

WÄRTSILÄ

**Sterntube seals**

**MANECRAFT  
SMALL CRAFT SEAL**



# A GENERATION OF PROPELLER SHAFT SEALS

## THE MANECRAFT EM AND EY SMALL CRAFT SEAL

The Manecraft propeller shaft seal is designed specifically to meet the demanding requirements of today's pleasure and commercial craft.

Manecraft incorporates the wealth of experience gained by Wärtsilä, leaders in the development and manufacture of seals for naval and commercial shipping in over 100 nations. Our seals are used on applications as diverse as nuclear submarines and semi-submersible oil platforms to aircraft carriers and super tankers.

## DESIGN FEATURES

### APPLICATIONS

Sealing water lubricated propeller shafts and rudderstocks for the following marine uses; boat building, boat repair, charter fleets, fishing boats, hire craft and owner retrofits.

### SELF ADJUSTING

These seals automatically compensate for face wear, and unlike gland packing, require little or no adjustment.

### NO SHAFT WEAR

The Manecraft seal rotates with the propeller shaft, and therefore cannot cause wear of the shaft surface.

### MAINTENANCE FREE

Once fitted, the seal does not require any routine maintenance other than regular inspection as made in common with other hull fittings below the waterline.

### EMERGENCY SAFETY SEAL WITH TAMPER PROOF TAG

The red tag is designed to prohibit accidental use of the emergency safety seal until required.

- Manecraft keeps your bilges dry and clean
- Manecraft automatically compensates for wear and needs little or no adjustment
- Manecraft has a built in emergency seal for added security and is ABS approved.

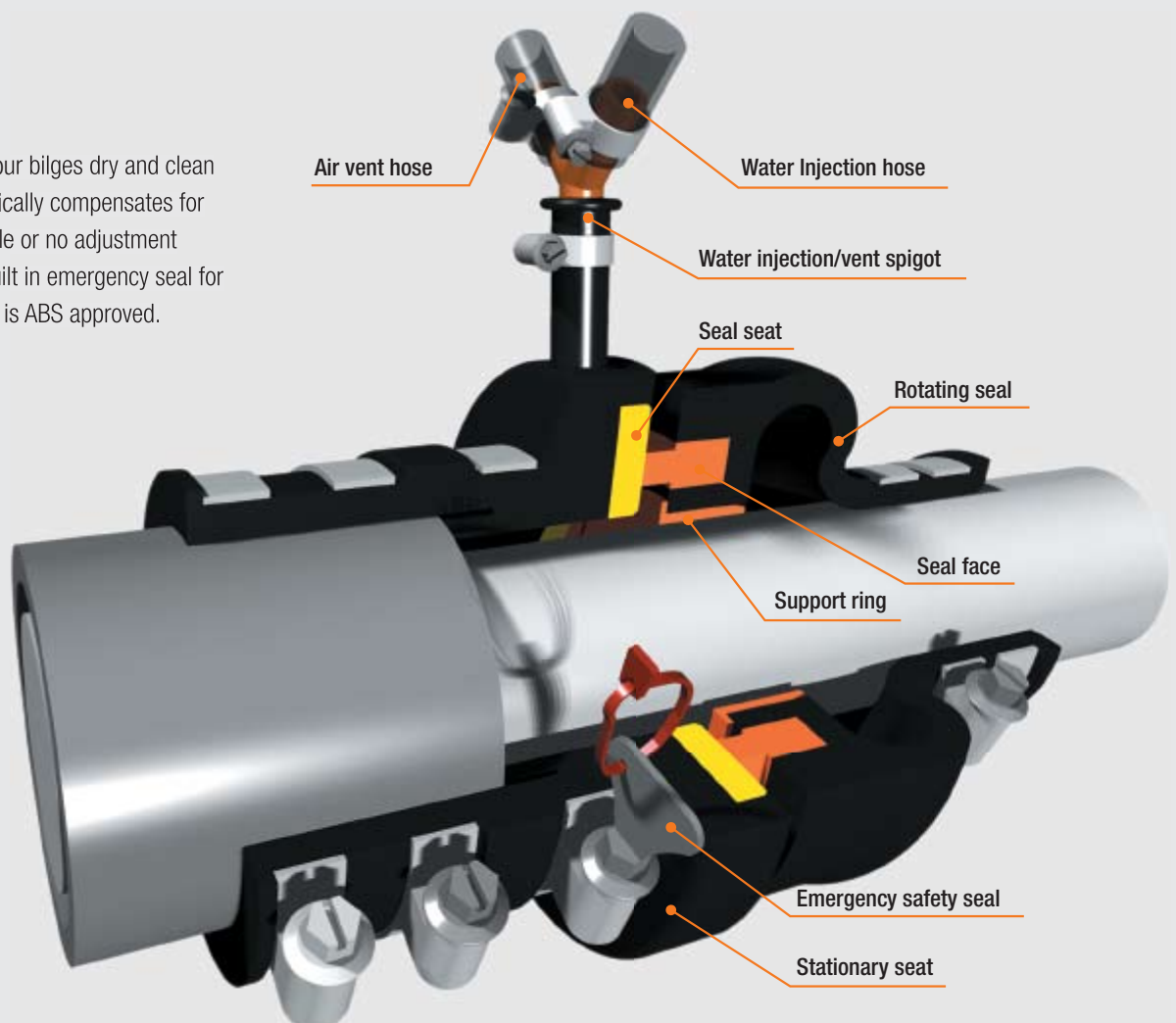
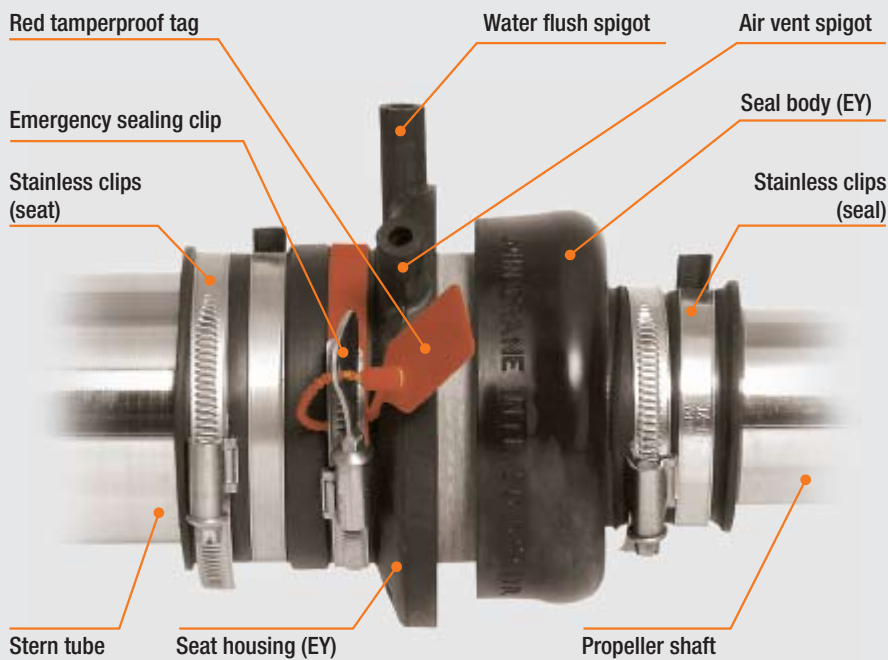


