

Rudder Port Bearings - With Seals

Type D

PRODUCT OVERVIEW



The Tides Marine Type D rudder port is an integrated approach to rudder port installation. It was developed for both the FRP boat builder and for retrofits.

Unlike conventional post layup rudder port installations, the FRP receiver (Liner) for the Type D rudder port can be incorporated into the primary hull lamination, resulting in an assembly stronger than any bronze rudder port. Tides Marine can supply mold tooling for this purpose.

The Type D system is also easy to use as a retrofit for replacing other types of conventional rudder ports. No tooling is required.

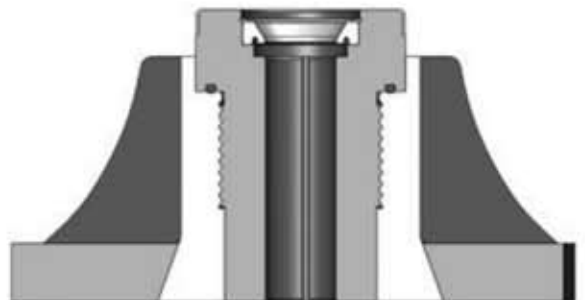
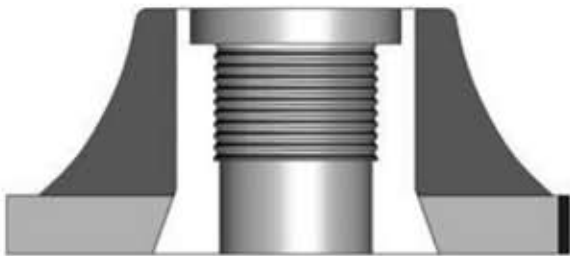
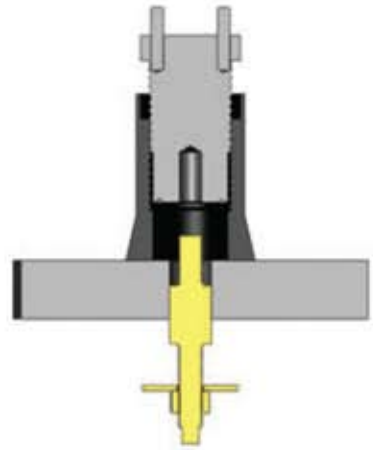
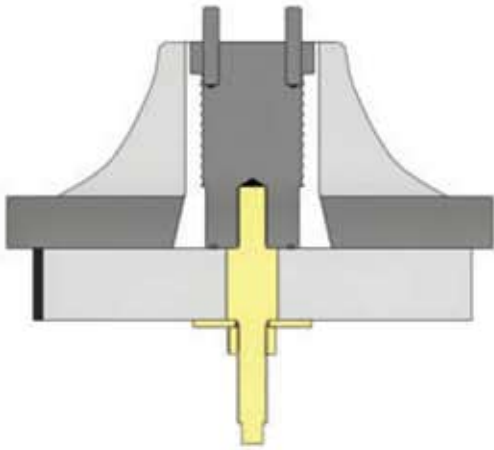
One reason many boat builders are changing to the Type D system is the significant labor savings associated with this approach. To accommodate various conventional rudder ports currently available, builders have to perform a variety of post-lay-up operations on each hull being produced. These include: building up / leveling mounting blocks, locating the correct position and axis for the rudder stock hole, aligning and drilling pilot holes and subsequent thru-holes, checking and adjusting for misalignment which may have occurred along the way and, finally, locating and drilling the mounting holes for the conventional port unit. These operations require special jigs and fixtures, several skilled workers, numerous tools and significant man hours to complete.

With the Type D product, post lay-up operations that once required hours of skilled labor are eliminated.

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NEW CONSTRUCTION – COMPONENT OVERVIEW

The Tides Marine Type D system components include a FRP liner, a re-useable alignment plug and fastener assembly and the Type D bearing and seal.

Molded from FRP and compatible with polyester, vinylester and epoxy systems, each Type D liner has an internal thread to accept its corresponding rudder bearing and seal.

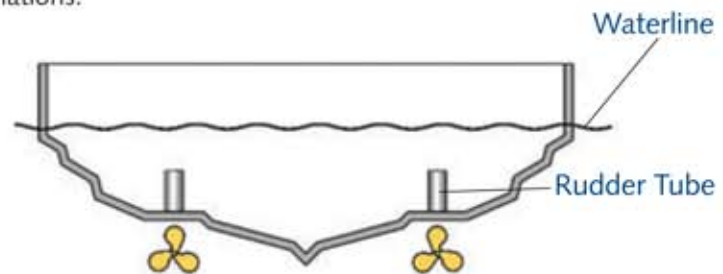
The plug and fastener assembly consists of a machined UHMW body with either a threaded rod or bolt (depending upon the application) for attaching it to the hull mold.

