



# **KHETLAJI INDUSTRIES**

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**PRECISION, PURITY, PERFORMANCE**



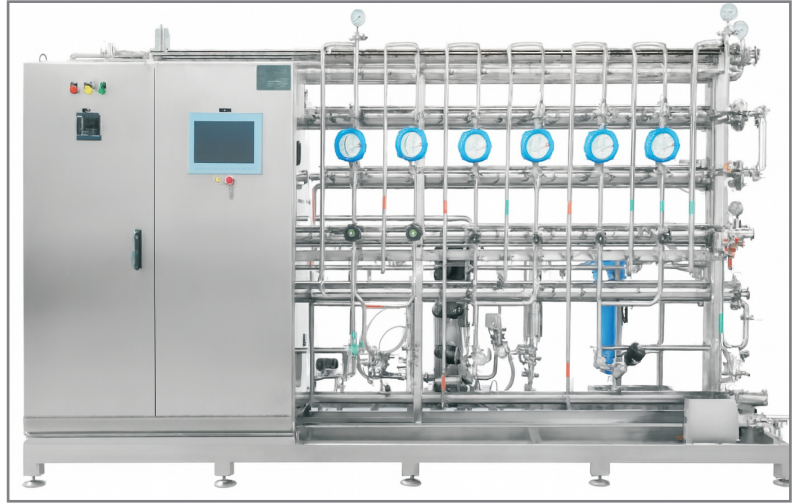


# KHETLAJI INDUSTRIES

**PRECISION, PURITY, PERFORMANCE**

## Introduction

Welcome to the world of excellence in purified water generation & Purified water distribution systems for the pharmaceutical sector. Khetlaji industries are leading manufacturer, dedicated to delivering cutting -edge solutions for pharmaceutical water purification. With a proven track record of reliability and innovation, our systems ensure the highest quality standards for your pharmaceutical processes. Trust our expertise to meet and exceed your purified water requirements. Experience excellence with us today.



## Year of experience

With over 11 years of industry experience, we are a trusted name in providing purified water systems for the pharmaceutical sector. Khetlaji industries expertise lies in designing and manufacturing state-of-the-art water purification solutions that comply with stringent industry regulations. We have successfully served numerous pharmaceutical and sugar companies, ensuring consistent water quality and reliability. Rely on our extensive experience to meet your purified water needs with precision and proficiency. Partner with us for unparalleled pharmaceutical water solutions

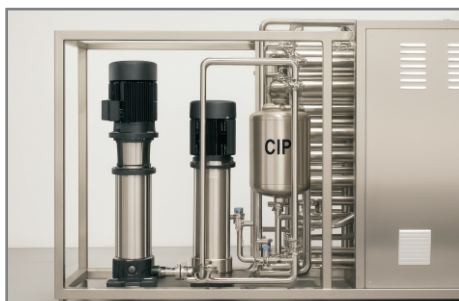
## Product range

Khetlaji industries comprehensive product range includes high-quality purified water systems tailored for the specific needs of the pharmaceutical and sugar sector. From Reverse Osmosis(RO) units to storage and distribution systems, our offerings cover a wide spectrum of purification technologies. We also provide Ultrafiltration (UF) systems, De mineralization (DM) system , Mixed bed (MB) Electrodeionization (EDI) , Effluent Water Treatment Solutions (ETP) units and to ensure optimal water quality for critical pharmaceutical processes. Explore our diverse product line and discover the perfect purified water solution for your pharmaceutical operations. Trust in our products to uphold the highest standards of purity and performance.

## CIP/SIP Procedure

Our purified water systems feature advanced Clean-in-Place (CIP) and Sterilize-in-Place (SIP) capabilities, ensuring thorough cleaning and sterilization of critical components for optimal water quality.

The CIP/SIP process is fully automated, reducing manual intervention and minimizing the risk of contamination during system maintenance.



Our CIP/SIP protocols adhere to industry standards, including FDA guidelines, to meet the strict requirements of the pharmaceutical sector

With our reliable CIP/SIP procedures, you can trust that your purified water system maintains peak performance and purity throughout its lifecycle.

The CIP/SIP documentation and validation services provided ensure compliance and traceability, assuring regulatory authorities and maintaining your production's integrity



### **Quality assurance**

We ensure rigorous quality testing of our purified water systems, adhering to industry standards and regulations, to meet the highest pharmaceutical sector requirements.

