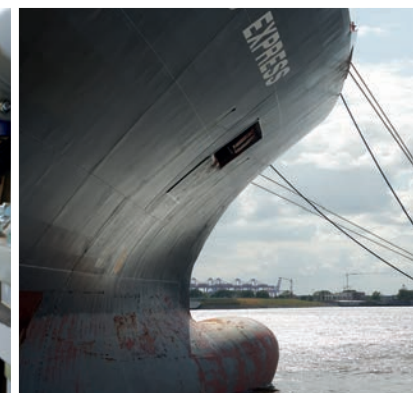
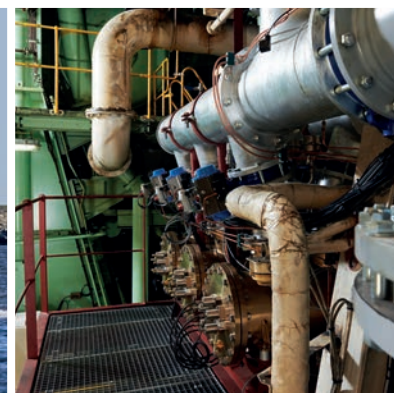
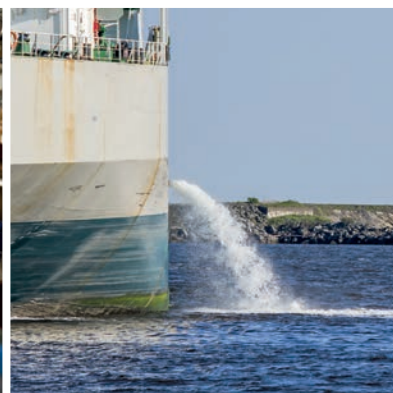
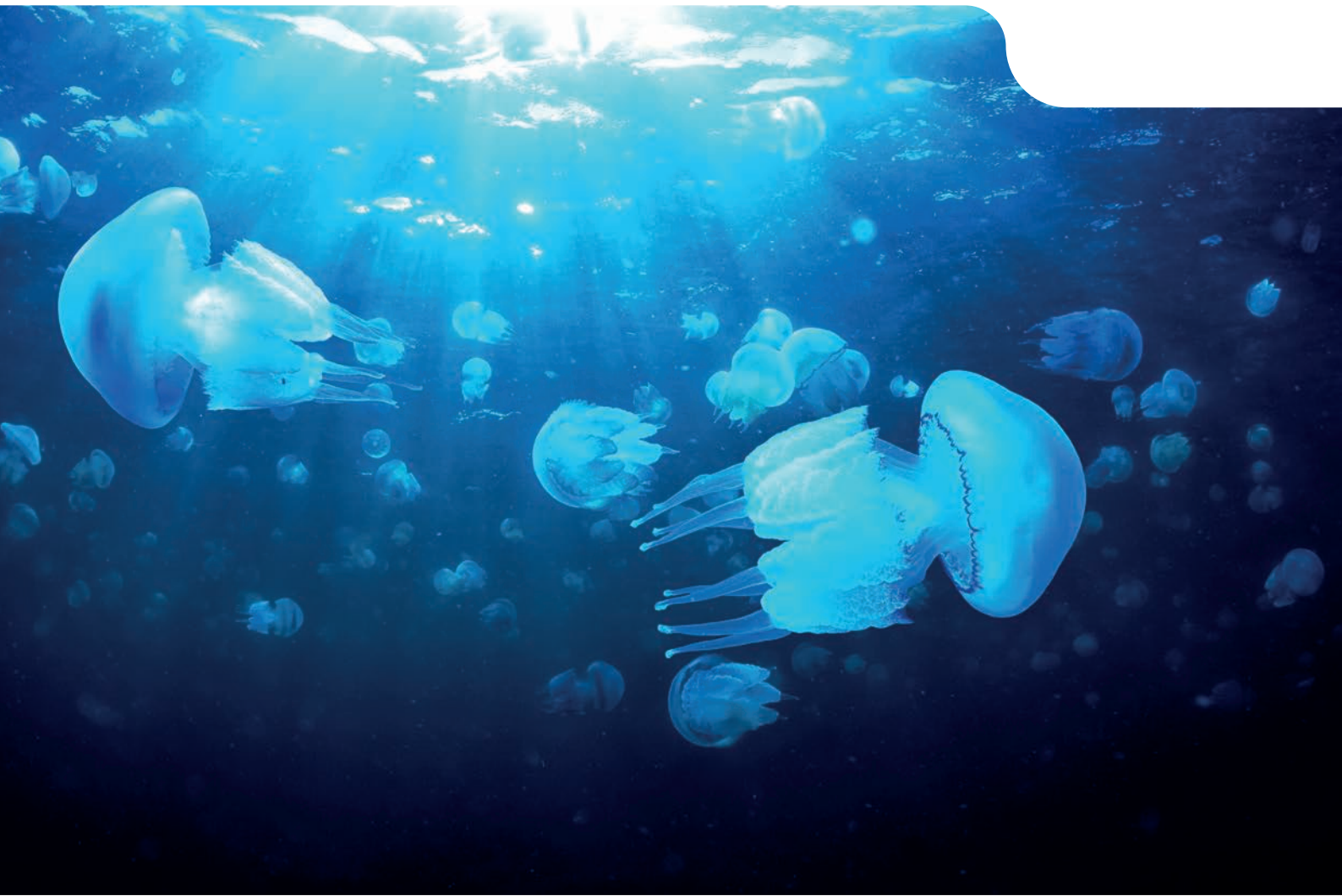


