

Level Control Valve with Modulating Vertical Float

Model 750-67

- Reservoir filling
 - Low volume reservoirs
 - Large surface area reservoirs
 - Hydraulic backup
- Reservoir outlet
 - Reservoir level sustaining
 - Pump flow modulating

The Model 750-67 Level Control Valve with Modulating Vertical Float is a hydraulically controlled, diaphragm actuated control valve that controls reservoir filling to maintain constant water level, regardless of fluctuating demand.

The modified Model 75A-67, installed at reservoir outlet, sustains minimum reservoir level.



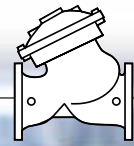
Features and Benefits

- **Line pressure driven** – Independent operation
- **Modulating hydraulic float control**
 - “Always Full” reservoir
- **Double chamber**
 - Full powered closing
 - Non-slam closing characteristic
 - Protected diaphragm
- **External installation**
 - Easy access to valve and float
 - Easy level setting
 - Less wear and tear
- **Balanced seal disk** – High flow capacity
- **In-line serviceable** – Easy maintenance
- **Flexible design** – Easy addition of features

Major Additional Features

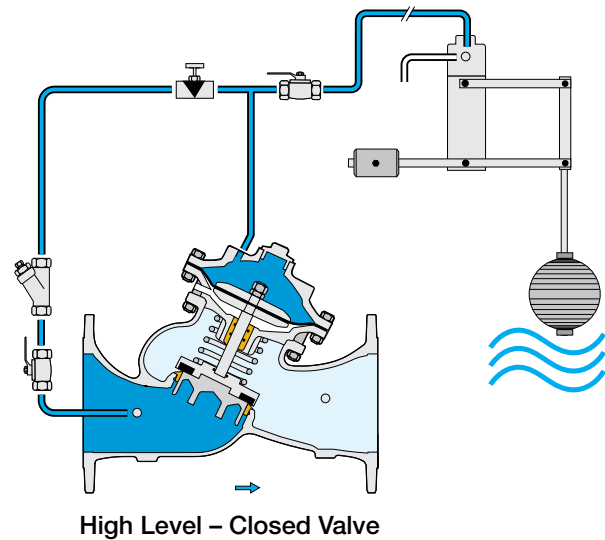
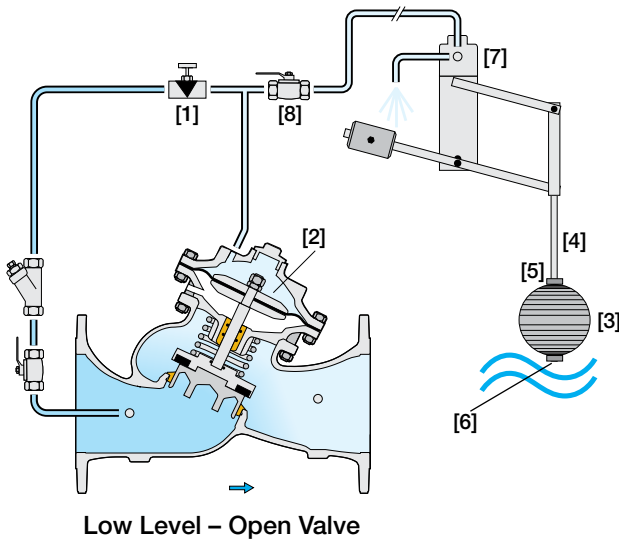
- Pressure sustaining – **753-67**
- Electric float backup – **750-67-65**
- Flow control – **757-67-U**
- Level sustaining – **75A-67**

See relevant BERMAD publications.



Operation

The Model 750-67 is a float controlled valve equipped with an adjustable, 2-Way vertical float pilot assembly. The needle valve [1] continuously allows flow from valve inlet into the upper control chamber [2]. The float [3] is locked on the float assembly rod [4] between two adjustable stoppers [5] and [6]. Should level rise towards setting, the float pilot [7] throttles, pressure in the upper control chamber accumulates causing the main valve to throttle closed, reducing filling rate, and eventually closing drip tight. Should level fall, the float pilot releases pressure from the upper control chamber causing the main valve to modulate open. The needle valve controls the closing speed. Cock valve [8] enables manual closing.



