

TIDESMARINE

Rudder Seals – TYPE I (no bearing)



Note:

This product is a seal only. It provides no bearing support for the rudder. It is generally more economical to eliminate the dual cost of a rudder port and this seal by using one of our other sealed bearing systems, such as a Type C, Type D or Tube System.

Tides Marine Type I Rudder Seals are retrofit units which are designed to replace hose mounted rudder stuffing boxes. They are connected to the existing bronze rudder port with a flexible hose which aligns the unit with the rudder stock. The assembly consists of a one-piece UHMW housing and a nitrile lip seal. The Type I will slightly increase the overall height of the rudder port assembly.

These 100% watertight units provide quieter, smoother operation. A pre-cut length of soft-wall hose (purchased separately) must be used with each Type I Rudder Seal for warranty coverage to apply.



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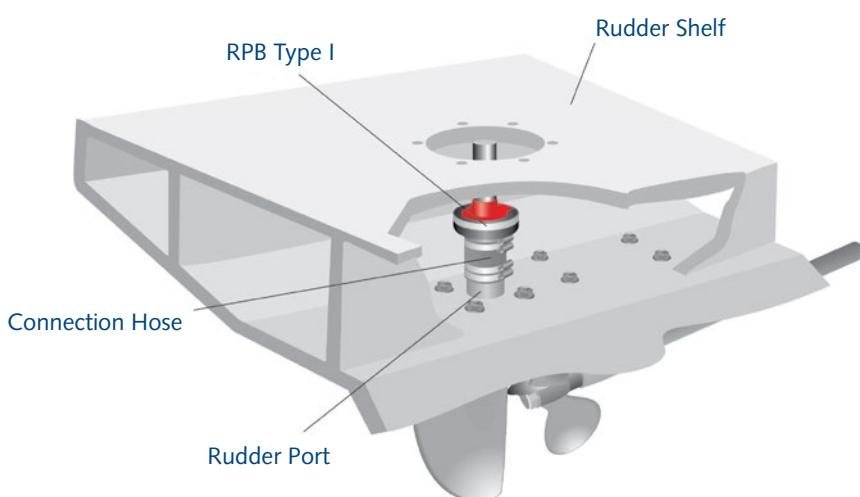
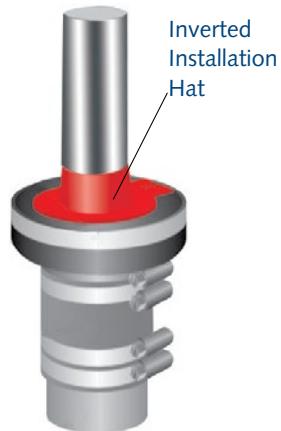
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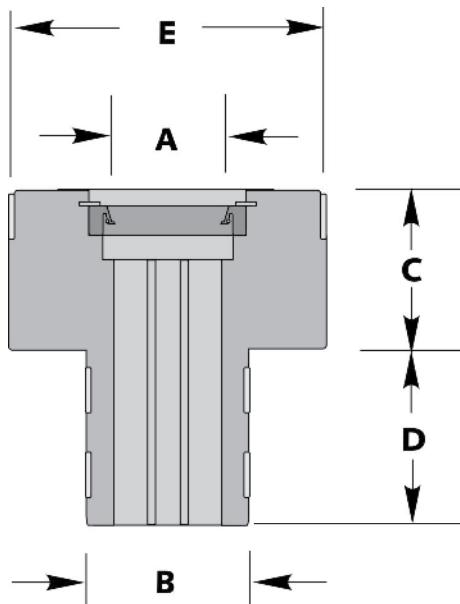
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Installation Overview

1. Inspect that area of the rudder stock where the lip seal will rest and confirm that there is clean, smooth stock available to accept the lip seal. See note in item #7 for approximate installed length.
2. Block the rudder into position and disconnect the steering arm and rudder collar.
3. Remove the blocking and carefully lower the rudder so that the rudder stock is beneath the upper rudder bearing. Confirm that there is sufficient clearance between the end of the stock and the underside of the shelf to add the Type-I assembly, the hose and hose clamps.
4. Remove the old stuffing box, hose and clamps.
5. Inspect the upper end of the rudder stock. Remove any burrs, nicks or sharp edges which might damage the lip seal during installation or operation.
6. Insert the red installation hat all the way into the top of the Type-I to cover the thin sealing edge of the lip seal.
7. Determine the length of hose needed to complete the installation and cut squarely to length. Note: There should be no less than 1" of space between the bottom of the unit and the top of the existing rudder after the Type-I is installed.
8. Connect the hose to the Type-I assembly and add two hose clamps.
9. Slide the rudder stock up through the port. Place the remaining two hose clamps onto the barrel of the port.
10. Slide the assembly down the stock and over the rudder port. Secure with hose clamps.
11. Jack the rudder back into position (passing through the upper rudder bearing) and block in place.
12. Reconnect the steering arm and rudder collar.

NOTE: Before installing the rudder, insert the red installation hat into the lip seal. When rudder is in place, remove, invert, and replace it on top of the Type-I unit to keep debris off the lip seal during use.



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To determine which part to order, measure the exact diameter of the rudder stock (.000") and the O.D. of the bronze rudder port to which the unit will be connected. Note your combination of rudder stock diameter and rudder port O.D. in the table below. Confirm that there is sufficient space to accommodate the flange height and the barrel height plus 1" of space between the Type I unit and the rudder port. Finally, confirm that there is clearance for the O.D. of the Type I assembly.

If your installation does not fit within the parameters noted below, please call Tides Marine to request a custom Type I.

Type I**Specifications** (dimensions in inches)

RUDDER STOCK OD	MINIMUM HOSE ID	FLANGE HEIGHT	BARREL LENGTH	FLANGE DIAMETER	PART NUMBER
A	B	C	D	E	
1	1 3/4	1 1/2	1 1/2	2 1/2	RPB-I-1000-(Hose ID)
1 1/4	2	1 1/2	2	3	RPB-I-1250-(Hose ID)
1 1/2	2 1/4	1 1/2	2	4	RPB-I-1500-(Hose ID)
1 3/4	2 1/2	2	2	4	RPB-I-1750-(Hose ID)
2	3	2	2	4	RPB-I-2000-(Hose ID)
2 1/4	3	2	2	4 1/2	RPB-I-2250-(Hose ID)
2 1/2	3 1/4	2	2	4 1/2	RPB-I-2500-(Hose ID)
2 3/4	3 1/2	2 1/2	2	5	RPB-I-2750-(Hose ID)
3	4	2	2 1/2	5	RPB-I-3000-(Hose ID)



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