Simplified BWMS operation

# SKF BlueSonic Ballast Water Management System



# Simplified BWMS operation

Each ballast water treatment method has its own advantages and drawbacks. For example, electrolysis produces hydrogen, which can pose a safety risk. And chemical injection can result in harmful chemicals being discharged with the ballast water. To offer a solution to these issues, SKF Marine has developed its own system called BlueSonic BWMS, which cleverly combines UV and ultrasound.

## A clever combination for an efficient BWMS

UV systems are an effective and environmentally friendly way of treating ballast water. They currently account for around 50% of the market. However, one of their downsides is that the UV lamps often become dirty due to the formation of a biofilm on the surface. To maintain optimal performance, the lamps must be cleaned regularly. This cleaning usually relies on chemicals which must be safely stored and processed to avoid environmental pollution.

SKF BlueSonic BWMS eliminates the need for chemicals by using ultrasound to clean the UV lamps. This maintains optimal performance while ensuring constant operation and protecting the environment.

## Tried, Tested, and Versatile

Ballast water management systems are subject to rigorous testing to ensure they function safely and effectively.

SKF BlueSonic BWMS underwent successful shipboard testing with a 750 m<sup>3</sup>/h sized unit onboard a Hapag Lloyd container vessel operating between Northern Europe and Canada, where it experienced high sediment loads in Antwerp and Hamburg.

The ballast water management system was installed in just four weeks during regular vessel operations and in line with a general overhaul, following preliminary piping and preparation works onboard.

## Type Approval

SKF BlueSonic BWMS has passed all tests required by both the revised IMO G8 Resolution MEPC.279(70) and the United States Coast Guard (USCG).

SKF Marine is in the final application process for IMO and USCG type approval and expects to receive full certification in the coming months.

## Design for your needs

SKF Marine offers pioneering 360° project management. From project planning and construction to complete order fulfilment and services, SKF Marine is with you every step of the way.

When buying your BWMS from SKF Marine we support you with

- system design
- 3D scanning
- installation on-board incl. piping and electrical wiring
- integration into existing ballast water system
- class certification
- crew training

## Service is our forte

High-quality products are only one side of the coin. Excellent service is also part and parcel of successful ship operation and, with our global service network, that is exactly what we have to offer. Our staff is available 24 hours a day to give you the benefit of their all-round expertise – whether in Hamburg, at our overseas subsidiaries or at our global sales agents and service stations. We're always on hand to offer you a truly personal service





## Simplified Ballast Water Management

- Environmentally friendly with no need for chemicals
- Easy to install and operate, reducing installation and training costs
- Reduced maintenance and optimal performance thanks to constant ultrasonic cleaning
- Modular design and small footprint for flexible installation options
- Can be used at flow rates of up to 1 500 m<sup>3</sup>/h
- Suitable for most types of vessel and all water temperatures and salinities
- Simplified operation with only one mode to fulfil both IMO and USCG requirements
- Backed by SKF Marine's global support network for quick service and spare parts

## SKF BlueSonic BWMS

The UV based SKF BlueSonic ballast water management system uses ultrasound to keep the UV lamps and chamber constantly clean. This maintains optimal performance and offers an environmentally friendly option, as no chemicals are discharged along with the ballast water.

The reactors' material is highly resistant against corrosion and cavitation, thus offering long lifetime and reducing downtime. Additionally, the avoidance of aggressive chemicals improves the longevity of the ballast water tank and pipes.

