



# RIDE THE TIDE OF PERFORMANCE.

Our range of Exhaust Gas Recirculation (EGR) water treatment modules – easy installation, minimal space requirements, lower emissions.

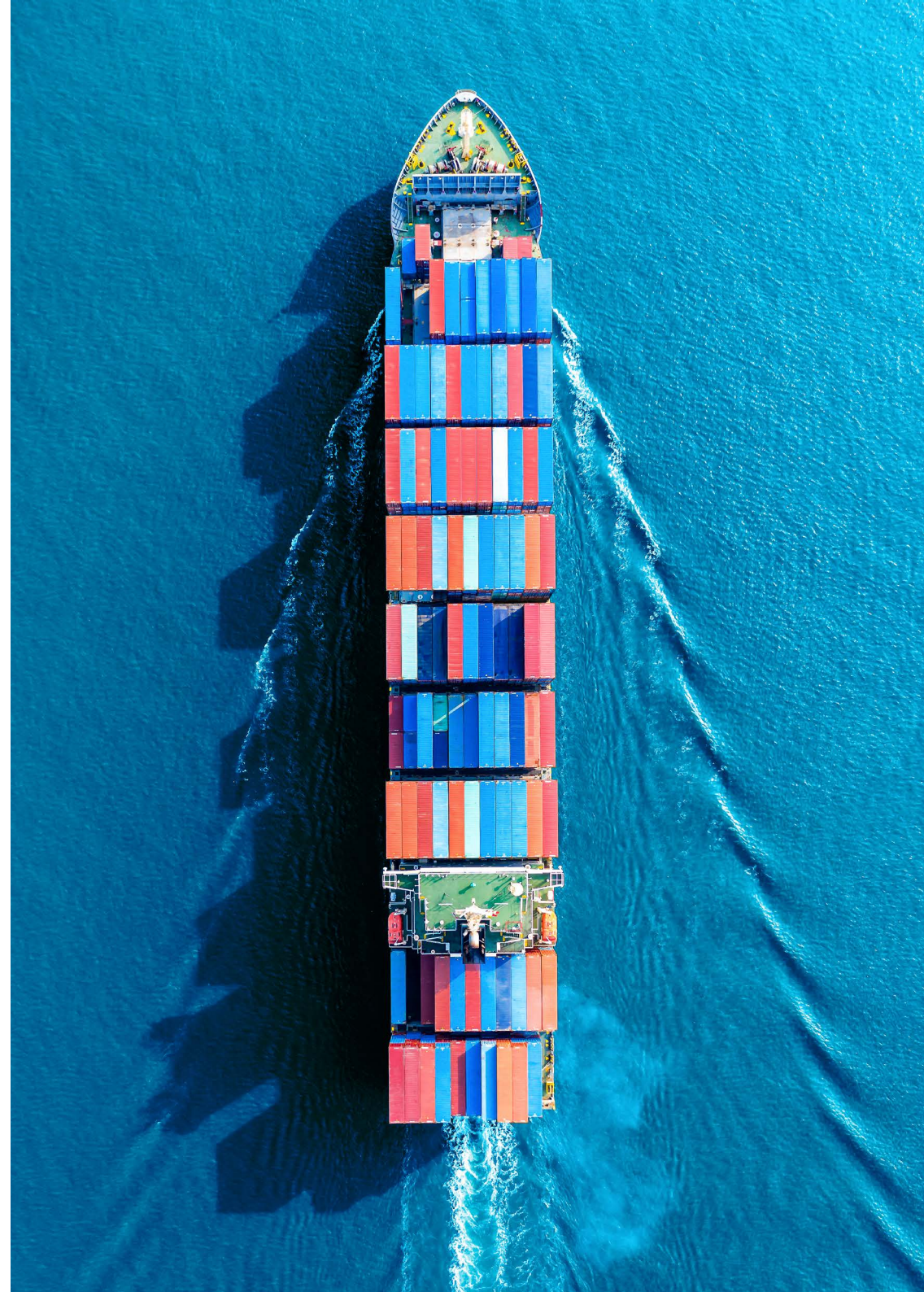




# EGR MATTERS.

When it comes to sustainability, EGR technology has made significant progress in the shipping industry, reducing nitrogen oxide emissions by up to 70% and improving specific fuel oil consumption (SFOC) up to 5%.

And now, with our introduction of EGR bleed-off water treatment systems, we are propelling EGR technology towards a more sustainable and environmentally conscious future. We offer innovative and unique solutions, to support and drive this progress further.





