



“High Efficiency Automatic Water Softener”

Auto- Water Softener

"Efficient Solutions for Scale-Free Water and Long-Lasting Equipment"

Innovation | Efficient | Future-Ready

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IONIC
Engineering Technology Pvt Ltd



INTRODUCTION TO IONIC

Ionic Engineering Technologies Pvt. Ltd. is an ISO-9001/2015 certified Indian water and wastewater technology company founded in 2005 with more than 20 years of experience in the treatment and re-use of hard-to-treat waters. We design and offer equipment to operate in the most challenging conditions, offering a cost-effective and environmentally friendly solution by means of our innovative and state-of-the-art technologies. We carry out projects and solutions for Industrial and Municipal Applications, like Pharmaceuticals, Chemical, Cosmetics, FMCG, Aero Space, Automotive, Metalworking, Steel, Refinery and Petrochemical, O&G Upstream, Downstream, Food & Beverage, Pulp and Paper, Sea Water Desalination, etc. to name a few. Our value engineered “Quality by Design” systems are working in several diverse industries for many years and is helping our customers move towards “Cleaner Production”

Motivation & Vision: Our main goal is to create value and make a difference for our clients and partners as well as deliver tailored-made solutions to satisfy the requirements of our clients, respecting the environment. At Ionic Engineering Technologies we believe that making water and wastewater reuse an affordable and sustainable water source is essential to the future development of mankind in terms of economy, environment, and society. All our systems are designed and engineered based on sound engineering practice and offer value for money and bring “Peace of Mind” to our customers.

Why Ionic? Good advice is half the battle won. Ionic Engineering is a technology neutral company and focused on providing “Quality by Design” engineered systems. We have technology associates based in Europe and USA for some of the cutting-edge disruptive technologies. The first step to the perfect water treatment solution: Understanding your wastewater analysis. We design the plant based on the water analysis sent by our customer.

We are dedicated to using our professional expertise accumulated over many years, to providing the solution you want, when you want it. We also take great pride in ensuring that every client is satisfied with the operating efficiency of the systems we design and the overall level of service that we provide, whether during the initial contract phase or later, throughout the life of the plant.

- Providing expert advice, tailored to meet your requirements.
- Supplying high quality, good value-for-money systems, and equipment.
- Supporting all our clients for the lifetime of their water & wastewater treatment systems.
- Developing and deploying the best, most economic solutions for your needs
- Listen to our customers as well as our suppliers on products and technologies feedback and updates.
- Continuous improvement in all that we do!

Find the best solution for your processes: Let our competent team from the application technology team advise you now! We look forward to hearing from you.

Customers: We have many reputed Multinational companies such as Unilever, Coca-Cola, L'Oréal, John Deere, Tata Hitachi, Bajaj, Tata Motors, Century rayon, GACL to name a few as our customers

Introduction: Empowering Industries with Soft Water

Water is essential to industrial operations, but hard water, rich in **calcium** and **magnesium**, creates significant challenges like scaling, reduced equipment efficiency, and higher maintenance costs. Left untreated, these issues lead to **downtime**, **increased energy consumption** and **reduced product quality**.

Our **Water Softeners** provide a reliable solution by removing hardness-causing ions, ensuring soft water that enhances efficiency, protects equipment, and lowers operational costs. With **advanced technology**, **customizable capacities**, and **durable construction**, our systems are designed to meet the demands of industries like power plants, pharmaceuticals, food & beverage, and more.

Say goodbye to scale buildup and inefficient operations. Invest in our **water softeners** today to experience **smooth processes**, **longer equipment life**, and **substantial cost savings**.

Features:

1. **Automatic Regeneration:** No manual intervention required.
2. **Energy-Saving Design:** Optimized for low energy consumption.
3. **Customizable Capacities:** From 1 m³/hr to hundreds of m³/hr.
4. **High-Grade Ion Exchange Resin:** Ensures longevity and consistent performance.
5. **Corrosion-Resistant Materials:** Designed for durability in tough industrial environments.
6. **Compact Footprint:** Saves space in plant layouts.



Technical Specifications & Features -Ionic's Water Softener

Key Specifications and Features:







- **Capacity:** Tailored to handle varying flow rates from small-scale to large-scale industrial operations.
- **Ion Exchange Technology:** Utilizes the ion exchange process, where hard minerals are replaced with soft ions (typically sodium).
- **Automatic Regeneration:** Features an automatic regeneration cycle, ensuring continuous soft water supply with minimal operator intervention.
- **Customizable Designs:** Available in both vertical and horizontal configurations to suit space and installation needs.
- **Resin Quality:** High-grade ion exchange resin designed for long-term durability and efficiency.
- **Operational Pressure:** Designed to operate within standard industrial pressure ranges.
- **Flow Rate Range:** Can accommodate flow rates from **1 m³/hr** to **several hundred m³/hr** depending on the plant's requirements.

• Additional Features:

- **Compact and Space-Saving:** Space-efficient design for easy integration into existing systems.
- **Low Maintenance:** Minimal downtime and simple maintenance procedures.
- **Energy-Efficient:** Uses less energy compared to other water treatment processes.
- **Remote Monitoring (optional):** Equipped with IoT-based monitoring for real-time performance tracking.

