

*Installatie instructies*  
*Installation instructions*  
*Installationsvorschriften*  
*Instructions d'installation*  
*Instrucciones de instalación*  
*Istruzioni per l'installazione*

**NEDERLANDS**

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**Schroefasafdichting**

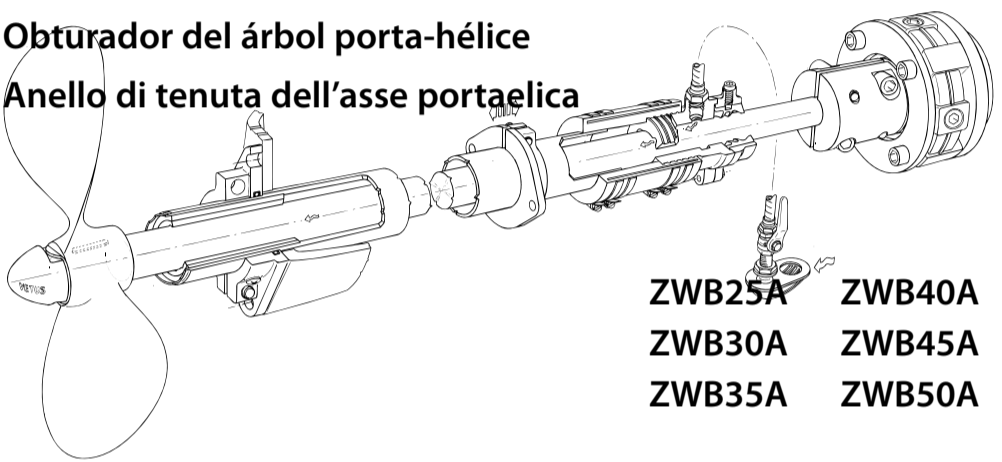
**Propeller Shaft Seal**

**Schraubenwellendichtung**

**Etanchement d'arbre porte-hélice**

**Obturador del árbol porta-hélice**

**Anello di tenuta dell'asse portaelica**



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**Hoofdafmetingen**

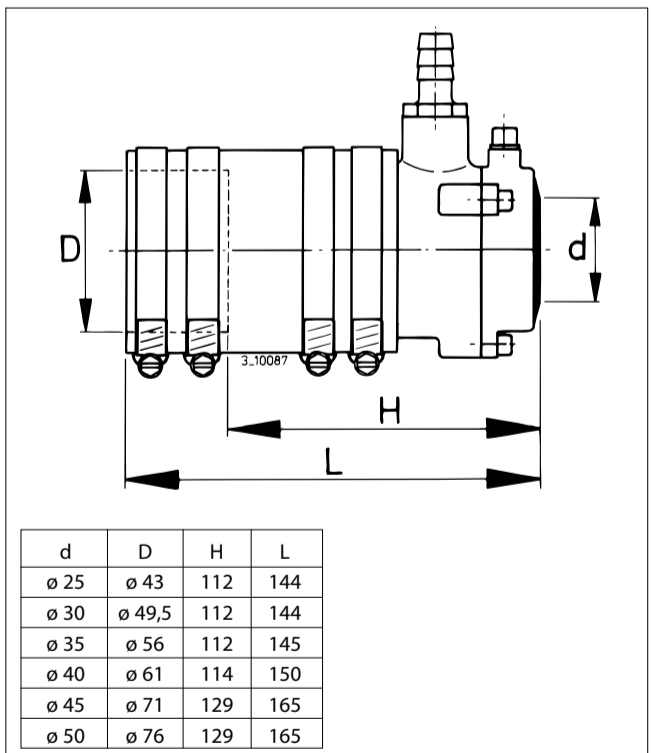
**Overall dimensions**

**Hauptmaße**

**Dimensions principales**

**Dimensiones generales**

**Misure principali**



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## Foreword

This Vetus propeller shaft seal with inner bearing has a **double** shaft casing.

To ensure a complete seal:

- the propeller shaft must have a maximum diameter-tolerance of + 0.0mm / - 0.16 mm
- the shaft must be centred within the casing.

**Align the propeller shaft with the ship engine before putting the seal in place!**

The propeller shaft speed may not exceed the values shown in the table below.

D (in mm)	25	30	35	40	45	50
RPM	2700	2500	2300	2150	2000	1900

## Installation

N.B. The numbers refer to the numbers in the drawings.

### General

**1** The end of the shaft casing where the rubber sleeve is placed must be free of burrs, grease, and must be clean. The free length of the tube must be the same as, or longer than, dimension A shown in the Table.

The shaft must be free of scratches, burrs, and must be clean, especially where the shaft touches the floating bearing and seal. The end of the shaft or the key way or holes which may be present must also be free of burrs. The free length of the shaft must be the same as, or longer than, dimension B shown in the Table.

