

One-Stop Solutions for the Food & Beverage Industry



**Advanced,
absolutely reliable solutions
for all your process applications,
water management,
chemical treatment and
service requirements.**



A Complete Menu Of Solutions

Over 45 years of pioneering specialisation in total water and environment management, comprehensive process technologies and an extensive service network enables Ion Exchange (India) Ltd. to present a complete, customised bouquet of solutions for the food & beverages sector. We offer the widest range of advanced systems for process applications as well as the complete water treatment circuit, along with chemical treatment programmes and 24/7 comprehensive technical support.

Single source solutions from design, through engineering, operation and maintenance, upto retrofit. Our customised, total solutions, technical support and comprehensive services ensure your systems operate at optimal performance with hassle-free single point contact.

A dedicated team from our specially set up F&B vertical works closely and exclusively with your industry to understand its needs and provide innovative, integrated solutions to meet these.

Which is why Ion Exchange is the partner of choice for almost every prestigious brand in the F&B sector.



Process Applications

Filtration, separation and purification systems play an essential role in food and beverage processing. Our advanced membrane processes using micro/ultra/nano filtration & reverse osmosis and special ion exchange processes are used in purification and separation systems for all types of process applications –

Cheese production
 Whey processing/concentration/demineralisation
 Gelatin deashing, decolorisation, deodorisation & concentration
 Liquid glucose/dextrose/sorbitol deashing, decolorisation & deodorisation

Bottle wash recycling in beverage production and breweries with caustic recovery
 Wine/beer filtration
 Juice debittering/clarification/concentration
 And many more ...

High end technology is customised to Indian conditions.

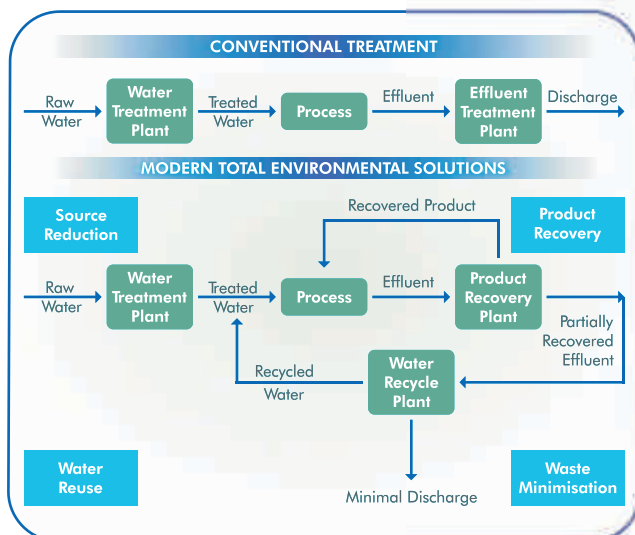


Total Water Management

Water treatment systems with material of construction to requirement.
 Waste water treatment – aerobic and anaerobic based, and recycle
 Cooling & boiler water treatment programmes complying to food industry requirements.
 Ion exchange resins (WQA Gold Seal approved for specific applications)
 RO antiscalants (NSF certified), activated carbon and other performance chemicals

Service Support

Total water management consultancy
 Application lab & pilot studies for new applications
 O&M and BOO/T for water systems, utilities and membrane/ion exchange systems for F&B processing
 Comprehensive 24/7 service back up
 Service contracts



Speciality Chemical Treatment Programmes

We offer a wide range of customised chemical treatment programmes to complement engineered water treatment as well as for process applications. They give excellent ROI by improving quality of product as well as by reducing costs and improving plant performance and life. Our range of fuel and fireside treatment programmes help maximise combustion efficiency, conserve energy and protect the environment.

Our high performance speciality chemicals are manufactured in our ISO 9001, ISO 14001 & ISO 45001 certified facility.

Our engineers conduct in-depth surveys of your plant and system requirements, closely monitor the treatment programmes and regularly evaluate results to make required adjustments for optimum benefit.

INDION® Ion Exchange Resins

(WQA Gold Seal approved for specific applications)



Decolorisation
Softening, demineralisation, decausticiser etc.
Deashing of sorbitol/
glucose/dextrose/
gelatin etc.