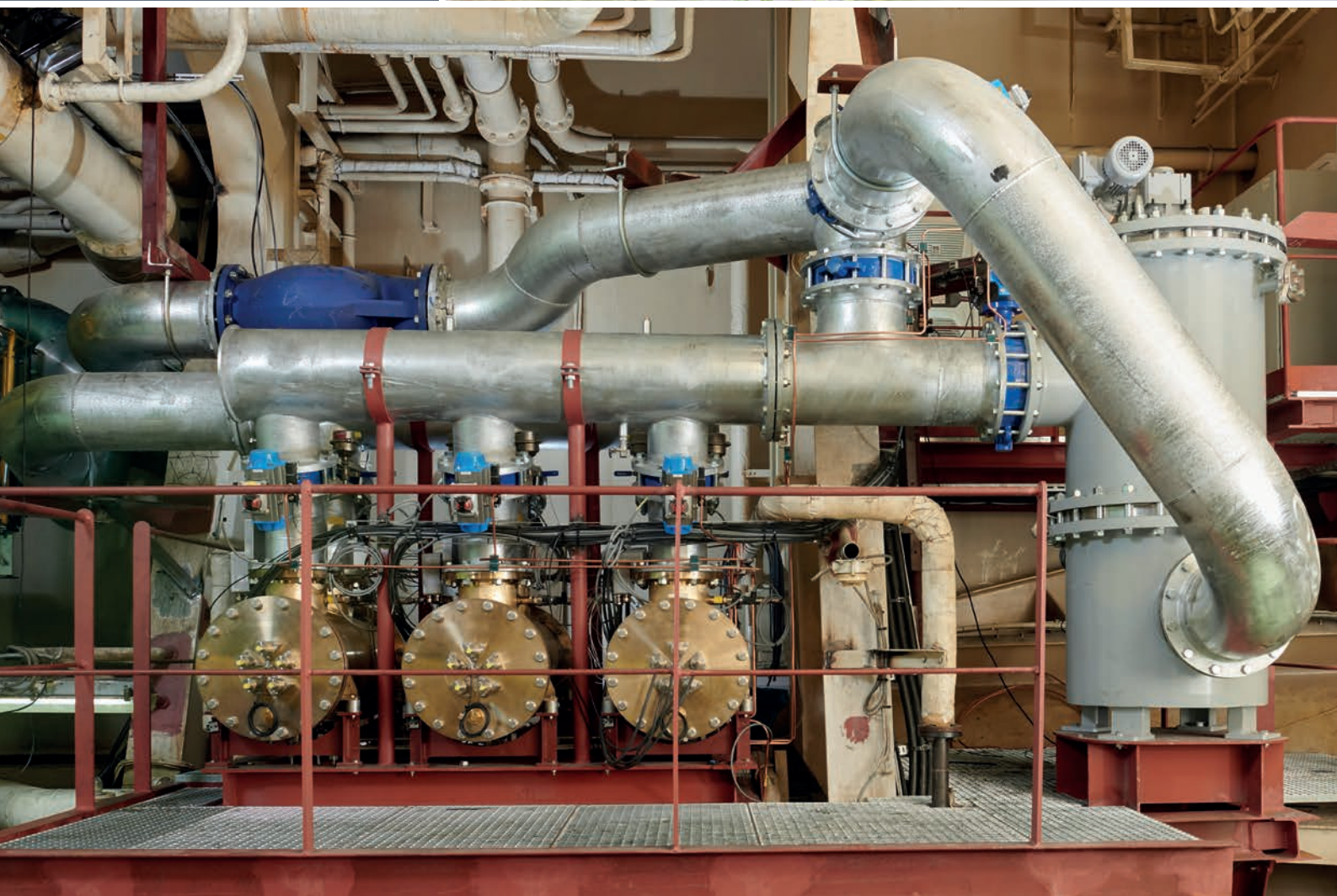
Full certification and commercialization of the system is expected for 2020. This will be in sufficient time for the 2024 cut-off date for retrofitting a BWMS to vessels built prior to 2017.



# CHEMICAL FREE OPERATION

## Advantages:

- Fully automatic operation
- Highest UV lamp efficiency by using ultrasound for continuous cleaning
- Environmentally friendly: No chemicals or by-products
- Modular redundancy
- One operating mode for IMO and USCG territories
- Low maintenance





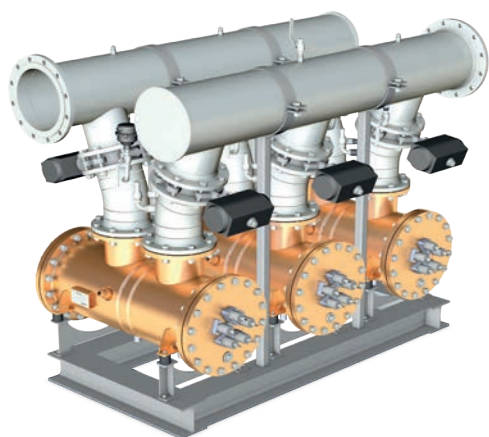


A modular design enables flexible installation options and a small footprint.

