

BioFishency ELX™

Smart, fully controlled electro-chemical water treatment systems

An entirely new approach to Recirculating Aquaculture Systems (RAS) water treatment solutions, and the first of its kind on the market today, BioFishency ELX™ is an advanced Electro-Chemical Water Treatment (ECWT) system for cost-efficient ammonia removal and water disinfection. BioFishency ELX outpowers the inefficiencies of biological RAS – all in a fully controlled environment, while eliminating unsavory off-flavors, to deliver a healthier and larger year-round harvest of fish.

A robust zero discharge water treatment system, BioFishency ELX is ideal for cold and warm water species. Powered by a built-in disinfection, multi-stage solution in a single cycle, BioFishency ELX directly transforms ammonia to nitrogen, without the need for a costly standalone denitrification reactor to remove nitrate and phosphate from the water. Highly sustainable, the system supports a small carbon footprint, requires considerably less space and energy, and operates immediately upon electrical supply.

Proprietary and patented, BioFishency ELX technology was developed and commercialized in collaboration with the Technion, Israel Institute of Technology, Haifa, Israel.

Features & Benefits

- Zero discharge water treatment system
- Outpowers the inefficiencies of biological RAS
- Innovative built-in water disinfection
- Multi-stage solution in a single cycle
- Directly transforms ammonia to nitrogen, without requiring a denitrification reactor for nitrate/phosphate removal
- Cloud-based solution, with real-time data collection and management
- Immediate operation upon power-up
- Significant CAPEX and OPEX savings, resulting in improved ROI



How It Works

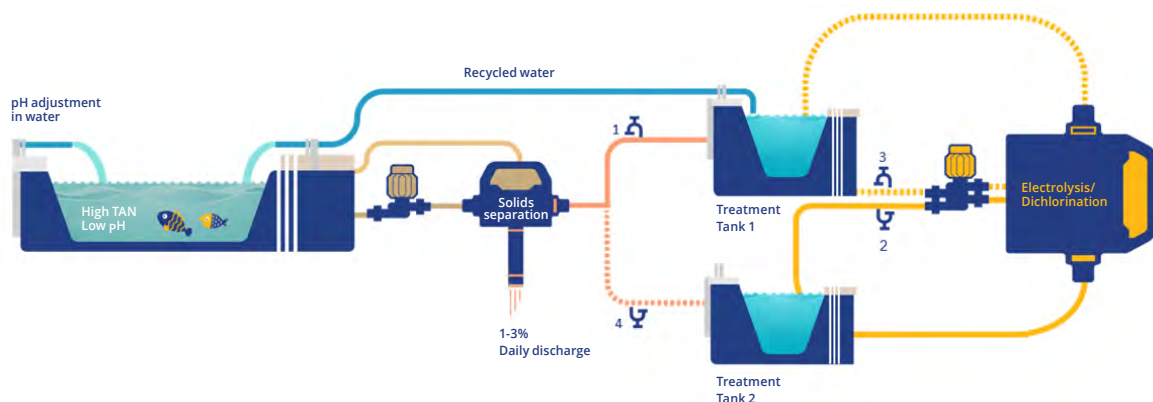
The BioFishency ELX system is powered by an advanced controller with a highly-intuitive dashboard that conveniently fits into existing control rooms. The system's disinfection processes facilitate comprehensive ammonia, CO₂ and fine particles removal, using a robust built-in electro-chemical reactor, exceedingly efficient, even at single pass. BioFishency ELX continuously monitors the water's pH, temperature, O₂, ORP, Cl₂ and NH₄ levels that yield optimal water quality for a wide variety of fish. The results – consistently clean, fully disinfected water, zero ammonia, and no off-flavors.

Technical Specifications

P/N	ELX-000450-001		
		Shrimp	Salmon
Total production	Ton/Year	100	150
Water temperature	°C	29-30	14-16
Salinity	ppt	20-25	5-35
Max. density	Kg/m ³	15	80
Total feed amount	Kg/Day	450	450

The BioFishency ELX system includes:

- System mounted on a skid, installed in a 40 ft. container
- Electrical panel
- Control panel (dashboard), including software
- Custom-designed treatment tanks



BioFishency ELX – Ammonia Removal and Water Disinfection Process