Our manufacturing process undergoes strict quality controls, guaranteeing that every component of the purified water system is thoroughly inspected and validated.

Continuous monitoring and documentation of our manufacturing procedures enable us to maintain consistent and reliable performance in our purified water systems.

Our commitment to quality extends to comprehensive validation protocols and periodic audits, ensuring the utmost reliability and compliance with pharmaceutical industry norms.

We take pride in delivering purified water systems that not only meet customer expectations but also contribute to the safety and efficacy of pharmaceutical products

### **Clean room utility pendant manufactures**

We are leading manufacturer, supplier of clean room utility pendants for the pharmaceutical, biotech. Our pendants are engineered to ensure efficient and effective control of the cleanroom environment, facilitating seamless integration of cleanroom utilities and process equipment.

Crafted from high-quality materials, they are designed for reliable performance in critical settings. Available in various configurations, our pendants cater to specific customer needs, offering multiple options for electrical outlets, gas outlets, data ports, and other utilities, all designed for easy accessibility and dependable operation.



### **Customization**

Personalized purified water systems designed to meet the exact specifications of pharmaceutical and sugar clients. Tailored features and configurations for seamless integration with existing pharmaceutical processes. Our commitment to customization ensures reliable and efficient purified water solutions for the industrial sector

### **Distribution and PW storage System**

Our leading purified water storage and distribution systems manufacturing company in the Pharma sector. We specialize in designing and engineering loop systems that guarantee high-quality water for pharmaceutical applications.





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With cutting-edge technology and adherence to industry standards, our solutions ensure optimal water purity and efficiency. As experts in the field, we take pride in delivering custom-designed loop systems that meet your specific requirements, providing seamless integration and reliable performance. Experience excellence in purified water storage and distribution with our trusted solutions.



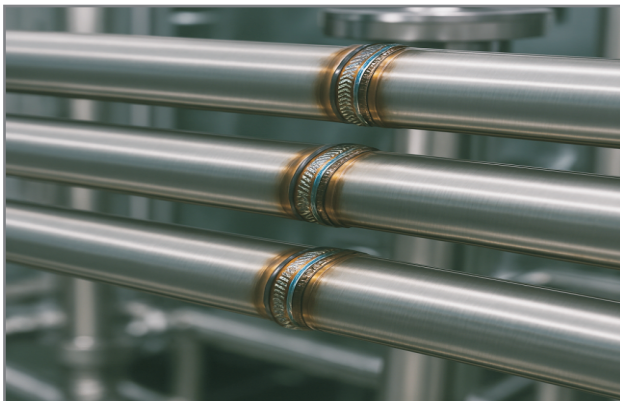
## **Loop line and orbital**

In the ever-evolving pharma, sugar, and dairy industries, efficient storage and distribution systems are crucial to ensure the seamless flow of goods while maintaining product integrity and safety. The Loop Line and Orbital Work approach present innovative solutions to address these challenges.

The Loop Line system involves the creation of interconnected loops, enabling a continuous circulation of products within the storage and distribution network. This loop-based design allows for easy retrieval and replenishment of goods, reducing downtime and improving overall operational efficiency.



Complementing the Loop Line is the Orbital Work concept, which optimizes the routing of products through the loops. By analyzing real-time data and demand patterns, the Orbital Work algorithm intelligently directs products along the most efficient paths, minimizing travel distances and expediting the delivery process.



Incorporating these cutting-edge methods not only streamlines operations but also enhances product traceability, facilitating compliance with regulatory standards in the highly-regulated pharma industry.

Furthermore, in the sugar and dairy sectors, where product freshness is paramount, the Loop Line and Orbital Work combination ensures swift delivery, preventing spoilage and maintaining product quality.





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In this fast-paced business landscape, embracing Loop Line and Orbital Work technologies is the key to unlocking enhanced storage and distribution capabilities, enabling the pharma, sugar, and dairy industries to meet the demands of a rapidly evolving market while delivering the highest quality products to customers worldwide

### **Water Purification Solutions**

#### **1. DEMINERALIZATION (DM/MB) PLANT**

Produce Ultra-Pure, TDS-Free Water

Removes all cations & anions for critical applications.

Features acid/alkali-proof pressure vessels, premium cation/anion exchangers, and complete regeneration systems (ejectors, chemical tanks, conductivity monitoring).