The Type D rudder bearing and seal assembly consists of a one-piece UHMW housing with a nitrile lip seal. The UHMW bearing eliminates metal-to-metal contact and associated problems of abrasion, electrolysis and corrosion. They are 100% watertight. Their performance characteristics match those of other Tides Marine rudder ports in that they are quiet, smooth and vibration free.

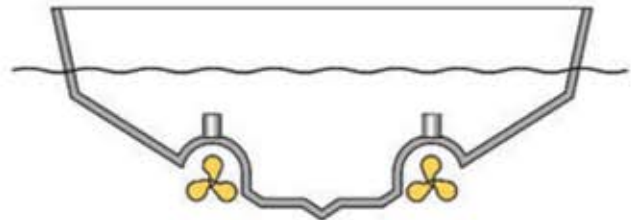
MOLD INSTALLATION TYPES

The procedure for modifying the mold and installing the liner prior to lay-up differs according to the type of hull being produced. The following are three of the most common variations.

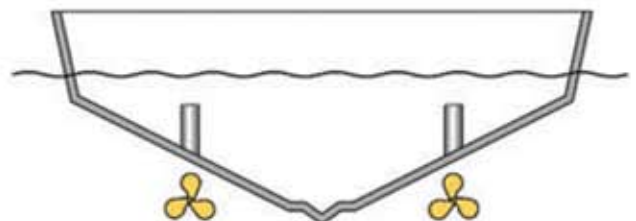
Type 1: Molds with an existing “flat” at the rudder port location. This installation will use the standard flange-type liner.



Type 2: Molds which require modification to achieve a “flat” surface or pocket for mounting a standard flange-type liner.



Type 3: Molds which require modification to accept an angled liner to match dead rise and rocker angles.

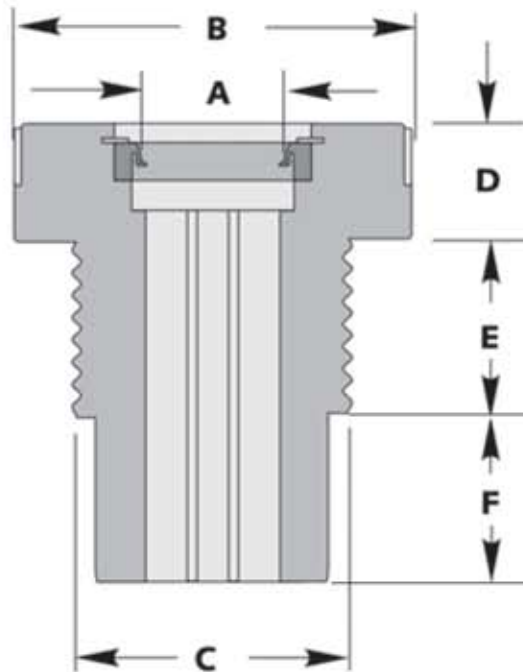


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BEFORE ORDERING

To determine which Type D to order, all you need is the exact diameter of your rudder stock (.000"). Assembly specifications are detailed in the table below. Confirm clearances and determine what, if any, mold modifications will be necessary. Please contact Tides Marine to discuss your installation parameters before placing your order.



Type D

Specifications (dimensions in inches)

RUDDER STOCK OD	FLANGE DIAMETER	THREAD DIAMETER	FLANGE HEIGHT	THREAD LENGTH	BASE LENGTH	PART NUMBER
A	B	C	D	E	F	
1	3	2 1/2	1 1/2	2 11/16	1 9/16	RPB-D-1000
1 1/4	3	2 1/2	1 1/2	2 11/16	1 9/16	RPB-D-1250
1 3/8	3	2 1/2	1 1/2	2 11/16	1 9/16	RPB-D-1375
1 1/2	4	3 1/4	1 1/2	2 15/32	1 13/16	RPB-D-1500
1 3/4	4	3 1/4	1 1/2	2 15/32	1 13/16	RPB-D-1750
2	4 1/2	3 1/2	1 3/4	2 15/32	2 1/16	RPB-D-2000
2 1/4	4 1/2	3 1/2	1 3/4	2 15/32	2 1/16	RPB-D-2250
2 1/2	5	4 1/4	1 3/4	2 15/32	2 9/16	RPB-D-2500
2 3/4	5	4 1/4	1 3/4	2 15/32	2 9/16	RPB-D-2750
3	6	5 1/4	1 1/2	2 15/16	2 13/16	RPB-D-3000
3 1/2	6	5 1/4	1 1/2	2 15/16	2 13/16	RPB-D-3500

If you are replacing a standard part (ex: RPB-D-1000), please specify its size/configurations when ordering because there are numerous variations for the same shaft size. You may not have the standard model.