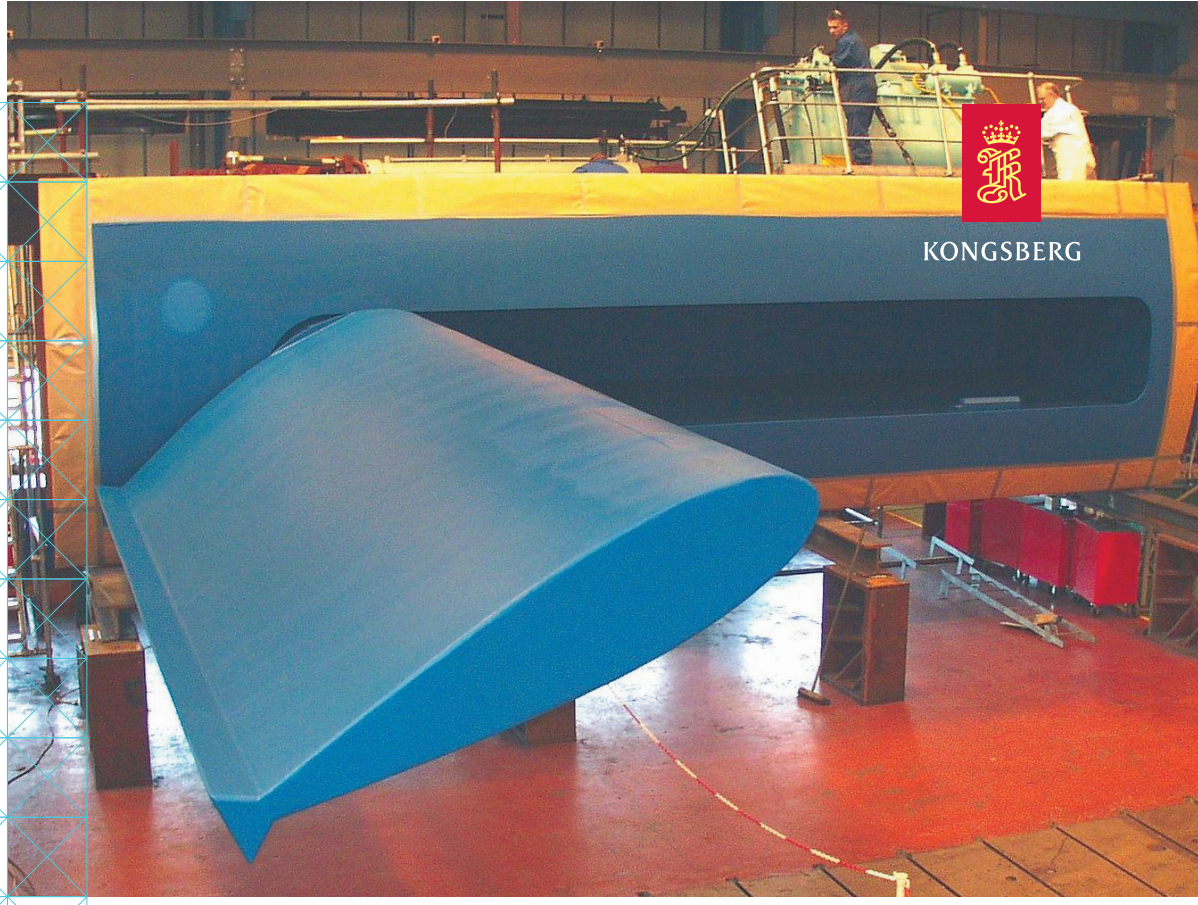
NEPTUNE AND AQUARIUS FOLDING FIN STABILISERS



FIN UNIT

- One piece construction
- High levels of performance and reliability
- NACA Profile incorporating fishtail
- Tip fence (optional)

HULL APERTURE

- Narrow parallel slot

BENEFITS OVER THE FLAP TYPE FIN

- Lower through life operating costs
- No flap hinge bearings
- No flap actuating mechanism
- Customers' spares holding requirements greatly reduced
- Low slot drag when compared to the 'key hole' type slot associated with the flap type fin

KONGSBERG STABILISERS

Fin profile for the KONGSBERG Neptune and Aquarius folding fin stabilisers

Both the Neptune and the Aquarius folding fin stabilisers incorporate a one piece fin construction and have a narrow parallel slot

Little to no maintenance required

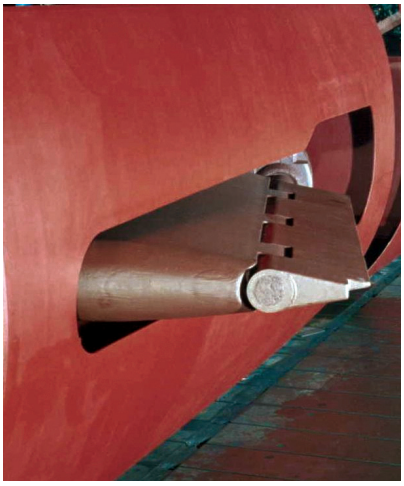
KONGSBERG offers its customers an impressive range of stabilisers for almost every type of commercial and naval vessel.