# EGR-WASHWATER TREATMENT. THE GEA WAY.



## Our new solutions: NOx Separator and bilgEGR Solution.

To comply with the stringent environmental standards of the International Maritime Organization (IMO) for EGR water treatment and to protect the environment, EGR bleed-off water must be carefully treated before it is discharged overboard. GEA offers two ideal solutions for this critical step in the EGR process – the NOx Separator and the bilgEGR Solution.

Specifically designed to effectively treat EGR bleed-off water, these innovative GEA modules set themselves apart from our competitors by using separators instead of filters.

# UNMATCHED CAPACITY.

Discover our new GEA NOx Separator – with flow rates of up to 10,000 l/h.

The GEA NOx Separator is a specialized and efficient solution in the treatment of EGR bleed-off water. It ensures compliance with international emission regulations such as MEPC.307(73) and optionally MEPC.259(68). We purposely apply our extensive expertise in the field of separator innovations to successfully integrate this proven technology into the world of EGR solutions.

## Capacity variants for every need:

- **GEA NOx Separator 2500:** With a capacity of 2,500 l/h, this model is perfect for smaller vessels or smaller volumes of bleed-off water.
- **GEA NOx Separator 5000:** Processing 5,000 l/h, this model is the perfect compromise between size and performance.
- **GEA NOx Separator 10000:** The ultimate choice for large vessels, with an impressive capacity of up to 10,000 l/h.



## Key benefits of the GEA NOx Separator:

**High flow rate:** With a flow rate of up to 10,000 l/h, our separator sets new industry standards. For comparison, conventional solutions provide outputs of max. 7,500 l/h.

**Performance:** The GEA NOx Separator effectively reduces the oil content in bleed-off water, meeting international standards requiring a maximum oil content of 15 PPM.

**Operating costs:** A major advantage of the GEA NOx Separator is its low operating costs compared to conventional filter systems, especially under continuous operation.

**Minimal space requirements:** The separator boasts the smallest footprint on the market, which makes it ideal for ships with a compact engine room.

**Low maintenance:** Our modular system is designed for low maintenance. Perfect conditions for less downtime and greater productivity.





# OUR REVOLUTIONARY TWO-IN-ONE-SOLUTION.

## Introducing the bilgEGR Solution for efficient water treatment.

The GEA bilgEGR Solution is unique on the market. As a two-in-one product, it combines the treatment of oily bilge water and EGR bleed-off water in a single separator module. Thanks to this innovative combination, the bilgEGR Solution ensures full compliance with environmental regulations and has been DNV-class approved.

### Capacity variants for every need:

- **GEA bilgEGR Solution 1200:** With a capacity of 1,200 l/h, this model is particularly suitable for smaller vessels that require a compact system with effective cleaning results.
- **GEA bilgEGR Solution 2500:** This model offers a capacity of 2,500 l/h and is ideal for medium-sized vessels wanting a balance between size and performance.
- **GEA bilgEGR Solution 5000:** With a capacity of 5,000 l/h, this model is designed to meet the needs of larger vessels that require a high flow rate for the purification of EGR and bilge water.



## Key benefits of the GEA bilgEGR Solution:

**Reduced space requirements:** The compact GEA bilgEGR Solution takes up less space on board than competing products, which makes it particularly useful for ships with a compact engine room.

**Lower costs:** Without the need for a separate system for purifying bilge water, you will enjoy instant cost-savings with your bilgEGR Solution.

**Low maintenance:** The GEA bilgEGR Solution is designed to be modular and, with that, user-friendly. This simplifies maintenance, reduces downtime and ensures continuous operation.

# INTEGRATED SMART SERVICES.

## How to get more out of our EGR solutions.

In the age of big data, there is an increasing expectation for more transparent data processing as well as the real-time availability of operational data. The NOx Separator and the bilgEGR Solution are tailored precisely to these needs, enabling the efficient control, visualization and analysis of onboard processes.



### **GEA IO control**

Simply press a symbol on the user interface of the built-in touchpad to control the separator or select functions like maximum power, minimum energy consumption and additives. You can also opt for remote access via a tablet or PC.



### **Condition monitoring**

A condition monitoring system continuously collects data and provides useful analyses, reports, and recommendations for optimal operation. These features not only guarantee high operational performance, but also increase the machine's service life by providing preventive maintenance tips.



