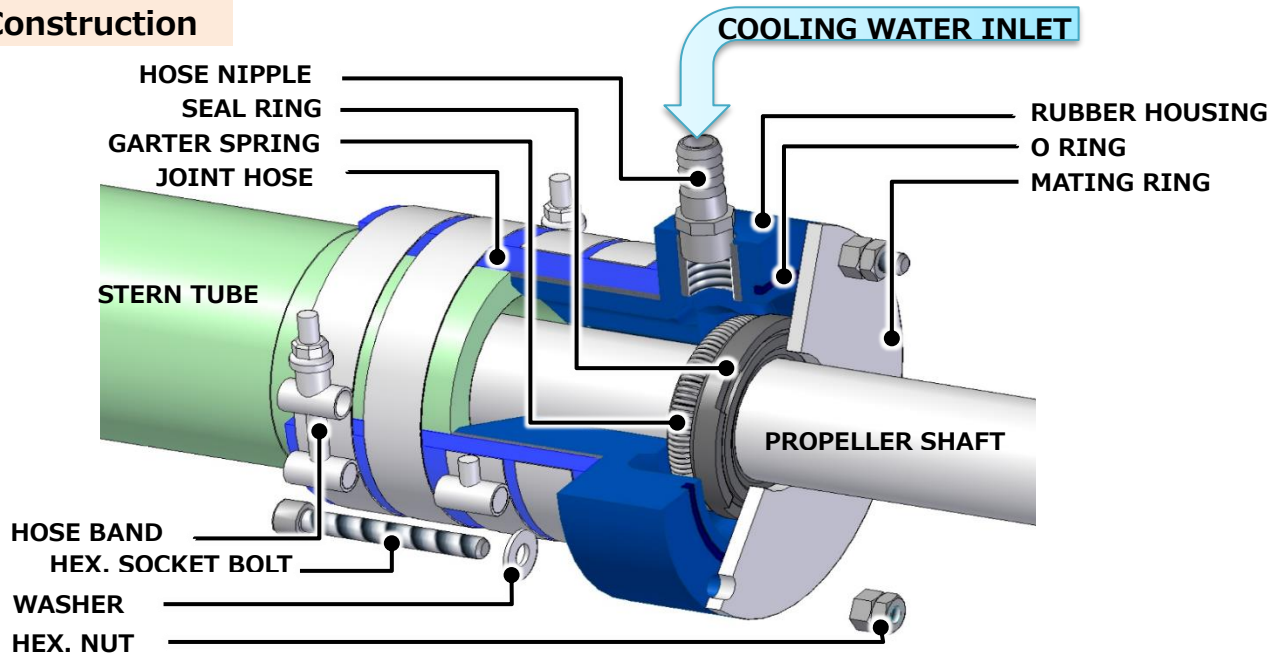


MAS

Marine Ace Seal

We are the leading manufacturer of stern tube shaft sealing devices worldwide with our products installed on over 30,000 100 gross tonnages or more. The Marine Ace Seal (MAS) is our newly developed water-lubricated stern seal for small vessels with direct drive systems.

Construction



Features

➤ **Excellent vibration resistance and sealing performance**

Due to an end-face seal structure consisting of a rubber sealing ring and a stainless steel mating ring, it is able to follow complex shaft vibration and displacements thereby demonstrating an excellent sealing performance.

➤ **Excellent followability in the axial direction**

As sealing is achieved by the seal ring rotating at the same speed as the shaft and its face structure making contact against the stationary mating ring as a stopper, it is able to absorb all axial movement.

➤ **Simple and robust rubber housing design**

The inner diameter of the housing is designed to the same high standard as a rubber bearing so its contact with the shaft is lowered. As the sealing area is not exposed externally as is the case with a mechanical seal, it is able to withstand 'mechanical shock' to a high degree.

➤ **Easy to install**

The installation space is compact with the structure requiring only the cooling water hose to be supplied. The structure is fixed to the stern tube by means of two hose bands making it simple to install.

➤ **Excellent slurry resistance**

The seal can be expected to have a long life even under dirty water conditions with a high degree of sediment as found in shallow water and rivers.

Design Outline

✓ **Shaft Range** : $\phi 45 \sim \phi 85$ (5mm increment), 2"~3" (0,5"increment)

✓ **Allowable PV Value** : 0.3 MPa·m/sec P (Pressure in sealing device) : Max. 0.1 MPa
V (Shaft rotation speed)