INDION® Cooling Water Treatment



Environmentally safe INDION products treat open recirculating cooling water systems. INDION corrosion and scale inhibitors control corrosion,

scaling and fouling over a variety of water quality and system conditions. Our various bio-degradable biocides control growth of algae, fungi & bacteria.

Corrosion, scale, silica inhibitors /dispersants
Iron specific, oil, bio-dispersants
Oxidising and non-oxidising biocides/algaecides
Multi-functional products

Closed Circuit Corrosion & Scale Inhibitors

A complete range of INDION corrosion inhibitors to control impingement & general corrosion.

Engine cooling systems
Hot water systems
Chilled water systems
Furnace cooling systems

Once-through Circulation Systems

Our non-polluting INDION chemicals improve cooling efficiency of systems.

FDA-approved potable water treatment
Metal sequestrants
Corrosion inhibitors
Scale retardants
Antifoulants-dispersants

INDION® Boiler Water Treatment

A wide range of boiler water chemical solutions for low, medium and high pressure boilers to prevent deposits and corrosion in pre-boiler, boiler and post-boiler systems.



Our unique DEHA based oxygen scavengers offer superior protection against corrosion even in condensate lines. We have food grade products for the food industry.

Phosphate and carbonate treatment programme
Chelant programme
Closed system treatment, electrical boiler treatment
Sludge conditioners
Anti-foamers and oxygen scavengers
Complete condensate line treatment programmes to solve specific corrosion problems
Combination of filming & neutralising amines



INDION® Fireside Treatment

We offer energy-saving fuel additives that are vital for any combustion system treatment programme.



- Water emulsifier
- sludge dispersants
- Combustion catalysts
- Slag/corrosion control agents
- Residual fuel oil additives
- Multi-purpose fuel oil and solid fuel additives
- Coal dust suppressants and flow enhancers
- Stack emission control

INDFLOC® Flocculants & Polyelectrolytes

- Clarification and purification of water
- Effluent treatment
- Treatment of process liquor
- Gelatin clarification/purification



INDION® Polymeric Adsorbents

Polymeric adsorbents are available in different polarities, surface areas and various chemical natures with polystyrenic and polyacrylic ester matrices for decolorisation/debitting of juices.

INDION® Easytest Kits



Specially designed for on-the-spot analysis of make-up water, boiler water and cooling water, without a trained chemist.

- | | |
|------------------|------------------|
| Total hardness | Phosphate |
| Alkalinity | Sulphites |
| Calcium hardness | Silica |
| Chloride | TDS |
| Iron | And many more... |

INDION® Water Quality Monitoring Products

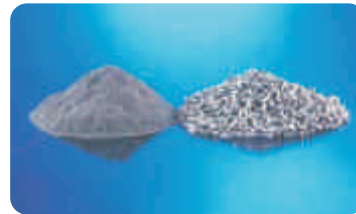
We manufacture a wide range of water quality monitoring instruments at our state-of-the-art manufacturing facility. The range includes process analysers and hand-held portable instruments for measuring critical water parameters like dissolved oxygen, conductivity, pH, Redox and resistivity.

INDION® Antiscalants & Membrane Cleaning Chemicals



- Eliminate scaling & fouling of reverse osmosis membranes
- Dispersal of suspended solids & colloids
- Removes biofoulants, organics, metal oxides, hydroxides & other colloidal particulate based foulants

INDCARB Activated Carbon



For dechlorination, pesticide and organics removal, sugar decolorisation.

- Granular, powder & extrudate forms
- Low leachability products for

effective reduction of oil, organics, decolorising & deodorising



Packaged Drinking Water & Natural Mineral Water Plants

We undertake turnkey projects, complete with water treatment, blow moulding and filling machines, labeling and packaging machinery. A full-fledged laboratory is set up with facilities for mineral and bacteriological analysis of the water, to ensure compliance with BIS/international specifications.