Pilot System Specifications

Standard Materials:

Float Pilot:

Body: Brass or Stainless Steel 316
 Elastomers: Synthetic Rubber
 Internal parts: Stainless Steel 316 & Brass
 Lever system: Brass or Stainless Steel 316
 Float: Plastic
 Float rod: Stainless Steel
 Base plate: Fusion bonded epoxy coated Steel or Stainless Steel 316

Tubing & Fittings:

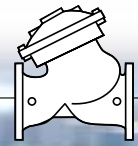
Stainless Steel 316 or Copper & Brass

Accessories:

Stainless Steel 316, Bronze, Brass and Synthetic Rubber Elastomers

Notes:

- Rod length: 54 cm (21")
- Each extension rod adds 56 cm (22"). One extension rod supplied
- Extra counterweight might be required depending on rod length and high operating pressure
- If inlet pressure is below 0.7 bar (10 psi) or above 10 bar (150 psi), consult factory
- Minimum operating pressure: 0.7 bar ; 10 psi. For lower pressure requirements consult factory
- Recommended continuous flow velocity: 0.3-6.0 m/sec ; 1-20 ft/sec
- See BERMAD float installation recommendations



Typical Applications

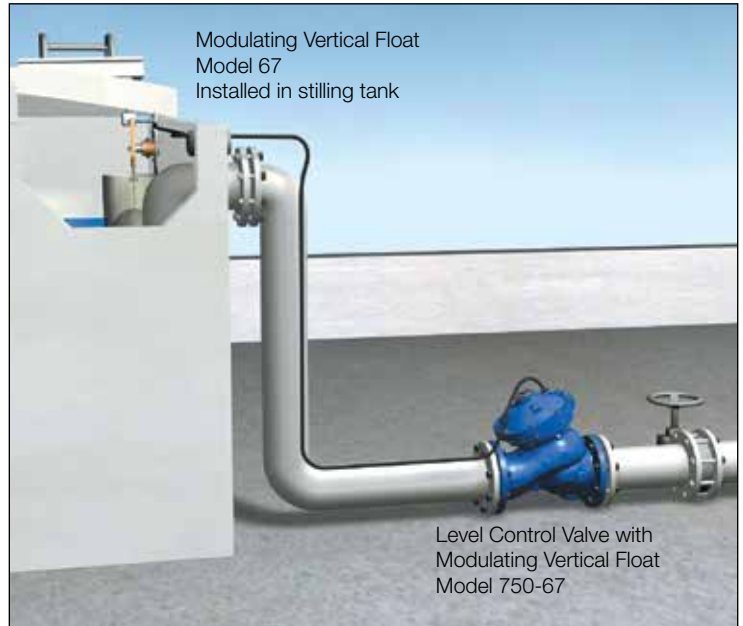
Rooftop Reservoirs

Rooftop reservoir level control is attained by electric control of the basement pumps according to reservoir level. As overflow of a rooftop reservoir can cause costly damage, hydraulic backup protection is recommended.

Where system design requires an “always full” rooftop reservoir, the Model 750-67 Modulating Level Control Valve:

- Ensures the reservoir is “always full”
- Closes securely to prevent overflow

Secured closing, even after long periods of the valve being open, is ensured by the fully developed hydraulic closing force associated with the double chamber design.



