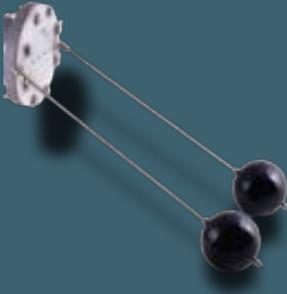
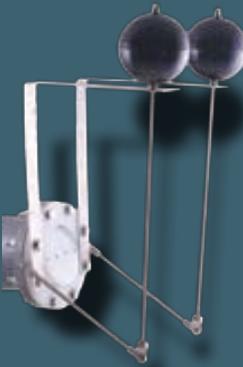


# MODULATING FLOAT VALVES for Aquatic Applications

Fluidtrol Modulating Float Valves come standard with two butyrate float balls, polypropylene valve construction with stainless brackets and hardware. They operate at 20% Open to 80% Open Range and are designed particularly for aquatic surge tanks.

<b>Horizontal</b>	Flange Size	Part Number
	Inches	
	3	MFV-H030HDF
	4	MFV-H040HDF
	6	MFV-H060HDF
	8	MFV-H080HDF
	10	MFV-H100HDF
	12	MFV-H120HDF
	14	MFV-H140HDF
	16	MFV-H160HDF

<b>Vertical</b>	Flange Size	Part Number
	Inches	
	3	MFV-V030H-VF
	4	MFV-V040H-VF
	6	MFV-V060H-VF
	8	MFV-V080H-VF
	10	MFV-V100H-VF
	12	MFV-V120H-VF
	14	MFV-V140H-VF
	16	MFV-V160H-VF

## SPECIFICATION FOR POLYPROPYLENE MODULATING FLOAT VALVES

**1.0 SCOPE** THIS SPECIFICATION COVERS REQUIREMENTS FOR MODULATING TYPE FLOAT VALVES, INTENDED FOR USE IN AQUATIC SYSTEMS WHERE SELF-REGULATING FLOW IS REQUIRED. MAXIMUM RESISTANCE TO CORROSION AND FREE MOVEMENT ARE ESSENTIAL PROPERTIES.

### 2.0 VALVE DESIGN: HORIZONTAL FLOATS or VERTICAL FLOATS

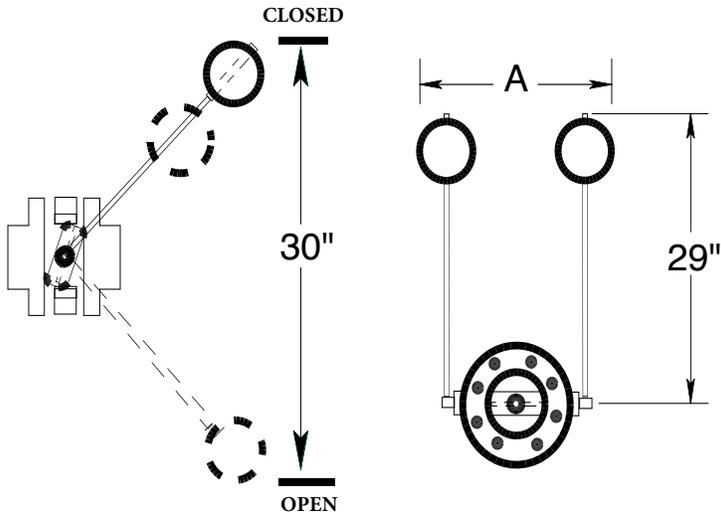
- 2.1 The Horizontal Modulating Float Valve will be designed to be used for horizontal pipe lines below tank water level and will have a working range of no less than 30". The Vertical Modulating Float Valve will be designed for use on a Horizontal Pipe Line and will have a working range of no less than 18".
- 2.2 Two 8" diameter butyrate floats shall be supported on ½ " diameter 304 SS rods- ball position on the rod is fully adjustable within working range of the valve.
- 2.3 The valve shall be 80% closed when the floats are in maximum vertical position and shall be 80% open when floats are in bottom position.