Technical Specifications & Features -Ionic's Water Softener

Applications:

-  **Power Plants:** Prevent scale buildup in cooling towers and boilers, improving efficiency.
-  **Food & Beverage Industry:** Essential for clean and efficient processing, reducing scaling in processing equipment.
-  **Pharmaceutical Manufacturing:** Helps maintain water quality, crucial for consistent production and hygiene.
-  **Textile & Dyeing Industry:** Prevents scale on machinery used for dyeing and washing fabrics.
-  **Chemical Industries:** Ensures smooth operation of heat exchangers and cooling systems.
-  **HVAC Systems:** Ensures trouble-free operation of boilers, cooling towers, and heating systems.
- **And More.....**

Benefits (with icons):

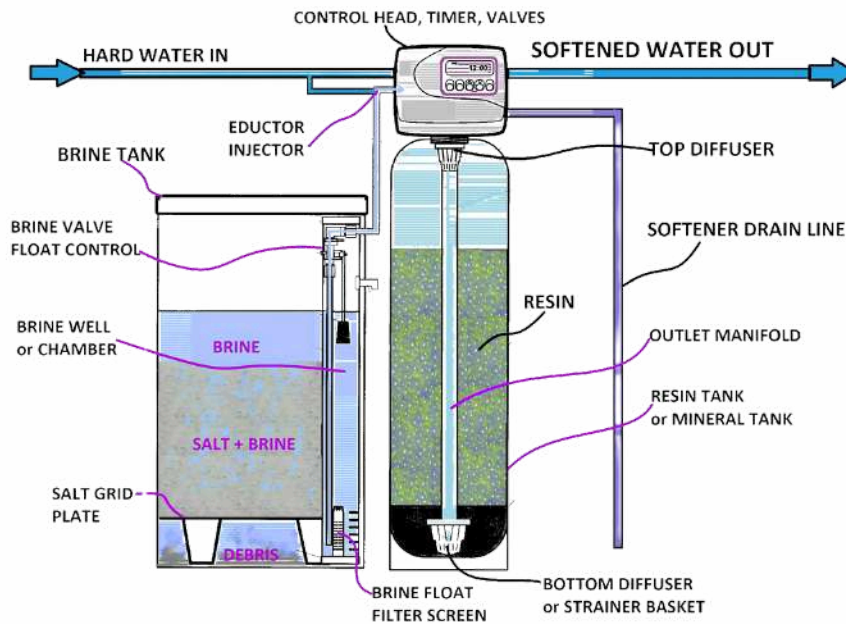
- ✓ **Improved Equipment Lifespan**
- ✓ **Reduced Maintenance Costs**
- ✓ **Enhanced Process Efficiency**
- ✓ **Eco-Friendly Operations**



System Components -Ionic's Water Softener

System Components

TYPICAL WATER SOFTENER COMPONENTS



1. **Control Head (Timer, Valves):** Automates the water softening process, including regeneration cycles, for minimal manual intervention.
2. **Top Diffuser:** Ensures even distribution of water over the resin bed for optimal ion exchange.
3. **Resin Tank (Mineral Tank):** Houses the high-capacity ion exchange resin that removes hardness-causing ions like calcium and magnesium.
4. **Outlet Manifold:** Collects the softened water from the resin tank and directs it to the output line.
5. **Resin Bed:** Contains ion exchange resin beads that exchange hardness ions with sodium or potassium ions, producing softened water.
6. **Bottom Diffuser (Strainer Basket):** Prevents resin beads from escaping the tank while allowing water to flow efficiently.
7. **Brine Tank:** Stores the salt solution (brine) used for regenerating the resin.
8. **Brine Well/Chamber:** A compartment within the brine tank that holds the float valve and prevents salt clogging.
9. **Brine Valve (Float Control):** Controls the flow of brine solution into the resin tank during the regeneration process.
10. **Salt Grid Plate:** Separates salt from debris at the bottom of the brine tank to maintain solution quality.
11. **Debris Collection Zone:** Located at the bottom of the brine tank to collect impurities and prevent clogging.
12. **Injector (Eductor):** Facilitates the transfer of brine solution into the resin tank during regeneration.
13. **Softener Drain Line:** Disposes of wastewater generated during the regeneration process.
14. **Hard Water Inlet:** Connects the hard water supply to the system for treatment.
15. **Softened Water Outlet:** Delivers softened water to the application point or storage tank.

Why Us Ionic's Water Softener ?

Why Us?

- **Years of Expertise:** Over [20 years] of proven experience in water treatment.
- **Tailored Solutions:** Customized to meet the unique needs of each industry.
- **Robust Design:** Built to withstand the demands of industrial environments.
- **Customer-Centric Approach:** From consultation to after-sales service, we've got you covered.

Feature	Our System	Competitors
Durability	✓	✗
Customization	✓	Limited
Energy Efficiency	✓	✗

Installation & Support

"Heading: Hassle-Free Installation and Reliable Support"

Content:

- **Pre-Installation:** Site survey and system customization.
- **Installation:** Professional setup by trained engineers.
- **Training:** Hands-on training for your team to ensure seamless operation.
- **After-Sales Support:** Dedicated support team for maintenance and troubleshooting.
- **Spare Parts:** Quick access to genuine replacement parts.

GET IN TOUCH

**WITH
IONIC ENGINEERING TECHNOLOGY PVT. LTD.**

We're here to help you with all your water and wastewater treatment needs. Whether you're looking for customized solutions, technical support, or just want to explore how our services can benefit your business, feel free to reach out to us.

Our team of experts is ready to provide personalized assistance and ensure that you get the most effective and innovative solutions tailored to your requirements. You can contact us via phone, email, or through our website. We value every opportunity to collaborate and are committed to delivering excellence in every interaction.

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