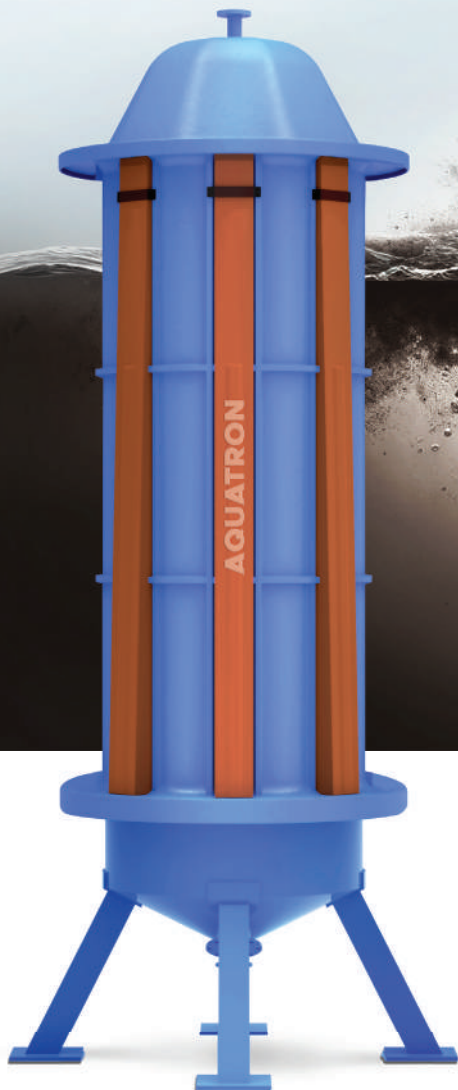


# THE FUTURE OF WASTEWATER RECOVERY

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Solve wastewater problems  
That conventional technologies can't



**AQUATRON<sup>®</sup>**  
THE FUTURE OF WASTEWATER RECOVERY

As contamination of water resources and water scarcity continue to grow unabated, societies and industries are at a great risk. There is an immediate need to rethink our relationship with water and focus on remedial actions.

## **FULL REUSE OF WATER**

Full reuse of water is a necessity today. Society and industries need to fully reuse their water to bring down the water footprint. Thus, build water security for all and resilience in industrial operations.

## **NO DISCHARGE TO THE ENVIRONMENT**

Rapid contamination of aquifers and water bodies can only be stopped by stopping all discharge of wastewater and hazardous chemicals to the environment.



## **GROWING STRINGENCY IN ENVIRONMENTAL COMPLIANCE**

As concerns over these environmental issues continue to grow at global and local levels, environmental regulations and standards are progressively becoming more stringent. There is increased pressure on industries to adhere to new and updated compliance requirements.

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## **CONVENTIONAL TECHNOLOGY: STRUGGLING TO MEET NEW REGULATORY DEMANDS**

Conventional effluent treatment technologies available today are incapable of meeting these regulatory demands because of the following technical limitations:

- The current treatment of water is based on using chemical and biochemical processes, resulting in hazardous secondary pollutants, aggravating the problem instead of solving it.
- Conventional methods used to achieve zero discharge are unsustainable due to high carbon footprint, unaffordable running cost and operational challenges.

Even with best efforts from the industry, the limitations in current technology do not allow them to reach the goal of Zero Liquid Discharge (ZLD) and Zero Discharge of Hazardous Chemicals (ZDHC), threatening the environment. Even when basic regulatory norms are met, the contamination of the environment and water resources continues unabated. It is quite evident that technology based on new scientific principles is required to meet the challenges in water recovery and prevention of discharge of hazardous chemicals.



