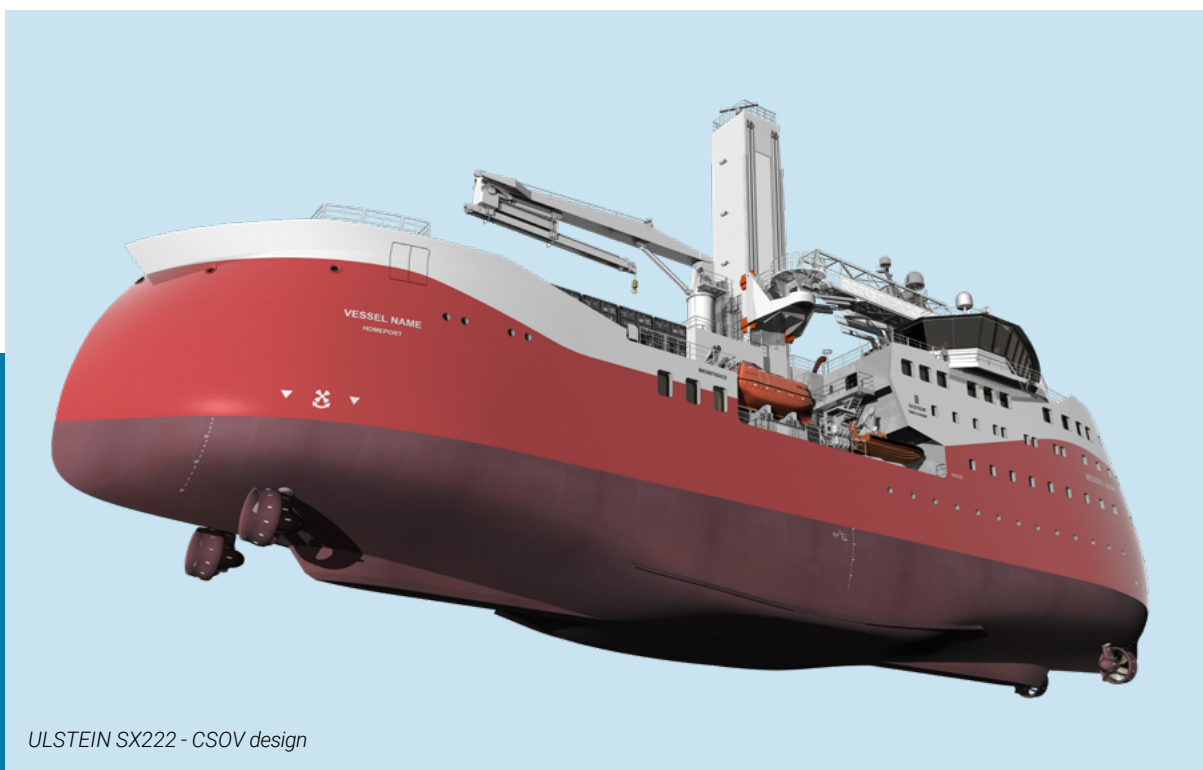




ULSTEIN®

E-BOOK

TWIN X-STERN®



ULSTEIN SX222 - CSOV design

ULSTEIN TWIN X-STERN®

WHAT IS IT?



Vessels operating long periods of time on-site in offshore locations require very high capability to handle harsh weather – as opposed to conventional transport vessels that normally can divert from bad weather conditions.

Some vessels perform operations that require a special heading – e.g. walk-to-work operations or replenishment operations – which imply that the vessel cannot always point the bow or stern towards the waves. For these types of operations, the vessel uses substantial energy to maintain the vessel with the right heading towards the incoming waves and that is the reason why we developed the TWIN X-STERN vessel.