**Ideal for:** Power Plants

• Pharmaceuticals • Battery Production • Electronics • Textiles/Process Water.



#### **2. ULTRAFILTRATION (UF) PLANT**

Advanced Barrier Against Contaminants

0.02 Micron Hollow Fiber PES Membranes (inside-out flow) - removes bacteria, viruses, colloids.

**Flexible operation:** Dead-end or Cross-flow with backwashing.

**Robust Construction:** UPVC housing, GRP end caps, 2" Victaulic connections.





### Advance Water Purification System

#### 1. NANO FILTRATION PLANT (NF PLANT)

Removes Dissolved organics, divalent ions, viruses, and specific salts.

**Key Features:** High-efficiency membranes, low operational pressure.

**Applications:** • Hospitals & Pharmaceutical Manufacturing  
• Biotechnology Labs • Fertilizer Production • Mineral Water Bottling



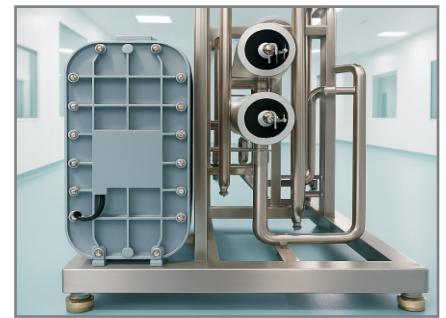
#### 2. ELECTRODEIONIZATION (EDI)

Continuous, Chemical-Free Ultra-Pure Water

Technology: Electricity-powered purification using ion-exchange membranes & resin.

**Key Advantage:** Eliminates chemical regeneration – ideal as a polishing stage post-RO.  
Removes: Dissolved ions (impurities) for ultimate purity.

**Critical Applications :** • Pharmaceuticals • High-Purity Power Generation (Boiler Feed, Cooling)



#### 3. ULTRAVIOLET DISINFECTION SYSTEM (UV SYSTEM)

Reliable Microbial Control Without Chemicals

**Technology :** Destroys bacteria, viruses, and pathogens using UV-C light.

**Key Advantage:** Chemical-free, no disinfection by-products.

**Applications:** Ensures microbial safety in: • Hospitals & Healthcare • Biotechnology Labs • Fertilizer Production  
• Mineral Water Bottling





### Waste water analysis

Characterize Pollution & Verify Treatment Compliance Test domestic sewage and industrial effluent to

Pre-Treatment: Identify contaminants (BOD, COD, TSS, heavy metals, organics)

Post-Treatment: Verify regulatory compliance & environmental safety

**Key Parameters:** Environmental chemistry, toxicity, organic/inorganic pollutants

### 1 SOURCE WATER ASSESSMENT

Evaluate Raw Water Safety for Potable Use

Analyze untreated water sources (rivers, wells, reservoirs) for: Health Risks: Bacteriological contamination (E. coli, coliforms) Treatability: Turbidity, hardness, TDS, inorganic contaminants

**Key Tests:** WHO/EPA-standard bacteriology, turbidimetry, hardness titration

### 2. TREATED WATER QUALITY MONITORING

Ensure Municipal/Domestic Water Safety

Validate purification plant output against drinking water standards:

**Microbiological Safety:** Pathogen elimination verification

**Chemical Compliance:** Residual disinfectants, heavy metals, clarity

**Key Indicators:** Bacteriological assays, chlorine residuals, turbidity, pH

### Advanced Water Softening Solutions

Our Water Softening Plants effectively eliminate calcium and magnesium ions – the primary causes of water hardness. Utilizing a sodium-based cationic resin bed, our systems exchange hardness ions for sodium ions, delivering truly softened water.

**Designed for Performance & Convenience:**

**Scale Prevention:** Protects utility equipment and plumbing fixtures from damaging scale buildup caused by total hardness.

**Flexible Control:** Available with Manual, PLC-based, or Fully Automatic control systems to suit your operational needs.