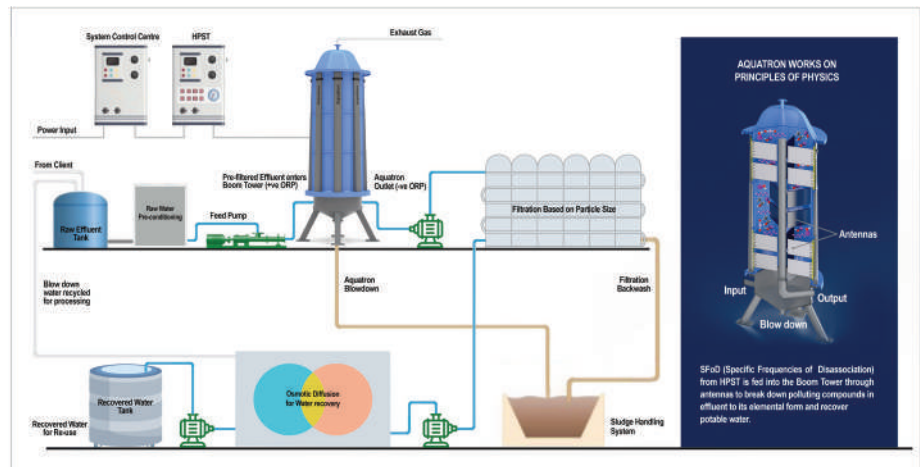
# AQUATRON<sup>®</sup>

## THE NEW BREAKTHROUGH TECHNOLOGY AND THE FUTURE OF WASTEWATER RECOVERY



Aquatron is a patented core technology for water recovery which uses the principles of molecular physics to achieve Zero Liquid Discharge (ZLD) and Zero Discharge of Hazardous Chemicals (ZDHC). This remarkable achievement is realised without any reliance on chemical or biological processes. Aquatron uses frequencies and resonance to disassociate contaminants in water at an atomic level to enable recovery of clean, recyclable water from wastewater. The sludge generated is non-hazardous and has the potential for resource recovery. It has been successful in removing heavy metals and complex compounds from the toughest wastewater for circular economy of water at a low Total Cost of Ownership (TCO).

### TYPICAL AQUATRON PLANT FLOW DIAGRAM

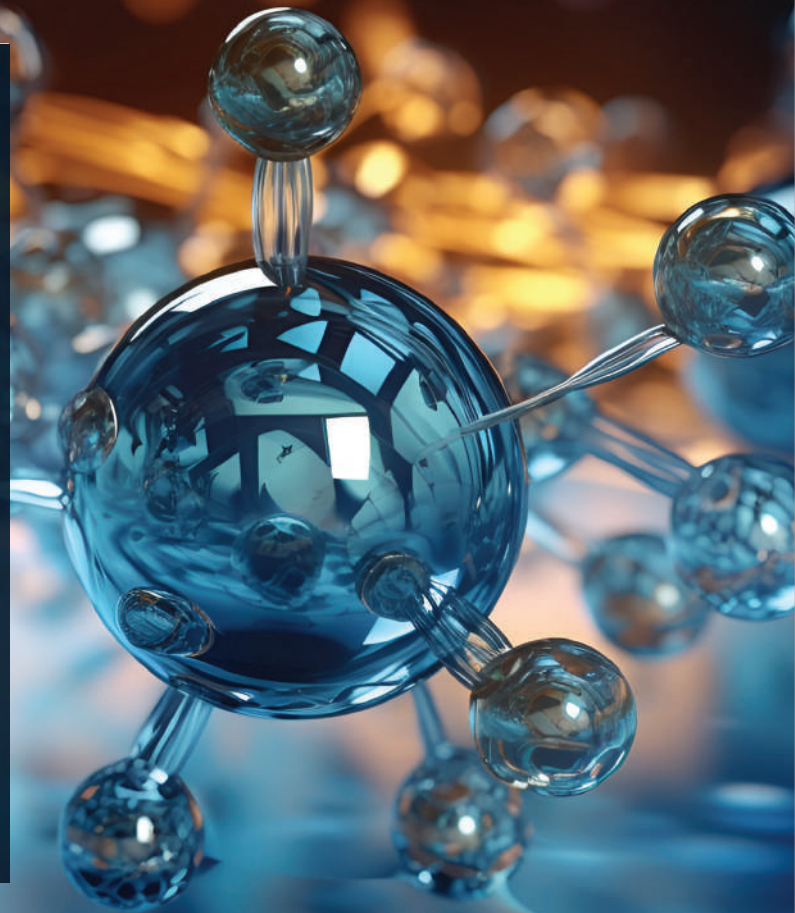


\*Creative visualisation of Aquatron Process

The core components of Aquatron – Boom Tower (resonating column) and HPST (High Power Thrombiser) – utilize the patented PFSTAR (Fine Particle Shortwave Thrombotic Agglomeration Reactor) technology. Together, they disassociate dissolved solids, usually into their elemental forms, by employing specific frequencies and resonance. The disassociation at an atomic level enables water recovery to its original, pristine condition, making Aquatron a 'Water Time Machine'. The sludge generated, largely in elemental form, is non-hazardous, thereby addressing the most pressing challenges in wastewater treatment.

