Kelvion

Bloksma FlowBox

PLUG & RUN COOLING SOLUTIONS DESIGNED FOR LOW LIFE-CYCLE COSTS

Introduction

We at Kelvion have taken seawater cooling to a new level. Designed not only for offshore vessels, the Bloksma FlowBox combines the valued features of box coolers and plate heat exchangers while adding ease of maintenance and installation. In addition, the Bloksma FlowBox is a worry-free fit-and-forget installation with delivery including the sea water box: a plug-and-run solution.

Leading benefits

Owner benefits

- Increased performance under stationary conditions compared to box coolers
- Consistently high-level performance for efficient cooling: sailing or stationary
- Flow control: seawater flow adapted to each situation regardless of vessel cruising speed
- Easy maintenance: inspection and maintenance as needed without drydocking

Yard benefits

- Ease of maintenance: like box coolers, the FlowBox is easy to clean. No special tools are required
- Limited number of spare parts: few components are required when maintenance is carried out
- Easy lifting: a frame is available for lifting the bundles

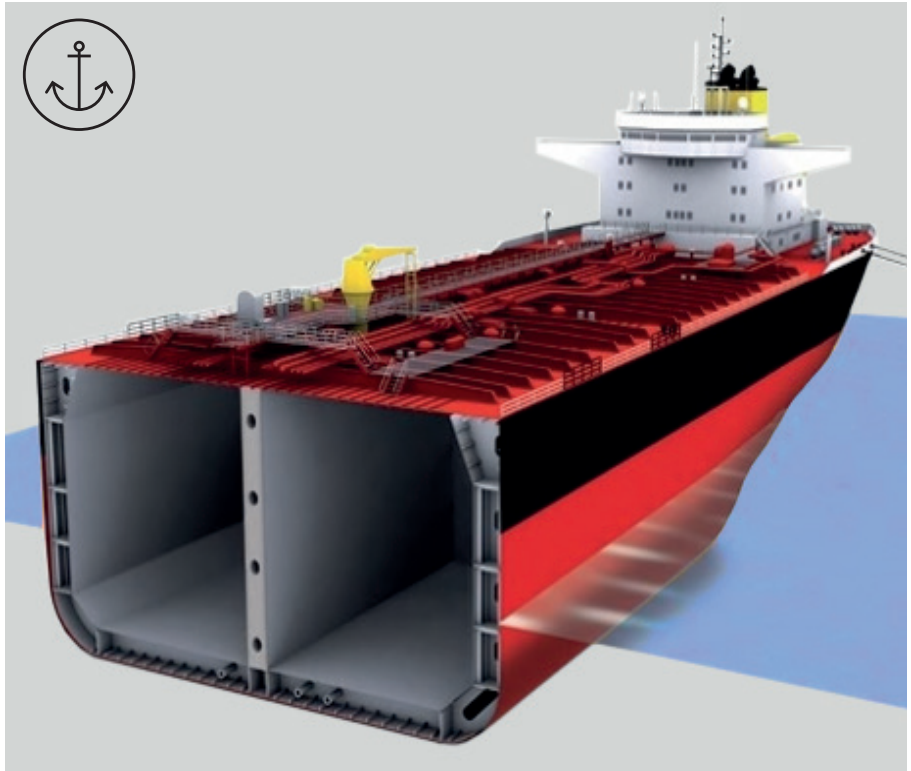
Design benefits

- Space savings: installation in a double hull is possible, leaving additional space in the machine room
- Compact dimensions: by forced flow and minimizing internal leakage
- Flexible modular design: easy replacement of individual bundles as required, with space available for addition of cooling bundles for upgrading capacity

Consistently high performance for efficient cooling.

Ease of maintenance.

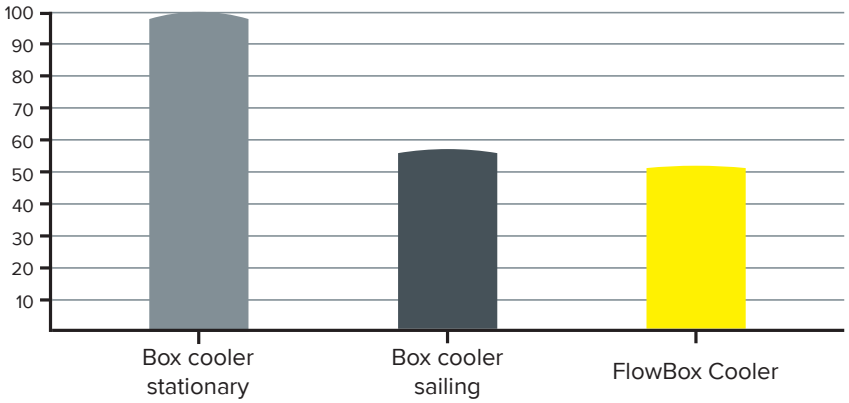
Space savings.