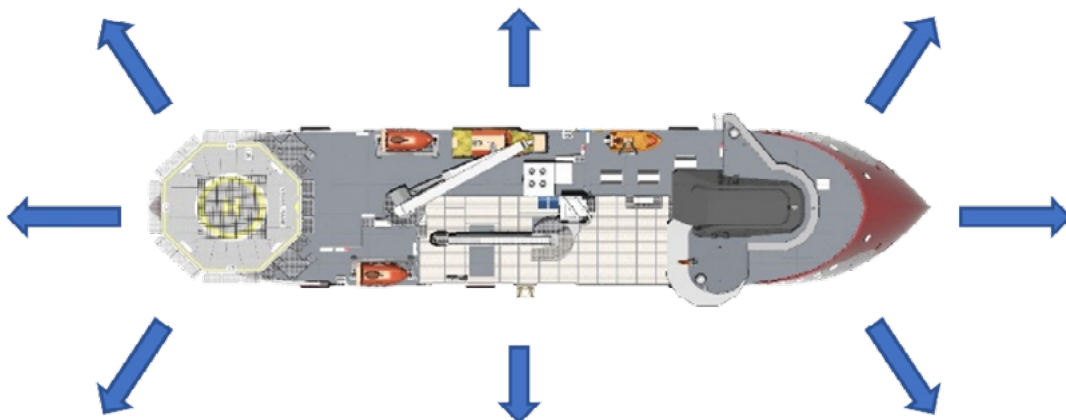
HOW DOES A TWIN X-STERN VESSEL WORK?

The operational window is extended by the TWIN X-STERN. Its symmetric hull shape behaves more efficiently in harsh weather conditions.

Four azimuth thrusters, two at each end, increase the manoeuvrability. The azimuths have higher efficiency

by being capable of turning the thrust directly in the direction of the waves and current.

The combination of thrusters and hull design result in lower energy consumption and reduced motions, and therefore higher operability and comfort.