## HOW IT WORKS

- To start with, an elemental analysis of the wastewater is required to determine the elements present in the contaminants.
- Based on the analysis, the wastewater is bombarded with Specific Frequencies of Disassociation (SFoD) in a resonating column.
- On exposure to SFoDs, the dissolved solids disassociate into their respective elemental form, converting dissolved solids into suspended particles.
- The suspended particles agglomerate under the influence of Van Der Waals force of attraction.
- Using downstream filtration, the agglomerated particles are removed for water recovery. The recovered water is of clean, reusable standards and can be reused in the process.
- The heavy agglomerated particles (sludge) is non-hazardous and has the potential for resource recovery.



## AQUATRON® - PLATFORM TECHNOLOGY FOR WTP, STP, ETP ACROSS INDUSTRIES AND DESALINATION.

Aquatron is industry and application agnostic and can treat most water and wastewater with ease and efficacy.

Aquatron is rapidly getting adopted across industries by visionary leaders for water reuse and sustainability in leachate, solar panel manufacturing, automobile manufacturing, graphite production, metals, advanced materials manufacturing, tyre manufacturing, dairy production, drinking water, and sewage; with active discussions in textile, chemical, fertiliser, leather, abattoir, mining, CETP to name a few.



WATER RECOVERY



SEWAGE WATER RECOVERY



EFFLUENT WATER RECOVERY



SEAWATER RECOVERY



Aerospace & Defense



Automobile



Chemicals



Electronics



Food & Dairy



Healthcare



Infrastructure



Leachate



Leather



Metals & Steel



Mining



Oil & Gas



Pharma



Pulp & Paper



HoReCa



Real Estate



Shipping



Sugar & Distillery



Textile



Township

## TURN WASTEWATER INTO PROFIT WITH AQUATRON

- Recover clean, reusable water from most types of wastewater
- Achieve low cost ZLD, ZHDC and circular economy of water
- Reduce water footprint through reuse of recovered water
- Potential for resource recovery from sludge
- Potential to earn water credits
- Low Total Cost of Ownership (TCO)
- Lower footprint and modular in nature
- Fully-automated plant that can be stopped and started. Variable capacity utilisation based on load.

## MEET NEW REGULATORY DEMANDS OF ZLD & ZDHC

Aquatron helps your business implement ZLD without producing hazardous sludge - thus conforming to ZDHC norms, Aquatron allows for compliance with rigorous environmental norms, mitigating the risk of penalties and closures for the industry.

## LEAD IN WATER SUSTAINABILITY. DERISK AGAINST WATER SCARCITY. DRAMATICALLY REDUCE WATER FOOTPRINT.

Aquatron enables reuse of water back into the process, reducing the input water requirements and safeguarding against any water shortages. With lower water footprints and circular use, change the goalpost of leading through innovation, and become a front-runner for adopting sustainable solutions in response to water challenges.

## AQUATRON. THE RESULT OF OVER 30 YEARS OF SCIENTIFIC RESEARCH.

Aquatron is trusted by the who's who of the industry.



(DAIRY EFFLUENT)  
4 LOCATIONS, INDIA



(GREY & BLACK WATER)  
BANGALORE



(GROUND WATER  
HEAVY METAL REMOVAL)  
BANGALORE



**Bruhat Bengaluru  
Mahanagara Palike**  
(MUNICIPAL LEACHATE)  
BANGALORE



(METAL EFFLUENT)  
OMAN

**GSF FROZEN FOODS**

(SEAFOOD PROCESSING)  
SHARJAH

## AQUATRON. BROUGHT TO YOU BY LIVPROTEC.

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- Livprotec is a technology innovations company, focused on arriving at breakthrough solutions in the areas of sustainability, healthcare and safety. Our company is focused on lab-to-market of technologies that are unique, patented, and made for the world.
- We are motivated by a vision of a world where water is pristine and plentiful, air is safe to inhale, energy is sustainable, and healthcare heals without side effects. Our mission is to help in “Restoring Earth’s Health”
- We provide pioneering technological solutions backed by three decades of research that use bio-mimicry, ensuring safety and efficacy. Our approach is life-centric and innovative, with our next-generation technologies in wastewater recovery, drinking water harvesting, bio-energy generation, aerial bio-safety, health tech, and advanced materials sharing a common objective—to address challenges that current technologies fall short of resolving.





**Livpro<sup>+</sup>tec**

RESTORING EARTH'S HEALTH

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