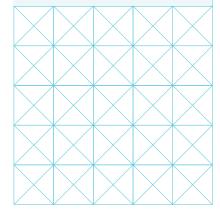


COMPLETE FPP PACKAGE

- Individual optimum Kongsberg Maritime design
- Monoblock propellers of conventional or high-skew design for both open and nozzle applications
- Shafting with stern tube, bearings, sealings, nozzle, etc.
- The Kongsberg Maritime SKF propeller sleeve
- Model testing in own facilities
- Shaft calculations, such as whirling and alignment
- Performance guarantees



KONGSBERG PROPELLERS

Fixed pitch propellers

And the Kongsberg Maritime SKF propeller sleeve - based on superior experience of propulsion systems Kongsberg Maritime is the world's leading supplier of marine propulsion systems and has more than 60 years' experience of propeller design.

Kongsberg Maritime fixed pitch propellers (FPPs) are high technology products, individually designed for optimised propeller efficiency, lowest possible vibration/noise levels, and no harmful cavitation.

FPPs for a wide range of applications

Kongsberg Maritime experience in the design and supply of FPP's covers a variety of applications, including sophisticated ship types such as cruise vessels and ferries, arctic vessels, drilling rigs and various types of naval vessel.

Kongsberg Maritime supplies complete propeller systems for newbuildings, or replacement propellers for existing vessels that increase efficiency, while reducing vibrations and noise. A number of replacements of competitors' FPPs in highly sophisticated vessels have been carried out successfully.







From left: Container vessel M/V Priwall, British Royal Navy's HMS Ocean, P&O's cruise ship Aurora

kongsberg.com 02.Propeller-1 of 2-14.10.09



Kongsberg Maritime FPP package with SKF propeller sleeve and shafting.



Type A - Propeller and intermediate shaft connected by integral flanges.



Type B - Propeller and intermediate shaft connected by SKF hydraulic sleeve coupling



Type C - Propeller shaft with SKF hydraulic flange coupling

The Kongsberg Maritime SKF propeller sleeve – a time and money saving innovation

The Kongsberg Maritime SKF propeller sleeve is a unique concept that simplifies removal and mounting of FPPs, provides full inter-changeability between operating propeller and spare propeller, and reduces the need for a spare propeller shaft. For shipowners and operators, where availability is cruical, the Kongsberg Maritime SKF propeller sleeve offers considerable cost savings in terms of downtime, maintenance and repairs. For shipyards it generates major savings by speeding up the installation process.

Mounting/dismounting - fast, safe and simple

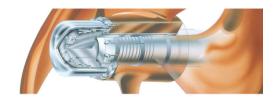
The Kongsberg Maritime SKF sleeve is a keyless high-grade steel sleeve with a cylindrical exterior and a tapered interior. The outer surface is manufactured to provide a precision fit into the cylindrical hole of the propeller hub. The inside is manufactured to give a precision fit to the tapered part of the propeller shaft. This eliminates costly, time-consuming verification of the matchmarking procedure by classification society survey when installing the propeller. When dismounting, the precision manufacturing also minimises the risk of the propeller seizing of the shaft, thus reducing the risk of damage to the shaft taper.

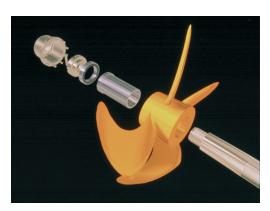
Rapid propeller change

The Kongsberg Maritime SKF propeller's cylindrical bore ensures rapid interchange of operating propeller and spare propeller. Scraping, matchmarking and classification survey of the contact surface are no longer necessary.

A spare sleeve is often enough

In many cases it is possible to replace the spare propeller shaft with a spare sleeve. The operating shaft and the Kongsberg Maritime SKF sleeve are supplied with an inner diameter 4 mm greater than that of the spare sleeve. If the taper of the propeller shaft suffers any damage it can be remachined and used with the spare sleeve





The Kongsberg Maritime SKF propeller sleeve offers cost savings in terms of reduced downtime, maintenance and repairs



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