✓ **Required amount of cooling water** : Min. 3 Litter/min

✓ **Temperature of cooling water** : 0~40°C

MAS

Marine Ace Seal

Standard dimension

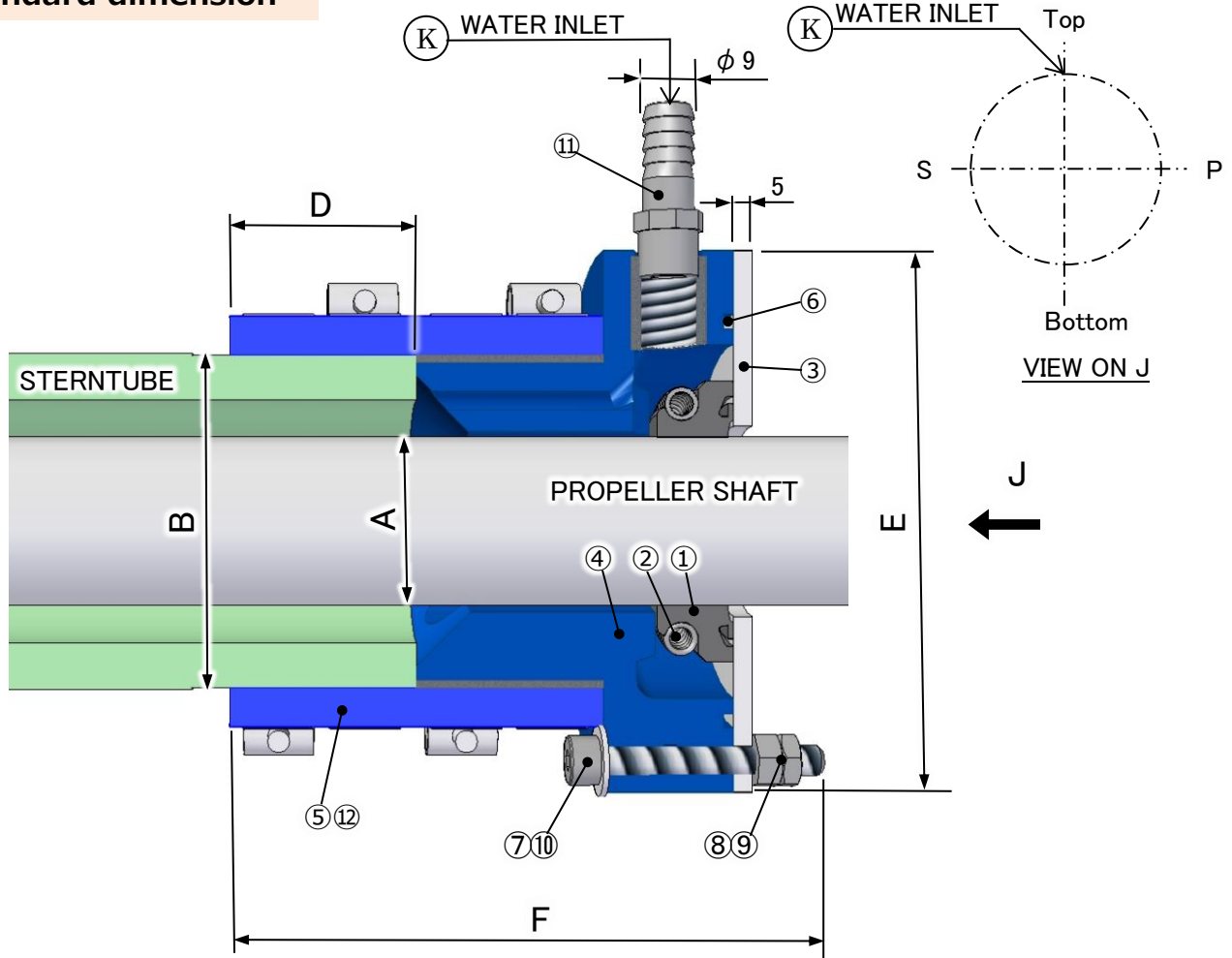


Fig1. Standard Dimensions

Fig2. Components & Materials

Shaft Dia. (mm) A	MAS Type Number	Stern Tube O.D. (mm) B	Conn. Len. (mm) D	MAS O.D. (mm) E	MAS Len. (mm) F	O Ring Size (mm) G	Mass. (kg) H
45	MAS045	89.1	50	150	170	3.5X104	2.7
50	MAS050						
50.8 (2")	MAS051						
55	MAS055	101.6	60	165	180	3.5X117	3.2
60	MAS060						
65	MAS065						
70	MAS070	114.3	70	180	190	3.5X127	3.7
63.5 (2.5")	MAS063						
75	MAS075						
80	MAS080	127	80	195	220	3.5X152	5.0
85	MAS085						
76.2 (3")	MAS076						

No.	Part Name	Material	Qty.	Remarks
1	Seal ring	Rubber NBR	1	
2	Garter spring	Stainless steel	1	
3	Mating ring	Stainless steel	1	
4	Rubber housing	Rubber IR	1	
5	Joint hose	Rubber CR	1	
6	O ring	Rubber NBR	1	[See G]
7	Hex. Socket bolt	Stainless steel	4	M8
8	Hex. nut	Stainless steel	4	M8
9	Hex. nut	Stainless steel	4	M8x60(70)
10	Plain washer	Stainless steel	4	
11	Hose nipple	Stainless steel	1	PT3/8
12	Hose band	Stainless steel	4	

※The value in the parentheses indicates over 75mm shaft dia.

*1 MAS051/MAS063/MAS076 are for inch shafts

*2 Please note that other non-standard size can be manufactured upon request.