

ECOCHLOR BALLAST WATER TREATMENT



POWERFUL TECHNOLOGY

RELIABLE

FULLY SUPPORTED

ACCOUNTABLE

ECOCHLOR® BALLAST WATER MANAGEMENT SYSTEM

TOUGH, MODULAR, SCALABLE



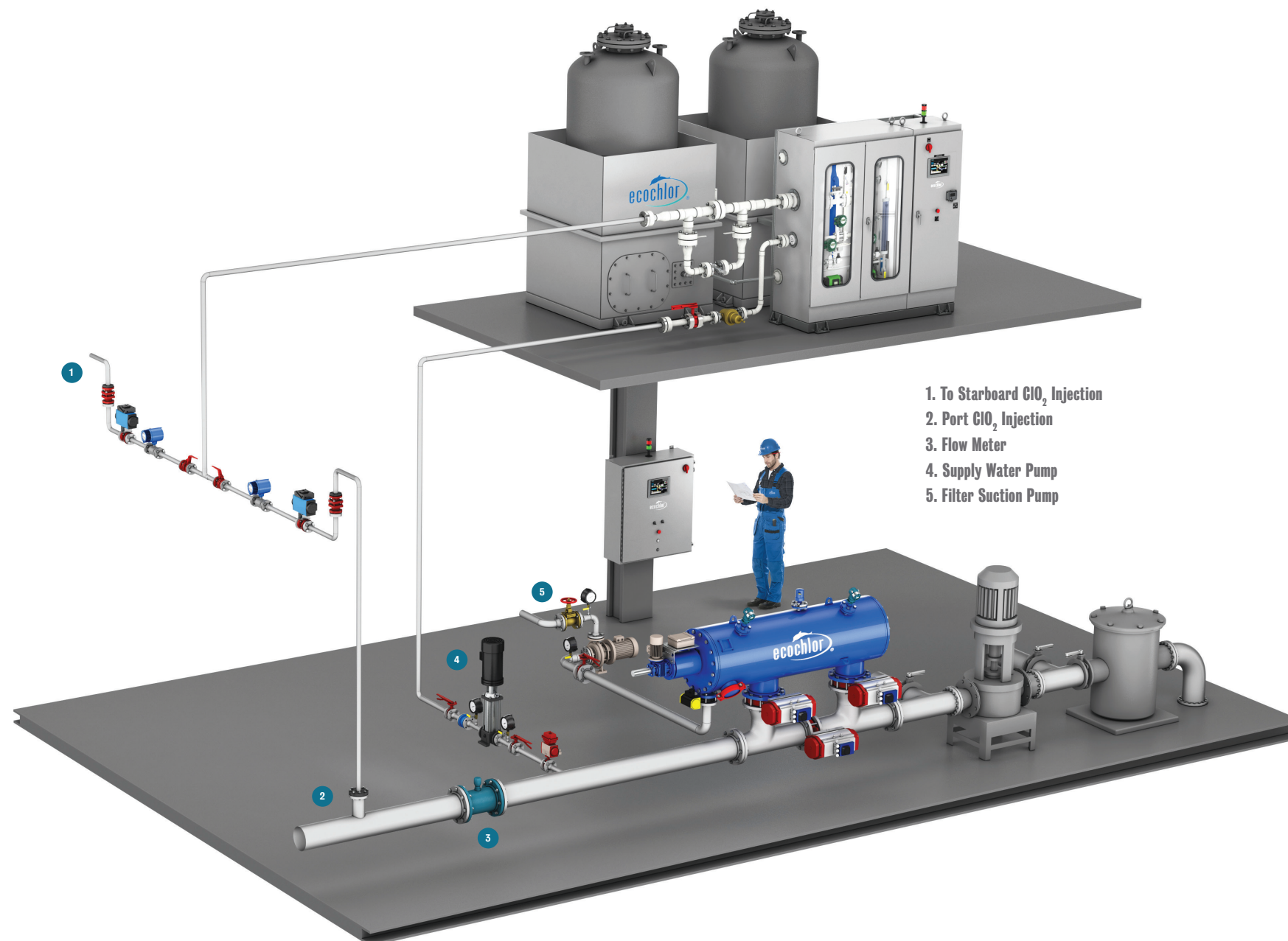
POWERFUL TECHNOLOGY

Ecochlor is the only company in the world utilizing a patented chlorine dioxide treatment technology for ballast water. Unlike other water treatment technologies, changes in water conditions — salinity, pH, temperature and turbidity — do not influence its effectiveness or the need for the crew to adjust for operations. This allows for a consistent, easy-to-use system for the crew without the uncertainty of its effectiveness when faced with varying water types.