BLOKSMA FLOWBOX – INCREASE FLEXIBILITY. SAVE SPACE.

Bloksma FlowBox – Advantages compared to other solutions			
Values	**FlowBox**	**Box Cooler**	**Plate Heat Exchanger**
Space saving	✔	✔	–
Easy inspection	✔	–	✔
Flow control	✔	–	✔
Easy maintenance	✔	✔	–
Flexible solution	✔	–	–

Cooling surface comparison (%)



Standard available in the following Bloksma FlowBox types		
Types	**Dimensions** (incl. mounting ring)	**Depth** (variable)
FB14-28	598 x 1672 mm	250 – 2000 mm
FB14-56	598 x 2086 mm	250 – 2000 mm
FB14-84	598 x 2502 mm	250 – 2000 mm
FB14-112	598 x 2918 mm	250 – 2000 mm

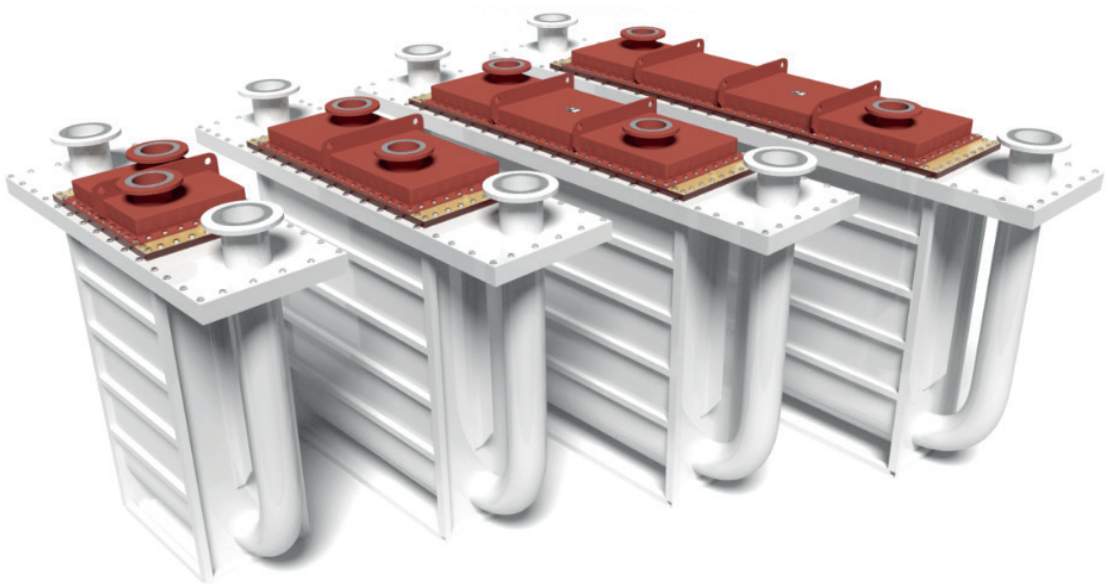
The Bloksma FlowBox offers all benefits of a modern heavy-duty cooling solution without having the disadvantages.

Design
The engineering design of the cooler features a U-shaped tube bundle, mounted with a tubesheet to guide the water flow. A new sealing system prevents by-pass and optimizes water flow. A mounting ring attaches the FlowBox casing to the hull. The box itself is bolted with a gasket to the mounting ring. The cooler is bolted to the box, and the water box is fastened to the tube bundle.
The design of the FlowBox facilitates removing the waterbox, the cooler, and/or the box without docking. This design is available for all major Class Societies.

The box
The design of the box allows controlled sea water flow to increase heat transfer, consequently enhance performance, and optimize operational costs. It is likewise possible to reserve space for an additional cooler element to add capacity as needed.

Engineering design data:
- Tube side:
  Design pressure: 4 bar / design temperature: 94 °C
- Box side:
  Design pressure: 2 bar / design temperature: 55 °C

The FlowBox scope of supply includes the box, the cooler, the mounting ring, gaskets, and on request spares and/or maintenance tools. Just plug & run!



Overview of the Bloksma FlowBox types

www.kelvion.com

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