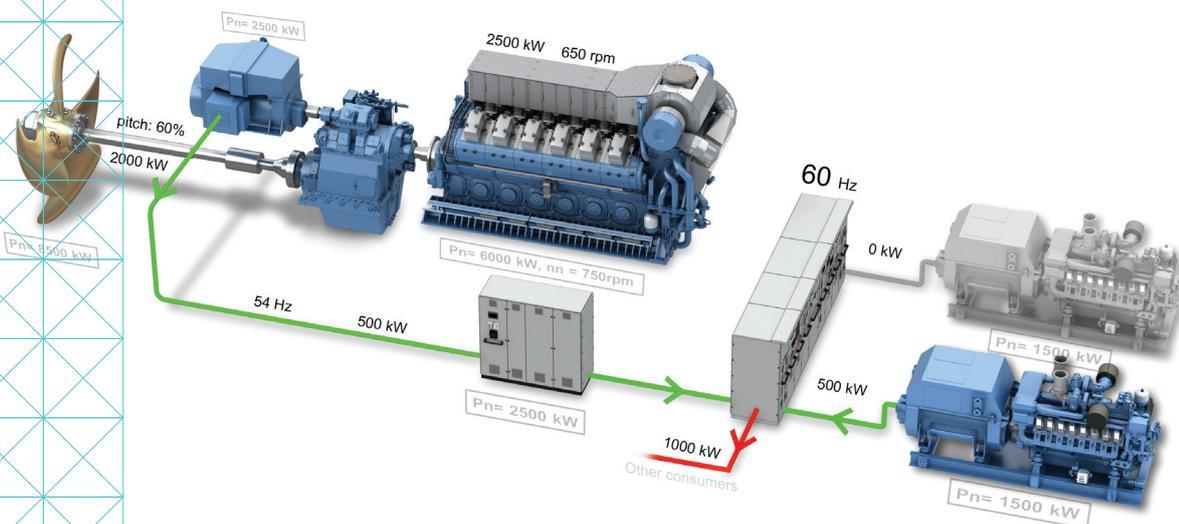


# SYSTEM AND VESSEL CONVERSIONS



KONGSBERG



## KONGSBERG MARITIME

### System and vessel conversions

Providing complete conversion solutions to meet the requirements of a changing world and a changing market

#### System conversions

Cost saving, improved fuel efficiency and reduced environmental footprint

Power and propulsion system re-powering or conversion can assist in achieving your operational targets to reduce fuel consumption and meet environmental requirements.

It can also provide improved operational flexibility and increase the power and capability of your vessels.

#### Hybrid propulsion solutions

Our hybrid shaft generator (HSG) system is an advanced power electric system which supplies fixed frequency power to the switchboard even when the engine RPM varies. This enables much more flexible use of engine and propeller speed variations. It means that both propeller and engine efficiencies can be maximised by running them at their design points. Doing so also helps to reduce exhaust CO<sub>2</sub> and NO<sub>x</sub> emissions.

The HSG system provides efficient operation without compromising functionality over the vessel's entire operating profile.

As a dedicated system integrator, we ensure that all proprietary equipment functions coherently and safely.

At Kongsberg Maritime we are helping our customers to adapt and expand their businesses into new and changing markets by providing innovative conversion and retrofit system solutions, with deep systems integration, industry leading product quality and world-class aftermarket support.

Our solutions are based on the latest technology and close customer cooperation throughout all projects. The result is proven reliability and profitability for your operation.

Our in-house expertise in all design disciplines, and a vast range of ship equipment, makes us exceptionally skilled in balancing all these crucial factors to create an optimised vessel.

## Vessel conversions

### Moving into a new market

Whether your vessel is a Kongsberg Maritime design or not we are able to deliver innovative full concept packages to meet your requirements for value, functionality and performance.

All vessels are individually re-designed for their new tasks, based on operational demands along with classification and overall vessel performance requirements.

Close cooperation from the start of a project ensures that consideration is given to all aspects and that our customers' valuable experiences become a vital part of the development of the design.

Customers can benefit from customised tank solutions, deck design and cargo facilities.

### Cost effective and efficient process

For Kongsberg Maritime designed vessels there is no "discovery phase". As owners of the original design drawings and equipment technical specifications the need to gather information from many different manufacturers and suppliers is greatly reduced.

Our intimate knowledge of our vessel designs means that we understand their flexibility and possibilities for adaptation.

Our expertise in the upgrade or re-use possibilities for your existing Kongsberg Maritime equipment enables

the most cost effective solutions to be produced. Our design and engineering teams' detailed knowledge of any new equipment added from our extensive product portfolio means only the minimal number of engineering hours are required for each re-design.

Our teams of experts can be brought to you anywhere in the world.