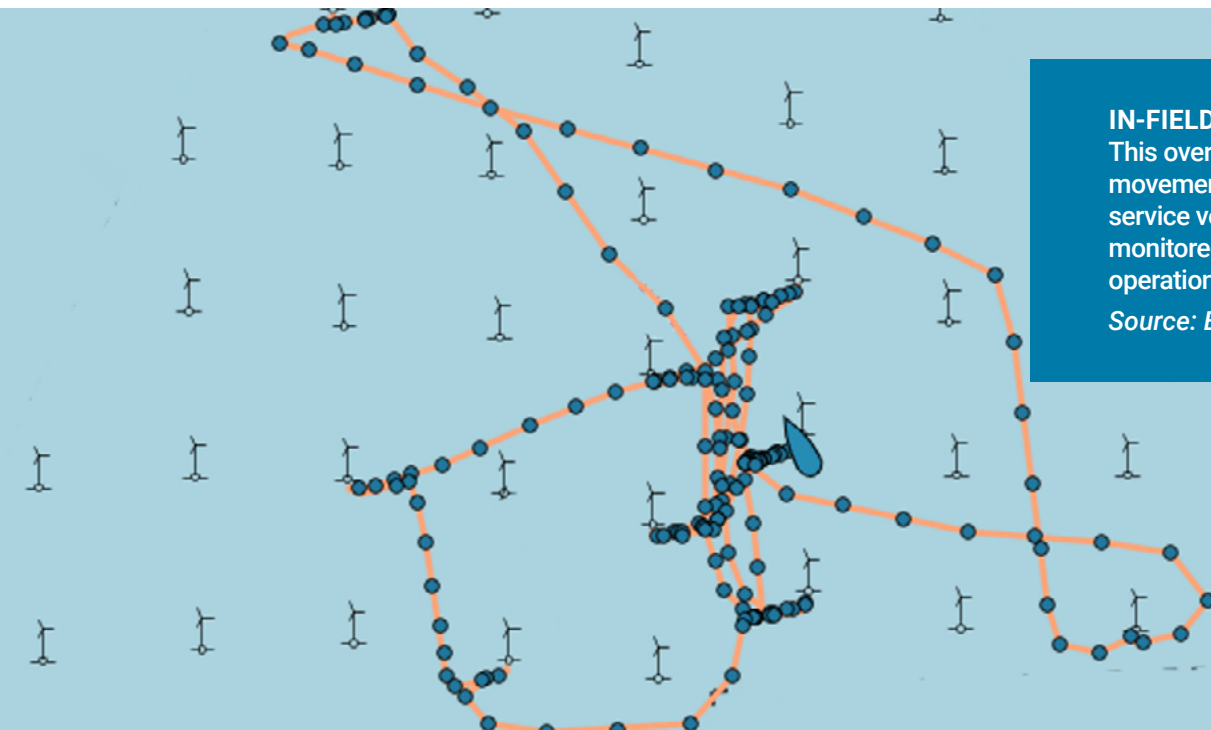
THE FIRST TWIN X-STERN PROJECTS

The first projects with this principle will be implemented in vessels for support operations in the offshore wind industry. At the wind farms, much time is spent on turning and manoeuvring the vessel. A TWIN X-STERN vessel can confront the weather without needing to reposition the bow.



"During operation, the offshore wind service vessels stay positioned at the turbines most of the time, and with the main propellers fore and aft, these vessels will reduce the energy requirement to a new level when on DP."

Stig Remøy, CEO Olympic Group



IN-FIELD OPERATIONS:

This overview shows the actual movements of an offshore wind service vessel at a wind farm, monitored through 24 hours of operation.

Source: Blue Box

APPLICATION AREAS

There are several application areas where the TWIN X-STERN can represent a benefit to traditional single stern vessels.

1. Construction service operation vessels (C/SOVs) operating a majority of their time on windfarms
2. Large offshore construction vessels spending significant time in DP operations, including diving support vessels (DSV) and light well intervention vessels (LWIV)
3. Larger offshore units such as drillships or offshore mining vessels.

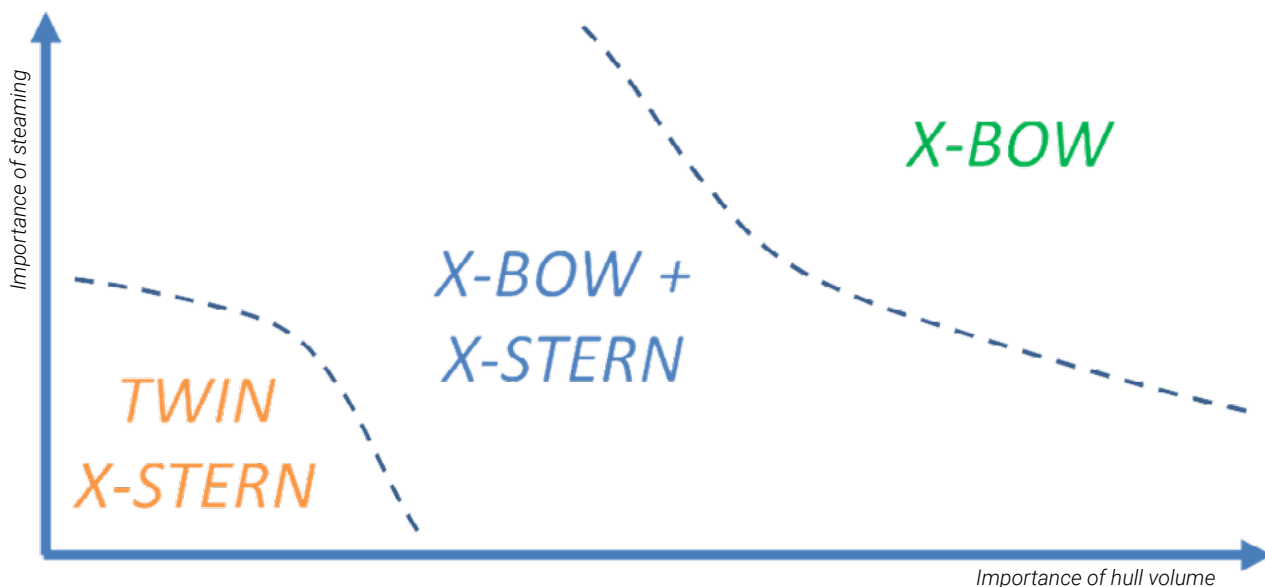
For many of these offshore operations, contractors' preferred arrangement allows for working over the side, midship, not so much over the stern or through moonpools. In such situations, the TWIN X-STERN is well suited.

