



GEA BILGE SEPARATOR

Sustainable purification for cleaner seas.

EXCEEDING IMO STANDARDS WITH THE GEA BILGE SEPARATOR

15 ppm without a filter

GEA has set a further milestone in the field of bilgewater processing: The new generation of bilge separators with integrated direct drive is designed for producing residual oil contents of 15 ppm in all performance classes. Without an additional adsorption filter, without chemicals. This is achieved by means of modifications in the product feed of the bowl and the disk stack, resulting in a gentle product feed and a higher clarifying area.

5 ppm with filter

The requirements for the purity of bilgewater are constantly becoming more demanding – not least as a result of tighter national requirements throughout the world for sensitive areas of the ocean. In order to be in a position to meet potentially tighter requirements, many shipping companies are already demanding a guarantee of less than 5 ppm residual oil content in the processed bilgewater. GEA will also be able to meet these requirements.

GEA bilge Separator

- Highly efficient integrated direct drive
- Compact design with small footprint
- Less energy consumption
- Easy exchangeable drive system
- Residual oil content downstream of separator <15 ppm
- Residual oil content downstream of separator <5 ppm by adding adsorption filter
- Optional with heat recovery (available for capacities of 1,200 to 5,000 l/h)
- Constant monitoring of the overboard valve (similar to GEA SafetyMaster)
- Optional in combination with SafetyMaster: system-integrated or “stand-alone”
- MTP ready

Optimized process safety with GEA bilge Separator

| | Capacity |
|--------------------------|-------------|
| GEA bilge Separator 200 | 200 l/h* |
| GEA bilge Separator 600 | 600 l/h** |
| GEA bilge Separator 1200 | 1,200 l/h** |
| GEA bilge Separator 2500 | 2,500 l/h** |
| GEA bilge Separator 5000 | 5,000 l/h** |

* at 60°C ** at 85°C



RESOURCE-EFFICIENT SOLUTION

As one of our most resource-efficient solutions, our GEA bilge Separator carries the Add Better label.*

The high efficiency motor of the GEA bilge Separator transfers the energy directly to the bowl without the use of belts and clutches. This reduces the energy consumption by 13 % compared to the predecessor model.

*The Add Better label relates to the serial product GEA bilge Separator, released in September 2021. The comparison refers to its predecessor model, the GEA BilgeMaster.



MODULAR DESIGN, MAXIMUM EFFICIENCY, AND ENHANCED SAFETY

Customized solutions for all bilge water processing systems.

GEA bilge Separators feature a modular design. The main components: Feed pump, automatic filter, preheater, the self-discharging separator, oil monitor and the control panel are installed on two modules (feed pump / preheater unit, separator unit). These modules are assembled to form a complete unit, and can also be supplied as individual modules upon request. This means that the system can be customized to meet the local circumstances in an optimum manner even in restricted spaces. An adaptive speed regulating facility of the feed pump adapts the system to the considerably fluctuating feed conditions of the product.

Maximize efficiency with heat recovery

The GEA bilge Separator enhances efficiency by utilizing waste heat to preheat incoming bilgewater, reducing energy consumption across all three operational modes: hot water, steam, and electrical heating.

How it works

Oily bilgewater is drawn from the bilge tank or engine room and passes through an automatic filter, removing coarse particles to prevent blockages. It then enters a heat exchanger, where it absorbs thermal energy from the outgoing heated bilgewater. This preheating step improves efficiency before the final heating stage, where steam or hot water – maintained at a minimum of 90 °C – raises the bilgewater temperature to the optimal separation level of 85 °C.