Ensure that the shaft has been placed in the casing.

### Lubrication

The shaft and if applicable, the rubber **outer bearing**, gets cooled and lubricated by external water. **It is therefore necessary that sufficient external water is supplied whenever the shaft is in operation.**

The minimum amount of water required is:

- Propeller shaft diameter 25 mm: 20 litres/hour
- Propeller shaft diameter 30 mm: 30 litres/hour
- Propeller shaft diameter 35 mm: 35 litres/hour
- Propeller shaft diameter 40 mm: 45 litres/hour
- Propeller shaft diameter 45 mm: 60 litres/hour
- Propeller shaft diameter 50 mm: 70 litres/hour

**2** The required external water can be supplied with a tap from the engine's external water cooling system.

**3** If an air vent is present (where the water injection point is either under or less than 15cm above the waterline) then **tap the engine's external water cooling system between the external water pump and the air vent** and not between the air vent and the water injection point.

**4** External water may also be supplied by a separate water scoop with a seal:

- Propeller shaft diameter 25/30/35 mm: min. G 3/8
- Propeller shaft diameter 40/45/50 mm: min. G 1/2

Place the water scoop with its intake grooves sufficiently in front so that enough water flows in and it does not interfere with the propeller water.

The shaft seal may be installed either under or above the waterline. If it is placed **above the waterline** it must, in order to ensure adequate supply of water, be connected as shown in drawing 2.

**5** In addition to lubrication by external water, the seal must also be lubricated with grease between the seal lips.

### Final Assembly

**6** Fit the rubber sleeve with the 4 hose clips over the prop shaft casing.

- Propeller shaft diameter 25/30 mm: The inner side of the opening has to touch the end of the casing.
- Propeller shaft diameter 35/40/45/50 mm: Do not slide the rubber sleeve further up the shaft than dimension C in the Table.

**7** Grease the shaft where it will be enclosed by the floating bearing and the shaft seal. Grease the rims of the shaft seal.

Only use the grease supplied. Any other lubricants could damage the shaft seal, the sleeve, or the rubber bearing.

**8** Fit the inner bearing on the propeller shaft and slide it into the sleeve. Tighten the hose clamps (4 to 5 Nm torque).

**9** Stick a piece of adhesive strip 'A' over the keyway. This will prevent the shaft seal being damaged when fitted on the shaft.

**Damage to the seal edges will lead to leaks!** Grease the seal lips. Fit the shaft seal on the propeller shaft. Ensure that the O-ring is properly in place and secure the shaft seal with 3 screws (10 Nm torque).

**10A** Remove the screw with the washer and fill about 50% of the forward space with grease (approx. 1 cm<sup>3</sup>). **Use only** the grease supplied! Replace the screw and the washer, tighten it to about 5 Nm.

**B** Attach the hose connection tube to the bearing casing using a liquid sealant.

**N.B. Do not use Teflon tape!**

**11** Connect the hose connection tube (water intake) using a piece of hose, inner dia-meter 10mm (ø 25, ø 30, ø 35 mm) resp. 12 mm (ø 40, ø 45, ø 50 mm), to the water supply. Each connection must be attached by 2 stainless steel hose clips.

## After launching

Check the following for leakage immediately: the shaft seal, the rubber sleeve connections, and all the hose connections.

It may be necessary to bleed the assembly first. Disconnect the hose from the inner bearing until water flows out.

Always open the cap (after the water scoop) before casting off.

Check the shaft seal for leaks and its temperature while cruising. An excessively high temperature indicates insufficient water for lubrication and cooling!

## Maintenance

The following maintenance must be performed after every 200 hours of operation or once a year while the ship is on dry dock:

- Loosen the bolts which attach the shaft seal to the inner bearing.
- Clean the surface of the deal rims where it touches the shaft so that it is free of grease, dirt and residue.
- Check whether the rim of the seal is not visibly damaged, and replace the shaft seal if it is. Article code for replacement:
  - 'ZWB25RESA' for ø 25 mm propeller shaft
  - 'ZWB30RESA' for ø 30 mm propeller shaft
  - 'ZWB35RESA' for ø 35 mm propeller shaft
  - 'ZWB40RESA' for ø 40 mm propeller shaft
  - 'ZWB45RESA' for ø 45 mm propeller shaft
  - 'ZWB50RESA' for ø 50 mm propeller shaft
- Lubricate the shaft and the exposed seal rim.
- Reattach the shaft seal onto the inner bearing, tightening the bolts to about 10 Nm.
- Fill the seal with clean grease, refer to Installation, point 10 B.
- Check the shaft seal and all connections for leakage immediately after launching.