### **OPC UA fieldbus-ready**

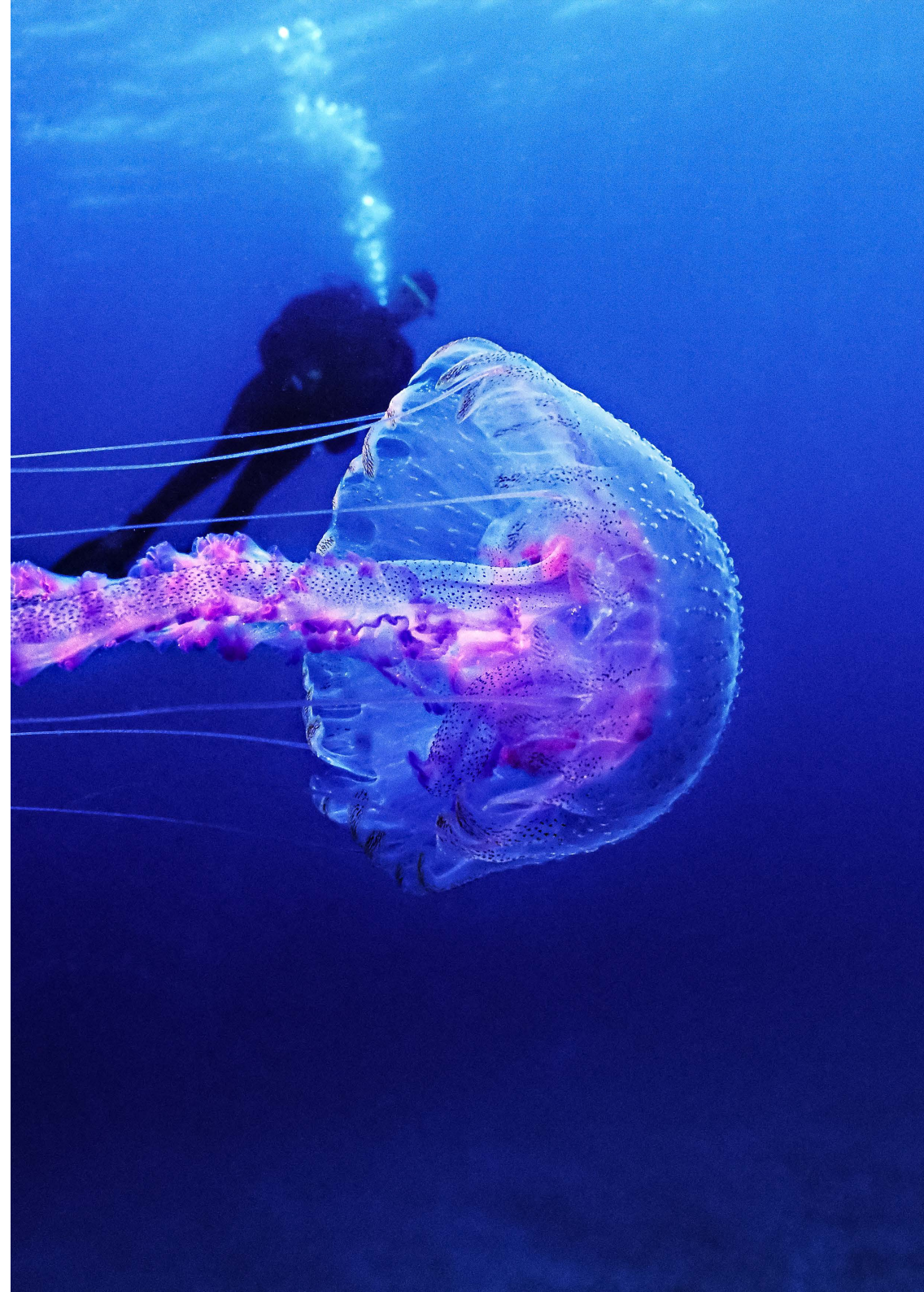
The GEA IO control unit is OPC UA fieldbus-ready and works based on the latest industrial communication protocol. Under the OPC specification, machine data is sent quickly and converted into a machine-readable format. This advanced technology enables seamless integration into existing Industry 4.0 systems and ensures smart networking and communication within onboard operations.



# LET'S DIVE INTO A CLEANER WORLD.

Our EGR solutions show that we are  
taking responsibility – for a cleaner and  
more livable world.

Join us and let's shape the future together.



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