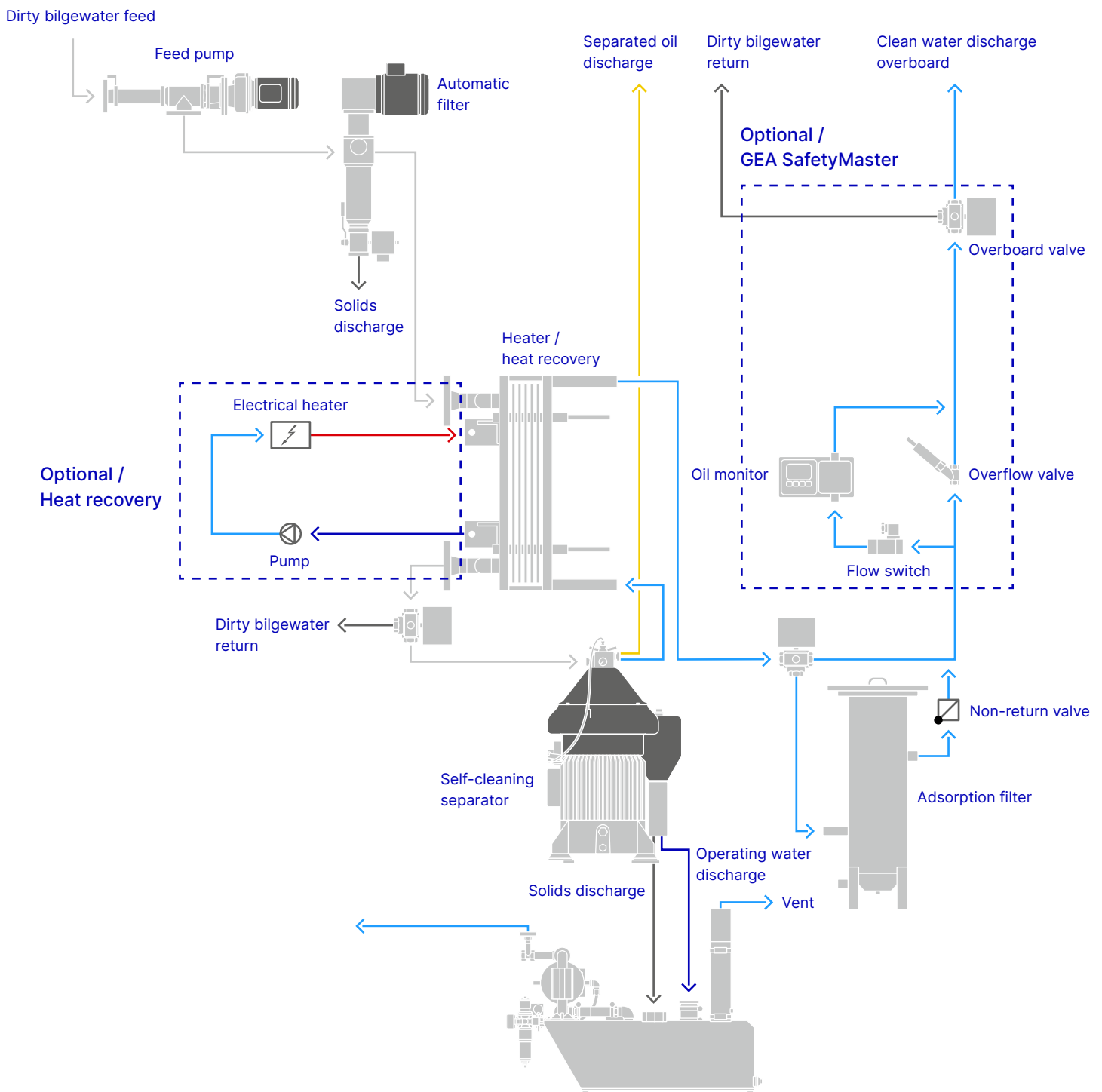
By integrating heat recovery, the GEA bilge Separator reduces energy consumption, enhances operational efficiency, and promotes sustainable bilgewater treatment.

GEA SafetyMaster – the gain in terms of safety

In addition to the high safety standard of GEA bilge Separators, GEA has developed the SafetyMaster. It prevents the unintentional overboard pumping of bilgewater containing excessive levels of oil by means of permanently monitoring the complete separating process including the overboard valve. An integrated data recorder saves all bilgewater processing information from the previous eighteen months. All components of the SafetyMaster system are mounted in a lockable cabinet which is protected against manipulation and installed on the separator unit.

INNOVATIVE BILGE WATER PROCESSING

Efficiency meets safety.



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