

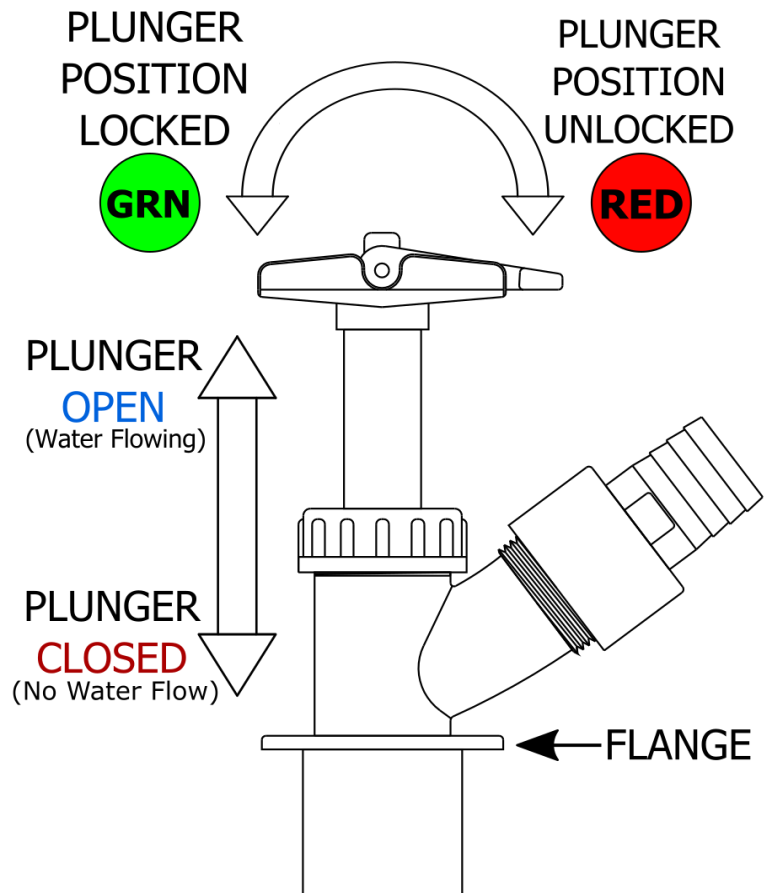


Flowtech™ Flush-Mount Valve Instructions

#905106 #905109

FORESPAR® FLOWTECH™ VALVES - THE RACER'S CHOICE FOR STREAMLINED FLUSH MOUNTED INTAKE VALVES

Congratulations on your choice of Forespar®'s Flowtech™ flush mounted valve system. Made of Marelton, an extremely strong, marine-grade polymer composite, our Flowtech™ valves are built to last the lifetime of your boat and have been in use by performance-conscious power, sail, and racing boat owners for over two decades. This instruction sheet will show you how to use and maintain your Flowtech™ valves, as well as properly install them to ensure a smooth, hydrodynamic hull finish.



USAGE

Flowtech™ valves operate by moving a plunger up or down through a two-step process. This unique design allows water to flow freely into your boat when the plunger is in the upwards position, while creating a perfectly smooth hull surface when it is down and locked position. A pair of O-rings are used to create a watertight seal when the plunger is in the closed and locked position.

Step one: To unlock the valve, simply flip the valve handle up and over so the red dot is facing upwards.

Step two: You can then pull the plunger up and away from the hull to allow water through the valve, or push the plunger downwards towards the hull to close the valve. After setting your valve's position, be sure to lock the plunger by flipping the valve handle over so that the green dot is facing upwards. The valve should always be left locked whether it is in the open or closed position, so that the plunger cannot change positions unexpectedly.

INSTALLATION

FORESPAR®

22322 GILBERTO RANCHO SANTA MARGARITA, CA 92688

Ph: 949-858-8820 Fax: 949-858-0505

STS@forespar.com www.forespar.com

Focused care and preparation should be given before installation of a Flowtech™ valve to ensure a safe and smooth assembly. **(See advisory disclaimer below.)** This installation should ideally be undertaken by a qualified professional installer, or certified marine technician who is very familiar with boat plumbing repair.

