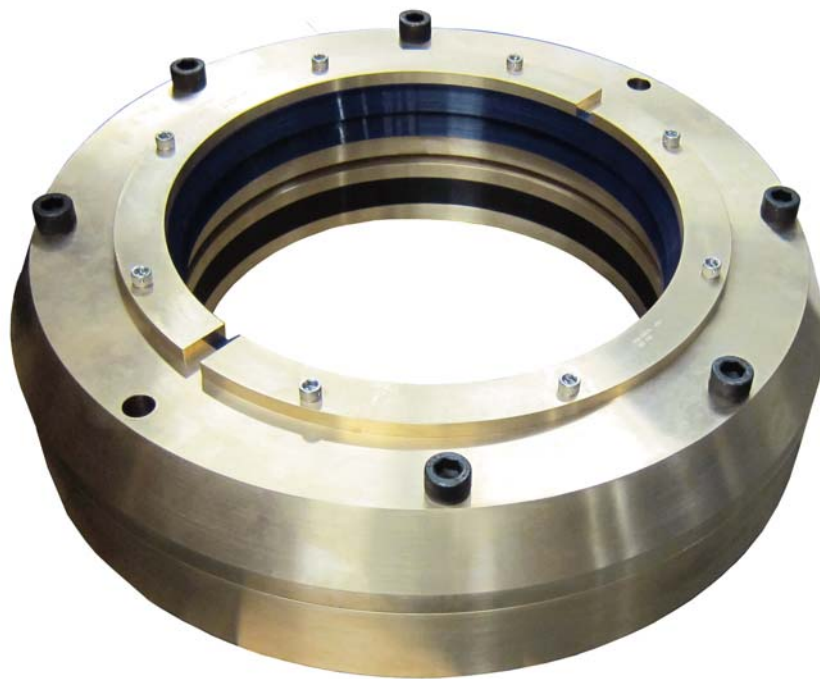


# Thordon Thorseal Rudder Seals

Thorseal rudder seals manufactured by Thordon Bearings Inc. are high performance, self lubricating lip seals designed to be mounted above the rudder bearing to prevent the ingress of sea water into the hull. Manufactured from a tough polymer, Thorseals provide long wear life with no need for periodic adjustments, resist tearing and extrusion and, as a result of built-in lubricants, operate with less drag and reduced cylinder wear.

The Thorseal rudder seal can be easily fitted to rudder shaft diameters ranging from 200mm (8") to 1500mm (60") for both newbuild and replacing multiple lip fabric/rubber seals or conventional packing. Thorseals offer positive sealing over a pressure range of 0 to 100 MPa (15,000 psi). Thorseals are designed with an interference and diametrical shaft movement allowance so that the sealing performance is maintained under the normal operational life of the rudder bearing. Special designs are available for small rudderstocks or where space is restricted. Thorseal rudder seals can also be used with fin stabilizers.



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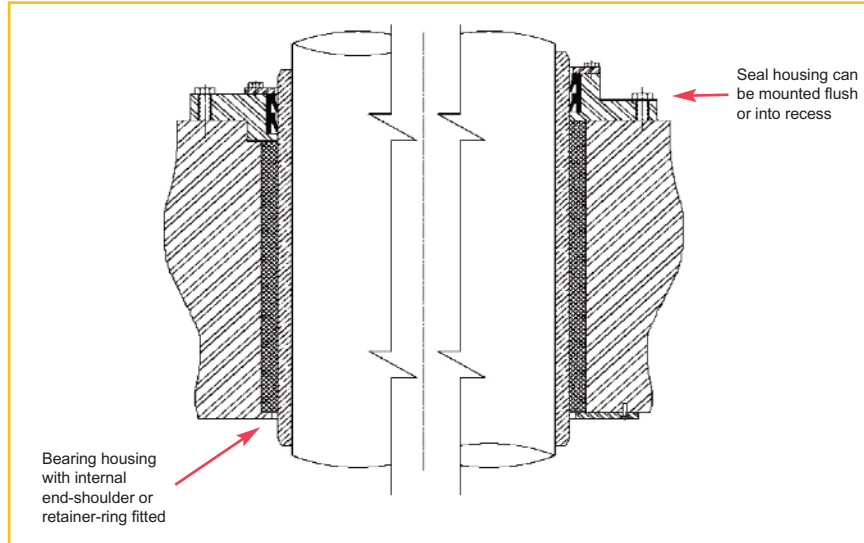
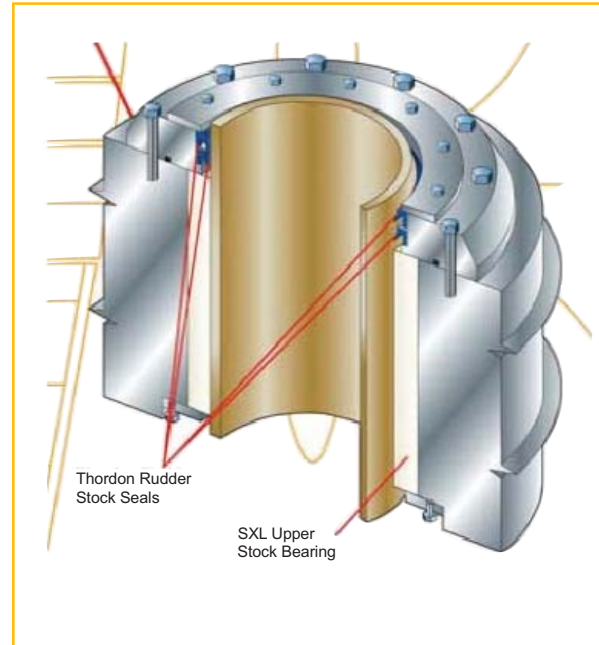
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# Thordon Thorseal Rudder Seals

The sizing and design procedure of Thorseal Rudder Seals is performed internally by Thordon Bearings, who will calculate the required diametrical movement allowance of the rudder shaft as well as the amount of interference at the dynamic seal lip and on the outside diameter of the seal. Thordon engineers will work closely with customers to design Rudder Seals that suit both retrofitting as well as new build installations.

Thorseals are approved by Bureau Veritas while Thordon Bearings is working to obtain other Classification Society approvals.

Thorseals have been fitted to over 200 ships including container ships, cruise ships and rescue vessels.



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