### Focused on safety

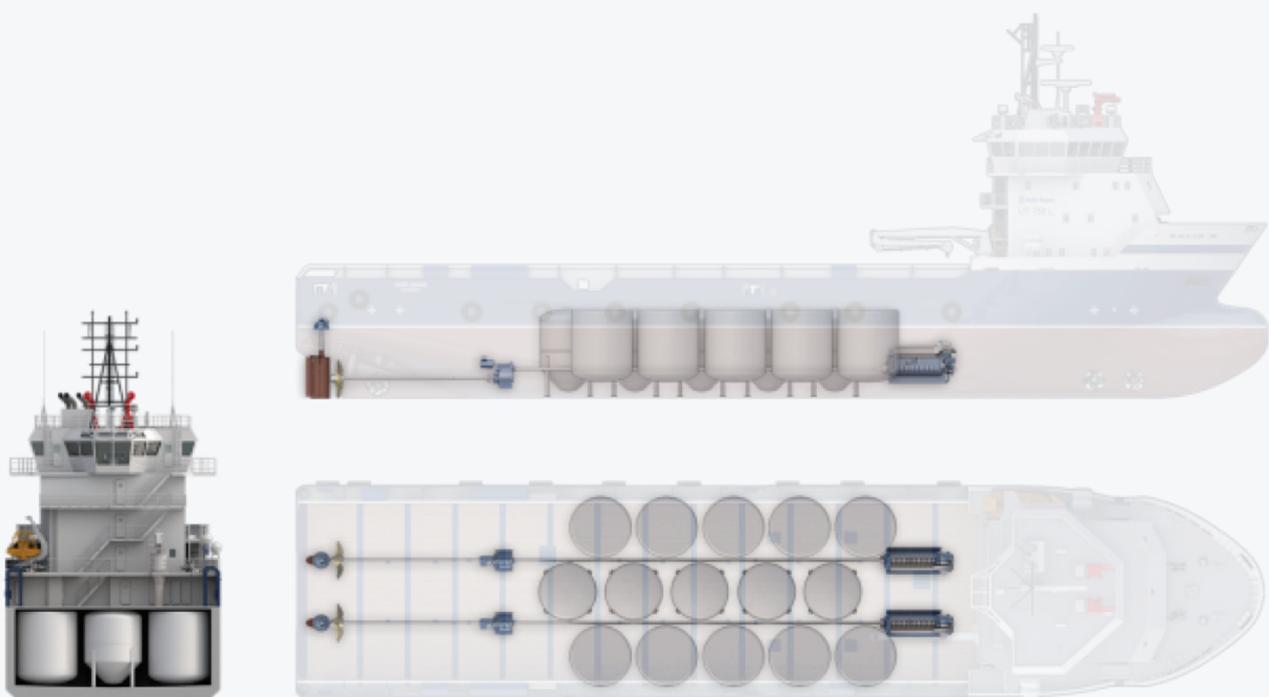
Safety is at the forefront of everything we do and our customers can be assured that all of our conversion designs include the latest advances in safety improvement.

As part of the conversion we are able to install equipment health monitoring solutions that support safer asset operation.

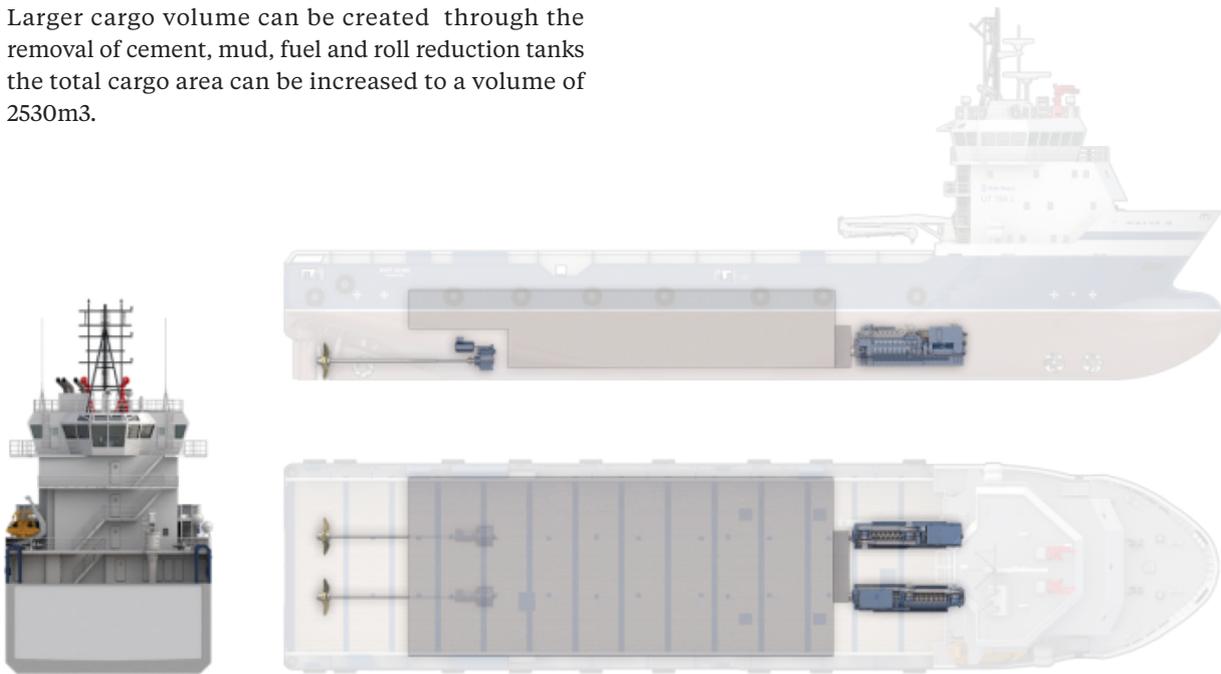
### Kongsberg Maritime UT design vessel conversions Cargo conversions