First, determine the location of your Flowtech™ valve and make sure that there will be ample space for its full operation and for routing your hosing and lines. Drill a 1-7/8" (48mm) hole through the hull in a reasonably flat internal surface. Make sure that the hull in this section is at least 5/8" thick to provide proper support for the valve. If the hull is not thick enough, you will want to create a backing block on the inside of the hull. This block can be made with a plank of strong waterproofed plywood, then covered with at least two layers of laminated fiberglass cloth and a resin suitable for your hull. If you have a multilayer or cored hull, make sure that you thoroughly apply resin to the inside of the hull hole to isolate the core from any possible water intrusion.

When you are ready to begin the installation, be sure the valve is closed and locked and the surfaces to be bonded are clean and free of any contaminants. Wipe the bonding surfaces with acetone or another strong non-petroleum cleaner. Be sure to give time for all acetone to fully evaporate before continuing the installation, as it could damage the O-rings. To install the valve to the inside of the hull, you will need a thick resin compound or marine sealant to fill gaps and bond the valve to the hull. You can prepare a thick resin compound by using Cabosil or a similar thickening material and combining it with a resin, polyester, vinylester or epoxy that is suitable for your hull. Spread this resin compound thoroughly around all areas where the thru hull and hull will be contacting. Be sure to work the compound well into the inside surfaces of the hull hole and into the outside ribs of the valve. Insert the valve into the hole and make sure that at least a small amount of the resin compound squeezes out from under the flange of the valve body. Do not press the valve against the hull hard enough to flex the flange as this could result in voids in the resin compound being created under the flange.

Once the initial installation is thoroughly hardened and dried, the flange of the valve needs to be bonded to the inside of the hull. Cut at least three sections of 17 oz. or similar woven fiberglass into circles to fit around the base of the valve protruding through the hull. Make sure each successive layer of glass fiber is slightly larger in diameter than the previous one until the final lamination extends a minimum of 3" beyond the edge of the valve flange. Cut 1-7/8" circular holes in the middle of each so that they can form a 'skirt' around the base of the valve. Laminate the fiberglass in a concentric pattern around the base of the valve with the smallest circle being laminated first.

When all resins are cured, the portion of the valve that extends beyond the outer hull surface must be cut down to create a smooth surface. You may want to lay some sturdy tape down to protect the hull, then make sure the valve is down and locked and saw off the bulk of the protruding valve with a hacksaw or cutting disc. The remainder of the excess can be ground smooth to the hull with an angle grinder or similar tool. Once you are satisfied with the shape and smoothness, you can re-paint and coat the area in the same manner as the rest of the hull. You can paint the bottom of the plunger in the

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down position so it matches the rest of the hull, just be careful not to apply too much paint around the plunger so that the plunger can still break loose when dry.

MAINTENANCE

Operate valve(s) regularly. Operation draws lubricant around shaft seals. Lack of use or drying out will make the piston stiff.

IMPORTANT:

- Use **ONLY** silicone grease or Marelube
- Lubricate the shaft only
- Do **NOT** use aerosols, petroleum based lubricants, or WD-40 as these will damage the O-rings.
- Do **NOT** lubricate the O-rings

If needed, replacement piston kits are available (Part # 905107 For MK-1, part # 905112 for MK-II).

Disclaimer of Installation Instructions

This disclaimer makes sure the purchaser and user understand that these instructions are intended as general guidance only and that each situation will be unique and that these instructions are not a substitute for installation by a qualified marine professional.

Please note that improper installation techniques may adversely affect both safety and product operation and the watertight condition of the installation. For this reason, Forespar Products Corp. strongly recommends that our products are installed by a qualified marine professional.

These instructions are based on industry accepted best practices. However, those who use them have the responsibility to apply them correctly in the appropriate situations. Forespar Products Corp. accepts no responsibility for any noncompliant installations of our products and reserves the right to void the warranties of improperly installed products.

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