The range includes the Neptune and Aquarius folding fin stabilisers, both of which incorporate a one piece fin construction.

This design provides an efficient, low cost of ownership motion control solution.
It requires little to no maintenance, with the result that operational hours lost due to scheduled or unscheduled maintenance are greatly reduced.

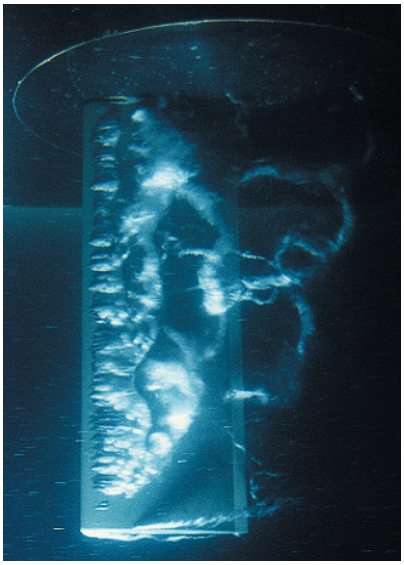
Extensive testing and operational experience has proven that one piece fins have an overall drag co-efficient similar to that of flap type fins.

Since 1992 well over 100 ship sets of these one piece fin stabilisers have been chosen by leading commercial and naval operators worldwide for a wide variety of vessel types.

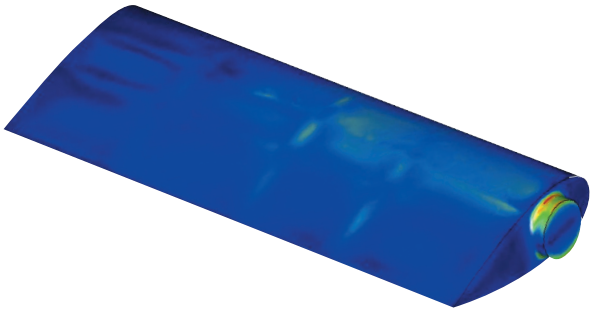


An example of a mechanically more complex flap type fin as previously manufactured by KONGSBERG. As can be seen, the one piece fin design dramatically reduces the requirement for maintenance on underwater components

The KONGSBERG fishtail fin profile was derived from standard NACA 00-series foil sections, modified for high lift using CFD (computational fluid dynamics) and cavitation-tunnel testing. The profile was first produced in 1990, and the most recent model-test verification was carried out in 1997 at the Haslar, UK test facility. The profile has good cavitation resistant properties and in most conditions operates outside the cavitation zone.

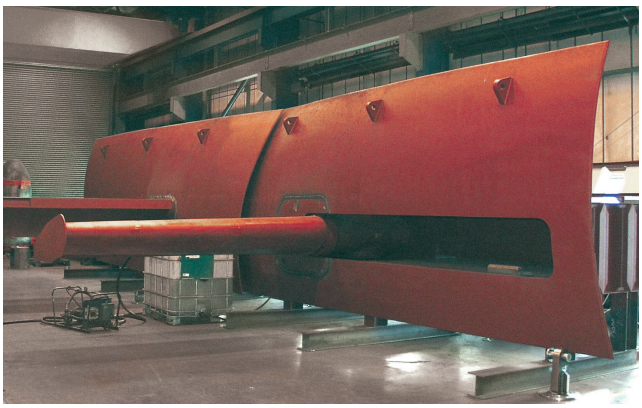


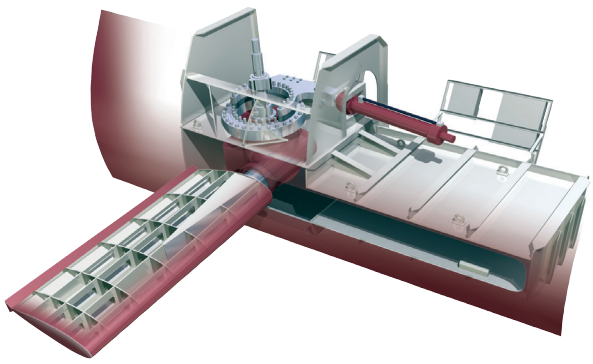
Neptune stabiliser fin in test tunnel



Fin construction is optimised and verified in-house using the latest Finite Element Analysis (FEA) to accommodate the extreme loading and fatigue environment seen by anti-roll stabilisers. Both stress and deflection can be calculated, and confirmed to be below design limits based on our extensive experience in this field.

Aquarius folding fin stabilisers





Kongsberg Maritime
P.O.Box 483, NO-3601
Kongsberg, Norway

Switchboard: +47 815 73 700
Global support 24/7: +47 33 03 24 07
E-mail sales: km.sales@km.kongsberg.com
E-mail support: km.support@km.kongsberg.com