Fig. 1 – EM seal cutaway.



## SIMPLE INSTALLATION, NEWBUILD OR RETRO-FIT

### HOW DOES MANECRAFT WORK?

The Manecraft seal comprises two main components: the stationary seat assembly and the rotating seal assembly, (see Figure 1) both moulded from tough, oil resistant chloroprene. The stationary seat has a solid bronze ring bonded into it and is clamped onto the sterntube with two stainless clips, this part remains stationary. Incorporated into the stationary seat is a red emergency sealing clip. This safety feature is for emergency only and is protected by a tamper proof tag. Under no circumstances should the shaft be rotated whilst this clip is tight.

The rotating seal assembly is clamped onto the shaft whilst being compressed against the seat. As the shaft rotates, so does the seal assembly. The sealing face rotates against the stationary bronze seat, lubricated and cooled by the water inside the seal, and a water flush. An air vent is incorporated in the flush system (see fitting instructions).

The Manecraft seal replaces the conventional gland on the stern tube. The bearing spacing must be determined from the thrust bearing to the 'P' bracket bearing. Please refer to the bearing spacing section for further information.

Manecraft seals are easy to fit and are direct replacements for old style propeller shaft packed glands. They do not require packing, adjusting, or maintaining and cannot wear a groove in the shaft. Following careful installation, all they need is a quick regular inspection in common with sea cocks, hoses, and other hull fittings situated under the water line. On monitored test vessels, Manecraft seals have completed in excess of 10,000 hours of service, or 100,000 sea miles and are still in perfect condition. On most vessels, age will be the deciding factor rather than service hours when renewal is necessary. With the low cost involved, replacement of such an essential component every five years is recommended.

The Manecraft seal is simple to fit. Most vessels are easily converted to Manecraft and while there are many types of stern gland, they generally fall into three styles. Suggestions for conversion are shown below.



### FLEXIBLE STERN GLAND

The old gland is secured to the sterntube by a short length of flexible hose. Simply remove the hose and fit the seal directly to the sterntube.



### RIGID STERN GLAND

Remove the gland follower, reverse and re-attach it using a sealant between the two flange faces. This will provide a short cylindrical propulsion on which to fit the seal.



### THREADED STERN GLAND

Remove the large nuts completely to expose the threaded tube. Fill the threads with a sealant and fit the seat to the tube.

Wärtsilä enhances the business of its customers by providing them with complete lifecycle power solutions. When creating better and environmentally compatible technologies, Wärtsilä focuses on the marine and energy markets with products and solutions as well as services. Through innovative products and services, Wärtsilä sets out to be the most valued business partner of all its customers. This is achieved by the dedication of more than 15,000 professionals manning 130 Wärtsilä locations in close to 70 countries around the world.

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