**Durable Construction:** Offered in robust FRP (fiberglass) or MSRL (mild steel rubber-lined) models for longevity.

**Easy Operation & Maintenance:** Engineered for simple use and low upkeep.

**Cost-Effective:** Provides essential protection at competitive prices.

**Ideal Applications:** • Residential (Bungalows, Homes) • Institutional (Schools, Hospitals, Hostels) • Industrial Facilities







### **Comprehensive Effluent Water Treatment Solutions**

Our engineered Effluent Water Treatment Plants provide robust solutions for treating diverse wastewater streams and industrial effluents. Designed and manufactured at our facility to meet stringent industrial standards, these plants effectively remove contaminants including suspended solids, organic matter, inorganic compounds, heavy metals, oil, grease, and more.



The effluent treatment process begins with biological degradation in Membrane Bio Reactors (MBR), which effectively reduce organic load and suspended solids. For advanced purification, the effluent undergoes a multi-stage membrane separation: Ultra Filtration (UF) removes fine particulates and pathogens, followed by Nano Filtration (NF) and Reverse Osmosis (RO) for critical TDS Reduction and TOC Removal. Simultaneously, the sludge stream is managed by Sludge Thickeners to reduce volume, followed by stabilization in Sludge Digesters or via Composting. Dewatering is achieved using Manual and Automatic Filter Presses, Centrifuges, or Conventional Sludge Drying Beds. For residual brine or concentrate, disposal options include Conventional Solar Evaporation Systems, Accelerated Spray Type Evaporation Systems, Mechanical Systems, or environmentally friendly Root Transpiration Beds, while organic sludge can be further treated by Vermicomposting to produce a valuable soil amendment.

### **Sewage Treatment Plant**

Khetlaji Industries manufactures Sewage Treatment Plants for hostels, industries, hospitals, residential colonies, IT parks, and commercial buildings.

We use high-quality materials to build our plants, ensuring they meet all industrial standards. They are easy to install and operate, with low maintenance costs.

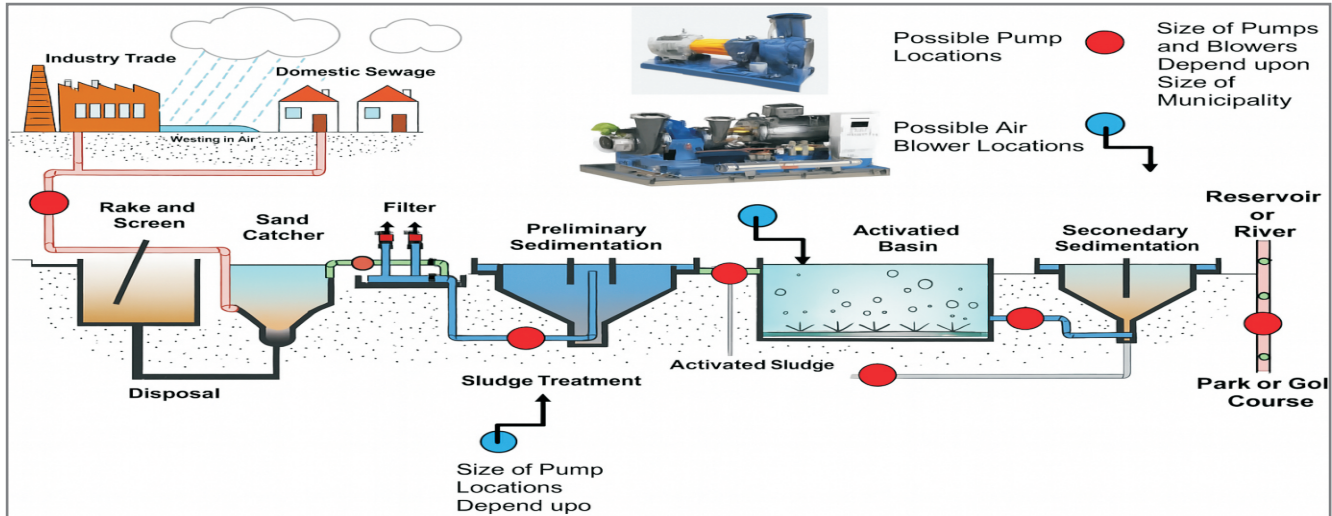
Our plants help create a cleaner and healthier environment for your community. They are also available at affordable and practical prices





Wastewater treatment plants clean dirty water from homes and businesses in a few basic steps:

1. **Remove Large Stuff:** First, they screen out big items like trash and sticks. Then, they let sand and gravel settle to the bottom.
2. **Let Solids Settle:** The water sits in large tanks so that smaller, heavy particles can sink to the bottom.