Design options available range from simply rebuilding the tanks to accommodate a different type of cargo, through moderate and reversible adaptation, to total cargo area conversion.

Our conversions are designed with cargo handling systems and arrangements that ensure efficient and safe loading and unloading of cargo. There is a high focus on low acceleration to reduce wave slamming, improve vessel performance in a seaway, minimise potential cargo damage and provide optimal living conditions for the crew.

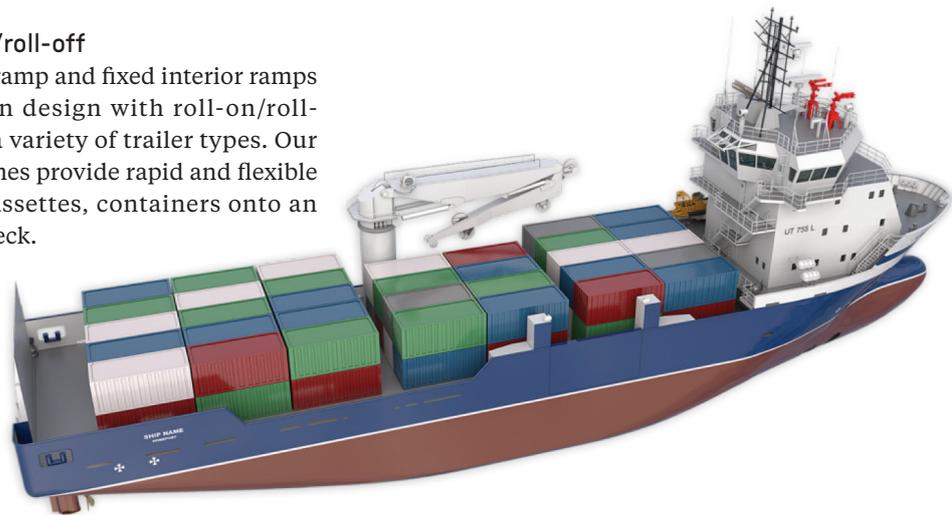


Larger cargo volume can be created through the removal of cement, mud, fuel and roll reduction tanks the total cargo area can be increased to a volume of 2530m<sup>3</sup>.



#### Conversion for roll-on/roll-off

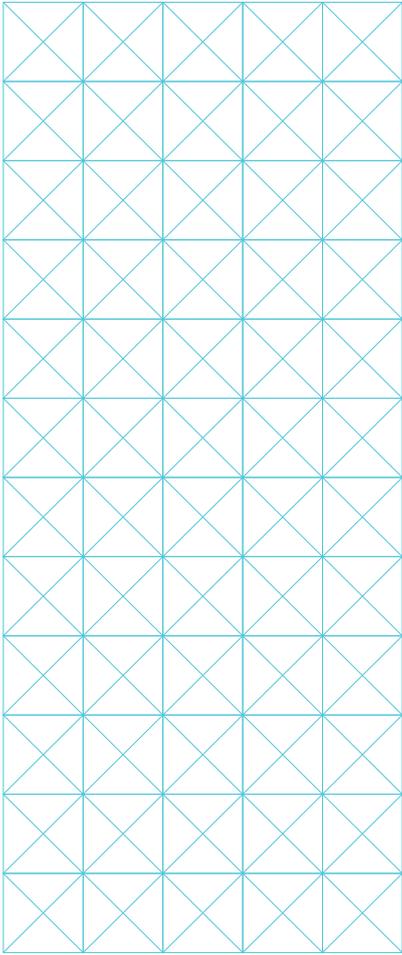
The addition of a stern ramp and fixed interior ramps produces a conversion design with roll-on/roll-off access suitable for a variety of trailer types. Our cargo lifts and deck cranes provide rapid and flexible handling of pallets, cassettes, containers onto an optimised all-weather deck.



