

# PROMAS FOR NAVAL VESSELS



KONGSBERG

## KONGSBERG PROPULSION SYSTEM

### Highly efficient propulsion and manoeuvring system

#### Increased action range with Promas

Naval vessels, such as Frigates and Corvettes, traditionally have rudders placed off-centre to the shaft line. This is to reduce cavitation issues on the rudder and allow the shafts to be pulled without removal of the rudder.

Off-centre rudders reduce a vessel's hydrodynamic efficiency and action range as well as increasing CO2 emissions.

#### Why Promas?

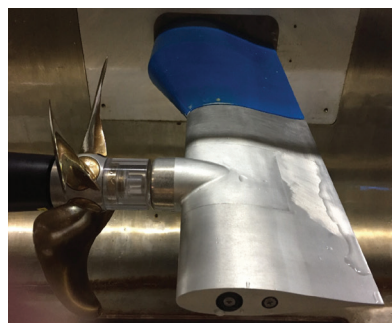
Already a well-proven product on hundreds of commercial vessels, Promas offers the same benefits to the Naval market.

Promas' design allows the rudder to sit in-line with the shaft line. This reduces rudder cavitation and significantly improves the hydrodynamic performance compared to the traditional off-centre rudder.

KONGSBERG EPS-rudders can be offered to enable pulling of the propeller shaft without needing to remove the entire rudder.

#### Full analysis for the optimum solution

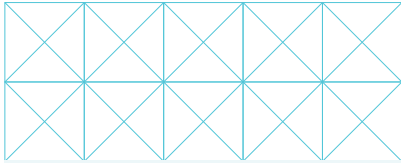
Kongsberg Maritime offers to analyze any vessel and its operational profile to be able to advise on suitable propulsion and manoeuvring systems.



Promas



Conventional off-centre rudder



## ADVANTAGES

- Increased action range
- Propulsive efficiency
- Improved manoeuvring
- Reduced pressure pulses
- Simple and robust design
- Small additional investment, large cost savings
- Green concept; fuel saving yields environmental benefits



## OPEN WATER EFFICIENCY