### 3.0 CONSTRUCTION

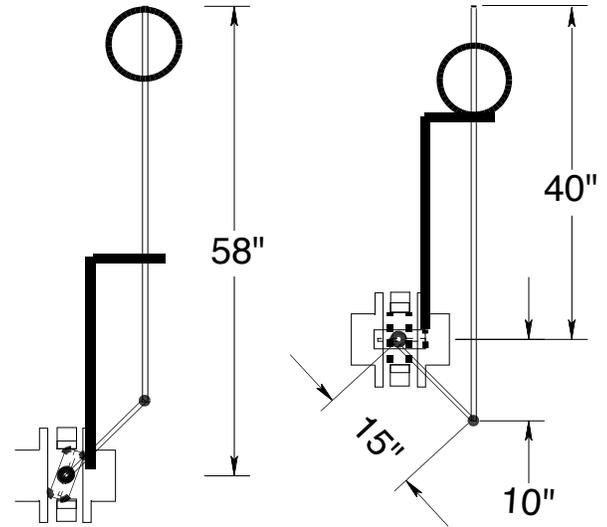
- 3.1 The valve shall consist of a stress-relieved polypropylene body with a solid polypropylene disc. Body bolt holes and flange dimensions shall conform to ANSI B 16.5, Class 150 Flanges machined to a tolerance of 0.01". Valve thickness shall be 1" minimum (1" up to 10" is standard, 1.5" thick PP material is used for 12"-24" Sizes).
- 3.2 Disc shaft shall be 1/2" diameter 304 SS mounted by stainless screws, flat washers, lock washers and nuts.
- 3.3 All valve hardware (minus flange bolts) for attachment of float assemblies shall be included and shall be 304 SS.

### 4.0) GENERAL

- 4.1 Valve assemblies shall be as manufactured by Fluidtrol Process Technologies, Inc.



**Horizontal Valves** are designed for operating at the inlet elevation- plus/minus 15"- Resulting in a 30" Operation Range. Tighter operation range can be achieved by using supplied collar stops to affix the float closer to the valve.



**Vertical Valves** are designed for controlling water level above the inlet elevation. Floats can be affixed onto vertical rod for adjustability. Standard maximum tank level is 50" above the valve with minimum level 16" - 20", depending on valve size.

Fluidtrol Valve Bodies for the Horizontal and Vertical units are identical and it is the hardware that differentiates the difference between the two types. The "A" Dimension (width of float outside to outside) are the same between the two style valves.

**Horizontal Valves** include Bracket Stops that bolt to valve body and control operating range of the float arm rods at 45 degrees upwards and downwards.

**Vertical Valves** include the Vertical L Bracket and elbowed float arms. Valve full open/close are still at 45 degrees.

Minimum Tank Levels (Float can be adjusted to be full open) is as follows:

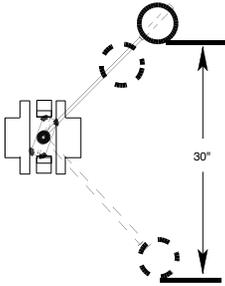
- 6" Valves and Smaller = 15.5"
- 8" Valves and Larger = 22.5"

Valve Size	Width of Valve Floats A Dimension
3	16.5"
4	18"
6	20"
8	22"
10	25"
12	28"
14	30"
16	32.5"
18	34"

Larger Sizes - Please Inquire



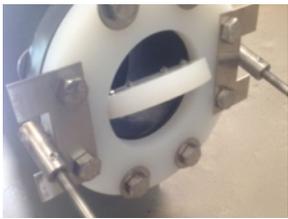
## Horizontal Float Valve Installation Guide



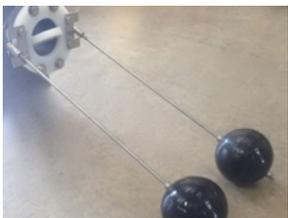
The Horizontal Float valve is designed for water level control above and below the surge tank inlet flange and is traditionally used to modulate the flow of main drain water based on surge tank water level. Maximum operating range is 30", so 15" above and below the valve would be standard, but this can be adjusted by sliding the floats down the rods to reduce this range if required.