#### Conversion for windfarm support

These vessels were designed to work in some of the harshest conditions so are ideal for conversion to these type of operations. Our re-designs are focused on delivering a low environmental footprint and incorporate advanced dynamic positioning and heavy lifting capabilities along with a high standard of crew accommodation.





### Technical support

For the duration of the warranty you will have one dedicated point of contact. With a detailed knowledge of your vessel design and all of your equipment, your Contract Manager will ensure that you receive fast and efficient support for all of your technical needs.

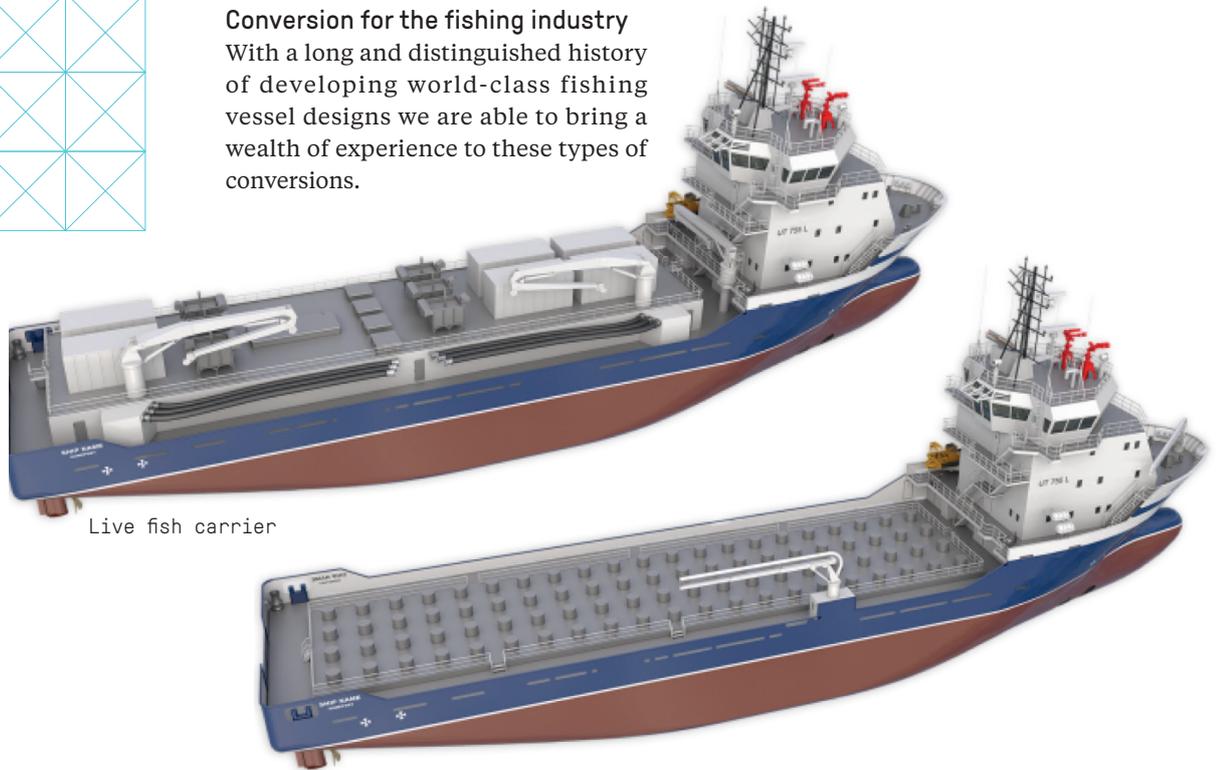
Whether the equipment is within our outside of warranty you receive 24/7 technical support from our dedicated teams of experts.

### Customer training

Correct operation of new and existing equipment is essential for optimum fuel saving and crew safety. We are able to provide world class, innovative training solutions to meet the needs of individual crews. Our flexible range of delivery options means that we can supply training anywhere in the world.

### Conversion for the fishing industry

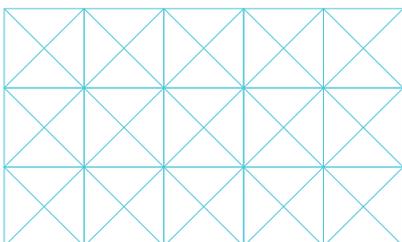
With a long and distinguished history of developing world-class fishing vessel designs we are able to bring a wealth of experience to these types of conversions.



Live fish carrier

Fish food carrier

Our products and services strike a harmonious balance between performance and ownership costs - all backed by a truly international customer support network assuring lifetime support and low life-cycle costs.



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