Engineering

- Tanks, Clarifiers & Aeration Systems
- Pressure Vessels & Dosing Systems
- Pumping & Piping Networks
- Sludge Handling Systems
- Modular & Skid-Mounted Plants

Electrical & Automation

- PLC & SCADA Automation
- Electrical Control Panels
- Process Instrumentation
- Remote Monitoring Systems
- Energy Optimization Solutions

Civil & Structural

- RCC Tank & Foundation Design
- Structural Platforms
- Plant Layout & Utility Planning
- Hydraulic Flow Optimization

Fabrication & Manufacturing

- MS, SS & FRP Equipment Fabrication
- Modular Plant Manufacturing
- Factory Testing & Quality Inspection
- Ready-to-Install Skid Systems



Project Execution & Support

01 Installation & Commissioning

- Complete Plant Erection & Installation
- Mechanical, Electrical & Piping Integration
- Trial Run & Performance Testing
- System Optimization
- Documentation & Operator Training

02 Research & Development

- Process Optimization
- Chemical & Energy Reduction
- Advanced Treatment Technologies
- ZLD Performance Improvement
- Industry-Specific Customized Solutions

03 Operation & Maintenance

- Annual O&M Contracts
- Skilled Technical Manpower
- Preventive & Predictive Maintenance
- Performance Monitoring
- Pollution Control Compliance Support

04 Project Strengths

- Turnkey EPC Execution
- Fast-Track Project Delivery
- Cost-Effective Engineering
- Quality & Safety Compliance
- Strong Vendor & Supply Chain Management



Industries Served

We deliver customized WTP, STP, ETP & ZLD solutions across diverse industries, ensuring efficient water management, regulatory compliance, and sustainable water reuse.

01	Textile & Dyeing	Color removal, dye effluent treatment, ZLD
02	Pharmaceutical & API	High COD reduction, complex wastewater treatment
03	Chemical	Neutralization, heavy metal removal, toxic effluent treatment
04	Food, Beverage & Dairy	Organic load treatment, oil & grease removal
05	Automobile & Engineering	Paint shop effluent, metal finishing, water recycling
06	Power & Utilities	Boiler feed, cooling tower blowdown, high-TDS & ZLD systems
07	Commercial	Hotels, malls, hospitals, IT parks & office complexes
08	Residential	Apartments, townships & community STPs
09	Municipal	City sewage treatment & wastewater reuse
10	Institutional	Schools, colleges, universities & government facilities
11	General Manufacturing	Customized WTP, STP, ETP & process water recycling

Our Clients

■ Builders & Real Estate

- Prestige Estates Projects Ltd
- Phoenix Mills Ltd
- VGN Housing & VGN Infra
- Jain Housing Pvt. Ltd.
- Ben Foundation
- True Value Homes
- SP Homes
- Rajparis Construction Pvt. Ltd
- Tamil Nadu Housing Board
- Premier Towers
- Southern Builders
- Lakshmi Builder
- Andrew Construction
- Sree Rosh Properties Pvt. Ltd

■ Hotels & Hospitality

- Prestige Estates Projects Ltd
- Westin Hotels & Resorts
- Vivanta Taj Connemara
- The Savera Hotel
- Residency Towers
- Zone by The Park
- Welcome hotel
- Park Plaza Chennai OMR
- Copper Kitchen
- Sapphire Foods (KFC & Pizza Hut)
- Murugan Idli Shop
- Buhari
- Anjappar
- Hotel Fortel
- Hotel Virudhunagar

■ Industries

- Foxconn (Apple iPhone)
- Indian Oil Corporation (IOCL)
- Lucas-TVS
- NIOT
- Baxter India Pvt. Ltd
- BGR Energy Systems Ltd
- L&T Geostructure LLP
- PunjLloyd Ltd
- MM Forgings
- Trident
- Pricol Gourmet Pvt. Ltd.
- HP Valves & Fittings India Pvt. Ltd

■ Healthcare

- MIOT International
- MMM Hospital
- SIMS Hospital
- SRM Hospital
- Prashanth Hospital
- Vee Care Hospital
- ACS Medical College Hospital
- Naruvi Hospital
- Gayathri Hospital
- VMS Hospital

■ Educational Institutions

- SRM University
- Velammal Schools
- Don Bosco Higher Secondary School
- St. Joseph Schools
- Easwari Engineering College
- Chennai Institute of Technology
- Maharishi Vidya Mandir
- ACS Medical College
- Tagore Medical College
- Tagore Dental College
- Jerusalem College of Engineering

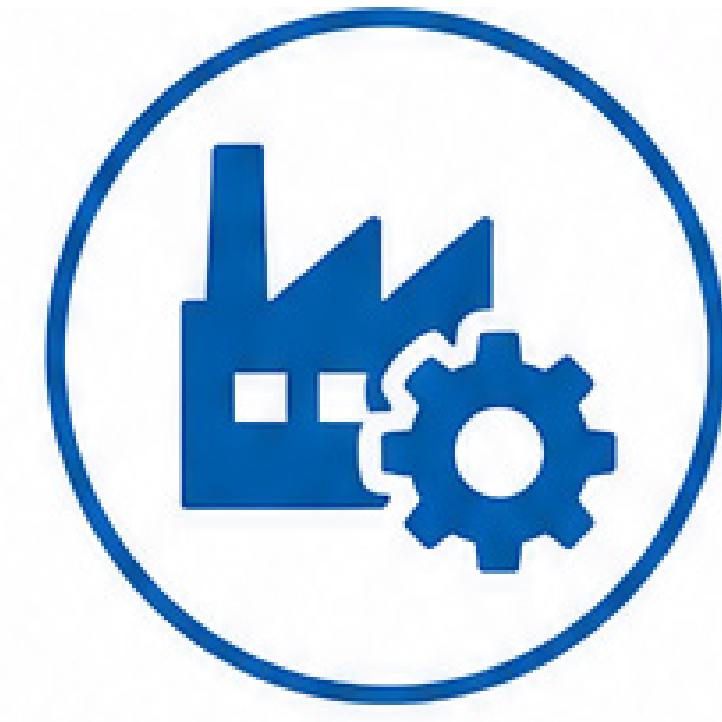
Our Process



Consultation &
Feasibility



Design &
Engineering



Supply &
Manufacturing



Installation &
Commissioning



Operation &
Maintenance



Optimization &
Support

Contact Us



+91 86670 55153



info@insohubindia.com



www.insohubindia.com



Plot 97 A 12, ARK Nagar, Karasangal,
Kundrathur, Kanchipuram,
Tamil Nadu - 603310.