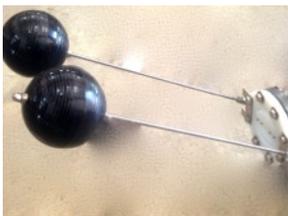
Fluidtrol's Horizontal Float Valve should be assembled as shown to the left. The C-Bracket is made from 12 Ga SS304 and has been sized to control the operating range of the valve. Failure to use this bracket on the horizontal valve will impact valve performance and the operating range will be extended and the valve will begin to close at very low water levels or open at very high water levels. The C-bracket bolted on with the flange bolts (flange and hardware not supplied). You will notice that when the rods are approximately 45 degrees in the downward position- the valve is full open and when the float rods are approximately 45 degrees in the upward direction- the valve is closed. Modulating float valves are designed to operate at 20% to 80% range.



These float valves have a correct installation position and an incorrect position. If installed upside down- the operation will be reversed (the valve will close when the float position is down). If this is the case- remove and re-install the valve in proper position.



Float valves are shipped partially assembled. The 38" float rod is threaded both ends with 1/2" threads. Float balls are slid onto the rod and secured on top/bottom with 1/2" shaft collars (1/8" hex wrench supplied). Positioning the floats at the end of the rod will give approximately 30" max operation range. Screw the float rod to the float valve arms and secured with a 3/8" threaded set screw (3/16" hex wrench supplied). The other end of this rod has a 1/2" locking nut. This can be used for the float upper limit, but is primarily used as a safety catch for floats in the event of a shaft collar failure.



The standard installation is for a horizontal supply line. If your application is on a vertical line- installation will be more like picture to bottom left- utilizing two sets of C-Brackets for float valve control range. Please specify this when you order.



Fluidtrol's standard float valves are used for in-tank installations. The valves are designed for seepage of water at the shafts. If your application requires a sealed shaft, please specify at time of order.

For any technical questions regarding the installation or operation of this float valve, please call Fluidtrol at 256-859-1609.

## Vertical Float Valve Installation Guide



The Vertical Float valve is designed for water level control above the surge tank inlet flange and is traditionally used to modulate the flow of main drain water flow based on surge tank water level. Maximum operating range is 15"-58" above the valve would be standard, but this can be adjusted by sliding the floats down the rods to reduce this range if required.

Fluidtrol's Horizontal Float Valve should be assembled as shown to the left. The L-Bracket is made from 3/16" SS304 and has been sized to control the operating range of the valve as well as keep vertical rods upright. Failure to use this bracket on the vertical valve will impact valve performance as the vertical float rods will not be held in position. The L-bracket bolted on with the flange bolts (hardware not supplied). You will notice that when the 15" valve rods are approximately 45 degrees in the downward position- the valve is full open and when the short 15" rods are approximately 45 degrees in the upward direction- the valve is closed. Modulating float valves are designed to operate at 20% to 80% range.



These float valves have a correct installation position and an incorrect position. If installed upside down- the operation will be reversed (the valve will close when the float position is down). If this is the case- remove and re-install the valve in proper position.



Float valves are shipped partially assembled. The 56" float rod and 15" valve rod are threaded both ends with 1/2" threads. Float balls are slid onto the 56" rod and secured on top/bottom with 1/2" shaft collars (1/8" hex wrench supplied). Install the lower shaft collar onto this rod when the valve is full open to serve as low point stop. Tighten this collar down just above the L-Bracket as shown to left. The second shaft collar will be positioned on top of the float ball at a point where you want the water level at full close. The small valve rod is to be attached to the float valve arms via these threads and secured with a 3/8" threaded set screw (3/16" hex wrench supplied).



The elbow mechanism consists of a toggle jaw, barrel nut and jaw pin. These will be assembled prior to shipment and attachment should be as shown to the left.

Vertical float valves do not offer options for vertical water flow- only surge tanks with horizontal oriented drain water will work well for vertical floats without customization of the L-Bracket. Fluidtrol's standard float valves are used for in-tank installations. The valves are designed for seepage of water at the shafts. If your application requires a sealed shaft, please specify at time of order.