The main components of each SKF BlueSonic BWMS are:

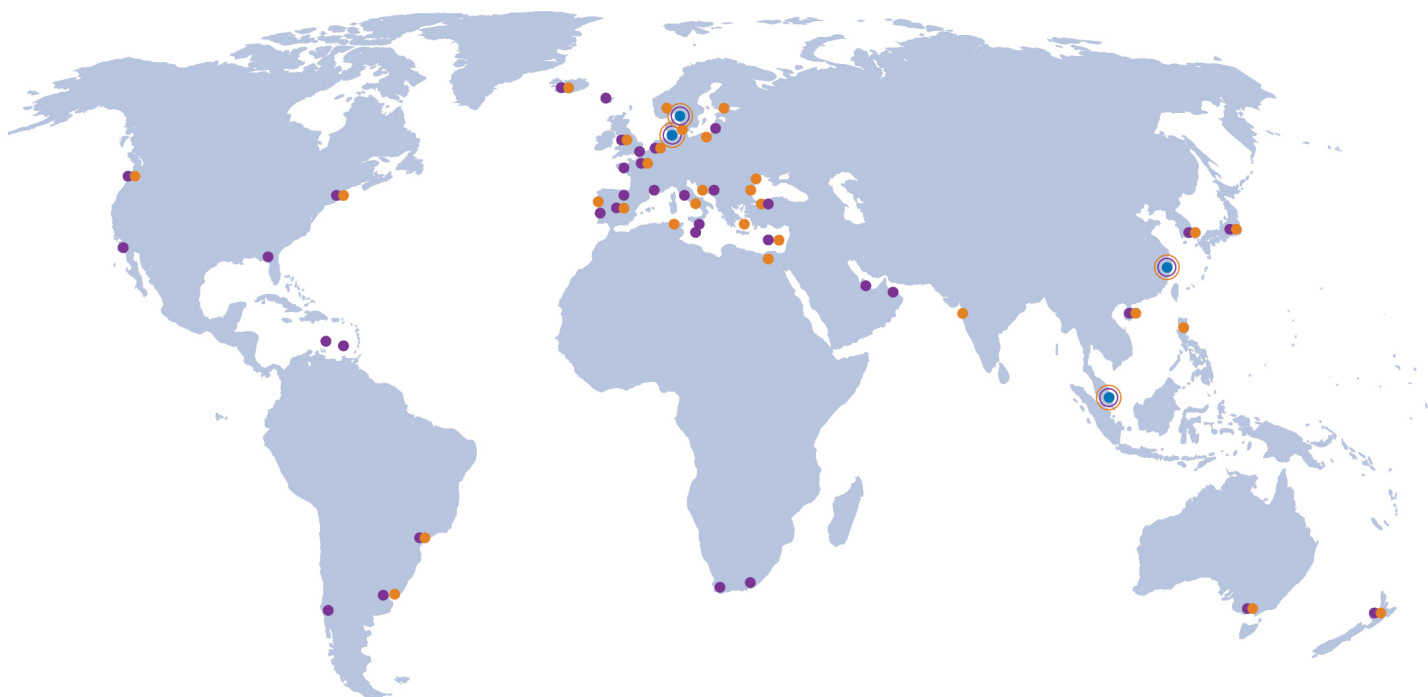
- Filter
- Reactor
- Power unit
- Control unit

COMPACT  
DESIGN



Sample dimensions  
for an SKF BlueSonic BWMS  
with 750 m<sup>3</sup>/h flow rate  
(skid mounted, incl. manifolds):  
2 076 x 1 345 x 1 845 mm

SKF BlueSonic BWMS Specifications		250	500	750	1 000	1 250	1 500
Flow capacity	m <sup>3</sup> /h	≤250	≤500	≤750	≤1 000	≤1 250	≤1 500
Quantity of reactors and power units		1	2	3	4	5	6
Energy consumption	kW	64	126	188	250	312	374
Operating pressure	bar	2-6					
Pressure loss	bar	Filter: 0.1-0.5 Reactor: 0.3					
max. operating water temperature	°C	60					
Salinities		marine, brackish, fresh water					
UV transmittance	%	min. 50					



● SKF Marine / Subsidiary    ● Sales Agents    ● Service Stations

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PUB 43/P2 18611 EN · July 2020

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