RELIABLE

Maximizing uptime means using high-quality components within a simple, inherently reliable system design — there are **no** TRO sensors and **no** complex power supplies to cause system failures. The reliability of our system ensures our customers do not suffer the significant costs associated with unreliability and non-compliance.

**MORE THAN 75% OF
ECOCHLOR'S NEW CLIENTS
ARE SHIPOWNERS
THAT HAVE EXPERIENCED
UNSUCCESSFUL
BALLAST OPERATIONS
USING OTHER
TREATMENT TECHNOLOGIES**



Ideal for Mid-size to the Largest Ships in the World

The flexibility of the ballast water management system with respect to installation location as well as Ecochlor's known engineering designed for reliability and longevity has driven more owners to choose our system for their vessels.

Retrofit Ready: Small Footprint with Flexible, Modular Installation

The Ecochlor system offers the small footprint and modularity needed to optimize available space. The generator and tanks can be placed in almost any convenient location on a ship. The filtration system is typically located in close proximity to the ballast pumps, and can be placed in a horizontal or vertical configuration space for system placement.

A Rugged System that Meets or Exceeds the Most Demanding IMO and USCG Regulations

The Ecochlor system has both USCG and IMO Type Approval, demonstrating that our technology can meet, and in many cases exceed, demanding regulations. Ecochlor worked with DNV GL to harmonize all aspects of the USCG approved system with the existing IMO Type Approval. One important update was the inclusion of additional FilterSafe models to the approved equipment list, such as FilterSafe's highest throughput SuperTurbo (ST) filter.

Operationally Efficient: Low Energy Consumption

The energy required to power the Ecochlor system is negligible in comparison to other ballast water management systems, possibly the lowest in the industry. Operation is simple with an intuitive control panel.

No Neutralization or Treatment at Discharge

The ability to discharge ballast water directly with no treatment or neutralization requirements is a distinct advantage of the Ecochlor system for vessels that require low power usage or that have gravity discharged top-side tanks. It also simplifies system operation for the crew.

Hazardous Zones Approval

The system is approved for installation in both US Flag and foreign flag vessels in hazardous zones rated Zone 1 or Zone 0.

FULLY SUPPORTED

The benefits of purchasing a high quality, ease to use and reliable ballast water management system from a company focused on outstanding service and support clearly outweigh the risk of non-compliance with other systems resulting in a cost-effective investment by the vessel owner.

TRAINING

Classroom and hands-on training is offered as part of commissioning.

Ecochlor offers additional training at the ship's first ballast operation, allowing for more time and a better experience with the engineers on board the vessel.

A visual, interactive computer software training program is provided to the crew and can be installed on the ship's computer network or at the owner's training facility.

An International Training Center offers instruction on the Ecochlor system and filter.

AFTER THE INSTALLATION

Ecochlor enters into a partnership with the owner and operator of the vessel with the expectation that one of our service technicians will be on board that ship twice a year.

From the first ballast operation, Ecochlor engages in continuous communication directly with the vessel's crew and operational data is collected for our service team. This communication allows for chemical monitoring and delivery logistics as well as early notification of equipment problems. The Ecochlor In-House Service Team manages each service call and performs all our chemical resupply.

ACCOUNTABLE

Our ballast water management system must not only meet and exceed environmental regulatory standards, it must do so reliably so that there is no interruption to vessel operations for customers. Ecochlor understands these requirements and the high expectations of our system's reliability. We stand by our product as the only BWMS manufacturer with a guarantee of system efficiency in treating ballast water — EcoCare®



Ecochlor, Inc.
14 Nason Street, Suite 309
Maynard, Massachusetts 01754
+1 978 298 1463
sales@ecochlor.com

Ecochlor Cyprus
P.O. Box 59720
CY-4012, Limassol Cyprus
+357 96 689945
ecochlorcyprus@ecochlor.com

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Brochure4pg_October2019.Rev1