Hallmark Features

- Consistent treated water quality
- PLC based automated operation
- Chemical injection, UV ozonation and other disinfection systems
- Remineralisation of bottled water
- Pre-validated systems to industry accepted standards
- Compliance with latest BIS/international specifications
- Complete O&M and lab testing facility with trained manpower

Single Point Responsibility

- Turnkey project management
- Assured compliance with standards
- Operation, maintenance and monitoring of plant
- Comprehensive service maintenance contracts
- Daily water analysis tests/weekly reports
- Company trained, experienced manpower
- Ex-stock, genuine spares and consumables
- Regular quality and operational audits



Total Integrated Solutions

Treatment	Applications	Products
<p>Process Water Treatment</p> 	<p>Removes suspended solids, colloids, organics, iron and manganese from water Reduces dissolved solids, TOC, pesticides etc.</p>	<p>Ultra High Rate Clarifier, Lamella Clarifier, High Rate Solids Contact Clarifier Pressure Sand Filters & Activated Carbon Filters (fully automated with MS/SS/MSRL) Ultra Filtration/Reverse Osmosis systems with UV/Ozonation and with various options including chemical/hot water sanitisation</p>
<p>Boiler Feed Make-up Water Treatment</p> 	<p>Produces high quality demineralised/soft water to medium/low pressure boilers Prevents and removes deposits, protects system from corrosion, gives trouble-free operation and clean boilers</p>	<p>Conventional and Layered Bed Ion Exchange Ultra Filtration Reverse Osmosis, Sea Water Desalination Speciality Chemicals for boiler feed water conditioning</p>
<p>Cooling Water Treatment</p> 	<p>Prevents corrosion, scale fouling and microbial growth in cooling water systems Side stream filtration to increase the cycles of concentration by reducing suspended solids</p>	<p>Speciality Chemicals for cooling water treatment Auto Valveless Gravity Filters Pressure Sand Filters</p>
<p>Waste Water Treatment & Recycle</p> 	<ul style="list-style-type: none"> Recovers cooling tower blow down and DM regeneration to minimize waste Milk evaporation condensate recycling Recycle & recovery of other process effluents Bottle wash water recovery Treatment/recycle of canteen/colony sewage 	<ul style="list-style-type: none"> Clarifiers Sand/Activated Carbon Filters Biological Treatment (e.g. membrane bio-reactor, fluidised media reactor) Anaerobic Digesters Ultra Filtration Reverse Osmosis Evaporators/Crystallisers Packaged Effluent Treatment Plants
<p>Food & Beverage Processing</p> 	<ul style="list-style-type: none"> Deashing and decolorisation of whey/liquid glucose/sorbitol/dextrose/gelatin Debitting of juices Concentration of gelatin Whey separation & concentration Sugar sweetness improvement/low calorie natural sweetener extract purification <p>And many other...</p>	<ul style="list-style-type: none"> Applied Ion Exchange Resins & Plants Activated Carbon/Polymeric Adsorbents & Plants Ultra Filtration/Nano Filtration/Reverse Osmosis Membranes & Plants

Complete Service Support



Our extensive service network of trained technicians is available 24/7 to ensure your treatment equipment runs at optimal quality, quantity and cost.

After visiting and studying your facility, we provide a detailed report with recommendations that will help you to optimise the cost and improve your plant performance and life.

Our services include:

- Total water management consultancy
- R&D, feasibility & pilot plant studies
- O & M contracts

- Plant water audits
- Membrane cleaning
- Service contracts & emergency services
- Upgradation & automation

Service contracts

Water systems require regular monitoring and maintenance to protect against fluctuating water conditions. With Ion Exchange at your service, you are guaranteed peace of mind with the assurance of efficient operation and long equipment life.

Our localised service allows us to schedule service and repairs as and when you need it. Our service contracts and preventive maintenance agreements include extended warranties, emergency repairs and complete replacement of necessary spares and consumables.



To the best of our knowledge the information contained in this publication is accurate. Ion Exchange (India) Ltd. maintains a policy of continuous development and reserves the right to amend the information given herein without notice. Please contact our Regional Offices for current product specifications.

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Sri Lanka | Tanzania | Thailand | UAE | USA

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Overseas - Hamriyah | Kingdom of Bahrain | Indonesia | Bangladesh

All India Service and Dealer Network

www.ionindia.com