Modulating Vertical Float Model 67 Installed in stilling tank

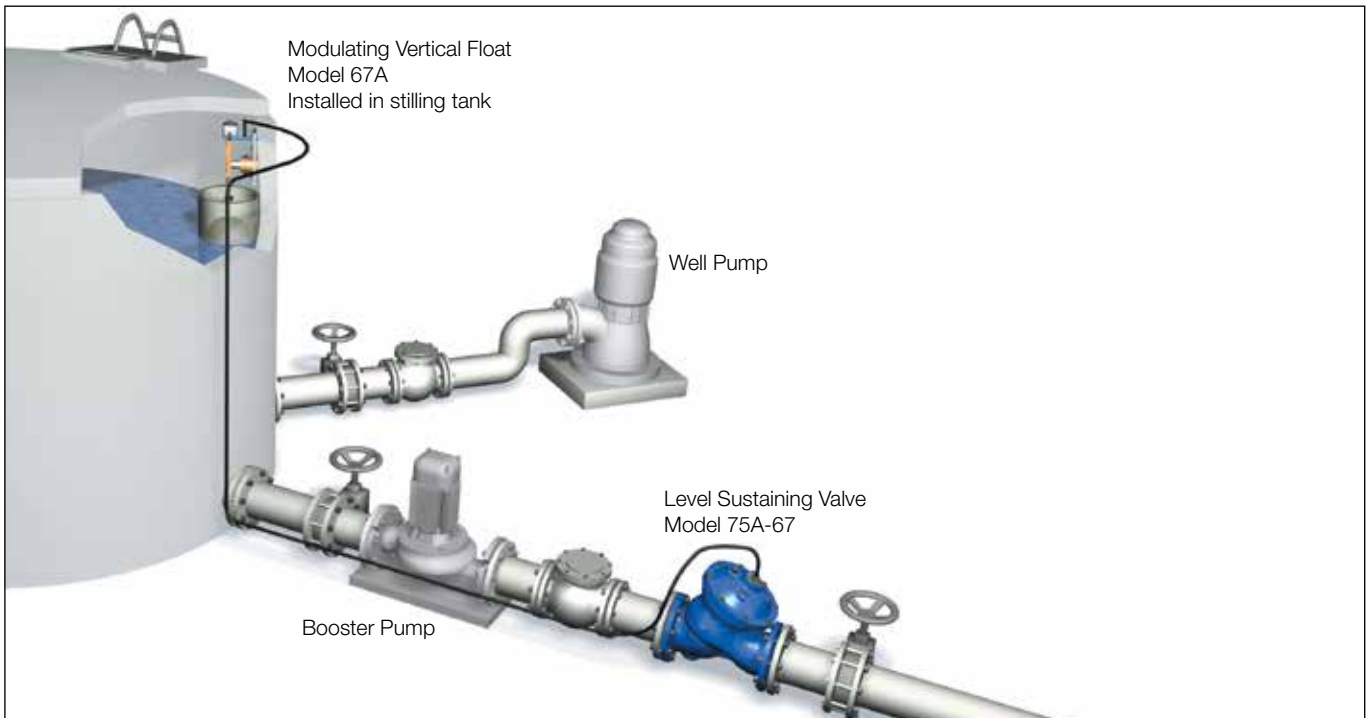
Level Control Valve with Modulating Vertical Float Model 750-67

Pump Flow Control According to Balancing Reservoir Level

Where well drawdown effects the inflow to a balancing reservoir and outflow varies according to demand, the booster pump to consumers requires protection against:

- Impeller cavitation
- Pump overload
- Air suction

The Model 75A-67 responds to the balancing reservoir level and provides this protection by dynamically restricting outflow when inflow to the balancing reservoir drops due to drawdown.

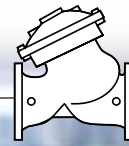


Modulating Vertical Float Model 67A Installed in stilling tank

Well Pump

Level Sustaining Valve Model 75A-67

Booster Pump



Technical Data

Size Range: DN40-900 ; 1/2-36"

End Connections (Pressure Ratings):

Flanged: ISO PN16, PN25 (ANSI Class 150, 300)

Threaded: BSP or NPT

Others: Available on request

Valve Patterns: "Y" (globe) & angle, globe (DN600-900 ; 24"-36")

Working Temperature: Water up to 80°C ; 180°F

Standard Materials:

Body & Actuator: Ductile Iron

Internals: Stainless Steel, Bronze & coated Steel

Diaphragm: Synthetic Rubber Nylon fabric-reinforced

Seals: Synthetic Rubber

Coating: Fusion Bonded Epoxy, RAL 5005 (Blue) approved for drinking water or Electrostatic Polyester Powder

Differential Pressure Calculation

$$\Delta P = \left(\frac{Q}{Kv; Cv} \right)^2$$

ΔP = Differential Pressure for fully open valve (bar; psi)

Q = Flow rate (m³/h; gpm)

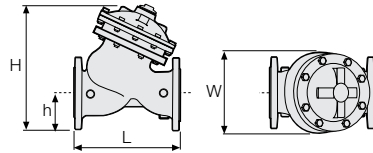
Kv = Metric system - valve flow coefficient
(flow in m³/h at 1 bar ΔP with 15°C water)

Cv = US system - Valve flow coefficient
(flow in gpm at 1 psi ΔP with 60°F water)