3. **Use Microbes:** Air is bubbled through the water. This helps tiny microbes (good bacteria) eat the remaining organic waste.
4. **Clean the Sludge:** The solid waste that settled out in steps 2 and 3 is treated separately, often by using more microbes to break it down.

After this, the clean water is released back into rivers or lakes.

### Documentation Support

Installation and Commissioning Guidelines:

Provide a comprehensive installation and commissioning guide to assist purified water system manufacturers in the pharma and sugar industries. This document should include step-by-step instructions, equipment requirements, and safety protocols, ensuring a smooth and error-free setup of the system.







### Routine Maintenance Protocols

Create a detailed routine maintenance protocol to help manufacturers ensure the optimal performance and longevity of the purified water system. Include schedules for regular inspections, cleaning procedures, and calibration guidelines. This format enables proactive maintenance, minimizing downtime and potential disruptions to production.

### Validation and Compliance Documentation

Offer thorough validation and compliance documentation that aligns with industry standards and regulatory requirements. Provide clear instructions for conducting validation tests and recording results, ensuring the purified water system meets the necessary quality and safety standards for pharmaceutical and sugar production.

By providing these documentation support formats, manufacturers can have the necessary resources to efficiently implement, operate, and maintain the purified water system, ensuring its reliability and adherence to industry standards in the pharma and sugar industries.

### Laboratory analysis & Water quality testing equipment



#### **1. SOURCE WATER ASSESSMENT**

Evaluate Raw Water Safety for Potable Use . Analyze untreated water sources (rivers, wells, reservoirs) for:  
Health Risks: Bacteriological contamination (E. coli, coliforms) Treatability: Turbidity, hardness, TDS, inorganic contaminants

Key Tests: WHO/EPA-standard bacteriology, turbidimetry, hardness titration

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### A COMPLET RANGE OF WATER TREATMENT SPARES



**RESIN**



**CARBON**



**MEDIA**



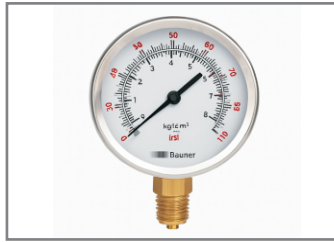
**MEMBRANE**



**ROTAMETER**



**MULTIPORT VALVE**



**PRESSURE GAUGE**



**MICRON CARTRIDGE FILTER**



**DOSING CHEMICALS**



**DOSING PUMP**



**TDS, PH METER**



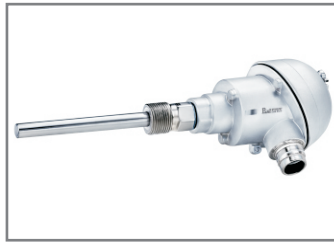
**LEVEL SENSOR**



**ALL TYPE OF PUMPS**



**CONDUCTIVITY METER & SENSOR**



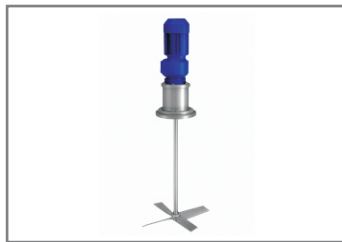
**TEMPRATURE SENSOR**



**BAR SCREEN**



**AIR DEFUSER**



**AGITATOR**



**S.S. STORAGE TANK**



**FLOW TRANS MITTER**



**PLC AND HMI**



**S.S. FILTER HOUSING**



**S.S. MEMBRANE HOUSING**



**S.S. FITTINGS**

## **Maintenance and Support**

Our maintenance team offers 24/7 support, promptly addressing any issues with our purified water systems to minimize downtime in pharmaceutical and sugar operations.

Regular preventive maintenance checks are conducted to ensure peak performance and compliance with industry standards.

Clients can rely on our experienced technicians for expert troubleshooting and efficient resolution of any technical challenges.

We provide comprehensive training and documentation to empower pharmaceutical personnel in operating and maintaining our purified water systems effectively.

Our commitment to ongoing support ensures a long-lasting partnership, delivering reliable and top-tier service to the pharmaceutical sector.



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Compound, Kewal Kanta Road, Rakhial, Ahmedabad - 380023

Our team will be delighted to assist you with any inquiries and  
provide comprehensive information about our products and services

## **A DIVISION OF CHAMUNDA METALS & TUBES**