

HYDROXON™ CATALYTIC MEDIA PLATFORM

Catalytic Advanced Treatment (CAT) - commercially deployable in Water Treatment

A compact, continuous-flow filter reactor system being excellent for organic contaminants, designed to reduce the energy consumption, footprint and operating complexity associated with conventional advanced oxidation process.

CATALYTIC ADVANCED TREATMENT (CAT) REACTOR

- Catalytic Advanced Oxidation (CAO) for organic matter degradation and removal
- Catalytic Oxidation (CO) for removal of heavy metals and inorganics and Disinfection
- Co-precipitation - a side process derived from CO, precipitated heavy metals.
- Disinfection - comparable with sterilization, superior to chlorine

CATALYTIC ADVANCED OXIDATION (CAO) SUMMARY:

- The key reaction in CAT reactor
- Surface contact with catalytic media
- Water molecule split into Hydrogen ion and free Hydroxyl Radical (-OH)
- (-OH) Radical is one of the most powerful oxidants in Water Treatment
- Electrochemical potential: (-OH) being 2.8 in comparison to Cl₂ (1.36), ClO₂ (1.57), O₃ (2.07)
- Can oxidise and mineralise 'hard-to-treat' organic compounds.
- Self-regenerating media without sacrificial electrodes or electrolytes

HOW IT WORKS

01 · CONDITION

Clarify the feed

Coagulant-assisted removal of suspended and colloidal solids.

02 · TRANSFORM + CAPTURE

Hydroxon™ catalytic bed

Surface-mediated oxidation as key process inside a continuous-flow reactor.

03 · INTEGRATE

Various WTP Applications

Compact, modular integration architecture scalable to any capacity suitable for new and existing systems upgrade.

DIFFERENT DELIVERY ARCHITECTURE COMPARISON

Treatment factor	Conventional UV / ozone AOP	Hydroxon™ filter reactor
Energy input	Electrical energy for UV irradiation or onsite ozone generation.	Catalyst-assisted filtration designed to reduce electrical demand.
Treatment equipment	UV reactor and chemical dosing, or ozone generator, contactor and off-gas treatment.	Catalytic-media filter reactor integrated into a modular treatment train.
Operating model	Performance governed by energy dose, oxidant dose, contact time and water chemistry.	Flow-through filter operation with oxidant dosing, monitoring and media management.
Oxidation mechanism	Oxidation occurs in the bulk water inside a dedicated reaction stage.	Oxidation is promoted at catalytic-media surfaces within the filter bed.

Additional technical, validation, intellectual property and commercial information are available upon request and subject to appropriate confidentiality arrangements.



infinite water

THE INVESTMENT CASE

COMMERCIAL MODEL ·
REVENUE

Technology platform + flexible business models

Infinite Water's innovative technology and flexible business model have the potential to transform the water-treatment market and reshape the competitive landscape. The company is dedicated to delivering game-changing solutions that address the pressing global water crisis and create significant impact.

FLEXIBLE BUSINESS MODELS · REVENUE STREAMS

PROJECT DELIVERY

01 Capital equipment sales

Engineering, equipment, installation and commissioning are sold under milestone-based contracts, generating upfront project revenue.

LEASING · WAAS · DBOM

02 Leasing model

Recurring leases reduce upfront capital while Infinite Water retains equipment ownership. Optional services include commissioning, maintenance, remote monitoring, performance support and capacity upgrades.

VOLUME-BASED SALES

03 Treated water or brine (salt & minerals) sales

Plants are operated by Infinite Water or a partner, with treated water sold through volume-based or long-term offtake contracts. Qualified brine products may generate secondary revenue where buyer economics are validated.

DESIGN · KNOW-HOW

04 Consultation & technology enabling

Paid feasibility studies, treatability testing, pilots, process design and operator training convert complex water challenges into project-ready solutions and pathways to equipment, lease or licence revenue.

CO-DEVELOPMENT

05 Strategic collaborations & partnerships

Utilities, EPCs, manufacturers and regional partners co-develop projects. Infinite Water contributes technology and process know-how; partners add market access, approvals, fabrication, delivery capability and capital.

LICENSING · ROYALTY

06 IP licensing & royalty

License defined IP rights, reactor designs and confidential know-how by geography or application. Revenue may combine access and transfer fees, milestones, annual minimums and running royalties.

Revenue models represent flexible commercialization pathways and may be deployed individually or in combination depending on project scale, customer requirements, financing structure and local regulation. New models remain subject to commercial validation and contractual development.

APPLICATION PATHWAYS

Municipal & utility water

NOM, DOC and disinfection by-product precursor removal in compatible treatment trains.

Industrial wastewater

Dyes, persistent organics and pretreatment applications ahead of downstream processes.

Retrofit & decentralized

Modular deployment where footprint, skills and infrastructure constrain conventional AOP.

Resource-constrained sites

High-performance contaminant removal where energy and operational complexity are decisive.

We welcome strategic investment partner enquiries for pilot deployment, commercialization and market development. Further information will be provided upon request with confidentiality agreement.

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