A SIMPLE RULE OF THUMB

The TWIN X-STERN is suitable for vessels with strict requirements for operability in harsh weather

conditions, and with a large share of their operations on-site offshore. The compromise of choos-

ing propulsors in the bow and the imposed effect it has in transit asserts itself first at high speeds.



Choosing the appropriate hull design for a vessel's specific operational profile and requirements.

THE TWIN X-STERN

What are the benefits?

"Their commitment to innovation and the outstanding quality of the Ulstein shipyard were key factors in our decision. The excellent reputation of our existing fleet of Ulstein SOVs shows that the market appreciates these criteria".

Matthias Müller, Managing Director
at Bernhard Schulte Offshore.

A

LOWER ENERGY CONSUMPTION

The lower energy consumption is most significant during DP operations and the reasons behind this are:

- Using azimuths instead of tunnel thrusters
- Reduced manoeuvring time
- Lower resistance in transit at service speed

B

INCREASED OPERABILITY

There will be lower motions and quicker response.

C

LOWER NOISE AND VIBRATIONS

This leads to higher comfort and less concern for structural fatigue failures.



Reference vessels Ulstein Design & Solutions AS

ACTA MARINE - 4

Acta Marine has ordered four methanol-fuelled CSOVs of the SX216 design. The vessels are being built at Tersen Shipyard. Contracted in 2022 and 2023.

OLYMPIC - 2

Ulstein Verft will be constructing two CSOV vessels for Olympic, based on the SX222 design. The vessels were contracted in 2022, and are planned for delivery in 2024.

BERNHARD SCHULTE OFFSHORE (BSO) - 2

Ulstein Verft will be constructing two CSOV vessels for BSO, based on the SX222 design. The vessels were contracted in 2023.

J.P MORGAN - 2 (+2)

Ulstein Verft signed a contract with JP Morgan Asset Management, on behalf of institutional investors on two SX222 design, and two options. The vessels were contracted in 2023.

TURNING VISIONS INTO REALITY

Thinking differently is easy yet complicated

Vessel designs are a result of many compromises. It is essential to understand the functions the vessel is supposed to cover, and the operations it will be involved in. The TWIN X-STERN is based on decades of innovations in Ulstein.



TWIN X-STERN:
Twice nominated for
the Innovation of the
Year Award at the
OSJ Conferences.

TWIN X-STERN was one of
the decisive factors to earn
Ulstein the Industrial Com-
pany of the year Award at
the IDC Conference in 2022.



HOW CAN WE HELP?

Ulstein Group is a family owned group of companies offering a wide range of ship designs, equipment packages, shipbuilding and maritime solutions.

We deliver award-winning vessels of European quality designs and standards. We have a solid, more than 100-year experience in shipbuilding, and are

renowned for punctual deliveries of high-quality vessels to the agreed price. We offer a portfolio of designs and equipment packages for a wide range of segments. Our thorough marketing and vessel concept design solution analyses make a solid foundation for developing outstanding performances in an ever more competitive market.

ULSTEIN GROUP
TEL. +47 7000 8000
EMAIL: GR@ULSTEIN.COM
ULSTEIN.COM

Nothing in this e-book shall be construed as a warranty or representation by the Ulstein Group as to the validity or scope of the TWIN X-STERN® Intellectual Property Rights.



ULSTEIN®

Would you like more **insights?**

*Follow us on social media or
sign up for our newsletter*



ulstein.com



info@ulstein.com



+47 7000 8000



linkedin.com/company/ulstein



facebook.com/ulsteingroup