$$Cv = 1.155 Kv$$

Flow Data & Dimensions Table

DN / Size		40	1.5"	50	2"	65	2.5"	80	3"	100	4"	150	6"	200	8"	250	10"	300	12"	350	14"	400	16"	450	18"	500	20"		
Flow Data	700-ES																												
	700-EN																												
	700-EN																												
700 Flanged	"Y" PN16 Class 150	L (mm / inch)	205	8.1	210	8.3	222	8.7	250	9.8	320	12.6	415	16.3	500	19.7	605	23.8	725	28.5	733	28.9	990	39	1,000	39.4	1,100	43.3	
		W (mm / inch)	155	6.1	165	6.5	178	7	200	7.9	223	8.8	320	12.6	390	15.4	480	18.9	550	21.7	550	21.7	740	29.1	740	29.1	740	29.1	
		h (mm / inch)	78	3.1	83	3.3	95	3.7	100	3.9	115	4.5	143	5.6	172	6.8	204	8	242	9.5	268	10.6	300	11.8	319	12.6	358	14.1	
		H (mm / inch)	239	9.4	244	9.6	257	10.1	305	12	366	14.4	492	19.4	584	23	724	28.5	840	33.1	866	34.1	1,108	43.6	1,127	44.4	1,167	45.9	
	Weight (Kg/lb)	9.1	20	10.6	23	13	29	22	49	37	82	75	165	125	276	217	478	370	816	381	840	846	1,865	945	2,083	962	2,121		
	"Y" PN25 Class 300	L (mm / inch)	205	8.1	210	8.3	222	8.7	264	10.4	335	13.2	433	17	524	20.6	637	25.1	762	30	767	30.2	1,024	40.3	1,030	40.6	1,136	44.7	
		W (mm / inch)	155	6.1	165	6.5	185	7.3	207	8.1	250	9.8	320	12.6	390	15.4	480	18.9	550	21.7	570	22.4	740	29.1	740	29.1	750	29.5	
		h (mm / inch)	78	3.1	83	3.3	95	3.7	105	4.1	127	5	159	6.3	191	7.5	223	8.8	261	10.3	295	11.6	325	12.8	357	14.1	377	14.8	
		H (mm / inch)	239	9.4	244	9.6	257	10.1	314	12.4	378	14.9	508	20	602	23.7	742	29.2	859	33.8	893	35.2	1,133	44.6	1,165	45.9	1,197	47.1	
	Weight (Kg/lb)	10	22	12.2	27	15	33	25	55	43	95	85	187	146	322	245	540	410	904	434	957	900	1,984	967	2,132	986	2,174		
	700 Threaded	"Y" PN16; 25 Class 150; 300	L (mm / inch)	155	6.1	165	6.5	185	7.3	207	8.1	250	9.8	320	12.6	390	15.4	480	18.9	550	21.7	570	22.4	740	29.1	740	29.1	750	29.5
			W (mm / inch)	122	4.8	122	4.8	122	4.8	122	4.8	163	6.4																
h (mm / inch)			40	1.6	40	1.6	48	1.9	56	2.2																			
Angle PN16; 25 Class 150; 300		L (mm / inch)	-	-	121	4.8	140	5.5	159	6.3																			
		W (mm / inch)	-	-	122	4.8	122	4.8	163	6.4																			
		R (mm / inch)	-	-	40	1.6	48	1.9	55	2.2																			



Specify when ordering:

- Size
- Main model
- Additional features
- Pattern
- Body material
- End connection
- Coating
- Voltage & main valve position
- Tubing & Fittings materials
- Operational data (according to model)
- Pressure data
- Flow data
- Reservoir level data
- Settings

* Use Bermad's Waterworks Ordering Guide

DN / Size		600	24"	700	28"	750	30"	800	32"	900	36"
Globe PN16 Class 150	L (mm / inch)	1,450	57.1	1,650	65	1,750	68.9	1,850	72.8	1,850	72.8
	W (mm / inch)	1,250	49.2	1,250	49.2	1,250	49.2	1,250	49.2	1,250	49.2
	h (mm / inch)	470	18.5	490	19.3	520	20.5	553	21.8	600	23.6
	H (mm / inch)	1,965	77.4	1,985	78.1	2,015	79.3	2,048	80.6	2,095	82.5
Weight (Kg/lb)	3,250	7,150	3,700	8,140	3,900	8,580	4,100	9,020	4,250	9,350	
Globe PN25 Class 300	L (mm / inch)	1,500	59.1	1,650	65	1,750	68.9	1,850	72.8	1,850	72.8
	W (mm / inch)	1,250	49.2	1,250	49.2	1,250	49.2	1,250	49.2	1,250	49.2
	h (mm / inch)	470	18.5	490	19.3	520	20.5	553	21.8	600	23.6
	H (mm / inch)	1,965	77.4	1,985	78.1	2,015	79.3	2,048	80.6	2,095	82.5
Weight (Kg/lb)	3,500	7,700	3,700	8,140	3,900	8,580	4,100	9,020	4,250	9,370	

